22 September 2022

Pre-Feasibility Study Delivers Robust Project Economics
Ewoyaa Lithium Project, Ghana, West Africa

Post-Tax NPV Increases to US$1.33bn
Internal Rate of Return Increases to 224%
Maiden Ore Reserve of 18.9Mt at 1.24% Li_2O Declared

Atlantic Lithium Limited (AIM: ALL, ASX: A11, OTC: ALLIF, "Atlantic Lithium", the "Company" or "ALL"), the funded African-focussed lithium exploration and development company targeting to deliver Ghana's first lithium mine, is pleased to announce the completion of the Pre-Feasibility Study ("PFS") on the Ewoyaa Lithium Project ("Ewoyaa", "ELP" or the "Project") in Ghana, West Africa, demonstrating the significant profitability potential of this stand-out project.

Figures and Tables referred to in this release can be viewed in the PDF version available via this link: http://www.rns-pdf.londonstockexchange.com/rns/2798A_1-2022-9-22.pdf

The PFS was managed directly by the Company, engaging experienced internationally recognised consultants, and incorporates the increased JORC resource of 30.1Mt at 1.26% Li_2O, as announced on 24 March 2022.

HIGHLIGHTS:

- **Post-tax NPV_8 of US$1.33bn with free cash flow of US$2bn from Life of Mine ("LOM") revenues of US$4.84bn.**
- **Internal rate of return of 224% and payback less than five months, with average LOM EBITDA of $248 million per annum.**
- **Maiden Ore Reserve of 18.9Mt at 1.24% Li_2O declared, demonstrating sound resource to reserve conversion.**
- **12.5-year mine life, 2Mtpa conventional dense media separation ("DMS") processing facility with average 255,000tpa 6% lithium spodumene concentrate ("SC6") production.**
- **C1 cash operating costs of US$278 per tonne of SC6 Free-On-Board ("FOB") Ghana Port, after by-product credits.**
- **In addition to SC6 production, the PFS incorporates two additional revenue streams from by-products:**
  - **A saleable direct shipping ore fines product ("DSO fines")**
  - **A saleable Feldspar by-product**
- **Capital cost estimate of US$125 million, including integrated 3-stage crushing facility ahead of the DMS processing facility; a major design change to the Scoping Study concept of contract crushing, reducing plant OPEX, improving operational control and reducing lithium losses.**
- **Key assumptions: Long-term average SC6 price of US$1,359/t FOB over 12.5 years, project funding via Piedmont agreement (*refer RNS of 31 August 2021*) and cost estimation at +/- 20% level of accuracy.**

- **First quartile cash costs; low capital and operating costs and low carbon footprint due to outstanding asset processes, logistics and access to infrastructure:**
  - **Conventional open cut mining operation from surface, LOM strip ratio of 8:1**
  - **Simple processing via conventional DMS only, producing a premium SC6 saleable product at a 10mm top size crush**
  - **Simple mineralogy and metallurgy with potential upside for improved DMS recoveries**
  - **Significant exploration upside potential within the 560km^2 portfolio**
  - **Skilled Ghanaian workforce readily available within the surrounding communities**
  - **Close proximity to excellent logistics and infrastructure – 110km by road from the deep-sea port of Takoradi, adjacent to highway and high voltage powerlines, including hydroelectric sources.**

Commenting on the Company's latest progress, Lennard Kolff, Interim Chief Executive Officer of Atlantic Lithium, said:

"We are delighted to release our Pre-Feasibility Study for the Ewoyaa Lithium Project in Ghana, which further illustrates Ewoyaa as an industry-leading lithium asset, generating in excess of US$4.84bn in revenues over a 12.5-year mine life.

"The Study outlines a robust 2Mtpa operation which can deliver excellent cash flows, an exceptional 20-week payback and a post-tax NPV$_8$ of US$1.33bn producing a coarse, premium DMS SC6 product including credits from DSO fines and feldspar by-products.

"The study used a long-term average SC6 price of US$1,359/t FOB Ghana, with recent equivalent grade prices as high as US$7,708/t being achieved on Pilbara Minerals Limited BMX platform and representing a mid-range forecast when compared to other commentators.

"Every US$100/t increase in SC6 price forecast results in an additional 9% increase to the post-tax NPV$_8$, highlighting the significant potential value uplift to the Project.

"We are also pleased to declare a maiden Ore Reserve of 18.9Mt at 1.24% Li$_2$O, presenting sound resource to reserve conversion and confirming the robust project fundamentals.

"Operating costs of US$278/t SC6, which include a discount of US$165/t for by-products, further demonstrate the attractive fundamentals of the Project. Ewoyaa benefits from simple mineralogy, low power and water consumption, a DMS-only process flow-sheet design, skilled workforce and proximity to operational infrastructure, including grid power, sealed road and deep-sea port. These fundamentals are arguably among the best in the world and enable a low carbon footprint project.

"CAPEX has increased from US$70 million to US$125 million in the PFS, primarily due to bringing the crushing circuit in-house as opposed to contract crushing. Additionally, the increased resource footprint resulted in increased costs, including the extended high-voltage power line re-alignment and inflationary cost pressures in line with the current market. The financial model, however, shows that the Project is currently not sensitive to inflationary and capital cost increases.

"Against the backdrop of buoyant global lithium demand, driven particularly by electric vehicle demand, we believe Ewoyaa will play a significant role in the role of sustainable lithium production. This PFS moves the Project another step closer to becoming Ghana's first lithium-producing mine.

"Supported by our funding agreement with Piedmont Lithium Inc., we are excited to continue advancing the Ewoyaa Lithium Project through the next stages of studies and permitting towards production. The resource infill and extensional drilling programme underway is nearing completion and we look forward to sharing updates on this and further Project developments shortly."

This announcement contains inside information for the purposes of Article 7 of the Market Abuse Regulation (EU) 596/2014 as it forms part of UK domestic law by virtue of the European Union (Withdrawal) Act 2018 ("MAR"), and is disclosed in accordance with the Company's obligations under Article 17 of MAR.

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Notes to Editors:

About Atlantic Lithium
www.atlanticlithium.com.au

Atlantic Lithium (formerly "IronRidge Resources") is an AIM and ASX listed lithium exploration and development company advancing a portfolio of lithium projects and licenses in Ghana and Côte d'Ivoire.

The Company's flagship project, the Ewoyaa Project in Ghana, is a significant lithium spodumene pegmatite discovery targeted to become Ghana's first lithium producing mine. The Company signed a funding agreement with Piedmont Lithium Inc. for US$103m towards the development of the Ewoyaa Project. Based on the Pre-Feasibility Study, the Ewoyaa Project has indicated Life of Mine revenues exceeding US$4.84bn, producing a spodumene concentrate via simple gravity only process flowsheet.

Atlantic Lithium holds a 560km^2 & 774km^2 tenure across Ghana and Côte d'Ivoire respectively, comprising significantly under-explored and highly prospective Birimian geology.

Cautionary Statement

The Mineral Resource referred to in this announcement is based on 68.1% Indicated Resources and 31.9% Inferred Resources from the JORC Mineral Resource Estimate released on AIM on 24 March 2022.

The Mineral Reserve referred to in this announcement is based on Indicated Resources only from the JORC Mineral Resource Estimate released on AIM on 24 March 2022. All stated Ore Reserves are completely included within the quoted Mineral Resources and are quoted in dry tonnes. Probable Ore Reserves were declared based on the Indicated Mineral Resources only contained within the pit designs.

The production targets referred to in this PFS announcement are based on an initial 12.5-year mining plan comprising 75.5% of Indicated Resources and 24.5% of Inferred Resources modelled from the JORC Mineral Resource Estimate released on AIM on 24 March 2022. It is noted that 9.2% of the Inferred Resources are mined within the first 24 months of the PFS mining schedule, this due to drilling access restrictions at the time of the Mineral Resource estimate, which will be resolved as part of the current in-fill drilling programme.

There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.

The Inferred Mineral Resource is not the determining factor in the viability of the Ewoyaa Lithium Project as the Inferred Mineral Resource represents only 9.2% of the processed ore during the first 24 months of production, with a short pay-back period of 5 months. Additionally, even with Inferred Resources deferred to waste, and all mining and processing costs carried over life of mine for the Inferred Resources, the Project remains cash-flow positive on an annualised basis.

The mineralisation at Ewoyaa has been confirmed to be associated with spodumene bearing pegmatite as the main lithium bearing mineral. No significant petalite or lepidolite has been observed. The deposits show good continuity of the main mineralised units which provided for drill hole intersections to be modelled into coherent, geologically robust domains. Consistency is evident in the thickness of the structure, and the distribution of grade appears to be reasonable along and across strike.

It is considered that there are reasonable grounds for the conversion of Inferred to Indicated or Measured Resource status, providing reasonable confidence that the production targets outlined in the PFS will be achievable.

The Ore Reserve and Mineral Resource Estimate have been prepared by Competent Persons, with Competent Persons Statements at the end of the release and below the relevant tables. The Ore Reserves and Mineral Resources that underpin the production target have been prepared by a Competent Person that meets the requirements of the JORC code.

The PFS developed engineering designs to provide costs at a +/- 20% level of accuracy.

The Company has concluded that it has a reasonable basis for providing the forward-looking statements and forecasted financial information included in this announcement. The reasons for that conclusion are outlined throughout this announcement and all material assumptions, including JORC modifying factors (Appendix 1, JORC Table 1, Section 4) upon which the forecast financial information is based, are disclosed in the announcement. This announcement has been prepared in accordance with JORC code 2012, AIM and ASX listing rules.

All material assumptions relating to production and financial forecasts are detailed in this report. Material and economic assumptions are summarised in the body of this release.
Rounding may cause some computational discrepancies for totals in the tables in this announcement.

1. Project Summary

Atlantic Lithium plans to develop the Ewoyaa Lithium Project (the Project, "Ewoyaa", "ELP") in Ghana, West Africa through studies and permitting towards production. The PFS was carried out for the purpose of determining the PFS level criteria under which development of the Project may be considered potentially economic, and subsequently to support an application for a mining licence with the relevant authorities of the Government of Ghana.

The proposed Project development programme targets first production of lithium concentrate ("spodumene") in Q3 2024, based on receiving a Mining Licence in Q3 2023, subject to meeting all statutory requirements.

The PFS was prepared in accordance with the disclosure and reporting requirements of AIM, a market operated by London Stock Exchange, the disclosure and reporting requirements of Australian Securities Exchange ("ASX"), and the Australasian Code for Reporting of Mineral Resources and Ore Reserves of December 2012 ("JORC Code") as prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy.

Ewoyaa is the Company's flagship project and is targeted to be Ghana's first lithium-producing mine, having secured project development funding via an off-take agreement with Piedmont Lithium Inc. (NASDAQ: PLL; ASX: PLL, refer ***RNS*** of ***31 August 2021***).

The original Scoping Study (*refer **RNS** of **19 January 2021***) was based on a maiden Mineral Resource Estimate ("MRE") at Ewoyaa of 14.5Mt grading 1.31% Li_2O (189,000 tonnes of contained Li_2O). The Scoping Study Update (*refer **RNS** of **7 December 2021***) was based on an upgraded MRE of 21.3Mt at 1.31% Li_2O (278,000 tonnes of contained Li_2O). This PFS is based on a further upgraded MRE of 30.1Mt at 1.26% Li_2O (377,000 tonnes of contained Li_2O) (*refer **RNS** of **24 March 2022***).

Figure 1 provides a planned site overview of the ultimate pit outlines, waste dumps, process plant and associated infrastructure required for the mining operation. ***Table 1*** provides a summary of the key Project metrics resulting from the PFS. ***Table 2*** provides a summary of Reserves and Resources by status for the Project, where the Reserves are reported as part of the total Mineral Resource.

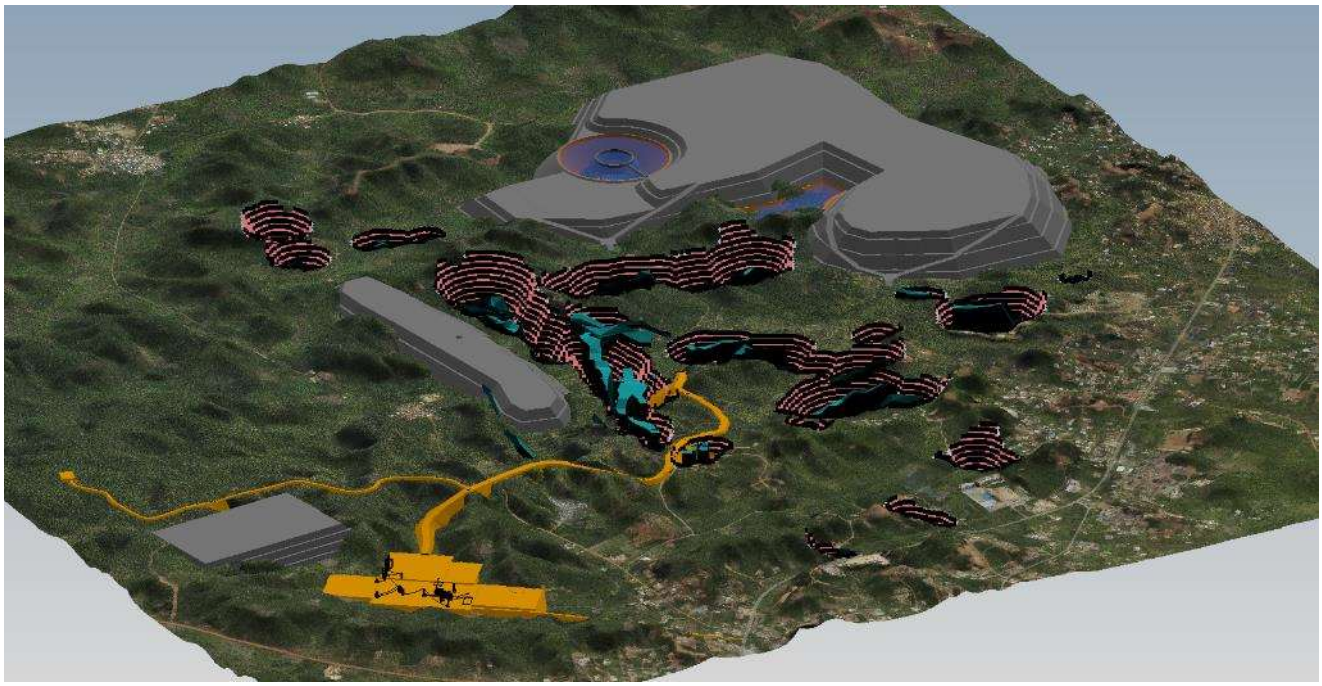

Figure 1: Ultimate mining operation overview showing all associated project development infrastructure

Table 1: Ewoyaa PFS key Metrics (100% project basis[1])

Item	Units	PFS Statistic
Mineral Resource[2]	Mt @ %	30.1Mt @ 1.26% Li_2O
Indicated Mineral Resource	Mt @ %	20.5Mt @ 1.29% Li_2O
Inferred Mineral Resource	Mt @ %	9.6Mt @ 1.19% Li_2O
Mine Life	Years	12.5
Ore Reserves (Probable)[2]	Mt @ %	18.9Mt @ 1.24% Li_2O
Total Material Movement LOM	Mt	225
Mined Waste	Mt	200
Mined Ore	Mt	25
Strip Ratio	W:O	8.0
DMS Plant Feed Rate LOM[3]	Mtpa	2.0
Li_2O Head Grade	%	1.22%
Average Whole of Ore Recovery SC6	%	62.5%
SC6 Produced	LOM, t	3,180,000
Feldspar Produced	LOM, t	4,120,000
DSO Fines Produced	LOM, t	3,740,000
Project Total Capital Cost	US$M	$125
SC6 Sell Price, LOM Average, FOB Ghana	US$/t	$1,359
DSO Fines Sell Price, LOM Average, FOB Ghana	US$/t	$85
Feldspar Sell Price, LOM Average, FOB Ghana	US$/t	$50
Revenue (including by-products)	US$M	4,845
IRR	%	224%
C1 Cash Cost, after by-product credits	US$/t	278
All In Sustaining Cost (AISC)	US$/t	460
Surplus Cashflow, Post Tax	US$M	1,999
NPV (8%) Post Tax	US$M	1,328
Payback	Months	5
NPAT, LOM	US$M	1,873

[1]Whilst the asset is currently wholly owned by Atlantic Lithium Limited, Piedmont Lithium Inc. can earn up to half the asset through the funding agreement, whilst the Government of Ghana has the right to a 10% free carry once in production.

[2]Mineral Resources are inclusive of the Ore Reserves. The Competent Persons are Mr S. Searle of Ashmore Advisory Pty Ltd for Mineral Resources and Mr H. Warries of Mining Focus Consultants Pty Ltd for Ore Reserves. For full Competent Persons statements, refer to ***Table 3*** *and* ***Table 8.***

[3]The Ore Reserves and Mineral Resources that underpin the production target have been prepared by a Competent Person that meets the requirements of the JORC code. The production targets referred to in this PFS announcement are based on an initial 12.5-year mining plan comprising 75.5% of Indicated Resources and 24.5% of Inferred Resources modelled from the JORC Mineral Resource Estimate released on AIM on 24 March 2022. It is noted that 9.2% of the Inferred Resources are mined within the first 24 months of the PFS mining schedule, this due to drilling access restrictions at the time of the Mineral Resource estimate, which will be resolved as part of the current in-fill drilling programme. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.

Table 2: Summary of Reserves and Resources by status

Category[2]	Gross			Net attributable[1]			Operator
	Tonnes (Mt)	Grade (% Li_20)	Contained Li Metal kt	Tonnes (Mt)	Grade (% Li_2O)	Contained Li Metal kt	
Ore/ Mineral reserves per asset							
Proven	-	-	-	-	-	-	-
Probable	18.9	1.24	109	8.5	1.24	49	ALL
Sub-total	18.9	1.24	109	8.5	1.24	49	ALL
Mineral Resources per asset							
Measured	-	-	-	-	-	-	-
Indicated	20.5	1.29	123	9.23	1.29	55	ALL
Inferred	9.6	1.19	53	4.32	1.19	24	ALL
Sub-total	30.1	1.26	176	13.55	1.26	79	ALL

[1]Whilst the asset is currently wholly owned by Atlantic Lithium Ltd, Piedmont Lithium Inc. can earn up to half the asset through the funding agreement, whilst the Government of Ghana has the right to a 10% free carry once in production.
[2]Mineral Resources are inclusive of the Ore Reserves. The Competent Persons are Mr S. Searle of Ashmore Advisory Pty Ltd for Mineral Resources and Mr H. Warries of Mining Focus Consultants Pty Ltd for Ore Reserves. For full Competent Persons statements, refer to ***Table 3*** *and* ***Table 8****.*

2. Project Location

The Ewoyaa Lithium Project includes the Ewoyaa, Abonko and Kaampakrom deposits and is located in Ghana, West Africa, approximately 100km southwest of the capital of Accra. The Project area is immediately north of Saltpond, in the Central Region, and falls within the Mfantseman Municipality where Saltpond is the district capital (refer ***Figure 2***).

Access to the site from Accra is along the asphalt N1 Accra-Cape Coast-Takoradi highway which runs along the southern coastal boundary of the Project. Several laterite roads extend northwards from the highway and link communities in the Project area. The deep-sea port of Takoradi is within 110km west of the site, and accessible via the same highway (refer ***Figure 3***).

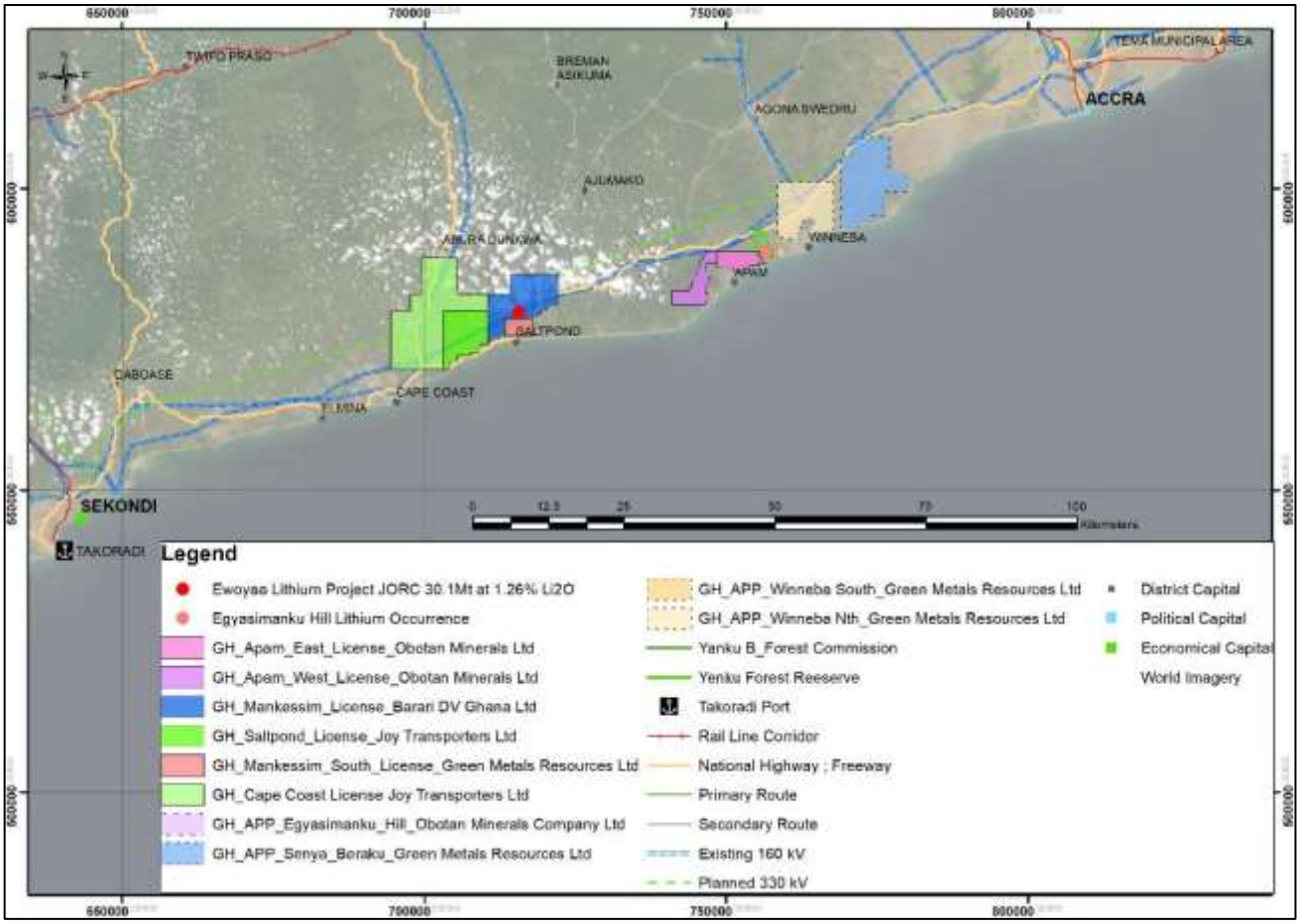

Figure 2: Project location and tenure, showing proximity to Takoradi Port, highway and grid power

The topography of the Project varies with steep hills surrounding low-lying valleys throughout the proposed mining area. The terrain of the Project area rises sharply from a narrow coastal plane to an undulating peneplane where elevation ranges from 20m to 120m above mean sea level.

Ghana is a republic within the Commonwealth. Ghana gained independence from colonial Britain in 1957, being the first sub-Saharan African country in colonial Africa to do so. Despite some turbulent history in the first decades following independence, Ghana has emerged since the 1990s as a stable, multi-party democracy.

Under the terms of the 1992 Constitution (Fourth Republic), executive power is vested in the President, who is Head of State and Commander-in-Chief of the armed forces. Legislative power is vested in a single chamber Parliament consisting of 275 members elected by direct election on a first-past-the-post basis for a four-year term. His Excellency Nana Akufo-Addo is the current President. He was elected in December 2020 for a four-year term.

Figure 3: High voltage power transmission lines, bitumen highway and deep-sea Takoradi port close to Project site

3. Mineral Resource

A JORC (2012) compliant Mineral Resource Estimate was prepared by Ashmore Advisory Pty Ltd using ordinary kriging methods for resource estimation with a 0.5% Li_2O cut-off. The MRE was commissioned as a result of an additional infill and extensional drilling programme conducted by ALL at the Project in support of the PFS deliverable. The JORC (2012) compliant Mineral Resource was released to market on ***24 March 2022*** and is shown in ***Table 3***.

Drilling at the deposit extends to a maximum drill depth of 319m and the mineralisation was modelled from surface to a depth of approximately 330m below surface. The estimate is based on good quality reverse circulation ("RC") and diamond core ("DD") drilling data. Drill hole spacing is predominantly 40m by 40m across the Project and up to 80m by 80m in parts of the lesser-known mineralisation.

The current MRE is based on a 0.5% reporting cut-off grade (constrained to above the -190mRL), within a 0.4% Li_2O wireframed pegmatite body. However, when assessing all pegmatite volumes (with no cut-off's applied), there is significant scope to increase the resource tonnage (*refer **RNS** of **24 March 2022***) in addition to exploration upside outside of the current resource volumes (*refer **RNS** of **2 August 2022***).

Mineralisation

The Project area has two clearly defined domains, or material types, of spodumene bearing lithium mineralisation. ALL has termed these material types as Pegmatite Type P1 and Pegmatite Type P2; viz:

- **P1**: Coarse grained spodumene material, the dominant spodumene bearing pegmatite encountered to date, exhibiting very coarse to pegmatoidal, euhedral to subhedral spodumene crystals (avg. >20mm) composing 20% to 40% of the rock (refer to ***Figure 4***).
- **P2**: Medium to fine grained spodumene material, where abundant spodumene crystals of a medium crystal size (avg. <20mm) dominates. The spodumene is euhedral to subhedral and can compose up to 50% of the rock. The spodumene can be bi-modal with some larger phenocrysts entrained within the medium grained spodumene bearing matrix. Minor other lithium bearing phases are present (refer to ***Figure 5***).

There are four geometallurgical domains; coarse grained type P1 and finer grained type P2 pegmatites and their weathered or fresh equivalents. It is noted that metallurgical recoveries differ between the four material types, which is discussed later in this announcement.

The estimated relative abundances, metallurgical recoveries and concentrate grades of the domains are summarised in ***Table 4***.

Figure 4: Typical P1 coarse grained spodumene (>20mm long crystals) pegmatite in half core (diameter of hand lens approx. 2cm)

Figure 5: Typical P2 finer grained spodumene (<20mm long crystals) pegmatite in half core (diameter of hand lens approx. 2cm)

Table 3: Ewoyaa MRE by Deposit and JORC Classification (0.5% Li_2O Cut-off, above -190mRL)

Deposit	Indicated		
	Tonnage Mt	Li_2O %	Cont. Lithium Oxide kt
Abonko	1.1	1.30	14
Anokyi	2.2	1.46	33
Bypass	0.0	0.00	0
Ewoyaa	10.0	1.23	123
Ewoyaa Northeast	2.5	1.42	36
Grasscutter	3.3	1.19	39
Kaampakrom	0.4	1.43	5
Okwesi	0.6	1.48	9
Sill	0.4	1.34	5
Total	**20.5**	**1.29**	**265**

Deposit	Inferred		
	Tonnage Mt	Li_2O %	Cont. Lithium Oxide kt
Abonko	0.7	1.18	8
Anokyi	1.1	1.29	14
Bypass	0.2	1.15	3
Ewoyaa	4.2	1.09	46
Ewoyaa Northeast	0.9	1.19	10
Grasscutter	1.5	1.28	19
Kaampakrom	0.6	1.31	8
Okwesi	0.3	1.34	4
Sill	0.1	1.57	1
Total	**9.6**	**1.19**	**114**

Deposit	Total Mineral Resource		
	Tonnage Mt	Li_2O %	Cont. Lithium Oxide kt
Abonko	1.8	1.25	22
Anokyi	3.4	1.40	47
Bypass	0.2	1.15	3
Ewoyaa	14.2	1.19	169
Ewoyaa Northeast	3.4	1.36	46
Grasscutter	4.8	1.22	58
Kaampakrom	0.9	1.35	13
Okwesi	0.9	1.43	13
Sill	0.5	1.38	6
Total	**30.1**	**1.26**	**379**

Competent Persons Note:
The Mineral Resource Estimate has been compiled under the supervision of Mr. Shaun Searle who is a director of Ashmore Advisory Pty Ltd and a Registered Member of the Australian Institute of Geoscientists. Mr. Searle has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he has undertaken to qualify as a Competent Person as defined in the JORC Code.

All Mineral Resources figures reported in the table above represent current estimates. Mineral Resource estimates are not precise calculations, being dependent on the interpretation of limited information on the location, shape and continuity of the occurrence and on the available sampling results. The totals contained in the above table have been rounded to reflect the relative uncertainty of the estimate. Rounding may cause some computational discrepancies.

Mineral Resources are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The Joint Ore Reserves Committee Code – JORC 2012 Edition).

Table 4: Material Types, Recoveries and Concentrate Grades (at 10mm crush and laboratory setting)

Geomet Type	Weathered				
	Tonnage Mt	**Li_2O %**	**Cont. Lithium Oxide kt**	**Recovery %**	**Conc. Grade Li_2O (%)**
P1	1.7	1.13	20	68	6.0
P2	0.3	1.05	3	50	6.0
Total	**2.0**	**1.12**	**22**		
Geomet Type	**Primary**				
	Tonnage Mt	**Li_2O %**	**Cont. Lithium Oxide kt**	**Recovery %**	**Conc. Grade Li_2O (%)**
P1	23.5	1.30	305	70	6.0
P2	4.7	1.11	52	50	5.5
Total	**28.1**	**1.27**	**356**		

Competent Persons Note: as per Table 2 above and metallurgical sign off in Competent Persons section at end of document.

4. Geology

The regional geology of western Ghana is characterised by a thick sequence of steeply dipping metasediments, alternating with metavolcanic units of Proterozoic age. These sequences, belonging to the Birimian Supergroup, extend for approximately 200km along strike in a number of parallel north-easterly trending volcano-plutonic belts and volcano-sedimentary basins, of which the Kibi-Winneba Belt and the Cape Coast Basin extend through the region around the Company's Mankessim licence area.

Within the mineralised Ewoyaa pegmatites, there are broadly two dominant pegmatite trends which have been observed: the roughly north-south en-echelon pegmatite array of the "Ewoyaa trend" and the roughly west northwest – east southeast trending intrusive swarm arrays of the "Abonko trend". Mineralised pegmatite intrusions occur as sub-vertical bodies within the two dominant trends. Pegmatite thickness varies across the Project, with thinner mineralised units intersected at Abonko and Kaampakrom between 4m and 12m; and thicker units intersected at Ewoyaa Main between 30m and 60m, and up to 100m at surface (refer to ***Figure 6*** and ***Figure 7***) that follows provides a cross – section through the Ewoyaa Main deposit.

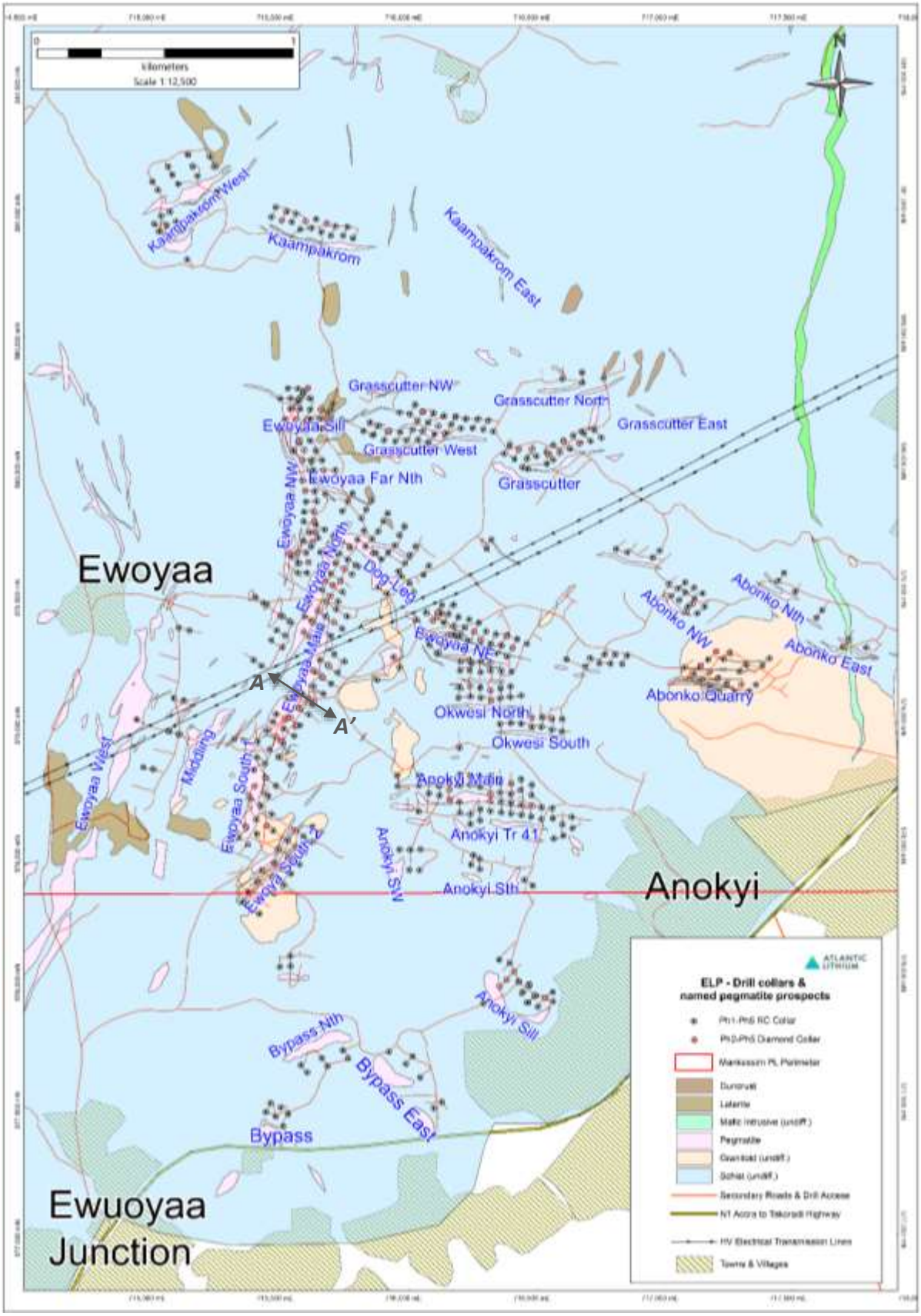

Figure 6: Deposit geology and prospect names at the Ewoyaa Lithium Project

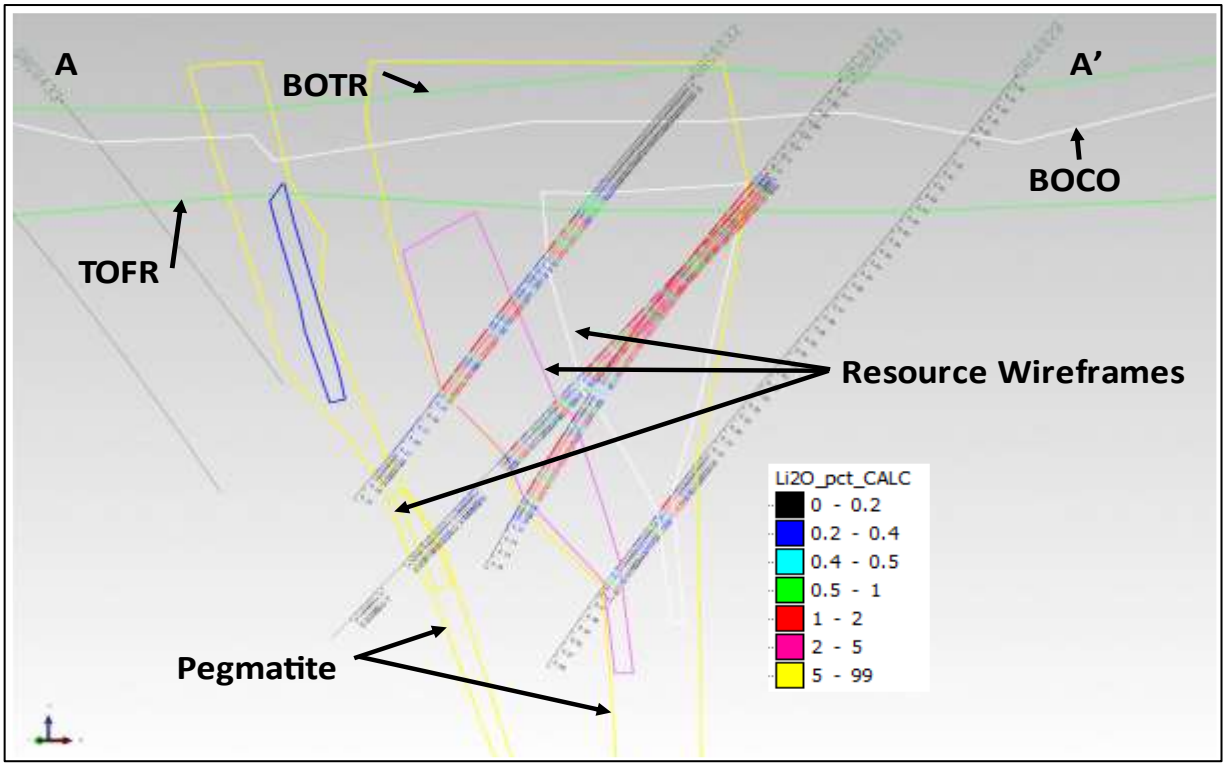

Figure 7: Cross section through the Ewoyaa Main deposit

5. Mining

Conventional open pit mining is considered as the preferred mining method for the Project since the ore presents near surface and there is space to construct waste dumps. A contract mining operation is proposed given the abundance of experienced well established local contractors in Ghana.

The PFS assumes that all material will require some form of drill and blast. Open pit mining will utilise three main 120t excavators and 90t dump trucks supported by an appropriate ancillary fleet. This equipment matches the scale of the operation and the mining environment across the distinct mining areas.

Effectively five mining areas including fourteen individual ultimate pits will be developed. A bench height of up to 10m, excavated in 2.5m flitches, is proposed to achieve acceptable levels of dilution and ore loss and to match the excavator size. Vegetation will be cleared and grubbed prior to topsoil stripping and later used to cover the topsoil stockpiles. Topsoil will be stockpiled and retained for later rehabilitation at the site.

The operation will employ a strategy of partial direct tipping with approximately 60% of crusher feed coming from rehandling run of mine ("ROM") ore. The lower recovery/grade long term stockpiles, predominantly comprising P2 material, will be rehandled and fed to the plant after the priority P1 materials have been processed, or if ore supply interruptions are experienced from the mine.

Mine Production Schedule

A pit optimisation process was undertaken on the entire MRE, using WHITTLE™ Four-X optimisation software. The key economic input parameters that were adopted for the pit optimisation are shown in ***Table 5***. These were selected prior to finalisation of operating costs as noted later in this RNS. Delineation of resources is outlined in ***Figure 8*** with the results of the total resource pit optimisation process depicted in ***Figure 9*** following.

Table 5: Summary of key pit optimisation input parameters

Item	***Unit***	***Value***
DMS Plant throughput	Mtpa	2.0
Spodumene price	$/t	1,000
Concentrate grade	%	6.0
Royalty	%	6.2
Processing Cost	$/t processed	13.50
General and Administration	$/t processed	3.20
Land freight	$/t conc.	25.00
Average Mining Cost	$/t mined	3.25
Rehandle cost	$/t	0.54
Sustaining capital	$/t processed	0.44
Closure cost	$/t processed	0.64
Mining recovery	%	97.0
Mining dilution	%	5.0
Overall Pit Wall Slope Angle (inclusive of a ramp system)	Degrees	Ranging from 34.8° (Oxide) to 46.5° (Fresh)

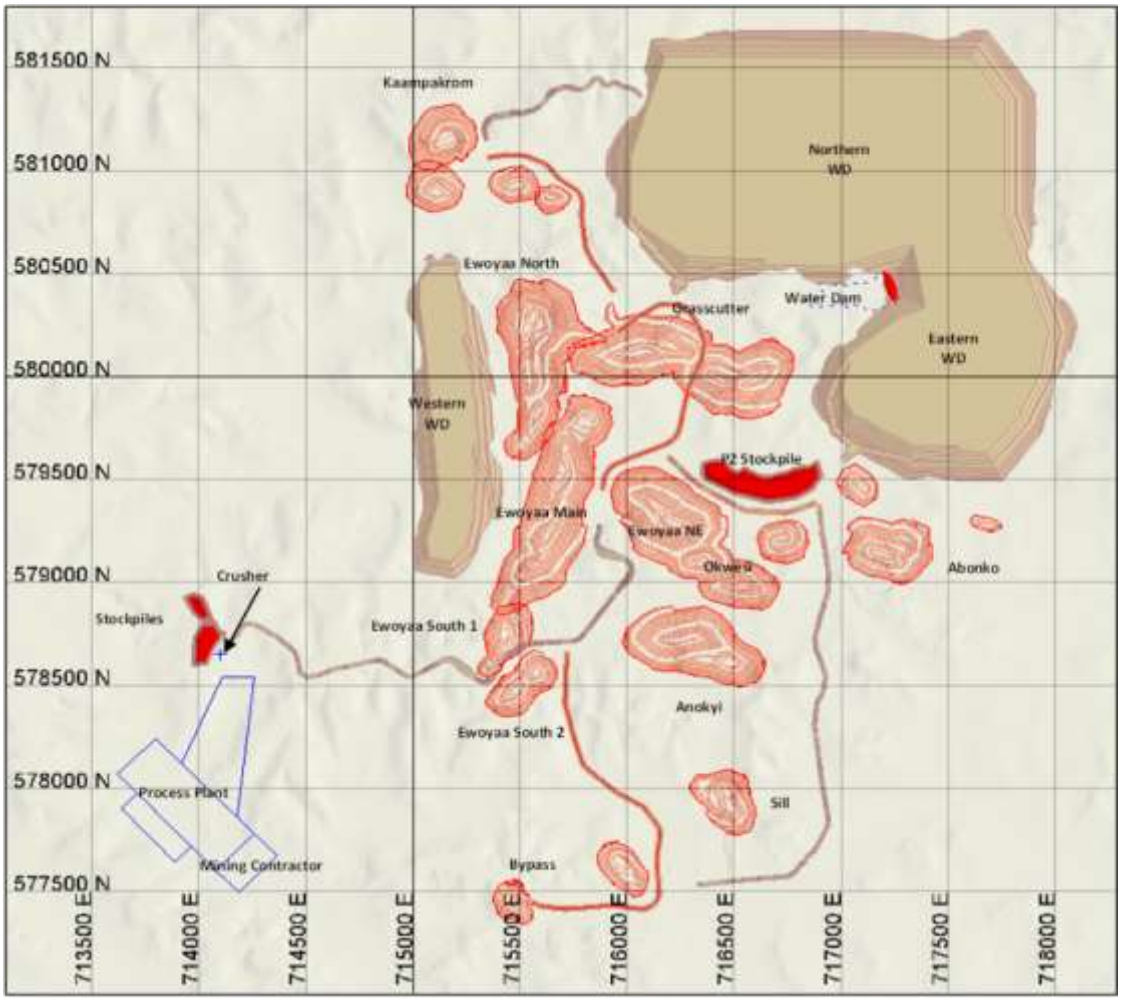

Figure 8: Delineation of resources

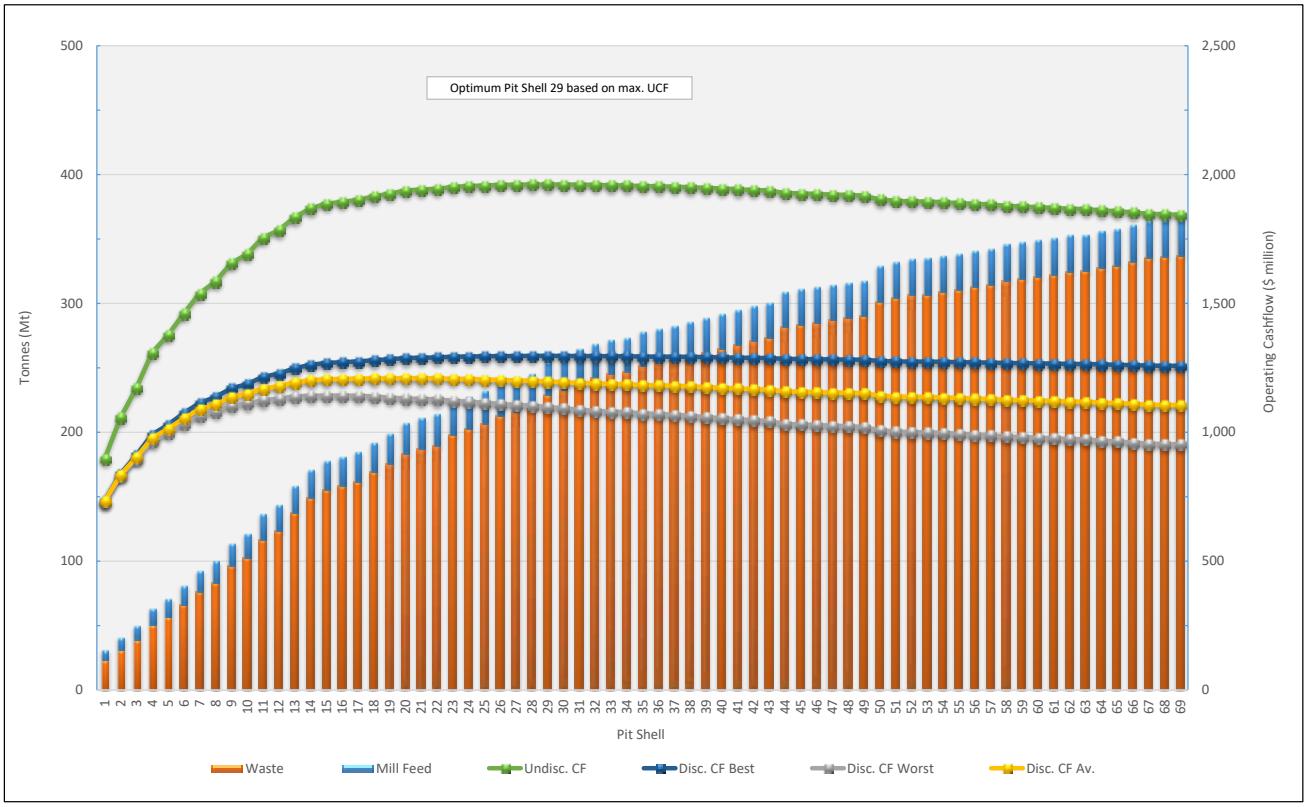

Figure 9: Pit Optimisation results; Indicated and Inferred resources

The main aim of the mining schedule was to provide 2.0Mtpa ore plant feed while adopting realistic material movements, deferring both of waste mining and processing of inferred resource as much as possible, and prioritising P1 material over P2.

Staged development of the pits is driven by the desire to maximise the grade of the initial plant feed, minimise waste pre-stripping and the requirement for consistent total material movement. Staged mining has a positive impact on the project NPV by reducing the duration of the pre-production phase and reducing the strip ratio in the early years of production.

The schedule included a three month ramp up period and processed all the ore in the ultimate pits. A total of 25Mt at 1.22% Li_2O of crusher feed is mined over LOM. This includes a total of 18.9Mt at 1.24% Li_2O of Indicated Resource (equivalent to 75.5% of the total plant feed) and a total of 6.1Mt at 1.14% Li_2O of Inferred Resource (equivalent to 24.5% of the total plant feed). The Ore Reserves and Mineral Resources that underpin the production target have been prepared by a Competent Person that meets the requirements of the JORC code.

There are a total of six major haul road segments that connect the pits with the crusher and the waste dumps. All bar one traverse over moderately sloping terrain and do not require major earthworks. The main road connecting the pits with the crusher will traverse through some steeper terrain.

The results of the mining schedule are shown in ***Table 6***. The average total material movement for the first five years is 14Mtpa, representing a waste to ore strip ratio of 5.2, after which it increases to 22Mt. The increase in total material movement in Year 6 is due to mining higher strip ratio pits. A summary of the annual total material movement by pit area is represented graphically in ***Figure 10***.

P2 ore equates to 17% of the total plant feed with the bulk of P2 ore contained within the Ewoyaa Main pit (64% of the total). However, through stockpiling the P2 ore ratio at Ewoyaa Main can be maintained at 20% for the first few years when the majority of the plant feed is sourced from Ewoyaa Main.

Table 6: Summary Mine Production Schedule

Year	*Total Material*	*Waste*	*Strip Ratio*	*Crusher Feed Mined*		*Ore processed*	
				Tonnes	*Li_2O*	*Tonnes*	*Li_2O*
	[Mt]	*[Mt]*	*[W:O]*	*[Mt]*	*[%]*	*[Mt]*	*[%]*
Pre-prod	0.8	0.6	4.5	0.14	1.12		
1	10.7	8.0	3.0	2.6	1.27	1.9	1.33
2	12.2	9.9	4.3	2.3	1.25	2.0	1.27
3	15.6	13.3	5.8	2.3	1.09	2.0	1.12
4	15.3	12.9	5.3	2.4	1.12	2.0	1.14
5	15.6	14.2	10.0	1.4	1.37	2.0	1.28
6	20.4	18.5	9.8	1.9	1.30	2.0	1.29
7	20.9	19.4	12.7	1.5	1.38	2.0	1.31
8	21.4	18.9	7.5	2.5	1.12	2.0	1.14
9	22.3	20.9	15.1	1.4	1.32	2.0	1.24
10	22.8	21.1	12.5	1.7	1.12	2.0	1.11
11	21.8	19.5	8.7	2.3	1.19	2.0	1.20
12	22.7	20.7	10.3	2.0	1.23	2.0	1.23
13	2.8	2.4	5.2	0.5	1.20	1.1	1.11
Total	**225.2**	**200.3**	**8.0**	**25.0**	**1.22**	**25.0**	**1.22**

Cautionary Statement:
The production targets referred to in this PFS announcement are based on an initial 12.5-year mining plan comprising 75.5% of Indicated Resources and 24.5% of Inferred Resources modelled from the JORC Mineral Resource Estimate released on AIM on 24 March 2022. It is noted that 9.2% of the Inferred Resources are mined within the first 24 months of the PFS mining schedule, this due to drilling access restrictions at the time of the Mineral Resource estimate, which will be resolved as part of the current in-fill drilling programme.

There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.

The Ore Reserves and Mineral Resources that underpin the production target have been prepared by a Competent Person that meets the requirements of the JORC code.

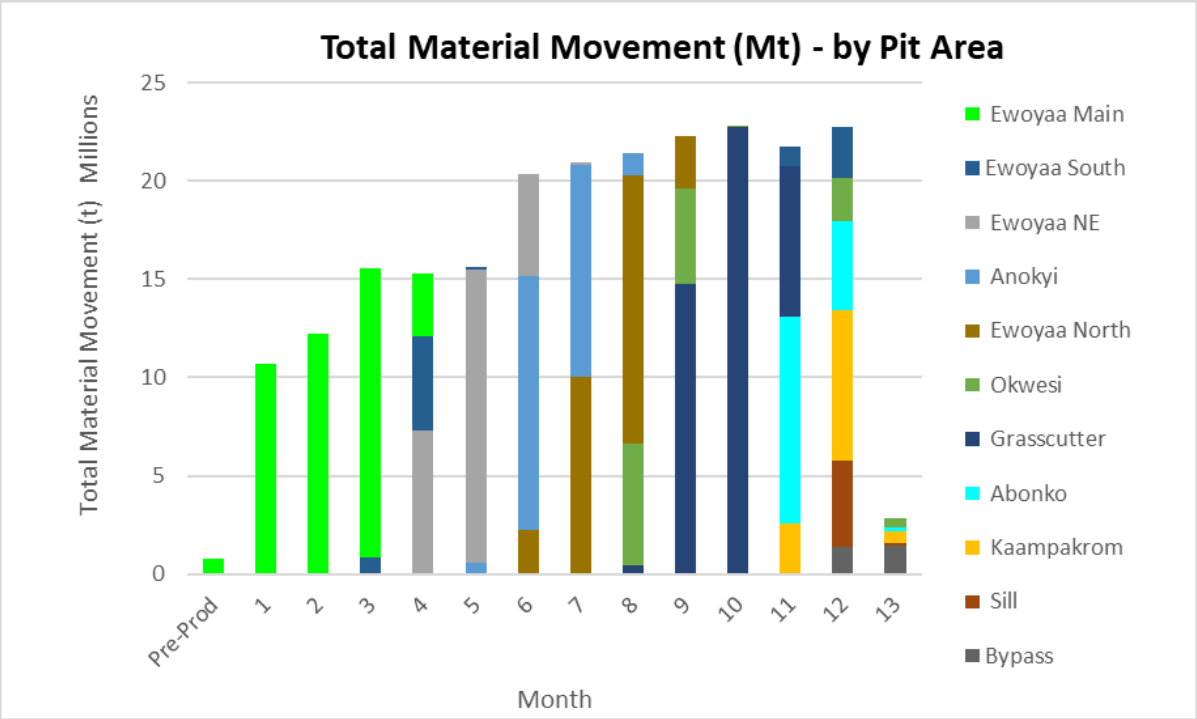

Figure 10: Total material movement by pit

Mining Costs

Estimation of direct mining costs was developed on the basis of a mining contractor operation, under the management of the ALL site operations team and based on the following general assumptions:

- Contract mining costs established via a request for quotation ("RFQ") process involving eight established mining contractors active in the region for the full scope of contract mining services, excluding grade control drilling. Contract grade control costs were provided by the exploration drilling company that conducted the resource drilling at the Project (Geodrill).
- Capital works relating to mobilising and establishing mining operations were requested as part of the RFQ process.
- Owner's operations mining management team costs were estimated by ALL.

The average mining costs per tonne are summarised in ***Table 7***.

Table 7: Mining operating cost summary

Mining Cost per unit of Material	Units	US$ Rate
Average contract mining cost per tonne (TMM)	$/tonne	$3.40
Average mining management cost per tonne (TMM)	$/tonne	$0.16

Ore Reserves

A total of 25Mt at 1.22% Li_2O of crusher feed is mined over LOM. This includes a total of 18.9Mt at 1.24% Li_2O of Indicated Resource (equivalent to 75.5% of the total plant feed) and a total of 6.1Mt at 1.14% Li_2O of Inferred Resource (equivalent to 24.5% of the total plant feed).

The Ore Reserves were determined as part of the mine planning work that Mining Focus Consultants Pty Ltd undertook for ALL as part of the PFS. The PFS was completed by Atlantic and this Ore Reserve Statement is a result of the PFS. The PFS was undertaken by a team of industry professionals as listed below and shown in ***Table 27***.

- Resource Estimate — Ashmore Advisory Pty Ltd
- Mine Engineering — Mining Focus Consultants Pty Ltd
- Geotechnical investigation — SRK Consulting Ghana
- Metallurgy and Processing — DRA Sth Africa, Trinol Pty Ltd, Nagrom
- Hydrogeology — SRK Consulting South Africa & Ghana
- General site infrastructure — Geocrest, Resource Engineering Consultants (REC)
- Tailings storage facility — Geocrest and REC
- Legal tenure — Atlantic Lithium Limited
- Social and Environmental — NEMAS Consult Limited, Environmental and Social Sustainability (ESS)
- Market Research — Atlantic Lithium Limited
- Financial Modelling — Atlantic Lithium Limited

The Ore Reserves as determined for the Project were based on the Modifying Factors as summarised in ***Table 8*** and detailed further in subsequent sections of this announcement. Conversion of Mineral Resources to Ore Reserves has been by the application of appropriate mining factors and assumptions based on the PFS. All currencies are denominated in United States of America dollars, unless specifically stated otherwise.

Table 8: Summary Modifying Factors used for Ore Reserve determination

Item	Unit	Value	
		P1 Pegmatite	**P2 Pegmatite**
Mill throughput	Mtpa	2.0	
Spodumene price (LOM average)	$/t	1,269	
Concentrate grade	%	6	
Royalty	%	6	
Marketing and insurance (% of gross sales)	%	1	
Processing recovery Transition Fresh	%	68 70	51 50
Processing Cost	$/t milled	7.74	
General and Administration	$/t milled	2.93	
Lithium Concentrate Transport Costs	$/t conc.	29.82	
Average Mining Cost (Contract mining)	$/t mined	3.56	
Mining recovery	%	97	
Mining dilution	%	5	
Overall Pit Wall Slope Angle (inclusive of a ramp system)	Degree	Ranging from 34.8° (Oxide) to 46.5° (Fresh)	
Capital expenditure	$M	125	
Sustaining capital	$M	83	
Discount rate	%	8	

It is proposed to mine the resource utilising conventional open pit mining methods and the geotechnical parameters used for pit wall design were developed by a specialist geotechnical consultant. Pit optimisations were completed and the results of which were used to identify the final pit limits.

The mine plan was based on Indicated Resources and Inferred Resources with 24.5% of Inferred Resources included. This Inferred Resource is not considered material to the value of the Project and is not included as part of the Ore Reserve. The mine plan incorporates a three to five month mining ramp-up, with steady state production of 2.0Mtpa of mill feed.

The proposed metallurgical process incorporates well-tested technology and utilises conventional dense media separation techniques. Processing will be conducted in a newly constructed plant adjacent to the mining operations. The metallurgical test work indicated that, based on the processing flow chart adopted, the process plant will produce processing recoveries of around 70% for P1 fresh material and around 50% for P2 material, before processing dilution and discounting of 4% utilised in the financial model.

The Project is located approximately 1km from the N1 national bitumen highway and 110km from the operating deep-sea port of Takoradi. Water supply for the process will be sourced from a combination of pit dewatering, water capture and the nearby reservoir for makeup water.

Baseline environmental and heritage studies have been conducted and environmental licensing is not currently identified to pose a restriction to the planned activities. There are reasonable grounds to expect that future agreements and Government of Ghana approvals will be granted and maintained within the necessary timeframes for successful implementation of the project.

The community has been actively engaged throughout the exploration and resource evaluation stages with ongoing community engagement meetings, local employment from within the affected communities and a

community development programme initiated. The project based on its footprint does not envisage the requirement to relocate villages but will require to relocate individual households impacted by the proposed project design. Labour is expected to be sourced locally within Ghana and proximal to the project site.

The mine plan described above includes 6.1Mt of Inferred Resources at 1.14% Li_2O or 24.5% of the total DMS plant feed. In order to determine whether the Project was still economically viable when plant feed that was classified as Inferred was excluded from the mine plan (and re-categorised from plant feed to waste) ALL developed a cash flow model with all Inferred excluded from plant feed and re-assigned as waste. This alternative cash flow model indicated that the Project is still financially robust when all Inferred plant feed is treated as waste with an All-In-Sustaining Cost (AISC) of US$656/t.

Based on the above, Probable Ore Reserves were declared for the Project. All stated Probable Ore Reserves are completely included within the quoted Mineral Resources and are quoted in dry tonnes. Probable Ore Reserves were declared based on the Indicated Mineral Resources only contained within the pit designs. The financial analysis showed that the Project is economically viable and the risk analysis did not identify any insurmountable risks. ***Table 9*** provides a summary of the Ore Reserves that were determined for the Ewoyaa Lithium Project.

Table 9: Ore Reserve – As of 12 September 2022

Classification	**Ore Reserve**	
	Tonnes (Mt)	**Li_2O Grade (%)**
Probable	18.9	1.24

Competent persons note*:*
All stated Ore Reserves are completely included within the quoted Mineral Resources and are quoted in dry tonnes. The reported Ore Reserves have been compiled by Mr Harry Warries. Mr Warries is a Fellow of the Australasian Institute of Mining and Metallurgy and an employee of Mining Focus Consultants Pty Ltd. He has sufficient experience, relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking, to qualify as a Competent Person as defined in the 'Australasian Code for Reporting of Mineral Resources and Ore Reserves' of December 2012 ("JORC Code") as prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and the Minerals Council of Australia. Mr Warries gives Atlantic Lithium Limited consent to use this reserve estimate in reports.

6. Processing

Metallurgical Testwork

Subsequent to the preliminary metallurgical test work, which was conducted between March and July 2019, additional diamond drilling was carried out from June to July 2021 to provide samples for PFS testwork series. Testing was conducted at the Nagrom Laboratories in Western Australia and included density, uniaxial compressive strength ("UCS"), crushing work index ("CWi"), size by analysis, crush size establishment, variability heavy liquid separation ("HLS") testing and DMS250 pilot scale testing.

For the PFS, 31 diamond drill holes were utilised for the metallurgical sampling programme. A total of 375 pegmatite samples for a total of 450m of half HQ and PQ core were selected from the PFS drilling programme. The sampling was used to generate a total of 64 composite pegmatite samples across the Ewoyaa and Abonko trends, adding to the 95 samples for 17 composites tested previously (as reported in the Scoping Study ***RNS*** of ***7 December 2021***).

Before core composites were crushed, key physical parameters were tested from five deposits as summarised in ***Table 10***. The CWi and UCS values confirm the P1 ore is more crystalline and easier to crush than P2.

Table 10: Summary of ore physical parameters

Test Parameter	Unit	Deposit				
		Ewoyaa Starter		Ewoyaa Main		Anokyi
		P1 fresh	P2 fresh	P1 fresh	P2 fresh	P1 fresh
CWi	kWh/t	10.9	11.0	7.8	10.5	8.4
UCS	MPa	84	124	82	127	105

12 composites from the first three deposits to be mined were crushed to 10mm and 6.3mm to compare the HLS results. These results confirmed that crushing to a top-size of 6.3mm would produce superior results in terms of recovery and concentrate grade. However, the practicalities of achieving a 6.3mm crush at the 2Mtpa throughputs envisioned with higher fines generation, larger proportion of coarse grained P1 mineralisation in the resource than previously modelled and ability to generate a SC6 product with good recoveries at a top size 10mm crush, resulted in this sizing being adopted for the PFS study. The crushing facility has been designed with a target crushed product top-size of 10mm as a key criteria, which based on crushing simulation modelling conducted, should provide a particle size distribution P_{80} of approximately 7.0mm.

64 composites were made up from 12 of the identified deposits at Ewoyaa. All the composites were crushed to 10mm and screened at 0.5mm for HLS comparisons in order to benchmark the deposits. The results are summarised in ***Table 11***.

Table 11: Comparison of gravity response for all deposits at a 10mm crush size

Deposit	P1 Content	Lithology	Primary Concentrate			
			Grade		Overall Lithium Recovery	Overall Mass Yield
			% Li_2O	% Fe_2O_3		
Ewoyaa Starter	69%	P1 Fresh	6.42	0.81	59.3%	16.1%
		P1 Trans	6.71	0.73	47.4%	9.5%
		P2 Fresh	5.52	0.86	20.4%	4.4%
		P2 Trans	5.69	0.82	14.8%	4.0%
Ewoyaa Main	56%	P1 Fresh	6.39	0.81	56.8%	10.9%
		P2 Fresh	5.60	0.91	24.9%	4.6%
Ewoyaa NE	94%	P1 Fresh	6.53	0.89	70.9%	17.5%
		P1 Trans	6.90	0.66	79.3%	28.6%
		P2 Fresh	5.16	0.83	13.8%	4.5%
Ewoyaa South 2	93%	P1 Fresh	6.02	1.15	52.6%	12.5%
		P2 Fresh	5.78	0.71	21.2%	4.3%
Ewoyaa South 1	51%	P1 Fresh	5.89	0.66	44.2%	8.7%
		P1 Trans	5.41	0.69	16.6%	4.7%
Anokyi Main	98%	P1 Fresh	6.25	0.78	65.4%	21.1%
		P1 Trans	6.51	0.73	39.0%	7.1%
Grasscutter E	100%	P1 Fresh	5.90	0.60	56.6%	16.6%
Okwesi N	100%	P1 Fresh	6.69	0.92	55.7%	13.6%
Okwesi S	100%	P1 Fresh	5.59	0.78	54.0%	16.6%
Abonko NW	90%	P1 Fresh	6.77	0.72	80.6%	25.6%
Abonko Quarry	100%	P1 Fresh	6.75	0.88	79.4%	26.8%

Deposit	P1 Content	Lithology	Primary Concentrate			
			Grade		Overall Lithium Recovery	Overall Mass Yield
			% Li_2O	% Fe_2O_3		
EWNW North	100%	P1 Fresh	5.74	0.37	57.3%	14.6%
		P2 Fresh	5.02	0.56	16.5%	5.1%

These results demonstrate variable recovery response of 50% to 80% to gravity processing for P1 fresh ores (with the exception of Ewoyaa South 1). P1 Fresh ore makes up approximately 80% of the MRE. There were insufficient density fractions tested in the HLS work to normalise these recovery results to 6% concentrates, however the concentrate grades were well in excess of 6% on most results. The implication of high >6% concentrate grades is that the corresponding recoveries at 6% would improve significantly. Further possible improvements may potentially be gained from re-crushing the middlings or lowering the crush size.

The results to date were highly encouraging and provide justification for proposing a gravity-only plant for the PFS, particularly if the sales of DSO fines and Feldspar by-product is achievable.

A feature of the testwork has been the consistently good quality of lithium concentrates produced. In the main, the results show the iron content of the concentrates, as expressed by % Fe_2O_3, as being consistently below 1% and total alkalis (Na_20 + K_20) to be less than 3%. Coupled with the coarse size of the concentrates, these are desirable properties for off-takers in addition to the very favourable Project logistics.

Recovery

The PFS recoveries for P1 and P2 materials were based on HLS and DMS 250 test results and on calculation of assumed additional Lithium recovery from middlings.

Ore recoveries selected for the DMS Plant process design criteria are summarised in ***Table 12***. The recoveries interpreted from laboratory results were discounted by 4% to simulate the typical loss of recoveries from laboratory conditions to on-site, large-scale operations. The final recoveries stated in ***Table 12*** were used for estimation of production rates and Project economics.

Recoveries for P1 material into primary concentrate at a 10mm crush were 50-80% from the HLS test work with an average 68% recovery for weathered and 70% for the fresh used for the PFS before discounting (*refer **RNS** of **7 June 2022***).

A P2 recovery of 50% was used for weathered and fresh for the purpose of the PFS study. In the Scoping study, HLS tests on P2 weathered and fresh material at a 6.3mm crush size gave recoveries of 46-61% (*refer **RNS** of **25 November 2020***). Recoveries of P2 to primary concentrates at 10mm crush size ranged from 7-30% and averaged 20% (*refer **RNS** of **7 June 2022***).

The middlings contained ~60% of the lithium and it is expected that after finer crushing (as was done in the Scoping study), at least 50% of this will be recovered giving an overall recovery of 50% before discounting. No samples high in P2 content have been processed through the larger scale DMS100 or DMS 250 plant as yet, and this will be conducted during the next study phase.

Table 12: Final DMS recoveries used for the PFS

Ore Type	% of Ore	Laboratory Recovery	Final Recovery
P1 Transition Material	7%	68%	64%
P1 Fresh Material	76%	70%	66%

P2 Transition Material	1%	50%	46%
P2 Fresh Material	16%	50%	46%

Products

Due to the current buoyant lithium market conditions, considerable interest has been shown from potential off-takers in DSO streams or sources of lower-grade materials from the plant.

In addition is the potential quantities of feldspar that may be produced from the plant – feldspar being defined as aluminosilicates containing a combined alkali content ($Na_20 + K_20$) of greater than 10%. The products from the DMS250 runs were nominally high in iron content – good feldspar should contain less than 0.1% Fe_2O_3. Following testwork processed via high intensity magnetic separation (WHGMS) at 17,000 gauss, the iron content was lowered to 0.04% for the loss of only 3.1% mass. The feldspar grade, measured by the combined alkalis, increased from 10.1% to 10.2%.

This demonstrated low iron products could be produced where required. Samples before and after magnetic separation were prepared and sent to a potential off-taker in Europe for initial assessment. The feedback confirmed that feldspar from Ewoyaa was considered a saleable material. Negotiations are continuing with off-takers for price and quantity indications for the material.

Based on work done to date and indicated by the DMS250 results, a Feldspar DMS circuit was included in the process plant circuit design. The DSO fines material is produced from the plant as standard from the primary sizing screen as explained further in the next section.

The potential sales volumes of suitable materials are shown in ***Table 13***. The quantity and grade of the DSO Fines and Feldspar products will be examined in more detail in the next testwork series, planned for the last quarter of 2022. The average annual quantities noted below were used for the financial analysis but are considered conservative with reasonable upside potential for increased tonnages.

Table 13: Estimate of potential products

Product	Average Annual Quantity (tpa)	% of plant feed tonnage	Size range (mm)	Grade % Li_2O
Spodumene Concentrate	255,000	~10% - 15%	-10+1	6.00
DSO Fines from the plant	300,000	~15% - 20%	-1.0	1.2 - 1.5
Feldspar	330,000	~20% - 40%	-10+1	n/a

7. Process Plant

The processing facility has been designed in accordance with accepted industry practice and the flowsheet incorporates unit operations that are well proven in the industry and commensurate with the testwork conducted and results achieved to date. The testwork supports a flowsheet that utilises conventional DMS processing to recover spodumene to a saleable concentrate.

The plant layout provides ease of access to all equipment for operating and maintenance requirements while maintaining a compact footprint to minimise construction costs *(refer **Figure 11***). The key Project and ore specific design criteria for the processing facility design are as follows:

- 2,000,000tpa of Run-of-Mine ("ROM") ore through the crushing plant operating at 65% utilisation (5,694h/y).
- DMS plant utilisation of 90% (7,884h/y) supported by crushed ore storage and standby equipment in critical areas.

- Sufficient automated plant control to minimise the need for continuous operator interface and allow manual override and control if and when required.

Figure 11: Process plant viewed from the south, looking northwards.

Crushing Flowsheet

ROM feed material will either be direct tipped or loaded by front-end loader into a ROM feed bin. Ore will be withdrawn from the feed bin and scalped on a vibrating grizzly. The oversize reports to the primary jaw crusher. The jaw crusher product is combined with the grizzly undersize and conveyed to the secondary crusher circuit.

The primary crusher product is screened ahead of the secondary crusher. The screen oversize is conveyed to the secondary crusher. The secondary crusher operates in open circuit. The screen undersize bypasses the secondary crusher circuit and is combined with the secondary and tertiary crusher product and conveyed to the crushing silo.

Material is withdrawn from the crushing silo (two streams in parallel) and conveyed to the tertiary crusher screens. The screen oversize is conveyed to the tertiary crusher circuit. The crusher product is conveyed back to the crushing silo i.e. closed circuit tertiary crushing.

The screen underflow is pumped to a dewatering screen with the dewatered product conveyed to the DMS feed bin and the screen undersize pumped to a degrit circuit. The block flow diagram below summarises the crushing circuit configuration (*refer* ***Figure 12***).

Figure 12: Crushing circuit flowsheet

Flowsheet Development

Crushed ore is processed through a conventional and proven three-stage DMS beneficiation circuit. The Primary DMS module produces a low-density fraction that is further processed in the Feldspar DMS to produce a low-density Feldspar product and a waste fraction.

The Primary DMS sinks is further upgraded in the Spodumene DMS with the sinks reporting as a Spodumene concentrate and the floats screened at 3.5 mm. The +3.5 mm fraction is fed to a middlings re-crush circuit. The re-crush product is recirculated back to the Primary DMS. The -3.5 mm fraction reports to the tails circuit.

The screened out -0.8 mm fraction is pumped to the degrit circuit. The underflow or grits fraction is dewatered and conveyed to the grits stockpile. The dewatered grits will be sold as a DSO Fines product. Should the market for DSO Fines diminish, this stockpiled material could alternatively be retained for future flotation plant processing. The flowsheet makes provision for an optional spiral plant to potentially upgrade the grits fraction however this was not included in the base case and not costed in the CAPEX, however the layout provides space for the possible retrofit of this circuit in the future.

The degrit cyclone overflow or slimes fraction is laundered to the thickener. The thickener underflow is pumped to the slimes/tailings disposal facility. The process tailings will be a mix of fine (< 1mm) material and water used in the DMS recovery process. There are no toxic chemicals used in the DMS circuit and therefore the tailings itself is chemically and biologically inert.

The design includes for all associated infrastructure and services, including water services, reagents and consumables, offices, workshops, etc.

The overall process flowsheet is depicted in ***Figure 13***, followed by 3D modelled overviews showing the major plant components design concepts.

Figure 13: Overall simplified process flowsheet

Figure 14: DMS plant layout showing key structures

Figure 15: Primary crusher

Figure 16: Secondary and tertiary crushing building

8. Infrastructure

Access to the site from Accra is along the asphalt N1 Accra-Cape Coast-Takoradi highway which runs along the southern boundary of the Project. Several laterite roads extend northwards from the highway and link communities in the Project area. The port of Takoradi is within 110km to the west from the site, and accessible via the same highway. ***Figure 17*** depicts the full extent of infrastructure at the Project site.

The Project benefits from the proximity of the deep-sea port of Takoradi, even during peak times being less than 4 hours' drive from the Ewoyaa site. The three products from the DMS process plant will be stockpiled on site and removed by front end loader onto 35t tipper trucks for transport to Takoradi.

ALL solicited assistance from established freight forwarding and transport companies established at the port to provide the transport solution on an FOB Incoterms basis. There is no capital cost allowance for trucks and loaders to handle the product export needs, as these groups confirmed they have the capacity to provide the necessary equipment. It is proposed that a combination of warehousing and outdoor storage be utilised proximate to the port.

In the vicinity of 900,000 tonnes of product will be exported annually. This equates to a nominal trucking fleet of fifty 35t tipper trucks. Based on working day shifts only, it is envisaged that two front end loaders will service the product load out requirement, equating to an average cycle time of 15 minutes.

Figure 17: Overall Ewoyaa project infrastructure layout

Water

Raw water supply for the Project will be sourced from passive inflows to the various pits, runoff inflows to the water storage dam ("WSD") and tailings storage facility ("TSF"), augmented via a pump and pipeline from Lake Agege, 7km north of the proposed WSD location. An overall site water balance was completed for the Project, predicting raw water makeup volumes at an average 24.1 m^3/h for the life of mine.

Raw water will be distributed throughout the process plant, mine and infrastructure to meet demand. The groundwater inflows into the pits were modelled for the PFS. The combined inflows from all the pits gradually increases from 9 m^3/h during pre-production, to a peak of 188 m^3/h by year 11. Therefore, the reliance on Lake Agege for providing water to the operation is expected to be a short-term requirement.

Given the relatively low inflows, additional active dewatering from ex-pit boreholes is considered unnecessary. Once additional geological structural information is available and these are exposed in the pit, horizontal drain holes targeting these structures from inside the pit could be used to manage inflows into the Ewoyaa Main and North-East pits.

Although the zone of drawdown does not extend a large distance from the mining area, there are some settlements near the mining area. There is a risk, although deemed low, of some reduction in water levels. ALL has installed monitoring bores for mapping these impacts.

Power

The power supply is planned to come from the electricity grid in Ghana at an average operating cost of $US0.14/kWh. Installed power to the operation is estimated at 6,290 kW and an average continuous load of 4,270kW. The Ghana Grid Company Ltd (GRIDCo) owns the National Interconnected Transmission System in Ghana, and Volta River Authority (VRA) is the primary energy provider in Ghana augmented by other IPP power generation companies providing alternative sources of energy which can be wheeled through the grid.

Ghana currently has 12 commercial power generation facilities with total generation capacity of 2,831MW. This is made up of three hydro power plants at Akosombo, Kpong and Bui representing 56% of generation capacity, an array of thermal plant including combined cycle gas turbines, simple cycle gas turbines and diesel generators representing about 44% of total generation capacity and solar power representing less than 0.1% of total generation capacity.

The preferred option for providing power to the Ewoyaa Project is to construct a 34.5kV single circuit transmission line from the Ewoyaa plant site to Saltpond where there is a 161/34.5kV substation. The transmission line length would be approximately 2km.

Two 161kV transmission lines pass through the mining area and will be diverted around the planned mining areas. Refer ***Figure 17***. The revised route will be approximately 10km in length and requiring 20km of new transmission lines and a major shutdown to decommission the existing lines and connect the replacement lines.

Electrical power will be received from the mine's consumer substation and distributed to the various electrical substations around the plant.

Tailings Management

The TSF proposed is an Integrated Waste Landform (IWL) design (Refer ***Figure 17***), which takes advantage of the proposed northern waste dump and the natural landforms. The WSD comprises of a low permeability face situated on the southwestern face of the waste dump. The embankments of the TSF are proposed to be

constructed using excavated and borrowed low permeability material and waste rock, with borrowed material to be used to construct the WSD.

The Project processing schedule will comprise of a 12.5-year life with a tailings design basis production rate of 400ktpa into the TSF. It is noteworthy that the TSF design capacity provides spare capacity in the event that the DSO Fines product cannot be sold. Therefore, there is sufficient excess capacity in the TSF to accommodate this worst-case scenario and so represents a conservative approach to managing tailings at the Project.

The operation of these facilities is based on an anticipated high recovery, at least 70% of the slurry water volume entering the TSF. The decant pumping system (return water pumps and pipelines) will be designed to accommodate a water return of up to 80% of the tailings slurry water to the process plant. The results of high-water recovery can be directly attributed to a small decant pond, high in-situ dry density of the deposited tailings and minimal seepage losses.

In accordance with the DMP Code of Practice (CoP) (DMP, 2013), the IWLTSF and WSD is assessed as a 'Medium' Category with a classification of 'Category 1'. Tailings will be deposited from the perimeter embankments of the TSF in a sub-aerial manner in thin lifts and beaching towards the decant/rock ring decant at the centre of the facility to form a decant pond away from the main embankment.

The TSF and WSD have capacity for the 1:200-year annual exceedance probability (AEP) 72-hour storm event in accordance with the GISTM requirements, Government of Ghana, and DMP required freeboard. These design objectives have been developed to ensure that premises are decommissioned and rehabilitated in an ecologically sustainable manner in accordance with the DMIRS principal closure objectives for rehabilitated mines and the EPA's objective for Rehabilitation and Decommissioning.

Site Access

A range of road types will be required to and within the Project site to meet a wide range of duties. The hierarchy of road types includes dedicated mine haul roads, the main access roads, general access roads and minor use roads and tracks. Some of the roads will border service corridors, e.g. raw water supply pipe lines, or tailings pump line access. Hence, road alignments also need to consider service routes in addition to transport requirements.

The road widths and construction details have been selected to match the required duties. The main haul road will intersect the existing dirt road that connects the Ewoyaa village to the main highway. A tunnel is proposed for the existing road, so that haul trucks delivery ore to the plant will not interact with local light vehicles and pedestrians.

Buildings / Other

New administration buildings, workshops and warehouses will be established for all plant and mining services. Accommodation of the workforce is proposed utilising the available accommodation in the region.

Fuel storage and distribution will be controlled by the mining contractor as the main user of fuels and lubricants at the site. ALL will make use of locally available services for maintenance of light vehicles, and to support the basic administrative supplies requirements for the operation.

Communications, consisting of phone, internet and radio communications, will be established for the site.

9. ESIA and Permitting

Legislation and Guidelines

Under Ghanaian environmental and social legislation, all undertakings, including mining and allied activities, must be compliant with the Environmental Protection Agency Act 1994, Act 490, and the Environmental Assessment Regulations 1999 (LI 1652). In addition to these two key national legislations, there are over 40 other environmental and social related legislations that any undertaking must be compliant with, depending on the nature, scope, and location of the undertaking.

The ELP holds considerable international outlook, and as such has adopted critical international environmental and social guiding principles and benchmarks. Among these include:

- Equator Principles (EP); EP3 – EP10;
- International Finance Corporation Performance Standards (IFC PS); PS1 – PS6 & PS8;
- WB EHS Guidelines (General) (2007) & WB EHS Guidelines (Mining) (2007);
- International Labour Organisation (ILO) Conventions.

Regulatory Framework and Approvals Process

The Ghana Environmental Protection Agency (EPA) is the legally authorised body for the granting of Environmental Permits to undertakings in the country. Ghanaian environmental approval requirements for mining require a full Environmental and Social Impact Assessment (ESIA). The ESIA and permitting process commences with the registration of the project with EPA. The EPA then screens the application and decides on the need for further study based on the scope of the project, potential environmental and social impacts, and the consent and support of various stakeholders within the project footprint. After this, is a scoping stage, once EPA has requested the conduct of a detailed ESIA study.

A Scoping Report, which includes a Terms of Reference for the ESIA and a description of any issues raised during the consultation process, and how they will be addressed in the ESIA, will be developed and submitted to the EPA for review and approval. The Scoping Report will also be made publicly available.

The ESIA study will cover potential positive and negative impacts on environmental, social, economic, and cultural aspects in relation to the different phases of the project, including transboundary impacts. Upon completion of the ESIA Study, a draft Environmental Impact Statement (EIS) will be developed and submitted to the EPA for review and approval. The approval of the EIS by EPA will be premised on their satisfaction with the identified impacts, and mitigation and management measures outlined in the EIS. The EPA after reviewing the draft EIS may also recommend amendments to the report or the conduct of further studies to warrant the approval of the EIS. Once the EPA is satisfied and approves the EIS, an Environmental Permit for the project will be issued.

Existing Environmental Setting

Topography and Geology

Generally, the Project area landscape is undulating with isolated hills at different locations with an elevation of between 15m to 110m above sea level. The area geologically lies within the Birimian Supergroup, a Proterozoic volcano-sedimentary basin located in western Ghana. The site is also classed as B and C under the Euro Code 8 seismic site classification for soil which consists of outcrop rock masses or very rigid soils and medium-dense sand, gravel, or stiff clay respectively. Analyses of ground vibration data within the Project area indicate that generally the peak particle velocity (PPV) recorded do not pose an elevated seismic vulnerability risk.

Climate

The Ewoyaa area experiences mild temperatures that average between 24 and 28 degrees Celsius all year round and relative humidity of about 70% due to its proximity to the ocean. The area experiences double maximum rainfall with peaks in May-June and October. Annual total rainfall ranges between 90cm and 110cm in the coastal savannah areas and between 110cm and 160cm in the interior close to the margin of the forest zone. Dry seasons usually occur from December to February and from July to September.

Hydrology and Hydrogeology

Within the ELP area, the natural drainage indicates the possibility of several streams and rivers existing or flowing through the area. Nonetheless, very few surface water bodies are actually encountered on the ground, with the majority being dugouts or water holding areas that temporarily dry out during the dry season. Water from dugout sources normally is a mixture of surface runoff and groundwater mostly from the unsaturated zone. No perennial streams or rivers occur within the immediate project area. The British Geological Survey (BGS) hydrogeological description for the Project area is low to moderate groundwater potential with localised highs. Specifically, groundwater yields are poor except where there is thick weathering of the basement rocks allowing groundwater flow. Typical borehole yields are from 0.1 to 0.5l/sec. Surveys conducted in the Project area indicate that the water chemistry is predominantly alkaline, with elevated fluoride levels which is normal for basement geology, and high nitrate levels which indicate contamination from human and animal waste.

Air Quality and Noise

The results of air quality monitoring conducted in the Project area since 2021 to date revealed that prevailing air quality of the ELP area generally falls within the recommended Ghana EPA and WHO levels. On the other hand, noise levels in some areas monitored exceed Ghana EPA and IFC/WHO recommended levels. This observation has been attributed to the proximity of the communities/sampling areas to the Accra-Cape Coast Highway (N1) which is a significant source of noise pollution.

Long-Term Environmental Monitoring

The Project has gathered extensive environmental baseline data from 2019 to date, which provides a snapshot of the quality and nature of the environment. Additionally, the Project has instituted and is implementing a long-term environmental monitoring programme (exploration phase through to closure phase) which will afford prompt detection of deteriorating and/or improving environmental conditions within the Project area to enable appropriate action to be taken where required.

Existing Social Setting

Traditional Ownership of Land

The ELP communities where land ownership is likely to be affected are Abonko, Anokyi, Ewoyaa, Krofu, Krampakrom and Lower Saltpond. Land title in these communities is predominantly held by families, rather than chiefs and stools, as is common in Ghana. Family lands, implicitly inferred by the 1992 Constitution as private property, are devoid of extensive government regulatory mechanisms compared to stool or skin lands. Traditional authorities however have played a key role in resolving and/or mediating conflicts that have arisen in land ownership.

Population

A survey conducted in 2020 on communities within a 2-kilometre radius from the active areas of mineralisation estimated that over 3,562 people were living within that 2-kilometre boundary. The area surveyed included communities like Abonko, Anokyi, Ewoyaa, Krofu, Krampakrom, Ansaadze, and Afrangua.

Cultural Heritage and Archaeology

Cultural heritage and archaeological studies conducted in the Project area reveal that 33 archaeological and heritage resources are located within the Project area. These heritage resources are shrines believed to be a

link between the living and dead. All the shrines in these communities are networked, and rituals for one can be performed at another. Almost all the shrines share common ritual items, functions, and taboos. There may be a need to relocate some of these resources, but this is to be done in consultation with the various Deity-Heads to avoid social disruption and prevent potential non-cooperation.

Health, Safety, Environment and Communities Management System (HSECMS)

The Project has developed a number of mechanisms to facilitate the sustainable and effective management of HSEC concerns within its footprint. This includes documented plans, agreements, toolkits, and registers that provide the framework to manage the HSEC management system of the project.

- **Stakeholder Engagement Plan (SEP)**: Describes the applicable regulatory and/or other requirements for disclosure, consultation and ongoing engagement with the Project's stakeholders, and provides the framework to build a two-way communication between the Project, the potentially affected communities and other project stakeholders through a clear, simple and effective communication strategy.
- **Community Development Plan (CDP)**: Aimed at ensuring inclusive decision-making with host communities, supporting environmental and socio-economic development, enhancing community wellbeing, and expanding the capabilities of communities to effectively engage with the Project, government, and Community-Based Organisations (CBOs) on development issues that concern the communities.
- **Emergency Response Plan (ERP)**: Identifies potential emergency scenarios likely to occur in association with the Project and their likely consequences, preventive strategies, response procedures, and corresponding responsible parties/persons, including resource requirements for efficient emergency response and response timing and reporting channels and procedures.
- **HSEC Risk Register**: Details all the identified risks of the ELP (Exploration Phase) and the potential impacts or consequences of those risks occurring. It furthermore outlines control and management measures for each identified risk, and the responsible parties for managing those risks.
- **Baseline Exceedance Level Tracking**: Serves as a proactive monitoring tool to identify deteriorating or improving environmental conditions (air and water quality, and noise levels) within the ELP footprint based on data from monthly environmental monitoring.

10. Operating Costs

Operations

Unlike the many gold projects in Ghana, the Project is located close to the coast in a semi-urban location. Therefore, the Project will not need to be as self-sufficient as would be the case in a remote location. It is expected that the local Ghanaian workforce will have previous mining and plant operation experience, likely from similar sized gold operations in the region, however Ewoyaa will be the first lithium production operation in the country.

The operation will seek to predominantly employ a core group of experienced Ghanaian management and supervision, supplemented by a small number of expatriates with specific expertise in lithium production which will be critical for the initial training and management of the operation and plant commissioning.

A small expatriate team of nominal five senior personnel has been included for start-up, commissioning, operational readiness and establishment of steady-state production. The expatriates are expected to remain with the operation for one to three years, after which time it is anticipated that the operation will employ 100% Ghanaian personnel.

Ghanaian plant operating personnel will be provided with pre-operations training from experienced expatriates to become familiar with DMS operating procedures and problem-solving techniques in advance of commissioning. This will be followed by coal-face experience on the plant during testing, commissioning and ramp-up to nameplate production.

It is estimated that upward of 300 new jobs will be created at the Project.

Economic development will be encouraged within the local community and the region in general. Local contracts will be let where possible, and ALL will work actively with existing and emerging companies in Ghana to achieve this aim.

Operating costs were developed from first principles, utilising a combination of database information from similar projects (both in Ghana and other lithium projects) and from Project specific budgetary quotations from experienced suppliers/contractors active in the region *(refer **Table 14)***.

OPEX

Project operating costs have been developed using the parameters specified in the plant process design criteria and the contract mining estimate. The operating cost estimate includes all direct costs for the production of lithium concentrate at the Ewoyaa plant site, plus Feldspar and DSO Fines by-products. The operating cost target accuracy is ±20% as at Q2 2022.

Corporate costs associated company overheads, Ghana administration office costs, project financing costs, sunk costs, escalation and foreign exchange rate fluctuations are excluded. Corporate Tax and VAT are addressed separately in the cash flow model (refer section 12 of this RNS).

An allowance has been made for contract laboratory costs based on a quotation received for the design, site establishment, commissioning, and ongoing operations. Reagent consumptions have been derived from recent metallurgical testwork and benchmarking against similar operations. Generally, reagent unit costs were obtained from relevant suppliers with most DMS consumables sourced from South Africa.

The operating cost breakdown is summarised in ***Table 14*** through to ***Table 21*** and ***Figure 18***. Following these are separate tables providing more detailed level breakdowns of each component of OPEX.

Table 14: Summary of project operating costs

Cost Centre	**Cost Basis US$**	**Comment**
Mining Costs	$3.56 / tonne	Per tonne of material mined (ore and waste), including Mine Management team
Processing Cost	$7.77 / tonne	Per tonne of ore processed
General & Administration Costs	$2.87/ tonne	Per tonne of ore processed
Lithium Concentrate Transport Costs	$29.82 / tonne	Per wet tonne of concentrate produced
Feldspar Transport Costs	$29.82 / tonne	Per wet tonne of feldspar produced
DSO Fines Transport Costs	$32.66 / tonne	Per wet tonne of DSO fines produced
Other Costs		
Government Royalty	5%	Of receipts from product sales
Local Partner Royalty	1%	Of receipts from product sales
Surface taxes / permitting costs	$57,444	Per annum for LOM
GET Fund	2.5%	Of non-exempt goods & services cost
NHIL Fund	2.5%	Of non-exempt goods & services cost
COVID 19 HRL	1%	Of non-exempt goods & services cost
CDA Fund (community development)	1%	Of profit
Corporate tax	35%	Of earnings before tax

Figure 18: Proportions of operating cost

Table 15: Summary of process operating costs

Item	US$/y	US$/t Feed
Processing Labour	4,322,011	2.16
Power (@ $0.14/kWh)	3,916,070	1.96
Maintenance	2,793,224	1.40
Reagents and Consumables	2,691,142	1.35
Miscellaneous (includes Laboratory)	1,761,540	0.88
General and Administration (incl. Labour)	5,850,388	2.93
Total	**21,334,375**	**10.67**
Total with General & Administration Removed		**7.74**

Table 16: Power cost summary

Area	Total Cost	
	US$/y	US$/t
ROM Feed & Crushing	1,327,511	0.66
DMS Feed Circuit	107,366	0.05
Primary DMS	650,082	0.33
Feldspar DMS	535,340	0.27
Spodumene DMS	382,599	0.19
Thickening & Degrit Circuits	134,934	0.07
Water Reticulation	185,326	0.09
Product and Discard Handling	60,948	0.03
Services	531,965	0.27
Total	**3,916,070**	**1.96**

Table 17: Summary of maintenance materials and specialist costs

Area	Total Cost	
	US$/y	US$/t
ROM Feed & Crushing	1,581,944	0.79
DMS Circuits	374,115	0.19
Thickening & Water Circuits	446,224	0.22
Piping, Electrical & Instruments	514,172	0.26
Services	11,602	0.01
Total	**2,928,056**	**1.46**

Table 18: Laboratory cost summary (including mine)

Area	Number of units	Unit cost US$	US$/y	US$/t
Contract Laboratory costs	12 months	52,755.00	633,060	0.32
Assays per sample per day	200	3.76	274,480	0.14
Feldspar assays per day	40	40.00	584,000	0.29
Total per annum:			**1,491,540**	**0.75**

Table 19: General and administration costs

	Item	Allowance	Basis	Annual Costs US$
Site Office	Telecommunications			135,000
	Office Suppliers, etc	1,767	per month	21,200
Insurances	Operational		per annum	706,000
Financial	Banking Charges, Legal fees, audit			68,700
Consultants	Environmental Consultants	2,000	per month	24,000
	Consultants and Vendors	4,000	per month	48,000
	Environmental Compliance Testing			30,000
Personnel	Recreational and Local Facilities			20,000
	Entertainment			10,000
	Safety Clothing			47,600
	Training			45,000
Contracts	IT Service Contract	4,000	per month	48,000
	Security Contract	12,000	per month	144,000
	LV Maintenance Contract	12,000	per month	144,000
General	Community Relations Expenses	4,500	per month	54,000
	Bussing Contract - Village to Site			124,800
	Miscellaneous			30,000
TOTAL	**$0.85/t processed**			**1,700,300**

Table 20: Labour costs summary

Department	Employee Numbers	Employee per Shift	Expat Numbers	Senior Ghanaian	Local Ghanaian	OPEX US$/year
Finance & Administration	62	23	0	3	59	1,351,288
Human Resources	4	4	0	1	3	172,531
OHS & Security	108	30	0	2	106	1,922,480
Supply and Logistics	12	6	0	1	11	325,246
Environmental & Social	11	11	0	2	9	378,543
Operations Management	2	2	1	0	1	472,592
Process Management	2	2	1	0	1	350,806
Metallurgy	10	4	0	6	4	794,360
Process Operations	66	18	0	2	64	2,177,805
Plant Maintenance	15	15	0	1	14	526,447
Mine Management	4	4	2	1	1	704,680
Mine Planning	8	8	0	1	7	355,396
Mine Operations	7	4	0	5	2	517,259
Mine Geology	7	4	0	2	5	380,890
Exploration Team	21	21	1	1	19	999,806
Labour Totals	**339**	**156**	**5**	**28**	**306**	**$11,430,130**

Table 21: Summary of concentrate transport costs

Item	SC6 ($/t)	Feldspar ($/t)	DSO Fines ($/t)
Stockpiling on site	0.96	0.96	0.96
Loading and trucking to port	13.00	13.00	13.00
Storage at port	2.17	2.17	2.17
Loading onto ship.	4.70	4.70	4.70
Sampling at port	0.23	0.23	0.23
Port charges	5.24	5.24	5.24
Warehousing	2.10	2.10	2.10
Total, dmt basis	28.40	28.40	28.40
Moisture content (%)	5%	5%	15%
Total, wmt (moisture content applied)	**29.82**	**29.82**	**32.66**

11. Capital Costs

The scope of the capital cost estimate comprises the engineering and design effort to a level supportive of a capital cost estimate of overall accuracy ±20%.

The high-level scope of plant facilities comprises of a crushing circuit, which receives ROM ore from the mining operation, a DMS plant and the various stockpiles for the concentrates and grits, as well as truck discharge bin for the coarse tailings stream. Support services and infrastructure facilities includes the TSF, WSD, overland piping, power supply and powerline relocation work, and all roads and buildings to support the mining operation.

The mining contractor mobilisation, site establishment and pre-production costs will be amortised across the first year of operation, in negotiation with the mining contractor, in order to minimise upfront capital cost. The impact of these deferred costs is incorporated in the financial modelling applying an interest rate of 7%.

Estimate Basis

The estimate has been presented in United States dollars currency as at Q2 2022. Prices obtained in other currencies has been converted to US$ using applicable exchange rates. Fluctuations in exchange rates from the date of quotation to the date of indent have not been taken into consideration.

The estimates have been set up in such a way as to facilitate a PFS level of detail. For this level of study, the estimate has been produced using budget quotations for major items and where required, in-house data, and is based on the engineered plant design and associated infrastructure and facilities described herein.

The capital cost estimate does not include for the following and is summarised in ***Table 22***:

- Corporate costs and associated company overheads
- Project financing costs
- GST, VAT, or other taxes or duties
- Sunk costs

Table 22: Capital cost summary, US$ ±20%

Area	US$
1. Construction Preliminaries & General	4,496,225
2. 3-Stage Crushing Facility	26,994,765
3. DMS Plant & Services	23,646,756
4. Infrastructure	19,198,194
5. Mining	1,462,185
6. Management Costs	13,817,535
7. Owners Cost	18,313,913
8. Working Capital	2,732,243
Sub Total	**110,661,817**
9. Contingency	14,206,513
Grand Total	**124,868,329**

12. Financial Analysis

A PFS financial model was developed for the purpose of evaluating the economics of the Project. Summary results from the financial model outputs are presented in tables within this section, including financial analysis, cash flow projections and sensitivities.

The main sensitivity factor in the financial analysis is the SC6 price forecast which was based on an average consensus pricing across financial institutions and independent price forecasts available in the public domain or through membership and listed in ***Table 23***. All costs are presented in current US Dollars.

Table 23: PFS Study SC6 consensus pricing FOB Ghana used for the 2025 through 2037 period.

Year	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
PFS SC6 US$	**2,300**	**1,800**	**1,400**	**1,300**	**1,300**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**
Min US$	1,300	1,100	1,100	1,100	980	850	850	850	850	850	850	850	850
Mean US$	2,284	1,747	1,392	1,332	1,260	1,225	1,226	1,226	1,226	1,226	1,226	1,226	1,226
Max US$	3,525	2,725	2,100	1,809	1,614	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500

The Project is funded under a co-development agreement made with Piedmont Lithium Inc (“PLL") on 1 July 2021, where Piedmont has the right to earn up to 50% at the project level and 50% SC6 offtake at market rates by solely funding US$17m towards studies and exploration and US$70m towards mine capex. Piedmont also subscribed in Atlantic’s shares, investing £11.52m (US$16.0m) to receive a 9.9% interest in the Company. Any cost overruns or cost savings for the development of the Project (i.e. where the development costs are more or less than the funding in the agreement) will be shared equally between the Company and PLL.

The funding for the Project has been included on the premise that all project development requirements will be funded by the PLL agreement, and any additional funding required by the company will be via cash or equity. Revenue was based on a consensus lithium selling price as stated in ***Table 23*** (“PFS SC6 US$” row) that averaged US$1,359/t over the LOM for SC6, FOB Ghana port of Takoradi (refer tables below).

As outlined above, operating costs for processing and administration were derived from estimates generated by budget quotations or benchmarking from similar operations and first principle estimates based on plant operating data. No funding for exploration work during operations was included.

Mining costs are based on the contractor mining RFQ process. The mining contractor mobilisation and site establishment costs are amortised over the first year of production, incurring interest of 7% in order to defer the capital cost in negotiation with the mining contractor.

Depreciation and amortisation have been expensed at the rates applicable for tax deductibility under the Ghana fiscal regime for mining companies.

The Project would be subject to standard Ghana corporate taxation arrangements for exploitation companies. The model provided for the inclusion of a corporate tax rate of 35% and royalties paid to the Government based on a percentage of the return from production.

A 5% royalty is payable to the Ghana government on sale of SC6. Additional royalties for the concessions are payable to one joint venture partner; 1% for LOM to the Ewoyaa, Abonko and Kaampakrom deposit JV partner, and an additional 1% that is capped at US$2m.

A cash flow model was prepared by ALL, and the results of the financial analysis summarised in ***Table 24***, ***Table 25*** and ***Table 26***.

Table 24: Cash Flow model inputs summary

Variable	**Units**	**2.0Mtpa**
Life of Mine	yrs	12.5
Waste Mined	kt	200,273
Ore Mined	kt	24,966
Strip Ratio, first 5 Years	W:O	5.2
Strip Ratio, LOM	W:O	8.0
LOM Average Resource Grade (Li_2O)	%	1.22%
LOM Average Resource Recovery	%	62.5%
% of P1 Material	%	83.0%
6% Spodumene Production, LOM	kt	3,181
LOM Average Product	ktpa	255
Annual estimated power consumption	MW	27,970
Capex	US$M	124.87

Table 25 provides a summary of the operating cash costs contained within the cash flow model.

Table 25: Operating cash costs summary LOM

LOM Variable	**Units**	**2.0Mtpa**
Mining Costs Total	US$M	801.9
Processing Costs Total	US$M	194.1
General & Admin Costs Total	US$M	71.6
Freight & Selling Costs Total	US$M	340.0
GET, NHIL, HRL, CDA Funds Contribution	US$M	30.2
Sub Total Operating Expenditure	**US$M**	**1,437.7**
Royalties (Government & NSR)	US$M	285.1
Rehabilitation Provision	US$M	27.0
Land Taxes & Fees	US$M	0.7
Corporate taxes paid	US$M	1,008.8
Import Duties, Non-mining Goods	US$M	4.2
Sustaining Capital Costs	US$M	83.0
Net Operating Costs	**US$M**	**2,846.5**

Table 26 provides the results of pre- and post-tax cash flows, NPV's and Internal Rate of Returns ("IRR") for the base case, using an annual average SC6 selling price of US$1,359/t FOB Ghana port. For annualised pricing assumptions refer to ***Table 23***.

Table 26: Cash Flow model key results

Variable	**Units**	**2.0Mtpa**
Lithium SC6 Concentrate Revenue	US$M	4,321
Revenue By-products	US$M	524
IRR, Post Tax	%	224%
C1 Cash Cost	US$/t	277.70
NPV (8%) Pre-Tax	US$M	1,999
NPV (8%) Post-Tax	US$M	1,328
EBITDA	US$M	3,095
Payback	Months	4.9
NPAT, LOM	US$M	1,873
NPAT / year average	US$M	150
Surplus Cashflow, Pre-Tax	US$M	3,008

Cash Flow Sensitivities

The Post-Tax Net Present Value ('NPV') sensitivity results are represented in ***Figure 19***.

Project cash flows are most sensitive to changes in concentrate selling price where a 10% change in price resulted in a 17.0% change to the Post-Tax NPV. This was closely followed by sensitivity to changes in recovery or grade at 15.4%.

Sensitivity adjustments of project expenses demonstrated that mining costs, which made up the largest portion of operating expenditure, resulted in the most significant movements in project NPV followed by processing, concentrate transport and was least sensitive to changes in capital cost.

The +/-25% sensitivity range over average LOM SC6 pricing shown in ***Figure 19*** below equates to an approximate US$1020 to US$1700/t price range.

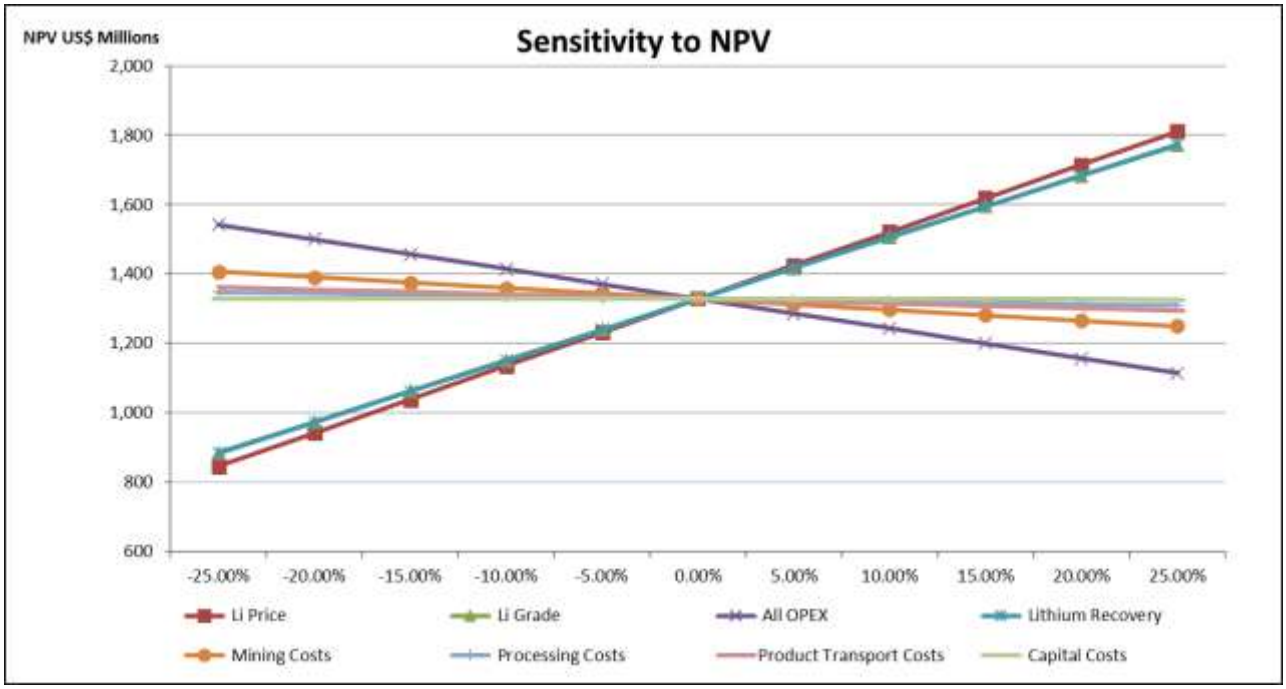

Figure 19: Cash flow sensitivities graph, NPV_8 basis

13. PFS Contributors

ALL engaged various experienced and specialist technical consultants to assist their project team in managing and coordinating the preparation of the PFS. Contributors to the PFS, and their areas of contribution, are listed in ***Table 27***.

Competent Persons

Information in this report relating to the exploration results is based on data reviewed by Mr Lennard Kolff (MEcon. Geol., BSc. Hons ARSM), Chief Geologist of the Company. Mr Kolff is a Member of the Australian Institute of Geoscientists who has in excess of 20 years' experience in mineral exploration and is a Qualified Person under the AIM Rules. Mr Kolff consents to the inclusion of the information in the form and context in which it appears.

Information in this report relating to Mineral Resources was compiled by Shaun Searle, a Member of the Australian Institute of Geoscientists. Mr Searle has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Searle is a director of Ashmore. Ashmore and the Competent Person are independent of the Company and other than being paid fees for services in compiling this report, neither has any financial interest (direct or contingent) in the Company. Mr Searle consents to the inclusion in the report of the matters based upon the information in the form and context in which it appears.

Information in this report relating to metallurgical results is based on data reviewed by Mr Noel O'Brien, Director of Trinol Pty Ltd. Mr O'Brien is a Fellow of the Australasian Institute of Mining and Metallurgy (AusIMM) and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the December 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code). Mr O'Brien consents to the inclusion in the report of the matters based upon the information in the form and context in which it appears.

The reported Ore Reserves have been compiled by Mr Harry Warries. Mr Warries is a Fellow of the Australasian Institute of Mining and Metallurgy and an employee of Mining Focus Consultants Pty Ltd. He has sufficient experience, relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking, to qualify as a Competent Person as defined in the 'Australasian Code for Reporting of Mineral Resources and Ore Reserves' of December 2012 ("JORC Code") as prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and the Minerals Council of Australia. Mr Warries gives Atlantic Lithium Limited consent to use this reserve estimate in reports.