ASX ANNOUNCEMENT
14 December 2021

Lycopodium completes Direct OFS for Arcadia Project

HIGHLIGHTS:

- **Direct Optimised Feasibility Study (Direct OFS) confirms strong technical and economic viability of Arcadia under a single-stage development pathway to 2.4Mtpa throughput.**
- **Study completed by leading engineering consulting firm, Lycopodium, to +/- 12.5% capital expenditure estimation accuracy, building on the technical assessments undertaken in the Staged Optimised Feasibility Study (October 2021).**
- **Prepared under three LOM average lithium product pricing scenarios: base (US$892/t spodumene concentrate 6% (SC6) reference price), high (US$1,019/t) and low (US$736/t).**
- **Financial outcomes highlight substantial capital and operating efficiencies achieved through single-stage development to 2.4Mtpa, relative to staged pathway.**
- **Pilot Plant success de-risks project execution, process flowsheet and provides bulk technical petalite samples for customers qualification.**
- **Strategic partnership process on-track following receipt of non-binding proposals in November.**

ARCADIA DIRECT OPTIMISED FEASIBILITY STUDY (DIRECT OFS): KEY OUTCOMES					
Key metric (100% project basis)	**Unit**	**Direct OFS**			**Staged OFS**
Price deck utilised		**High prices**	**Base prices**	**Low prices**	
Annual process throughput	Mtpa	2.4	2.4	2.4	2.4
Initial life-of-mine (LOM) (Ore Reserve)	years	18.3	18.3	18.3	20.0
Average head grade (Ore Reserve)	% Li_2O	1.19	1.19	1.19	1.19
Average production –spodumene	ktpa conc.	147	147	147	133
Average production – technical petalite	ktpa conc.	94	94	94	86
Average production – chemical petalite	ktpa conc.	24	24	24	22
Pre-production capital expenditure	US$m	192	192	192	140
Stage 2 capital expenditure	US$m	-	-	-	72
Sustaining capital expenditure	US$m	36	36	36	39
Post tax investment to positive cash	US$m	201	202	204	148
C1 cash operating cost	US$/t conc.	369	357	345	378
All-In-Sustaining-Cost (AISC)	US$/t conc.	376	364	353	386
LOM average SC6 reference price	**US$/t SC6**	**1,019**	**892**	**736**	**736**
IRR (pre-tax, real basis, ungeared)	**%**	**72**	**61**	**48**	**35**
Pre-tax $NPV_{10\%}$ (real basis, ungeared)	**US$m**	**1,399**	**1,022**	**646**	**465**
IRR (post-tax, real basis, ungeared)	**%**	**71**	**60**	**47**	**34**
Post-tax $NPV_{10\%}$ (real basis, ungeared)	**US$m**	**1,268**	**929**	**590**	**408**
Average annual EBITDA (post-tax)	**US$m**	**232**	**175**	**118**	**97**
Project net cashflow (post-tax)	**US$m**	**3,504**	**2,597**	**1,690**	**1,468**
Payback period (from first production)	**Years**	**3.0**	**3.3**	**3.6**	**5.4**

Cautionary Statement: ARCADIA PROJECT DIRECT OPTIMISED FEASIBILITY STUDY (OFS)

The Direct OFS production schedule is comprised entirely of Ore Reserves and contains no Inferred Mineral Resource material.

The Mineral Resource underpinning the Ore Reserve and production target in the Direct OFS have been prepared by Competent Persons in accordance with the requirements of the JORC Code (2012). The Competent Person's Statement(s) are found in the section of this ASX release titled *"Competent Person's Statement(s)"*. For full details of the Mineral Resources estimate, please refer to Section 1.3 of the Direct OFS Executive Summary. Prospect confirms that it is not aware of any new information or data that materially affects the information included in that release. All material assumptions and technical parameters underpinning the estimates in that ASX release continue to apply and have not materially changed.

This release contains a series of forward-looking statements. Generally, the words "expect," "potential", "intend," "estimate," "will" and similar expressions identify forward-looking statements. By their very nature forward-looking statements are subject to known and unknown risks and uncertainties that may cause our actual results, performance or achievements, to differ materially from those expressed or implied in any of our forward-looking statements, which are not guarantees of future performance. Statements in this release regarding Prospect's business or proposed business, which are not historical facts, are forward-looking statements that involve risks and uncertainties, such as Mineral Resource estimates, Ore Reserve estimates, market prices of metals, capital and operating costs, changes in project parameters as plans continue to be evaluated, continued availability of capital and financing and general economic, market or business conditions, and statements that describe Prospect's future plans, objectives or goals, including words to the effect that Prospect or management expects a stated condition or result to occur. Forward-looking statements are necessarily based on estimates and assumptions that, while considered reasonable by Prospect, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies. Since forward-looking statements address future events and conditions, by their very nature, they involve inherent risks and uncertainties. Actual results in each case could differ materially from those currently anticipated in such statements. Investors are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date they are made.

Prospect has concluded that it has a reasonable basis for providing these forward-looking statements and the forecast financial information included in this ASX release. This includes a reasonable basis to expect that it will be able to fund the development of the Arcadia Project upon successful delivery of key development milestones and when required. The detailed reasons for these conclusions are outlined in the section of this ASX release titled *"Funding pathway"*. While Prospect considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Direct OFS will be achieved.

To achieve the range of outcomes indicated in the Direct OFS, pre-production funding in excess of US$192m will likely be required. There is no certainty that Prospect will be able to source that amount of funding when required. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Prospect's shares. It is also possible that Prospect could pursue other value realisation strategies such as a sale, partial sale or joint venture of the Arcadia Project. These could materially reduce Prospect's proportionate ownership of the Arcadia Project.

This ASX release has been prepared in compliance with the current JORC Code (2012) and the ASX Listing Rules. All material assumptions, including consideration of all JORC modifying factors on the Ore Reserve, production target and forecast financial information are based have been included in this ASX release, including the Direct OFS Executive Summary (and summarised again in Appendix A).

Introduction

Prospect Resources Limited (ASX: PSC, FRA:5E8) (**Prospect** or **the Company**) is pleased to announce the results of the Direct Optimised Feasibility Study (**Direct OFS**) on its 87%-owned Arcadia Lithium Project (**Arcadia**, **Arcadia Project** or **the Project**).

The Direct OFS presents a development pathway for Arcadia that involves construction of a 2.4Mtpa nameplate capacity plant in a single stage, providing capital efficiencies and improved economic returns relative to the two-phase approach presented in the Staged OFS released in October 2021 (refer ASX announcement 11 October 2021).

The Direct OFS was prepared by leading engineering consulting business, Lycopodium, with assistance from Prospect and selected external contributors. Where required, Lycopodium provided direction in the planning and execution of programmes designed to reduce technical risk, resulting in increased confidence and accuracy in process development, engineering design and cost estimation. The Direct OFS capital expenditure has been prepared to a +/-12.5% overall estimation accuracy.

As with the Staged OFS, the Direct OFS reflects the strong potential of Arcadia to become a compelling long life, large scale, hard rock open pit lithium mine in Zimbabwe. It results in enhanced forecast economics and again confirms the Project to be among the best lithium development projects globally in terms of scale and cost of production.

Current engagement under the previously announced formal partnership process (being managed by Azure Capital and Vermillion Partners) is focused on the development and financing of Arcadia under the Direct OFS pathway.

Prospect Managing Director, Sam Hosack, commented:

"On behalf of the entire Prospect team, I am proud to announce completion of the Arcadia definitive optimisation process with release of the Direct OFS."

"While the Staged OFS presented a strong development case for Arcadia with a lower upfront capital requirement, the single-stage build to 2.4 Mtpa was always expected to be more compelling in terms of capital and economic efficiencies. This expectation has been resoundingly validated by the outcomes of the Direct OFS."

"The Direct OFS further enhances Arcadia's positioning as one of the world's premier hard rock lithium assets, with outstanding projected returns under a range of lithium price scenarios. It builds on the detailed technical assessments undertaken as part of the DFS (2019) and Staged OFS (October 2021) in outlining a robust and highly attractive mine development case for Arcadia."

"As one of the only independent, shovel-ready projects globally without offtake totally locked up, it is unsurprising that interest in the current Arcadia strategic partnership process being undertaken by Prospect is strong."

Arcadia: A world-class lithium mine

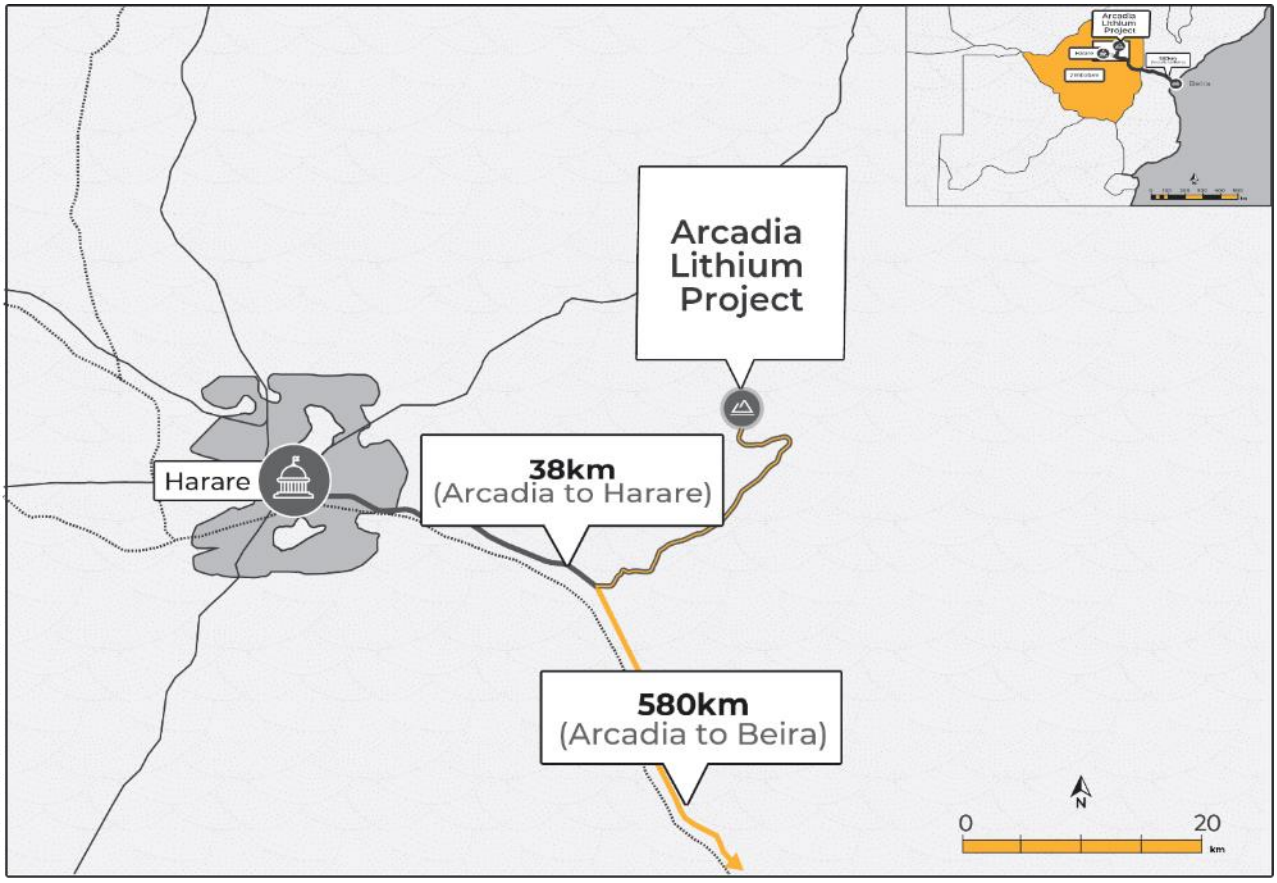
Brief Overview

Arcadia is located in the Mashonaland East District of Zimbabwe, approximately 38km east of the Capital, Harare (17º46'26" S 31º24'34" E). It is positioned within an established mining jurisdiction, where mining and export of lithium products has been ongoing for over 60 years.

Arcadia is owned by Prospect, through its 87% owned subsidiary, Prospect Lithium Zimbabwe (pvt) ltd (**PLZ**). The Project occupies an area of more than 9km^2 and incorporates historical lithium and beryl workings, and the existing Pilot Plant producing technical grade petalite samples.

The Project is close to major highways and railheads. The nature and location of the Port of Beira (a regional export hub located less than 600km from Arcadia by road transport) is also a key advantage. Arcadia's proximity to Harare provides access to a source of skilled and semi-skilled labour, and qualified technical and commercial personnel. Arcadia is situated in close proximity to key infrastructure, including being 11km from the major power transmission line between the region's largest hydro-electric facilities, providing ease of interconnection, and reliability of supply.

Figure 1: Location of the Arcadia Project



Planned development of Arcadia involves bulk open pit mining of a large Lithium-Caesium-Tantalum (LCT) pegmatite followed by crushing, dense media separation, milling, froth flotation and magnetic separation to produce lithium and tantalum concentrates.

In November 2018, Prospect released a Definitive Feasibility Study (**DFS**) on the Project. Subsequent work on the Mineral Resource, mine design, metallurgical testing programmes and product marketing resulted in an Updated DFS completed in late 2019.

The Updated DFS embedded a market-driven approach in which the production and sale of premium ultra-low iron, technical grade petalite concentrate was a key driver of development strategy. This strategy fed into mine planning and in turn influenced the design of the primary petalite recovery circuit such that production of technical grade petalite was maximised.

In October 2021, the Company released a Staged OFS in which the studied development of Arcadia was undertaken via two build stages in order to reach eventual nameplate capacity of 2.4Mtpa. The Staged OFS was authored by Lycopodium and represented a lower upfront capital cost option to developing Arcadia, with reduced execution and market risk. Although the staged development pathway presents an attractive alternative, the preferred pathway for development of Arcadia remains the direct, single-stage approach.

The Arcadia Direct OFS

The capital estimate for the Direct OFS has been prepared in accordance with the Lycopodium Cost Estimating Procedures and fulfils the requirement of a AACE Class 2 Estimate ("Bankable Feasibility Estimate") with an accuracy range of ±12.5%. The overall estimation accuracy for the Direct OFS is ±15%.

Key contributors to the Direct OFS include the Study Manager, Lycopodium (process plant design and review, plant capital and operating cost estimates), CSA Global (Ore Reserve, mine planning), Practara Ltd (geotechnical services), SRK Consulting (environmental assessment) and Wood Mackenzie (previously named Roskill Consulting, for price forecasting).

The Direct OFS has confirmed the strong technical and economic viability of conventional open pit mining and gravity processing of the world-class Arcadia deposit via single-stage development of a 2.4Mtpa throughput mining operation and processing plant.

Key physical outcomes

The existing Mineral Resource estimate for Arcadia is 72.7 million tonnes at 1.06% Li_2O and 119 Ta_2O_5. This estimate was reported in accordance with the JORC Code (2012).

For full details of the Arcadia Mineral Resource estimate, refer to Prospect ASX release dated 11 October 2021, *Arcadia Staged Optimised Feasibility Study*. Prospect is not aware of any new information or data that materially affects the information included in that release and all material assumptions and technical parameters continue to apply.

Table 1: Arcadia Mineral Resource estimate* 0.2% Li_2O Cut-off *(October 2021)

Category	Tonnes (Millions)	Li_2O %	Ta_2O_5 ppm	Contained Tonnes Li_2O	Ta_2O_5 (Mlbs)
Measured	15.8	1.12%	113	176,900	3.9
Indicated	45.6	1.06%	124	483,600	12.5
Inferred	11.2	0.99%	119	111,300	2.9
Total	**72.7**	**1.06%**	**119**	**770,200**	**19.4**

CSA Global has undertaken open pit optimisation, open pit designs, production scheduling and reporting of an Ore Reserve estimate in accordance with the JORC Code (2012 Edition).

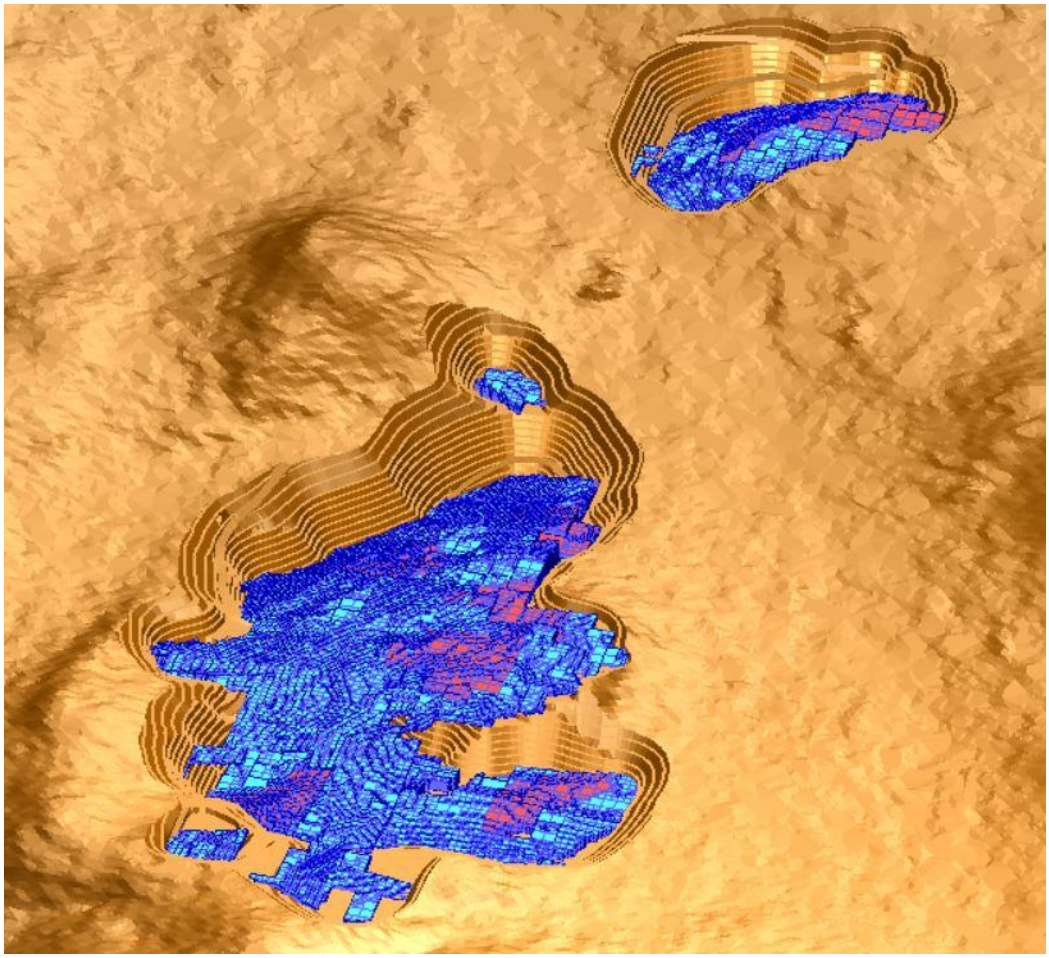
For full details of the Arcadia Ore Reserve estimate, refer to Prospect ASX release dated 11 October 2021, *Arcadia Staged Optimised Feasibility Study*. Prospect is not aware of any new information or data that materially affects the information included in that release and all material assumptions and technical parameters continue to apply.

Table 2: Arcadia Ore Reserve estimate (October 2021)

Category	Tonnes (Mt)	Grade (Li_2O %)	Contained Li_2O (Mt)	Ta_2O_5 (ppm)	Contained Ta_2O_5 (Mlb)
Proved	11.8	1.25	144,000	114	3.0
Probable	30.5	1.17	357,000	123	8.3
Total Ore Reserve	**42.3**	**1.19**	**504,000**	**121**	**11.3**

The Ore Reserve estimation process consisted of modification of the Mineral Resource model to a mining model by adding several mining related attributes and assumptions. This was followed by open pit optimisation to define the new economic mining envelopes and subsequent detailed in pit designs, mine scheduling and input into a financial model.

Figure 2: Arcadia pit design



The Ore Reserve for the final pit design is shown above in Figure 2. The life-of-mine (**LOM**) strip ratio is approximately 3.4 (waste tonnes to ore tonne). The Ore Reserve is the economically mineable part of the Measured and Indicated Resource. It includes mining dilution of 5% and allowance for losses in mining of 5%.

Appropriate assessments and studies have been carried out and include consideration of modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and government factors.

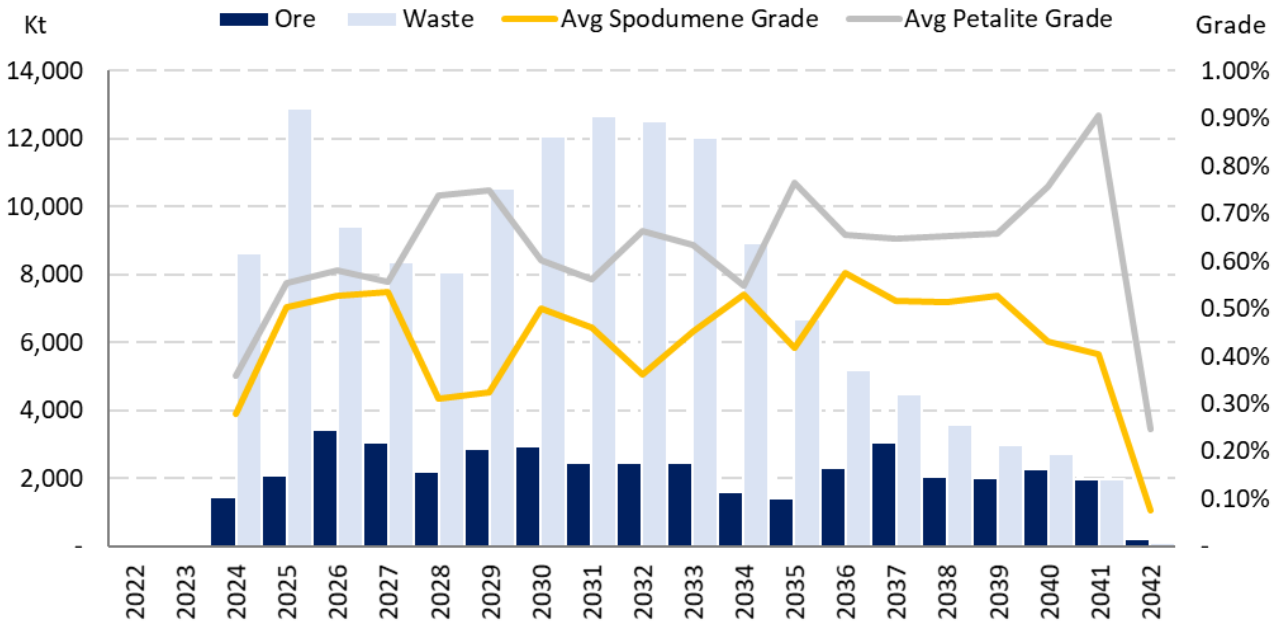
Table 3: Key Direct OFS physical outcomes

Key metric (100% basis)	Unit	LOM
Total ore throughput	Mt	42.34
Annual process throughput	Mtpa	2.4
Initial life-of-mine	years	18.3
Average strip ratio (waste: ore)	t:t	3.4
Average head grade	% Li_2O	1.19%
Recovery		
Spodumene	%	78.2%
Petalite	%	31.3%
Tantalum	%	27.0%
Total Production		
Chemical spodumene	kt conc.	2,642
Technical petalite	kt conc.	1,700
Chemical petalite	kt conc.	425
Average Annual Production		
Chemical spodumene	ktpa conc.	147
Technical petalite	ktpa conc.	94
Chemical petalite	ktpa conc.	24

Mining

The Arcadia deposit is to be mined as a conventional truck and shovel open pit operation via contract mining. Waste dumps are to be located as close as possible to pit exit points to minimise haulage profiles without disrupting the access to the minable resource or crushing plant. Arcadia's LOM schedule is outlined in Figure 3.

Figure 3: Arcadia mine schedule



The mine design is further based on a processing plant capable of producing several lithium mineral concentrates, as well as a tantalite concentrate, receiving ROM ore at 200,000 tonnes per month.

Processing

The key focus of processing strategy in the Direct OFS has been the further reduction of risk and increase of certainty for Arcadia processing. The flowsheet design and forecast recoveries for the Direct OFS are identical to the Staged OFS. Global lithia recovery is 51.3%, comprising estimated spodumene recovery of 78.2% and petalite recovery of 31.3%, and estimated tantalum recovery is 27.0%. These assumptions are based on the extensive testwork undertaken to date, as well as the learnings from the Arcadia Pilot Plant operation.

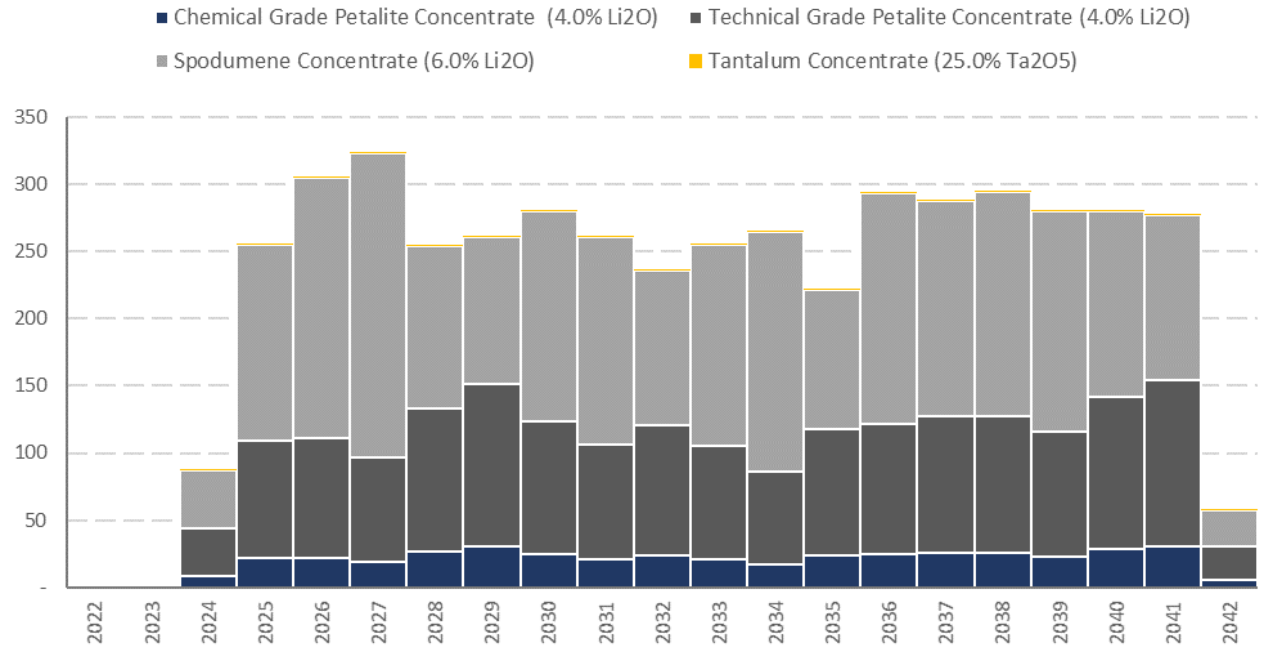
Since publishing the DFS (2019), additional variability testing has been done on the two main zones (Main Pegmatite (**MP**) and Lower Main Pegmatite (**LMP**)), which constitute over 79% of the total Arcadia Mineral Resource estimate. This extensive testwork included flotation configuration changes and optimum flotation parameters under locked cycle conditions.

Locked cycle testwork is a standard process requirement to assess the consequential effects of process recycle streams on the circuit mass balance and recoveries while also serving as a conventional way to mitigate flotation circuit design risk. This study work yielded lower LOM spodumene recoveries of 78.2%, compared to the previous assumption of 84.5% utilised in the DFS (2019). Opportunities exist for further recovery optimisation before entering the detailed engineering design phase.

Split Dense Media Separation (**DMS**) variability testing, which sought to confirm technical grade petalite and chemical grade petalite production from the coarse and fines fraction respectively, was also completed. The results of this testing confirmed the ability of DMS processing to produce the required product specifications and assumed LOM petalite recoveries in the Direct OFS (and Staged OFS) of 31.3% were only marginally changed from the DFS (2019) level of 31.7%.

Arcadia's LOM concentrate production schedule is outlined in Figure 4.

Figure 4: Arcadia production schedule



Forecast average LOM production is 147 kt per annum of spodumene concentrate, 94 kt per annum of technical grade petalite concentrate and 24 kt per annum of chemical grade petalite concentrate. Peak annual concentrate production of 338 kt is forecast to be achieved in Year 4. An initial ramp-up period of six months has been incorporated for the processing plant to achieve assumed recovery levels.

Conventional beneficiation techniques including dense medium separation (DMS) to recover petalite, gravity-based processes to recover tantalite, and froth flotation to recover spodumene have been retained from the DFS (2019). Key areas of subsequent testing included the use of high pressure grinding rolls (HPGR) technology, ongoing DMS optimisation and locked cycle spodumene flotation. Testwork was carried out on the MP and LMP zones during 2019 and 2020, and the data derived from these programmes has been applied by Lycopodium to current process and engineering design. Optimisation of tantalum recovery is continuing at the time of study preparation.

Two-stage crushing followed by HPGR has been selected to achieve the sub 5 mm crush size required to achieve adequate liberation of petalite for primary recovery by DMS. DMS feed preparation is based on secondary crusher product feeding HPGR crushing operating at medium pressure. Approximately 68% of plant feed will report to DMS at a bottom cut-off size (BCOS) of 0.6 mm. Primary crushing capacity will be set at 2.4 Mtpa from the outset.

The target grade for petalite products is 4% Li_2O (i.e. 82% petalite). DMS testwork has demonstrated that 80% of all DMS petalite concentrates produced from Arcadia ores coarser than 1.7 mm will meet specifications for technical grade product, with Fe_2O_3 substantially less than 0.05%. The remaining 20% finer petalite at -1.7 mm +0.6 mm will be suitable as chemical grade product. Recoveries of petalite to Technical Grade and Chemical Grade products are expected to be 25% and 6% of plant feed petalite respectively.

The sub-millimetre spodumene grain size limits recovery of spodumene by DMS. Consequently, all ore post gravity recovery will report to the flotation circuit where spodumene is effectively recovered at a grind size P100 of 0.212 mm (P80 0.150 mm). Fatty acid flotation of spodumene is widely

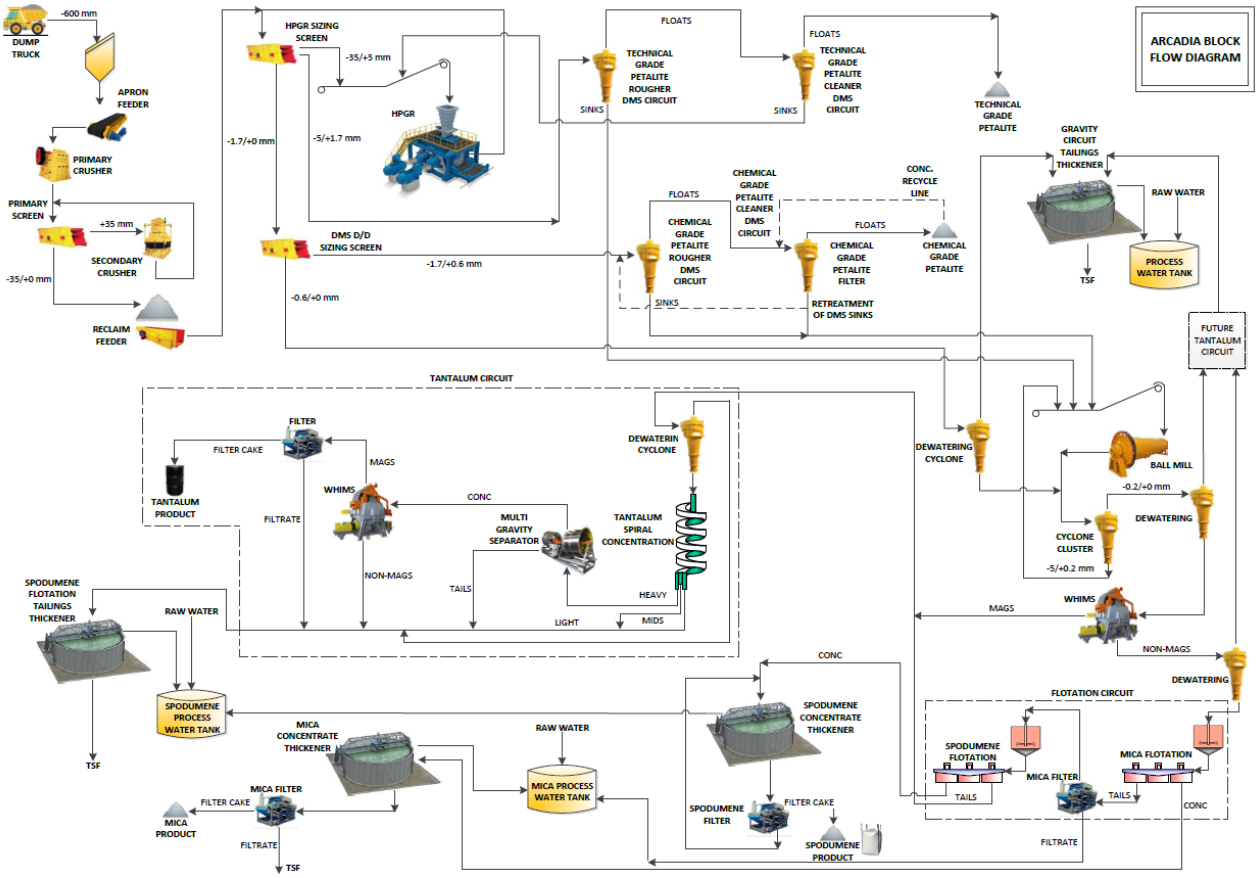
practised in the lithium beneficiation industry and Arcadia will be no exception in this regard. The target grade for spodumene concentrate is 6% Li_2O (i.e. 75% spodumene).

Based on flotation data accumulated to date, expected spodumene recovery to concentrate is about 81% for LMP ore and about 55% for MP ore. The iron content of spodumene concentrate is expected to be about 0.3% to 0.5% Fe_2O_3. Spodumene concentrate is to be cleaned, and upgraded, by employing mica flotation at low pH followed by WHIMS to reduce iron contamination. The mica concentrate is planned to be set aside pending potential identification of a commercial opportunity to realise value from this product.

Tantalite is to be recovered in a dedicated spiral circuit placed in the flotation tailings stream. The rough tantalite will be upgraded to a saleable product containing approximately 25% Ta_2O_5 by the use of conventional gravity concentration methods and magnetic separation. Test data suggests tantalite recovery at 27% can be achieved. However, as at the date of publishing the Direct OFS, ongoing confirmatory work remains in progress.

The current Arcadia flowsheet is detailed in Figure 5 below.

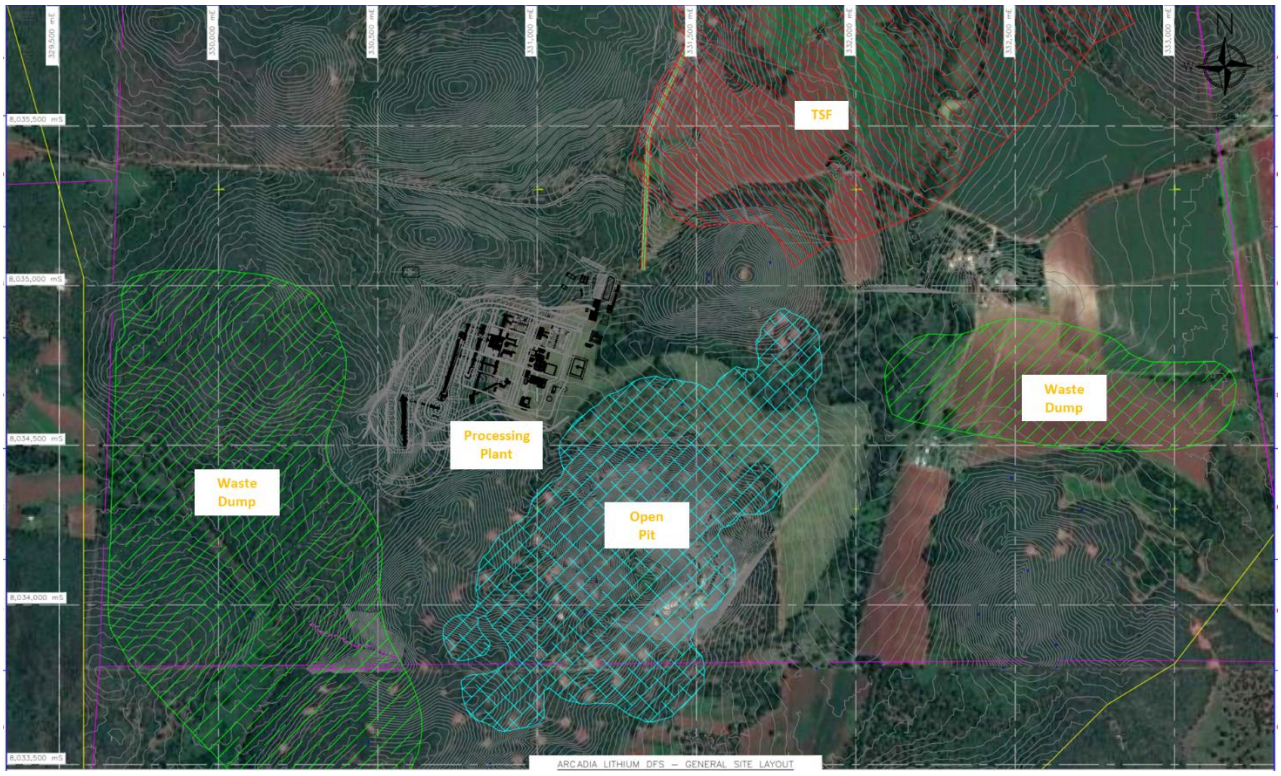
Figure 5: Arcadia process flow diagram



Site layout and access

The site layout shown in Figure 6 has been optimised driven largely by the typical economic imperative to restrict waste and ore haulage distances. Arcturus Road is the sealed road from Harare to the Arcadia site, with existing access to Arcadia from Arcturus being available via a 7 km unsealed road.

Figure 6: Arcadia site layout



Power and water supply

Power for the Arcadia site is to be sourced from the ZETDC Atlanta 132 kV substation, comprising 5 feeder bays in use with an equipped spare 20 MW bay, situated approximately 9.5 km from the Project site. PLZ has paid for and secured a dedicated 33 kV, 20 MW spur line from the Atlanta substation. The peak electrical load requirement of the operation has been estimated to be approximately 18.5 MVA.

High Tension (HT) power will feed into the local substation built near the plant to centralise power distribution. Motors above 400 kW will be rated for 11 kV whilst all other electrical equipment will be connected to a 400 V feed. Electrical equipment and installation at Arcadia will comply with relevant International Electrotechnical Commission (IEC) standards. The existing substation capacity exceeds peak demand requirements of a 2.4 Mtpa plant.

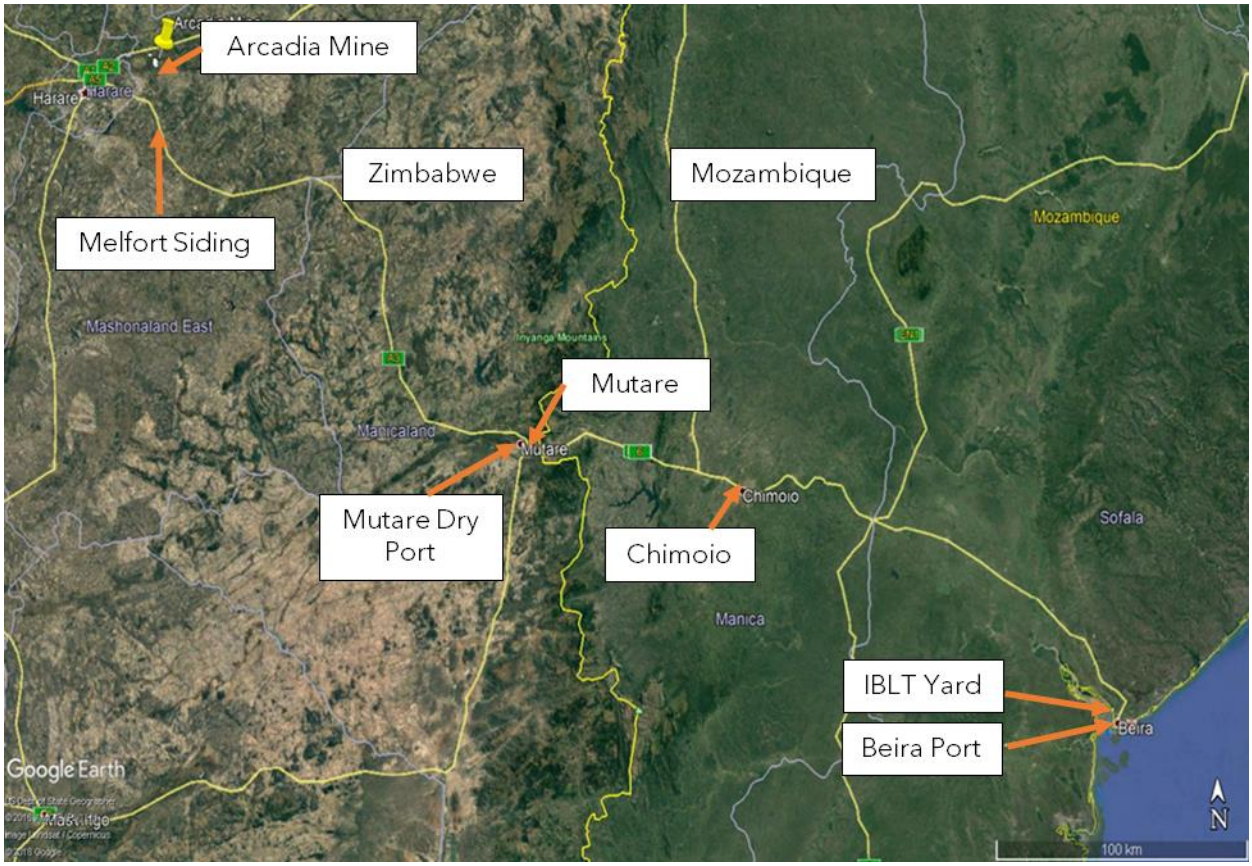
Site water requirements are to be met by the collection of run-off and abstraction of raw water from bores within the Project mining lease area, which are of adequate volume and quality for Arcadia production needs. Additional availability of water is via the Chinyika dam, situated less than 4 km away from Arcadia, which has an 8.1 million cubic metre capacity and provisional supply arrangements agreed.

Product transport and export

Arcadia is located 38km east of Harare, Zimbabwe, and has access to considerable existing infrastructure and utilities. Arcadia aims to export an average of 265,000 tonnes of product concentrate per year. Prospect's existing offtake agreements call for settlement as FOB Beira, Mozambique. Prospect completed a logistics report during 2019, which investigated road and rail options for transport of product to port.

This found the road network to be the most suitable option. The 22 km route from site via Goromonzi district to the Harare-Mutare Road has been identified as the shortest and quickest route to the Mozambique Port of Beira. The existing road includes a 12 km stretch of gravel followed by a 10 km stretch of tar. The 12 km gravel stretch of road is planned to be upgraded and maintained to cater for construction vehicle access and for concentrate export. Arcadia's transport route to the Port of Beira is outlined in Figure 7 below.

Figure 7: Arcadia to the port of Beira overview



The existing national highway between Harare and the Forbes border post at Mutare can accommodate the vehicles that will be added to the road network. Similarly, the highway from the Forbes border post to the Port of Beira is structurally sound. Both sections of roads have been upgraded within the last decade and are well maintained.

All lithium concentrates are to be transported in 1 tonne bulka bags by flat top trucks. Cornelder is a major port operator and has been operating the Beira Port for more than 20 years (and has won the contract for a further 25 years). Beira is a modern port with substantial digital tracking systems and capability. The current port layout is displayed in Figure 8.

Figure 8: Beira port terminals

Beira Port can accommodate breakbulk vessels up to 30,000 dmt with a maximum draft size of 12m. It can handle breakbulk cargo from both road and rail with a typical loading rate of 2,500 to 5,000 tonnes per day. The Beira Port has 3 x 8,000m^2 storage sheds that are utilised on a first come first serve basis.

The ports of Maputo, Richards Bay and Durban are all accessible from the Arcadia site through the existing rail and road network and have both container and bulk terminals to load and ship the concentrate to customers. A comparison between the potential ports is outlined in Table 4 below.

Table 4: Port comparison

Capabilities / Accessibility	Beira	Maputo	Durban	Richards Bay
Break Bulk Capable	Yes	Yes	Yes	Yes
Containers Capable	Yes	Yes	Yes	Yes
Container Capacity TEU's pa	400 000	300 000	3 400 000	50 000
Support Additional Capacity	Yes	Yes	Yes	No (Containers)
Road Access from Arcadia	Yes	No	Yes	Yes
Road Loading Capacity	30 Mt	N/A	34 Mt	34 Mt
Distance from Arcadia by Road	586 km	2000 km	1670 km	1508 km
Road Condition	Good	No vehicles route	Good	Good
Rail Access from Arcadia	Yes	Yes (Via Gweru)	Yes (Via Bulawayo)	Yes (Via Bulawayo)

The road infrastructure to Durban (1,670km) is in good condition. A partial rail option can also be considered to Durban via transport of the cargo from Arcadia to Johannesburg by truck and then by rail from Johannesburg. While the Port of Durban presents the most suitable alternative to Beira, the estimated cost of utilising that export route is higher than for Beira.

Offtake Agreements

Prospect and Sinomine Resource (Hong Kong) International Trading Co., Limited (**Sinomine**) have entered into an offtake agreement for a term of seven years to deliver 48,160 lithia units (Li_2O), equating to 6,880 lithia units per annum.

Under the Sinomine offtake agreement, Prospect is entitled to increase the quantities of spodumene and decrease the quantities of petalite delivered provided that the lithia units of the combined spodumene and petalite concentrates meet the lithia units specified.

Sinomine has agreed to a pre-payment of US$10 million upon the ball mill being delivered and bolt installed during the construction phase of the Project.

If either party elects to terminate the offtake agreement, it must pay an agreed liquidated damages sum to the other party.

For further information on the Sinomine offtake agreement please refer to Prospect ASX release dated 4 April 2018.

Prospect and Sibelco N.V. (**Sibelco**) have entered into an offtake agreement for a term of seven years to deliver up to 100,000 tonnes per annum of technical grade petalite.

Under the Sibelco offtake agreement, the parties will annually agree binding delivery of quantities, pricing and end customer contract terms for the following year. Prospect and Sibelco are to share end-customers sales receipts in agreed proportions after recovery of their respective costs and payment to Prospect will be through an Irrevocable Letter Of Credit.

Prospect may terminate the contract if Sibelco does not purchase at least 10,000 tonnes of product in each of two successive quarters for any reason other than that the global market price for petalite being below an agreed price level.

For further information on the Sibelco offtake agreement please refer to Prospect ASX release dated 17 August 2020.

Price Forecast

The Arcadia orebody is globally unique in that it hosts two lithium minerals that can be concentrated economically (petalite and spodumene), with the ability to place its resulting lithium concentrate products into both the chemical and the technical markets. Arcadia's product marketing strategy is to maximise spodumene and chemical grade petalite sales into the chemical (battery) market, and technical grade petalite sales into the premium technical (glass and ceramics) market.

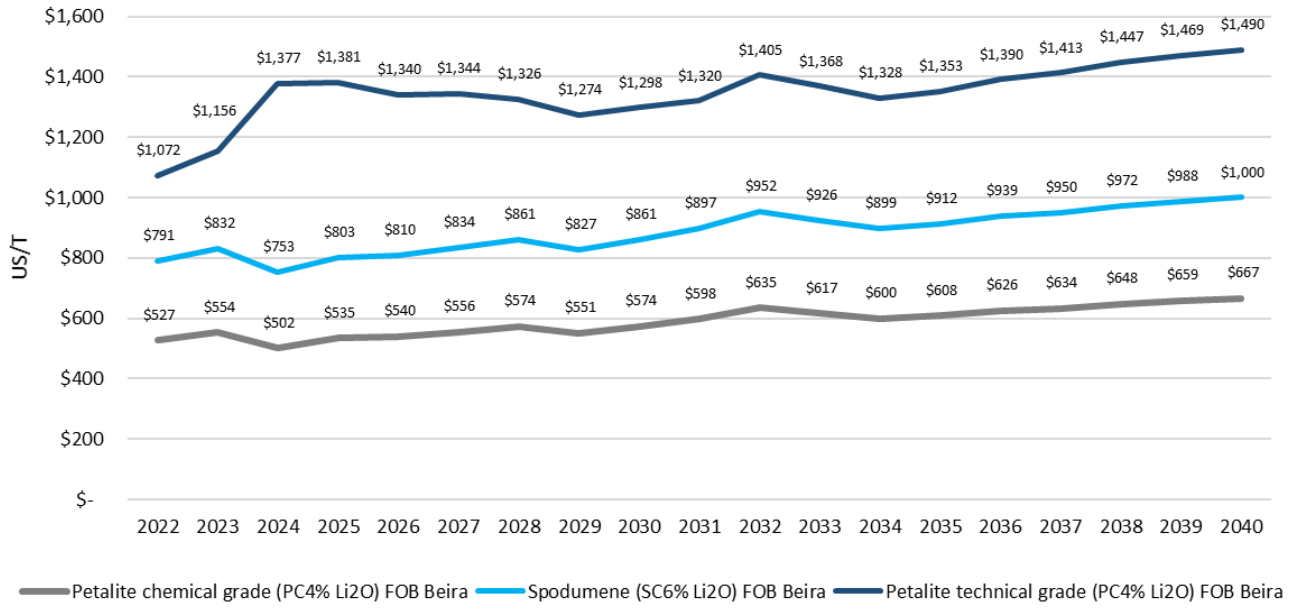
Prospect has utilised leading commodity markets consultant, Roskill (a Wood Mackenzie company), for price forecasting purposes. In November 2021, Prospect received updated pricing estimates, with Roskill now expecting (over its forecast window of 2021 to 2040) battery-grade lithium hydroxide to average US$25,000/t and battery grade lithium carbonate to average US$24,000/t (the latter commanding a premium to technical-grade product of between US$1,500-2,000/t CFR Asia).

These price forecasts are substantially higher than Roskill's earlier estimates, including the price forecasts received from Roskill in July 2021 and utilised for the Staged OFS. Accordingly, for the purposes of this study, Prospect has elected to adopt a more conservative approach to long term lithium pricing by adopting the mid-point between the July and November Roskill price forecasts.

Prospect has also utilised Roskill's July 2021 price forecast as a low case (to allow comparison to the Staged OFS) and Roskill's November 2021 price forecast as a high case to illustrate the upside potential inherent in the project.

The base case LOM average pricing forecasts are therefore: spodumene concentrate US$892/t FOB Beira, chemical grade petalite concentrate US$595/t FOB Beira, and technical grade petalite US$1,339/t FOB Beira.

Figure 9: Arcadia Direct OFS base case price forecasts (real basis)



Key financial projections

Operating Cost

Operating costs are based on estimates of costs at the Arcadia mine, vendor quotations, budget prices, in-house database costs and engineering of costs and engineering experience, to a ±15% level of accuracy.

These estimates have been incorporated into a fully dynamic financial model based on the mining schedule, metallurgical variables and the mass balance to determine unit outcomes per tonne of product. The Direct OFS is based on a contract mining operation. This includes drilling, blasting, loading and hauling of ore and waste. The forecast unit mining cost of US$2.61/t material mined is based on indicative quotes sourced from regional mining contractors, after a complete review of mining process.

There has been an independent review of the logistics assessment, confirming the most viable export route continues to be via Beira. Independent assessment of all costs confirms a sustained margin, even when considering potential price volatility and cost escalation.

Table 5: Arcadia operating cost estimate

Key metric (100% basis) US$/tonne		LOM
C1 Cost		
Mining	101	
Processing	141	
Support Services (SS)	22	
Administration	18	
Packaging and Logistics	82	
Selling costs	48	
Tantalum (Ta) credit	(54)	
Total C1 Costs		**357**
Depreciation	51	
Total C2 Cost		**408**
C3 Costs (C2 + Corporate Cost + Royalties)		**431**
AISC (C1 + Sustaining Capex)		**364**
AIC (AISC + Pre-Production Capex)		**405**

Capital Cost

The capital expenditure estimate in the Direct OFS is based on the construction of a 2.4 Mtpa processing plant. Generally, the increased capital expenditure estimate compared to the DFS (2019) is related to the expansion of equipment capacity and capability, to reduce and manage process risk with a more modularised construction approach, including pre-erection in South Africa, focused on reducing execution risk.

The Direct OFS also factors in EPCM costs, and higher contingency to account for the known and unknown risks. The risk of further increases in capital expenditure is mitigated by a high proportion of Front-End Engineering Design (FEED) having now been completed.

The Staged OFS outlined pre-production capital expenditure forecasts for Stages 1 and 2 of approximately US$140.7 million and US$71.7 million, respectively, totalling approximately US$212.4 million (including contingencies of approximately US$18.8 million) to deliver an eventual 2.4 Mtpa throughput rate.

The Direct OFS forecasts total pre-production capital expenditure of approximately US$192.5 million (including a US$16.7 million contingency) to deliver the same 2.4 Mtpa throughput, highlighting the capital efficiencies achieved by opting for a direct development pathway, particularly in processing plant costs (a delta of US$13.8 million versus the Staged OFS), site readiness and infrastructure estimates (US$4.4 million delta), and in contingency estimates (US$2.0 million delta) between the two studies.

The capital estimate has been prepared in accordance with Lycopodium Cost Estimating Procedures and fulfils the requirement of the AACE Class 2 Estimate (“Bankable Feasibility Estimate”) with an accuracy range of ±12.5 %.

The composition of the pre-production capital estimate is outlined in Table 6. The pre-production capital estimate includes an approximate US$16.7 million contingency allowance.

Table 6: Arcadia pre-production capital expenditure estimate

Capital Cost (100% basis) US$M	Total
Site Readiness & Infrastructure	25.55
Mining	7.28
Processing Plant	101.36
Preliminaries and General	15.59
Owners Project Team Costs	10.71
EPCM	15.25
Contingency	16.73
Total	**192.46**

Financial Analysis

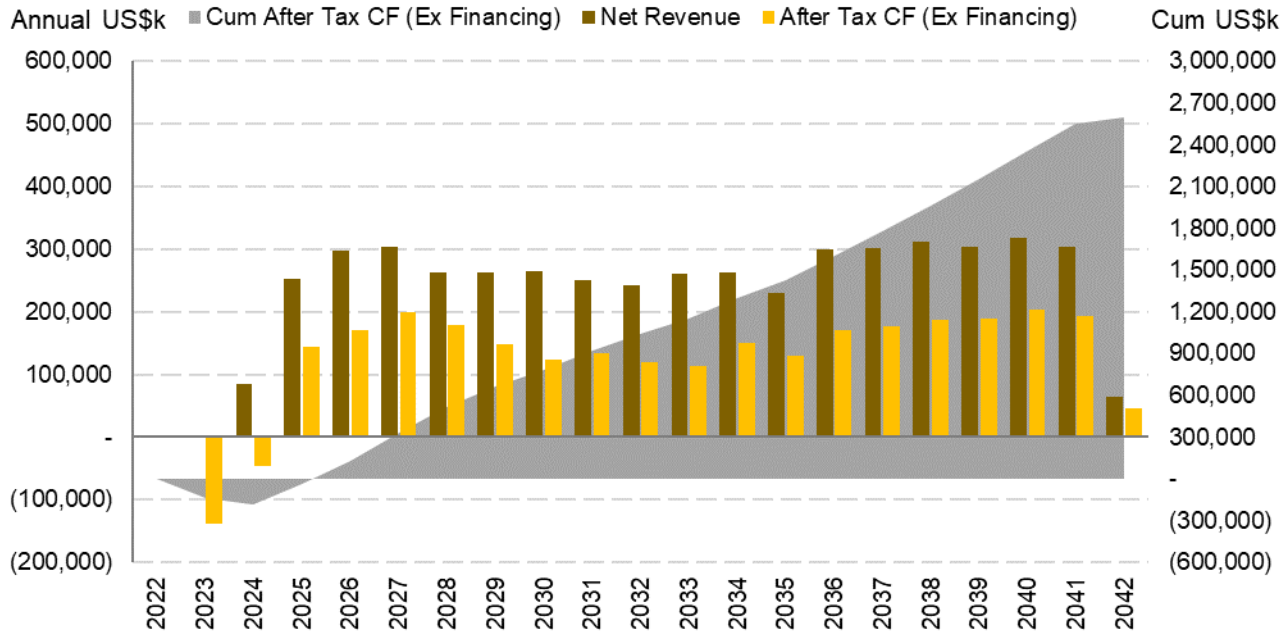
Forecast key financial metrics for the single-stage development of Arcadia as reflected in the Direct OFS are summarised in Table 7 (all projections are on a 100% project basis).

Table 7: Direct OFS key financial outcomes (base case prices)

Key financial outcomes	Unit	LOM
Price Input		
LOM Average spodumene (SC6) price	US$/t conc.	892
LOM Average technical petalite price	US$/t conc.	1,339
LOM Average chemical petalite price	US$/t conc.	595
LOM Average tantalum price	US$/lb conc.	21
Valuation, returns and key ratios		
$NPV_{10\%}$ (pre-tax, real basis, ungeared)	US$m	1,022
$NPV_{10\%}$ (post-tax, real basis, ungeared)	**US$m**	**929**
IRR (pre-tax, real basis, ungeared)	%	61%
IRR (post-tax, real basis, ungeared)	**%**	**60%**
Payback period (post-tax, from FID)	**Years**	**3.3**
Post tax investment to first positive cash	US$m	202
Cashflow summary		
Sales revenue (gross)	US$m	5,213
Operating costs	US$m	2,065
Project operating surplus	US$m	3,148
Pre-production capital expenditure	US$m	192
Sustaining capital	US$m	36
Project net cashflow (post-tax)	US$m	2,597
Operating costs		
C1 Operating Cost (incl tantalum credit)	US$/t conc.	357
All-In-Sustaining-Cost (AISC)	US$/t conc.	364

The Project LOM cashflow is shown in Figure 10.

Figure 10: Arcadia Direct OFS Life-of-Mine cashflow



Sensitivity Analysis

Sensitivities are applied to key project estimates and assumptions. Favourable and unfavourable movements relative to post-tax NPV are illustrated in Figure 11.

Figure 11: Sensitivity analysis – post-tax NPV (US$m)

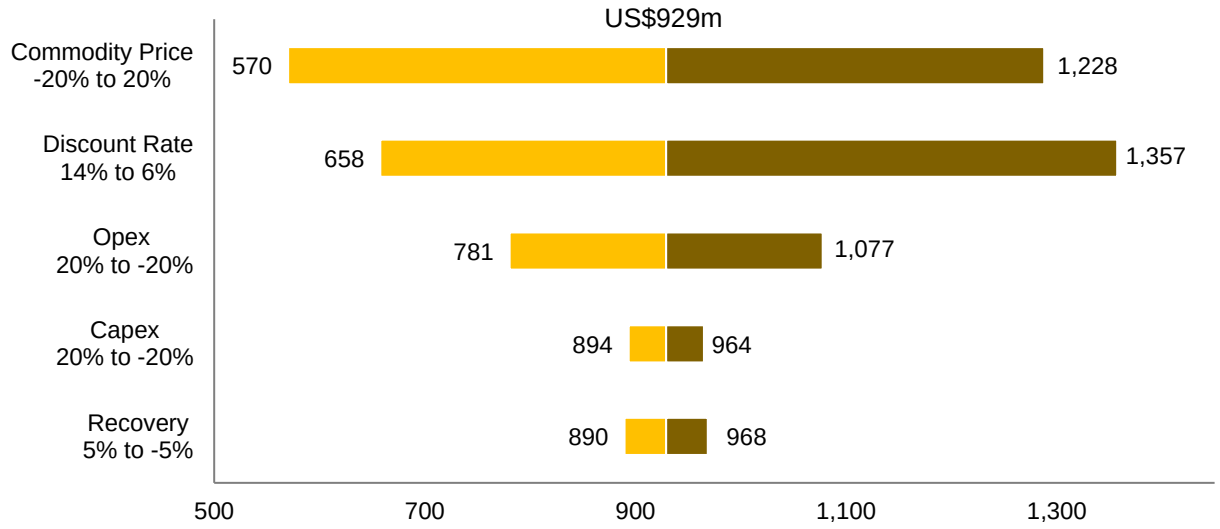


Table 8: High, base and low case price sensitivity on projected economics

Commodity Price Sensitivity	Unit	*Low*	*Base*	*High*
LOM average Spodumene (SC6) Price	*US$/t*	*736*	***892***	*1,019*
LOM average Technical Petalite Price	*US$/t*	*959*	***1339***	*1670*
LOM average Chemical Petalite Price	*US$/t*	*490*	***595***	*680*
LOM Revenue	US$m	4,103	**5,214**	6,324
LOM EBITDA	US$m	2,116	**3,148**	4,181
IRR (pre-tax, real basis, ungeared)	%	48	**61%**	72
Pre-tax $NPV_{10\%}$ (real basis, ungeared)	US$m	646	**1,022**	1,399
IRR (post-tax, real basis, ungeared)	%	47	**60**	71
$NPV_{10\%}$ (post-tax, real basis, ungeared)	US$m	590	**929**	1,268

Table 9 demonstrates the Arcadia post-tax NPV utilising different discount rates.

Table 9: Post-tax NPV (base case prices) variability for selected discount rates

Selected discount rate sensitivity	6%	8%	10%	12%	14%
Post tax NPV (US$m)	1,358	1,118	**929**	779	658

Environmental, Social and Governance (ESG) Credentials

Prospect is committed to developing mining projects through to responsible and sustainable mining operations.

Prospect's strategy of developing and operating long-life assets means that the Company needs to plan over many decades. Prospect believes that long term value is underpinned by sustainable operations with the support of the host communities in which we work. In line with this commitment, the Company operates a Corporate Social Responsibility (CSR) committee, focused on maintaining deep, authentic and respectful relationships with its stakeholders, securing a strong and stable social licence to operate.

Prospect recognises that lithium mining has a fundamental role in shaping the global energy future, as we transition to a low carbon economy. The Company is taking steps to build its approach to sustainability, which will involve preparation of a road map to deliver alignment with leading industry practise as we move towards construction.

The Company is currently undertaking a Greenhouse Gas (GHG) assessment for the Arcadia Project, which will include GHG emissions (Scope 1 and Scope 2) associated with material operations at the mine.

Future expansion, life extension and other upside potential

There is significant opportunity to extend the initial 18 year mine life of Arcadia, either in conjunction with or in alternative to an expansion of the operating scale.

The Direct OFS is based on an initial Ore Reserve of 42.3 Mt. This compares with Measured Resources of approximately 15.9 Mt, Indicated Resources of approximately 45.4 Mt and Inferred Resources of approximately 11.2 Mt. There is potential to increase Ore Reserves by upgrading the Inferred Mineral Resources at Arcadia and potential satellite pits to Indicated and Measured categories through further drilling.

Prospect has undertaken locked cycle petalite flotation testwork, focused on improving petalite recovery to maximise project economics and increase technical grade petalite sales into the lithium technical market. The locked cycle flotation testwork indicated significant potential to increase petalite recovery from 31% to >60%, across all Arcadia ore bodies contained within the Ore Reserve. With this substantial potential increase in petalite recovery, further work can be undertaken to understand the full economic benefits resulting from this increase in recovery, particularly the increase in revenues from additional sales of premium priced technical grade petalite concentrate (for further detail refer to Prospect ASX release dated 24 July 2020).

The Arcadia Pilot Plant, developed with the main objective of producing petalite product quality and volumes to meet or exceed customer's qualification requirements, was successfully implemented in June 2021. Following completion of the maiden shipment of 100 tonnes of concentrate, the focus of the Pilot Plant shifted towards process efficiency optimisation. The optimisation programme was prefaced on other extensive pilot studies carried out in South Africa.

The Pilot Plant optimisation testwork results have demonstrated increased mass pulls and corresponding improved petalite stage recoveries of up to 95% and 72.1% for the rougher and cleaner stages, respectively. The overall petalite recoveries achieved indicate a substantial improvement compared to the estimated Direct OFS Main Pegmatite (MP) recoveries for the coarse fraction. The MP recovery for petalite for the Direct (and Staged) OFS is 31.6%, comprising 25% for the 5 x 1.7mm and 6.6% for the 1.7 x 0.6mm fraction. Based on this optimisation study, an average petalite recovery of 30.3% and peak of 37.2% against the 25% target (average increase of 21% and peak increase of 50.2%) are attainable.

The Pilot Plant is now consistently running at these peak performance levels and thus providing confidence in the reproducibility of results at commercial scale. It is acknowledged that the Direct (and Staged) OFS recovery assumptions are quite conservative and a significant upside on petalite recoveries for Arcadia exists. Prospect is therefore extending operations of the pilot plant to capture this potential opportunity and continue to qualify Arcadia's technical grade petalite with customers. It has also been recommended that Lycopodium together with PESCO carry out an independent assessment of the Pilot Plant results and incorporate findings into the next project phase (detailed design).

Next steps and development schedule

The Direct OFS has demonstrated, to a relatively high level of accuracy, that Arcadia is a technically robust and highly economic mine development.

Figure 12 is an illustration of the indicative development timeline for Arcadia under the Direct OFS build approach.

Figure 12: Arcadia indicative development timetable

Risks

The Project risk register was developed in a workshop setting with senior representatives from Lycopodium and PLZ, challenging all key business functions of the Project from mining through to effective sales. Risks were then characterised in a risk assessment framework, to form a Project Risk Register. Key to the management of risk is the effective management oversight towards mitigations, with residual risk derived from the outcomes of all mitigations.

Risk management is a focus of the Company and continues to be the most effective means to reduce the challenges in commercially operating the Project.

Funding pathway

The robust technical and economic outcomes of the Direct OFS, as well as currently strong lithium market conditions, provide a strong platform for Prospect to continue to pursue a range of possible funding solutions to commercialise the Project.

Prospect is currently reviewing and assessing available funding options to maximise benefits to shareholders and has a reasonable basis to believe that it will be able to secure appropriate funding on competitive terms.

This confidence is highlighted by enquiries received from a range of international parties who have expressed interest in participating in the funding and development of Arcadia. Due to this interest, Prospect announced on 23 August 2021 that it had commenced a structured process to identify suitable strategic funding partners for Arcadia (**Process**). Prospect appointed Azure Capital and Vermilion Partners to assist and support management in the preparation, planning and execution of

this Process. The Process has provided interested parties the opportunity to put forward partnership proposals in a competitive environment to fully fund the development of Arcadia, with non-binding proposals having been received in November (refer ASX announcement dated 22 November 2021).

Prospect also notes that there are numerous recent examples of debt and equity funding being made available for progression and/or construction of lithium projects globally (refer ASX announcement dated 11 October 2021, in which a range of such examples are provided).

To develop the Project and achieve the range of outcomes indicated in the Direct OFS, pre-production funding in excess of US$192 million is likely to be required. There is no certainty that Prospect will be able to source that quantum of funding. It is also possible that such funding may only be on terms that may be dilutive to or otherwise affect the value of Prospect's shares.

Prospect notes that it has a current market capitalisation of approximately A$290 million and zero debt. The Company owns 87% of the Arcadia Project and otherwise has an simple corporate and capital structure. These factors are expected to be viewed favourably by potential strategic investors, offtake partners and conventional equity investors, as well as offering flexibility in engagement with potential debt and quasi-debt providers (should this be required).

The Prospect Board and management team have extensive experience in the global lithium, and broader resources, industry. Key Prospect personnel have demonstrated track records of identifying, acquiring, defining, funding, developing and operating quality mineral assets of significant scale.

It should be noted that Prospect's current funding strategy for Arcadia is subject to change at the Prospect Board's discretion at any point. It should also be noted that, while the Prospect Board holds a reasonable basis to believe that funding will be available as required, there is no assurance that the requisite funding for Arcadia will ultimately be able to be secured.

This release was authorised by Sam Hosack, Managing Director of Prospect Resources Ltd.

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About Prospect Resources Limited (ASX: PSC, FRA:5E8)

Prospect Resources Limited (ASX: PSC, FRA:5E8) is an ASX listed lithium company based in Perth with operations in Zimbabwe. Prospect's flagship project is the Arcadia Project located on the outskirts of Harare in Zimbabwe. The Arcadia Project represents a globally significant hard rock lithium resource and is being rapidly developed by Prospect's experienced team, focusing on near term production of high purity petalite and spodumene concentrates. Arcadia is one of the most advanced lithium projects globally, with a Definitive Feasibility Study, Offtake Partners secured and a clear pathway to production.

About Lithium

Lithium is a soft silvery-white metal which is highly reactive and does not occur in nature in its elemental form. In nature it occurs as compounds within hard rock deposits (such as Arcadia) and salt brines. Lithium and its chemical compounds have a wide range of industrial applications resulting in numerous chemical and technical uses. Lithium has the highest electrochemical potential of all metals, a key property in its role in lithium-ion batteries.

Caution Regarding Forward-Looking Information

This announcement may contain some references to forecasts, estimates, assumptions and other forward-looking statements. Although the Company believes that its expectations, estimates and forecast outcomes are based on reasonable assumptions, it can give no assurance that they will be achieved. They may be affected by a variety of variables and changes in underlying assumptions that are subject to risk factors associated with the nature of the business, which could cause actual results to differ materially from those expressed herein. All references to dollars ($) and cents in this announcement are in United States currency, unless otherwise stated.

Investors should make and rely upon their own enquiries before deciding to acquire or deal in the Company's securities. Prospect confirms that for the purposes of Listing Rule 5.19.2, all material assumptions underpinning the information continue to apply and have not materially changed

Competent Persons Statements

The information in this announcement that relates to Exploration Results, is based on information compiled by Mr Roger Tyler, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy and The South African Institute of Mining and Metallurgy. Mr Tyler is the Company's Senior Geologist. Mr Tyler 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 JORC Code 2012 Edition. Mr Tyler consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this announcement that relates to Mineral Resources is based on information compiled by or under the supervision of Ms Gayle Hanssen of Digital Mining Services, Harare Zimbabwe. Ms Hanssen is registered as Professional Scientist with the South African Council for Professional Natural Scientific Professions (SACNASP) which is a Recognised Professional Organisation (RPO). Ms Hanssen is employed by DMS and has sufficient experience which is relevant to the styles of mineralisation and types of deposit under consideration and to the activity which she is undertaking to qualify as a Competent Person as defined in the JORC Code 2012 Edition. Ms Hanssen consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.

The information in this announcement that relates to Ore Reserves is based on information compiled and reviewed by Mr Paul O'Callaghan, a full-time employee of CSA Global Pty Ltd. Mr O'Callaghan takes overall responsibility for the Report as Competent Person. Mr O'Callaghan is a Fellow of The Australasian Institute of Mining and Metallurgy and has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as Competent Person in terms of the JORC (2012 Edition). The Competent Person, Paul O'Callaghan has reviewed the Ore Reserve statement and given permission for the publication of this information in the form and context within which it appears.

Lycopodium

Prospect Resources

Arcadia Lithium

DFS Technical Report

6693-GREP-001

December 2021

Prospect Resources

DISCLAIMER

This report has been prepared for Prospect Resources Prospect Lithium Zimbabwe by Lycopodium Minerals Africa Pty Ltd (Lycopodium) as an independent consultant and is based in part on information furnished by Prospect Lithium Zimbabwe and in part on information not within the control of either Prospect Lithium Zimbabwe or Lycopodium. While it is believed that the information, conclusions and recommendations will be reliable under the conditions and subject to the limitations set forward herein, Lycopodium does not guarantee their accuracy. The use of this report and the information contained herein shall be at the user's sole risk, regardless of any fault or negligence of Lycopodium.

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Reviewed By

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Approved By

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Change History

Date	Revision	Description of Change

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1.0 EXECUTIVE SUMMARY

Prospect Resources Limited (ASX:PSC) (Prospect) has established the Arcadia Lithium Project (the Project) in Zimbabwe as a high quality deposit with substantial commercial potential. Through Prospect Lithium Zimbabwe (PLZ) its wholly owned subsidiary, Prospect has established a Mineral Resource of 72.7 Mt grading 1.11% Li_2O and 119 ppm Ta_2O_5. Since 2018 Prospect has evaluated a number of technical and commercial factors influencing potential project development, including mining, ore treatment and product generation and sale.

Prospect completed an updated feasibility study based on commencing mining and ore treatment operations at Arcadia at the rate of 1.2 Mtpa increasing to 2.4 Mtpa from year 4. This study assesses the option of commencing operations at 2.4 Mtpa from the outset, an approach that would better enable Prospect to benefit from continuing strong growth in the fundamentals of the global lithium minerals business.

The aim of this document is to describe the proposed mining, processing and commercial operations for the Project in the context of operations at 2.4 Mtpa. Where relevant, comparisons between the 1.2 Mtpa start-up case and the 2.4 Mtpa case will be presented. This study remains based on the current Mineral Resource estimation and with appropriate modifications to mine design, existing metallurgical test data and appropriately modified capital and operating cost estimates. It particularly addresses significant movements in the contemporary lithium market. It maintains a focus on risk aspects of the Project and all associated bases for decision-making are contained within or referenced from this document.

This study retains the market-driven approach adopted in the 1.2 Mtpa start-up case in which the production and sale of premium low iron petalite concentrate coupled with the production of chemical grade spodumene flotation concentrate underpins Project development strategy. This strategy feeds into mine planning and in turn influences the design of the petalite and spodumene recovery circuits to maximise Project returns.

1.1 Study Organisation and Approach

This study has been prepared by Lycopodium Minerals Africa (Pty) Ltd (LMA) and reviewed by relevant discipline experts within the wider Lycopodium Group with assistance from PLZ and Prospect and selected external contributors as outlined in Table 1.1.1 In particular LMA provided updated technical input while Lycopodium provided study review and compilation services.

Table 1.1.1 Arcadia DFS Contributors

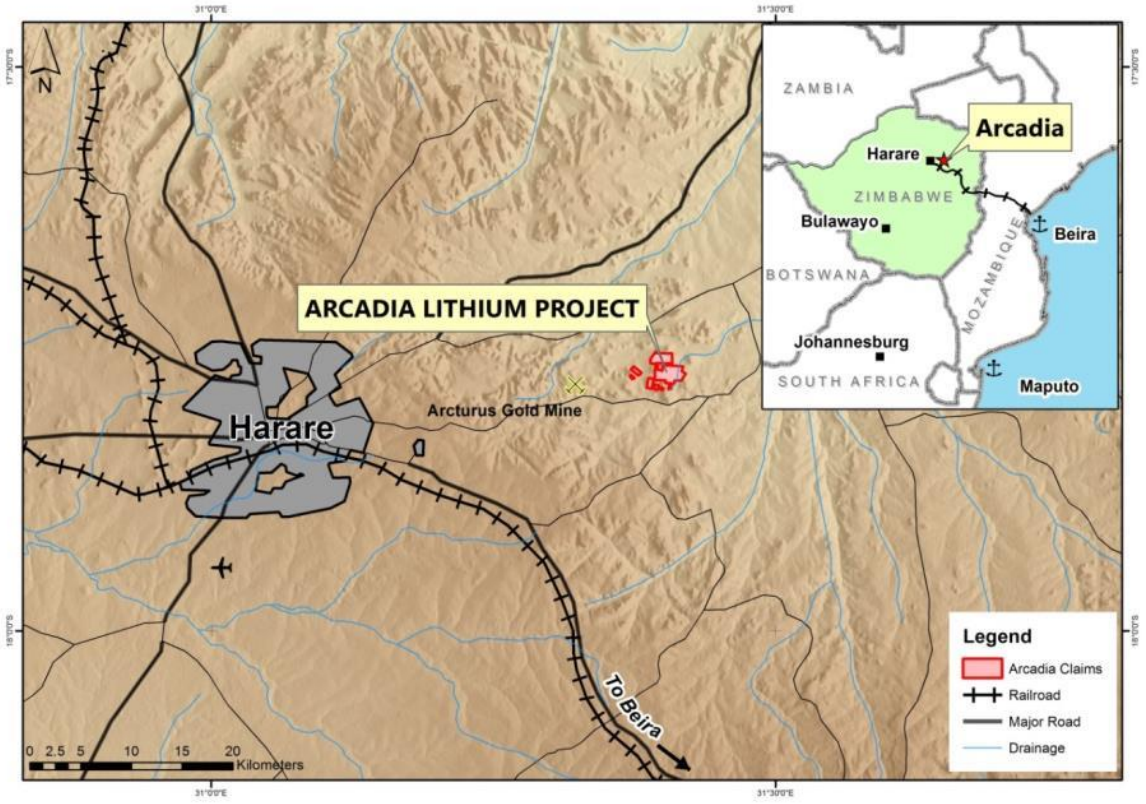
Contribution	Author
Resource Definition	Roger Tyler MEng (Mineral Resource Evaluation), BSc (Mining Geology), MAusIMM, MSAIMM, ARSM, SACNASP (PLZ)
Resource Modelling	Ms. Gayle Hanssen BSc Geology (Natal), SACNASP of DMS, Zimbabwe
Project Geologist	Adam Moodley BSc(Hons), MSc (CT) (PLZ)
Geotechnical services	Practara Ltd of Johannesburg South Africa Civil Technics of Bulawayo, Zimbabwe BCHOD of Harare, Zimbabwe
Mine Planning	CSA Global Pty Ltd of Perth, Western Australia
Environmental Impact Assessment	Gap Analysis by SRK Consulting of Johannesburg, South Africa Evans Matare of Envirosmart Consultancy, Zimbabwe
Hydrogeological Assessment	Constant Chuma of NUST University Zimbabwe
Metallurgy	LMA John Maketo (PLZ) Mike Kitney MSc, MAusIMM (Metallurgical Design, Perth)
Tailings disposal facility design	EPOCH Resources (Pty) Ltd
Process design	LMA
Engineering cost estimate	LMA
SHE Management Plan	LMA
Project Execution Plan	LMA
Quality Management Plan	LMA
Electrical Network Analysis	Norconsult
Transport Fleet Study	PLZ
Project Managers	Louis du Plessis, Lycopodium Trevor Barnard (PLZ)
Minerals Marketing	Lithium – Roskill, United Kingdom Tantalum – Roskill, United Kingdom
Project economic modelling	Nicholas Rathjen MAppFin, BComm (Prospect) Infinity Corporate Finance, Subiaco, Western Australia Iain Goldberg (Prospect)

1.1.2 Project Introduction

The Arcadia Lithium Project (the Project, Arcadia) is situated approximately 38 km east of Harare, Zimbabwe (17º46'26" S 31º24'34" E, Figure 1.2.1). It occupies an area of more than 9 km2 and incorporates historical lithium and beryl workings.

The Project is close to major highways and railheads, with the Beira Port in Mozambique less than 590 km away by rail/road transport. Its location as a regional transport hub serves the Project well. Its proximity to Harare facilitates access to a source of skilled and semi-skilled labour and qualified technical and commercial personnel.

Figure 1.1.1 Location of Arcadia Lithium Project



The Country

Zimbabwe is a land locked country about twice the size of the UK sharing common borders with Zambia, Mozambique, South Africa and Botswana. The largest city and capital is Harare. The population is approximately 15 million people speaking 16 official languages, with English, Shona, and Ndebele most commonly spoken. English is predominantly the language of business and government. The current President, E D Mnangagwa became President of Zimbabwe in 2017.

Natural resources include chrome, platinum, gold, nickel, copper, coal, industrial and gem diamonds, lithium, tin, tantalum, tungsten, uranium, iron ore, hydro-power and timber.

Project Access

The Arcadia Lithium Project is located on Nhaka Valley Estate, (formerly Thorn Vlei Farm) in Ward 13, Goromonzi District. The site is situated 38 km East of Harare and 9 km east of the now defunct Arcturus gold mine.

The Project is readily accessible via 18 km along the Harare to Murewa tarred A2 highway.

Climate

The climate is characterized by a wet season with a monthly maximum temperature of 25 ^{o}C to 27 ^{o}C and mean monthly minimum temperatures between 12^{o}C and 14^{o}C. The lowest temperatures are experienced in May – July, and the highest during the months of October – December often exceeds 30^{o}C. Annual precipitation varies between 800 mm and 1 000 mm. The April – October period receives the least, if no precipitation, while the amount increases towards summer, so that November – February are typically the rainiest months.

Topography

The Project site is located on a plateau within the Chishawasha uplands range. The elevation of the Project area varies between approximately 1 300 m – 1 410 m above mean sea level.

The majority of the Project area comprises steep but smooth sided greenstone ridges and undulating hills, running approximately east-west. The old Arcadia Pit is situated on the southern side of the prominent Arcadia Hill.

A number of SW-NE valleys cross the area, and these appear to be controlled by regional fault zones of the same strike.

Approximately 10% of the area comprises low lying, now fallow agricultural fields. These fields are controlled by the presence of large scale NNE -SSW trending and SE – NW trending fault sets.

Vegetation and Soil

Fallow farmland covers a large part of the area and indigenous vegetation is generally confined to the less easily cultivated hilly or marshy ground.

Mixed woodland is widespread, particularly on well drained hills and ridges of greenstone, and growth tends to be more prolific on the more fertile soils of the greenstones.

Residual soils cover most of the area and are mainly are fersiallitic, overlying basic greenstone lithologies (essentially meta-basalts) and mafic intrusive rocks (dolerites). The soils are shallow to a moderate in depth, rarely exceeding 5 m, and reddish brown to greyish brown loam. Over granitic areas, the soils are mainly moderately shallow, greyish brown to coarse grained sandy loams. There is no discernible difference in soil colouration or texture, in areas underlain by pegmatite.

1.2 Strategy

Zimbabwe enjoys considerable mineral resource endowment and a history of successful mining enterprise. The Government is committed to attracting foreign investment into the mining sector by updating its legislation environment and offering incentives to prospective project developers.

Arcadia is expected to initially be the only operating asset for PLZ and provide the cornerstone on which it can provide growth for stakeholders. The cash flow and balance sheet strength provided by Arcadia to PLZ is seen as integral to its vision of becoming a mid-tier, multi asset mining company. Leveraging the operating environment within Zimbabwe will offer PLZ a strategic advantage in unlocking value from Zimbabwe's vast mineral endowment.

Arcadia's optimum development plan indicates that a single project, single ramp up effort to 2.4 Mtpa throughput is most viable, which is the assumption used in this Definitive Feasibility Study (DFS). Start-up and ongoing production variability, especially through ramp up, has been mitigated by way of provision of pilot plant facilities at the Project and an ongoing ore testing program preceding operations by 6-12 months..

Outside of the scope of this feasibility study, PLZ is evaluating a number of value-add opportunities at Arcadia. Of immediate interest is the development of a petalite flotation process that if successful would open the opportunity to substantially increase petalite recovery from Arcadia. To date Dorfner Anzaplan of Germany has achieved positive results from an exploratory petalite flotation programme carried out on samples of Arcadia ores. PLZ proposes to continue this work.

The commencement of petalite production from the Arcadia DMS Pilot plant has allowed for multiple operational scenarios to be evaluated, allowing for strong development and learnings that have been incorporated into this Study. Secondary to this is the consequential production of by-product feldspar and quartz from petalite and spodumene flotation tailings.

Battery grade lithium carbonate has been produced from Arcadia petalite and spodumene ores at the PLZ chemicals pilot plant in Kwe Kwe in Zimbabwe. A chemicals plant at Arcadia would be unique in Africa and one of the few chemicals plants outside of China; and would have the potential to significantly benefit PLZ stakeholders. PLZ proposes to initiate pre-feasibility works to evaluate the viability of in-country chemicals production in due course.

1.3 Geology and Mineral Resources

1.3.1 Mineral Tenements

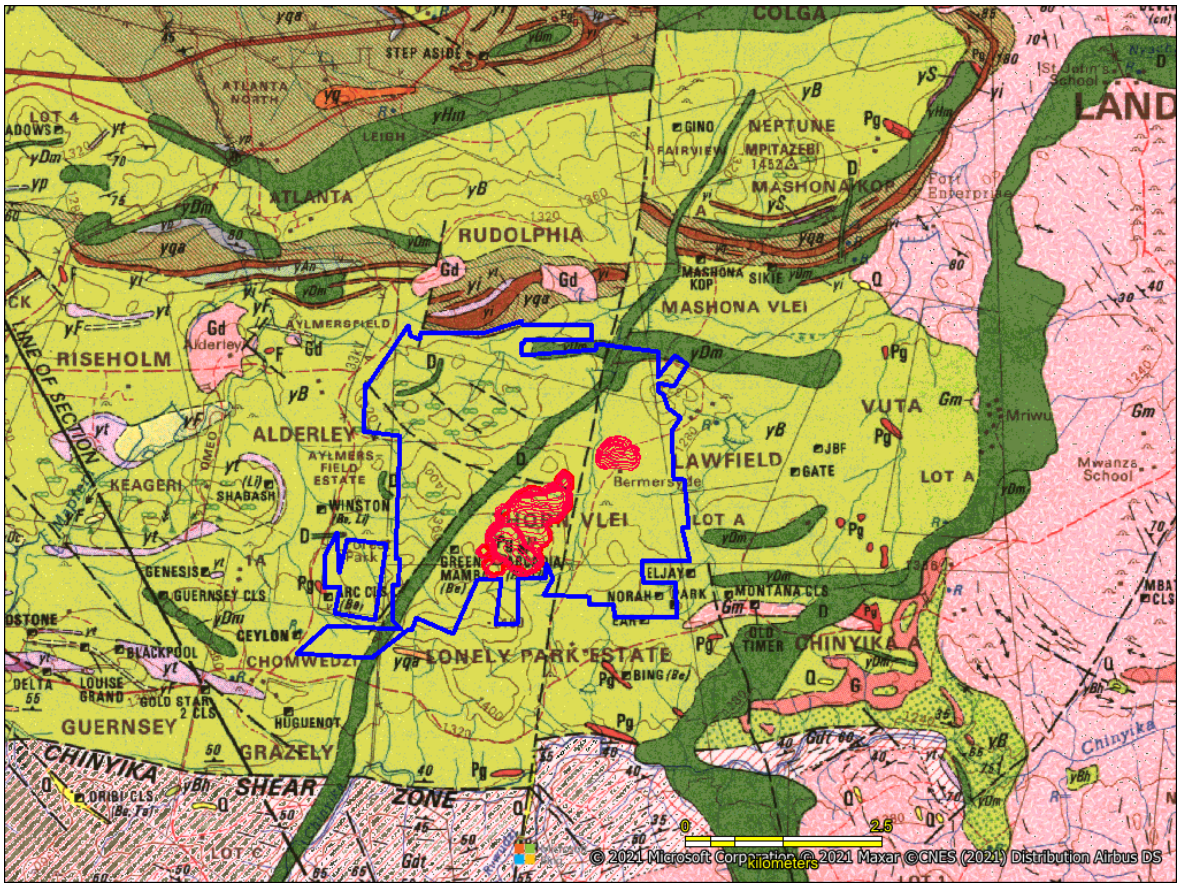
The Project is secured by 43 blocks of base metal claims ranging in size from 10 Ha to 103 Ha, covering a total area of almost 986 Ha. Mining lease number 38 was issued to PLZ which covers 10 km2 and encompasses 33 of the aforementioned base metal claims. Figure 1.3.1 shows the boundaries of the consolidated Arcadia tenements, while details of Arcadia tenement holdings are included in the main report.

All claim boundaries and beacons have been inspected and maintained as required by the Mines and Minerals Act. All the blocks are subject to annual inspections and following payment of an inspection fee, are renewed for another year.

Exploration and mining are permissible on claims, provided the pre-requisite environmental impact assessment (EIA) has been done. By law, extant mining claims also take preference over any new housing or agricultural rights.

None of these claims is subject to tribute agreements, nor under ownership dispute.

Figure 1.3.1 Combined Arcadia Mineral Tenement Outline



(North to the Top)

1.3.2 Brief Exploration History

Between 1962 and 1978, the Arcadia mine was sporadically worked as a small-scale open cast operation, where approximately 10 000 t of lithium minerals were produced, in addition to some limited amounts of beryl.

In early 1981, Rand Mines plc (Central African Minerals) undertook a limited drilling programme, which defined approximately 18 Mt, (Non JORC compliant) with high peak grades of Li_2O. The weighted average grade of the intercepts in the eight bore holes was 1.47% Li_2O over 26 m.

1.3.3 Historical Production

The mine was operational from 1962 – 1978, with the main era of production being the late 1960s, when a K. Warren mined the pit under a tribute agreement from the Consolidated Minerals Company. It was presumably him that initiated Geological Survey's involvement with the 1969 drilling programme. It is known that the area was quite dangerous during the war years, and this may well have caused the premature closure of the operation, along with economic sanctions in 1978. Reported production during this period was approximately 15 000 tonnes of mixed beryl and lithium ores.

Beneficiation was limited to simple crushing and hand sorting, with product being trucked to the Ruwa railway siding.

1.3.4 Geology

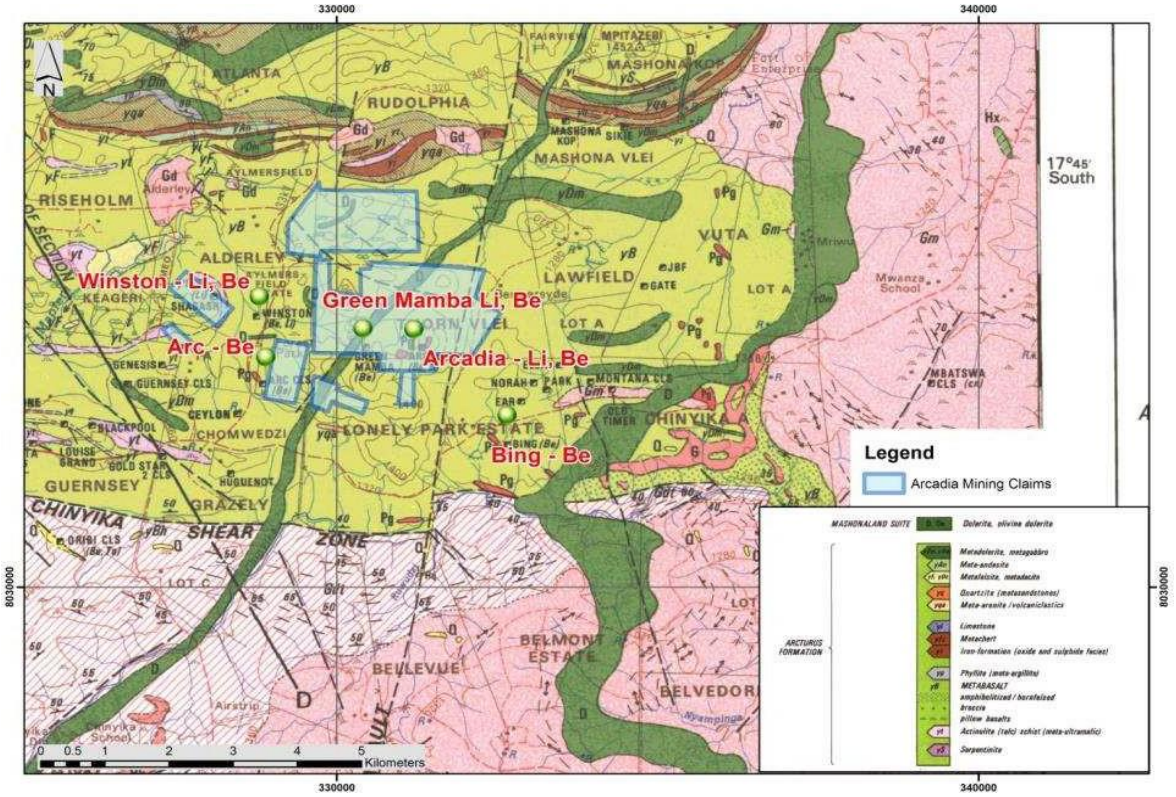
The geology of the greater Arcadia area is dominated by greenstone lithologies of the Arcturus Formation of the Harare Greenstone Belt (HGB). These greenstones are encircled and intruded by a variable suite of granitic rocks, the oldest of which may have been intruded at a similar time with the youngest felsic volcanic rocks of the belt. There is also some evidence for a small remnant area of gneissic basement to the greenstone belt.

The HGB takes the form of a complex refolded synform structure, which outcrops in two major limbs. The E-W trending Arcturus Limb occupies a broad band across the centre of the area, and to the west of the city of Harare this passes via a fold closure into the N-S trending Passaford Limb which is contiguous northwards to the greenstones of the Bindura area.

The main HGB lithological units comprise mainly meta-basalts, banded iron formations, meta-andesites, serpentinites, dolerites and the lithium bearing pegmatites that also host beryl, tin and tantalite amongst others.

The Project (Arcadia-Green Mamba Camp) which lies close to the eastern end of the HGB is dominated by Arcturus Formation Meta-basalts, Figure 1.3.2.

Figure 1.3.2 Regional Geological Map



Four different rock types are found on the Arcadia and Green Mamba claims. These are metabasalt, pegmatite, dolerite and quartz veins, listed from relatively oldest to youngest. The pegmatites comprise the lithium bearing rocks and are of immediate relevance to the Project.

Pegmatite outcrops are coarse to very coarse grained, white to greyish white in colour and blocky in appearance with some oxidation along joint planes. However, natural pegmatite outcrops are rare. This is because they contain high proportions of feldspar which readily weather to clay minerals such as kaolinite and hectorite. The pegmatite mineralogy is dominated by feldspars (mostly albite), lesser quartz and muscovite. The contained lithium bearing minerals include petalite, spodumene, eucryptite and rare lepidolite.

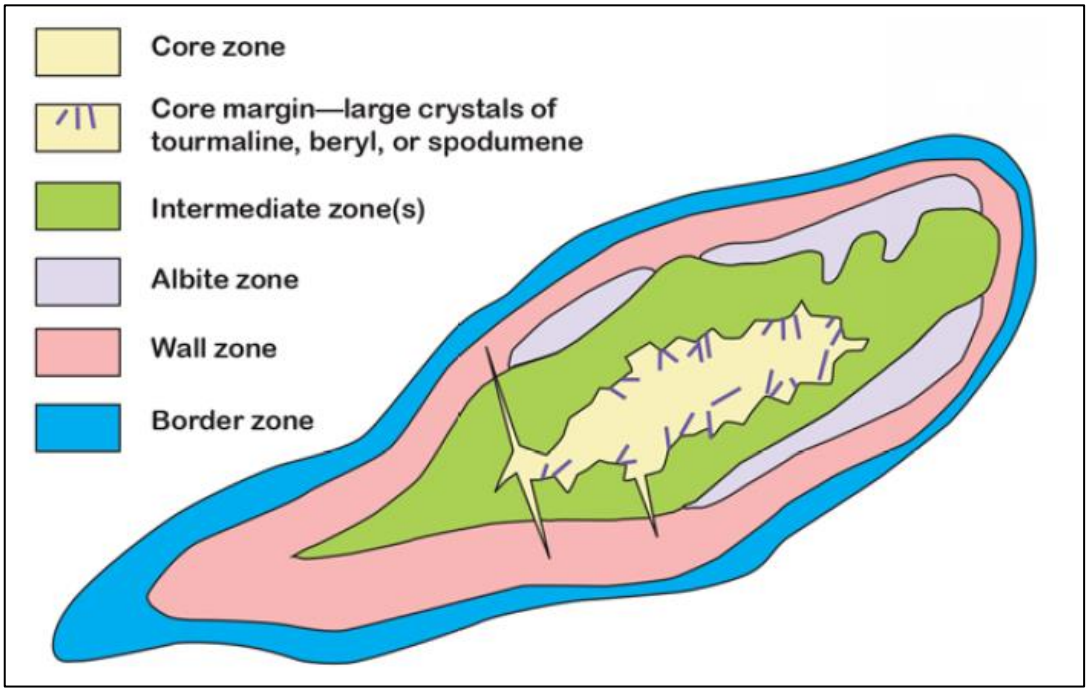
The ore bodies that constitute the reserve show local variation, notably in the proportions of the two main lithium ore minerals; spodumene and petalite. However, there is actually little overall lithological variation among the ore bodies, which are essentially lithium rich quartz-feldspar pegmatites. Detailed XRD and petrographic studies have deduced that the ore bodies consist on average of;

- 45% various feldspars, notably albite;
- 30% quartz;

- 19% lithium minerals, predominantly petalite and spodumene, with an average weight ratio of 2:1; and
- 4% muscovite, in solid solution with subsidiary amounts of lepidolite.

The pegmatite bodies are also concentrically zoned, Figure 1.3.3. The outer-most zones are the wall and aplitic zones, which are fine grained and comprise mostly feldspar, quartz and muscovite with some rare lepidolite. The intermediate zone is the widest of all the zones and has a coarse to very coarse-grained texture. Furthermore, the intermediate zone hosts petalite and spodumene, along with feldspar and quartz. The centre-most zone is referred to as the core zone, which is dominated by coarse grained quartz and muscovite. However, the core zone is not always developed. It is important to note that the thickness of each zone varies, depending on the thickness of the entire pegmatite body.

Figure 1.3.3 Stylised Pegmatite Zones (From USGS Open File 2013 – 1008)



1.3.5 Alteration

Alteration products generally include fine-grained intergrowths of elongate, acicular crystal masses, the composition of which is difficult to identify. Where discernible, alteration is observed along grain margins and veins, predominantly associated with petalite and spodumene.

Primary petalite and spodumene alter to 'SQI' (spodumene quartz intergrowths) and eucryptite respectively. SQI is identified within veins and fractures, and eucryptite and/or zinnwaldite is observed along the petalite grain boundary, resulting in irregular margins of petalite grains.

1.3.6 Exploration

Exploration comprised soil sampling and trenching followed by drilling. From statistical and empirical analyses, soil geochemistry samples containing >200 ppm Li indicated areas underlain by lithium containing pegmatites; effectively anomalous. Correlation of the anomalous areas revealed a mineralized zone in a southwest to northeast orientation. The presence of pegmatites just below the surface was positively proved by trenching over the areas where anomalies were identified. Exposing the weathered pegmatites in the trenches allowed the approximate strike, dip and dip direction to be established, as a prelude to drilling.

Prospect initiated its Phase 1 diamond drilling (DD) programme at the end of June 2016. This 16-hole (1 172 m) programme successfully defined the down dip extent of the so-called Main Pegmatite to at least 100 m northwest from the old pit and showed the presence of up to 14 lithium bearing stacked pegmatites, above and below the Main Pegmatite. Both petalite and spodumene were identified, along with lesser amounts of tantalite and eucryptite.

The 33-hole Phase 2 RC programme (2 070 m) undertaken in August 2016 successfully indicated that one of the pegmatite layers some 30 m to 40 m below the MP thickened considerably to the east, reaching over 30 m thick in parts. It has been subsequently shown that this Lower Main Pegmatite (LMP) dwarfs all the other pegmatites discovered, including the MP. It is this unit that will be the major contributor to the Ore Reserves. A combined RC and DD programme was initiated in October 2016, with the aim of extending the strike extent and down dip extent of the Lower Main Pegmatite.

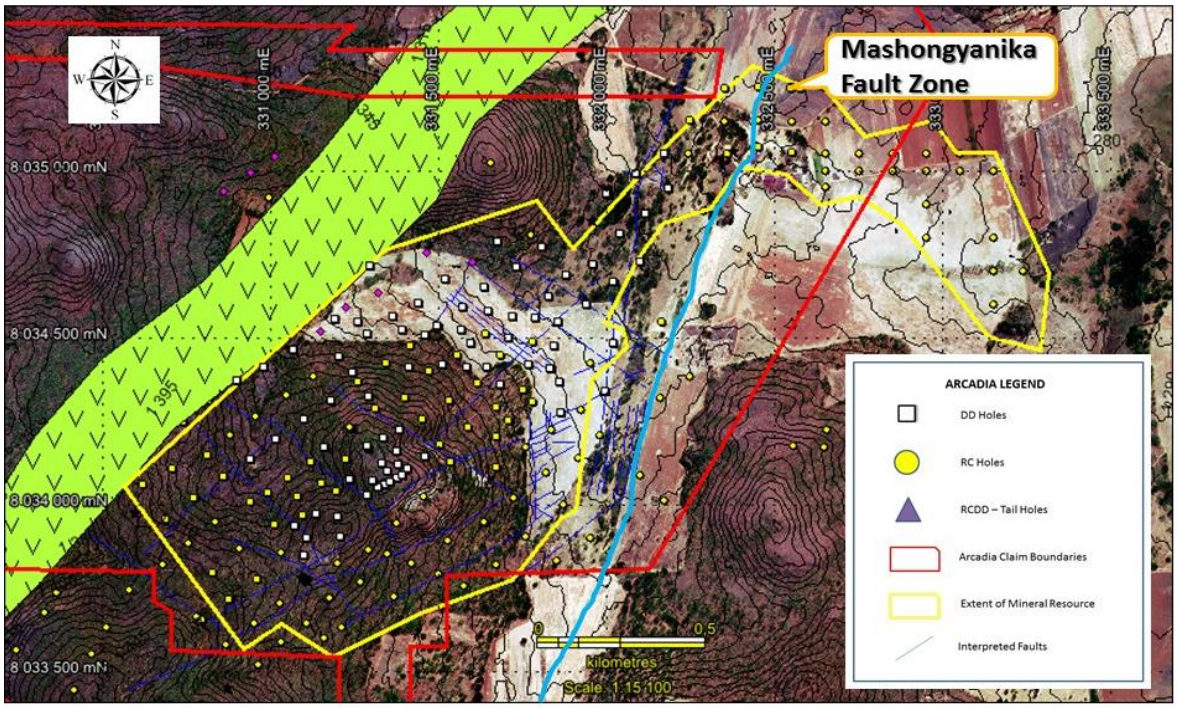
Phase 4 was a continuation of this programme in 2017.

Phase 5 drilled in the 3rd quarter of 2017 was an infill drilling programme designed to upgrade all the LMP within the planned pit to at least indicated resources. In addition, more exploration was undertaken on the Basal Pegmatite in the southwest.

In an effort to identify minable ground close to the surface a phase 6 drilling program was initiated in the 3rd quarter of 2018. A total of 6 RC holes were drilled totalling 518 m.

As of the end of 2018 a total of 23 724 m was drilled. The programme comprised of 194 RC holes, 81 DD holes and 11 pre-collared holes down to 50 m using an RC rig and from 50 m onwards using a DD rig. Figure 1.3.4 illustrates the drilling incorporated in the mineral resource estimate.

Figure 1.3.4 Drilling Incorporated In the Mineral Resource Estimate



As of the end of January 2019, the estimated SW-NE strike extent of the mineralised body was 4.5 km by 1 km down dip (NW). Additionally, exploration potential exists along strike for almost 3.5 km, not currently held by the Company. There is also considerable scope for finding further ore bodies in the greater area.

No further resource development activity has taken place since Early 2019.

1.3.7 Current Mineral Resource Summary

Exploration completed by PLZ supports the conclusion that Arcadia is a medium - high grade, large tonnage deposit comprising stacked pegmatites with potential to delineate additional resources along strike and the possibility of discovery of additional parallel ore bodies.
As of end November 2019, the estimated Global Mineral Resources for Arcadia were as shown in Table 1.3.1.

Table 1.3.1 Arcadia Global Mineral Resource Estimate at 0.2% Li_2O Cut-off

Category		Mt	Li_2O, %	Ta_2O_5, ppm	Li_2O, t	Ta_2O_5, lb
Measured	W	1.45	0.77	106	11 200	340 800
	F	14.41	1.21	123	173 700	3 897 000
Indicated	W	7.36	0.86	134	63 200	2 169 400
	F	38.00	1.15	118	438 400	9 932 100
Inferred	W	1.27	0.65	104	8 300	291 100
	F	10.17	1.11	112	113 100	2 504 600
Total		**72.70**	**1.11**	**119**	**807 900**	**19 135 000**

W = weathered; F = fresh

Table 1.3.2 shows a high grade zone MRE at a 1% Li_2O cut-off. This Resource forms the basis of this study.

Table 1.3.2 Arcadia High Grade Mineral Resource Estimate at 1% Li_2O Cut-off

Category		Mt	Li_2O, %	Ta_2O_5, ppm	Li_2O, t	Ta_2O_5, lb
Measured	W	0.24	1.33	134	3 200	71 200
	F	9.58	1.43	123	137 300	2 600 900
Indicated	W	2.41	1.22	141	29 400	748 300
	F	24	1.39	127	328 900	6 641 200
Inferred	W	0.08	1.42	130	1 200	24 100
	F	5.12	1.38	114	70 700	1 283 100
Total		**41,18**	**1.39**	**125**	**570 700**	**11 368 800**

W = weathered; F = fresh

There have been no changes to the Global Mineral Resource estimate since November 2019.

The exploration target remains 80 Mt to 100 Mt at 1.2% Li_2O to 1.5% Li_2O. Semi-regional exploration, in the form of mapping and soil geochemistry is continuing.

1.4 Geotechnical

The Project is located within the hydrological sub-zone CH4; Upper sub-catchment of the Mazowe catchment area. The Mazowe River rises north of Harare and flows northwards and then north east where after it heads to the border with Mozambique before entering the Zambezi River.

1.4.1 Geotechnical Setting

The RQD- structural logging undertaken by the exploration team showed the pegmatites and meta-basalt to be very competent, with distinct brittle contacts between lithologies that will permit easy separation during mining.

Practara of Johannesburg have assessed drill data throughout the Arcadia development programme and have made recommendations with respect to pit wall slopes and geometry.

Overall, there are no considered fatal flaws or critical risk factors to pit design. Structures and blocky ground can be managed during operations by applying sound rock engineering methods and techniques to monitor and support. Based on observations within the existing pit, the upper 25 m will most likely require a more conservative slope angle to cater for any eventualities and to ensure design within the required factor of safety.

There are however obvious gaps in the DD database due to the lack of DD holes in the South and West for the Main pit, and then for the NE satellite pit. These need to be addressed before pre-production plans may be finalised. Overall, the rock mass is considered acceptable, but the presence of interpreted structures and the orientations in relation to the planned walls will require further assessment as mine development progresses.

1.4.2 Proposed Plant Area

The plant area selected to the west of the proposed pit is within optimum hauling distance from the mine, but outside of the blast area to protect equipment from debris.

The generally weathered nature of material within about 4 m of surface suggest some major earth works will be required to provide a stable base for the processing plant civil works.

Merlicon were contracted during the November 2018 DFS study to review the geotechnical test work within the area and provide an opinion regarding the geotechnical work conducted to date. Merlicon were also contracted to give BOQ's for the revised processing plant earthworks as well as the roads within the area for this DFS. They have also provided the final positions of the major equipment in the current lay-out which will be used to site test pits and perform geotechnical logging and test work during the detailed engineering phase

1.4.3 Hydrogeology

The surrounding streams, such as the Nyachivi, which runs through the Project site are seasonally ephemeral and flow only during periods of active rainfall. The hydrogeology is dominated by secondary fracture permeability and shear zones within the greenstones. The occurrence of groundwater is solely controlled by the development of secondary porosity and permeability within the impervious rock mass. The crystalline parent rock gives rise to shallow crystalline fractured aquifers.

The dominant water bearing features appear in order to be; the NW-SE trending faults, the NNE-SSW regional faults, such as the Mashonganyika and the less than common but major SW- NE zones. Ground water is also concentrated along structurally controlled contacts to the Mashonaland dolerites, which appear to have been preferentially but not exclusively emplaced along these SW-NE fault zones.

The pegmatites form a generally impervious rock mass with any groundwater occurrence in the rocks controlled by fracture sets and secondary porosity.

1.4.4 Hydrological Report Conclusion

The hydrological and hydrogeological assessments showed that there is high potential for both surface and groundwater, and groundwater is most likely to be utilised. Surface water accessible to the mine is from the main catchment which has a spatial coverage of over 9 180 609 m2 and surface runoff of above 5 054 503 m2. The available small dam can provide seasonal water source from November to June if it is rehabilitated and there is sufficient rainfall each year. The models used in this assessment assumed minimum values and this is an advantage since it minimises risk factor.

Groundwater provides a source of water as a buffer during times of drought and is a resource that can be developed for localized use. Groundwater is the ultimate resource for use at local scale, because it lends itself to incremental development at relatively low cost and because it is more resilient to inter-annual variability than surface water.

A sustainable water resource for the Project is likely to be a combination of surface and groundwater. Mapping of groundwater using geophysical methods will be necessary as well as completing pump tests.

1.5 Mining

Mining activities have occurred on the Arcadia deposit over a number of decades albeit small scale and sporadic. The ore mined in the past was crushed and hand sorted for lithium minerals and beryl.

In March 2017, Prospect produced a Mineral Resource estimate of 57.3 Mt @ 1.12% Li_2O derived from a series of drilling programs and a pit design based on the Mineral Resource containing an Ore Reserve of 15.8 Mt @ 1.34% Li_2O was used in the PFS issued in July 2017. The pit design comprised a Main pit and two satellite pits with a production rate of 100 000 tpm ore to meet the then process plant throughput capacity of 1.2 Mtpa. The pit optimisation was based on producing chemical grade spodumene and petalite concentrate with tantalum concentrate as a by-product.

The Mineral Resource estimate was subsequently updated to 72.7 Mt @ 1.11% Li_2O in October 2017 following additional drilling, and a re-optimisation of the pits generated an updated Ore Reserve of 26.9 Mt @ 1.31% Li_2O in December 2017. This Ore Reserve was used in the DFS completed in November 2019 with an average ore production rate of 200 000 tpm based on the process plant capacity being increased to 2.4 Mtpa.

The current mining schedule developed has been revised to suit operations at 2.4 Mtpa. For this study, the pits have been re-optimised using the October 2017 Mineral Resource estimate, updated physical and cost parameters and the production of a higher value Low Iron Petalite concentrate as well as the three other products (petalite, spodumene and tantalum). The updated parameters have increased the Ore Reserve to 42.3 Mt @ 1.19 % Li_2O.

A processing plant receiving ROM ore at 200 000 tpm and capable of producing several lithium mineral concentrates as well as a tantalite concentrate forms the basis of the mine design.

Due to the shallowness of the orebody, open pit mining method is the most economic extraction method.

Waste dumps will be located as close as possible to pit exit points to minimise haulage profiles without disrupting the access to the minable resource or crushing plant.

1.5.1 Pit Design

Whittle software was employed to generate and evaluate a series of pit shells on worst- and best-case discounted cash flow outcomes. The optimal pit is found where an increase in pit size (larger pit-shell) does not add significant value or simply resulted in declining value. Ore waste selection in the optimisation process was based on cash flow, hence no pre-described cut-off grade was applied in the optimisation process. The optimizer flexibly retained blocks as ore if they generated positive cash flow and discarded blocks as waste if they generated negative cash flow.

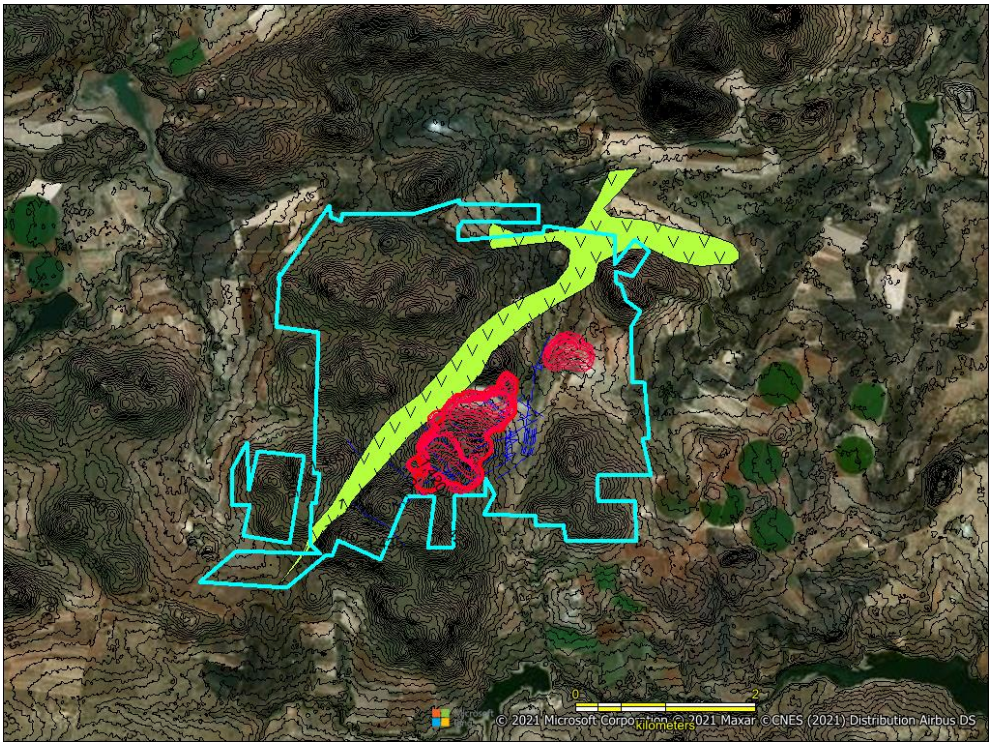
An updated geological model with detailed analytical attributes was used by CSA of Perth to run Lerchs-Grossman optimisations generating a series of nested pit-shells using a set of anticipated economic parameters and a variety of other technical parameters and constraints. The optimal pit was found where an increase in pit size did not add significant value or resulted in declining value.

Assumptions for economic and cost factors that were used to develop the basis for estimating the optimal pit include:

- Commodity prices;
- Royalties and taxes;
- Mining costs;
- Ore treatment costs;
- Product selling costs; and
- Mining and ore processing constraints.

The Whittle optimisation process resulted in the establishment of two pits comprising a Main Pit and a Satellite Pit located north-east of the Main Pit as illustrated in Figure 1.5.1.

Figure 1.5.1 Orientation of Main and Satellite Pits within Licence Boundary



(North to Top of Diagram)

The Main Pit has been designed in four phases to maximise Project discounted cash flow. This includes two small "starter" pits within the first phase pit to be mined at the commencement of operations, thus allowing for the mine schedule to minimise waste mining in the early years and maximise the lithium grades of the ore fed to the process plant, while maintaining practical mining practices including a minimum working width.

1.5.2 Ore Reserve

The Arcadia Ore Reserve has been prepared in accordance with the JORC Code, 2012 edition. Evaluation of the block model was carried out by CSA Global of Perth in August 2021, and Table 1.5.1 summarises the Ore Reserve that would be delivered to the processing plant. The key modifying factors applied to Ore Reserve calculation include:

- Dilution 5%, and
- Ore recovery 95%

The diluting waste material was assumed to be barren with respect to lithium and tantalum.

The Ore Reserve has been reported using a cut-off grade derived from calculations based on Net Smelter Return (NSR). Given the Project will sell four different products, the formula used to compute NSR is based on total revenue from all mineral products less processing and selling costs. Each block that is able to generate sufficient revenue to offset the stated costs is considered as ore.

Table 1.5.1 Arcadia Lithium Deposit Ore Reserve Estimate – August 2021

Category	Tonnes (Mt)	Li_2O (%)	Ta_2O_5 (ppm)	Li_2O (kt)	Ta_2O_5 (Mlb)
Proved	11.8	1.25	114	148	3.0
Probable	30.5	1.17	124	357	8.3
Total	**42.3**	**1.19**	**121**	**504**	**11.3**

A total of 144 Mt of waste is to be extracted from the pits, representing a life of mine stripping ratio of 3.2:1.

1.5.3 Mine Schedule

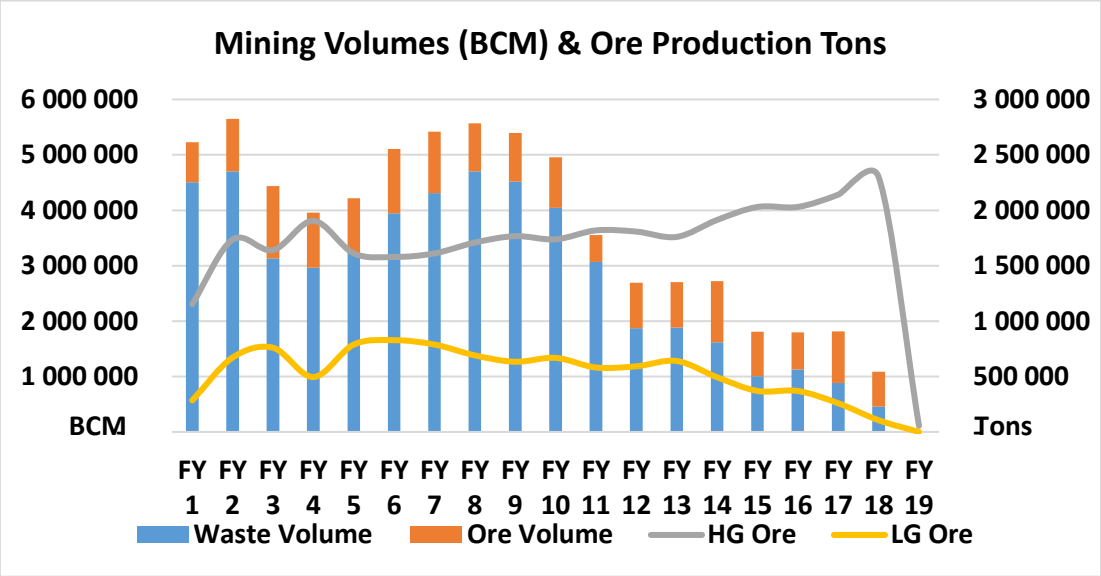
The mine schedule has been prepared based on the following criteria:

- The process plant to commence commissioning in July 2023
- The process plant has six-month ramp-up period prior to a steady state throughput rate of 200 000 tpm for the life of mine.
- Low grade ore is to be fed into the processes in the first month of commissioning, with high grade ore (+1.0% Li_2O) thereafter. The remaining mined low-grade ore is to be stockpiled and fed to the process plant when high grade ore reserves are exhausted or blended with very high-grade ore to produce a relatively constant product production profile over life of mine.

A life of mine production schedule has been prepared using "MineSched" software. To ensure sufficient high- and low-grade stocks are available at the commencement of process plant commissioning, mining operations are to commence six months prior to plant start-up.

Figure 1.5.2 illustrates the Arcadia life of mine (LoM) ore delivery schedule. Early supply of Main Pegmatite ore in which petalite dominates will provide maximum opportunity for the production of Technical Grade ultra-low iron petalite concentrate.

Figure 1.5.2 Arcadia Mining Schedule



1.5.4 Mine Operations

Mining will be carried out over 2 x 10 hour shifts per day, 6 days per week. Mining operations will be conducted utilising a contracted fleet for key equipment with some ancillary vehicles being supplied by the mine operator. PLZ will be in charge of managing and supervising the contractor to ensure compliance with all business ethics, environmental and occupational health and safety requirements.

It is planned that track mounted diesel hydraulic backhoe excavators will load ore and waste into dump trucks. Ore grading 1% Li_2O or more will be transported to the run of mine (ROM) pad where it will be stockpiled in fingers prior to reclamation by front end loader. Lower grade ore will be stockpiled for later processing or blending with high grade ore to control treatment plant head grade.

Waste material will require blasting except for some of the upper weathered rocks. Topsoil will be pre-stripped to a separate dumpsite for future use in rehabilitation at mine closure stage. Ore and waste will be identified and mined separately in 2.5 to 10-metre-high benches. Ore boundaries will be identified using grade control drilling, blast hole sampling and cross pit trenching.

Ground water is unlikely to influence the stability of the pit walls but may require the need for wet hole blasting. Dewatering boreholes around the pit perimeter will be employed to lower the ground water front ahead of mining faces. In-pit pumping will also contribute to mine water management.

A small Clean Basalt dump could provide an option to stockpile material for producing aggregate which will be used in the project's construction phase, road maintenance and road construction and potentially sold as a by-product.

1.5.5 Mining Costs

Contract mining will serve to minimise up-front capital items, which CSA estimates to be USD1.407M. Pre-strip costs incurred in the first 3 months will be capitalised at USD5.25M.

Table 1.5.2shows the estimated life of mine (LOM) operating costs for Arcadia.

Table 1.5.2 Estimated Arcadia LOM Mining Costs

Description	Quantity
Total LOM direct operating cost, USD	531,147,523
Total ore tonnes mined (t)	42 324 064
Total waste tonnes mined (t)	143,788,159
Total material mined (t)	186,112,223
Cost/tonne ore mined, USD	12.55
Cost/tonne total material mined, USD	2.85

Mine expansion costs will be drawn from sustaining capital.

1.5.6 Mine Closure

CSA has formulated a mine closure plan with the objectives to minimise or eliminate public safety hazards, provide long-term stable configurations and reclaim surface disturbances for beneficial use that is consistent with local land use objectives.

The closure and reclamation plan proposed will meet or exceed typical African standards and requirements in anticipation of future guidelines developed in Zimbabwe. Closure and reclamation activities will cover mine and waste dump rehabilitation, and remediation of processing, tailings storage and other surface facilities.

CSA has estimated the total value of mine closure to be USD10.3M.

1.6 Mineral Processing

1.6.1 Mineral Processing Overview

Following completion of its 2019 DFS, Prospect engaged LMA to review all process design and metallurgical assumptions in the feasibility study. The outcomes of the review highlighted the need for additional variability test work on all processes i.e. DMS, flotation (including the milling circuit), comminution and tantalum recovery circuits to provide confidence in the robustness of the selected processes.

A test work program was developed by LMA prior to starting work on the feasibility study of 2021. Due to time constraints, certain gaps with regards to addressing the ore variability and repeatability of the tests remained within the test programme.

These gaps were mitigated as follows:

- LMA adopted a pragmatic approach and benchmarked the current (2021) test work against similar operations, hence increasing the design envelopes and thus mitigating the absence of variability test work. This was done in conjunction with Prospect and the knock-on effects on the capital and operational cost is understood.

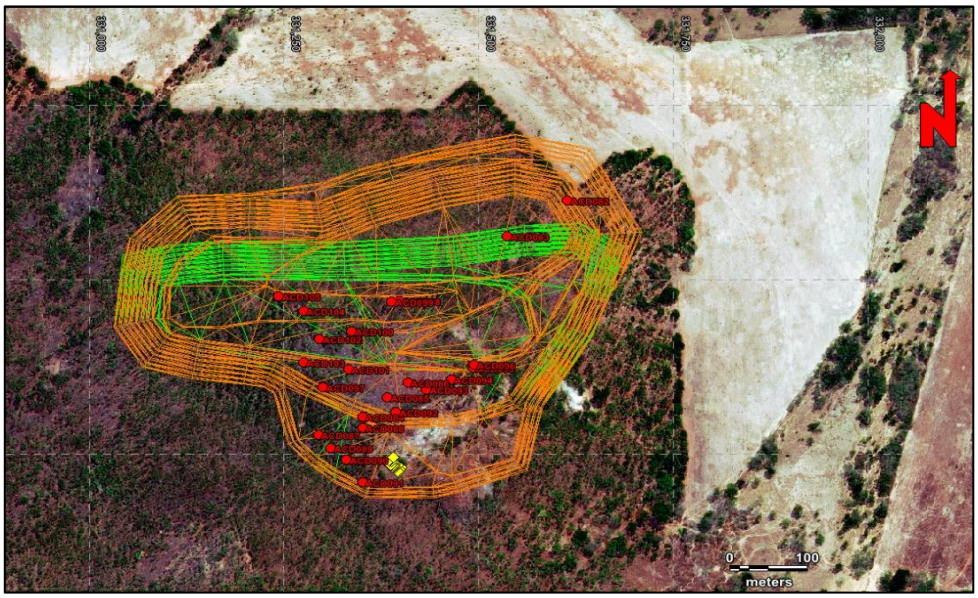
- Prospect's Geologist has observed that, even though the ore bodies show local variation, notably in the proportions of the two main lithium ore minerals, spodumene and petalite, there is very little overall lithological variation within the ore bodies, which are essentially lithium rich quartz - feldspar pegmatites.

The mineralogy of the Arcadia deposit lithium minerals shows petalite to be dominant, at up to 20% by weight, averaging 13%, spodumene to 7.7% by weight, averaging about 5.5% and Bikitaite to 0.66% by weight, averaging 0.45%. Tantalite averages 119 ppm as Ta_2O_5 throughout the Ore Reserve.

1.6.2 Metallurgical Sampling

The samples used for the 2018 / 2019 and 2021 DMS testwork programmes were taken from the bulk Main Pegmatite (MP) blast in the Arcadia pit and the drill cores were from the 2018 DFS mining plans phase 1 and 2 pits. The pit shells are highlighted in Figure 1.6.1.

Figure 1.6.1 Diamond Drill Core Positions



1.6.3 Metallurgical Testing Outcomes

Subsequent to previous studies, conventional beneficiation techniques including dense medium separation (DMS) to recover petalite, gravity-based processes to recover tantalite, and froth flotation to recover spodumene have been retained. Key areas of the most recent testing included the use of high pressure grinding rolls (HPGR) technology, ongoing DMS optimisation and locked cycle spodumene flotation. Testwork was carried out on Main Pegmatite (MP) and Lower Main Pegmatite (LMP) ore zones during 2019 and 2020, and the data derived from these programmes has been applied by LMA to current process and engineering design. Optimisation of tantalum recovery was continuing at the time of study preparation.

Two-stage crushing followed by HPGR has been selected to achieve the sub-5 mm crush size required to achieve adequate liberation of petalite for primary recovery by DMS. DMS feed preparation is based on secondary crusher product feeding HPGR crushing operating at medium pressure. Approximately 68% of plant feed will report to DMS at a bottom cut-off size (BCOS) of 0.6 mm. Primary crushing capacity will be set at 2.4 Mtpa from the outset.

The target grade for petalite products is 4% Li_2O; i.e. 82% petalite. DMS test work has demonstrated that 80% of all DMS petalite concentrates may be produced from Arcadia ores coarser than 1.7 mm and will meet specifications for Technical Grade ultra-low iron product at substantially less than 0.05% Fe_2O_3. The remaining finer petalite at -1.7 mm +0.6 mm will be suitable as Chemical Grade product. Recoveries of petalite to Technical Grade and Chemical Grade products are expected to be 25% and 6% of plant feed petalite respectively.

The sub-millimetre spodumene grain size limits recovery of spodumene by DMS. Consequently, all ore post gravity recovery will report to the flotation circuit where spodumene is effectively recovered at a grind size P100 of 0.212 mm (P80 0.150 mm). Fatty acid flotation of spodumene is widely practised in the lithium beneficiation industry and Arcadia will be no exception in this regard The target grade for spodumene concentrate is 6% Li_2O; i.e. 75% spodumene. Based on flotation data accumulated to date, expected spodumene recovery to concentrate is about 81% for LMP ore and about 55% for MP ore. The fine-grained nature of spodumene and the presence of spodumene-quartz intergrowths (SQI) in MP ore contribute to poorer recovery from this material. The iron content of spodumene concentrate is expected to be about 0.3% to 0.5% Fe_2O_3.

Milled spodumene float feed will be prepared by applying WHIMS to substantially reject contaminant iron minerals followed by mica flotation of the non-magnetic fraction at low pH. Mica concentrate will be set aside pending potential sale. Mica float tails will be washed and reconditioned ahead of spodumene flotation at alkaline pH.

Tantalite will be recovered in a dedicated spiral circuit placed in the flotation tailings stream. The rough tantalite will be upgraded to a saleable product containing approximately 25% Ta_2O_5 by the use of conventional gravity concentration methods and magnetic separation. Early test data suggest tantalite recovery at 27% may be achieved. However, ongoing confirmatory work initiated prior to October 2021 remained in progress as at November 2021.

Liquid/solid separation testing has been carried out. This work showed spodumene float concentrate may be filtered to within specification 8% moisture by vacuum filtration. Thickening tests on final flotation tails achieved settling rates up to 23 m/h and supernatant turbidity values to <20 NTU, which is suitable for use as process water. Flocculant consumption was in the range 10 – 25 g/t.

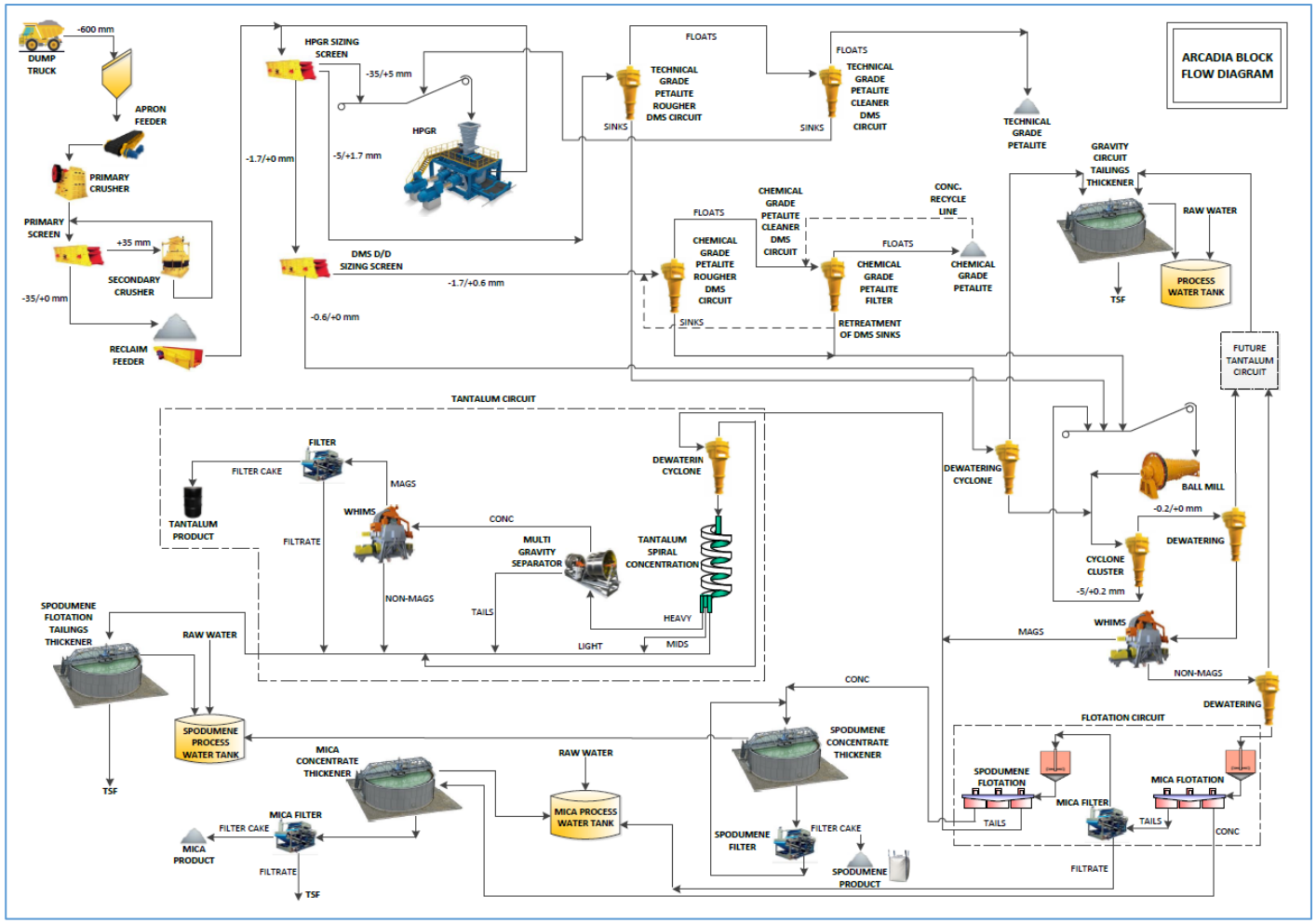
Process water reclaimed within the process flowsheet and returned from the tailings storage facility (TSF) for reuse in the processing plant will be augmented by raw water abstracted from within the Arcadia lease. Two process water circuits will ensure flotation chemicals do not contaminate the DMS circuits.

Thickened process tailings will be disposed of to a buttressed, self-raising TSF designed to hold 42.3 Mt. The TSF will be constructed over three phases including a starter phase operating for 1.4 years followed by a downstream lift to accommodate operation for a further 4.2 years, then the third phase would support the continued TSF expansion as buttressed upstream raises for the remaining life of mine. The TSF will incorporate a decant water recovery and return system.

Figure 1.6.2 illustrates the Arcadia process flowsheet.

Further test work including pilot-scale DMS testing, spodumene flotation and tantalum recovery will continue while the Project is under construction in order to better anticipate the response of various ore types ahead of full-scale mining. Testing of petalite flotation will also continue as precursor work towards establishing increased lithium recovery from the Project in due course.

Figure 1.6.2 Arcadia Flowsheet (Simplified)



1.6.4 Arcadia Pilot Plant

The Arcadia pilot plant was commissioned during June 2021 with the purpose of producing high purity petalite concentrate for Prospect's long term technical grade customer. A single stage DMS consisting of a 200 mm cyclone was implemented initially treating the 5 mm x 1.7 mm size fraction. The product produced by the pilot plant met all technical grade requirements as indicated Table 1.6.1 below.

Table 1.6.1 Estimated Arcadia LOM Mining Costs

Product	Li_2O, %	Fe_2O_3, %	Na_2O, %	K_2O, %
Pilot plant petalite	4.35	0.04	0.28	0.30
Technical grade specification	>4.00	<0.06	0.05 max	0.05 max

The results of this work confirmed design parameters for DMS operation in the production of technical grade petalite. The focus of the pilot plant will soon shift to complete a similar set of work on the 1.7 mm x 0.6 mm size fraction and thus confirm all design parameters prior to detail design for the chemical grade DMS plants.

1.6.5 Future Metallurgical Work

LMA has recommended additional test work be carried out subsequent to Project construction in order to fully characterise future ore treatment responses. Areas of testing include:

- Tantalum recovery;
- Petalite flotation;
- Potential feldspar and quartz extraction;
- Ongoing comminution testing; and
- Ongoing fine DMS testing.

1.7 Infrastructure

The Arcadia lithium project is located 38 km east of Harare, Zimbabwe and has access to considerable existing infrastructure and utilities. Arcadia aims to export 265 000 tonnes of product per year. Prospect's offtake agreements call for settlement as FOB Beira, Mozambique. Prospect completed a logistics report during 2019, which investigated road and rail options for transport of product to port.

This found the rail network between Zimbabwe and Beira to be under capacity and that the road network would be the better option. The 22 km route from site via Goromonzi district to the Harare-Mutare road has been identified as the shortest and quickest route to the Mozambique port of Beira. The existing road includes a 12 km stretch of gravel followed by a 10 km stretch of tar. The 12 km

gravel stretch of road will be upgraded and maintained to cater for construction vehicle access and for concentrate export.

The existing national highway between Harare and the Forbes border post at Mutare can accommodate the vehicles that will be added to the road network. Similarly, the highway from the Forbes border post to the Beira port is structurally sound. Both sections of roads have been upgraded within the last decade and are well maintained.

1.7.1 Power

The ZETDC 132 kV Atlanta substation, located approximately 9.5 km from the Arcadia Lithium Mine, has two 132/33 kV transformers rated at 75 MVA and 50 MVA respectively. The substation has 5 feeder bays currently in use with one equipped and available 25 MW bay for the Arcadia Lithium Project. PLZ has paid for and secured a dedicated 33 kV, 20 MW supply from the ZETDC Atlanta Substation.

HT power will feed via a new 33 kV line into the local substation built near the plant to centralise power distribution. Motors above 400 kW will be rated for 11 kV whilst all other electrical equipment will be connected to a 400 V feed. Electrical equipment and installation at Arcadia will comply with relevant IEC standards.

1.7.2 Communications

Mine communications comprising internet and email traffic as well as VOIP telephone communications will be via fibre optic cable incorporated in the overhead power supply line. A back-up satellite communication system will be installed. Site wide WAN systems will comprise a fibre optic backbone linking local wireless routers to users' computers or devices. Printers for non-confidential use will be centralised at network print stations.

A Pronto ERP system will be installed with server located off site at the PLZ offices in Harare.

1.7.3 Water

Site water requirements will be met by the collection of run-off and abstraction of raw water from bores within the Project mining lease area. The Chinyika dam, situated less than 4 km away from Arcadia, has an 8.1 million cubic meter capacity. PLZ has engaged ZINWA with regards to extracting water from the Chinyika dam and have subsequently received supply/extraction rates and guidance on how to get access to the water body. ZINWA has since acknowledged that there is sufficient available capacity in the Chinyika dams to partially meet the mine water balance demand requirements.

Potable water for the offices and village will be produced on site directly from boreholes. A separate fire water reticulation system will be installed in the plant area for the purpose of asset protection.

1.7.4 Waste Management

A land fill site has been planned for disposal of both construction waste and general waste from operations. The land fill will be constructed on a well-drained and accessible site location. Site selection and land fill design will minimise both the rate of infiltration and preserve the quantity of run-off available for infiltration.

Recycling of all materials will be undertaken wherever possible to minimise waste going to landfill. A composting system will be in place with all organic materials composted for use in site gardens.

1.7.5 Fuel

Diesel fuel will be stored in a suitably bunded area and will be replenished when needed. The estimated storage capacity with be 100 000 L, comprising 4 x 25 000 L tanks. Dispensing pumps with secure meters will be installed for filling light vehicles and fuel bowsers.

Bulk lubricants will also be stored within a protected area. This facility will be designed and built by a fuel supplier in Zimbabwe as part of a contract to supply fuel and lubricants. PLZ will operate the facility.

1.7.6 Buildings

Use will made of pre-fabricated buildings including containerised units and light steel structures. Where applicable, buildings will be designed to utilise decommissioned shipping containers.

Offices have been provided for the following departments:

- Processing Plant management;
- PLZ Mining & Geological management;
- Logistics Department & Security management; and
- The Workshops include ablutions and offices for relevant staff.

Ablution facilities will be provided at the administration and process plant centres. The facilities will be suitable for male and female personnel and will consist of toilets and showers with provision for lockers.

Mine access and plant access control rooms will be provided; these will include a search area and biometric access control. Staff will access the mine through turnstiles to allow mine security to observe each employee entering and exiting the mine site.

A clinic to provide basic health checks for employees will be established at the main gate. An ambulance able to transport persons to a hospital in Harare will be permanently maintained on site.

An assay laboratory will be constructed on site for the operation prior to plant commissioning. The building will include a sample preparation room, metallurgical test work room, wet lab, balance room, instrument room, assay room, reagent store and appropriate offices.

Workshops will be located in the plant area and will provide for mechanical, electrical and instrumentation maintenance. The workshop complex will also incorporate engineering offices, engineering stores and a meeting room.

An explosives magazine will be located in an area easily accessible yet sufficiently remote from existing or planned structures to comply with relevant design standards. The magazine compound will be an area 75 m by 25 m enclosed by a 3 m high wire fence. Explosion-proof lighting will illuminate the area. A manned guard shack shall be located near the entrance to the compound.

1.8 Engineering Design Basis

The engineering design for the processing plant has been based on the Process Design Criteria (PDC), flowsheet development and mass balance. The discipline-specific design criteria also reference the applicable standards, codes and specifications for each element of work.

The processing plant has been designed to operate at up to 2.4 Mtpa feed rate on a 24 hour continuous basis comprising 3 x 8 hour shifts per day. Design plant availabilities are 65% for crushing and 86% for HPGR and subsequent unit operations.

The design life of the processing plant is 20 years.

1.8.1 General

The following general considerations were included in the design:

- Conformance with the Project process design criteria;
- Appropriate safety measures for lifting duties;
- Adequate crane and personnel access for equipment maintenance;
- Structural isolation of vibrating equipment;
- Spillage minimisation;
- Adequate flushing and drainage of slurry systems;
- Hydraulically operated spile bar gates on broken ore draw down points; and
- Adequate protection against wear.

1.8.2 Codes Standards and Safety

Engineering design will conform to the latest edition of the relevant SANS Standards or other recognised international standards.

Design principals will be in line with the governing acts and regulations in South Africa where applicable.

Safety systems including programmed and hard-wired equipment interlocks will be prominent in the plant design.

1.8.3 Hazardous Materials

The following materials will not be used;

- Asbestos and compounds thereof;
- Poly-Chlorinated Bi-Phenyl (PCB) and compounds thereof;
- Ceramic fibres unless otherwise approved;
- Chloro-fluoro carbons (CFC) and compounds thereof; and
- Radioactive materials unless as part of instrumentation systems.

Known carcinogenic substances; and hazardous materials will be transported and stored in accordance with the relevant SANS Standards.

1.8.4 Engineering Deliverables

Discipline engineering design will conform to detailed contractual obligations in pursuit of the delivery of a fit for purpose ore processing plant.

1.9 Human Resources

1.9.1 Labour Budget & Manning Timeframes

PLZ expects to recruit most personnel either from within Zimbabwe or from Zimbabweans in the diaspora who wish to return home. Expatriates required for the provision of specialist skills may qualify for temporary visas valid for one year to at most two years as advised by the Department of Immigration of Zimbabwe and guided by the Immigration Act, Chapter 4:02 on issuance of Temporary Employment Permits, under which transfer of skills is possible.

PLZ also intends to invest in in-house training programmes to ensure proper alignment of all employees with the desired world class standards in the production of Lithium concentrates.

In order to focus on the core business, PLZ intends to outsource some of its activities such as security services, garden services and logistics to local Contractors.

PLZ has developed an operational organogram for use during operations. The anticipated manning establishment is described in Table 1.9.1.

Table 1.9.1 Operations Manning Budget

DEPT/SECT	Departmental Heads	Section Heads	Professionals	Supervisory Personnel	Technicians & Artisans	Semi-skilled & Unskilled	TOTAL
Mining Dept	1	3	4	2	4	20	34
Production Dept-Plant	1	4	4	28	8	105	150
Production Dept-Engineering	0	1	5	3	20	19	48
Human Resources Dept	1	2	2	0	1	1	7
Safety, Health & Environmental Affairs Dept	1	1	4	0	4	1	11
Commercial	2	5	5	5	5	8	29
Company Secretary's Dept	1	0	0	1	0	4	6
TOTAL	**7**	**16**	**24**	**39**	**42**	**158**	**285**

An operational readiness plan has been developed and a take-on period has been incorporated in the overall project schedule.

1.9.2 Employment and Remuneration Strategy

PLZ is confident of attracting and engaging the most suitable human capital candidates to work at its Arcadia operation, in that the labour market in Zimbabwe has an abundance of qualified, experienced and competent managerial and technical skills in all sectors of the economy. All recruitment efforts to date have been met with overwhelming response, and successful identification of appropriate candidates.

PLZ desires to be an employer of choice and/or the most preferred employer among other comparative and competitive operators in the mining industry of Zimbabwe, particularly relevant when considering the restoration of investment confidence. Furthermore, the Company recognises that the engagement and development of qualified and competent Human Resources base is a significant game changer in ensuring overall business operational effectiveness. Based on these

premises, PLZ is committed to paying competitive remuneration packages in order to attract, motivate and retain qualified and competent staff for maintenance of its competitive edge.

1.9.3 Applicable Labour Legislation

The Labour Legislation in Zimbabwe aims to strike a balance between the Employer's quest for minimal work disruption, flexible employment contracts and affordable wage rates through Collective Bargaining Agreements against Employees' expectations for work place democracy and a living wage.

The Labour Act provides that either party may terminate the Contract of Employment by giving the necessary notice period stipulated in the Labour Act. This provides flexibility to business where it may wish to reduce labour. Where labour disputes arise, there are clear dispute resolution processes to be followed. If properly followed the Company may avoid litigation and/or minimise disruption of productive time.

1.9.4 Training

PLZ is committed to ensuring high standards of Technical, Supervisory and Management competence. To ensure this, PLZ will deliver training programmes to its employees and Management in all facets of technical operations, supervisory and management roles training. All employees including contractors will receive basic safety training as part of the induction process.

1.10 Project Execution

The Project Execution Plan (PEP), developed by LMA, outlines the project execution strategy and the proposed overall management methodology for the development of the Project. The scope of works for the Project addresses engineering, procurement and construction management (EPCM), commissioning and handover to PLZ.

1.10.1 Project Execution Strategy

At a high level, there are two teams responsible for Project execution being:

- Prospect Lithium Zimbabwe - the Owner's team; and
- A yet to be nominated EPCM team.

The proposed execution strategy for the EPCM scope of works for the Project is based on the provision of EPCM and commissioning services on a cost reimbursable basis for the development of the process plant and related facilities utilizing horizontal discipline-based contract packaging.

The PEP includes strategies for all aspects of project management and control across all functions and phases under the EPCM contractor's responsibility. The PEP only provides high-level execution philosophies. Detailed project execution plans per function will be developed during the detailed engineering phase.

Specialist consultants will be contracted to PLZ to address specific elements of the Project outside the core competency of the EPCM contractor and PLZ, including mining, geotechnical, environmental and the tailings storage facility (TSF) and water harvesting bore holes.

The PEP has considered the following:

- Project scope;
- Contracting strategy;
- Resourcing and organisation;
- Engineering and detailed design;
- Procurement and logistics.
- Construction and construction management;
- Mine development;
- Project controls;
- Project schedule;
- Health, safety, environment and community; and
- Commissioning, handover and operational readiness.

The PEP will be updated during the detailed engineering design and procurement phase of the Project.

1.10.2 Owners Team Scope of Works

The activities to be directly managed by the Client are as follows:

- Recruitment of Owner's project execution staff;
- The management of the EPCM contractor;
- Communications for site-wide construction and process plant;
- The management of the mining contractor;
- The management of the TSF contractor;
- Management and implementation of all environmental and social management plan activities;

- Management of the risk register; and
- Operational readiness planning and implementation.

Other PLZ activities include:

- Purchase of construction insurances;
- Purchase of an ERP system for the operations team;
- Legal consulting for assembly of EPCM and mining contracts, standard purchase orders and small services contracts;
- Ongoing planning and consultation with relevant authorities; and
- Ongoing local representation with landowners and other stakeholders.

1.10.3 EPCM Contractor's Scope of Works

The Project scope outlines the services to be provided for the delivery of the Project. The scope of the Project includes the mine development, process design, engineering, detailed design of the facilities, all construction management, commissioning and operational readiness to enable mine and plant production to be achieved.

A 20 KVA overhead power facility is to be installed.

The following major areas are part of project execution scope for the EPCM Contractor:

Project Management including but not limited to:

- Purchase requisition management;
- The performance of detailed design and the preparation of the design documentation;
- Full procurement services for EPCM scope including quality assurance functions;
- Construction management, coordination and administration services;
- Outdoor switchyard (connecting to incoming 33 kV power line supplied by ZEDTC); and
- Commissioning.

Administration of the manufacturing, construction contractor and vendor defects liability period will be by PLZ and the monitoring is not part of the EPCM contractor's scope of services.

1.10.4 Project Controls

Project controls will be the responsibility of the Owners' team for the Project as a whole. The controls provide relevant and consistent budget, costs and schedule reporting to the Project team. This provides the tools to efficiently manage the Project at the level of detail necessary to meet Project objectives.

Key aspects of Project controls to be applied during construction include:

- Costs;
- Scheduling;
- Approvals;
- Change management;
- Communications; and
- QA/QC.

1.10.5 Project Commissioning and Closeout

The following nominal commissioning definitions will be used to properly define handover requirements:

- C1 – Electrically complete with respect to all pre-energization tests and energized / run.
- C2 – Run and tested with water.
- C3 – Tested with water and feedstock not at design rates.
- C4 – Tested with water and feedstock metallurgical design achieved.
- C5 – Performance testing for as per equipment vendor agreements.

Handover documentation will include:

- Commissioning documentation plus manuals.
- Up to date electronic copies of all civil, structural, mechanical, electrical and piping drawings.
- Up to date electronic copies of all vendor drawings.
- As built drawings and engineering deliverables as agreed.

A formal closeout report will be compiled at Project completion (as defined by completion of C5 commissioning) by the Owner's team with input from the EPCM Contractor, which will provide an overview of all aspects of the engineering, procurement and construction management of the Project. The report is to be issued within four weeks of successful C5 commissioning.

1.10.6 Project Execution Schedule

A high level 26-month execution schedule has been developed for the Project. The implementation strategy is structured into four broad stages:

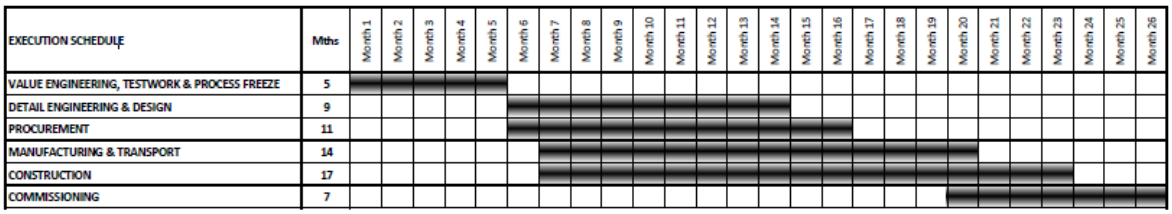
- Engineering;
- Procurement;
- Construction; and
- Commissioning and handover.

The following activities have been identified as the key schedule constraints due to their interconnection with Project activities:

- Wet season effect on starting earthworks for plant terraces and TSF;
- Delivery of equipment and materials from off shore; and
- Availability of services required for construction.

The estimated durations of key activities associated with the Project are summarized in Figure 1.10.1.

Figure 1.10.1 Project Execution Schedule



1.10.7 Operational Readiness

The aim of operational readiness is to achieve smooth transition from Project construction through commissioning to first concentrate production and on to sustainable production thereafter.

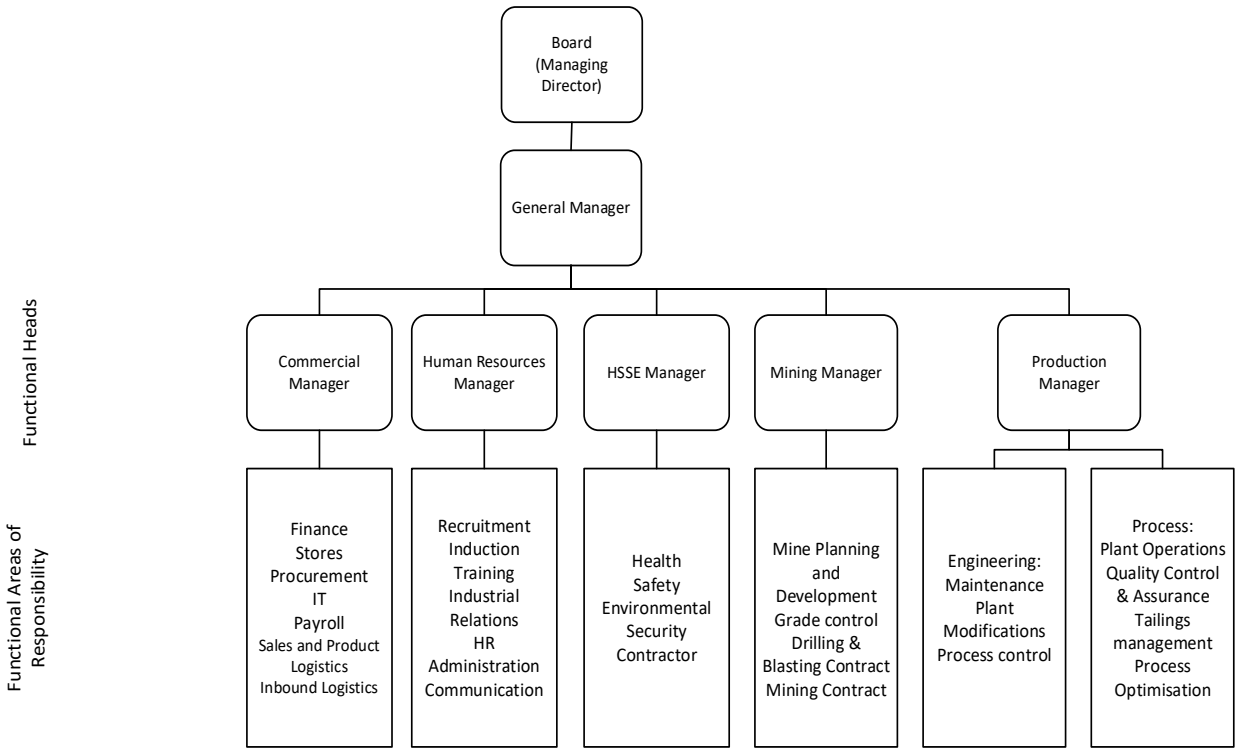
All activities associated with operational readiness lie within the Owner's team budget and scope. Specialist contractors may be engaged directly to assist in this process and a level of cooperation will be built into the EPCM contract where required, to enable interfacing specifically with respect to equipment spares supply and first fill requirements.

1.11 Operations Management

The Project operation will be based on continuous production, working 365 days per year, 24 hours per day. The Project will maximise the employment of Zimbabwean nationals, who will receive specialised training prior to commencement of operations. Expatriate numbers will be minimal and on an as-needs basis for specialised requirements.

The Project will be under the leadership of the PLZ General Manager who will report to the Managing Director of Prospect. As illustrated in Figure 1.11.1, each functional area will be managed by a Functional Head reporting to the General Manager.

Figure 1.11.1 Arcadia Functional Management Structure



Drilling, blasting and mining will be carried out by relevant in-country contractors under the direction of the Mining Manager. Mine planning and grade control will also be under the Mining Manager supported by relevant specialists.

The Production Manager will manage the operations and engineering function. This department includes the laboratory and metallurgy sections responsible for grade and quality control / assurance.

All health, safety and environmental functions will be managed by the Health Safety Security and Environmental Manager. The Security Contractor will report to the HSSE Manager.

The Human Resources Manager will manage the human resources functions including recruitment, induction, training, industrial relations, human resource administration and communication.

Finance, procurement and stores, information technology support, payroll administration, sales and inbound and outbound logistics will be managed by the Commercial Manager.

The Company Secretary will be responsible for legal support, statutory compliance and reporting, government liaison, risk management and coordinating Corporate Social Responsibility (CSR). Arcadia Lithium will establish a committee to develop and implement the CSR strategy and plan.

1.12 Information Management

PLZ will employ a knowledge management system to capture, control, securely store and share all relevant knowledge as developed during the Project and operational phases of the Project.

The knowledge management system will expand to incorporate information generated during the operational phase which will be managed on an ongoing basis. This will include the following information:

- Policies and operating procedures;
- Commercial documentation;
- Mining data;
- Metallurgical data and accounting;
- TSF data; and
- HSE monitoring information.

All financial information will be captured and maintained in the Enterprise Resource Planning (ERP) Unix-based System, which will incorporate a Computerised Maintenance Management System (CMMS) that will be used to capture all equipment maintenance and service information.

PLZ has settled on preferred hardware options, which are readily available, satisfy plug and play simplicity and which are readily maintained or replaced.

Similarly, software selection is consistent with financial and enterprise packages in use within the mining industry. With the exception of the ERP system, all applications will operate within a MS-Windows environment. A local IT service provider

Quotes have been obtained from in-country companies for the provision of a fibre line linking the mine site to Harare, where ISP and data storage and protection services will be contracted to a local service provider.

PLZ intends to recruit a full time IT Administrator, with strong technical skills to manage all facets of the IT network in the future, and the mine site will also have a full time LAN Administrator to support the IT Administrator.

1.13 Health Safety Environment & Community

The Project has been designed to comply with the following guidelines, standards and conventions:

- International Finance Corporation Performance Standards of 2012;
- Equator Principles of June 2013; and
- International Labour Organisation conventions.

An EIA was carried out in 2017 with a revision in March 2019 to comply with in-country legislation. The EIA included a baseline study, which covered the current status of the biophysical and socioeconomic environment of the Arcadia mine claims area. Site-specific environmental resource evaluations were completed, including assessment of soil, water, air, wildlife, vegetation, noise, socioeconomic, archaeology and local culture.

Subsequent to the issue of the EIA a gap analysis was conducted by SRK Consulting (SRK) of South Africa.

1.13.1 Industrial Health, Safety and Fire Control

All employment conditions will conform to the standards as set out in the Labour Act and Mines and Minerals Act. The company will use these as baseline to develop their own internal HSE system. Dust generation constitutes the most prevalent environmental and safety hazard for the Project. Mining, ore transport, stockpile activity and ore crushing are operations that have the potential to generate significant quantities of airborne dust.

Given silica is a component of the orebody, there may be some risk of silicosis from sustained exposure to operationally generated dust. The Project will apply dust generation and exposure mitigation measures to ensure protection from exposure. These measures may include suppression and the use of appropriate PPE.

There is no specific standard for fire risk, which will be addressed in standard building codes applicable to Zimbabwe.

1.13.2 Environmental and Community Risk Assessment

In the performance of the work carried out to draft the EIA, members of the community were consulted. Where appropriate, old graves were relocated in accordance with the local tradition and applicable legislation.

There are no built-up areas within, or adjacent to the mine area, and all persons living on the property are employees of either the farmer, or PLZ, and have no rights to occupation.

Mining sites will be secured with adequate fencing and notices, whilst access to the mine and plant will be strictly controlled though designated points of entry. All persons visiting the site will be required to complete an induction process.

1.13.3 Community

The Arcadia environmental impact assessment addresses the community stake in and interaction with the Project.

Stakeholder views will be considered through planned interactions with the stakeholders scheduled at an agreed frequency. Stakeholder grievances raised in accordance with the stakeholder awareness procedure will be dealt with accordingly and feedback will be provided once the situation has been investigated. Typically, feedback will be provided at one of the interaction sessions to allow the whole of the stakeholder body to be made aware of the ongoing investigation into issues raised. These interactions will allow other members of the community to raise awareness.

1.13.4 Environmental Approval

An application for the Project to proceed was made following completion of the Project EIA. The Zimbabwe Environmental Management Authority (EMA) issued a certificate (licence) on the 24th May 2017 giving approval for the Project to proceed with construction and operation. This approval remains valid, requiring regular updates to the Environmental Management Authority.

A baseline study was undertaken for the EIA. The study covered the current status of the biophysical and socioeconomic environment of the Arcadia mine claims area. Site-specific environmental resource evaluations were completed, including assessment of soil, water, air, wildlife, vegetation, noise, socioeconomic, archaeology and local culture.

The baseline study was considered inadequate to meet the international guidelines and therefore further work has been undertaken by PLZ to meet these guidelines. This work was based on recommendations arising from the gap analysis carried out by SRK. The resulting expansion report was accepted by the authorities and PLZ has been issued with a new licence valid until April 2022 and is renewable annually.

An environmental monitoring programme will be initiated upon commencement of development and construction activities on the Arcadia mine lease area. Various aspects of the environment will be monitored on a daily or weekly basis to mitigate the effect of the operations on the environment, employees and stakeholders. The proposed monitoring programme will cover water, dust, noise and impacts on native fauna. Revegetation programmes will also be initiated on disturbed ground.

Erosion and sediment transport during rainfall events will be managed within a run-off mitigation plan. Waste rock will be used to curtail erosion or areas susceptible to erosion in the wet season. Topsoil's removed during mining and construction will be used to re-vegetate areas towards the end of the mine life.

1.13.5 Mine Closure Plan

The objectives of closure and reclamation activities are to minimise or eliminate public safety hazards, provide long-term stable configurations and reclaim surface disturbances for beneficial use that is consistent with local land use objectives.

The closure and reclamation plan proposed by Prospect Lithium Zimbabwe will meet or exceed typical applicable standards and requirements in anticipation of future guidelines developed in Zimbabwe.

The closure and reclamation plan addresses the following activities

- Preparation and planning for closure during operations;
- Rehabilitation measures during closure;
- Rehabilitation measures during temporary suspension of operations;
- Rehabilitation measures during states of inactivity; and
- Stability activities in the post-closure phase

The present estimated closure cost of USD10.3M will be reviewed annually to reflect changing circumstances and levels of risk. This will ensure that the accuracy of closure costs is refined and improved with time and will assist with management and mitigation of high-risk issues.

1.13.6 SHE Management and Monitoring Plan

The purpose of the Health, Safety and Environmental Management Plan is to clearly define the systems, strategies and responsibilities for the effective management of safety, health and the environment for the Project. The main objective of the SHE management plan is to prevent incidents that affect personnel, plant and the environment during construction activity on the Project. The following four basic principles of safety will underscore construction and operations:

- Competent employees;
- Safe equipment;
- Safe working environment; and
- Emergency management.

The SHE management structure will incorporate the following key components:

- Environment management plan (discussed above);
- Risk management plan;
- Communications protocols and competencies; and
- Incident response protocols.

1.14 Stakeholder Relations

Engagement with key stakeholders and public communication are very important components of the Study and were on-going from the commencement of the Study to the completion of the work. Stakeholder meetings, Focus Group meetings and one-on-one meetings, Prospect's website and Company announcements are key elements of Prospect's stakeholder engagement strategy. PLZ will continue to maintain, open and transparent communications with all stakeholders in regards to the Project.

1.14.1 Key Stakeholder Engagement and Communication

Key stakeholders who have been considered and engaged with through the DFS process include:

- Local community groups and community services were engaged to gather community attitudes to the proposed project;
- The Office of the President and Cabinet of Zimbabwe, Ministries of the Zimbabwe Government and Provincial Ministries;
- Local suppliers and service suppliers;
- Current employees and contractors;
- Non-government organisations (NGO's);
- International trade organisations and representative bodies; and
- Local and offshore media outlets.

PLZ will continue to facilitate communication with the stakeholders of the company via numerous distribution channels and means of engagement.

There are five key ministries within the Zimbabwean Government that are particularly relevant to the development of the Project. PLZ has established contact with these key ministries and has close and active contact with the Office of the President and Cabinet (O.P.C), which is the lead office in the Government of Zimbabwe. The key ministries are:

- Ministry of Mines and Mining Development (MMMD);
- Ministry of Foreign Affairs and International Trade;
- Ministry of Finance and Economic Planning;
- Ministry of Transport and Infrastructure Development; and
- Ministry of Lands, Agriculture and Rural Resettlement.

The operation will be responsible mainly to the Ministry of Mines and Mining Development (MMMD) for operational matters including its mining concession compliance and reporting.

Although the above Ministries are the key Ministries in regards to the Arcadia Lithium Project, Prospect continues to maintain communication with all Ministries and Zimbabwe Government officials, to ensure the long term and healthy relationship with the Government of Zimbabwe continues.

1.15 Risk Management

Risk management addresses anticipated problems aiming to mitigate loses and identify potential gains prior to implementation of the project and is based on identification and assessment of risk issues. Risk assessment is intended to identify risk which could impact the final designs. Effective management of these risks will reduce PLZ's exposure to risk. During operations risk management will support health and safety issues and operational budgets, reducing the risk of overruns. It is important to establish effective risk management from the onset of the project that continue through the entire life cycle of the project.

The Project risk register was developed in a workshop setting on several occasions in 2018, 2019 and 2021 through the participation of representatives from ADP, LMA and PLZ. The risks were developed around the following base categories:

- Business and financial;
- Technical process;
- Resources and mining;
- Brownfield complexities;
- Site execution;
- Project management;
- Political; and
- Socio-economic.

Risks were identified in each of these categories, the likelihood of occurrence and the potential consequences associated with these risks were determined using conventional risk ranking approach to build the Project risk matrix. Mitigation actions were developed and recorded in the matrix. The risks were then reassessed after the mitigation actions had been considered and each risk was assigned a revised rating as a Residual Risk.

At the completion of this process the team recorded no high risk items, 13 moderate risk items and 5 low risk items. Some of the mitigations to the high impact risks discussed were as follows:

1. Business & Financial:

- Close consultation with ZIDA, parent ministry to SEZ. Close consultation with the Ministry of Mines, and Ministry of Finance, RBZ Governor
- To complete alternative pathway that requires a lower capital hurdle. Staged OFS
- Remuneration packages to be well structured and attractive (incentives, perks, retention bonus, etc.)

2. Technical Process:

- Key independent review of process design
- Recruitment of competent personnel and training plan.
- Construct and operate a pilot plant to inform operating ore variabilities 6 months ahead of production. Implementation of robust grade control to enable a correct blend of feed to the plant.
- Perform additional variability testing during Feasibility Studies, and during life of mine operations.

3. Project Management (Execution):

- A comprehensive Project Execution Plan including a Risk Management Plan needs to be prepared prior to this phase commencing, which must include the ongoing management of the identified risks.

4. Socio-Economic

- Safe operational protocols, focus on OHS
- Design and implement a sustainable CSRP strategy

5. Political

- Put on-site arrangements in place through SEZ including Customs and Zimra on site presence.
- Key stakeholder relationships

1.16 Market Analysis

Lithium products including concentrates of petalite and spodumene are consumed in the glass / ceramics industries and as feedstock to lithium chemicals production, notably lithium

carbonate and lithium hydroxide. Sales are often described in terms of lithium carbonate equivalent (LCE) which contains 40% lithia (Li_2O).

Industry consulting firm Roskill presents a base-case scenario in which global lithium consumption is expected to grow at 18% pa to reach ~1.85 Mt in 2030. This quantity is expected to meet the requirements for the manufacturing of ~2 400 GWh across all battery applications and the material requirements of historic end-uses of lithium including ceramics, greases, polymers and glass among others. The base-case scenario is aligned with the EV targets envisioned by the European Union and China through their EV regulations. Although estimates of EV demand were uncertain due to the economic shocks of the COVID-19 crisis, this estimation should be an accurate representation of long-term lithium demand assuming that a new battery technology does not disrupt the existing Li-ion battery supply chain and its raw materials.

For the purposes of this study, Prospect has used Roskill's base case forecast to 2030 of 1 845 ktpa LCE as the forecast demand. Battery market demand is forecast to grow at 22.9% per annum, while total non-battery demand is forecast to grow at about 1.8% pa in line with global GDP. Table 1.16.1 shows the forecast growth in global lithium demand.

Table 1.16.1 Lithium Demand Forecast

Demand		**2019**	**2020**	**2025**	**2030**	**CAGR (2019-2030)**
Battery Market Demand	t LCE	175 000	207 000	786 000	1 696 000	22.9%
Total Other Demand	t LCE	123 000	98 000	134 000	150 000	1.8%
Total Demand		**298 000**	**305 000**	**920 000**	**1,846,000**	**18%**

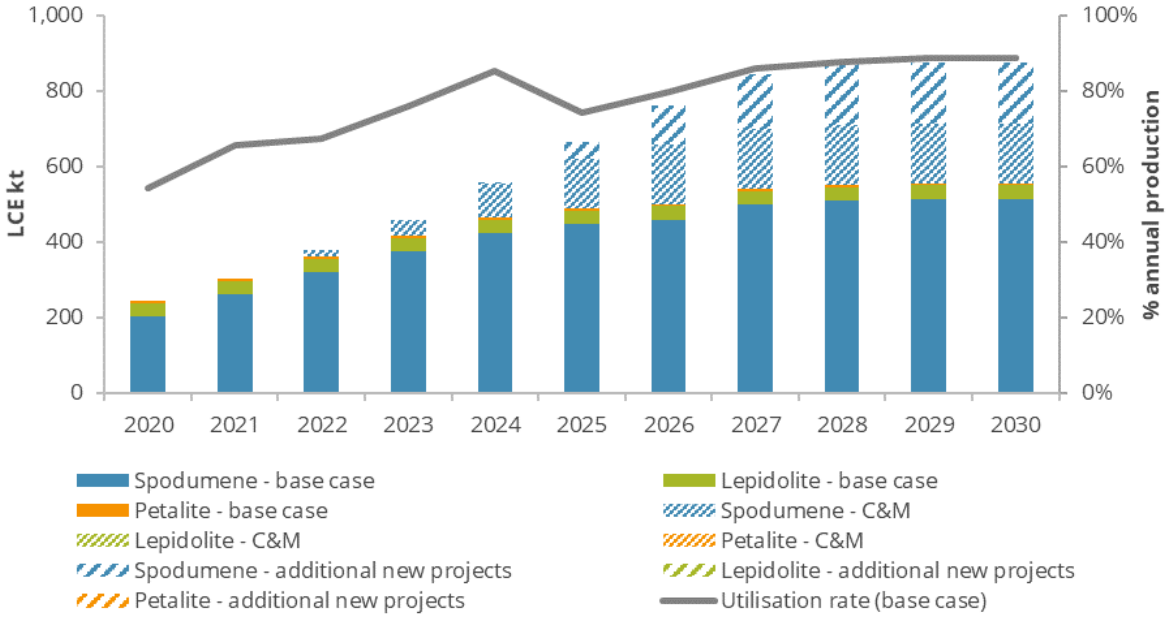
Based on announced capacity expansions and new project schedules, within Roskill's base-case parameters, supply is expected to grow at 9% CAGR to 2030. Under this scenario supply is forecast to surpass 500 kt LCE in 2026 before reaching 556.1 kt LCE by the end of the decade. This represents an increase of more than double expected output in 2020.

At this production level, around 54% of operational industry capacity is being utilised. This highlights a high degree of latent capacity of existing producers. When combined with assets on care and maintenance 379.9 ktpa of mine capacity is not currently being utilised for production. However, utilisation rates are expected to increase as converters consume accumulated stocks and new feedstock requirements increase.

In terms of mineralisation type, spodumene production is forecast to dominate lithium concentrate supply. In 2020, 84% of global concentrate production was spodumene mineralisation, this is expected to increase to 95% by 2030 including potential supply from additional new projects. When including supply across all forecast categories and mineralisation types, a total of 876.9 kt LCE could be produced in 2030.

Figure 1.16.1 illustrates present day projections of supply and demand for LCE products.

Figure 1.16.1 LCE Supply Demand Forecast



For mine supply to meet the future feedstock requirements of converters, Roskill forecast additional production capacity will be required beyond 2025. Existing producers and installed industry capacity are expected to fulfil a large proportion of this feedstock requirement, though new sources are likely to be needed to satisfy longer-term demand growth. Capacity being assessed as part of existing mine expansions or new projects totals 832.9 ktpa LCE. This covers new capacity at a minimum of PFS study level through to construction phase as shown in Table 1.16.2.

Table 1.16.2 Potential Expansions and New Mine Project Capacity by Project (LCE ktpy,2020)

Company	Project	Phase: PFS	BFS/DFS	Pilot	Financing	Construction	Start-up date[3]	Capacity
Construction:								
Sub-total								-
Requiring finance:								
Pilbara Minerals	Pilgangoora (S2)						2022	75.7
Talison Lithium	Greenbushes (tailings)						2024	41.5
AVZ Minerals	Manono						2025	100.9
Nemaska Lithium	Whabouchi						2027	33.2
Altura Mining	Pilgangoora (S2)						2024	32.6
Core Lithium	Finniss						2025	24.5
Critical Elements	Rose						2025	29.7
Keliber	Keliber						2024	13.4
Yongxing New Energy	Huaqiao (S2)						2023	8.9
Youngy Co.	Jiajika						2021	14.9
Prospect Resources	Arcadia						2025	55.0
Sigma Lithium	Grota do Cirilo						2022	32.6
Sub-total								*462.9*
Feasibility:								
Pilbara Minerals	Pilgangoora (S3)						2022	31.1
Piedmont Lithium	Piedmont						2022	23.7
Sigma Lithium	Grota do Cirilo						2022	32.6
Lepidico	Karibib						2025	4.9
Kodal Minerals	Bougouni						2023	32.6
Sayona Mining	Authier						2025	16.9
Bacanora	Zinnwald						2026	10.7
Rio Tinto	Jadar						2025	20.0
Sub-total								*139.9*
Pre-feasibility:								
Covalent Lithium	Mt Holland						2023	51.9
European Lithium	Wolfsberg						2026	10.6
European Metals	Cinovec						2026	22.5
Mali Lithium	Goulamina						2024	53.7
Frontier Lithium	PAK						2024	33.7
Infinity Lithium	San Jose						2025	13.4
Liontown	Kathleen Valley						2025	44.5
Sub-total								*230.1*
Total								***832.9***

1.16.1 Lithium Products and Marketing Strategy

Typical specifications for chemical grade spodumene and petalite concentrates are:

	Spodumene	Petalite
• Li_2O	>6.0%	>4.0%
• Fe_2O_3	<1.0%	<0.80%
• Moisture	<8.0%	<8.0%

Very little petalite concentrate has been used to produce lithium chemicals. Lepidolite concentrate which has similar lithia grades to petalite has been used in China. Due to the lower lithia grade, petalite concentrate needs to be at a minimum of 4.0% Li_2O, below which calcination costs and lithia recovery in the chemical plant are negatively impacted. Concentrate moisture content adversely impacts transport costs. In the case of the Arcadia Project, for every 1% increase in moisture, there is an added 1% increase in transport cost from mine gate to the final destination.

Typical specifications for technical grade petalite concentrate are:

- Li_2O >4.0%
- Fe_2O_3 <0.06%
- Na_2O <0.50%
- K_2O <0.50%
- Moisture <6.0%

The target customers for Arcadia's chemical grade lithium concentrate products are:

- Lithium chemical converters;
- Downstream lithium users including producers of cathode, battery and vehicle manufacturers; and
- Trading companies.

Technical Grade Petalite Product

There are four principal consumers of technical-grade lithium products. These are ceramics, glass-ceramics, glass and metallurgical powders. Mineral concentrates within these sectors are used in tandem with technical-grade carbonate as a flux or part of feedstock batches for end products. Spodumene concentrate is consumed across all four first-use sectors, whilst petalite is predominantly utilised by ceramics and glass-ceramics producers.

Mineral demand in the markets key to petalite demand of ceramics, glass-ceramics and glass is forecast to increase by 2% CAGR to 2030, reaching 515 kt 4% Li_2O concentrate. By 2030 the value of global technical mineral concentrate demand from these three markets could reach over USD650 million pa.

The target customers for Arcadia's technical grade petalite concentrate product are:

- Glass/Ceramics cooktops and ovenware manufacturers;
- Fibre glass manufacturers;
- Specialty glass manufacturers;
- Ceramics manufacturers; and
- Metallurgical powder manufacturers.

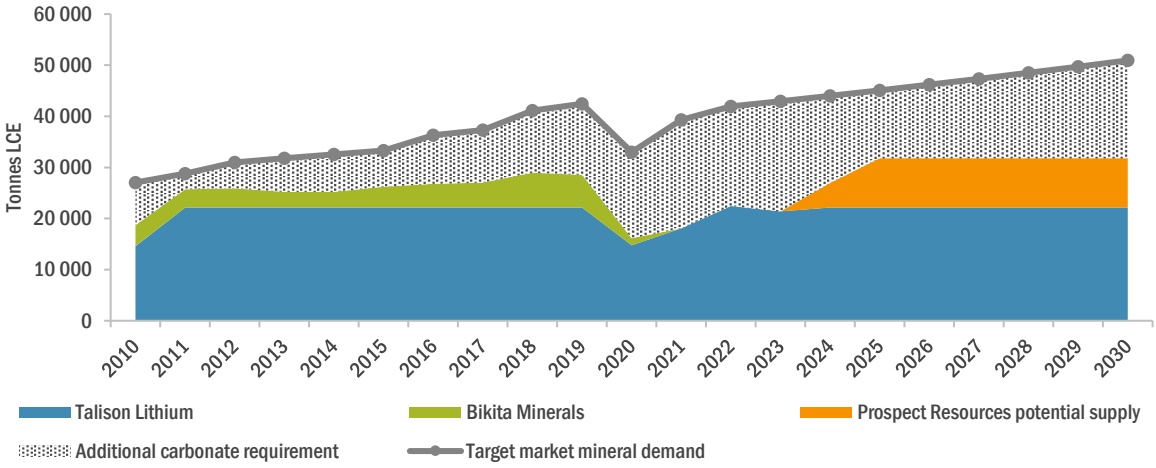
The consumption of petalite as feedstock within its core target markets has generally been restricted by availability and reliability of supply rather than demand and its differing qualities to that of spodumene. For those that utilise technical mineral concentrates, petalite may be used interchangeably with spodumene if product specifications fall within the parameters of the customers' needs.

Roskill, a leading commodity markets consultant believes that lack of supplier diversity, evolving demand trends and substitution dynamics are likely to increase the size and scope of markets available for petalite. These factors present as potential opportunity for market entry to provide customers greater choice by decreasing reliance on limited sources.

Clear glass producers represent a potential new market for petalite should Prospect Resources produce commercial scale volumes of ultra-low iron concentrate via flotation as test work has indicated. This is, however, subject to customer testing and certification procedures with definitive offtake agreements needing to be established.

Figure 1.16.3 illustrates the growth in petalite demand envisioned by Roskill.

Figure 1.16.2 Technical Mineral Supply and Demand, 2010-2030 (t LCE)1



Note: 1 – Target market mineral demand is the sum of the three core target petalite markets being ceramics, glass-ceramics, and glass

Should Prospect Resources enter production in 2024, Arcadia's 9.7 ktpa LCE petalite capacity could be potentially consumed by the market without the need for displacing units of carbonate. A technical mineral supply shortfall of 28.8 kt LCE is forecast by 2030. This would be reduced to 19.1 kt LCE should Arcadia be producing at design capacity.

Roskill considers the ability of technical sectors to continue sourcing carbonate to cover a lack of mineral supply moving forward to be the biggest risk to meeting forecast demand growth. An evolving demand landscape in glass-ceramic cooktops and renewable energy sectors further broadens potential markets for petalite. Demand from such industries have been quoted by market participants to be increasing at rates above that of GDP.

1.16.2 Offtake

Prospect has entered into two offtake agreements with Sinomine of China and Sibelco of Belgium. The Sinomine agreement calls for the delivery of Li_2O concentrate on the earlier of the delivery of 48 160 lithia units or over the first 7 years from the commencement of production. Under this agreement Prospect is entitled to increase the quantities of spodumene and decrease the quantities of petalite in order to take advantage of the premium prices available elsewhere for the technical grade iron petalite product for the glass & ceramics market, provided the lithia units of the combined spodumene and petalite do not change.

The agreement provides for attractive pricing linked to the Lithium Carbonate CIF price under harmonised code HS283691, as published by Global Trade Atlas (owned by IHS Markit) and is calculated on an FOB Incoterms® 2010 basis at the loading port of Beira, Mozambique.

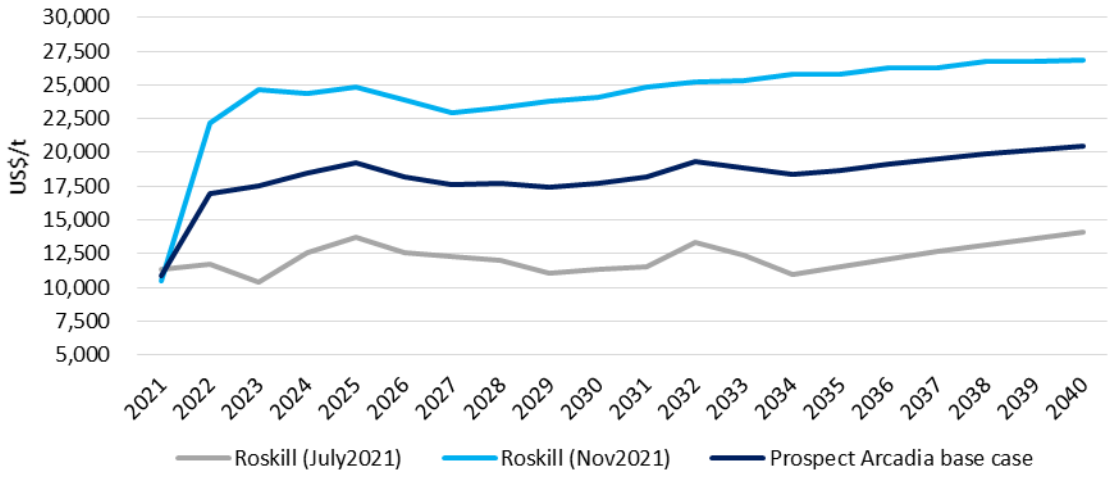
The agreement with Sibelco provides for the delivery of up to 100 000 tonnes per annum of technical grade petalite concentrate for 7 years, totalling up to 700 000 tonnes. Prospect and Sibelco will annually agree binding delivery quantities, pricing and end-customer contract terms for the following year. Pricing is to share end-customer sales receipts in an agreed proportions after recovery of their respective costs.

1.16.3 Lithium Pricing

In November 2021, Prospect received updated pricing, with Roskill now expecting (over its forecast window of 2021 to 2040) battery-grade lithium hydroxide to average USD25 000/t and battery grade lithium carbonate to average USD24 000/t (the latter commanding a premium to technical-grade product of between USD1 500/t to USD2 000/t CFR Asia).

These price forecasts are substantially higher than Roskill's earlier estimates, including the price forecasts quoted by Prospect in its earlier studies. Accordingly, Prospect has elected to adopt a more conservative approach to long term lithium pricing. As a result, the mid-points between Roskill's July 2021 and November 2021 price forecast decks have been adopted as the base case price assumptions for the purposes of this study. Prospect has also utilised the July 2021 price forecast deck to present a low case and the November 2021 price forecast deck to present a high case to the project economics, as shown in Figure 1.16.4.

Figure 1.16.3 Forecast Lithium Carbonate Prices Low, Base and High Cases, 2021-2040

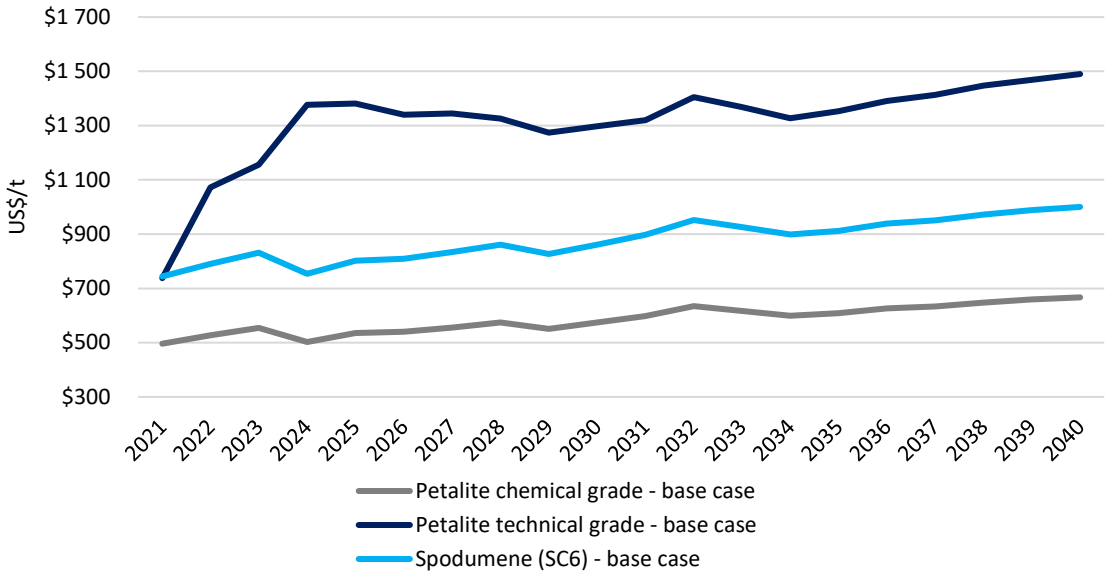


Spodumene concentrate prices on an arm's length basis are primarily driven by the availability of material to third-party buyers in the open market (non-contracted units). As a result of major concentrate producers either being integrated from mine-to-refined (Tianqi Lithium/Albemarle) or having capacity fully committed under offtake agreements, Roskill forecasts an increasing tightness in the availability of units for spot buyers as the demand for feedstock from non-integrated refineries in China is expected to increase. Higher prices are therefore paid for such material within a forecast premium range of USD70/t to USD120/t. Using the midpoint of Roskill's July 2021 and November 2021 price forecast decks, the life of mine spodumene concentrate prices are forecast to average USD892/t FOB Beira and chemical grade petalite concentrate prices averaging USD595/t FOB Beira.

Prices for technical-grade spodumene and petalite concentrates used directly in the glass, glass-ceramic, ceramics and metallurgical powder industries typically follow movements in the technical-grade lithium carbonate price. Contracts commonly have limitations to up- and down-sides to fluctuations in the latter. Technical mineral concentrate prices are capped by the equivalent lithium

carbonate price, which may be used as a substitute in most of the major end-use applications. Figure 1.16.5 shows anticipated movements in pricing of spodumene and petalite products.

Figure 1.16.4 Forecast Spodumene and Petalite Concentrate Prices, 2021-2040



The higher prices received by technical mineral concentrates compared to their chemical-grade counterparts is largely owing to the smaller niche markets, beneficial product characteristics and lack of supplier diversity. The market value of technical petalite is derived from more than purely the lithium oxide component, but also the alumina and silica (application dependent) contained in concentrate, and lower impurity levels. The business case underpinning the use of petalite over spodumene is dependent on the first-use application and the additional benefits the product yields over the latter in the final product being produced. In ceramics, for example, petalite does not require pre-calcination like that of spodumene before use in the batch mix.

Roskill has undertaken a value-in-use (VIU) assessment of technical petalite for use by pyro-ceramics producers. The methodology analysed the calcination costs of spodumene at a mineral converter in China and the subsequent cost of shipping the calcined material to customers based in South Korea/ Japan. The VIU determined a value of USD75/t be applied in addition to the technical petalite concentrates contained payable compounds. Given the largest payable component is the contained lithium oxide, Roskill considers it reasonable for technical petalite to be tied to the technical-grade carbonate price as a percentage of its product value. Utilising the midpoint of Roskill's July 2021 and November 2021 price forecast decks, the life of mine average technical petalite price is USD1,339/t FOB Beira.

1.16.4 Tantalum

Arcadia will produce by-product tantalum as a gravity concentrate derived from rejects from the petalite DMS circuits and from spodumene flotation tailings. Typical tantalum concentrate specifications of relevance to Arcadia are as follows:

- Ta_2O_5 20% min
- SnO_2 5% - 20% max dependent on smelter
- As 0.25% max
- Sb 0.2% max
- $U_3O_8 + ThO_2$ 0.1% above which the concentrate is classified as a Class 7 Dangerous Good
- Particle Size 2 mm max

For Arcadia, the two key specifications will be tantalum and radionuclide content. While 20% Ta_2O_5 content is the minimum requirement, the smelters prefer concentrates with a minimum of 25% Ta_2O_5 content. Tantalum concentrates from Central Africa, the largest supplier of primary tantalum material, typically grade around 30% Ta_2O_5.

Test work to date indicates that the tantalum concentrate produced at Arcadia will be a Class 7 Dangerous Good. This requires specific packaging and labelling and affects transportation options and costs and reduces the potential customer base. This has been factored into the Arcadia Financial Model.

Most tantalum production currently comes from conventional mines and artisanal production, along with a growing amount as a by-product of lithium mining. There is also some secondary supply (syncons) that is sourced from slags generated during the processing of tin ores (mostly ore from the DRC that is smelted by Malaysia Smelting, with the slag, containing 3% tantalum). Recycling is an important and growing portion of the supply of tantalum units.

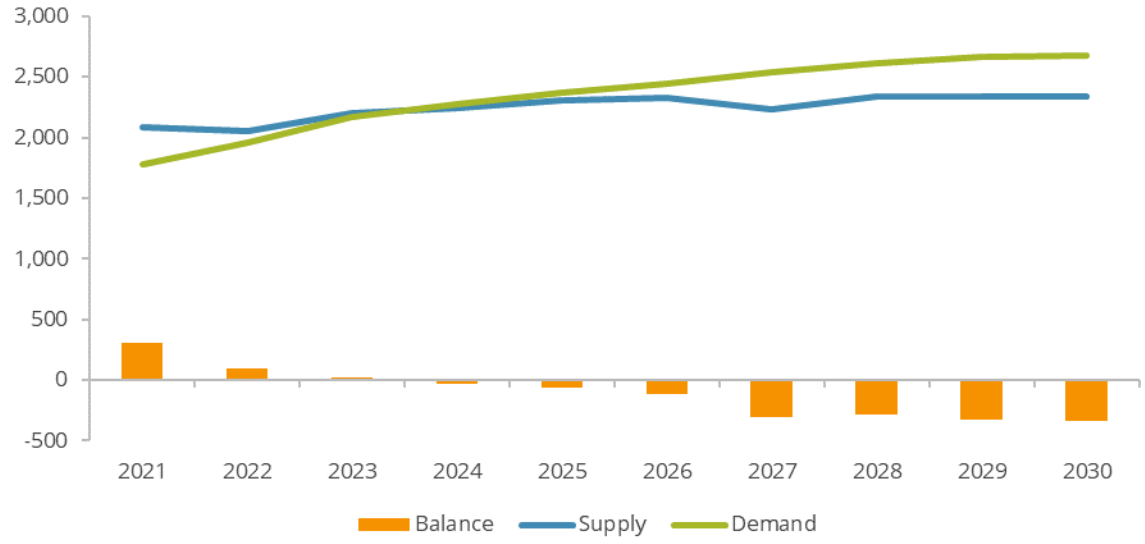
World consumption was 2,292 t Ta in 2019 requiring 5.7 Mlb Ta_2O_5 (1.22 conversion factor Ta to Ta_2O_5 plus smelter losses), having grown by 2.4% pa from 2010. Unlike the lithium chemical market, the tantalum market is small and mature. Capacitor manufacture is the largest market for tantalum (36%) followed by alloy additives (20%). Roskill's latest forecast indicates overall demand growth of approx. 4.5% per annum over the next ten years. Alloy additives are estimated to grow by 5.3% per annum on the basis of a strong outlook for the aeronautics industry where tantalum is used in the nickel alloys for jet engine turbines. Capacitor growth on the other hand is expected to grow modestly at 4.4% per annum, challenged by ongoing reduction in capacitor size (less tantalum powder but with a higher capacitance) and competition from other, cheaper capacitor types. Table 1.16.3 shows Roskill demand forecast from 2021.

Table 1.16.3 Tantalum Demand Forecast

Product	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Ta, tpa	2,182	2,394	2,522	2,640	2,749	2,842	2,955	3,042	3,097	3,111
Ta_2O_5, Mlb	5.86	6.44	6.78	7.10	7.39	7.64	7.95	8.18	8.33	8.37
Concentrate at 25% Ta_2O_5, tpa	10,648	11,682	12,307	12,883	13,415	13,868	14,420	14,844	15,113	15,181

Supply of tantalum into the market in 2020 was 5.13 Mlb Ta_2O_5. Of this, 4.8 Mlb Ta_2O_5 was produced from primary sources such as mines producing tantalum concentrate, with the remainder coming from secondary sources such as recycling and tin slags. Of the 4.8 Mlb Ta_2O_5, the vast majority is produced as tantalum concentrate. Over half this concentrate was sourced from artisanal and small-scale mines in Central Africa (Rwanda, DRC and Burundi). Tantalum production from larger scale operations is generally in the form of by-products from lithium or tin production, as the tantalum price is too low to justify the operation of stand-alone tantalum hard rock resources. Figure 1.16.6 illustrates the forecast tantalum supply and demand balance to 2030.

Figure 1.16.5 Forecast Tantalum Supply & Demand Balance (tpa)



The tantalum supply demand dynamics in the short term will be very much impacted on by the growth in tantalum output from global lithium operations, which have the potential to introduce an additional 20% into the market.

The main customer bases for the tantalum concentrate are:

- Tantalum smelters;

- Capacitor manufacturers; and
- Traders.

As the tantalum concentrate is likely to be a Class 7 Dangerous Good, this precludes sales to a number of smelters, particularly those located in Europe and Japan. The main smelter customers able to accept Class 7 material will be those based in the United States, Thailand and China.

In the past, the tantalum smelters entered into long term offtake contracts with the larger concentrate producers. However, this has changed to short term contracts (less than one year) or sales based on purchasing one or two containers. This is due to:

- The reduction in the number of large producers for the majority of product being sourced from less reliable artisanal mining; and
- Movement in the tantalum price resulting in longer term contract price being significantly misaligned to the spot price, which is generally higher than contract.

It is likely that pricing of concentrate from Arcadia will be based on the spot price at the time of sales.

Prices over this decade have been volatile. Between 2010 and 2018, annual average prices have ranged from USD57/lb Ta_2O_5 to USD119/lb Ta_2O_5. At the end of 2017, the price was about USD88/lb Ta_2O_5 but is estimated to have declined to USD81/lb Ta_2O_5 in 2018 due to supply disruptions. The price in 2018 year peaked at over USD100/lb Ta_2O_5 but has retreated to about USD85/lb Ta_2O_5.

For the purposes of this study, Prospect has adopted the pricing forecast generated by Roskill, which generates an average price of USD83/lb Ta_2O_5 over the life of mine.

1.16.5 Product Shipping, Storage and Distribution

All lithium concentrates will be transported in 1 t bulka bags by flat top trucks approximately 590 km by road from the mine site to the port of Beira, Mozambique. The product will be sold on an FOB Port of Beira Incoterms® 2010 basis which will require Prospect to load the vessel after which the Buyer is responsible for onward transportation, costs and risk.

The preferred transport of lithium concentrates globally is loose bulk. There is a considerable cost saving by not using bulka bags and the product is much easier to load, unload and transport in loose bulk form. It is likely that new customers will require product be delivered in loose bulk and logistic options to transport the concentrate in this form need to be considered.

Packing of Tantalum concentrate for transportation will comprise loading the product into 210 litre steel open head drums. The drums will be strapped to wooden pallets and stuffed into 20-foot general purpose sea containers at the rate of one to two containers per month. As the product is designated as Dangerous Goods Class 7, both the drums and the sea container will require appropriate labelling and secure storage.

Walvis Bay in Namibia is presently the only port in southern Africa that currently accepts Class 7 products. Previous tantalum operations in Mozambique had entered into discussions with the Mozambican Government to allow shipping of Class 7 Dangerous Goods through Mozambique ports before premature mine closure. Prospect will follow up on these discussions as utilising a Mozambique port will significantly reduce shipping transit time and transport costs.

Generally, tantalum concentrate is sold on a CIF Incoterms® 2010 basis requiring Prospect to organise transportation from the mine site to the customers' port of delivery.

1.16.6 Revenue Forecasts

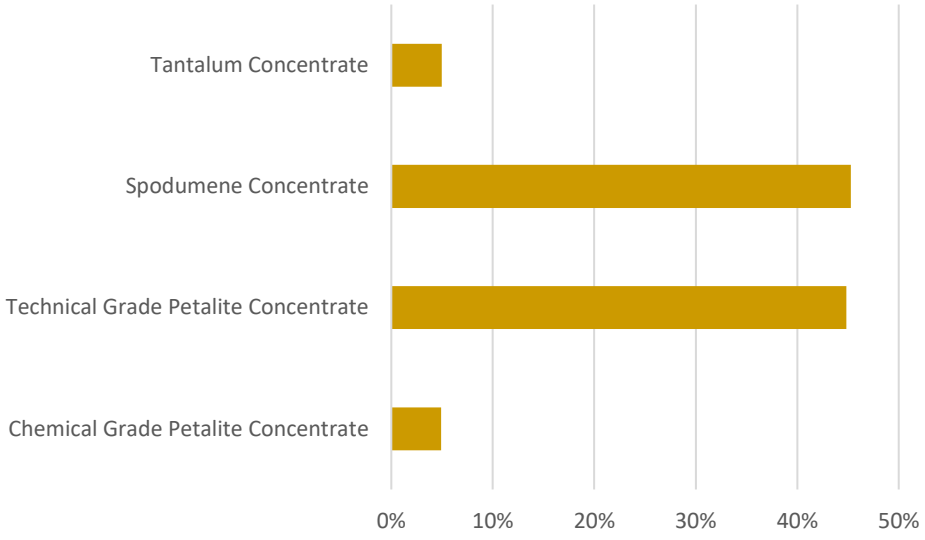
Based on the forecast annual sales revenue in Table 1.16.4, annual revenues (excluding FY2024 and FY2044 as they are not expected to be full years of production) vary from USD288 M in FY2025 in the first full year of stage one operation and peaking at USD411 M in FY2041.

Table 1.16.4 Forecast Annual Sales Revenue

Product	Metric	Average Annual	LOM Total
Chemical Grade Petalite Concentrate	USD M	14.2	255
Technical Grade Petalite Concentrate	USD M	129.9	2 338
Spodumene Concentrate	USD M	131.2	2 361
Tantalum Concentrate	USD M	14.4	259
Total	**USD M**	**289.6**	**5 213**

While spodumene concentrate generates the most revenue over the life of mine with 48%, sales revenue contribution year on year does vary markedly year on year. Technical petalite is the second largest contributor of revenue over the life of mine with 44%, leaving chemical grade petalite and tantalum as low contributors to overall revenue as shown in Figure 1.16.7.

Figure 1.16.6 Contributions to Revenue



1.17 Capital Cost Estimate

The capital cost estimate prepared by LMA is based on the construction of a single 2.4 Mtpa processing plant.

The total estimated capital cost for the processing plant is USD192.0M including an EPCM component of USD16.2M. The capital estimate has been prepared in accordance with Lycopodium Cost Estimating Procedures and fulfils the requirement of the AACE Class 2 Estimate ("Bankable Feasibility Estimate") with an accuracy range of ±12.5 %. The estimate is presented in USD as at Q2, 2021.

TSF costs have been provided separately.

Mining operations will be carried out by a contractor who will provide substantially all of the equipment required for ore and waste excavation and transport. Consequently, the PLZ component of mining capital will be confined to the construction or purchase of contractor support facilities, mobilisation charges, pre-stripping and haul roads.

The estimated project capital costs have been structured into the following major categories.

- Direct costs;
- Indirect costs; and
- Contingency costs.

Contingency costs in this study form a cost provision for construction unknowns, which may not be quantifiable, but which may eventuate as Project development progresses.

A summary of the estimated capital cost is presented in Table 1.17.1 below.

Table 1.17.1 Arcadia Capital Cost Summary

Area	Cost, USD M
Site Readiness & Infrastructure	25.55
Mining	7.28
Processing Plant	101.36
Preliminaries and General	15.59
Owners Project Team Costs	10.71
EPCM	15.25
Contingency	16.73
Total	**192.46**

1.17.1 Owner's Costs

Owner's costs of USD21.7M have been included in the Project capital estimate.

1.18 Operating Cost Estimate

The overall financial model has been developed by Prospect, with LMA providing certain inputs, which have been used by Prospect towards developing the annual ore treatment costs within the project cost model. The operating cost database developed by LMA was populated with updated vendor costs and has been developed to include administration, logistic, mobile equipment, labour costs and laboratory costs.

Lycopodium has prepared the operating cost estimate for the Arcadia Project to an accuracy level within the range ±15%. The estimate is based on contract and vendor quotations, detailed estimates of power, consumables and labour requirements and contemporary assessment of prevailing Government royalties, taxes and fees relevant to the operation of mining businesses in Zimbabwe. The estimate is presented in USD as at Q4, 2021.

The operating cost estimate for 2.4 Mtpa plant feed, excluding mining is based on the production of concentrates as shown in Table 1.18.1 below.

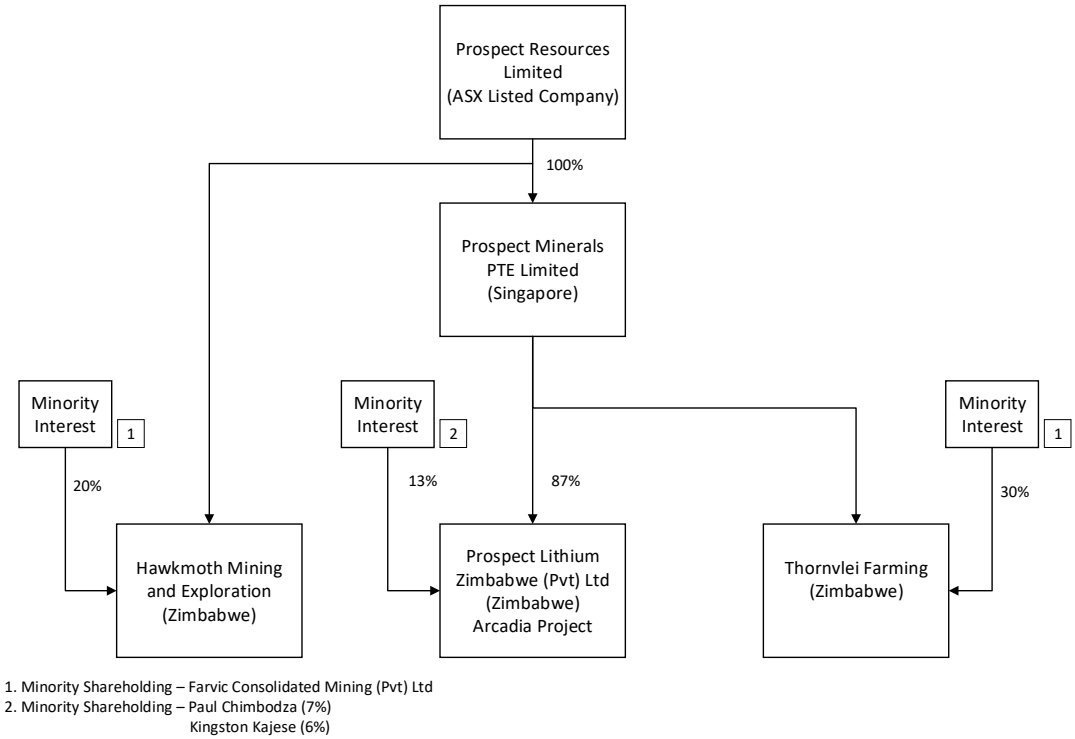
Table 1.18.1 Concentrate Production Costs

Cost Component	2.4 Mtpa			
	USD pa	USD/t dry feed	USD/t dry concentrate	% Cost
Power	10 324 505	4.30	38.94	14
Operating Consumables	21 863 104	9.11	82.51	29
Maintenance	3 668 339	1.53	13.85	5
Laboratory	528 000	0.22	1.99	1
All Labour	7 005 327	2.92	26.45	9
Total Processing	**43 389 275**	**18.08**	**163.74**	**57**
General & Administration Costs	2 229 408	0.93	8.42	3
Mobile Equipment	846 146	0.35	3.17	1
Logistics	29 441 602	12.27	111.12	39
Total G&A	**32 517 157**	**13.55**	**122.72**	**43**
TOTAL including G&A	**75 906 432**	**31.63**	**286.46**	**100**

1.19 Ownership

Figure 1.19.1 illustrates the Prospect group structure.

Figure 1.19.1 Prospect Resources Group Structure



1. Minority Shareholding – Farvic Consolidated Mining (Pvt) Ltd
2. Minority Shareholding – Paul Chimbodza (7%)
   Kingston Kajese (6%)

1.19.1 Mining Rights

Mining lease number 38 dated 16 August 2018 has been issued to PLZ ("**Mining Lease**"). The Mining Lease was granted pursuant to Part VIII of the Mines and Minerals Act in respect of an area of 1 031 hectares. It states that the principal mineral to be mined is lithium and the other mineral to be mined is gold. The provisions of this lease extend to exploitation of mineral resources, use of other natural materials and abstraction of water for primary purposes. The lease grant period is permanent and is dependent on an annual inspection.

1.19.2 Contractual Obligations

The land which is the subject of the Mining Lease is currently farmed pursuant to a lease granted by the Government to Professor K Kajese. The farm is operated in a joint venture pursuant to an arrangement between Professor Kajese and Prospect's subsidiary, Thornvlei Farming Enterprises (Pvt) Ltd (TFE). The joint venture has a term of 15 years commencing on 13 September 2016. Pursuant to a further agreement dated 28 January 2017 between Professor Kajese and PLZ, Professor Kajese has granted PLZ various rights permitting it to access, construct and operate a mine on the farm.

The sale of minerals is governed by the Minerals Marketing Corporation Zimbabwe (MMCZ). Agreement has been reached with the MMCZ on rates and procedures, which are detailed in a Memorandum of Agreement No 031/2018/MMCZ/EXA/SINO.

PLZ has entered into a 7 year offtake agreement with Sinomine Resource (Hong Kong) International Trading Co., Limited, for the delivery of up to 48 160 lithia units within 7 years of commencing production.

1.19.3 National Project Status

The Company has been granted National Project Status which exempts it from certain duties and taxes. It also enhances the status of the Project which assists with the movement of goods into Zimbabwe during the construction period.

1.19.4 Special Export Zone Status

PLZ was licenced as a Special Economic Zone (SEZ) on 11th March 2019. This status provides the Arcadia Project with various fiscal and exchange control benefits. In particular SEZ status provides for 15% corporate tax rate and a 5 year tax holiday from Project commencement.

The SEZ benefits also extend to exemption from import/export permitting and duty free import of raw materials and capital equipment for use by the Project.

1.19.5 Government Compliance

Table 1.19.1 lists a number of acts that govern the operation of the Arcadia Project.

Table 1.19.1 Mining-related Acts of Zimbabwe

Legislation	Highlights
Mines and Minerals Act (Chapter 21:05)	Provides guidelines for exploration, mining and processing of minerals in Zimbabwe. It lays out requirements for acquisition and registration of mineral rights, prospecting, pegging of underground extension, mining lease and right of claimholders and landowners, abandonment and forfeiture, royalties, management and safety issues.
Water Act (Chapter 20:24)	The act provides guidelines for the optimum development and utilization of water resources through controls of rate of abstraction. It also safeguards pollution of surface and groundwater systems through the waste and effluent disposal regulations.
The Pneumoconiosis Act (Chapter 15:08)	The act states that it is an offence to employ a person suffering from pneumoconiosis in a dusty environment. Section 23 adds that for the employment of a worker in a dusty environment, there is need for that worker to be a holder of a certificate allowing him to work under such conditions.
Forest Act (Chapter 19:05) revised 1996	The act protects the clearance of forests with particularly reference to areas covered by endangered species. It also permits the use of timber as support in underground workings, which tends to encourage cutting of trees.
Parks and Wildlife Act (20:14) revised 1996	Relates to wildlife protection, protecting wild animals, their territories and natural habitat. It also permits the displacement of the wild animals to make way for projects.
Suppression of Money Laundering Act (Chapter 24:24)	The act provides rules and regulations for proactive measures to contain money laundering and makes provision for the identification, tracing and seizure and confiscation of tainted property. Normally money laundering involves a process by which illegally obtained money or property is given an appearance of having originated from legitimate sources, money derived from illegitimate sources such as illegal arms sales, drug trafficking, smuggling of precious metals and minerals, corruption or fraud.
Public Health Act (Chapter 15:09)	This act regulates the spread of infectious and venereal diseases and the provision of safe water supplies and sanitary facilities.
National Museums and Monuments Act	The act seeks to protect areas of national heritage and areas which archaeological significance.
Explosives Act (Chapter 307, 1961)	Deals with the manufacture, purchase, possession, delivery, storage, use and conveyance of explosives. Licenses and/or permits are required for these activities.

1.20 Financial Analysis and Evaluation

A detailed financial analysis of the Arcadia Project has been prepared by Infinity Corporate Finance ("Infinity") of Perth employing MS Excel® in order to understand the sensitivities of the project to certain key variables. Infinity brings an independent perspective and a rigorous process focus to the development of the model via:

- Modelling in line with Industry Best Practices;
- Providing an objective review of data inputs provided, and working with both internal technical resources and consultants;
- Balancing the level of detail with a simple presentation and layout that make the resulting model flexible, simple to use; and
- Their peer review and internal quality control, which ensure confidence in model outcomes.

Modelling has been undertaken on a current cost basis in USD. No impacts of inflation have been incorporated.

The financial base case analysis has been prepared using inputs provided by Lycopodium, Prospect and various consultants (in-house and external). Values derived from metallurgical test work, market research and mineable resources, and rationalised mining and engineering estimates have been incorporated in the analysis. Due to the standard industry processes used in the processing plant many of the fundamental variables are based on standard industry practice or experience.

Considering that the project NPV is insensitive to increases in Capex, no provision has been made for escalation and unknown risks.

The financial model has been built around two key foundational inputs. The first is the anticipated production process flow of material from the crushing circuit through to product bagging and tailings disposal. The second key input is a mass balance, which is used to reconcile the volume of ore inputs mined to the volume of concentrate outputs. Costs of each sub-process have been applied to the volume of input, throughput or output of each sub-process which in turn generate a value of input for the next sub-process or the value of a final output (mineral concentrate). Table 1.20.1 summarises the economic outputs of the model.

Table 1.20.1 Key Project Economic Outsomes

Key metric (100% basis)	Unit	LOM
Pre-production capital expenditure	USDM	192
Further expansion capital expenditure	USDM	36
Cash operating cost	USD/t conc.	357
All-In-Sustaining-Cost (AISC)	USD/t conc.	364
Chemical spodumene price	USD/t conc.	892
Technical petalite price	USD/t conc.	1 339
Chemical petalite price	USD/t conc.	595
NPV10% (pre-tax, real basis, ungeared)	USDM	1 022
IRR (pre-tax, real basis, ungeared)	%	61%
NPV10% (post-tax, real basis, ungeared)	USDM	929
IRR (post-tax, real basis, ungeared)	%	60%
Project net cashflow (post-tax)	USDM	2 597
Payback period (post-tax, from first production)	years	3.33

Table 1.20.2 summarises life of mine operating metrics.

Table 1.20.2 LOM Operating Cost Metrics

Key metric (100% basis) USD/tonne	LOM
C1	
Mining	101
Processing	141
Support Services (SS)	22
Administration	18
Packaging and Logistics	82
Selling costs	48
Ta credit	(54)
Total C1 Costs	**357**
C2 Costs	
C1 Costs + depreciation	408
C3 Costs	
C2 + Corporate over heads & Royalties	431
AISC (C1 + Sust Capex + Ta)	364
AIC (AISC + Capex)	405

Figure 1.20.1 illustrates Project LOM cash flow profile, based on commencement in 2022.

Figure 1.20.1 Annual USD Cashflow Profile

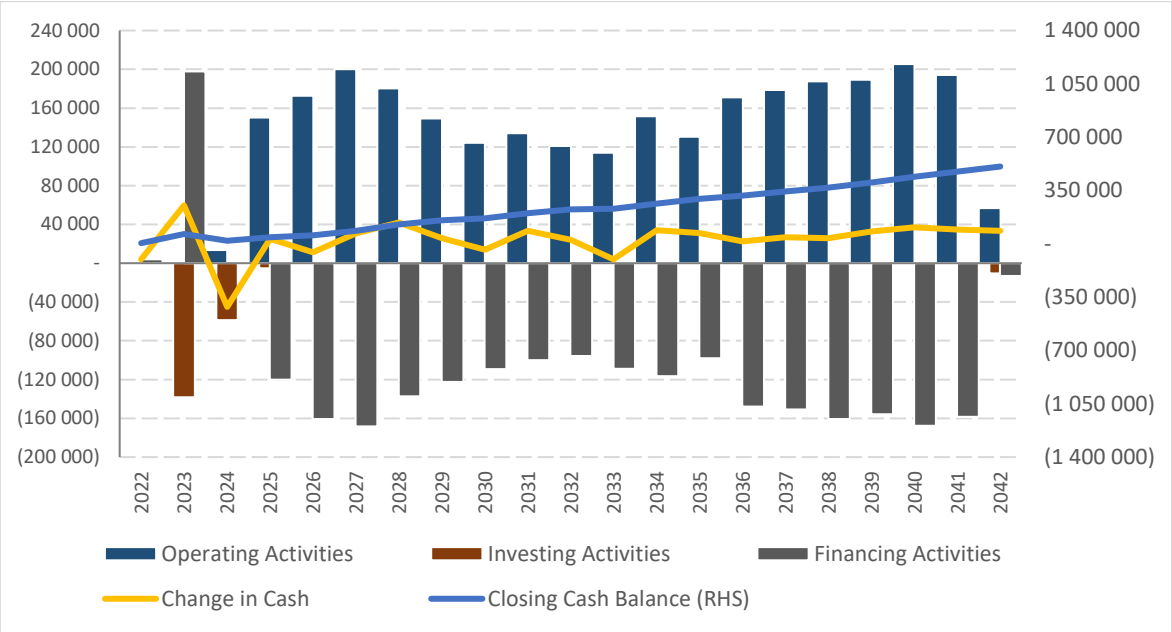


Figure 1.20.2 illustrates Project sensitivity to variances in selected key variables.

Figure 1.20.2 Sensitivity of Project NPV10, USD M, to Selected Variables