ASX Code: IPT

9th November 2023

LAKE HOPE SCOPING STUDY

Outstanding Economics show Lake Hope to potentially be the lowest-cost producer of High Purity Alumina (HPA) globally by up to 50%

Impact Minerals Limited (ASX:IPT) is pleased to announce the positive results of a Scoping Study based on realistic production and capital expenditure estimates for the company's Lake Hope High Purity Alumina (HPA) Project, located 500 km southeast of Perth in the Tier 1 jurisdiction of Western Australia.

Cautionary Statement

The Lake Hope HPA Project Scoping Study in this ASX announcement was completed to assess the potential economic viability of mining lake clays at Lake Hope with offsite metallurgical processing at a plant near Kalgoorlie in Western Australia. The Scoping Study has been prepared to an accuracy level of +/-30% and is a precursor to an ongoing Preliminary Feasibility Study (PFS). The results should not be considered a profit forecast or production forecast.

The Scoping Study is a preliminary technical and economic study of the potential viability of the Lake Hope project in accordance with the JORC Code 2012 and ASX Listing Rules. Impact advises that it is based on low-level technical and financial assessments that will require a review to support an estimate of Ore Reserves. Further evaluation work, including extensive metallurgical test work and market acceptance studies of the final product, is required before an Ore Reserve can be estimated or to provide any assurance of an economic development case.

The Study is based only on Indicated Resources announced to the ASX on 19th June 2023. Material assumptions are outlined throughout the announcement and include assumptions about the market price of HPA and funding availability. While Impact considers all the material assumptions to be based on reasonable grounds, there is no certainty that they will prove correct or that the range of outcomes indicated by the Scoping Study will be achieved.

Additional funding will be required to achieve the range of outcomes indicated in the Scoping Study. Investors should note that there is no certainty that Impact can raise financing when needed. It is also possible that such funding may only be available on terms that dilute or affect the value of Impact's existing share capital structure.

Impact has concluded that it has a reasonable basis for providing the forward-looking statements included in this announcement and believes it has a sound basis to expect it will be able to fund the development of the project. However, given the uncertainties, investors should not make investment decisions based solely on the study's results.

ABN 52 119 062 261
61+ 8 6454 6666
info@impactminerals..com.au
www.impactminerals.com.au

SCOPING STUDY HIGHLIGHTS

The Lake Hope project contains a significant alumina (Al_2O_3) resource, which could become a major global supplier of High Purity Alumina (HPA) because of the unique nature of the deposit that allows very cost-effective mining and processing.

This Scoping Study indicates that, as far as Impact can ascertain from published data, the Lake Hope project could be one of, if not the lowest-cost producer of HPA globally, possibly by a significant margin of up to 50%.

Life Of Mine (LOM) Base-Case Financial Metrics

10,000 tpa 4N HPA	**A$1,334M**	**A$253M**	**55%**
initial 25-year mine life	Post-tax NPV_8	Initial Capital Expenditure	Post-tax IRR
US$3,264/t	**A$174M**	**A$4,877M**	
Operating cost (nett of by-product)	Post-tax cash flow per year	Post-tax cashflows	

- Potential to become a significant producer of HPA with steady-state production of 10,000 tonnes per annum following a two-year ramp-up.
- Low capital costs compared to peers driven by the unique nature of the clay deposit at Lake Hope.
- Low operating cost and high margins due to the deposit size, zero strip ratio, high-grade mineralisation at surface, no on-site beneficiation required, advantageous kinetics of the metallurgical process and by-product credits.
- Natural ESG benefits include probably considerably reduced CO_2 emissions compared to incumbent producers.
- Very favourable market fundamentals with HPA deemed a Critical Mineral in Australia and many other countries.

- Forecast compound annual growth rate of about 20% for the HPA and related products market over the next decade driven by expansion in the battery and LED sectors.

- The study of HPA is based on a conservative commodity price estimate of US$22,000 per tonne compared to recent forecasts of more than US$25,000 per tonne from 2025 onwards.

Impact Minerals' Managing Director, Dr Mike Jones, said, *"This Scoping Study demonstrates the world-class potential of the Lake Hope Project and supports what we first thought was possible when we came across it and the work already done by Roland Gotthard and the Playa One team".*
"If you are playing in the industrial minerals space, at least one of four things has to be true about your mine otherwise you will not make it through the market cycle: the deposit has to be either the biggest, have the highest grade, be the first to market or, preferably, be the lowest cost producer. The unique characteristics of the Lake Hope deposit, both in terms of mining and processing, look like they could possibly deliver HPA at the lowest cost globally by a significant margin".
"Even though we are only at the Scoping Study stage, with all its inherent uncertainties, the financial model demonstrates the world-class economics of the project, which has an NPV of more than A$1 billion, very large operating margins and significant after-tax earnings of A$174 million per year. The ability to deliver sub-US$4,000 per tonne HPA is an extraordinary competitive advantage that Impact will continue to leverage in the current Preliminary Feasibility Study, due for completion in 2024."

Dr Michael G Jones
Managing Director

KEY SCOPING STUDY OUTCOMES

Outcome	Unit	Lake Hope	Unit	Lake Hope
NPV8 (real post-tax)	US$	$934M	AUD$	$1,334M
NPV10 (real post-tax)	US$	$742M	AUD$	$1,060M
IRR (post-tax)		55%		
Capital Costs (10Ktpa)	US$	$177M	AUD$	$252M
Sustaining Capital (25-year LOM)	US$	$142M	AUD$	$1,334M
Capital Costs (per tonne capacity)	US$	$17,700	AUD$	$25,285
Operating Costs (AISC)	US$/t HPA	$7,023	AUD$	$10,032
Operating Costs (nett by-product)	US$/t HPA	$3,264	AUD$	$4,662
Throughput Per Annum (Clay)	Tonnes	46,300		
Throughput (Life Of Mine)	Tonnes	1,157,000		
Life Of Mine (Initial)	Years	25		
Annual Production (HPA)	Tonnes	10,000		
Annual Production (all by-products)	Tonnes	74,000		
Revenue (Life Of Mine)	US$	$6,286M	AUD$	$8,980M
Annual Revenue (Average LOM)	US$	$258M	AUD$	$368M
Annual EBITDA (Average LOM)	US$	$175M	AUD$	$250M
Construction period		2 years from FID		
Production (Year 1)	Tonnes	5,000		
Production (Year 2)	Tonnes	8,000		
Production (Steady State)	Tonnes	10,000		
Payback period (from FID)		4.5 years		
Payback period from first production		2 years		

SUMMARY OF THE SCOPING STUDY

Impact Minerals Limited (ASX:IPT) is pleased to publish the results of a Scoping Study into a series of development options for the Lake Hope High Purity Alumina (HPA) Project located 500 km east of Perth in the Tier 1 jurisdiction of Western Australia. The Study comprises the results of preliminary metallurgical, engineering and logistical studies into the economic viability of the Lake Hope project.

HPA is now listed as a Critical Mineral in Australia, the US and Europe and is an essential mineral required for the ongoing decarbonisation of the world's energy market.

The Scoping Study is reported in accordance with the JORC 2012 Code and ASX Listing Rules and with a level of accuracy of +/-30% commensurate with this level of study. The Study justifies the project progressing to a Preliminary Feasibility Study, which is well underway (ASX Release October 18th 2023).

The Study is based on work completed by Playa One Pty Ltd before Impact's involvement in the project and work completed by Impact since acquiring the right to earn an 80% interest in the project earlier in 2023 (ASX Release March 21st 2023). Impact can earn its 80% interest by completing the PFS.

The Scoping Study shows that the Lake Hope Alumina Project has the potential to deliver attractive financial returns due to the unique properties of the Lake Hope Resource, being:

- An at-surface sheet of lake clays which will be relatively cheap to mine and with limited long-term rehabilitation requirements.
- There is no requirement for on-site beneficiation because of the very fine-grained nature of the clay. The mine will be a free digging operation with the transport of the ore offsite for processing at a permitted industrial site. This contrasts dramatically with a conventional open pit hard rock mining operation (Figure 1).
- No significant infrastructure is required at site, such as power or large quantities of water.

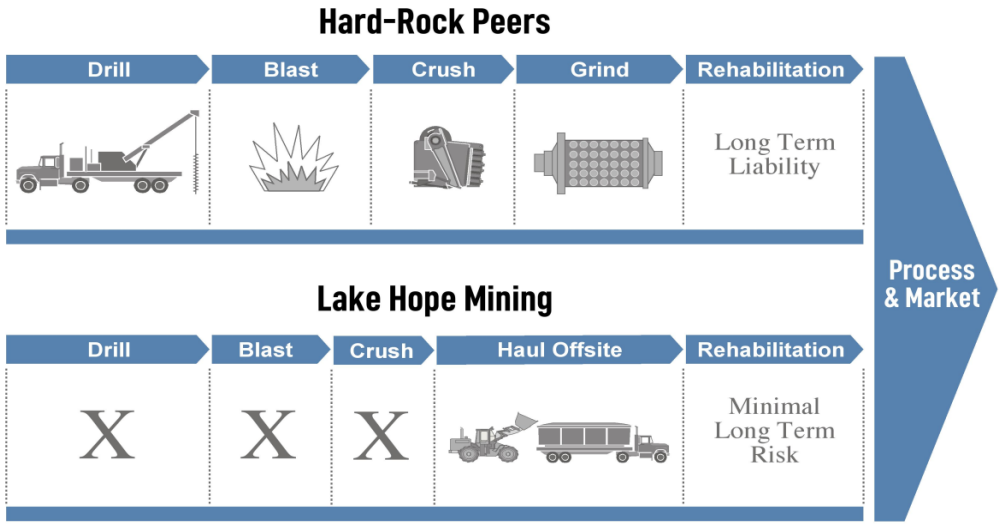


Figure 1. Comparison of mining techniques between Lake Hope and conventional hard rock mining.

- Indicated Resources sufficient to allow a long-life mining operation of more than 25 years.
- Mineralisation is amenable to low-temperature acid roasting with low CO_2 emissions compared to incumbent producers.
- Demonstrated capacity to produce 99.99% HPA from representative material.
- Strong ESG Credentials with Heritage Clearance for mining already received.

These advantages could lead to the Lake Hope Alumina Project potentially delivering HPA for approximately US$3,300 (A$4,714) per tonne nett of by-products, with a post-tax NPV8 of A$1,334 million (US$933 million) for a capital investment of A$253 million (US$177 million). This assumes a nominal benchmark production target of 10,000 tonnes per annum of HPA (as used in feasibility studies by Impact's peers) with Impact's metallurgical process models and using costs similar to current and proposed HPA and similar mining and processing operations.

This operating cost is significantly lower than costs published by Impact's peers in several feasibility studies. For example, Alpha HPA Ltd (US$5,940 and nett of by-products ASX:A4N Release 17th March 2020), where HPA is produced from a chemical feedstock and FYI Resources (US$6,217 ASX:FYI Release 8th April 2021) where HPA is produced by hydrochloric acid leaching of kaolin. These figures are not adjusted for the significant and ongoing inflation of costs since publication. Impact's costs are in 2023 dollars.

An in-house cost-curve analysis indicates that at an operating cost of US$3,300 per tonne, Lake Hope, to the best of Impact's knowledge, will possibly deliver the lowest-cost HPA globally (Figure 2).

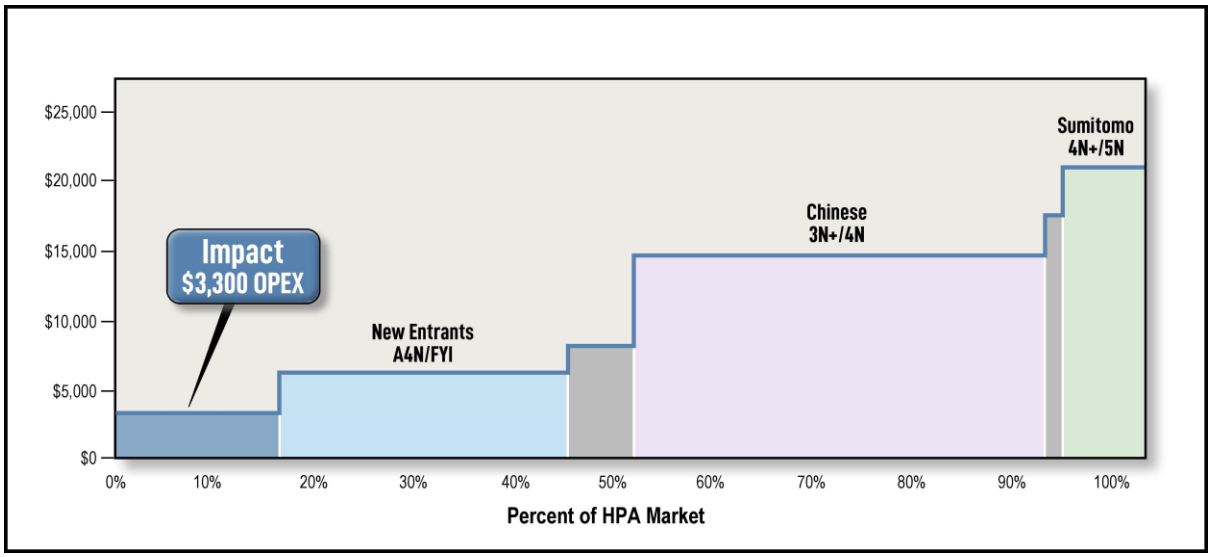


Figure 2. HPA Industry operating cost curve (costs of new entrants not adjusted for inflation) Existing OPEX Data sourced from market analyst reports and in-house research.

The Scoping Study has provided a framework for assessing in more detail the metallurgical, engineering, logistical, heritage and environmental factors in the work program for the PFS.

Investors should note that the outcomes of the PFS may alter the capital and operational estimates produced during the Scoping Study, and no investment decision should be based solely upon the Scoping Study.

PRODUCTION TARGET

The Scoping Study provides a Production Target of 250,000 tonnes of HPA production over 25 years of the project study. The Production Target is based on extraction of an average of 46,300 tonnes of mineralised resources extracted from the Lake Hope deposit. The Lake Hope Resource comprises 880,000 tonnes of contained alumina at a grade of 25.1% Al_2O_3, with 88% of the resource in the higher confidence category of Indicated Resources (Table 1 and ASX Release 19th June 2023). The Production Target is based solely on the extraction of Indicated Resources only, with no Inferred Mineralisation or Exploration Target material included in the Production Target.

Impact confirms that there have been no material changes to the Resources Mineralisation report subsequent to the ASX Release on 19th June 2023.

MATERIAL ASSUMPTIONS and MODIFYING FACTORS

Based on work completed by Playa One Ltd and Impact Minerals, the Scoping Study has made several material assumptions and used Modifying Factors as defined in the JORC 2012 Code to assess the project's economic viability. Investors should note that these Material Assumptions and Modifying Factors are subject to confirmation from ongoing work.

Material Assumptions and Modifying Factors used in this Scoping Study include;

- The operation's nameplate production is 10,000 tonnes per annum of HPA.
  There is no certainty that an operation of this scale will be built. However, based on Impact's industry analysis, this target has been chosen as a realistic target market share. This is also the benchmark target used by Impact's peers (e.g. A4N ASX Release 17th March 2020, and FYI ASX Release 8th April 2021).
- That the HPA produced will meet the quality specifications required by customers.
  The HPA sighter samples previously produced by Playa One Pty Ltd meet the chemical specifications required by customers. On-going metallurgical test work as part of the PFS has so far replicated the Playa One metallurgical process (the patented Sulphate Process), and therefore, Impact has a reasonable basis to conclude, but cannot guarantee, that it can reproduce the HPA specification (ASX Release October 18th 2023). In addition, HPA end-user quality specifications and needs may change, and there is no guarantee that current HPA product specifications will result in future sales.

- The price of 99.99% (4N HPA) realised will be US$22,000 per tonne.
  Impact has assumed a discount of about 10% to the commonly perceived basket price of US$24,000-$25,000 for 4N HPA. Recent independent market analysis indicates prices of between $US25,000 and upwards of US$30,000 per tonne of milled HPA from 2026 onwards. However, there is no guarantee that these prices will be achieved.

- The forecast increase in demand for HPA over the next decade will be realised.
  The LED and battery sectors are under constant technological innovation, and there is no guarantee that HPA demand will rise as forecast should alternatives be found.

- That by-product and co-product chemicals (agricultural and chemical feedstocks) produced from the Playa One Sulphate Process will meet customer specifications.
  Up to 10% of the project revenue will come from the sale of by-products. Impact needs to perform marketing and specification research on these by-products and will also require a greater understanding of the saleability of these chemicals, although they are in high demand. Variance in revenues from by-products may materially affect future returns.

- No Native Title impediment exists to the development of the Lake Hope Project mining operation.
  A Heritage Survey has been conducted by the Ngadju Native Title group over the Lake Hope deposit, with no Aboriginal Cultural Heritage objects or ethnographic sites found. Before the approval of a mining lease, a mining agreement must be negotiated with all affected Native Title Parties. Impact has assumed that the terms of this agreement will be agreed upon in the future.

- No Environmental impediment exists to the development of the Lake Hope Project mining operation.
  Although a desktop review has indicated no threatened flora or fauna in the area, there is a risk of finding unrecorded priority ecological communities. Baseline Flora and Fauna Surveys will start in November 2023. There is no guarantee that environmental factors will not prevent the development of the mining operation.

- A suitable site for the HPA facility can be found within the Kalgoorlie region.
  Enquiries about the availability of, and conditions surrounding, a processing facility in Kalgoorlie are at an early stage.

- The Capital Cost estimate is accurate to within 30%.
  The Scoping Study capital costs are an estimate arrived at via analogy with existing operations and proposed operations of similar scope and scale. Further work is required to finalise the Lake Hope process flow sheet before undertaking detailed engineering and capital cost estimation.

- It takes 30 months to build the Lake Hope processing facility and 18 months to reach nameplate capacity at 99.99% alumina product quality.
  Impact believes these are conservative and achievable time frames.

- That end-to-end recoveries of alumina are 80%.
  Initial work by Playa One indicated end-to-end recoveries of 92% using the patented Playa One Sulphate Process to produce HPA. Given the unknown performance of the Sulphate Process at scale, a conservative recovery of 80% alumina has been used.

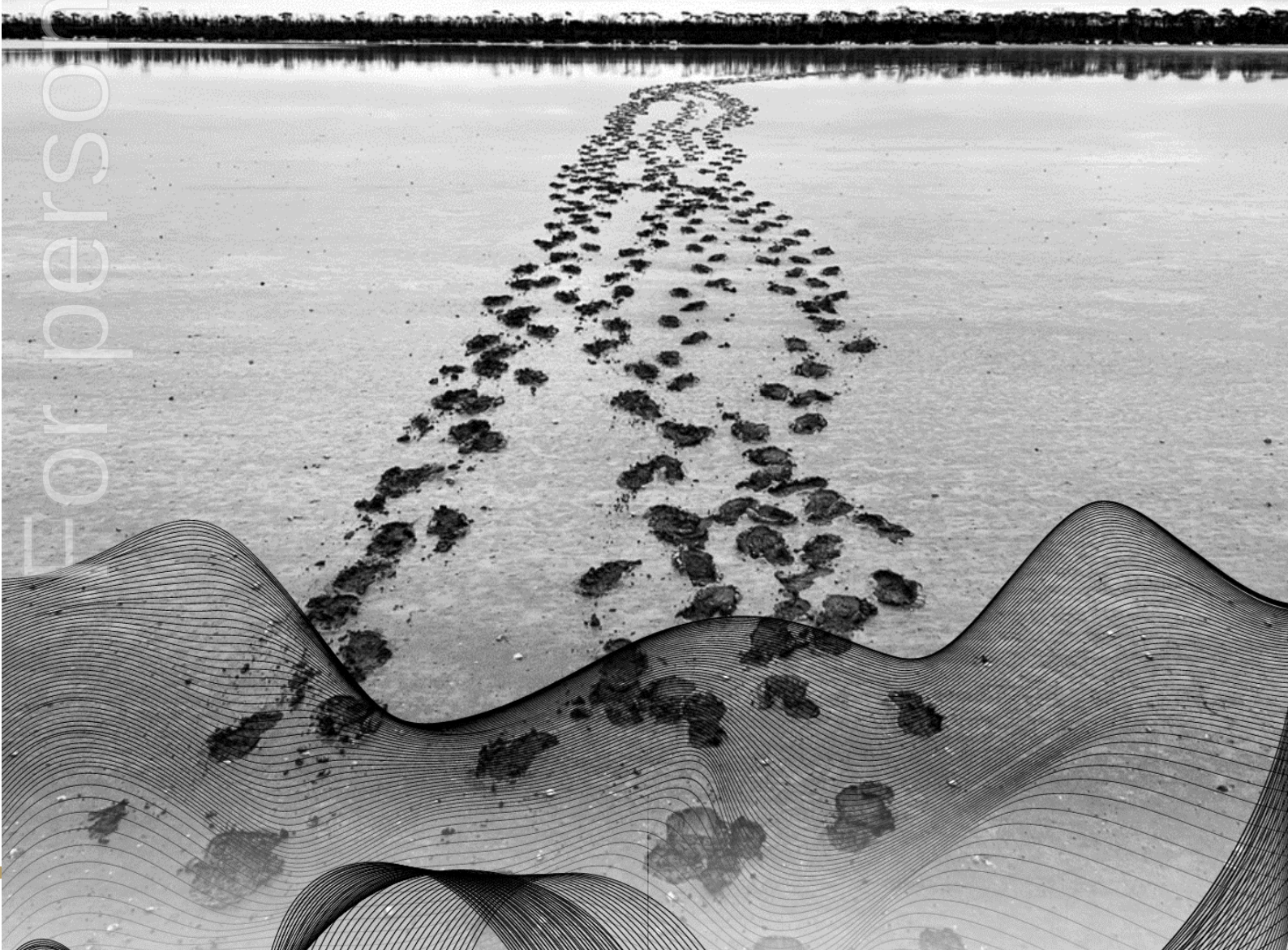
- **No debt is assumed.** There must be more grounds to believe any debt financing for the Project because of the early-stage nature of the economic and technical studies. The NPV is calculated on a 100% equity basis.
- **A discount rate of 8% has been assumed.**
- **An exchange rate of US$1 to A$0.70 is assumed.**
- **The Scoping Study has been managed by Impact Minerals Limited using several external consultants for the specialist work.** The Study has only been independently reviewed in part.

END OF SUMMARY

The full Scoping Study is attached to this report.

LAKE HOPE

SCOPING STUDY



1. PROJECT OVERVIEW

The Lake Hope High Purity Alumina (HPA) Project is an integrated mine and metallurgical processing operation proposed to be developed over the next few years in the Tier 1 jurisdiction of Western Australia.

The mine will be located on E63/2086, about 500 km east of Perth. It will supply an alumina-mineralised clay to a processing plant, most likely in Kalgoorlie, that will convert the clay into High Purity Alumina with a purity of 99.99% Al_2O_3 (so-called 4N, short for four nines) or better. Alumina is the name given to aluminium oxide with the formula Al_2O_3.

2. PROJECT OWNERSHIP

The Lake Hope Project covers numerous prospective salt lakes between Hyden and Norseman in southern Western Australia and comprises eight granted exploration licences that are poorly explored (E63/2086, EL63/2317-19, EL63/2730, EL74/673 EL74/764 and EL74/779). The tenements cover about 238 km^2 and are all 100% owned by Playa One Pty Limited.

Impact has the right to earn an interest in the company Playa One Pty Limited as follows (ASX Releases 1st and 4th May 2023):

1. Upon completion of a Preliminary Feasibility Study (PFS), Impact can elect to enter an incorporated joint venture with the Playa One shareholders (through an entity representing them, Playa Two Pty Ltd). If so, it will acquire an immediate 80% interest in Playa One by issuing up to 120 million fully paid ordinary shares capped at a maximum value of $8 million (based on the 5-day VWAP before the election) to Playa One Shareholders.

2. Upon completion of a Definitive Feasibility Study to be sole-funded by Impact, Impact will issue up to 100 million fully paid ordinary shares capped at a maximum value of $10 million (based on the 5-day VWAP before the ASX announcement of the completion of the DFS) to the Playa One Shareholders.

3. Playa One shareholders will be free-carried to a Decision to Mine. Impact will maintain all Playa One tenements in good standing during this time.

4. If a Decision to Mine is made, the Playa One Shareholders may contribute to mine development costs or be diluted. If their interest falls below 7.5%, it will convert to a 2% net smelter royalty.

3. MANAGEMENT OF THE SCOPING STUDY

The Scoping Study and the complimentary and ongoing PFS are managed by Roland Gotthard, who discovered the Lake Hope Project and joined Impact as Project Manager.

The Company has appointed independent consultants and experienced contractors to provide advice and costs for the various parts of the studies and contribute to the current state of knowledge for the project outlined in this report.

The following consultants are providing advice:

Mineral Resource Estimation: H and S Consultants, Brisbane. H and S are well-known resource estimation specialists with specific experience in resource estimation for deposits in Western Australian Playa lakes.

Environment: Biota, a respected environmental consultancy with Biota Environmental Sciences, a consultancy specialising in flora, fauna and ecological studies for environmental impact assessment. Biota is also providing advice about the approvals process for the grant of a Mining Lease.

Mining: The Mining Engineer (TME) Mining Consulting, an independent mining engineering consultant with experience in mine design, scheduling, and work within near-surface mineral deposits.

Metallurgy: ALS Metallurgy Pty Ltd manages and conducts the metallurgical test work and laboratory services for the ongoing PFS work stream. Strategic Metallurgy, a specialised consultant, has been engaged for process design and modelling.

Logistics: Qube Logistics Pty Ltd has provided scoping-level advice on the logistical aspects of the project, such as haulage costs for ore and reagents.

Financial Modelling: Platek Analytics has reviewed and built upon Impact's internal economic model for the Scoping Study and will continue to do so for the PFS.

Marketing: Impact has advanced discussions with various marketing and trading houses to build a network of contacts for marketing the Lake Hope alumina products.

4. PROJECT LOCATION

The Lake Hope project is about 135 km east of Hyden and about 500 km east of Perth in Western Australia and is centred on two small salt lakes about 25 km south of the Norseman-Hyden road (Figure 1). A track goes from the road directly to the lakes (Figure 2).

High-grade alumina-bearing clay mineralisation occurs in the top two metres of the lake beds, and the project aims to produce HPA by shallow open pit mining of that clay and transport it via the Norseman-Hyden Road to Kalgoorlie for processing.

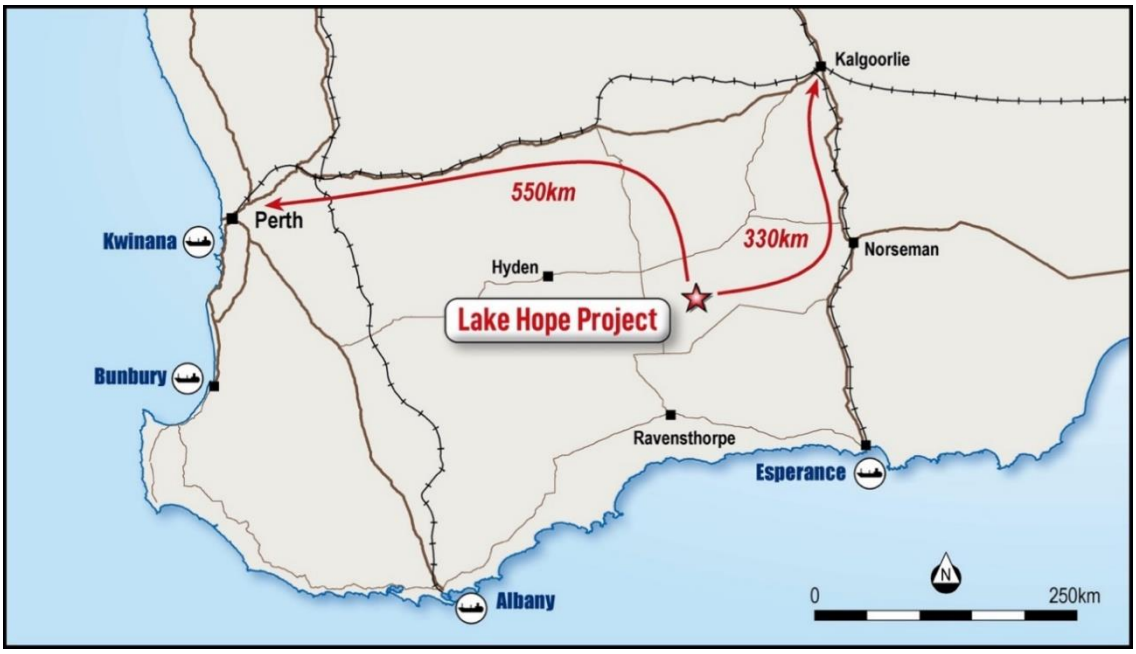


Figure 1. Location of the Lake Hope HPA Project.

5. GEOLOGY

The salt lakes of Western Australia are well known for their unique and complex hydrogeochemistry, which has led to the formation of a wide variety of economic minerals and brines within the playa systems. These include the world-class Yeelirrie uranium deposit (>100 Mlb U_3O_8), significant resources of potash brines, gypsum and lime-sand.

Playa One identified the Lake Hope area as having unique climatic and geological characteristics that have led to the formation of what may be a globally unique deposit of alumina-rich material within the surficial clay of two small salt lakes, or “pans”, in the larger Lake Hope playa system. These pans are called West Lake and East Lake and are surrounded by various sand dunes and weathered granite outcrops (Figures 2 and 3).

The lake clays, which are only up to a few metres thick, have unique chemical and physical properties and consist almost entirely of alumina-bearing minerals that are plasticine-like in consistency and can be sampled with hand-held augers and push tubes (Figures 4 and 5).

Figure 2. West Lake and East Lake within E63/2086 (blue rectangle). Note the track, which extends from the Norseman-Hyden Road, thus eliminating significant clearing for access.

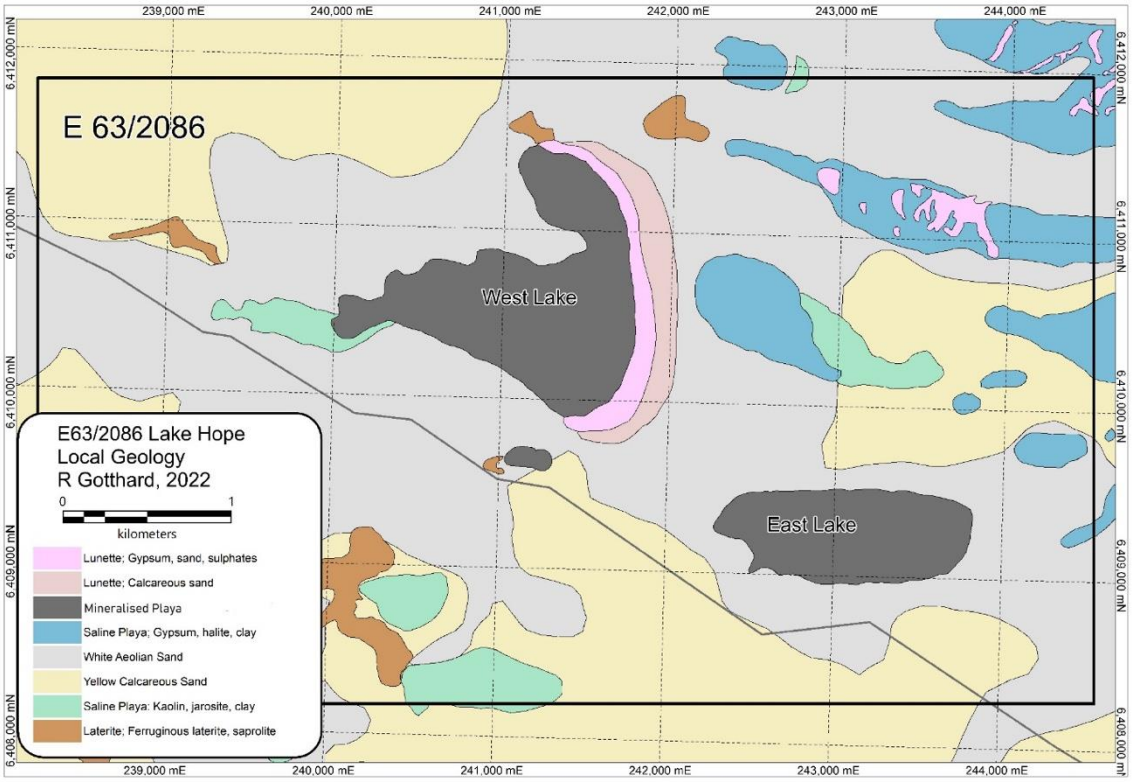


Figure 3. Geology of the Lake Hope HPA Project.

Figure 4. Lake Hope showing the push tube sampling method (!) and an example of the lake clay from the push tube.

Particle size distribution analysis demonstrates that virtually all the minerals within the lake clay are less than a few microns in size and that between 80% and 90% of them are less than 300 nanometres in size (Figure 5).

These unique characteristics have produced a near-perfect mineral deposit for mining - a very high-value end-product whose parent material is:

- very soft and shallow, allowing for extremely cheap quarrying with limited infrastructure requirements, no pre-stripping, no selective mining, a tiny environmental footprint, and limited rehabilitation requirements.
- naturally fine-grained with no need for crushing and grinding, allowing for transport to an off-site processing facility that can be built at an existing industrial site. In essence, this is equivalent to Direct Shipping Ore (DSO) and
- comprises a few minerals that require only simple washing before acid leaching, thus allowing for low-cost, straightforward metallurgical processing.

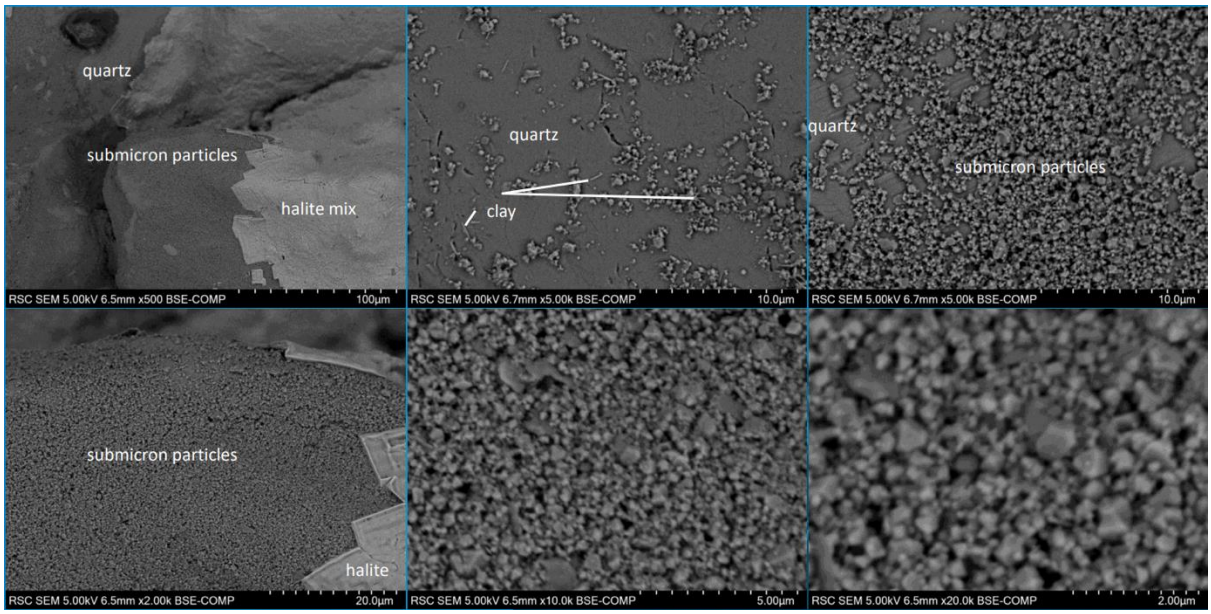


Figure 5. Scanning Electron Microscope imagery of <300nm clay particles.

6. MINERAL RESOURCES

The Lake Hope deposit has a mineral resource that comprises 880,000 tonnes of contained alumina at a grade of 25.1% Al_2O_3, with 88% of the resource in the higher confidence category of Indicated Resources (Table 1 and ASX Release 19th June 2023). A block model plan view of the resource is shown in Figure 6. Only Indicated Resources have been included in this study.

Category	Million tonnes	Alumina %	Al_2O_3 Tonnes
West Lake			
Indicated	2.09	25.5%	534,600
Inferred	0.23	23.2%	52,300
Total	**2.32**	**25.3%**	**586,900**
East Lake			
Indicated	1.10	24.8%	273,400
Inferred	0.08	24.1%	19,400
Total	**1.18**	**24.8%**	**292,800**
Combined			
Indicated	3.19	25.3%	808,000
Inferred	0.31	23.4%	71,700
Total	**3.50**	**25.1%**	**879,700**

Table 1. Lake Hope Alumina Mineral Resources.

The Mineral Resource Estimate was prepared by resource consultants H and S Consultants (H&SC) of Brisbane, Queensland. It has been reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, the JORC Code (2012). Impact confirms that no new information exists, and all modifying factors remain the same as at the time of the first publication of the resource (ASX Release June 19th 2023).

The Mining Studies for this Scoping Study have focused on the highest-grade parts of the Lake Hope alumina deposit. Mining will initially excavate the parts of the deposit with greater than 27% Al_2O_3 (about 360,000 tonnes or 97,000 tonnes of contained alumina). After that, the greater than 25% Al_2O_3portion would be extracted (Figure 6).

This is sufficient to supply material to the processing plant for the first ten years of production at the benchmark production rate of 10,000 tonnes per year of HPA.

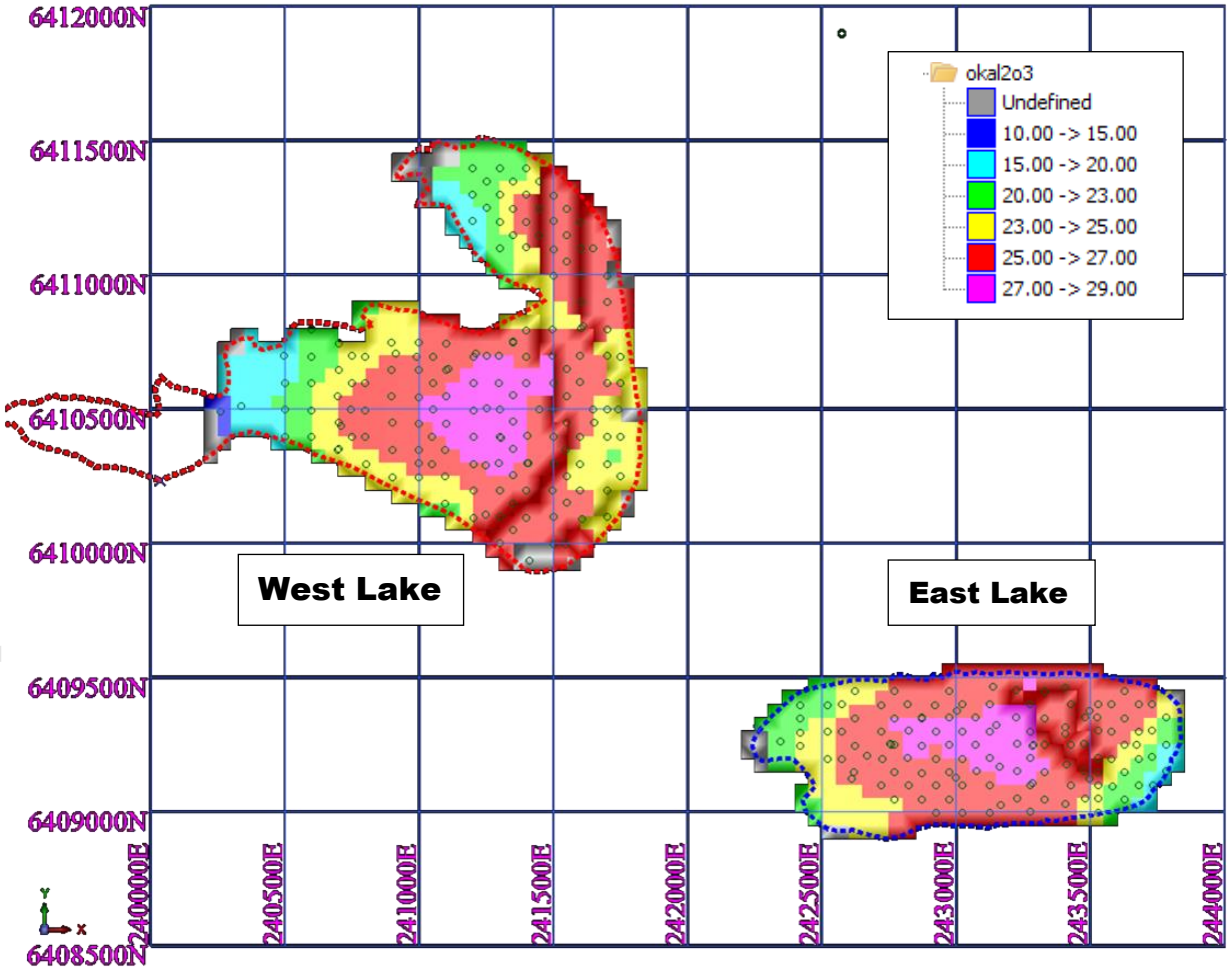


Figure 6. Alumina Block Grade Distribution for the Lake Hope Mineral Resources.

7. DEVELOPMENT SCENARIO and MODIFYING FACTORS

Investors should note that the development of the Lake Hope HPA Project proposed here is preliminary, and further significant work is required to confirm its economic viability.

The project aims to extract alumina from the lake clays at Lake Hope and transport them to Kalgoorlie to be processed in a purpose-built facility via the patented and proprietary so-called Playa One Sulphate Process. This hydrometallurgical process has been shown to have the technical capacity to produce 4N HPA (ASX Release March 21st 2023).

This Scoping Study is aimed at demonstrating the economic viability of the project under a base case scenario with the following material assumptions and modifying factors, which are described in more detail at the front and end of this report:

- The nameplate production capacity of the operation is 10,000 tonnes per annum of HPA production with a minimum purity of 99.99% Al_2O_3. This would account for between 10-15% of global production as forecast in 2027, the forecast year of nameplate production.
- The HPA produced will meet the quality specifications required by customers.
- The price of 99.99% (4N HPA) realised will be US$22,000 per tonne.
- The Mineral Resources justify an operation with a minimum mine life of 25 years.
- By-product chemicals (agricultural and chemical feedstocks) produced from the Playa One Sulphate Process will meet customer specifications.
- No Native Title impediment exists to the development of the Lake Hope Project mining operation.
- No Environmental impediment exists to the development of the Lake Hope Project mining operation.
- The Capital Cost estimate is accurate to within 30%.
- A suitable site for the HPA facility can be found within the Kalgoorlie region.
- It takes 30 months to build the Lake Hope processing facility and 18 months to reach nameplate capacity.
- Hydrometallurgical treatment of mineralisation via the Playa One Sulphate Process is successful, with 80% end-to-end recovery of alumina.
- A discount rate of 8% is assumed.
- No debt is assumed.
- The Scoping Study has been managed by Impact Minerals Limited using several external consultants for the specialist work. The Study has yet to be independently reviewed in whole.

8. MINING

The mine plan, prepared by TME Mine Consulting, envisages campaign mining with the excavation of 140,000 tonnes of lake clay grading 27% Al_2O_3 from the top one to two metres of the lake ore every three years and an annual drawdown of about 46,300 tonnes per year. This is needed to reach the yearly benchmark production rate of 10,000 tonnes of HPA. The mining would comprise a 94-day digging cycle every three years in the dry months between November and March.

TME have provided mine schedules, plant and equipment schedules, and a cost base for a preferred mining fleet comprising an excavator (20-tonne capacity) and seven to eight 10-tonne capacity tracked dump trucks. No significant infrastructure, such as power or large quantities of water, is required at the site.

The cost model covers the mining of the clay and delivery to the Run-Of-Mine (ROM) pad at the western end of West Lake on outcrops of granite (Figures 7 and 8). It is based on market rates for contract hire of the mining equipment and fuel with 90% equipment availability and staff costs, including reasonable rosters for machine operators, service technicians, fitters, managers, supervisors, and technical staff (Table 2).

Material Budget	Campaign	LOM (25 years)
Tonnes Clay to ROM	140,000	1,157,000
1.85 tonnes per Bench Cubic Metre	75,700	630,833
Campaign (Days)	94	781
Cost Model Outcomes	**USD$**	**LOM (25 years)**
Excavator Dry Hire	$240,000	$2,000,000
Dump Truck Dry Hire	$985,000	$8,205,000
Fuel	$173,000	$1,439,000
Mob/Demob	$600,000	$4,800,000
Labour Costs	$555,000	$4,624,000
Total Cost	$2,553,000	$21,068,000
Cost Per Tonne	**$18.20**	
Cost per tonne of HPA	*$84.30*	

Table 2. Mining model parameters for Lake Hope.

Each mining campaign is estimated to cost A$3.65 million (US$2.55 million) every three years, with an average cost of A$26.00 (US$18.20) per tonne of ore delivered to the ROM. This equates to about **A$119 (US$84) per tonne of HPA** produced and supports Impact's assertion that mining would be a very low percentage of the overall operating cost.

A small area for limited site infrastructure (workshops, office, refuelling bays and living quarters) will be needed close to the West Lake (Figures 7 and 8).

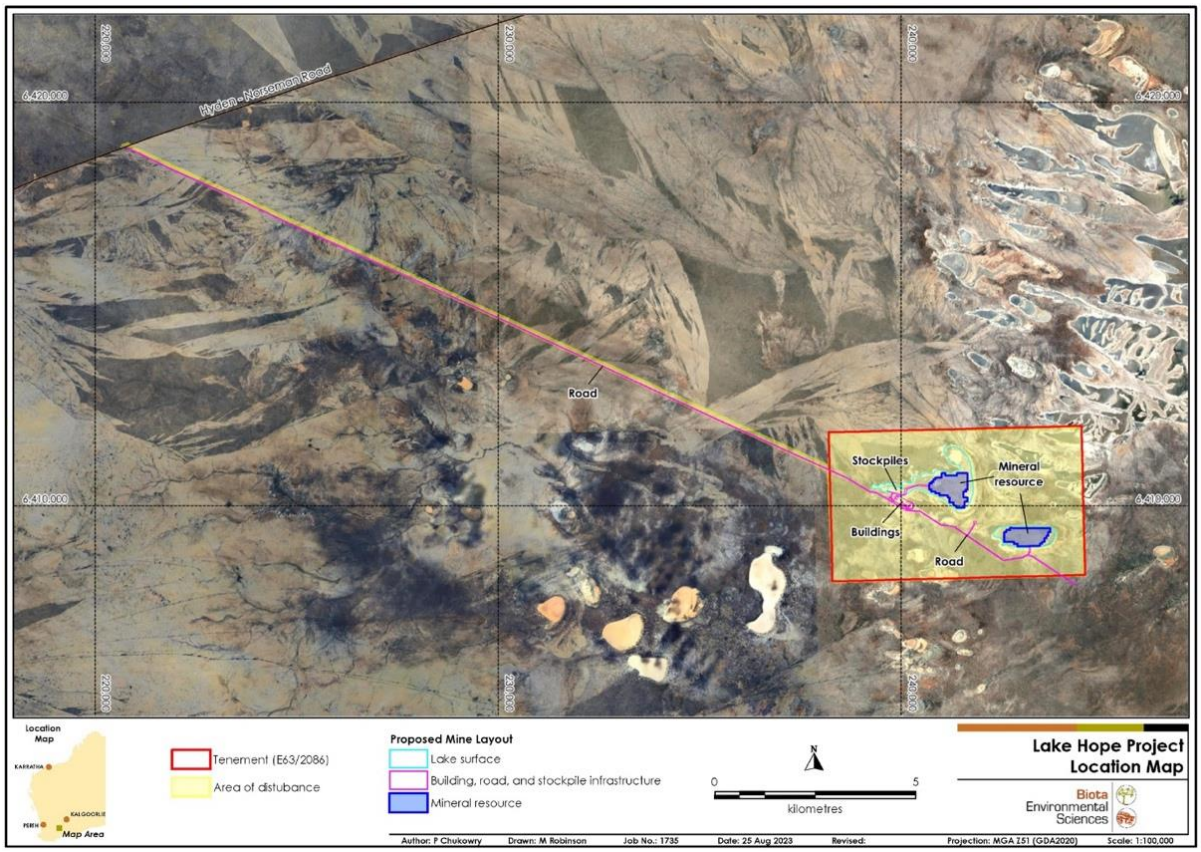


Figure 7. Proposed access and layout of mine site infrastructure at Lake Hope.

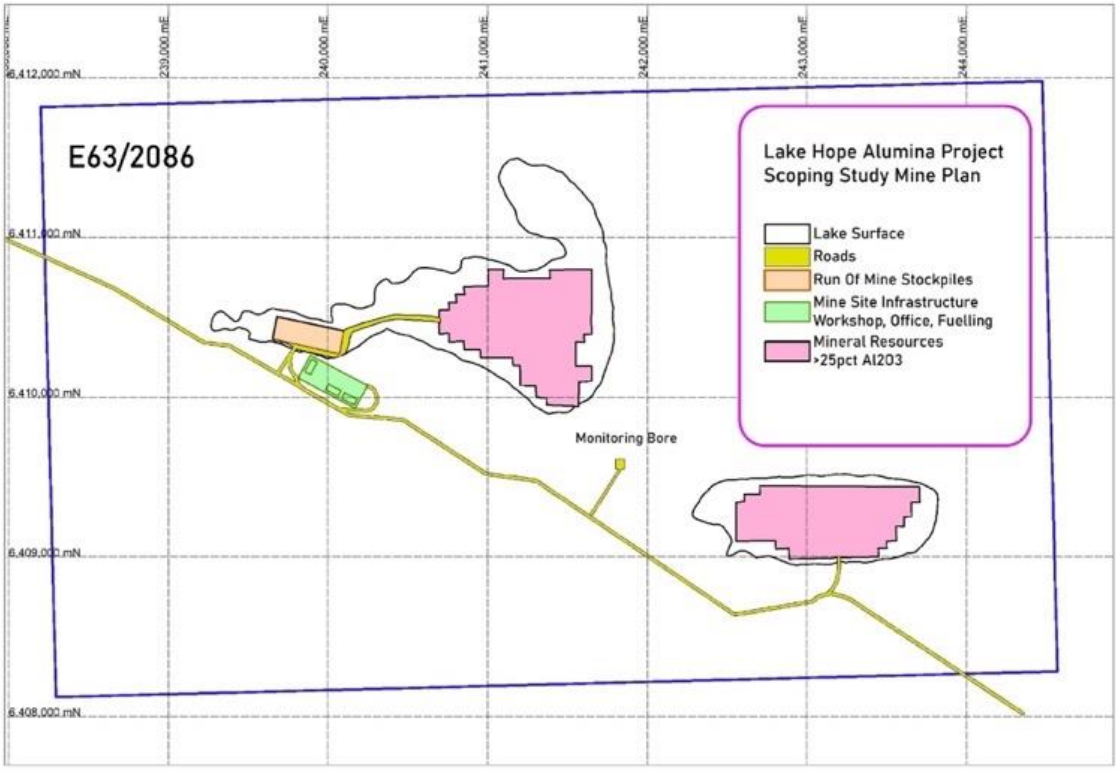


Figure 8. Schematic site layout for Lake Hope.

The natural properties of the Lake Hope deposit deliver many advantages over conventional hard rock open pit mining, as proposed by some of Impact's peers who will mine kaolin and other sources of hard rock sources of HPA. A comparison of these advantages of Lake Hope for mining is shown in Figure 9.

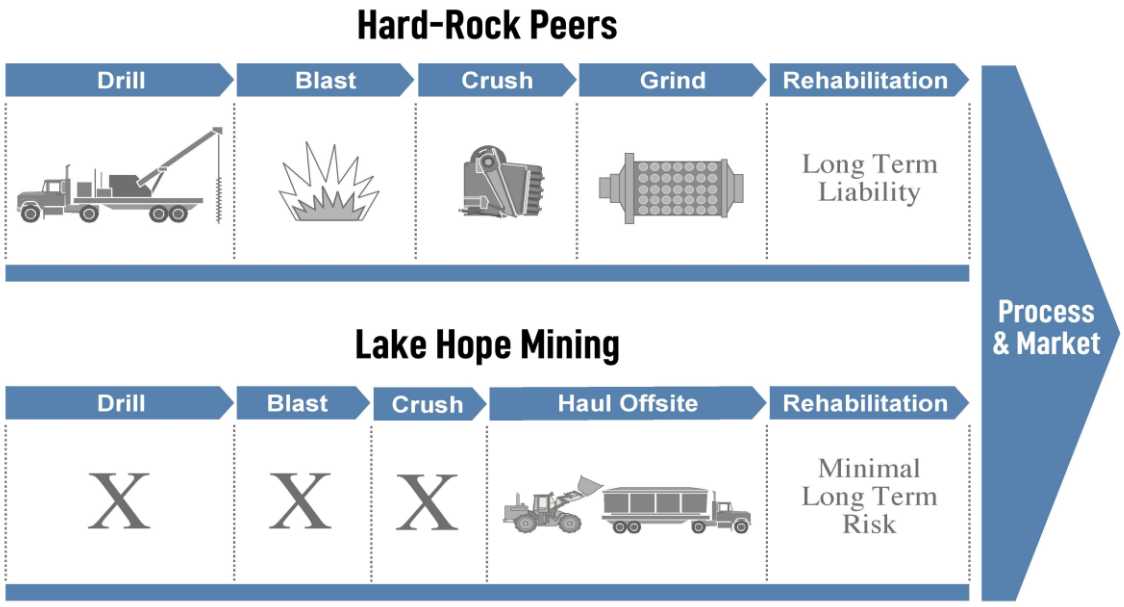


Figure 9. Comparison of mining techniques for Lake Hope with conventional hard rock mining.

9. PROCESS PLANT LOCATION

Both cost and permitting considerations led to an early conclusion that an offsite hydrometallurgical processing plant would be the best strategy for the project.

Cost considerations include:

- Significant commissioning and operational costs and risks in constructing a high-purity clean facility located in a remote location.
- Significant cost and risk involved in transporting reagents to site and product offsite.
- Significant costs in site infrastructure, such as a permanent camp and provision of potable water and electricity.

Permitting considerations were:

- Offsite processing and the low environmental impact of the mining method could contribute to the expedited grant of a Mining Lease compared to a conventional hard rock mining project.
- An offsite plant would also significantly reduce risks to the local environment.
- Permitting an offsite plant in an existing industrial facility may be easier and quicker than an onsite plant.

Accordingly, the Scoping Study has investigated locating the processing plant at one of four urban centres with established transport and export infrastructure: Perth (including the Kwinana Industrial Area), Kalgoorlie, Esperance or Albany.

In particular, risk assessment was focussed on the ability to transport the required reagents such as acids, other dangerous goods, and other materials in and out of the centres.

The location of the processing plant is also integral to the costs of trucking the raw ore from Lake Hope to the plant. Qube Logistics was commissioned to determine the haulage costs for ore from the mine to the plant and reagents, by-products and end-products to and from the plant.

The Scoping Study has used Kalgoorlie as the preferred location for the processing plant. This is based on:

- the ready availability of land zoned for heavy industry;
- existing mineral processing and advanced high-purity mineral beneficiation plants within the industrial area (e.g. Lynas Resources Ltd REE cracking plant);
- access to a skilled workforce;
- existing acid handling facilities and available sulphuric acid;
- world-class transport links; and
- access to grid power and water.

For Perth, the Study investigated the Kwinana Industrial Area (KIA or “Battery Alley”), where operational synergies can be found with existing and proposed battery and industrial chemical industries. There is some risk associated with the high cost of land and its availability in the KIA. Any facility in Perth may likely be located elsewhere in the metropolitan area.

Esperance and Albany have been discounted because they both lack acid-handling facilities, which have to be constructed at a considerable capital cost that materially affects the NPV of the project.

Impact knows that the Western Australian Government has allocated $210 million to co-fund new mineral processing operations and industry as part of the Collie Industrial Transition Fund. This location and more detailed studies for Kalgoorlie and Perth will be a key focus of the PFS.

10. TRANSPORT COSTS FOR ORE AND PROCESS REAGENTS

As noted in Section 8, the mine plan envisages campaign mining with excavation of about 140,000 tonnes of ore every three years and an annual drawdown of about 46,300 tonnes to achieve a nameplate production of 10,000 tonnes per year of HPA product. This ore requires transport to the processing plant.

It is proposed that ore stored on the ROM pad be loaded onto conventional road trains to be trucked off-site to the plant. The preferred trucking route is via the Hyden-Norseman road, rated for quad-road trains (four trailers of ore). Two quad-road train trucks per day for 290 days per year would be required to deliver sufficient ore to the process plant.

For the Kalgoorlie location, road train haulage rates, provided by Qube Logistics, for bulk and containerised transport prices are A$58 (US$40.60) per tonne for ore transport from the mine site to the processing plant. Train and road haulage rates for reagents and products to and from the processing plant site to Fremantle Port are A$92 (US$64.40) per tonne.

In total, the costs of mining (A$120 (US$84)) and the transport of the ore to the processing plant (A$136 (US$95)) amount to about **A$256 (US$179) per tonne HPA produced.**

11. METALLURGICAL PROCESSING

The unique nature of the mineralogy and the extremely fine-grained nature of the clays at Lake Hope deliver significant cost advantages to both the mining and processing of the ore to produce HPA.

The clay mineralogy allows leaching by a sulphuric acid (H_2SO_4) dominant process, the patented Playa One "Sulphate Process", which was developed by Playa One Pty Ltd before Impact's involvement in the project (ASX Release March 21st 2023 and October 16th 2023).

The Sulphate Process offers several advantages over other methods being trialled to produce HPA, particularly hydrochloric acid (HCl) leaching of kaolin. This requires the kaolin to be mined, crushed and screened by conventional mining techniques (c.f. Figure 9) and then leached with hydrochloric acid and calcined at high temperatures in the first stages of the process.

The Playa One Sulphate Process allows direct leaching of the raw lake clays using a cheaper, more readily available, and environmentally friendly acid and removes the need for upfront calcining. This offers significant cost savings in energy and acid consumption and capital expenditure requirements in the grade of steel and other materials required in a processing plant.

Both the Sulphate Process and hydrochloric-kaolin process use hydrochloric acid and calcining in the later stages of purification to produce HPA but on much smaller volumes of material.

Metallurgical test work by Impact has focused on replicating and optimising the Playa One Sulphate Process, which produced 99.99% Al_2O_3 (so-called "4N HPA") from representative material (ASX Release March 21st 2023). The test work program is being managed by Impact with laboratory work completed at ALS Metallurgy, Balcatta, Western Australia and with advice from consultants Strategic Metallurgy.

The Playa One Sulphate Process is straightforward and comprises five key stages (Figure 10). The ongoing test work program is focused on the optimisation of the principal operating conditions of each stage (ASX Release October 16th 2023).

Numerous experiments have now been completed for the first three stages of the process: Stage 1 Wash circuit, Stage 2 Roast circuit, and Stage 3 Intermediate alumina salt production (Figure 10).

The Intermediate alumina salt samples have been submitted for Stage 4 purification by conventional hydrochloric acid gas sparging. Material from Stage 4 will then be presented for HPA production by calcining in Stage 5 (Figure 10).

Further details of the test work program results are given in ASX Release October 16th 2023.

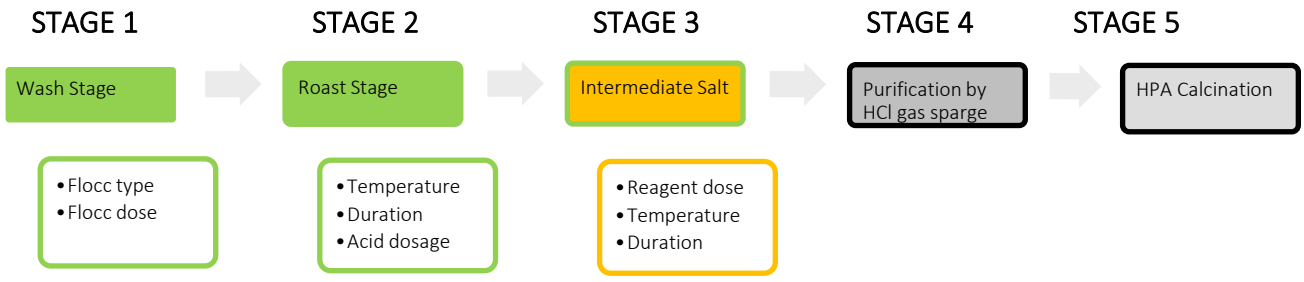


Figure 10. Summary of the Sulphate Process and Tests Completed in the Optimisation Test Work.

In summary, the metallurgical optimisation program for Stage 1 to Stage 3 has delivered results consistent with or exceeding Playa One's previous test work, and Impact is reasonably confident but cannot guarantee that it will be able to replicate Stages 4 and 5 to produce HPA by early 2024 (ASX Release October 16th 2023).

Playa One's previous test work produced HPA at about a 20% mass recovery from the raw ore, representing an end-to-end recovery of up to 92% of contained alumina (ASX Release March 21st 2023).

A conservative 80% recovery has been assumed for the Scoping Study model.

12. HYDROMETALLURGICAL PROCESSING PLANT

The five stage Sulphate Process involves straightforward beneficiation steps, including washing and filtration of the clay, a low-temperature acid sulphate roast, crystallisation of an intermediate aluminium salt, and purification of that salt via the well-understood process of hydrochloric acid-gas sparging purification with subsequent calcining.

For each Stage of the Sulphate Process, several factors that affect capital and operating costs have been considered in this Study as follows (and see ASX Release October 16th 2023):

STAGE 1 Wash Circuit.

The primary purpose of the wash circuit is to remove sodium salt and other salts from the clay. Washing is followed by conventional flocculation and thickening to recover the clays. The wash water will be desalinated for reuse in-circuit, and the salt brine will be concentrated for disposal.

Equipment and cost factors considered include the sourcing of water, reverse osmosis to purify to provide water of process quality, washing conditions, flocculant usage, settling/filtration energy, and water recycling/desalination and disposal of water waste.

Desalination costs were assessed based on industrial-scale desalination data obtained from commercial plant specifications of an order of magnitude greater than the proposed hydrometallurgical wash circuit. These were factorially adjusted to the appropriate order of magnitude of operating costs.

The waste brine composition has yet to be studied in detail, and further work is required to determine the appropriate regulatory framework and method of disposal of this waste material.

STAGE 2 Acid Roast Circuit

The washed clay from Stage 1 is mixed with sulphuric acid and subjected to a low-temperature sulphuric acid roast. The specific methodology and processing technology are confidential.

Energy for this process is likely to be provided by electricity sourced from the Southwest Integrated System (SWIS).

Cost factors considered included the source of sulphuric acid, energy costs for the roasting process and capital costs for the equipment required.

STAGE 3 Intermediate Aluminium Salt Precipitation

The roasted clay from Stage 2 is washed to release dissolved alumina salts into a pregnant leach solution (PLS), which is mixed with specific reagents to precipitate out Intermediate aluminium salts, which are collected by centrifuge and subsequently washed.

The cost of reagents required for this Stage has been sourced from published long-term averages. Other equipment and cost factors are reagent dosage, heating duty, mechanical filtration, and waste product disposal to the by-product circuit.

STAGE 4 HCl gas sparging circuit

Intermediate salts from Stage 3 are then purified within a well-understood hydrochloric acid gas sparging purification circuit, which comprises hydrochloric acid reaction, crystallisation and centrifuging, nitrogen gas addition, and ammonium make-up to precipitate precursor HPA.

Thermal work within the purification circuit is calculated within the metallurgical model, and energy provided by grid electricity priced against the SWIS.

To derive costs, data from existing metallurgical tests have been integrated into a metallurgical model of the HCl purification circuit, deriving energy and reagent consumption data. The capital and operating cost estimates were compared to competitor costs for similar HCl purification circuits at an equivalent modelled scale.

STAGE 5 Calcining

The purified HPA precursor from Stage 4 is then calcined via two-stage heating to produce HPA. The calcining (or heating) drives off volatile components, removes moisture and may induce a phase transition to produce so-called alpha-HPA. This is essentially corundum.

The energy cost is the critical component considered here and was also compared to competitor costs.

Physical Modification

Post calcination, the HPA commonly requires physical modification for end-user specifications. Processes include jet milling, micronisation and roller milling. Impact still needs to make such changes using HPA from its project, which is planned for 2024 in the PFS. However, these are well-understood industry-standard processes, and Impact has assumed that final products that meet specifications will be made.

By-product Circuit

The Sulphate Process produces modest quantities of valuable by-products from Stage 3, which are recovered and purified separately.

Cost factors considered include reagent addition, reaction and filtration processes and evaporation and crystalliser circuits.

The by-products comprise various industrial reagents and fertiliser precursors, which are proposed to be sold into the domestic and international markets. Pricing assumptions have been based on long-term average prices, widely available in industry and analyst publications.

13. WASTE

The waste products from the production of HPA using aluminous clay are relatively benign waste-fines composed of inert silica and iron residue with minor amounts of unrecoverable alumina and other elements. Around 20,000 tonnes of solid waste would be produced annually at nameplate capacity. This is very small compared to conventional mining projects.

Sodium chloride salt and bitterns are produced from the wash water desalination process and would be recovered in a salt evaporation system. Wastes produced from the hydrometallurgical plant are classed as industrial wastes, and studies are required to determine the final form and destination of all solid wastes.

14. PROCESSING OPERATING COSTS

A preliminary process flow diagram (PFD) based on the test work completed thus far was constructed to help estimate the operating costs of the proposed HPA circuit.

The PFD model, built in the metallurgical processing software Aspen+, looked to derive energy and mass balances of reagent input and product output for all individual Stages of the metallurgical circuit except the waste acid and by-product product stream. The waste stream simply neutralises excess sulphuric acid in-circuit with limestone.

HPA production was modelled to the benchmark 10,000 tonnes per annum of product, consistent with comparisons made to previously published PFS and DFS estimates (King River Resources Ltd, ASX:KRR Release 16th June 2021, FYI Resources Limited, ASX:FYI Release 8th April 2021 and Alpha HPA Limited, ASX:A4N Release 17th March 2020). This has allowed direct comparison of the operating costs between the different projects.

Wash Circuit Costs were estimated by reference to filter press operating costs for similar sized installations using publicly available information. Wash water reuse costs were calculated based on commercial-scale desalination, with electricity costs benchmarked to the SWIS grid connection. Costs are A$0.67 million (US$0.47 million) per year.

Acid roasting costs were calculated from the PFD model to derive energy consumption and reagent consumption. The costs are based on sulphuric acid consumption and a price of A$210 per tonne (US$147 per tonne), reagent consumption at costs marked to publicly available prices, and energy at the assumed energy price of A$0.25(US$0.18c) per kilowatt hour. Nett acid consumption costs A$ 9.3 million (US$6.5 million) per year in sulphuric acid.

Intermediate salt production costs are mostly related to the crystallisation circuit and are dominated by water heating for post-roast washing of the salts and reagent consumption. Reagent recycling occurs in the by-product circuit, with 80% recovery efficiency assumed. Water heating costs are A$5.9 million (US$4.2 million) per year and A$32.2 million (US$22.16 million) of reagent consumption.

Gas sparging costs were modelled by balancing metallurgical test work recoveries with kinetic parameters used in the PFD. Hydrochloric acid was assumed to be recovered at 90% efficiency, deriving total costs of A$3.2 million (US$2.2 million) per year, with an additional A$1.6 million (US$1.14 million) per year in nitrogen costs, using on-site nitrogen generation. Ultrapure water, used in all processing stages, was estimated at A$4.16 million (US$2.9 million).

Calcination of the alumina after purification occurs via two-stage calcination, with a total cost of A$11.45 million (US$8 million) per year in natural gas costs for a cost of A$1,144 per tonne (US$801 per tonne) of HPA produced. This cost is significantly less than published figures from equivalent gas sparging-calcination circuits (see previous references from King River Resources Ltd., FYI Resources Ltd and Alpha HPA Ltd), which are up to A$2225 per tonne (US$1,557 per tonne). This may relate to the water content of the precursor salt and needs to be better understood at present.

The total for all metallurgical processing costs is A$7,368 (US$5,157) per tonne of HPA produced. This comprises A$5,232 (US$3,663) per tonne in materials and A$2,135 (US$1,495) in energy costs per tonne of HPA produced.

15. OTHER CONSIDERATIONS

Workforce

Only limited studies have been completed to estimate labour costs for the project. A labour cost intensity of A$1,070 (US$750) per tonne of HPA production based on estimates of labour required and current market rates.

Energy

Electricity is used in heating, cooling, filtration, pumping and roasting the proposed flow sheet's solid and liquid components.

The total energy costs of the proposed processing plant are about A$21.4 million (US$15 million) per year, comprised of US$9.0 million in electricity and US$5.9 million in natural gas for calcining. This cost is about **A$2,135 (US$1,495) per tonne of HPA produced.**

Renewable Energy

Using renewable energy is the default position of modern integrated mining and processing operations, and Impact will seek to utilise as much renewable energy as possible. This is part of Impact's commitment to ESG principles and to continue receiving social licences to operate.

The provision of renewable energy via offtake with renewable energy providers is also eased by location within major urban areas. It eliminates the need to install dedicated renewable energy infrastructure on the proposed Mining Lease.

Impact notes that construction of industrial solar farms near Kalgoorlie is ongoing for general use and mine site-specific build-outs. An integrated renewable energy will likely be mature and established within the region within the next few years. There may be opportunities to engage in commercial supply contracts that can supply renewable energy to the project.

16. ENVIRONMENTAL AND SOCIAL IMPACT

Environment

The Lake Hope mine is planned as a relatively simple dig and truck operation for the Scoping Study. The investigated mine plan proposes upgrading and utilising the existing fire break that leads to the mine for access to the lake vicinity, which would require heritage and environmental surveys.

The operations on the lake would require excavation of the clay and delivery to a ROM pad, which may be located on the lake's periphery. The mine plan does not envisage large-scale clearance of native vegetation, with short (<200 metres long) access corridors and minor (<10 Hectares) clearing required for site infrastructure. This will require additional heritage and environmental surveys.

The salt lake environment is naturally acidic and hypersaline. Measures will be required to contain all groundwater and runoff within the natural footprint of the salt lakes.

Environmental monitoring equipment and instrumentation, including monitoring bore fields, are expected to be required to comply with groundwater and environmental management plans.

Even if located off the lease, the hydrometallurgical circuit may be considered within the context of the Mines Act and will require permitting as a scheduled premise. The hydrometallurgical plant will, therefore, be restricted to the appropriate land use zoning within the city or town in which it is sited.

CO_2 Emissions

Impact is sponsoring a Masters-level engineering project at the University of Western Australia to study the CO_2 emissions intensity of the project. This will allow disclosure of the carbon intensity of the Lake Hope Project metallurgy and its potential low-carbon credentials within the ESG Reporting Framework recently adopted by Impact (ASX Release 9th October 2023). The project aims to achieve low-carbon ESG certification to avoid carbon tax or tariff penalties. This will allow customers to book lower Scope 2 and Scope 3 emissions intensity.

Environment Social and Governance Framework

Impact is committed to consent-based approvals under the current Mining Act within Western Australia with all stakeholders, including local governments, State Government and, in particular, indigenous landholders.

The Company recently announced that it has adopted an ESG framework with 21 core metrics and disclosures created by the World Economic Forum (WEF) (ASX Release October 9th 2023).

The WEF framework is a set of standard metrics for sustainable value creation captured in 21 core ESG disclosures (Figure 11). The Board of Impact Minerals Limited has resolved to use this universal ESG framework to align mainstream reporting on performance against ESG indicators.

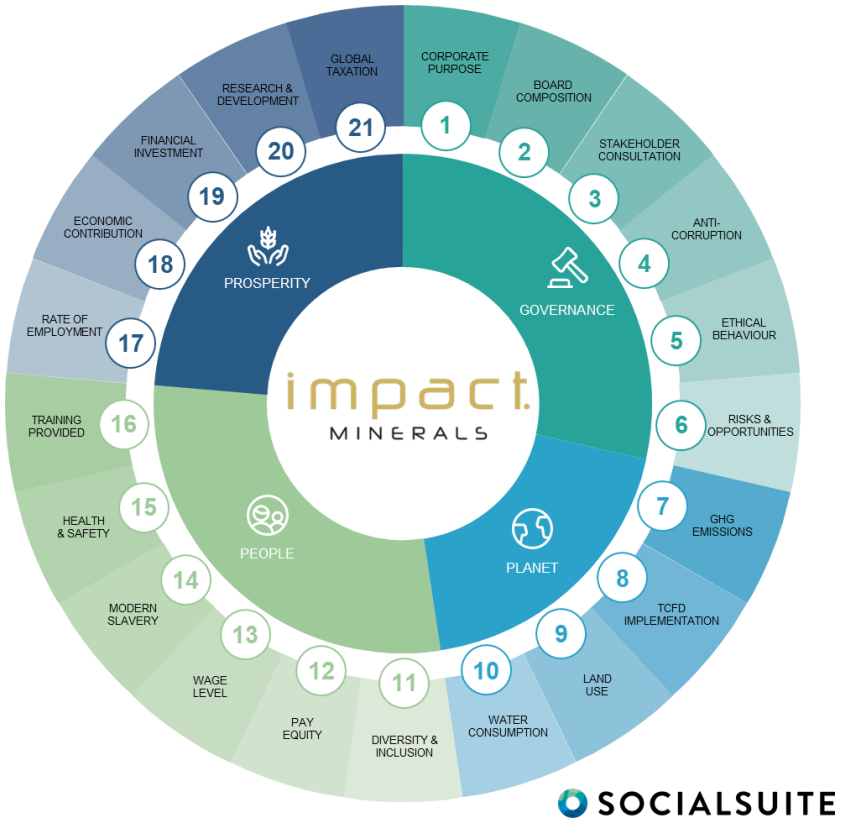


Figure 11. The World Economic Forum (WEF) Framework for ESG Reporting.

The WEF Stakeholder Capitalism Metrics is an appropriate ESG disclosure framework as it leverages various existing frameworks and is intentionally built to be a stepping stone to begin building capacity and capability in ESG reporting. Impact will report regularly on core ESG matters of governance, anti-corruption practices, ethical behaviour, human rights, carbon emissions, land use, ecological sensitivity, water consumption, diversity and inclusion, pay equality and tax payments.

17. THE HIGH PURITY ALUMINA MARKET

High Purity Alumina is aluminium oxide (Al_2O_3) with a purity exceeding 99.99% (4N). At this purity, the alumina has a total of all elemental contaminants of <100 parts per million.

HPA has superior properties such as high brightness, excellent hardness, and superior corrosion resistance. It has traditionally found applications in:

Lithium-ion and other batteries: HPA is used as a coating on the separator sheets in lithium-ion and increasingly in other forms of batteries. This has been shown to help to improve the battery's performance, reliability, and safety.

LED light globes: This is another substantial growth market for HPA as they substantially replace incandescent lights because they require less energy and are sustainable, durable, and safe.

Micro-LED uses: HPA is used to make phosphors, which are materials that emit light when exposed to electricity. Phosphors are used in various applications, such as televisions, computer monitors, and fluorescent lights.

Precursors for sapphire glass, optical lenses and specialty ceramics used in high technology bio-medical devices imaging, defence and protective uses as a hard, chemically resistant and inert barrier.

Protective coatings (in powdered form) are inert, incombustible, and non-conductive ceramic fillers in electronics applications.

In addition to the HPA, which is the final calcined ceramic form of the mineral, various precursor aluminium salts, which include sulphates, nitrates, chlorides, and silicates (clays), also have vital end market uses and precursors summarised in Table 3 below.

Aluminium Chemicals Overview

Aluminium Oxide	α-Al_2O_3
• Calcined alumina: HPA. Typical product target 99.99% purity • LEDs, sapphire, LiB, Catalysts, Abrasives	
Aluminium Nitrate	$Al_2(NO_3)_2.9H_2O$
• Precursor chemical; Requires 4N to 5N purity • Cathode cementation, stabilisation, electrolyte chemical, etc	
Hydroxides	$Al_x[OH]_{y\ variations}$
• Precursor chemical to alumina; Requires 5N or better • Catalysts, electrolytes, precursor feedstock for HPA	
Chlorides	$Al_2Cl_6.12H_2O$
• Precursor chemical – not traded in bulk; Requires 5N to produce 4N HPA • LiB electrolytes, specialty chemicals	
Sulphates	$Al_2[SO_4]_3$
• Industrial chemical flocculant, and by-product • Mining by-product used for HPA in China (3N usually)	
Silicates	$[K,Al]_2Si_2[OH]_5$
• Sourced from granites, sediments • Chemically stable, require2 calcination; Hydrochloric acid route only	

Table 3. Uses of HPA and other aluminium precursor chemicals.

Growing awareness of ultra-high purity (UHP) precursor chemicals as a revenue opportunity has been shown by ASX Releases by Alpha HPA Ltd in particular (www.alphahpa.com.au). These products, whilst low volume, are very high margin as they command high prices of up to US$50,000 per tonne.

Current Market Dynamics

The leading suppliers of high-purity alumina are Sumitomo Chemicals in Japan, Sasol Limited in Germany and a selection of producers in China (Table 4). Production is dominated by metal alkoxide processes where isomers of isopropyl alcohols or isopropyl ketones are reacted with aluminium metal to produce alumina hydroxides, destroying the alcohols in the reaction. This drives high costs from metal and organic solvent consumption. Alternative traditional production methods include derivatives and precursors such as sodium aluminate and Bayerite sourced from conventional Bayer process alumina refineries.

These processes are energy-intensive and can produce significant quantities of hazardous waste in the production chain.

Company name	Raw Material / Process	Operating Position
Sumitomo Chemical Co. Ltd (Japan)	Alkoxide / Al Metal	Leading quality
Sasol Limited (Germany, USA)	Alkoxide / Al metal	Sapphire glass
Baikowski (Fr, EU, USA)	Bayer Process	Specialist ceramic. Al glass and YAG
Nippon Light Metals (USA, Brazil)	Sodium aluminate	Lowest OPEX , Western Group
Producer 1 (Hebei, China)	Choline / Al metal	LED phosphors, sapphire,
2 (Shanghai, China)	Undefined	Li-B separators, nano alumina
Producer 3 (Shandong, China)	Modified Bayer / ATH	Led glass, optoelectrics
Producer 4 (Dalian, China)	Alkoxide / Al metal	Pseudoboehmite, ATH, HPA
Producer 5 (Yangzhou, China)	Alkoxide / Al metal	Alkoxide, 3N pseudoboehmite
Producer 6 (Shandong, China)	Undefined	3N Alumina, boehmite

Table 4. Current HPA producers.

Due to the high costs of incumbent production routes, alternative methods to produce HPA are under investigation and include utilising various chemical feedstocks such as gibbsite/aluminium nitrate with solvent extraction; mining of aluminous clay (kaolinite), which is treated by conventional mining and followed by front-end calcination and hydrochloric acid dissolution and purification. Other proposed methods have struggled to be commercialised. These processes operate around US$6,000 to US$7,000 per tonne of HPA produced (Table 5 in 2019 to 2020 dollars).

Company Name	Deposit/Feedstock	Process	Status	OPEX Estimate	Capacity (tpa)
Advanced Energy Minerals	Aluminous clays	Kaolin Process. Calcine, HCl purification	Early Stage Production	Uncertain	1,000
Altech (Malaysia)	Aluminous clays	Kaolin Process. Calcine, HCl purification	Suspended	US$8,900	~4,500
Polar Sapphire (Canada)	Aluminium alkoxide	Al-Alkoxide and/or HCl purification	Early Stage production	~US$8,000 est	1,000
Lava Blue (Australia)	Aluminous clays	Kaolin Process. Calcine, HCl purification	Pilot Plant	Uncertain	1,000
King River Resources (Australia)	Chemical feedstock	Alum reprocessing	DFS suspended	~$6,740	9,000
FYI Resources Ltd (Australia)	Aluminous clays	Kaolin Process. Calcine, HCl purification	Pilot Plant	~$6,660	1,000
Alpha HPA (Australia)	Chemical feedstock	Al nitrate with SX Recovery	Early Stage Production	~$5,940 nett of byproduct	1,000 expanding to 10,000
ChemX Limited (Australia)	Chemical feedstock	Uncertain	Metallurgical research	Unknown	Uncommitted

Table 5. Proposed Entrants into HPA Market Space

Demand Outlook

LED growth has experienced between 13% and 18% Compound Annual Growth Rate (CAGR) over the past ten years, and this is predicted to continue into at least the early 2030s (Figure 12). This is driven by the increased installation capacity of LED's and demand for energy-saving lighting in domestic and commercial properties. Further underpinning demand for LED lighting is legislated decarbonisation initiatives, as LED lighting is more energy efficient than incandescent lighting.

HPA is now increasingly used in MicroLEDs with televisions, computer monitors, and fluorescent lights.

The fastest-growing end-use demand sector in recent years has been anode-cathode separators in lithium-ion batteries. Demand has increased by a CAGR of 25.7%, reaching 20,000t in 2022. As mentioned above, additional uses for UHP precursors are likely to be realised in the coming years.

Sapphire glass accounts for a relatively small share of the overall market, totalling around 2,000t in 2018. Sapphire glass demand is growing at 8% to 10% CAGR, has few market participants that dominate supply, and has precise input tolerances.

In Asia-Pacific, government funding has fuelled the manufacturing capacity investments for electronic companies, which in turn is expected to fuel the demand for HPA during the analysis period.

Overall, demand for HPA is predicted to increase from ~35-50,000 tonnes in 2022-23 to about 125,000 tonnes in 2030 (Figure 12).

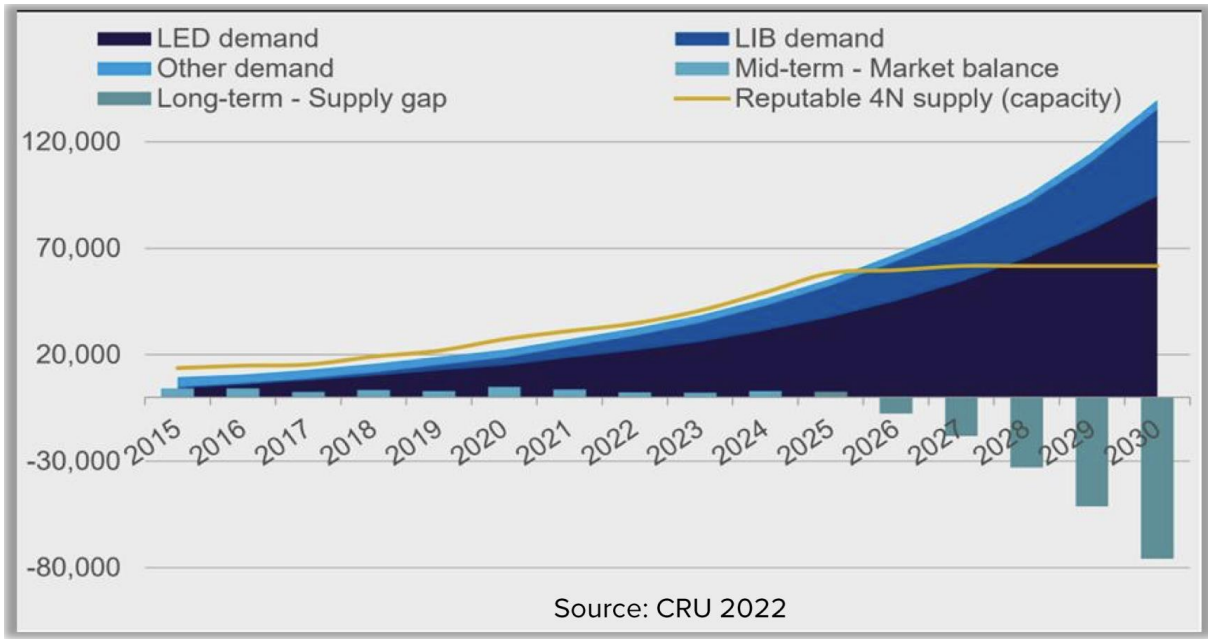


Figure 12. HPA actual and forecast demand (sourced from ASX:A4N Release July 21st 2023)

Pricing Forecasts

HPA Pricing depends on purity, with 3N HPA commanding lower prices than 4N and 5N. A recent market analysis published by Alpha HPA Ltd and completed by an independent research group shows forward pricing increasing strongly into 2025-2027 (Figure 13 and ASX:A4N Release October 18th 2023).

For the benchmark 4N HPA as a milled product, prices are forecasted to grow between US$30,000 and US$35,000 per tonne by 2026. Prices for unmilled 4N HPA and also for 5N products are also expected to increase significantly.

For Impact's Scoping Study, a conservative forward price for HPA of US$22,000 per tonne (A$31,400) has been assumed and is used in the financial model.

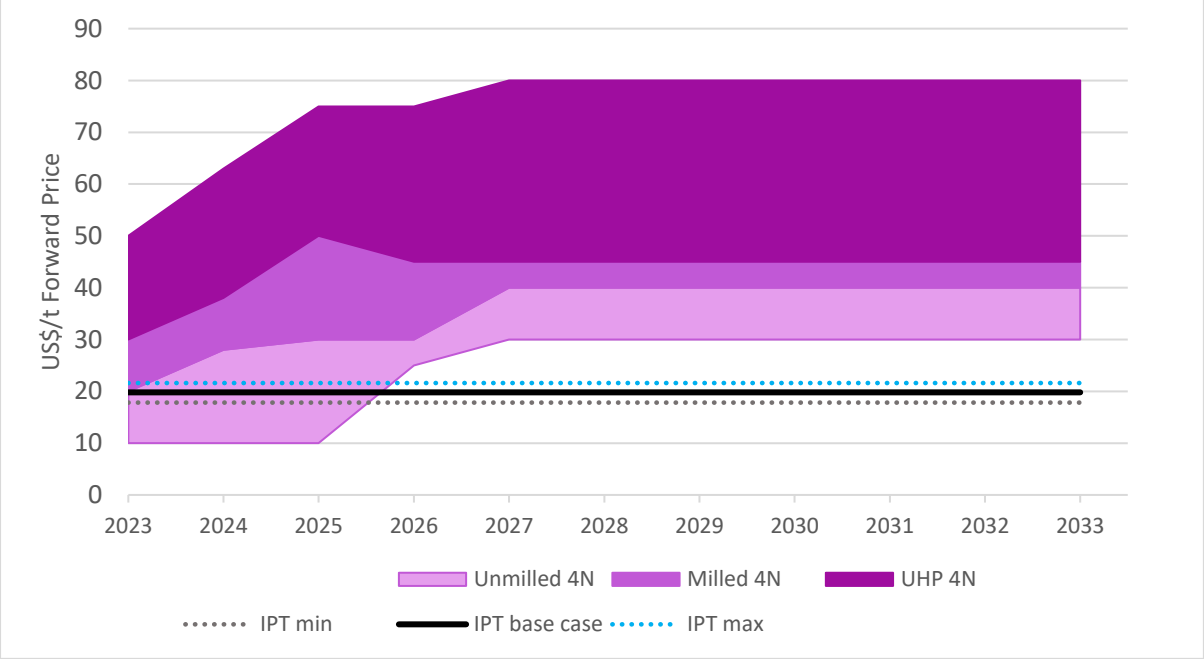


Figure 13. Forward HPA pricing scenarios (Data sourced from ASX:A4N Release October 18th 2023).

18. COST ESTIMATIONS

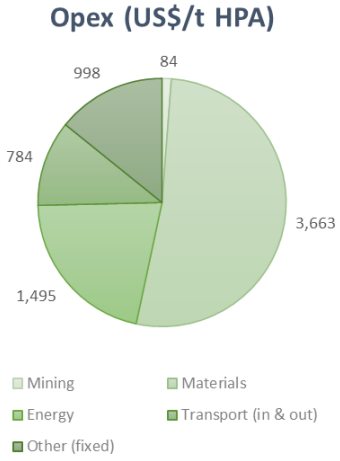
Lake Hope's low-cost profile is achieved through the unique nature of the Lake Hope deposit, which is amenable to low-cost free-dig mining and allows the production of HPA through the cost-effective Playa One Sulphate Process.

The mine area has excellent access and will require very little onsite infrastructure with limited long-term rehabilitation liability. The processing plant in Kalgoorlie will have access to excellent infrastructure, a skilled workforce and readily available access to reagents and other required materials.

18.1 Operating Costs

Operating costs were estimated from the Preliminary Flow Diagram (PFD), metallurgical model energy and material balances, advice from Impact's consultants, and publicly available operating costs of equivalent operations for HPA and other commodities.

The OPEX is estimated at A$4,664 (US$3,264) per tonne, including by-product credits and A$10,033 (US$7,023) exclusive of by-product credits. Details are shown in Table 6.



Opex Metrics	US$M	US$M	HPA	
	Per year	Life of Mine	US$/t	A$/t
Mining	1	25	84	120
Materials	37	916	3,663	5,232
Energy	15	374	1,495	2,135
Transport (in & out)	8	196	784	1,120
Other (fixed)	10	249	998	1,425
By-product credit	(38)	(940)	(3,759)	(5,369)
Total Opex	35	816	3,264	4,664

Table 6. Operating Cost Estimate, LHAP Scoping Study

About 74,000 tonnes of by-product chemicals will be produced and sold per year in the model, and costs associated with the transport of these chemicals offsite are included in the operating cost estimates. The value of by-product chemical sales is between 5% to about 10% of the total revenue (before costs) but significantly reduces the cost per tonne of HPA produced by A$5,369 (US$3,759) per tonne.

Impact notes that even without the by-product credit, the cost of production is on par with those of FYI Resources Ltd and Alpha HPA Ltd (which includes by-product credits as well – Table 5). It is noted that these published costs are several years old and have not factored in the significant inflation since then. Impact's costs are modelled in 2023 real dollars.

Lowest OPEX on the HPA Global Cost Curve

Impact has completed a notional cost curve analysis based on analyst reports and limited publicly available information about HPA production costs (Figure 13).

Although data is scarce, the bulk of incumbent HPA producers are doing so at a cost of US$11,000 to US$15,000 per tonne and up to US$20,000 per tonne for 4N HPA. As discussed, these producers are using a variety of alkoxide, choline and modified Bayer processes.

New entrants, such as FYI Resources Ltd and Alpha HPA Ltd, which use hydrometallurgical processes, are forecasting production between US$5,600 and US$6,6500 per tonne (in 2020 and 2021 dollars - Figure 14).

At about US$3,300 (+/-30%), the OPEX for the Lake Hope Project, as estimated in this study, is highly competitive with all other producers and has the potential to be up to 50% below even the new market entrants. To Impact's knowledge, this would make Lake Hope the world's lowest-cost producer of HPA (Figure 14).

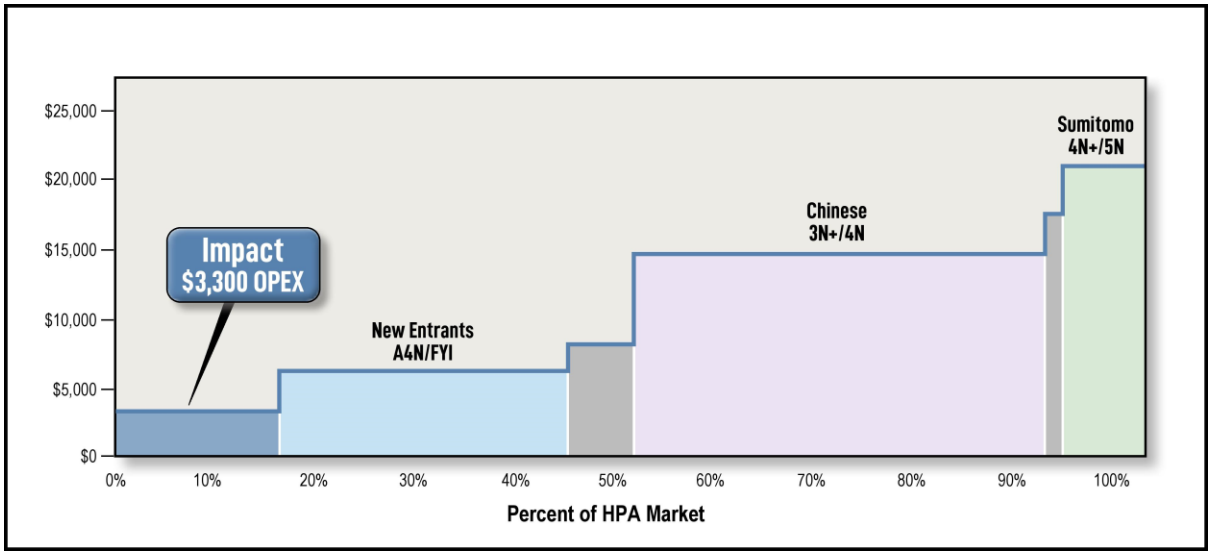


Figure 14. HPA industry operating cost curve (costs of new entrants not adjusted for inflation).

18.2 Capital Costs

Mine Costs

Capital costs for the Lake Hope mine infrastructure are estimated at A$7.6 million (US$5.3 million) by reference to analogous operations and published feasibility studies in Western Australia, including bulk haulage for equivalent distances.

Processing Plant Costs

The capital cost for the hydrometallurgical facility is estimated to be about A$253 million (US$171.6 million) with an accuracy of +/- 30% (2023 dollars – Table 7).

This estimate comes from the Preliminary Flow Diagram, which describes a set of capital items and machinery, with costs for the machinery estimated from published costs within the HPA industry or from in-house estimates of the cost of similar-sized equipment.

For plant capital costs, data was taken from a PFS study by King River Resources Limited (ASX:KRR Release 16th June 2021), a DFS by FYI Resources Limited (ASX:FYI Release 8th April 2021) and Alpha HPA Limited (ASX:A4N Release 17th March 2020). Adjustments were made for the scale of the processing plant and inflation at 6.5% per annum to 2023 dollars where appropriate.

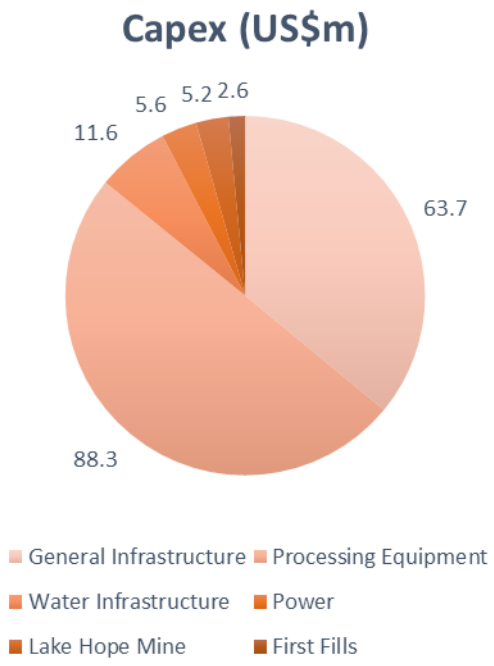
Other capital costs specific to the Lake Hope flow sheet include calciners, filter presses, mixing equipment and an autoclave, which were validated against external sources.

The Lake Hope capital cost is modelled to be significantly lower than Impact's peers FYI Resources (A$324 million (US$226 million) in 2023 figures) and Alpha HPA Ltd (A$350 million (US$250 million) in 2023 dollars). The costs are similar to those for King River Resources Limited (A$232 million (US$163 million) in 2023 dollars), although this project, with HPA derived from a chemical feedstock, is now on hold.

The low capital cost is driven by the key advantages of the Lake Hope deposit and the Playa One Sulphate Process, which eliminate the need for a crushing and screening plant at the mine site (estimated US$10-20 million) and a front-end calciner in the processing plant (estimated between US$40-80 million). In addition, the majority of the plant is only exposed to sulphuric acid, removing the need for larger equipment items to be of higher-specification materials.

The operation is estimated to require sustaining capital (maintenance costs) of A$9.6 million (US$6.7 million) per annum, representing 3.8% of CAPEX with a total for the Life of Mine of US$202 million.

The Playa One Sulphate Process may be able to be modularised. If so, this will allow a gradual scale-up of production to 10,000 tonnes per year and lead to a significant decrease in capital requirements at any one time as the project develops.



CAPEX Metrics	US$M	A$M
General Infrastructure	**63.7**	**91**
Processing Equipment	**88.3**	**126**
Water Infrastructure	11.6	**17**
Power	5.6	**8**
Lake Hope Mine	5.2	**7**
First Fills	2.6	**4**
Total Initial Capex	177	**253**
Sustaining capital LOM	142.2	**203**
Total Capex	319.2	456

Table 7. Capital Cost Estimates, LHAP Scoping Study

19. HPA PRODUCT SPECIFICATION

Previous work by Playa One Pty Ltd has produced calcined 99.99% high-purity HPA (alpha alumina or corundum) via the Playa One Sulphate Process (ASX Release March 21st 2023).

The purity of the 4N HPA ranged from 99.994% to 99.996% in limited assays for 33 elements, with the principal elemental contaminants being sodium (6.61 ppm), iron (2.08 ppm), potassium (7.94 ppm), magnesium (7.23 ppm). This compares favourably with the purity of other HPA products obtained from publicly available data (Table 8).

	Playa One	KRR	FYI
Element	Sulphuric	HPA7	5N
As	0.69	NR	NR
Ag	NR	NR	0.1
B	NR	NR	NR
Ba	0.2	0.516	0.5
Ce	BDL	NR	0.34
Ca	2.57	<0.06	NR
Cr	0.7	2.76	5
Co	0.15	0.046	0.1
Cs	0.02	<0.01	0.03
Fe	2.08	6.2	BDL
Gd	BDL	NR	0.01
Ga	2.01	0.809	NR
K	7.94	17.4	NR
La	BDL	NR	0.2
Mg	7.23	0.603	NR
Mn	2.74	0.138	1
Mo	0.33	0.052	NR
Na	6.61	8.59	0
Nb	0.01	3.01	NR
Nd	NR	NR	0.15
Ni	0.11	0.377	BDL
P	3.45	1.74	NR
Pb	0.76	<0.01	NR
Pr	BDL	NR	0.04
Rb	0.26	<0.01	0.1
Sc	BDL	NR	0.1
Si	3.05	15.8	4.67
Sm	BDL	NR	0.02
Sn	BDL	NR	0.8
Sr	0.2	0.053	0.2
Ti	0.08	0.695	NR
U	BDL	NR	0.01
V	0.01	<0.02	0.3
W	BDL	NR	0.1
Zn	0.15	0.488	NR
Zr	BDL	NR	NR
TOTAL	**41.35**	**59.28**	**13.67**

Table 8. Minor element results for Lake Hope HPA compared with results from King River Resources Ltd (ASX:KRR 25th March 2021, 30th April 2021) and FYI Resources Ltd (ASX:FYI 13th March 2019).

Note that Assay methods vary between data sources, and a direct comparison is not strictly possible. Total ppm is a sum of all elements reporting above the detection limit. BDL = below the detection limit. NR is not reported.

The final calcined HPA samples were analysed using SEM and EDS microscopy by RSC Mineral Consultants, Perth, Western Australia. The HPA occurs mainly as alumina in fused aggregates up to 200 microns in size (Figure 15). X-ray diffraction studies have confirmed that the final product is alpha-HPA, with the alpha crystal structure (corundum), the desired form of alumina.

It should be noted that the precipitation of the crystals occurred with little or no control over temperature and pressure. In addition, work has yet to be done on refining the final HPA product, for example, jet milling or developing intermediate saleable products that the end-users require. This critical capability needs to be built out by Impact, and this will be another area of focus in the PFS using material produced from the bench-scale test work.

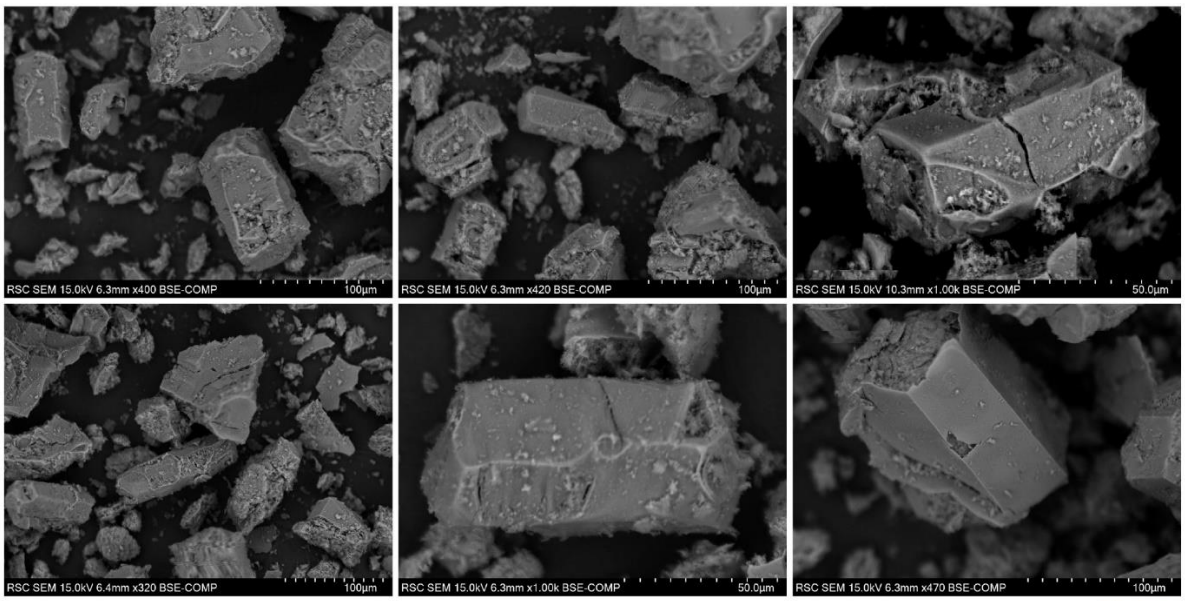


Figure 15. Backscatter scanning electron micrographs of final calcined alumina (sample HY11558) showing corundum crystals and nanoparticles of gamma alumina.

20. FINANCIAL AND ECONOMIC ANALYSIS

A detailed project economic model has been prepared based on the assumptions described in Section 7 above and modelled in consultation with Platek Analytics. The results are shown in Table 9, with projected cash flows in Figure 16.

Modelling is conducted to resolve an NPV based on a hypothetical operation as if it were proceeding to production from the financial year 2023.

The financial analysis includes no project debt. Insufficient technical and economic studies have been completed to allow financial investment decisions to be made on the project. Therefore, Impact considers it inappropriate to assess the impact of debt on the project's economics.

Outcome	Unit	Lake Hope	Unit	Lake Hope
NPV8 (real post-tax)	US$	$934M	AUD$	$1,334M
NPV10 (real post-tax)	US$	$742M	AUD$	$1,060M
IRR (post-tax)		55%		
Capital Costs (10Ktpa)	US$	$177M	AUD$	$252M
Sustaining Capital (25-year LOM)	US$	$142M	AUD$	$1,334M
Capital Costs (per tonne capacity)	US$	$17,700	AUD$	$25,285
Operating Costs (AISC)	US$/t HPA	$7,023	AUD$	$10,032
Operating Costs (nett by-product)	US$/t HPA	$3,264	AUD$	$4,662
Throughput Per Annum (Clay)	Tonnes	46,300		
Throughput (Life Of Mine)	Tonnes	1,157,000		
Life Of Mine (Initial)	Years	25		
Annual Production (HPA)	Tonnes	10,000		
Annual Production (all by-products)	Tonnes	74,000		
Revenue (Life Of Mine)	US$	$6,286M	AUD$	$8,980M
Annual Revenue (Average LOM)	US$	$258M	AUD$	$368M
Annual EBITDA (Average LOM)	US$	$175M	AUD$	$250M

Outcome	Unit	Lake Hope	Unit	Lake Hope
Construction period		2 years from FID		
Production (Year 1)	Tonnes	5,000		
Production (Year 2)	Tonnes	8,000		
Production (Steady State)	Tonnes	10,000		
Payback period (from FID)		4.5 years		
Payback period from first production		2 years		

Table 9. Base case Financial Model Results.

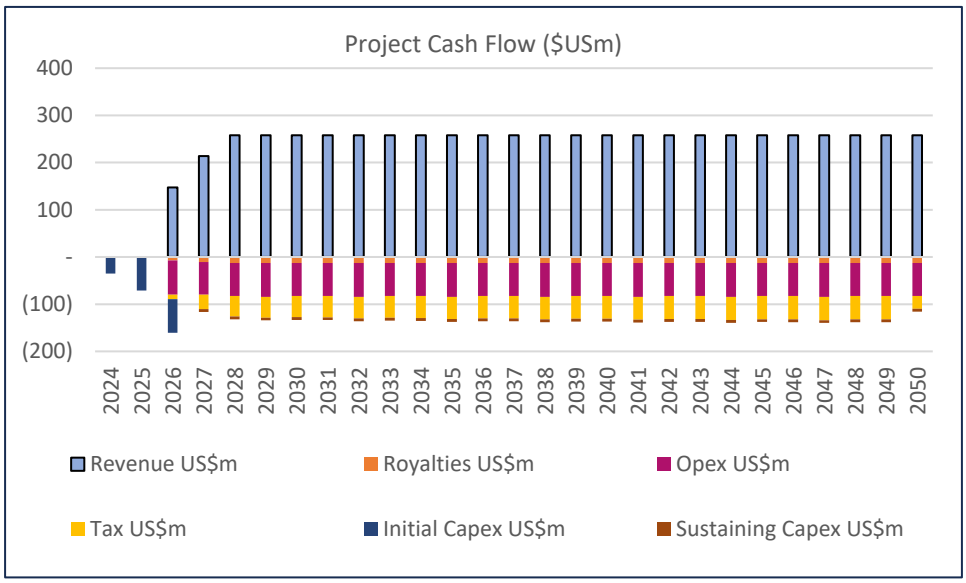


Figure 16. Project cash flows by expenditure and earnings type.

The project shows strong cash flow generation potential if brought into production, based on the low operating costs, long mine life, and relatively low capital costs.

Sensitivity Analysis

The Scoping Study has estimated capital and operating costs with an accuracy of +/-30%. The sensitivity of the financial outcomes to a +/-20% variation in the price of Key Inputs has been modelled. These inputs include HPA product and by-product pricing, energy and reagent cost, escalation of capital expenditure, and metallurgical recovery (Figure 17).

The financial performance is most affected by the price of HPA received in the market, with the lowest NPV8 of US$620M achieved at A$28,300 per tonne (US$19,800/t) for 4N HPA (Figure 17).

The financial performance is sensitive to the end-to-end recovery of alumina. A conservative recovery of 80% was used in this study compared to bench-scale test work, which has resulted in nearly 90% recoveries (ASX Release March 21st 2023). If recoveries were 90%, the NPV8 would be about $A1,500M (US$1,050M).

The influence of reagent costs is modest (at +/-A$70 million (US$50 million)) due to the high value-in-use of the reagents in the circuit, where input chemicals flow through into saleable by-products. The bulk of this variation in reagent costs is in the cost of sulphuric and hydrochloric acids.

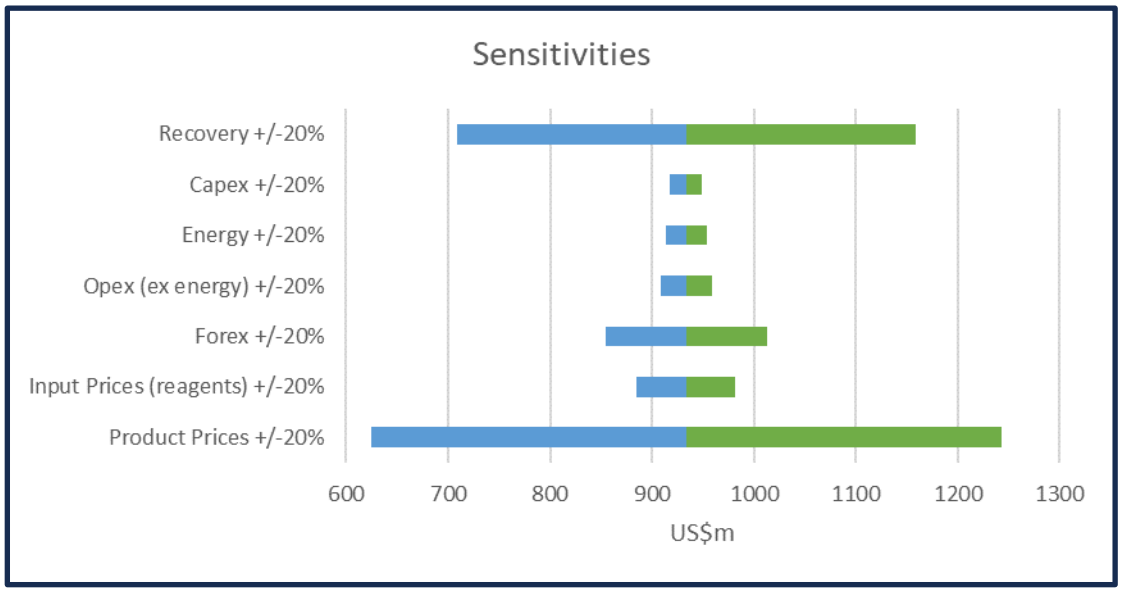


Figure 15. Sensitivity Analysis Tornado chart

Impact has also considered the effect of a range of discount rates from 0% to 12% and the impact of these on modelled project NPV (Table 10).

At a discount rate of 12%, the Lake Hope project maintains a robust post-tax NPV of A$853 million (US$597 million).

Discount Rate	NPV A$M	NPV US$M
0%	$3,972M	$2,781M
5%	$1,938M	$1,357M
8%	$1,334M	$934M
10%	$1,060M	$742M
12%	$853M	$597M

Table 10. NPV Variance by the modelled discount rate

21. Funding Strategy

An initial assessment of the various funding alternatives available to Impact, mainly to fund the project's capital expenditure, has been made based on precedent transactions in the mining industry, including other options operating in the industrial and specialty minerals sector.

Financing for specialty minerals companies may involve a broader mix of funding sources than just traditional debt and equity. Funding may involve specialist funds with funding sources that may include traditional debt and equity, royalty financing and off-take agreements at either the corporate or project level.

It is important to note that no funding arrangements are in place, and it is not possible to provide further information at this stage.

Investors should note that there is no guarantee that funding will be readily available.

22. NEXT STEPS: Preliminary Feasibility Study

Based on the outstanding economic opportunity demonstrated by the Scoping Study, Impact Minerals has committed to undertaking a Preliminary Feasibility Study (PFS), which will provide more details and costs at a greater level of accuracy of +/-20% or better.

The following key objectives for the PFS have been identified from the Scoping Study:

1. Continued engagement with the Ngadju First Nations people. Heritage clearance was recently granted over the West Lake and East Lake, and, subject to a mining agreement with the Ngadju, there are no impediments to mining the lake beds at Lake Hope. Additional heritage surveys will be required as detailed mine infrastructure planning is completed. Impact will work with the Ngadju people to determine opportunities for indigenous involvement in the ongoing project.
2. Environmental baseline flora and fauna surveys. Impact has retained Biota to complete baseline studies and guide the submission of a Mining Lease Application and associated documentation. The baseline studies are scheduled to commence in November 2023.
3. Mining Lease Application. A mining lease application is being prepared and will be lodged following initial feedback from the Department of Mines, Industry and Resources Safety (DMIRS) and is expected by November.
4. Geotechnical Studies. Given the hardness and density of the lake bed and the very shallow mining depth, the geotechnical risk at Lake Hope is considered low. However, it was recommended that the PFS investigate the lake bed's trafficability and suitability of tracked versus wheeled mining equipment. A modest geotechnical drilling and test pitting program is due to start in November.

5. Mining Studies. The results of the geotechnical study will be integrated into more detailed mine studies, narrowing down the parameters and costs for the proposed campaign mining.

6. Metallurgical Testwork. Impact has begun a comprehensive optimisation study of the hydrometallurgical process (ASX Release October 16th 2023). The PFS will investigate opportunities to increase recovery, decrease acid and reagent consumption, reduce energy usage, and improve product quality. Reduction of acid usage of this work is a key component as there is a possible AISC reduction of US$200 per tonne of HPA produced per 10% of nett acid consumption.
   The PFS is also investigating metallurgical circuit options to produce a variety of other high purity alumina chemicals that are in demand and include precursors such as boehmite, gibbsite and aluminium sulphate chemicals.

7. By-product Circuit. The volume of by-product chemicals is strongly dependent on the hydrometallurgical facility's nett sulphuric acid consumption. Impact has identified a range of options to significantly reduce the nett cost of the metallurgical processing circuit by targeting different by-product chemicals. These options form a module in the ongoing PFS metallurgical test work.

8. A PFS-level estimate of the capital costs will be developed from Process modelling of the optimised metallurgical circuit to deliver to engineering and process design work.

9. Logistics and Transport costs. Work completed by Qube Logistics for the Scoping Study has identified a suite of road route requirements, regulatory processes and additional work, which will be studied in more detail in the PFS.

10. Process Plant Location. Integral to the Logistics costs, the plant's location is a key factor in the project's economic performance. Land availability and permitting requirements for the various possible locations will be studied in the PFS.

11. Marketing. Discussions with parties engaged in the HPA and aluminium chemical sector have begun. This is a focus for 2024, when final HPA from the Lake Hope project will be available in quantities suitable for initial qualification with potential off-take customers.

12. Impact is also considering a mini-pilot plant and associated laboratory to accelerate the metallurgical work program and allow small-scale batch processing of Lake Hope mineralisation to produce HPA. This work would develop and expand upon the company's technical capacity to produce marketing samples of HPA and investigate the capability of producing precursor alumina hydroxide and other chemicals.

13. Research. Impact is engaging with the University of Western Australia to sponsor two research projects. These will investigate precursor aluminium hydroxide production and carbon emissions reduction from the project to demonstrate the low-carbon credentials of the HPA process and routes to zero-carbon HPA.

Disclosures, Disclaimers and Modifying Factors

The information in this report related to Exploration Results and metallurgical test work is based on and fairly represents information and supporting documentation prepared by Roland Gotthard, a consultant geologist to Impact Minerals Limited. Mr Gotthard is a Member of the Australasian Institute of Mining and Metallurgy. He has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity that has been undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (The JORC Code). Mr Gotthard consents to the inclusion in this release of the matters based on the information in the form and context in which they appear.

The data in this report that relates to Mineral Resource estimates is based on information evaluated by Mr Simon Tear, who is a Member of The Australasian Institute of Mining and Metallurgy (MAusIMM) and who has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code"). Mr Tear is a Director of H&S Consultants Pty Ltd, and he consents to the inclusion in the report of the Mineral Resource in the form and context in which it appears.

The information in this report related to Mining Studies, including mining methods, mine designs, schedules, cost estimation and production targets is based on and fairly represents information and supporting documentation prepared by Joel van Anen., Principal Mining Consultant of TME Mine Consulting. Mr van Anen is a Member of The Australasian Institute of Mining and Metallurgy (MAusIMM) and who has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code"). Mr van Anen consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Forward-Looking Statements: This announcement contains 'forward-looking information' based on the Company's expectations, estimates and projections as of the date the statements were made. This forward-looking information includes, among other things, statements concerning the Company's business strategy, plans, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations, mineral reserves and resources, results of exploration and related expenses. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'potential', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this announcement are cautioned that such statements are only predictions and that the Company's results or performance may differ materially. Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance or achievements to materially differ from those expressed or implied by such forward-looking information.

Further Important Information for this Announcement

The Study has been prepared to an accuracy level of ±30% in accordance with the current JORC Code (2012) and the ASX Listing Rules. The study's primary purpose was to establish whether or not to proceed to the next stage of feasibility studies. The Study results should not be considered a profit forecast or production forecast. As defined by the JORC Code (2012), a "Scoping Study is an order of magnitude technical and economic study of the potential viability of Mineral Resources. It includes appropriate assessments of realistic assumed Modifying Factors and any other relevant operational factors necessary to demonstrate when reporting that progress to a Pre-Feasibility Study can be justified."

Impact has only used Indicated Mineral Resources in this study.

The Modifying Factors included in the JORC Code (2012) have been assessed as part of the Study, including mining, processing, infrastructure, economic, marketing, legal, environmental, social and government factors. The Company has received advice from appropriate experts when assessing each Modifying Factor.

Following an assessment of the results of the Study, Impact has formed the view that the next stage of feasibility studies is justified for Lake Hope. Feasibility Studies will provide the Company with a far more comprehensive assessment of a range of options for Lake Hope's technical and economic viability, which by international standards should give sufficient detail for project development financiers to base an investment decision.

The Company has concluded it has a reasonable basis for providing any of the forward-looking statements included in this announcement and believes that it has a reasonable basis to expect that the Company will be able to fund its stated objective of completing feasibility studies for Lake Hope. All material assumptions on which the forecast financial information is based are set out in this Study.

MATERIAL ASSUMPTIONS and MODIFYING FACTORS

Based on work completed by Playa One Pty Ltd and Impact Minerals, the Scoping Study has made several material assumptions and used Modifying Factors as defined in the JORC 2012 Code to assess the project's economic viability. Investors should note that these Material Assumptions and Modifying Factors are subject to confirmation from ongoing work.

Material Assumptions and Modifying Factors used in this Scoping Study include;

- The operation's nameplate production is 10,000 tonnes per annum of HPA.
  There is no certainty that an operation of this scale will be built. However, based on Impact's industry analysis, this target has been chosen as a realistic target market share. This is also the benchmark target used by Impact's peers (e.g. A4N ASX Release 17th March 2020, and FYI ASX Release 8th April 2021).
- That the HPA produced will meet the quality specifications required by customers.
  The HPA sighter samples previously produced by Playa One Pty Ltd meet the chemical specifications required by customers. On-going metallurgical test work as part of the PFS has so far replicated the Playa One metallurgical process (the patented Sulphate Process), and therefore, Impact has a reasonable basis to conclude, but cannot guarantee, that it can reproduce the HPA specification (ASX Release October 18th 2023). In addition, HPA end-user quality specifications and needs may change, and there is no guarantee that current HPA product specifications will result in future sales.

- **The price of 99.99% (4N HPA) realised will be US$22,000 per tonne.**
  Impact has assumed a modest discount to the commonly perceived basket price of US$24,000-$25,000 for 4N HPA. Recent independent market analysis indicates prices of between $US25,000 and upwards of US$30,000 per tonne of milled HPA from 2026 onwards. However, there is no guarantee that these prices will be achieved.
- **The forecast increase in demand for HPA over the next decade will be realised.**
  The LED and battery sectors are under constant technological innovation, and there is no guarantee that HPA demand will rise as forecast should alternatives be found.
- **That by-product and co-product chemicals (agricultural and chemical feedstocks) produced from the Playa One Sulphate Process will meet customer specifications.**
  Up to 10% of the project revenue will come from the sale of by-products. Impact needs to perform marketing and specification research on these by-products and requires a greater understanding of the saleability of these chemicals, although they are in high demand. Variance in revenues from by-products may materially affect future returns.
- **No Native Title impediment exists to the development of the Lake Hope Project mining operation.**
  A Heritage Survey has been conducted by the Ngadju Native Title group over the Lake Hope deposit, with no Aboriginal Cultural Heritage objects or ethnographic sites found. Before the approval of a mining lease, a mining agreement must be entered into with all affected Native Title Parties. Impact has assumed that the terms of this agreement will be agreed upon in the future.
- **No Environmental impediment exists to the development of the Lake Hope Project mining operation.**
  Although a desktop review has indicated no threatened flora or fauna in the area, there is a risk of finding unrecorded priority ecological communities. Baseline Flora and Fauna Surveys will start in November 2023. There is no guarantee that environmental factors may prevent the development of the mining operation.
- **A suitable site for the HPA facility can be found within the Kalgoorlie region.**
  Enquiries about the availability of, and conditions surrounding, a processing facility in Kalgoorlie are at an early stage.
- **The Capital Cost estimate is accurate to within 30%.**
  The Scoping Study capital costs are an estimate arrived at via analogy with existing operations and proposed operations of similar scope and scale. Further work is required to finalise the Lake Hope process flow sheet before undertaking detailed engineering and capital cost estimation.
- **It takes 30 months to build the Lake Hope processing facility and 18 months to reach nameplate capacity at 99.99% alumina product quality.**
  Impact believes these are conservative and achievable time frames.
- **That end-end recoveries of alumina are 80%.**
  Initial work by Playa One indicated end-to-end recoveries of 92% using the patented Play One Sulphate Process to produce HPA. Given the unknown performance of the Sulphate Process at scale, a conservative recovery of 80% alumina has been used.
- **No debt is assumed.** There are insufficient grounds to assume any debt financing for the Project because of the early-stage economic and technical studies. The NPV is calculated on a 100% equity basis.
- **A discount rate of 8% is assumed.**
- **An exchange rate of US$1 to A$0.70 is assumed.**
- **The Scoping Study has been managed by Impact Minerals Limited using several external consultants for the specialist work. The Study has only been independently verified in part.**

Appendix 1 – JORC Table

The following table is sourced from the JORC Code (2012) and is provided as advised in the ASX Scoping Study Interim Guidelines.

Section 4 Estimation and Reporting of Ore Reserves modified for a Scoping Study which includes and approximate Production Target and/or Financial Information.

No JORC Code (2012) Ore Reserves are being reported.

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• Description of the Mineral Resource estimate used as basis for the conversion to Ore Reserve • Clear statement as to whether the Mineral Resources are reported in addition to, or inclusive of, the Ore Reserve	• No Ore Reserve estimate has been classified or reported • The preliminary production target is based on the Mineral Resource of 3.5 Mt @ 25.1% Al2O3, classified in the Indicated and Inferred categories and reported in the ASX Announcement 19th June 2023. Only Indicated Resources are used in the Production Target comprising 1.157Mt of mineralisation mined and 250,000t of HPA produced. • The Competent Person for the Mineral Resources is Mr Simon Tear (Consultant Person with H&S Mineral Consultants) • The Competent Person for the mining studies is Mr Joel van Anen, Principal Mining Consultant with TME Mine Consulting
Site Visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits* • *If no site visits have been undertaken indicate why this is the case*	• Mr Tear and Mr van Anen have not visited the Lake Hope site • Mr Tear and Mr van Anen were unable to attend due to other commitments and the preliminary nature of the Scoping Study.
Study Status	• *The type and leve of Study to enable Mineral Resources to be converted to Ore Reserves*	• The study presented is a Scoping Study and accordingly an Ore Reserve is not being reported. • A Pre-Feasibility Study is currently underway, including conversion of resources to reserves, and is expected to be completed within the next 9 to 12 months. • The Scoping Study has been prepared to an accuracy of +/-30% using Indicated Mineral Resources, appropriate mine planning and modifying factors have been applied commensurate with a Scoping Study level of accuracy and are deemed to have reasonable prospects of being technically and economically viable. • Section 4 of JORC Code (2012) Table 1 is being completed to enable material modifying factors and assumptions underpinning the conceptual Production Target and their link to the forecast financial information to be disclosed in appropriate manner for investors.
Cut-off parameters	• *The basis of the cut-off grade or parameters applied*	• A cut-off grade of 27% Al_2O_3 has been used for the initial mining activities (approx. 360.000t), thereafter the greater than 25% portion of the resource will be extracted • This is justified on the basis of the broad homogeneity of the deposit, clear area delineation of the estimated block grade ranges being targeted for mining in both deposits (>25% and >27% Al_2O_3), simple mineralogy, and simple bulk mining approach
Mining Methods and Assumption	• *The methods and assumptions used as reported in the Study (ie; either by application of appropriate factors by optimisation or by preliminary or detailed design)* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters such as pre-strip, access, etc* • *The assumptions made regarding geotechnical parameters, grade control and pre-poduction drilling*	• No Ore Reserve estimate has been classified or reported • The Lake Hope clay deposit is a flat-lying surficial aluminous clay deposit • The Production Target is based on a digging schedule for 25 years, comprising 250,000 tonnes of contained alumina from the 880,000 tonnes of contained alumina in the resource. • Inferred Resources comprise approximately 10% of the mineral resource inventory, and are not included in the initial mine plan or production target. • There is no certainty that inferred resources may be converted into Ore Reserves in the future. • There is no overburden and no inter-burden, allowing a simple bulk mining approach • The full thickness of mineralisation would be excavated (~1.5-2m) with no selective digging required. • No dilution factors are assessed at this stage. • Mineralisation is visually distinctive and no grade control drilling will be required to determine mineralisation • The clay layer is relatively hard and is assumed to be trafficable during summer. Tracked dump trucks are proposed, to ensure trafficability assumptions, prior to further geotechnical investigations. • Mining is proposed to utilise conventional excavator and tracked dump trucks. This is a simple configuration considered appropriate for the operation. • The mineralisation is unconsolidated clay. No drill or blast is required • No minimum mining thickness has been assessed at this stage • Excavation of panels of mineralisation will be used in a dig and retreat fashion • Mineralisation is stockpiled on an on-playa ROM pad, with an area identified as suitable. • Mineralisation is then loaded on to conventional road trains using a conventional wheeled loader.

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		• Mining is proposed to occur every three years, with material excavated during a 3 month digging campaign. This mining rate was reviewed by the independent mining consultant and considered achievable. • The Study assumes the use of a mining contractor. • Infrastructure requirements on the Lake Hope mine site are expected to comprise a temporary camp during the digging campaign, and a workshop, fuel facility, crib room and communications facilities required for haulage operations • Access is proposed to utilise an existing fire access track and duplication of thick track with a suitably upgraded unsealed road. The majority of this access route is covered by an exploration tenement Application ELA63/2370 (100% Playa One Pty Ltd)
Metallurgical Factors or Assumptions	• *The metallurgical process proposed, and the appropriateness of that process to the style of mineralisation* • *Whether the metallurgical process is well-tested or novel in nature.* • *The nature, amount, and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied, and the corresponding metallurgical recovery factors applied* • *Any assumptions or allowances made for deleterious elements* • *The existence of bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole* • *For minerals defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet specifications?*	• No Ore Reserve estimate has been classified or reported • The metallurgical treatment of Lake Hope mineralisation is via a hydrometallurgical process developed specifically for the particular aluminous clay deposits found on Lake Hope and as such is the most appropriate method for conversion into high purity alumina • The process is novel • The process involves washing of the clay mineralisation with fresh water, to remove NaCl salt, flocculation of the clay particles, and recirculation of the wash water. Recovered clay is roasted with sulphuric acid, and aluminium salts are washed from the roasted clay. Intermediate alumina salts are recovered via reaction with reagents, and are purified using 'industry standard' HCl gas sparging technology. The resultant alumina chloride salt is calcined to produce alpha-HPA at 99.99% or better purity. • HCl gas sparging is well understood and used widely in the High Purity Alumina industry to purify intermediate alumina salts. Other aspects of the hydrometallurgical process are individually well understood and are used in a novel combination to achieve the desired HPA purity. • Initial metallurgical test work was undertaken by at Australian Laboratory Services (ALS Metallurgy), a commercial laboratory service provider under the direction of Playa One Pty Ltd (2019-2022). Confirmatory testing and optimisation test work is being undertaken by Impact Minerals Limited (2023) at ALS Metallurgy and Strategic Metallurgy. • Recovery of up to 92% of alumina has been achieved by metallurgical testing. Impact has assumed 80% recovery factor for the Study. • Sampling and test work by Impact Minerals Limited to date has verified and repeated the prior work of Playa One Pty Ltd. • Metallurgical modelling was undertaken to derive chemical and thermal performance data. This has informed cost and metallurgical factors to a level of accuracy commensurate with a Scoping Study. • The high purity alumina produced by the hydrometallurgical process meets all available chemical purity specifications for commercial 4N (99.99% Al2O3) HPA. The data on HPA produced to date was reported February 2023. • Sampling and test work to date have not shown any deleterious elements in the mineralisation or HPA produced from the metallurgical process. Arsenic, chrome, iron, sodium contents meet specifications for 4N HPA. • No bulk or pilot scale test work has been completed to date. Playa One has produced lots of HPA up to several kilograms in size. Bulk sampling is scheduled to occur in early 2024, to provide samples for a pilot scale plant to be constructed in 2024.
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where appropriate, the status of approvals for process residue storage and waste dumps should be reported*	• Baseline environmental work has commenced in June 2023. An initial desktop review has identified low likelihood of Priority Ecological Communities, Threatened species or listed flora and fauna. The review has identified a work program, scheduled for end October 2023, to map, describe and locate any potential TEC's, PEC's and environmental impacts of the proposed Lake Hope mining operation • Discussions are at an early stage with regards to the mining proposal, site selection and regulatory framework which would apply to any proposed mining and hydrometallurgical facilities. Impact has scheduled initial consultation meeting with the regulator, and will work to address the normal process of environmental review. • An initial heritage survey of the Lake Hope tenement was attended by traditional owner representatives and recognised knowledge holders from the native title party in June 2023. No archaeological or mythological sites were found to interact with the proposed mining envelope or ROM pad location. Further heritage surveys will be required over infrastructure and access routes. • There will be no waste sump on site as all material excavated from the lake bed will comprise ore. • The mining void is proposed to be left open as a salt lake and will naturally rehabilitate. • Test pitting scheduled for 2024 will investigate slope stability and groundwater effects of excavations. • The study has assessed the waste products from the hydrometallurgical facility has identified the waste products are relatively benign. The study will consider options for disposal of plant residues based on feedback from regulators.
Infrastructure	• *The existence of appropriate infrastructure; availability of land for plant development, power, water, transportation, labor, accommodation; or the ease with which infrastructure can be provided or*	• The study has assessed a variety of potential locations for the plant location and considered that Kalgoorlie is the most suitable location • The mine site will not be permanently inhabited due to its remote location,

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	accessed	lack of fresh water, power and transportation links. • Consultation with Qube Logistics Pty Ltd has indicated the Hyden-Norseman Road to Kalgoorlie is a suitable transportation route for road train bulk transport of mined material • Initial engagement with the City of Kalgoorlie-Boulder has indicated Kalgoorlie has a sizeable allocation for industrial land • Kalgoorlie has a sophisticated logistical capacity, a skilled workforce, a supply of fresh water albeit somewhat limited, an integrated scheme power grid and proposed renewable energy supplies and facilities; natural gas is available, excellent communication links and capacity for fly-in fly-out workers if needed. • Water is proposed to be sourced from scheme water in Kalgoorlie; metallurgical processing has been designed to minimise and recycle water as much as possible to reduce water consumption.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the Study* • *The methodology used to estimate operating costs* • *Allowances made for the content of deleterious elements.* • *The assumptions made of commodity prices- for the principal products and co-products.* • *The source of exchange rates in the Study* • *Derivation of transport charges* • *The basis for forecasting or source of treatment charges and refining charges, penalties for failure to meet specification, etc* • *The allowances made for royalties payable, both government and private*	• The capital cost of the proposed hydrometallurgical facility has been estimated by constructing a preliminary flow diagram which describes a set of capital items and machinery. The capital costs for the machinery were estimated by developing a model via analogy to existing datapoints within the HPA industry, and where no equivalent equipment exists, by sourcing datapoints for similar sized equipment. This was then factorially modified based on the scale of the proposed facility and is considered accurate to within an order of magnitude or better. Life of Mine of 25 years • Targeted accuracy of +/- 30% • OPEX costs associated with the conceptual production target were estimated using a combination of costs built up from first principles metallurgical modelling, vendor quotes, benchmarked rates received from consultants and benchmarking against similar projects in Australia • Transport costs are based on estimated provided by Qube Logistics Pty Ltd, a vendor consultancy, for a variety of road transport routes, trucking configurations, and data based on mass transport models provided by Impact Minerals, accurate to +/- 15% in 2023 dollars • Royalties payable are 5% to the State of Western Australia. A further potential royalty may be payable to Playa One Pty Ltd upon certain conditions outlined in the acquisition agreement. • All estimates presented here are for the total project and do not take into account the Company's current and future ownership of the Project under the acquisition agreement entered into with Playa One Pty Ltd.
Revenue Factors	• *The derivation of assumptions made regarding revenue factors including head grade, metal or commodity prices, exchange rates, transportation and treatment charges, penalties, nett smelter returns, etc* • *The derivation of assumptions made of metal or commodity prices of the principal metals, minerals and co-product*	• The head grade of mineralisation proposed to be treated averages 25.1%, with >27% Al_2O_3 to be treated for the first 8 years • The Company has not established any contracts or committed any production pursuant to offtake or pre-sale agreements • The HPA market outlook is outlined in the body of the Scoping Study report • Reagent and product prices were sourced from publicly available data, industry research reports including quoted CRU Research reports, HPA and boehmite market research by independent analysts (Golden Dragon Capital) and discussions with market participants, traders and representatives. Impact assumes HPA prices of US$22,000 per tonne for 99.99% HPA. • By-product and reagents are commercially sensitive, but are informed by industrial and fertiliser industry research and public chemical market indices. • Impact assumed ramp-up of the mine and hydrometallurgical facility would result in reduced revenue for the first two years of production.
Market Assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future* • *A customer competitor analysis along with likely market windows for the product* • *Customer specification, testing and acceptance requirements prior to accepting a supply contract*	• High Purity Alumina prices are quoted relative to a 99.99% (4N) Al2O3 specification. Other factors affecting saleability include particle size distribution, particle morphology, porosity and surface area. • Analyst and industry participants quote 4N HPA at US$24,000 to US$26,000 per tonne. • Penalty elements within the allowable maximum contaminant specification vary by application • Impact's analysis concurs with the sighted analyst reports. Impact assumed US$20,000 per tonne for HPA sales. • HPA is used in LED diodes, micro-LED's, technical glasses and lithium ion batteries. Precursor chemicals are used as catalysts, in electronics and lithium battery separators. • Analyst reports derive a prospective supply deficit in HPA from 2027 with CAGR of 15% per annum projected. • Suppliers of HPA are based in Japan, China, Europe and North America, with new supply in Australia in 2023. • Supply of HPA is constrained due to the high costs of entering production and protracted qualification periods. • New supply is proposed from several sources which implies near term supply balance but long-term supply deficit assuming market growth is maintained. • HPA is traded on a contract basis between producers and end-users • End users require a period of qualification trialling of new HPA inputs prior to accepting supply. HPA suppliers often tailor their product to meet end-user requirements.
Economic	• *The inputs to the economic analysis to produce the nett present value (NPV) in the study, the source and confidence of these economic inputs, including*	• The inputs to the NPV estimations are described in the body of the ASX release and in the NPV table

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	estimated inflation, discount rates, etc • *NPOV ranges and sensitivity variations in the significant assumptions and inputs*	• A Tornado chart of NPV variance with key assumptions is provided • The NPV has been determined using the Discounted Cash Flow method of valuation. For the scoping Study a discount rate of 8% has been used. Variation of the discount rate is discussed in the body of the report. • The financial model is in real terms • The model is based on yearly increments, with an assumption of 'as in operation' in 2023. • No inflation was applied to costs or commodity prices • The Project was treated as its own tax entity on a 100% Project basis • Royalties of 5% are based on the Western Australian royalty rate for processed material • Australian corporate tax rate was applied as per the federal government corporate tax rate of 27.5% • NPV ranges between US$720M and US$1,080M. Variation in NPV is dominated by the HPA price with the highest NPV achieved at +20% HPA price.
Social	• *The status of agreements with key stakeholders and matters leading to social license to operate*	• Playa One Pty Ltd has a Native Title and Heritage Protection Agreement in force with both native title parties. This agreement is able to be converted to a Mining Agreement upon negotiation of a compensation package with affected native title parties. Impact has the right to earn 80% of Playa One Pty Ltd and can assume the Native Title agreement via appropriate notification. • An Aboriginal Cultural Heritage and Archaeological Survey was undertaken in June 2023 on Lake Hope and meeting have been held with the traditional owners to inform them of the Project progress • No impediments have been identified in terms of Aboriginal cultural heritage to exploitation of the Lake Hope resource • Impact assessments on the proposed transport route are yet to be completed • Impact assessment and EPA Assessment of the proposed hydrometallurgical facility are required prior to approval
Other	• *Identified naturally occurring risks* • *Status of material legal agreements and marketing agreements* • *Status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government statutory approvals. There must be reasonable grounds to expect that all necessary government approvals will be received within timeframes anticipated in the pre-feasibility or feasibility study. Highlight and discuss the materiality of any uresolved matter that is dependent on a third party on which extraction of the resource is contingent*	• No naturally occurring risks have been identified • No marketing agreements are in pace at this stage, however discussions are underway with marketing consultants and potential offtake partners • Applications for a Mining Lease are being prepared, with initial scoping discussions and feedback underway with the Department on Minerals and Resources Safety (DMIRS), Western Australia • General Purpose Leases for water, transport access and associated infrastructure will likely be required. Impact expects that no material impediment would occur in the grant of such licenses. • Discussions with councils are at an early stage with respect to allocating land or transport routes. • Agreement with the Native Title Parties is required prior to grant of a Mining Lease or approval of a Mining Proposal.
Audits or reviews	• *The results of any audits or reviews*	• No audits or reviews have been conducted
Classification	• *The basis for classification of the Ore Reserves into varying confidence categories* • *Whether the result appropriately reflects the Competent Person's view of the deposit* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any)*	• No Ore Reserve estimate has been classified or reported • The level of accuracy for the Scoping Study is +/- 30% • The level of confidence for the estimates used in the conceptual production schedule is below that required for reporting Ore Reserves under the JORC Code (2012) • The Life of Mine (LOM) Production Target associated with the Scoping Study is 36% of the Indicated Resources and 0% of the Inferred Resources • A Pre-Feasibility Study is currently underway, including conversion of resources to reserves, and is expected to be completed within the next 12 months.

Impact Minerals Limited Interactive Investor Hub

Engage with us directly by asking questions, watching video summaries, and seeing what other shareholders have to say about this and past announcements at our Investor Hub
https://investors.impactminerals.com.au/welcome