fyi Resources Limited

8 April 2021

FYI HPA PROJECT NPV INCREASES TO US$1.014Bn

Key points

- **Updated DFS results in increase in NPV reflecting technical and commercial progress of FYI's HPA Project development and positive value re-rating**
- **FYI's innovative HPA process technology and process design validated through extensive test work and pilot plant trials**
- **Updated DFS results in compelling project metrics demonstrated in revised NPV**
- **HPA product marketing research confirms strong HPA industry growth and pricing support**

FYI Resources Ltd **(ASX: FYI)** (FYI or the Company) is pleased to announce its updated definitive feasibility study (**Updated DFS**) of the Company's high purity alumina (**HPA**) Project resulting in an increase in net present value (**NPV**). The Updated DFS has been prepared by the Company in conjunction with selected industry specialists. The resulting NPV increase reflects the major technical improvements, substantial Project de-risking and other key commercial developments accomplished since the initial DFS announcement on 11 March 2020.

The Updated DFS and revised NPV have confirmed the HPA Project is not only technically and financially robust, but the development work completed since the initial DFS in March 2020 demonstrates continued project de-risking and positive value re-rating.

Following the release of the Company's initial DFS, enhancements that have been made to the Project include detailed flowsheet advances, process redesign, production optimisation and extensive supporting testwork (including multiple pilot plant trials) to optimise and de-risk the integrated HPA strategy.

After taking into account the technical and commercial improvements, market applied metrics relative to its peer group, updated inputs (exchange rate) and discount rate (8%) FYI has updated the base NPV of the project by **87%** to **US$1.014 billion.**

Major Highlights of Updated DFS and NPV

FYI's Updated DFS highlights an increase in the forecast financial returns and a de-risking for the Company's HPA Project. The points are summarised below:

- **Sensitivity analysis demonstrates robust project economics**
- **Updated DFS inputs are supported by additional pilot plant trials and data validation**
- **Updated DFS conducted by leading hydrometallurgical experts**
- **The Updated DFS and financial analysis was completed to an overall accuracy of -10% to +15%**
- **Updated key project NPV metrics include:**
  - **post-tax $NPV_{8\%}$ of US$1.014 billion**
  - **project post-tax IRR 55%**
  - **annual production**
    - **8,500 tpa 4N HPA (99.99% Al_2O_3)**
    - **1,500 tpa 5N HPA (99.999% Al_2O_3)**
  - **average selling price US$26,400/t *(basket 4N and 5N pricing)***
  - **annual project revenue US$261m**
  - **annual project EBITDA US$186m**
  - **project capex US$202m**
  - **project opex US$6,661**
  - **project payback 3.2 years**
  - **AUD:USD exchange rate of 0.75 (from 0.70)**

FYI Resources Managing Director Roland Hill said: *"The update to the Company's initial DFS was an obvious progression in the development of our HPA project strategy. The quality and robustness of our HPA Project was demonstrated in our initial DFS released in March 2020. Since then, the Company has continued the evolution of the Project through further process design improvements, detailed test-work via numerous pilot plant trials and other supporting activities to assist in de-risking the Project. There has also been a number of external factors such as the AUD:USD exchange rate movement that has had an impact on the economics of the project. It was evident that a more up-to-date financial case be presented to the market.*

The Updated DFS outcome represents a persuasive economic case and demonstrates the merit of the Project in being developed as potentially one of the HPA sector's highest quality, lowest capital and operating cost projects".

FYI believe the increased NPV outcome is a more appropriate reflection of the HPA Projects achievable potential and signifies the greater confidence in the Project given the progress accomplished by the Company in the last 12 months.

It should be noted that the level of detailed work and supporting inputs into the Updated DFS and financial forecast (NPV) is substantial and is the outcome of a further 12 months of development progressed from the Company's initial DFS.

Key changes to Updated DFS and NPV

Discount rate	Revised from 10% to 8% reflecting further Project development resulting in increased project confidence
HPA annual production	Revised from 8,000tpa to 10,000tpa based on expected HPA market growth
HPA product mix	Sales assumptions includes 8,500tpa of 4N and 1,500tpa 5N. FYI has demonstrated that 5N production is possible and will likely become a material contribution to future sales
HPA pricing	Product pricing has increased from US24,000/t (100%4N) to an assessed basket price of US$26,400/t (85% 4N / 15% 5N) reflecting a conservative selling price
Exchange rate	The AUD:USD exchange rate has moved from 0.70 to 0.75
Capex	Exchange rate has impacted the project capex from US$189 to US$202 due to the AUD component of the cost base (expressed in US$)
Opex	Exchange rate has impacted the project opex from US$6,217/t to US$6,661/t due to the AUD component of the cost base (expressed in US$)

Intangible Improvements to FYI's HPA Project

- Further attraction of major industry participants and potential off-take parties to FYI's HPA strategy (including Alcoa of Australia)
- Advancing of product marketing and potential off-take party assessment
- Progressing Project financing alternatives providing visible financing options
- WA Government recognition of HPA Project status through granting of Lead Agency support
- Environmental, Social and Corporate Governance (ESG) and carbon footprint targets designed to lower Project carbon emissions.

Summary of Updated DFS

The Updated DFS is based on the initial DFS of March 2020 which considers FYI's innovative, low temperature, low pressure leach and precipitation process flowsheet for the production of high quality HPA. The Updated DFS combines detailed technical and financial inputs that result in the study having a -10% + 15% degree of accuracy and confidence - suitable for this level of study.

FYI's process design basis was the adoption and advanced refinement of a conventional leach and precipitation flowsheet which was adapted and optimised to commercialise the production of high quality, high purity alumina. The process refinements are specific to FYI's unique feedstock and its amenability through the innovated flowsheet resulting in excellent production characteristics including achieving lowest cost quartile for both opex and capex.

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A revised financial model and resulting NPV was completed based on all the initial DFS, pilot plant trials and other supporting studies used in calculating and estimating the project capital and operating costs as well as all other operating parameters.

FYI is continuing to progress the development of its HPA Project strategy and advancing to the final engineering stage for the HPA Project. The Company's updated DFS confirms the Project's potential ability to generate outstanding financial returns over the initial modelled life of 25 years.

Purpose of Updated DFS and revised NPV

- to provide the market with quantifiable project development progress and de-risking measurement
- the Updated DFS defines a clear pathway for development to commercial production of HPA
- the Updated DFS and supporting pilot plant testwork demonstrates production of high quality, high purity 4N and 5N HPA suitable for LED and Lithium-ion battery markets
- the ongoing process refinements and optimisations to the process design suggest potential for further improvements
- to demonstrate the technical and financial robustness of the HPA project via continued process development testwork and trial production
- the response from potential customers to FYI's high quality HPA is very positive

The initial DFS established an outstanding set of financial results for the Company's HPA project. The initial DFS demonstrated the quality of the innovative flowsheet and the robustness of the Company's HPA project and outlined the clear pathway forward to developing an integrated HPA refining business in the favourable operating jurisdiction of Western Australia. FYI has taken the foundation work and improved the overall project metrics by a further 12 months of continuous project improvements.

The Updated DFS and revised NPV demonstrates the progress achieved with FYI's HPA Project.

Key DFS assumptions and outcomes include:

DFS version	**Initial**	**Updated**
Discount rate	**@10%**	**8%**
NPV (post tax)	US$543m	US$1.014m
IRR (post tax)	46%	55%
Payback period (years) (post tax) (inc ramp up)	3.6	3.2
Assumed exchange rate A$/US$	0.70	0.75
Modelled DCF Life of Project (years)	25	25
Total Sales (initial 25 years) no escalation	US$4.7b	US$6.1b
Total Project net operating cash flow (25 years)	US$2.0b	US$3.3b
Annual EBITDA (average)	US$133m	$186m
Cash flow after finance and tax	US$88m	US$131m
Shares on issue (as at publication of the DFS)	212.77m	321.09m
Capex (US$)	US$189m	US$202m
Capex/t (US$/t)	US$23,575	US$20,200
Opex (US$/t) - Life of Mine C1 costs, FOB Kwinana	US$6,217	US$6,661
Tonnes Processed (initial 25 years) (kt)	189	247
Production Target (tpa) (initial 25 years)	8,000	10,000
Proven + Probable Ore Reserves (@ 24.8% Al_2O_3 kt)	3,205	3,205
Ore Reserve life (years)	25	25
JORC Resources (million tonnes)	11.3	11.3

Updated DFS highlights (comparison to initial 11th March 2020 DFS)

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Key economic assumptions for the Updated DFS include:

Currency	United States dollars Future sales contracts for HPA are usually based in US$. The financial model (NPV) is prepared in US$. All A$ inputs are converted to US$ based on an exchange rate of A$1.00 = US$0.75.
Project life	25 years
Ore Reserves	Total Proven + Probable Ore Reserve alone supports a 25 years project. Mining will occur solely from the Proven + Probable Ore Reserve during the project life.
Corporate tax rate	30%
Government royalty	2.5%
Depreciation rate	20%
HPA Production	Steady state production from Proven + Probable Ore Reserves over life of mine, with HPA production in the first year being 5,600 tonnes per year and thereafter 10,000 tonnes per year.
Shares on Issue	321,095,989 (as at time of publication of Updated DFS)
NPV estimation discount rates	Financial modelling has been calculated using at 8% discount rate (previously 10%).
Capital costs	US$202m, estimated at an accuracy of -10%/+15% as per recommended practice 18R-97 for process industries set out by AACE International for Class 3 estimates
Capex contingency	15% of capital cost
Sustaining capex	2% of capital costs, annually
Operating costs	US$6,661/t HPA produced; costs estimates have been developed from first principles with an accuracy of -10%/+15%
Mine closure costs	US$5m as per Mine Closure Plan
Plant maintenance	7.2% of capital costs
Sales price	US$26,400 per dry metric tonne average of 4N (8,500tpa) and 5N (1,500tpa) product. The average price was estimated dependent on product type, product quality, country, contact terms and sales quantity. The total revenue is constant based on the forecast average basket price and does not include any escalation in commodity price or inflation
Debt financing	Up to 70% of capex (depending on the finance structure)
Borrowing rate	7.5%, tenor 6.5 years and grace period 2 years
Upfront financing cost	8% (assumption)
Working capital	US$5m
Accounts receivable	30 days

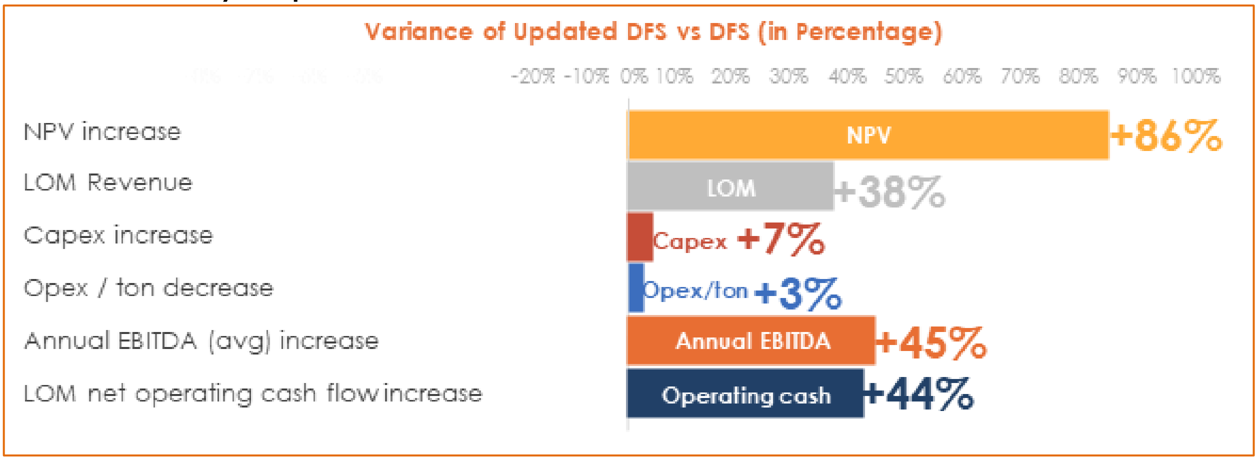
Revised DFS Comparison

The Updated DFS is a result of studies undertaken to demonstrate FYI's HPA process flowsheet and design. FYI has enhanced and optimised the Project flowsheet progressively since the release of the initial DFS with the continuity of technical input via the various team of expert study managers.

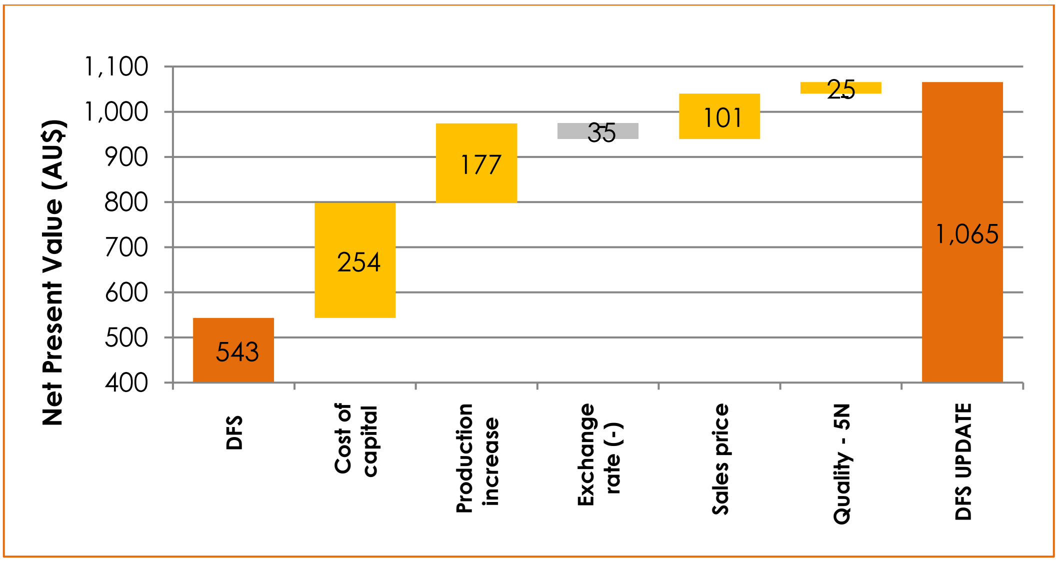
The initial DFS and the Updated DFS / revised NPV outcome are both considered to be in the range of -10% /+ 15% degree of accuracy.

The recalculated NPV of US$1.014b, demonstrates the quality of the Project and the progressive Project improvement and de-risking undertaken since the initial DFS. Additionally, limiting the nominal capex increase whilst maintaining minimal change to the opex (the opex and capex increase is largely due to the exchange rate variance) of HPA produced. The key operating and capital numbers are result of improvements achieved over the last 12 months of continued development. The key Updated DFS metrics results compared to the initial DFS results are shown graphically below:

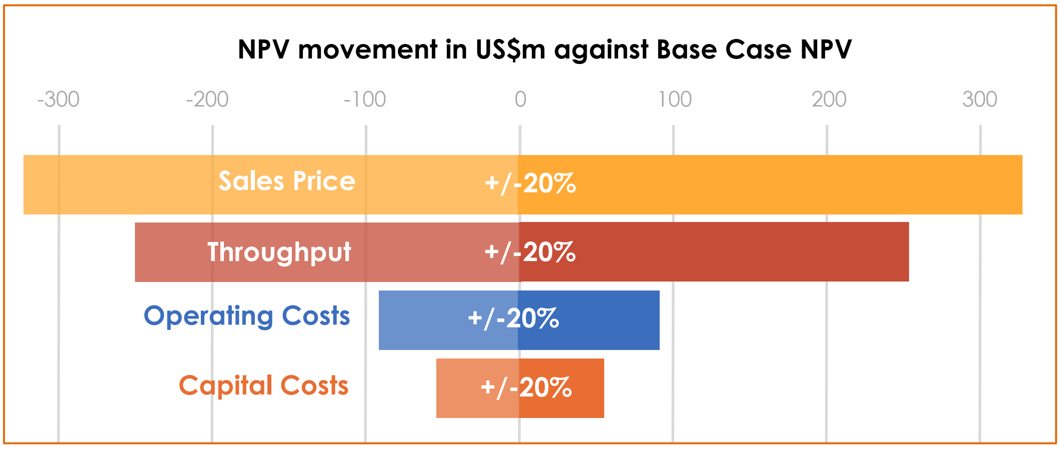
Updated DFS Sensitivity Graphs



Updated DFS variance to initial DFS



Water fall graph of Updated DFS reconciliation to initial DFS



Tornado graph of input sensitivities to the revised NPV

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Material Modifying Factors

FYI has considered a number of modifying factors in calculating the Updated DFS. The material modifying factors are set out in the HPA Updated Definitive Feasibility Study summary document appended to this announcement.

	Material Modifying Factor	Appendix Page No.
1	Proven and Probable Ore Reserve	8
2	Mining	9
3	Processing and Infrastructure	10
4	Metallurgical and Process Design	10
5	Transport and Logistics	12
6	Economic	13
7	Product Marketing (HPA)	14
8	Legal	18
9	Environmental	18
10	Social	19

HPA Market Update

FYI employs a number of methods to determine pricing and demand models for the HPA market to establish a reliable estimated sales price. This price establishing process includes the engagement of several independent commodity market research firms and direct contact with market participants.

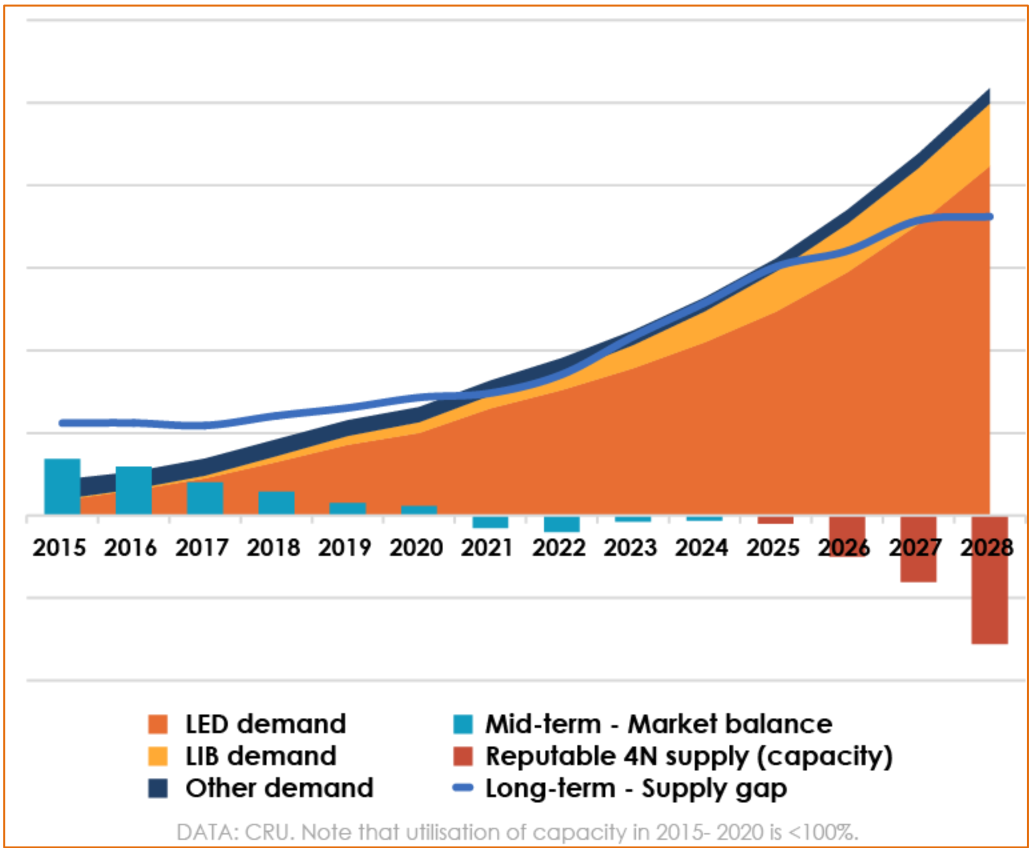
One primary source relied upon by FYI is the CRU Group, whom are a leading market intelligence and analysis firm specialising in HPA. CRU have performed the HPA market determination function for FYI in our previous feasibility studies and whose scope includes detailed breakdown of the HPA market, supply, demand and pricing. FYI mandated CRU especially for the Updated DFS, with a research report released to the Company in March 2021.

The most recent market survey and round of interviews conducted with producers, consumers, projects and other market participants in Japan, South Korea, North America, Europe and China conclude there is evidence that the HPA market is entering a phase of mild tightness. Consumers, particularly in the sapphire market for LEDs, state that supplies of reputable 4N HPA is becoming limited.

In summary, whilst it is evident that different trends are emerging in the HPA sector from the previous DFS report in March 2020, for the purposes of the Updated DFS report the focus will be on the 'performance-driven or 4N-5N market.

In terms of sales volumes, assuming unconstrained by supply of 4N+ HPA, demand is forecast to grow from ~30 kt in 2021 to over 104 kt in 2028, a CAGR of 18.7%. Pricing has been noted by CRU to be in the range of:

- US$15/kg for mis-represented, off-specification product largely centering on the Chinese domestic market
- US$56/kg for premium, high quality and reliable supply and specialist applications
- US$100/kg (up to) for spot and small parcels



HPA market demand and deficit forecast 2015 to 2028 – CRU HPA Report 2021

FYI understands that realising price premiums for high quality 4N material relies upon building strong relationships with customers, being able to adjust specifications to meet customers exacting requirements and consistently supplying material to the agreed specification. Achieving and maintaining a reputation for delivery of reliable and consistent specification will become a very powerful marketing tool.

The modelled HPA demand is forecast to grow rapidly at approximately 18.7% CAGR between 2021 to 2028. As a result of the demand, CRU models the HPA market to tip into deficit in 2021, as reputable 4N and 5N as current supply capacity fails to meet the market demand as production has not kept pace with demand growth. FYI sees tremendous potential opportunities as a result.

Lithium-ion Batteries

Lithium-ion batteries (LIBs) represent the largest potential growth sector for HPA demand over the coming decade. LIBs are currently used in portable electronics such as mobile phones and laptops; however, their high energy density (energy contained vs weight) makes them ideal for use in the surging electric vehicle market.

CRU understands that separator manufacturers are seeking out high-quality HPA for their coatings. This signifies a discerning customer class that will pay the higher price for quality HPA product.

LEDs

Due to strong headline demand for LED units driven by broad application development, market acceptance and replacement of inferior and less efficient alternatives, LED driven demand for 4N and 5N HPA is likely to grow from 20ktpa in 2020 to 85kt in 2028, with a CAGR of 19.8%.

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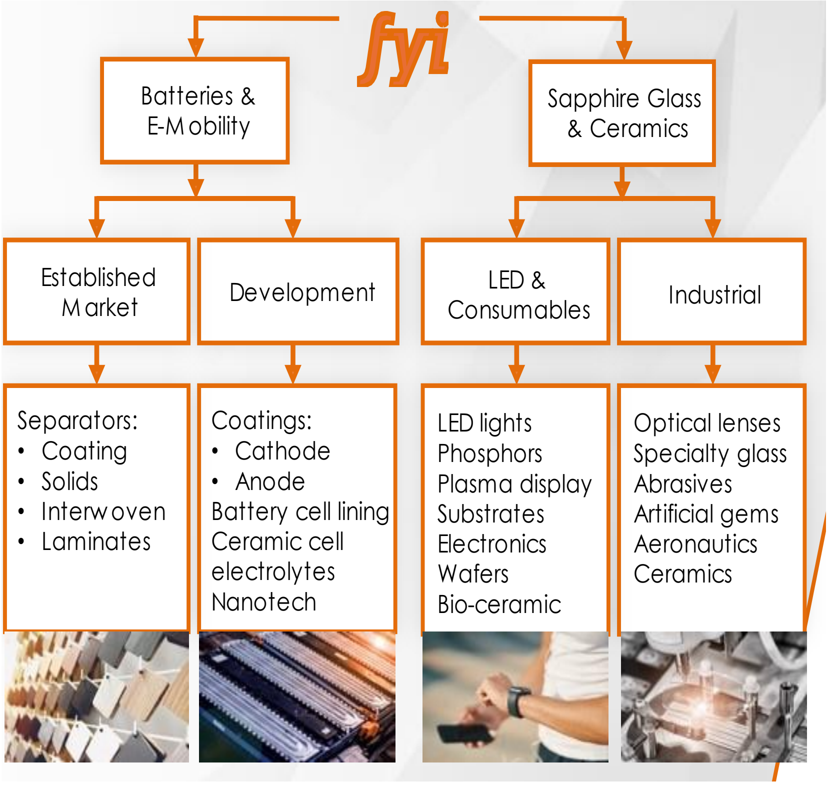

Production costs

Market research, supported by CRU findings, suggests an increasing global trend of HPA production costs. This migration of increasing cost of goods sold has moved from ~$15/kg in 2018 and rising to ~$21/kg (nominal) in 2028. This cost hike is attributed to rising Chinese labour costs, climbing aluminium prices and European/Japanese carbon pricing.

FYI HPA – Low Environmental Impact / High ESG

The mining sector faces many material environmental, social and governance (ESG) issues. Certain mining operations can have significant and long-lasting environmental and social impacts on the community.

These ESG issues include:

- Excessive energy use and greenhouse gas emissions
- Disproportionate effluent and waste production
- Land degradation and negative impact on biodiversity
- High water use
- Community Relations
- Community Health and Safety concerns

FYI is operating in a highly challenging environment. Declining resource accessibility, growing pressure to implement reporting standards and increasingly complex permitting processes from governments are major concerns in achieving and maintaining a licence to operate.

FYI has made significant efforts during the development of the Company's HPA Project strategy to address ESG issues and the projects sustainability. FYI is establishing stable frameworks and transitioning to increase its ESG standards along with programmes and initiatives to reduce its legacy impact and potential risks.

Along with designing its HPA Project and process flowsheet to minimise its environmental impact and greenhouse gas contribution, FYI also recognises its social and governance requirements. FYI has combined these practices to identify and improve legacy issues to achieve best practices to be a leader in the sector. To quantify FYI's ESG footprint, the Company is currently being assessed and rated by an independent industry rating service.

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Alcoa Australia HPA MOU

Based on the initial DFS and the development work progressing the Company's innovation process flowsheet for producing high quality, ultra-pure HPA, FYI signed a memorandum of understanding (MOU) (ASX announcement 8th September 2020) with leading alumina producer, Alcoa of Australia Limited. The MOU will explore the possibility of Alcoa joining with FYI and furthering the development of FYI's innovative and fully integrated HPA refining project for commercialisation, as well as the establishment of offtake customers into HPA markets. The MOU establishes a pathway to progress to a joint venture following the satisfaction of certain conditions precedent.

Alcoa is a global industry leader in the production of bauxite, alumina and aluminium, a position enhanced by a portfolio of value-added cast and rolled products and select energy assets. Since developing the aluminium industry more than 130 years ago, Alcoa has built a legacy of breakthrough innovations and best practices that have led to efficiency, safety, sustainability and stronger communities wherever they operate. Alcoa of Australia Limited is owned 60 per cent by Alcoa Corporation and 40 per cent by Alumina Limited. The Australian operations represent one of the world's largest integrated bauxite mining, alumina refining and aluminium smelting systems and add value to Australia's local, state and national economies at every stage.

The conditions precedent cover further HPA pilot plant variability trials being successful and the continued cooperation having commercial benefits for both parties. FYI is developing an innovative process for the production of high quality, high purity alumina. FYI has been very successful in its development strategy and continues to advance the HPA refining process to address the supply shortfalls in the rapidly growing HPA market. The MOU will allow the parties to explore and develop respective technical capabilities and capacities in alumina production, with the potential to leverage opportunities in the HPA market.

Future Value Catalysts

The Updated DFS confirms the robustness and quality of FYI's HPA Project. Further to the Updated DFS results, there remains additional technical improvements and other commercial opportunities within FYI's HPA strategy which have not been incorporated into the updated DFS. These added opportunities may have the ability to positively impact on the Company's future valuation. These events include:

- Entering into a Joint Venture Agreement with Alcoa
- Additional process flowsheet development and demonstration
- Completion of HPA Project detailed engineering, front end engineering and final investment decision
- Continued product market qualification
- Signing of customer MOU's and strengthening marketing relationships
- Advancing financing arrangements
- Investigation of additional internal revenue streams
- Investigation into broader battery HPA utilisation and markets
- New demand growth sectors in HPA appearing through development channels.

Authorised for release by Roland Hill, Managing Director.

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Cautionary Statements

Substance of Updated DFS

The Updated DFS referred to in this announcement is a study of the potential viability of the production of high purity alumina from feedstock form the Cadoux Kaolin Project. It has been undertaken to understand the technical and economic viability of the Project.

The Updated DFS assumes as a 25-year Project life based only on Proved and Probable Ore Reserves (100%). The Updated DFS is based on the material assumptions set out in this announcement and its appended DFS summary. These include assumptions about the availability of funding. While the Company considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the feasibility studies will be achieved.

To achieve the range of outcomes indicated in Updated DFS, funding in the order of A$202 million will likely be required. Investors should note that there is no certainty that the Company will be able to raise the amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of the Company's existing shares.
It is also possible that the Company could pursue other "value realisation" strategies such as a sale, partial sale or joint venture of the Project. If it does, this could materially reduce the Company's proportionate ownership of the Project.

General and forward-looking statements

The contents of this announcement reflect various technical and economic conditions, assumptions and contingencies which are based on interpretations of current market conditions at the time of writing. Given the nature of the resources industry, these conditions can change significantly and without notice over relatively short periods of time. Consequently, actual results may vary from those detailed in this announcement.

Some statements in this announcement regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance. Such forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. When used in this announcement, words such as, but are not limited to, "could", "planned", "estimated", "expect", "intend", "may", "potential", "should", "projected", "scheduled", "anticipates", "believes", "predict", "foresee", "proposed", "aim", "target", "opportunity", "nominal", "conceptual" and similar expressions are forward-looking statements.

Although the Company believes that the expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties, and no assurance can be given that actual results will be consistent with these forward-looking statements.

The contents of this release are also subject to significant risks and uncertainties that include but are not limited those inherent in mine development and production, geological, mining, metallurgical and processing technical problems, the inability to obtain and maintain mine licences, permits and other regulatory approvals required in connection with mining and processing operations, competition for among other things, capital, acquisitions of reserves, undeveloped lands and skilled personnel, incorrect assessments of the value of projects and acquisitions, changes in commodity prices and exchange rates, currency and interest rate fluctuations and other adverse economic conditions, the potential inability to market and sell products, various events which could disrupt operations and/or the transportation of mineral products, including labour stoppages and severe weather conditions, the demand for and availability of transportation services, environmental, native title, heritage, taxation and other legal problems, the potential inability to secure adequate financing and management's potential inability to anticipate and manage the foregoing factors and risks.

All persons should consider seeking appropriate professional legal, financial and taxation advice in reviewing this announcement and all other information with respect to the Company and evaluating the business, financial performance and operations of the Company. Neither the provision of this announcement nor any information contained in this announcement or subsequently communicated to any person in connection with this announcement is, or should be taken as, constituting the giving of investment or financial advice to any person. This announcement does not take into account the individual investment objective, financial or tax situation or particular needs of any person.

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Competent Persons Statements

Ore Reserves

The information in this announcement that relates to Ore Reserves is based on information compiled by Mr. Steve Craig, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Steve Craig is a full-time employee of Orelogy Consulting Pty Ltd and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". The information is extracted from the Ore Reserve announcement released 29 October 2018 and the DFS announcement released 11 March 2020 and are available to view on the Company's website at www.fyiresources.com.au . The Company confirms that it is not aware of any new information or data that materially affects the information included in the original announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original announcements.

Mineral Resources

The information in this report that relates to Mineral Resources is based on information compiled by Mr Grant Louw, under the direction and supervision of Dr Andrew Scogings, who are both full-time employees of CSA Global. Dr Scogings is a Member of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. He is a Registered Professional Geologist in Industrial Minerals. Dr Scogings 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 Competent Person as defined in the 2012 Edition of the "Australasian Code for the Reporting of Exploration Results, Mineral Resources, and Ore Reserves". The information is extracted from the PFS announcement dated 25 September 2018, Ore Reserve announcement released 29 October 2018 and the DFS announcement released 11 March 2020 and is available to view on the Company's website at www.fyiresources.com.au . The Company confirms that it is not aware of any new information or data that materially affects the information included in the original announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original announcements.

Metallurgy

The information in this report that relates to metallurgy and metallurgical test work is based on information reviewed and compiled by Mr Daryl Evans, a Competent Person who is a Fellow of the Australian Institute of Mining and Metallurgy (AusIMM). Mr Evans is an employee of Independent Metallurgical Operations Pty Ltd, and is a contractor to FYI. Mr Evans has sufficient experience that is relevant to this style of processing and type of deposit under consideration, and to the activity that he has undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves". Announcements in respect to metallurgical results are available to view on the Company's website at www.fyiresources.com.au . The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original announcements.

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HPA UPDATED DEFINITIVE FEASIBILITY STUDY

APRIL 2021

DEVELOPING A WORLD CLASS INTEGRATED HIGH PURITY ALUMINA (HPA) PROJECT

fyi Resources Limited

Please note:
This document is a summary only of the more comprehensive Updated DFS and is presented in outline form for market purposes.

This Updated DFS combines detailed technical and financial inputs that have -10/+15% degree of accuracy- suitable for this level of study

FYI Resources relies on the opinion of experts for certain contributions to this updated DFS.

The substantive DFS report contains more than 250 pages covering 20 sections as well as appendices volumes in excess of 1500 pages and other supporting documents.

This Updated DFS and supporting economic outcomes (NPV)is augmented from the detailed development work first published in FYI's initial DFS in March 2020.

UPDATED DFS SUMMARY

Introduction

FYI is pleased to provide an updated Definitive Feasibility Study (DFS) and revised net present value (NPV) for the Company's high purity alumina (HPA)project. This report provides a summary of the extensive process flowsheet development and supporting testwork regarding the Company's HPA project on which the report is based. FYI's HPA process is capable of producing high quality HPA in product specifications of 4N (99.99% Al_2O_3) and 5N (99.999% Al_2O_3) at a forecast lowest quartile capital and operating costs. The updated DFS and revised NPV has confirmed the project is not only technically and financially robust, but the development work completed since the initial DFS demonstrates continued project de-risking and positive value re-rating.

FYI's initial DFS established a set of financial results for the Company's flagship HPA project *(please refer to ASX announcement 11th March 2020)*. The initial DFS demonstrated the potential of the production flowsheet and the robustness of the Company's HPA strategy. The Updated DFS also outlined the clear pathway forward to developing an integrated HPA refining business wholly within the favourable operating jurisdiction of Western Australia. FYI has taken the foundation work of the initial DFS and improved the overall project metrics by a further 12 months of project improvements.

As a component of the initial and updated DFS, a Mineral Resource Estimate (**MRE**) for the Cadoux Kaolin Project (**Project**) for Proven and Probable reserves has been calculated, upon which the studies were based. The single source, fully integrated and environmentally low impact kaolin derived feedstock supports the long-life project and was the basis for the metallurgical test work, process design and engineering undertaken over the feasibility studies review period.

The combined updated DFS study and revised NPV demonstrates FYI's HPA project's outstanding investment case.

FYI 4N HPA produced from the Company's pilot plant

Key DFS assumptions and outcomes include:

DFS version	Initial	Updated
Discount rate	@10%	8%
NPV (post tax)	US$543m	US$1.014b
IRR (post tax)	46%	55%
Payback period (years) (post tax) (inc ramp up)	3.6	3.2
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Modelled DCF Life of Project (years)	25	25
Total Sales (initial 25 years) no escalation	US$4.7b	US$6.1b
Total Project net operating cash flow (25 years)	US$2.4b	US$3.3b
Annual EBITDA (average)	US$133m	$186m
Cash flow after finance and tax	US$88m	US$131m
Shares on issue (as at publication of the DFS)	212.77m	321.09m
Capex (US$)	US$189m	US$202m
Capex/t (US$/t)	US$23,575	US$20,200
Life of Mine C1 costs, FOB Kwinana (US$/t)	US$6,217	US$6,661
Tonnes Processed (initial 25 years) (kt)	189	247
Production Target (tpa) (initial 25 years)	8,000	10,000
Proven + Probable Ore Reserves (@ 24.8% Al_2O_3 kt)	3,205	3,205
Ore Reserve life (years)	25	25
JORC Resources (million tonnes)	11.3	11.3

FYI's Updated DFS highlights

Updated DFS NPV Comparison

The updated DFS and revised NPV outcomes are a result of studies undertaken to demonstrate FYI's HPA process flowsheet and design. FYI has enhanced and optimized the project flowsheet progressively since the release of the initial DFS with the continuity of technical input via the various team of expert study managers.

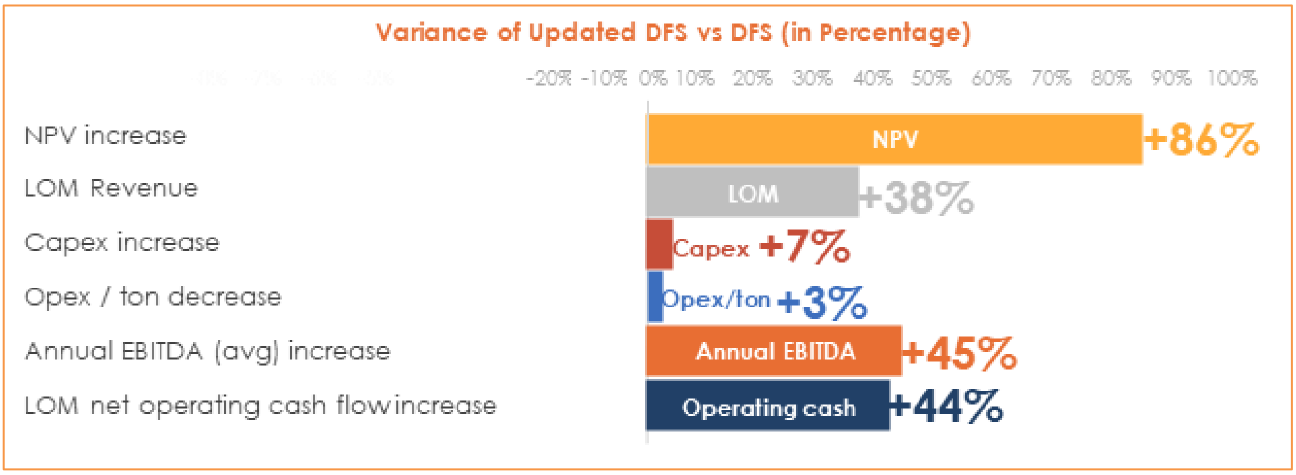
The initial and updated DFS and the revised NPV outcome are both considered to be in the range of -10%/+15% degree of accuracy. FYI considers the Company's updated DFS result to be in line with the International Cost Estimating and Analysis Association (ICEAA) Class 4 classification

FYI is particularly pleased with the revised NPV outcome. The recalculated NPV of US$1.014 billion demonstrates the quality of the project and the progressive improvement, de-risking and value increase achieved since the initial DFS. Additionally, limiting the nominal capex increase whilst maintaining the same opex per ton of HPA produced. The key operating and capital numbers are result of improvements achieved over the last 12 months of continued development.

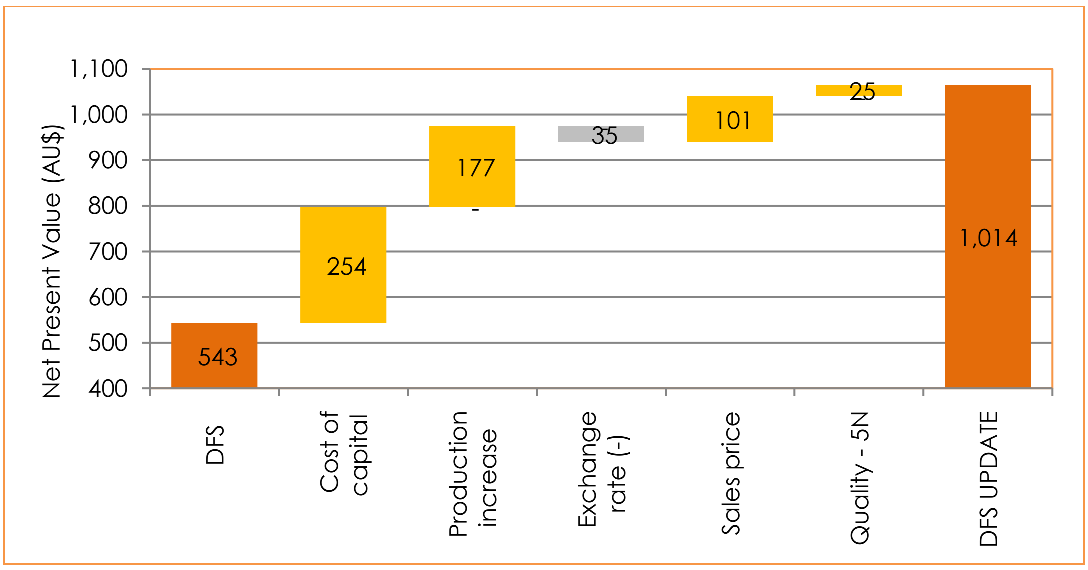
Major variances between the initial and updated DFS include:

Discount rate	Revised from 10% to 8% reflecting further Project development resulting in increased project confidence
HPA annual production	Revised from 8,000tpa to 10,000tpa based on expected HPA market growth
HPA product mix	Sales assumptions includes 8,500tpa of 4N and 1,500tpa 5N. FYI has demonstrated that 5N production is possible and may become a material contribution to future sales
HPA pricing	Product pricing has increased from US24,000/t (100% 4N) to an assessed basket price of US$26,400/t (85% 4N / 15% 5N) considered to be a conservative selling price
Exchange rate	The AUD:USD exchange rate has moved from 0.70 to 0.75
Capex	Exchange rate has impacted the project capex from US$189 to US$202 due to the AUD component of the cost base (expressed in US$)
Opex	Exchange rate has impacted the project opex from US$6,217/t to US$6,661/t due to the AUD component of the cost base (expressed in US$)

The results of the key metrics in FYI's updated DFS compared to the initial DFS results are shown graphically below:



FYI updated DFS reconciliation to the initial DFS result



Waterfall graph of FYI's Updated DFS variance to the initial DFS result

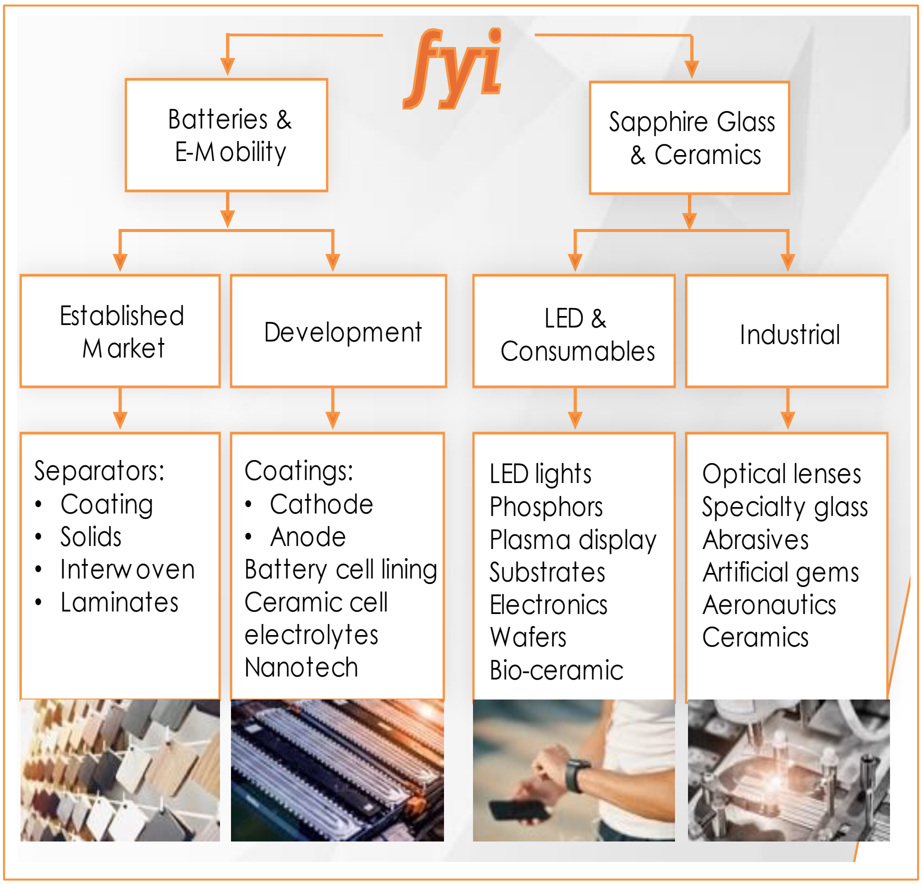
HPA Market Outline

FYI has the corporate objective of establishing the Company as a material global supplier of HPA. Timing for the development and commencement of the project production in the December quarter 2023 is anticipated to meet the uplift uplift in forecast demand for HPA in the 2023-24 period as a result of projected growth in Electric Vehicle (**EV**)markets and LED applications.

High purity alumina is an aluminum oxide (**Al_2O_3**) powder with a purity equal to, or greater than, 99.99% and is used in the production of many high-tech products.

The HPA market is split into two broad categories.

- Traditional applications include light-emitting diodes (**LED**), artificial sapphire glass screens (eg TV's, tablets, smartphone screens, electronics and aeronautics) and plasma screens
- E-Mobility (EV) and Battery and power storage applications which include use in Lithium-ion batteries, static power cells (power walls) and rechargeable batteries.



DFS Key Points and Assumptions

The DFS review assumes 25 years production from a potentially long-term (>50) years mine life. The updated DFS targets production of HPA commencing in Q4 2023.

Our production approach has two main integrated operating components in Western Australia:

1. the mining and beneficiation of high-quality kaolin on site at Cadoux to produce high grade aluminous clay feedstock for transportation to Kwinana for refining into HPA; and
2. the processing of the feedstock at the proposed Kwinana refining facility to refine the kaolin directly into high purity alumina.

Key economic assumptions for the updated DFS are as follows:

Currency	United States dollars Future sales contracts for HPA are usually based in US$. The financial model is prepared in US$. All A$ inputs are converted to US$ based on an exchange rate of A$1.00 = US$0.75.
Project life	25 years
Ore Reserves	Total Proven + Probable Ore Reserve alone supports a 25 years project. Mining will occur solely from the Proven + Probable Ore Reserve during the project life.
Corporate tax rate	30%
Government royalty	2.5%
Depreciation rate	20%
HPA Production	Steady state of production from Proven + Probable Ore Reserves over life of mine, with HPA production in the first year being 5,600 tonnes per year and thereafter 10,000 tonnes per year.
Shares on Issue	321,095,989 (as at time of publication of updated DFS)
NPV estimation discount rates	Financial modelling has been conducted at 8% discount rate (previously 10%).
Capital costs	US$202m, estimated at an accuracy of -5%/+15% as per recommended practice 18R-97 for process industries set out by AACE International for Class 3 estimates
Capex contingency	15% of capital cost
Sustaining capex	2% of capital costs, annually
Operating costs	US$6,661/t HPA produced; costs estimates have been developed from first principles with an accuracy of -5%/+15%
Mine closure costs	US$5m as per Mine Closure Plan
Plant maintenance	7.2% of capital costs
Sales price	US$26,400 per dry metric tonne average of 4N (8,500tpa) and 5N (1,500tpa) product. The average price was estimated dependent on product type, product quality, country, contact terms and sales quantity. The total revenue is constant based on the forecast average basket price and does not include any escalation in commodity price or inflation
Debt financing	Up to 70% of capex (depending on the finance structure)
Borrowing rate	7.5%, tenor 6.5 years and grace period 2 years
Upfront financing cost	8% (assumption)
Working capital	US$5m
Accounts receivable	30 days
Accounts payable	30 days

FYI Updated HPA DFS key economic assumptions

MATERIAL MODIFYING FACTORS

Proven and Probable Ore Reserve

FYI's integrated HPA process utilises feedstock from the Company's 100% owned ore source of aluminium rich clay. This wholly owned deposit exhibits chemical properties and physical characteristics that support the efficiency of the Company's flowsheet design to produce high quality HPA.

The Ore Reserve for the Cadoux Project feedstock was estimated in accordance with the JORC 2012 Code. The Ore Reserve estimate is based on the economically mineable portion of the Measured and Indicated Mineral Resource Estimate for the Cadoux kaolin deposit, applying modifying factors including metallurgical test work, processing and engineering designs for the Cadoux and Kwinana plants and their associated infrastructure, cost estimation, marketing and pricing research.

The Proven and Probable Ore Reserve for the project is calculated at **3.2 Mt @ 24.8% Al_2O_3** and is all contained within the area of the Company's granted Mining Lease (M70/1388)(see ASX announcement 11 March 2020)

The Ore Reserve is based on the Mineral Resource Estimate (**MRE**) totaling **11.3 Mt @ 22.5% Al_2O_3** as per table below (please see ASX announcement 11 March 2020).

Deposit	Resource Category	Volume Cubic Metres	Metric Tonnes (Dry)	Al_2O_3 Grade (%)	Fe_2O_3 Grade (%)	K_2O Grade (%)
Cadoux	Measured	292,300	480,500	23.56	1.24	1.18
	Indicated	3,501,300	5,742,700	23.36	1.19	1.09
	Inferred	3,111,700	5,045,500	21.45	0.59	0.91
All Categories	**Total**	**6,905,300**	**11,268,700**	**22.51**	**0.92**	**1.02**

FYI Mineral Resource Estimate (as at 11 March 2020)

The table below summarises the Proven and Probable Ore Reserve.

Category	Ore Kt	Al_2O_3 %	Fe_2O_3 %	K_2O %	TiO_2 %
Proved	290	24.9%	1.1%	0.5%	0.8%
Probable	2,914	24.8%	1.1%	0.6%	0.9%
Total	**3,205**	**24.8%**	**1.1%**	**0.5%**	**0.9%**

Updated Ore Reserve (as at 11 March 2020)

Mining

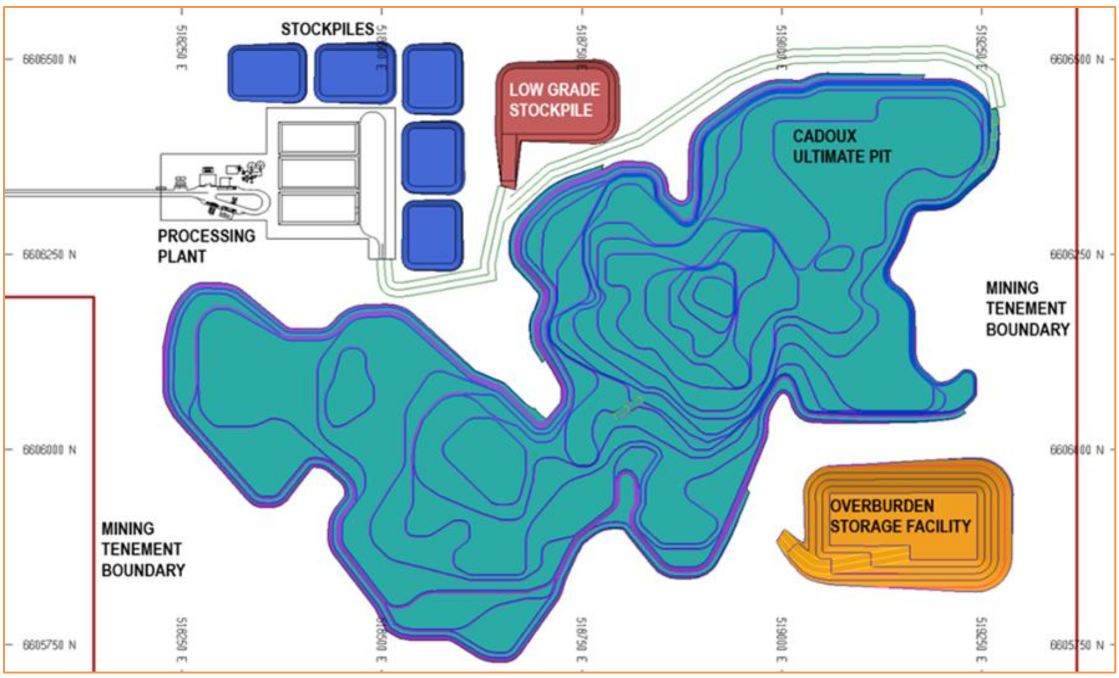
The mining operations at Cadoux will be by conventional open pit. This method is suited to the project's shallow, flat lying orebody. The kaolin orebody is soft and amenable to free digging (i.e. no drilling and blasting). Staged block mining and continuous backfilling during operations will minimise the disturbance footprint of the small-scale mining as well as limit the environmental impact at the site. The selected mining method has the following steps;

- Overburden is excavated with trucks and an excavator until the top of the orebody is exposed, with some areas potentially requiring hard ripping;
- Exposed ore is mined by excavator then hauled by trucks either directly to the beneficiation plant or to the Run of Mine (ROM) stockpile for future processing;
- Overburden and rejects are placed back into the previously excavated sections of the pit as soon as they become available for backfilling. (i.e. have enough stand off from the mining face and are completely exposed at the bottom).

The mining will be managed by a contractor on a campaign basis. Campaign mining is the most effective scheduling due to the very low tonnage requirements relative to a typical continuous mining operation. The mine will typically operate on a 3 month single campaign per year which will provide enough run of mine material (average 63,000tpa) to support a 3 year feedstock supply. This mining and stockpiling approach presents significant operational efficiencies and cost benefits as well as ensuring feedstock quality is maintained through the use of selected grad stockpiles.

The various activities of the mining operation consist of:

- Clearing of vegetation and topsoil stripping and storage;
- Haul road and ramp construction;
- Grade control;
- Establishment of any required pit bunds;
- Excavating and hauling overburden material to surface storage facilities or backfilling of mined out voids wherever ore mining has been completed;
- Ore mining and hauling to ROM stockpiles;
- Rehandling of Cadoux plant rejects, tailings;
- Recycling of treatment water;
- Stockpiling of high value silica;
- Rehabilitation works and pit dewatering when required



FYI's Cadoux site layout with final pit design

Processing & infrastructure

The Company's integrated HPA production consists of two operating sites:

- the mining and beneficiation of kaolin for feedstock at Cadoux; and
- the processing and refining of feedstock for HPA production at Kwinana.

The HPA refining process (designated site at Kwinana) is specifically designed around FYI's pilot plant demonstrated process flowsheet. FYI's HPA process is adapted to refine ultrapure, high quality, low deleterious and low environmental impact HPA. The redefined and innovative process is designed to utilise conventional "off-the shelf" technologies and equipment. The process emphasis has been directed at achieving the target HPA product (> 99.99% Al_2O_3 grade) as well as production process efficiencies, appropriate capital control, environmental sensitivity, safety and quality of product.

The basis of the updated DFS contemplates an initial supply 44,000tpa of beneficiated ore being transported from Cadoux to the Kwinana HPA refinery site. FYI's Kwinana facility will refine the beneficiated ore to produce 10,000 tpa of market ready HPA in both 4N (8,500tpa) and 5N (1,500 tpa) purity specification. The HPA will then be packaged to specific customer requirements for transportation to Fremantle port for export.

It is anticipated that the Kwinana refinery commissioning will take place ahead of commercial production being declared. A staged ramp-up of production rates (commencing at 5,600tpa for the first year) is calculated in the cashflow forecast until nameplate capacity (10,000 tpa) is achieved for 12 months. This ramp up period is reflected in the Company's financial forecast.

The HPA refinery is designed for efficient semi-autonomous production allowing for further increases in production capacity. There are no annual incremental production increases included in the Company's financial modelling and forecast for the updated NPV (i.e. the HPA production profile is kept flat for 25 years).

Metallurgy and Process Design

FYI's HPA flowsheet design has been the subject of extensive research and development over numerous phases of detailed technical studies at various study levels including scoping, pre-feasibility (PFS) and DFS level. These studies have increasingly demonstrated the high level of efficiency and commercial attributes of the Company's process flowsheet. FYI has supported the updated DFS with multi-stage pilot plant trials resulting in metallurgical and testwork data confirming the efficiency and effectiveness of the process flowsheet. The following test work was completed as input references to the updated DFS:

- bench scale;
- bench scale variability;
- locked cycle(s);
- mass balance and load factor studies;
- variability and process optimizing studies;
- waste recycling and legacy attributes;
- energy loads and variability testwork;
- pilot plant trials (3 separate trial operations).

All metallurgical test work has been successful with targeted HPA product grades being achieved in excess of 99.99% (4N) and ranging up to 99.999% (5N) Al_2O_3 (refer ASX announcements dated 6th November, 11th December 2019 and 11th February 2021).

The process validating and demonstrating the robustness and effectiveness of FYI's flow process flowsheet incorporated the following testwork into the updated DFS as key data references:

- To test production extremes (best case / worst case), the conducting of variability test work demonstrated robustness and reliability of feedstock consistently producing HPA grades of

99.99% Al_2O_3 or higher across the feedstock supply. The sample selection feedstock was sourced from the first three years of life of mine ore.

- The series of locked cycle test work was critical to the project development as it confirmed the process flow sheet and impurity mass balances. In achieving grades of 99.998% (5N) Al_2O_3 (see ASX release 11th February 2021) the efficiency of the flowsheet is demonstrated.

- FYI's fully owned, bespoke designed pilot plant was constructed to replicate the Company's HPA process flowsheet in detail. As a result, the test facility was able to demonstrate on a continuous "end to end" basis the materials handling and other efficiencies and effectiveness of actual physical production. The updated DFS utilised the results of three separate pilot plant trials that verified the operating parameters.

As a consequence of the above phases of R&D, all metallurgical testwork steps in the development of the HPA flowsheet were examined, refined and / or improved.

All analytical results of the various test work were check analysed and verified by the independent laboratory services EAG Laboratories in New York, USA.

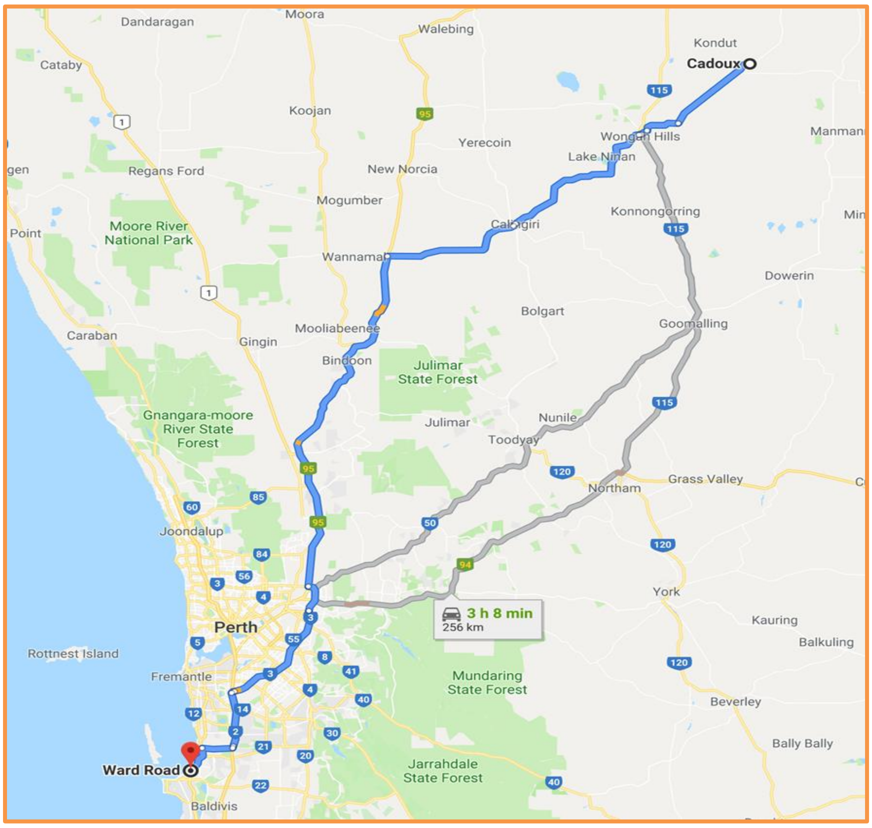
FYI's process flowsheet was demonstrated through the pilot plant operation to provide confidence in the deliverability and operability of the three main processing stages – beneficiation, leach and precipitation / purification. The pilot plant validates the operating and design parameters used in this updated DFS.

An Independent peer review, conducted by Dr Leon Lorenzen, concluded that that test work completed on the initial DFS was well designed, thoroughly executed and well reported. This report is included in the substantive DFS report.

The results of the metallurgical test work have been used by the engineering contractor to establish the flowsheet, Process Design Criteria and other operating parameters.

Transport and Logistics

Freight of the beneficiated kaolin from the Cadoux Kaolin mine to the proposed Kwinana refinery will be via the existing road network. The proposed route is via Wongan Hills to utilise the Great Northern Highway onto Roe Highway and through to Kwinana. The round-trip distance is 590 kms.



Transport route Cadoux - Kwinana

For transport, a single twin-steer prime mover and pneumatic tank pocket road-train combination capable of hauling 57 tonnes of kaolin is required. For the initial and updated DFS, a b-double combination with a combined capacity of 68 m^3 has been selected.

Operating two 12 hour shifts five days per week, trucking movements will provide sufficient total weekly capacity of feedstock to Kwinana. Allowances have been calculated to provides a suitable amount of additional supply capacity in the event of any unforeseen delays.

For export freighting of the finished product, the bulk density of HPA is light. The study assumes that 593 x 20’ and 334 x 40’ containers are loaded from Fremantle port annually. This is based on a compacted bulk density of 0.444g/ml. The container costs are based on providing side-loader trailer equipment to drop off and pick up containers on a drop and swap scenario (empty for full). Side-loader trailer equipment removes the need for levelling docks in the refinery and any onsite container handling equipment.

Port service charges are for the use of the Fremantle port. FYI is proposing a dedicated wharf services facility. One of the main benefits is having the ability to stage export containers within the port precinct. Staging enables containers to be ready on time for vessel arrival and handling can be accomplished within off-peak hours.

All sales are based on a Free on Board (**FOB**) basis. However, FYI has studied the freight forwarding costs in order to understand the cost of the total supply chain. If a customer requires the product to be shipped Cost Insurance Freight (**CIF**), FYI is able to recover this through an increased sales price to take into account these extra costs. The Company gathered the CIF cost information for the major transport routes into Asia, Europe and North America.

FINANCIAL METRICS

Economic

The Company's updated DFS financial projections (**Base Case**) was modelled using a conservative market approach of an average sales price of US$26,400 per tonne of HPA produced of a combination of 4N and 5N HPA.

The revised net present value (**NPV**) was calculated on the basis of a forecast post-royalty, post-tax, 70% debt and 30% equity-funded, with real cash flows and an 8% discount rate (after tax).

The revised NPV analysis incorporated the Cadoux kaolin reserve and a project life of 25 years. In the first year it is assumed that the Company will produce and sell 70% (7,000t HPA) of the annual capacity. Long term annual production was then forecasted to rise to an average of 10,000t pa.

The Kwinana HPA production forecast schedule assumes:

- 8,5000 tpa of 4N long term production (commencing at 5,950 tpa in year 1)
- 1,500tpa of 5N long term production (commencing at 1,050 tpa in year 1)

Capital costs estimate

The Project capital cost estimate for the Project is based on an Engineering, Procurement and Construction Management (**EPCM**) execution schedule for both the Cadoux mine site and the Kwinana refinery.

Both estimates have been compiled in separate estimating spreadsheets. This is due to the geographical differences between the two sites being that one is a remote site and one is located within the Perth metropolitan area. This geographical difference affects labour rates and rosters, mobilisation and demobilisation, productivity, transport and other costs to a lesser effect.

The project estimate includes all costs associated with process engineering, design engineering, drafting, procurement, construction and commissioning of the plant and refinery facilities and associated infrastructure, first fills of plant reagents and consumables, and spare parts to design, procure, construct and commission all of the facilities required to establish the Project.

The estimate accuracy for the updated DFS is -10% / +15% based on the following:

- Utilisation of engineering quantities and design drawings from similar projects;
- Budget quotations obtained for major items and site-based contract works;
- The capital cost estimate was segmented using a conventional work breakdown structure (**WBS**) by process area;
- The capital cost estimate was broken down into commodity components (i.e. equipment, steel, concrete etc.).

In addition to the general maintenance provisions addressed in the operating cost estimate, there is also a requirement for "sustaining" capital expenditure over the life of the Project. The estimated sustaining capital or deferred costs are based on industry experience and are US$4M per annum, or 2.0% of the capital expenditure estimate.

Operating costs estimate

The operating costs for the Project are based on the aggregation of FYI's two Project sites:

- **Cadoux** – the mining and beneficiating of 63,000 tpa of kaolin to produce 44,000tpa feedstock
- **Kwinana** – processing of 44,000tpa feedstock to produce 10,000 tpa of HPA.

Various utilities and plant infrastructure such as water, air services, fuel, power supply and distribution, roads, communications and site buildings will support the Project.

The operating cost is expressed in Australian dollars and is exclusive of Goods and Services Tax (GST). It is based on costs prevailing in the Australian minerals industry and conforms to a Class 4 estimate.

The operating cost reflects of the plant throughput, the process design criteria and steady state mass and energy balance model based on the metallurgy testwork.

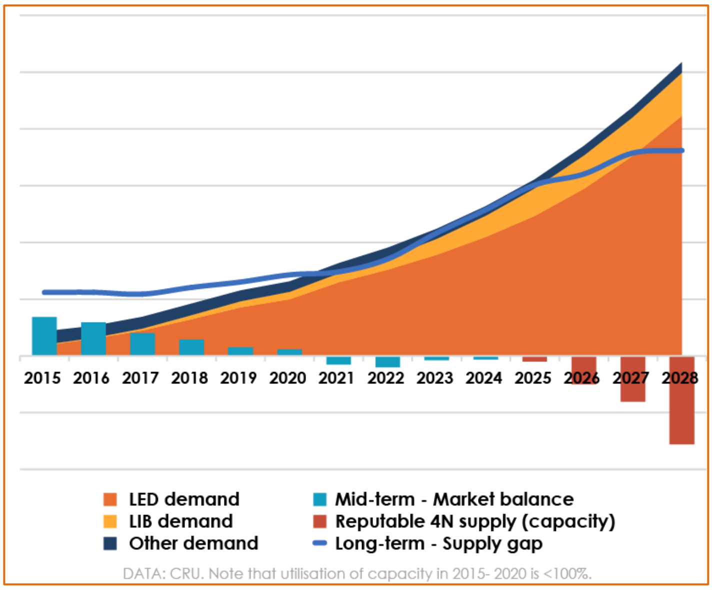
Reagent consumption rates have been calculated on the basis of the mass and energy balance model undertaken and validated from the results of the three separate pilot plant trials.

HPA Product Marketing

The HPA market is opaque. The majority of HPA is sold under contract. FYI has mandated independent sector and industry research from two leading groups Commodity Research Unit (**CRU**) and Allied Market Research (**Allied**) as well as undertaken our own separate in-house marketing studies with potential customers including a series of "one on one" meetings directly with industry participants.

The following marketing highlights are based on the independent commodity research groups findings as well as FYI's internal research:

- HPA has a strong demand outlook with the HPA global market expected to increase from approximately 30,000tpa in 2020 to approximately 104,000tpa in 2028, driven primarily by strong growth in demand for HPA as a lithium-ion battery (**LIB**) separator coating.
- The Company is developing a consistent, high quality product delivered by a reliable quality and assurance process.
- HPA pricing is determined by product purity, the physical characteristics of the products, ability to deliver consistent product quality and the end-use application of the HPA.
- The strong demand outlook and rising cost inputs are expected to place upwards pressure on prices. The main downside risks are increased competition from Chinese producers and changes to technology which reduce HPA intensity in manufacturing processes. Chinese material tends to be of lower quality than that produced by the established companies outside of China.



HPA market demand and deficit forecast 2015 to 2028 – CRU HPA Report 2021

In terms of sales volumes, assuming unconstrained by supply of 4N+ HPA, demand is forecast to grow at a CAGR of 18.7%. Pricing has been noted by CRU to be in the range of:

- US$15/kg for mis-represented, off-specification product largely centering on the Chinese domestic market
- US$56/kg for premium, high quality and reliable supply and specialist applications
- US$100/kg (up to) for spot and small parcels

FYI has been developing positive market engagement with potential customers regarding HPA off-take. The Company has produced sufficient trial samples during the pilot plant program to provide to potential customers for testing and evaluation with a view to securing off-take agreements to support the Project.

Description of High Purity Alumina and key uses

High-purity alumina is a crystalline white powder made from almost pure aluminium oxide (**Al_2O_3**). Commonly, HPA is defined as Al_2O_3 which is >99.99% pure. HPA products are generally classified by purity:

- 99.99% = 4N (equivalent to ≤100ppm impurities)
- 99.999% = 5N (equivalent to ≤10ppm impurities)
- 99.9999% = 6N (equivalent to ≤1ppm)

HPA is produced, as a final product, in powder, pellet or granular form, depending upon the end-use. Various end-use applications have different physical and chemical tolerances and requirements.

HPA is a versatile product with many broad uses. Some of the more common traditional uses include as a ceramic for producing substrates used in LED lighting and electronic applications, high strength scratch-resistant glass, as a fire retardant and as a fine polishing agent.

As HPA becomes more accessible and specifications of certain applications increase – with demands on higher quality, HPA has found uses in new high-tech applications such as batteries and energy storage and high-grade ceramic applications.

Drivers of demand

Market demand	Production process	End-use application	End-use sectors
HPA demand	Synthetic sapphire production	LED & semiconductor substrates Scratch-proof glass	Lighting, automotive, LED signs, electronics, tablets, smart phones, watch faces
	Direct use in manufacturing process	Lithium-ion battery (**LIB**) separator coating	Electric vehicles consumer goods
		Phosphor coating	Fluorescent lighting

HPA market demand drivers

The demand for high-purity alumina has gained traction in recent years due to growth from a broad array of applications including LED substrates, LIB separator coating, electronic displays, automotive components, and medical instrumentation and bio-medical replacement parts. This trend is anticipated to continue with the growth in the adoption of HPA by end users and emerging technological developments. The HPA global market is expected to increase from around 30,000tpa in 2021 to 104,000t in 2028, (Source: CRU HPA Market Report, March 2021, Global High Purity Alumina Market.

4N HPA accounts for the largest share of the HPA market demand, although more specialist applications, such as high-quality microscope glass, are likely to utilise higher-specification HPA products, such as 5N. The 5N market is relatively small at approximately 4,000tpa, however it is growing at a forecasted growth rate of ~22.0% CAGR the period 2021 – 2028.

Category	High Purity Alumina Market, by Application, 2020–2028 (Ton)									
	2020	2021	2022	2023	2024	2025	2026	2027	2028	CAGR (2020-2028)
LEDs	25,897	32,779	37,475	43,001	49,474	57,097	67,466	79,966	95,042	17.6%
LIB separators	5,832	7,147	9,378	12,531	16,798	21,623	26,199	30,329	33,661	24.5%
Other semiconductors	754	831	916	1,010	1,112	1,224	1,347	1,480	1,626	10.1%
Phosphor applications	3,038	2,616	2,241	1,920	1,154	389	259	172	115	-33.6%
Sapphire glass	1,432	1,553	1,674	1,801	1,988	2,199	2,396	2,613	2,853	9.0%
Polishing & CMP slurries	1,512	1,588	1,667	1,750	1,838	1,930	2,026	2,128	2,234	5.0%
Total	**38,465**	**46,514**	**53,351**	**62,013**	**72,364**	**84,463**	**99,693**	**116,688**	**135,531**	**17.0%**

HPA market by application, 2020 - 2028

Adopted Pricing

FYI has adopted a basket methodology to establish a conservative and realistic HPA sales price for forecasting purposes in the updated DFS financial model. FYI are assuming a conservative blended price of U$26,400 for both 4N and 5N sales into the updated DFS cashflow model.

This methodology includes sourcing of price indications from the following sources:

- independent price forecasts and price revealing by industry research experts including CRU and Allied;
- FYI mandated CRU for HPA market report with a focus on supply, demand and producer costs - published March 2021;
- web-based commodity trading platforms;
- purchasing of product from an established commodity retailer / trader; and
- FYI's own market intelligence studies - having direct face to face meetings with small and large manufacturers and traders in China, Japan and South Korea.

Pricing information used for the updated DFS was derived from:

- CRU and Allied research reports and presentations including price forecasts for the period 2021 to 2028;
- March 2021 pricing on commodity trading platforms for HPA was evidenced in retail spot prices for 4N ranging from US$15,000/t (for miss-represented and off-specification product focused on the Chinese market) to US$58,000/t (for premium, high quality and reliable supply and boutique applications);
- Invoiced price for HPA of US$100,000/t (used in independent metallurgical test work and verification of purity);
- Actual sales and pricing records from commodity trading platforms (pricing up to US$100kg – for small volume parcels)
- Canvassing of approximately 30 separate groups indicated the price range for 99.99% HPA was between US$22,000/t (China) and US$37,000/t (South Korea).

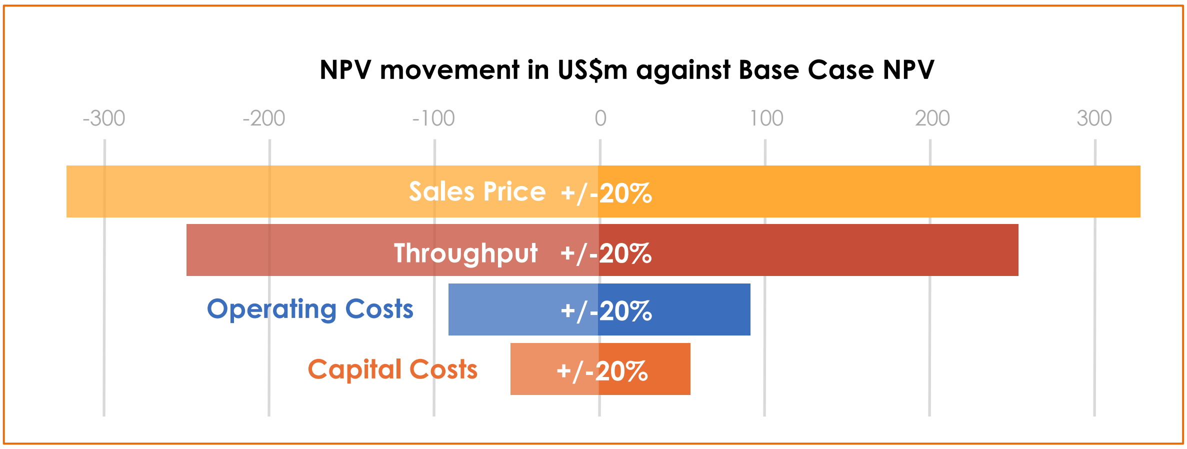
In order to calculate the HPA price for the updated DFS and revised NPV, FYI assumed combined production scenario of 8,500tpa of 4N specification and 1,500tpa of 5N. FYI determined a basket price of a flat US$26,400/tpa.

This adopted price is well within the 4N and 5N pricing guidance from the Company's market forecasters. FYI considers the average US$26,400/t basket price (combined price) to be conservative. The pricing methodology takes in account the price difference of HPA between diverse countries such as China, South Korea/Japan and markets such as end-users versus traders.

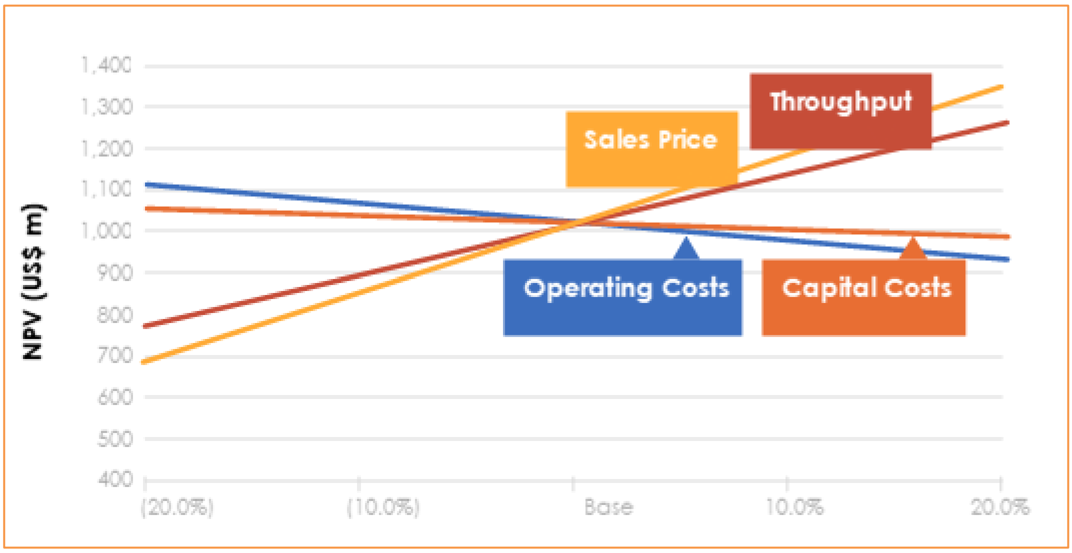
Sensitivities

The effects of varying a number of key drivers of cost and revenue have been modeled to assess their effects on the project value and the earnings sensitivities.

The Project's sensitivity analysis was revised to reflect the change in the applied discount rate to 8% (from 10% in the initial DFS). The variance to the project's inputs by +/- 20%, is shown below represented in a Tornado Graph. The Project is highly sensitive to the sales price, throughput and less to Operating and Capital Costs.



Tornado graph of FYI updated DFS sensitivity

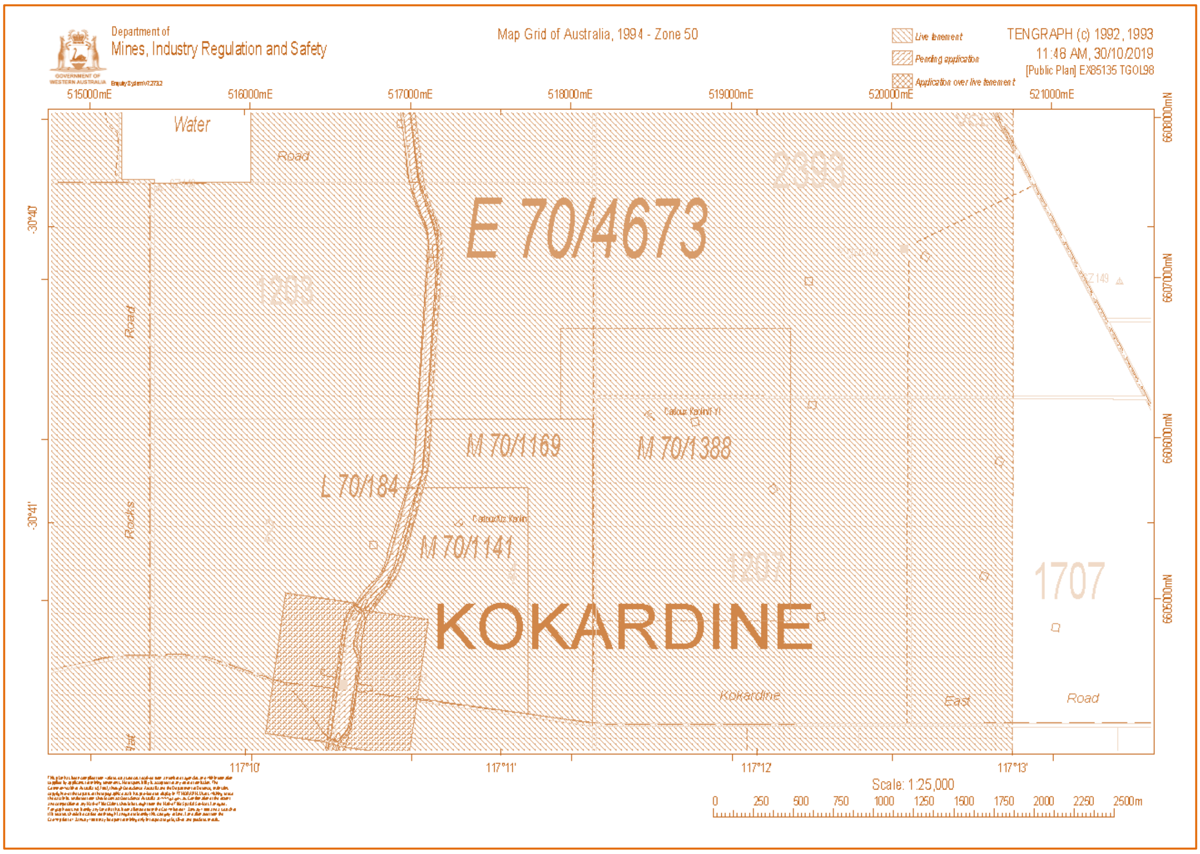


Spider graph of FYI updated DFS sensitivity to key inputs

Legal

FYI Resources Ltd, listed on the ASX, is the head company which holds 100% of the shares in the subsidiary Kokardine Kaolin Pty Ltd (**KKPL**). All HPA project development activities are accounted through KKPL thus all assets such as tenements, fixed assets and intellectual property are held in KKPL. Commercial contracts with regard to the development, construction and operation of the project are executed by KKPL. FYI, as a holding company, has a corporate function in managing, provision and allocation of capital, ASX compliance and ownership of its subsidiary including the project.

The HPA project tenement plan is presented below.



Tenement overview (E70/4673 & M70/1388).
Note: M70/1166 & M70/1141 are not owned by FYI and are not part of FYI's HPA project

Exploration license E70/4673 and Mining license M70/1388 are held by KKPL, a 100% wholly owned subsidiary of FYI Resources Ltd.

Environmental

All primary environmental approvals have been obtained and the proposed secondary approvals will be commenced when the project implementation starts. Approvals are targeted to be in place before the commencement of construction. Environmental management plans will be prepared for construction and operational phases of the project.

The Company is committed to compliance and its statutory requirements, continuous improvement and the minimising environmental and social impacts as a result of operating the project. From a primary approval point of view, with respect to Cadoux, the Mining Proposal (**MP**) including Mine Closure Plan (**MCP**) has been approved. The refinery site in Kwinana is already approved under Ministerial Statement 863 – 2011.05.26 Rockingham Industrial Zone Strategic Environmental Assessment (formerly IP14).

Social

Stakeholder engagement and consultation activities for the Project commenced in 2017 and are ongoing. The Company has identified and met with the following stakeholders: Western Australian Government agencies, local government, Aboriginal organisations, landholders, industry, non-government organisations, traditional owners and adjacent tenement holders. No significant issues have been raised to date and it has been acknowledged by the stakeholders that the project will create local and regional benefits in the Cadoux and Kwinana area.

The Cadoux mining lease is positioned 100% on freehold land or road reserves which extinguishes native title over the area of the mining lease. However, the mining lease is situated within the broader area covered by the Ballardong People Indigenous Land Use Agreement (ILUA). As required, by condition 6 of the mining lease, FYI has: (1) signed a Noongar Standard Heritage Agreement with the Ballardong People on the 15th of July 2019; and (2) provided the Department of Mines Industry, Regulations and Safety (DMIRS) with the required Statutory Declaration notifying DMIRS of the signed NSHA. Under the NSHA the Company will need provide the Ballardong People with an Activity Notice pursuant to clause 8.2 of the NSHA agreement before the commencement of mining.

FYI considers the traditional owners as an important stakeholder of the project and has actively been in discussion with the South West Aboriginal Land & Sea Council (**SWALSC**) who acts on behalf of the Ballardong People. FYI intends to keep SWALSC and the traditional owners up to date on the Project and discuss any future employment or business opportunities to maintain and develop this important relationship.

The Company understands that expectations regarding the types and level of stakeholder engagement are not static and will shift according to the Project phase and the social, economic and environmental conditions of the day. To maintain an effective Stakeholder Engagement Strategy and maintain its relevance over the long term, FYI will maintain a Stakeholder Consultation Database and undertake regular review of the strategy as part of its Environmental Management System. FYI aims to remain alert and sensitive to any changes in public perception of the Project and will continue to investigate, define and discuss any issues with relevant stakeholders.

WA Government Support

FYI received the support of the Premier of WA, who is also the Minister for State Development, Jobs & Trade, requesting the Department of Jobs, Tourism, Science and Innovation (**JTSI**), to provide lead agency services to the Project. This will assist with Project development and the timing of the required approvals.

Following discussions with DMIRS, the Company was informed that a WA Government royalty rate of 2.5% (instead of 5%) will be applied to the project.

Further Opportunities

FYI has delivered what it believes is an attractive business case as outlined in the updated DFS. During the DFS study period, the Company identified a number of areas where further opportunities may be gained to improve the overall HPA project financial metrics. During the next phase of development and leading up to the final engineering design, FYI will concentrate on improving the economics of the project.

Areas for further opportunities that have been identified include:

- Leveraging off the installed infrastructure and services in the Kwinana Industrial Zone (KIZ) for capital and operating cost benefits
- Sourcing cheaper major inputs and consumables
- Refining the EPC cost and delivery function
- Continue developing potential additional revenue streams
- Further investigation on materials of construction and handling

Project Funding

FYI intends to finance a portion of the HPA project. The final project financing package will include a combination of funding options including equity, debt, off-take advance, ESG financing, export credit finance or Joint Venture contribution at project level. The final funding package will, in most likely event, be a combination of these options. The Company will seek to minimise shareholder dilution, while taking a prudent and measured approach to the funding options the Company will deploy.

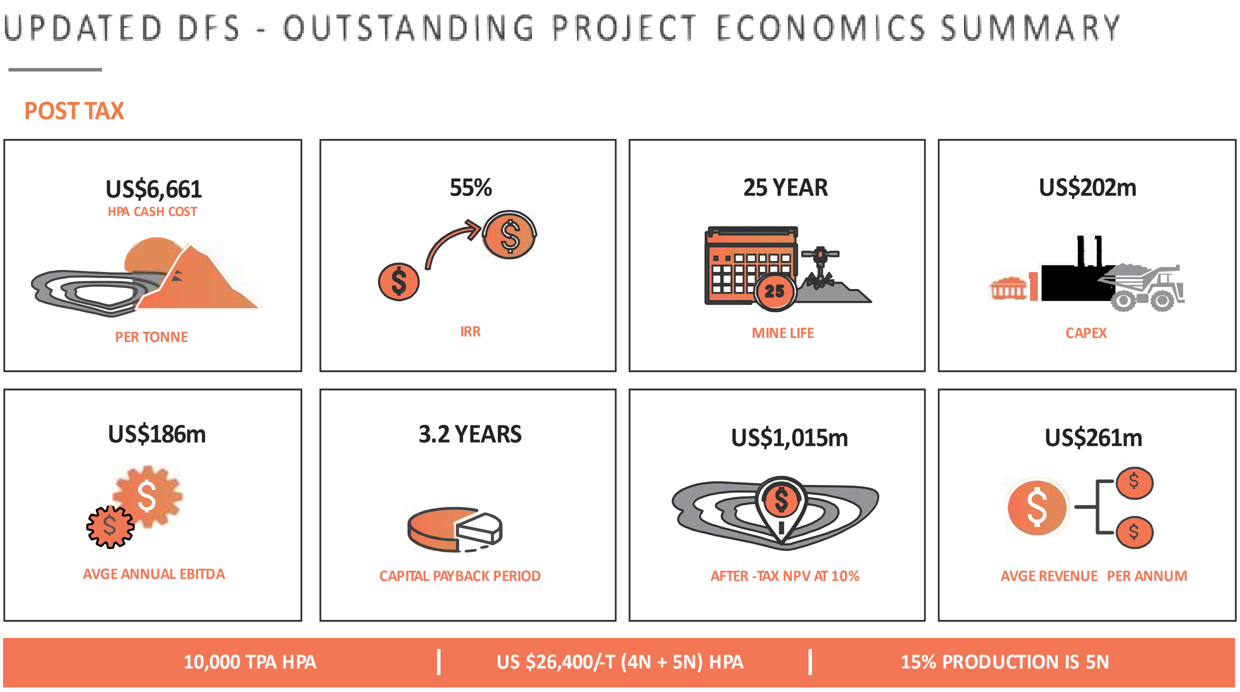
Next Steps

A project implementation schedule has been established to maintain the project development timeline. The key items within the critical path to production are included below:

- Continue HPA product qualification, customer discussions and MOU and binding off-take Agreements
- Advance ongoing financing and credit discussions
- Continue detailed engineering
- Customer lead HPA end product development
- Finalise EPCM structure & award
- Complete final project approvals and permitting
- Commence Early Works Construction activities
- Initiate long lead order items to synchronise with the construction timetable
- Continue to assemble the project delivery team

FYI UPDATED DFS SUMMARY

Table of Contents



Cautionary Statements

Substance of updated DFS

The updated DFS is a study into the potential viability of the Company's innovative design HPA Project. FYI produced an initial DFS which set the parameters (technical and economic viability) for an outstanding project as outlined in the financial results. The updated DFS is based on the assumptions outlined in that document. These include assumptions about the availability of funding. While the Company considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by this PDFS will be achieved.

To achieve the range of outcomes indicated in the DFS, funding in the order of US$202 million will likely be required. Investors should note that there is no certainty that the Company will be able to raise the amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of the Company's existing shares.

It is also possible that the Company could pursue other "*value realisation*" strategies such as a sale, partial sale or joint venture of the Project. If it does, this could materially reduce the Company's proportionate ownership of the Project.

Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the DFS.

General and Forward-Looking Statements

The contents of this document reflect various technical and economic conditions, assumptions and contingencies which are based on interpretations of current market conditions at the time of writing. Given the nature of the resources industry, these conditions can change significantly and without notice over relatively short periods of time. Consequently, actual results may vary from those detailed in this document.

Some statements in this document regarding estimates or future events are forward-looking statements. They include indications of, and guidance on, future earnings, cash flow, costs and financial performance. Such forward-looking statements are provided as a general guide only and should not be relied on as a guarantee of future performance. When used in this document, words such as, but are not limited to, "*could*", "*planned*", "*estimated*", "*expect*", "*intend*", "*may*", "*potential*", "*should*", "*projected*", "*scheduled*", "*anticipates*", "*believes*", "*predict*", "*foresee*", "*proposed*", "*aim*", "*target*", "*opportunity*", "*nominal*", "*conceptual*" and similar expressions are forward-looking statements. Although the Company believes that the expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties, and no assurance can be given that actual results will be consistent with these forward-looking statements.

The contents of this document are also subject to significant risks and uncertainties that include but are not limited those inherent in mine development and production, geological, mining, metallurgical and processing technical problems, the inability to obtain and maintain mine licenses, permits and other regulatory approvals required in connection with mining and processing operations, competition for among other things, capital, acquisitions of reserves, undeveloped lands and skilled personnel, incorrect assessments of the value of projects and acquisitions, changes in commodity prices and exchange rates, currency and interest rate fluctuations and other adverse economic conditions, the potential inability to market and sell products, various events which could disrupt operations and/or the transportation of mineral products, including Labour stoppages and severe weather conditions, the demand for and availability of transportation services, environmental, native title, heritage, taxation and other legal problems, the potential inability to secure adequate financing and management's potential inability to anticipate and manage the foregoing factors and risks.

All persons should consider seeking appropriate professional legal, financial and taxation advice in reviewing this document and all other information with respect to the Company and evaluating the business, financial performance and operations of the Company. Neither the provision of this document nor any information contained in this document or subsequently communicated to any person in connection with this announcement is, or should be taken as, constituting the giving of investment or financial advice to any person. This document does not take into account the individual investment objective, financial or tax situation or particular needs of any person.

1. Project Description and Development Approach

Introduction

FYI has the corporate objective to address the supply in the rising demand for HPA by bringing the refining process, via innovation, into the 21st century.

The major challenges in the current refining methodology of HPA include:

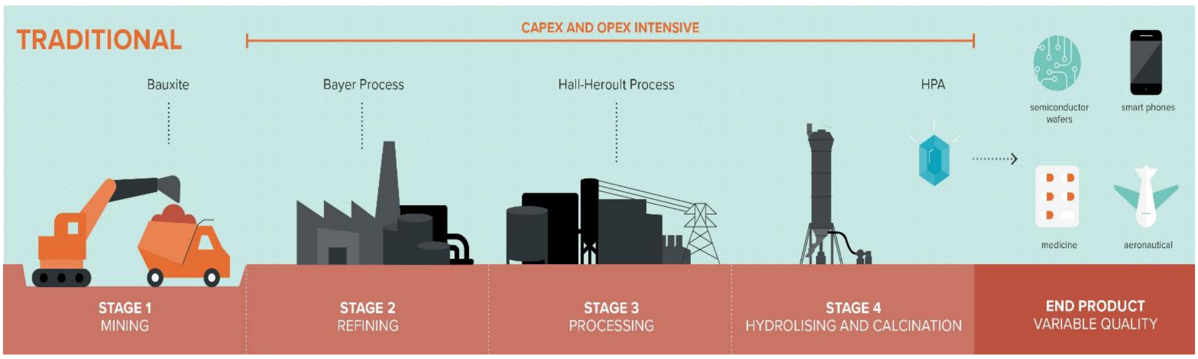
- decreasing product quality and purity assurance
- increasing supply disruptions
- Mis-represented quality and specifications by some suppliers
- increased customer frustration, product shipment returns and waste
- the rising costs of production
- high environmental impact and carbon footprint from feedstock mining

The traditional manufacturing of HPA involves a >100-year-old two stage process (Bayer - refining and Hall–Héroult - smelting, see cartoon diagram below). This combined refining procedure requires multiple stages of processing and expensive feedstock (i.e. already refined aluminium metal ingots), that is capital intensive, has high operating costs, includes intensive labour and energy costs and, depending on the jurisdiction in which the HPA is processed, a restrictive overlay of environmental conditions and stringent government regulations.

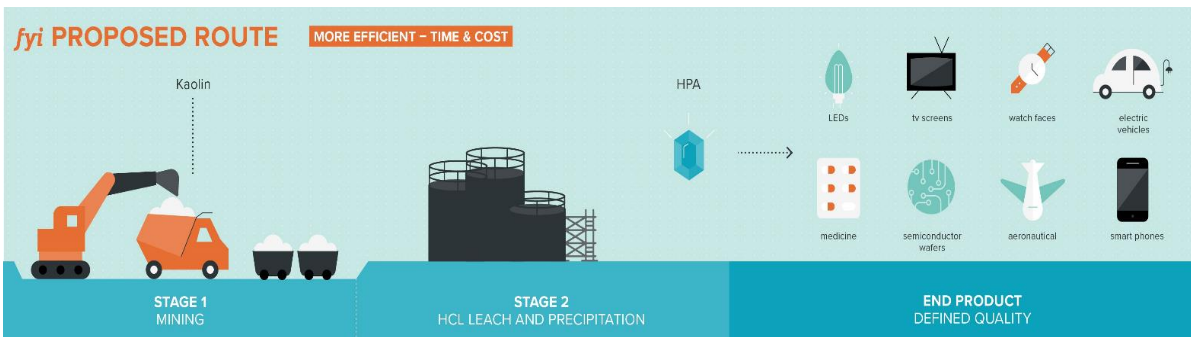
In the traditional process, expensive refined aluminium metal and alcohol is synthesised to produce high purity aluminium alkoxide, which is then hydrolysed to produce hydrated alumina. HPA is then obtained by calcination.

FYI intends to innovate the manufacture of HPA by using high grade aluminous clay (kaolin) as an alternative feedstock to supply the Company's refinery. FYI's process flowsheet involves a low capex, low opex refining method involving simple chemistry (hydrochloric acid leach and precipitation process) developed specifically for the Project's Cadoux beneficiated ore (feedstock).

FYI has adapted and refined a process design flowsheet that will result in the production of more commercially reliable HPA at a fraction of the capital and operating costs of the traditional production route via bauxite.



Traditional bauxite sourced process route



FYI kaolin sourced process route

Objective and Strategy

The Company's corporate objective is to become one of the world's leading producers of HPA by developing a vertically integrated HPA business to address the growing global demand for the next generation of high specification industrial materials requiring high quality HPA.

FYI's strategy is to own and manage the entire HPA production chain from the Company's wholly-owned mine for high quality feedstock through to the refining and export of high quality, ultra-pure HPA.

This integrated production chain allows FYI to:

- to maintain full control and provenance over the HPA;
- the HPA product is traceable and warranted for specification thus ensuring customer confidence through quality assurance;
- the HPA can be tailored to customer specification;
- allow control over production limits to meet market movements;
- control operating costs and maintain lowest quintile position.

FYI plans to meet the market's requirements through conventional chemistry but via a non-traditional processing route developed by the Company.

HPA Business Case Summary

FYI Resources is building a robust business case around the following factors:

- Long life, high quality and high margin strategy
- Fully integrated production and refining business model
- Product provenance ensuring quality assurance
- Low environmental impact / low carbon footprint / high ESG
- A "unique" high grade, superior quality and characteristic kaolin orebody that is well suited to HPA refining
- Innovative development of process flowsheet and HPA purity
- Excellent geological understanding and definition of the kaolin resource
- A revised MRE to provide optimal feedstock for HPA production – providing many decades of feedstock production
- Exceptional metallurgical test work and development of flow sheet – supported by pilot plant trials and critical material testwork
- Outstanding process engineering design
- Strong project financials (low Opex and Capex / attractive NPV, IRR)
- Timing of entry into a rapidly growing market
- Realistic commodity pricing forecast (4N and 5N basket combined pricing)

Alcoa MOU

As a result of the initial DFS and subsequent development work designed to progress the Company's innovation process flowsheet for high quality, ultra-pure HPA, FYI signed a memorandum of understanding (MOU) with leading alumina producer, Alcoa of Australia Limited (Alcoa). The MOU will explore the possibility of Alcoa joining with FYI and furthering the development of FYI's fully integrated HPA refining project for commercialisation, as well as the establishment of offtake customers into HPA markets. The MOU establishes a pathway to progress to a joint venture following the satisfaction of certain conditions precedent.

Alcoa is a global industry leader in the production of bauxite, alumina and aluminium, a position enhanced by a portfolio of value-added cast and rolled products and select energy assets. Since developing the aluminium industry more than 130 years ago, Alcoa has built a legacy of breakthrough innovations and best practices that have led to efficiency, safety, sustainability and stronger communities wherever they operate. Alcoa of Australia Limited (Alcoa) is owned 60 per cent by Alcoa Corporation and 40 per cent by Alumina Limited. The Australian operations represent one of the world's largest integrated bauxite mining, alumina refining and aluminium smelting systems and add value to Australia's local, state and national economies at every stage.

The MOU conditions precedent cover further HPA pilot plant variability trials being successful and the continued cooperation having commercial benefits for both parties. FYI is developing an process for the production of high quality, high purity alumina. FYI has been very successful in its development strategy and continues to advance the HPA refining process to address the supply shortfalls in the rapidly growing HPA market. The MOU will allow the parties to explore and develop respective technical capabilities and capacities in alumina production, with the potential to leverage opportunities in the HPA market.

Future Value Catalysts

Based on the outstanding outcomes of the updated DFS, FYI will progress the HPA project in line with a strict development schedule. FYI expects a number of key events that have the potential to impact project valuation in a positive manner. These events include:

- Progress the MOU with Alcoa
- Establishing an ESG rating from independent analysis agency
- Finalise advanced engineering studies
- Commencement of HPA project final engineering design, final investment decision
- Signing of customer MOU's and strengthening marketing relationships
- Finalising financing arrangements
- Continued product developments
- Investigation on additional revenue streams

High Purity Alumina Summary Description

High-purity alumina is a processed premium non-metallurgical alumina product characterised by its purity level – i.e. 99.99% (4N), 99.999% (5N). The market price, application and performance of HPA varies widely according to its degree of purity.

HPA is primarily sought after for the unique combination of its properties and characteristics, which include low-friction, high wear-resistance, hardness, thermal and electrical insulating abilities, non-corrosive and broad chemical compatibility. HPA is used in applications such as:

- light emitting diodes LEDs and substrates
- battery technologies and energy storage (cell linings / separators)
- electric vehicle EV components
- semiconductor wafers
- artificial gemstones (sapphires)
- sapphire glass for smart phones, television screens and watch faces
- high-strength ceramic tools
- space and aeronautics industry components
- high tensile light weight fabrication applications
- fine abrasives and industrial applications

Increasing research and development and advances in technology coupled with consumer demand for high quality applications increases the adoption of HPA and continues to drive the market. These applications are all high-end markets that are expected to show continued strong year on year growth.

Updated Definitive Feasibility Study

The objective of this updated DFS report and associated revised NPV is to demonstrate the progress of the HPA project development and to quantify the project value increase outlined in the revised NPV.

FYI has applied a disciplined approach via our team of expert study managers to progress and refine the updated project DFS. The resulting DFS outcomes are based on extensive the expert studies that have designed operating criteria for a world class HPA production facility. This scope of work encompasses the research and development stages of the processing flowsheet for HPA including the calculation of operating and capital costs to an accuracy level of between -10% to +15%. This development work culminates into the projects detailed financial analysis.

The Company aims to develop a high purity alumina refining operation with a production capacity of 10,000 tons per annum, through the beneficiation of kaolin into concentrate and then refining the concentrate into high purity alumina.

The updated DFS's scope addresses the:

- mining and beneficiation of Kaolin at Cadoux
- transport of kaolin concentrates from Cadoux to the refinery in Kwinana
- refining kaolin concentrate into high purity alumina (4N and 5N) in Kwinana
- sales and shipping of high purity alumina to the market
- associated approvals and permitting
- environmental and sustainable processes
- organisational structure including corporate office

Contributors

The DFS has been prepared by the Company in conjunction with selected industry specialists:

Company	Expertise
Allied Market Research	HPA market studies - 20212 to 2028
AQ2 Pty Ltd	Water management studies
Arthur J. Gallagher & Co (Aus) Limited	Insurances development and operations
Botanica Consulting	Environmental base line review, approvals and permitting
Bureau Veritas Australia	Independent final product XRF and Laser Ablation assay verification
Cravern Group	Information, communications and technology
CRU Group	HPA in-depth market studies and price discovery
CSA Global Pty Ltd	PFS - Independent geological studies and Mineral Resource Estimate
Davies Collison Cave Pty Ltd (DCC)	Intellectual property management and monitoring
Dr Leon Lorenzen	Independent peer review metallurgical test work
EAG laboratories (New York)	GDMS analysis
GR Engineering Services Ltd	Process engineering design and costing
Hydr2O Pty Ltd	Cadoux Hydrology review and baseline study
Hyland Geological and Mining Consultants	DFS - Independent geological studies and Mineral Resource Estimate
Independent Metallurgical Operations Pty Ltd	Metallurgical test work and flow sheet design
Indirect Tax Consulting Pty Ltd	Indirect tax consulting services including R&D tax incentive payment
Intertek Laboratories	Assaying and Sampling
McLintock International	Shipping agency, International freight
McMahon Mining Title Services Pty Ltd	Land access, native title, tenure advice, compliance and reporting
MGM Bulk Pty Ltd	Transport provider
Orelogy Consulting Pty Ltd	Mining study, ore reserve, pit optimisation and scheduling, costings

HPA DFS expert service providers

2. Geology and Mineral Resource

Exploration History

The Cadoux kaolin deposit is well defined by drilling. A total of 4,177 metres of drilling has been completed from a combined 199 Aircore (**AC**), Reverse Circulation (**RC**) and diamond drill holes (**DDH**). All holes were drilled vertically. Intersected kaolin thickness ranged from 1 m to 28 m. For the most recent drilling programs a total of 18 additional RC holes were drilled in the Geostatistical "L" test pattern for a total of 416m. A further four RC water bore test holes were also drilled for a total of 198m. Finally, four Diamond (PQ) geotechnical holes were also drilled for a total of 100m.

DH-Type	2019 Drilling		Historic Drilling	
	Number	Metres	Number	Metres
AC	-	-	98	1,850
DDH	4	100	-	-
RC	22	614	75	1,613
Total	**26**	**714**	**173**	**3,463**

Table 4-1: Historic and Current Drill-Hole Statistics

Selected Diamond Core Samples (PQ) from Geotechnical Hole CXGT02

Resource Development

The Company completed a detailed (close spaced) phase of infill test drilling at Cadoux in April 2019 which referred to as the Geostatistical "L" RC drilling program. The purpose of the program was to test the lateral short-range variability of Al_2O_3 and other selected ancillary elements in two separate directions (Grid E-W and grid N-S. The 'legs' of the Geostatistical "L" used drill hole spacings of 5m and 10m and were designed to 'test' the validity of a few of the pre-existing exploration RAB and RC drill-holes. The test pattern was also designed to test a zone where mineralization was expected to range from 'high grade' and relatively thick tending towards lower grades in a thinner part of the kaolinite horizon.

Overall the Geostatistical "L" pattern was successful in establishing that lateral continuity was slightly more variable than observed with the relatively sparse original exploration AC and RC drilling pattern, however the observed variability is considered not significant enough to alter the overall mineral resource estimate. Close examination of the new RC drill-holes with respect to a few of the previously drilled RC exploration holes ('twinned holes') revealed a very close correlation with respect to down-hole Al_2O_3 grades at equivalent depths indicating that drilling, sampling and assaying procedures have been reliable and relatively consistent.

A small part of the Al_2O_3 (kaolinite) mineralization was considered to be sufficiently densely drilled and sampled to allow the reporting of an amount of 'Measured' Resources.

Hydrological Appraisal

The Cadoux mine site is located in the area of low groundwater potential, with those limited aquifers that do exist, being associated with weathered and fractured bedrock. The annual evaporation is approximately seven times higher than the annual rainfall, resulting in low groundwater recharge.

Groundwater levels are moderately shallow, with the depth to groundwater ranging between 10.1 m and 26.4 m bgl (i.e. 357 and 360 mAHD). Groundwater flow is to the south-east, under a low hydraulic gradient, which closely reflects the site topography.

Groundwater is brackish to saline, with salinity ranging from 3,000 to 11,000 mg/L TDS and is slightly acidic to near neutral, with field pH values range from 5.8 to 6.8. Groundwater is sodium and chloride dominant, indicative of an end point ("older") water from an aquifer where limited recent recharge is occurring.

As part of the hydrogeological data collection for the site, four monitoring bores (CXWB01 to CXWB04) were constructed across the site, while one RC drill hole, GLRC016, was also equipped with casing to allow for hydraulic testing. Following the bore completion, hydraulic testing was undertaken on these five bores. The results of these tests indicated that the permeability of the weathered aquifer (saprock/saprolite) and solid fresh bedrock aquifer range from 0.004 to 0.09 m/d (average about 0.03-0.004 m/d). At one location, CXWB01, increased permeability is evident, associated with fractured bedrock (range of 0.5 to 2.8 m/d, average permeability of 1.7 L/d).

Geotechnical Appraisal

The geotechnical assessment by Peter O'Bryan and associates has been based on information derived from data obtained from geotechnical cores. Available information indicates only minor variation in ground conditions across the proposed mining area. From a wall design perspective, it is concluded that no further geotechnical investigation is required prior to commencement of mining.

Ongoing geotechnical assessment of actual conditions during operation, based on observed wall stability performance and mining experience will, however, be required to refine geological and geotechnical models and hence optimise pit design parameters.

Ongoing Geotechnical Assessment

It is considered essential that design re-assessments and where necessary design adjustments be made based on the findings derived from observational techniques employed during pit development.

Information obtained from mapping and slope stability monitoring should be assessed to confirm, or as the case may be, adjust, pit wall design parameters. As more data become available, it will become more likely that an 'optimal' approach to wall design and development will be derived.

3. Mining and Ore Reserves

Mining activities at Cadoux are planned on a campaign basis by contract miners. Each campaign generates 3 years of ore supply in a 3-month period. The ore is placed on a stockpile and the contractor demobilises after completion of the campaign. Backfilling with commence during the second campaign.

Mining Method

Conventional open pit mining is adopted due to the shallow depth of the orebody and is suitable for free digging and hard ripping (i.e. no drilling and blasting). Backfilling will minimise the disturbance footprint of the small operation and the environmental impact. The adopted mining method has the following steps;

- overburden is excavated with trucks and an excavator until the top of the orebody is exposed, with some areas potentially requiring hard ripping;
- the exposed ore is mined with trucks and an excavator then hauled either directly to mill or a Run of Mine (ROM) stockpile for future processing;
- overburden and rejects are placed back into the previously excavated sections of the pit as soon as they become available for backfilling. (i.e. have enough stand off from the mining face and are completely exposed at the bottom).

The operation is planned to be excavated with contract mining. A campaign mining methodology will be used due to the suitability to the projects low tonnage mining and loading. The mine will be in operation for typically 3 months (a single campaign) with each subsequent campaign separated by a period of 3 years from the preceding one. A single campaign is designed to excavate and stockpile 3 years of kaolin supply on the ROM stockpiles. This approach presents significant savings in overhead costs and ensures that adequate efficiencies are maintained.

The various activities of the mining operation consist of:

- clearing of vegetation and topsoil stripping and storage;
- Haul road and ramp construction;
- grade control;
- establishment of any required pit bunds;
- excavating and hauling overburden material to surface storage facilities or backfilling of mined out voids wherever ore mining has been completed;
- ore mining and hauling to ROM stockpiles;
- rehandling of Cadoux plant rejects, tailings;
- rehabilitation works and Pit dewatering when required.

Pit Optimisation Inputs and Assumptions

The open pit optimisation process is the first stage of the conversion of a mineral resource into a mineable open pit reserve. At this point, all latest physical, technical and economic parameters available are applied to the orebody to determine a mineable pit boundary. Open pit optimisation work has been undertaken to:

- identify, quantify and validate the potential mining inventory as guidance for pit designs;
- evaluate the effects of variations in the project economics and their assumptions; and
- determine the overall robustness of the Project and the potential for advancement.

The inputs and assumptions used in the pit optimisation process are in the table below.

Item	Value	
Block Model	April 2019 Hyland Consultants Mineral Resource Estimate	
Ore Reserve Reporting	Only Measured & Indicated Resource materials can be converted	
Item	**Units**	**Value**
Mining		
Ore Loss	%	10
Mining Dilution	%	0
Pit Slope	degrees	37° in all bearings
Mining Rate	dtpa	Variable
Mining Cost	AUD$/t	3.85 – 4.85
Processing		
Cadoux Beneficiation Costs	AUD$/ ore t	42.86
Cadoux Beneficiation Rate	dtpa	63,000
Cadoux to Kwinana transport costs	$/t intermediate concentrate	55.49
Kaolin concentrate transport/HPA Feed rate	dtpa	44,000
Kwinana HPA production costs	$AUD/t ore	1357.10
Minimum HPA (99.99% Al_2O_3) Production	tpa	10,000
Total Al_2O_3 recovery from processing	%	61.28
Financials		
Product Price HPA (4N & 5N basket price)	$AUD/t	35,200.00
Royalties	% of product revenue	2.5
Exchange Rate	USD / AUD	0.75
Discount Rate	%	8

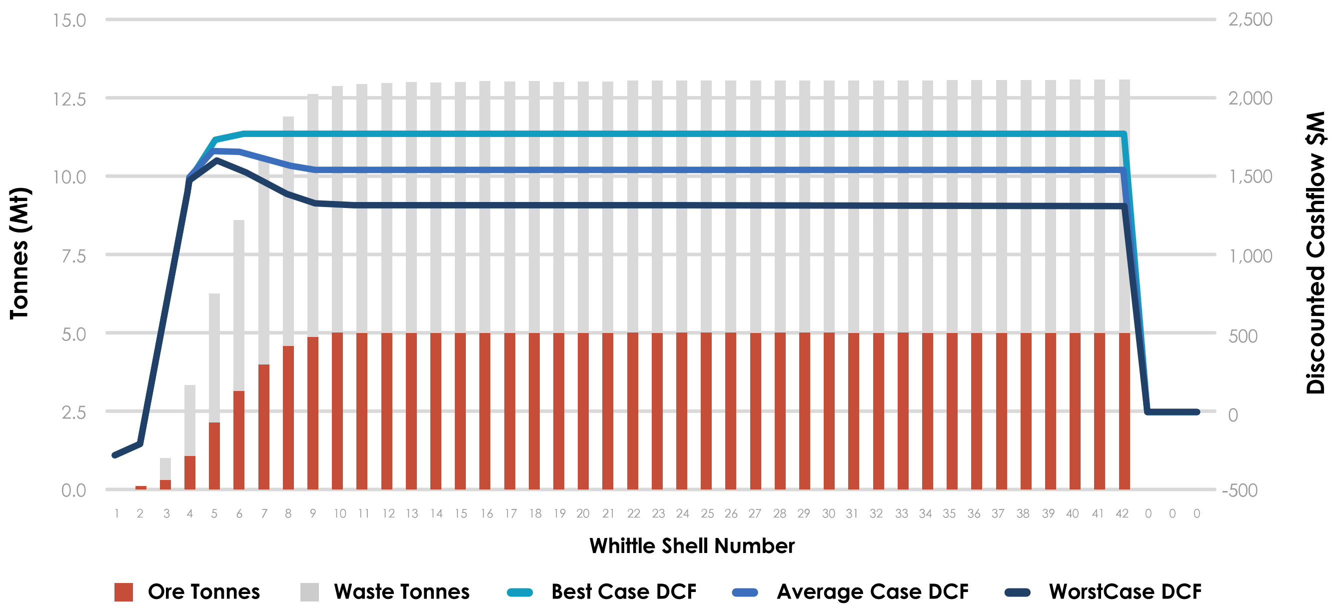
Pit optimisation parameters and constraints

Optimisation Results and Shell Selection

The pit optimisation results are presented in the figure below, showing:

- the Shells 12-45 have effectively the same geometry and value with the maximum best-case being Shell 31.
- the best case discounted cashflows are insensitive to larger inventories and shell sizes beyond Shell 6.
- the revenue stream associated with the high-grade concentrate far outweighs the costs associated with mining, beneficiating and refining, hence even at low revenue factors; all the measured and indicated ore is mined and continues to produce positive cash flows.
- due to the long mine life, the discounted cash flow is substantially lower than the undiscounted cash flow.
- mining costs are a fraction of the total costs.

Whilst the best-case shell was Shell 31, there is minimal additional discounted cashflow beyond Shell 6. This negates the benefit of mining a pit larger than Shell 6. Furthermore, mining to higher shells and increasing the mine life unnecessarily exposes the project to further risk in increased costs. The worst and average Case was Shell 5. When comparing Shell 5 and Shell 6, the larger shell presented a more suitable geometry amenable to the campaign-style mining and backfilling methodology proposed. Thus, Shell 6 with a revenue factor of 0.34 that yielded a 60-year mine life was selected as the basis for mine design.



FYI Cadoux pit optimisation results (by stage)

Mine Design

The primary Cadoux site layout mine design was based on the optimal production pit-shell. The mine scheduling design and the size of the anticipated mining fleet with considerations for:

- minimum mining width;
- bench height;
- berm and batter configuration;
- haul road width;
- backfilling;
- sizing of mining fleet; and
- operational flexibility.

A fleet of 45t articulated trucks and a 75t excavator was selected for the project earth moving operations. Minimum mining width considerations aim to avoid situations where future stages are too narrow to be mined (hence the ore will be sterilised) and to ensure that mining equipment can be operated efficiently and safely at the bottom of each stage.

The break-even cut-off grade for kaolin material to be treated as ore is substantially lower (7.06% Al_2O_3) than the grade of the orebody (averaging 23.38% Al_2O_3, measured and indicated only). Hence, all mineralised material meets the grade to be classified as ore. However, due to the presence of deleterious elements and poor metallurgical performance, the basement and saprolite rock is not classified as ore despite bearing some alumina grades.

Where sensible, the bench height is 5m. Near the bottom of the pit, the bench height was reduced to 1 m to be able to selectively mine the ore along the ore/waste boundary. The 5 m wide berms were designed every 2 benches (10m) with 50° batter angles. This results in an overall slope angle of 37° matching the geotechnical slope design criteria.

The project is highly sensitive to deleterious material mixing with the ore, the source of which is diluent material from outside the ore zone. To mitigate the risk of dilution and the introduction of other materials during the mining process, potentially contaminated ore will be treated as waste. Hence, an ore mining recovery of 90% has been assumed.

Haul roads were designed in accordance with industry standards using a multiple of 3.5 times the truck width. Backfill slope angles were designed at 35° and with a swell factor of 20%. Production stages were designed in accordance with the mining campaigns. A representative site layout can be seen in **Error! Reference source not found.** (the overburden storage facility is to be removed and the pit completely backfilled at EOM).

Mining and Processing Schedules

The objective of the scheduling activity was to generate maximum value while maintaining the practical integrity of the mining method) and certain constraints being realistically achievable. The scheduling aimed to:

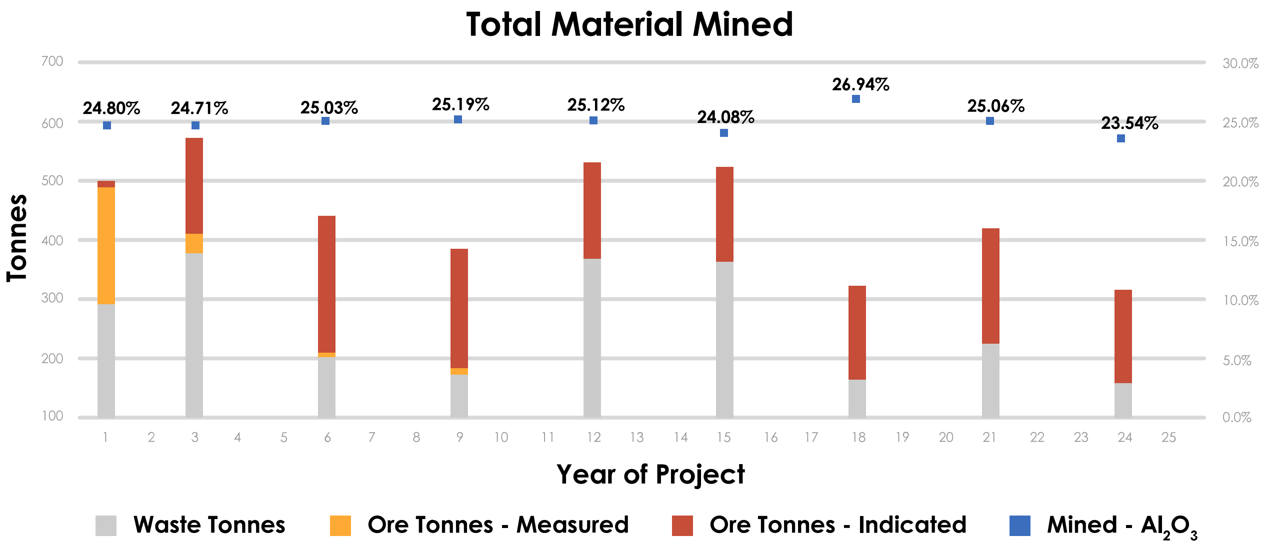
- provide a consistent total material movement (TMM) between campaigns to align with any equipment assumptions utilised during optimisation and design;
- provide allowance for backfilling opportunity of overburden and Cadoux plant reject material;
- defer mining and backfilling of areas in close proximity to inferred material to prevent sterilisation of possible ore by backfill. By deferring excavation of this material, this allows further drilling in these areas that may upgrade the mineral resource; and
- match campaign production with processing requirements to minimise stockpile balances and defer the associated costs.

Maximisation of the project value has been achieved by:

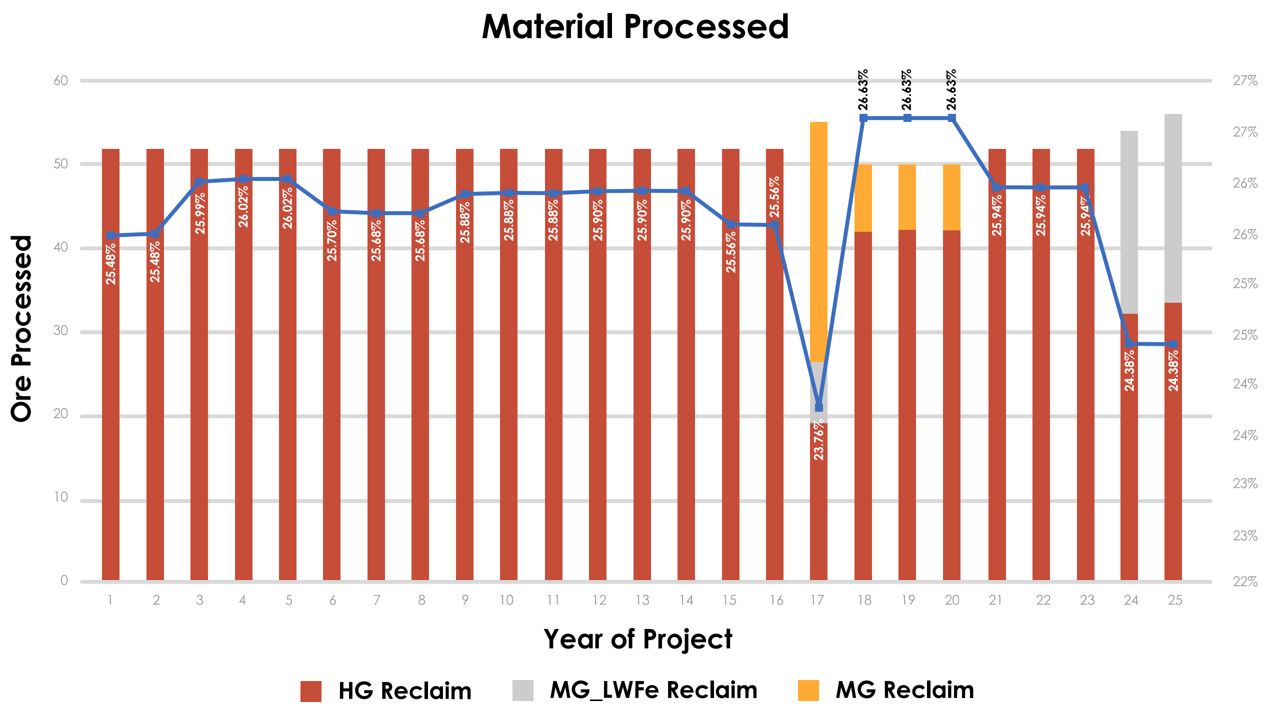
- deferring mining of areas with a high stripping ratio;
- maximise cashflow by maximising HPA production; and
- deferring processing costs by targeting a higher head grade early in the schedule. A higher grade translates into less tonnes processed and therefore defers costs between individual time periods.

The mining and processing schedule summaries:

- the mining campaigns commencing every 3 years with total mining averaging 500kt per campaign;
- a high stockpile balance at the end of each mining campaign, reducing over the next 3 years as ore is reclaimed and fed to the beneficiation plant;
- the beneficiation feed tonnages and grades for each year; and
- the Kwinana HPA production profile.



Total Material Mined, by campaign



Material processed grade

Ore Reserve Estimate

An Ore Reserve in accordance with the JORC 2012 Code was estimated for the Cadoux HPA Project. The Ore Reserve is based on the measured and Indicated Mineral Resource Estimate for the Cadoux kaolin deposit, metallurgical test work, processing and engineering designs for the Cadoux and Kwinana plants and their associated infrastructure, cost estimation, marketing and pricing research.

The mine planning inputs, variables and assumptions for the Ore Reserve estimate are summarised, in accordance with reporting criteria has been completed. The financial modelling of the project included sensitivities to confirm that the project generates positive economical returns and has a reasonable likelihood of success.

The composition of the total Ore reserve is shown in the table below. The Ore Reserves are summarised by stage. The average life of each stage is 3 years with a total mine life of 51 years. Note, processing of this ore continues for another 10 years, through to Year 62.

Category	Ore Kt	Al_2O_3 %	Fe_2O_3 %	K_2O %	TiO_2 %
Proved	290	24.9%	1.1%	0.5%	0.8%
Probable	2,914	24.8%	1.1%	0.6%	0.9%
Total	**3,205**	**24.8%**	**1.1%**	**0.5%**	**0.9%**

Ore Reserve Estimate above 7.06% Al_2O_3 cut-off grade

Stage	Proved Ore		Probable Ore		Waste	Total Mining	Waste Ratio
	kt	Al_2O_3 %	kt	Al_2O_3 %	kt	kt	
1A	63	25.9%	1	25.9%	150	214	2.3
1B	134	24.4%	10	22.4%	142	287	1.0
2	33	24.8%	163	24.7%	378	573	1.9
3	4	26.6%	234	25.0%	204	442	0.9
4	9	24.6%	204	25.2%	174	386	0.8
5	-	-	162	25.1%	369	531	2.3
6	-	-	161	24.1%	364	525	2.3
7	-	-	161	26.9%	163	324	1.0
8	-	-	194	25.1%	226	421	1.2
9	-	-	156	23.5%	161	317	1.0
10	-	-	151	24.4%	334	484	2.2
11	-	-	149	24.8%	324	473	2.2
12	-	-	148	26.0%	341	489	2.3
13	-	-	162	25.2%	374	536	2.3
14	-	-	153	25.2%	385	539	2.5
15	-	-	165	24.1%	468	633	2.8
16	47	24.7%	180	23.9%	474	701	2.1
17	-	-	181	24.2%	447	628	2.5
18	-	-	179	24.2%	351	530	2.0
Total	**290**	**24.9%**	**2,914**	**24.8%**	**5,827**	**9,032**	**1.8**

Ore Reserves by Campaign above 7.06% Al_2O_3 cut-off grade

4. Metallurgy

Following the successful completion of the initial DFS, FYI has progressed with further detailed development of the HPA project metallurgy. The updated DFS draws upon the significant advances in process design work and continued optimizing of FYI's innovative HPA process flowsheet.

The following major test work was completed during the updated DFS:

- materials construction and handling;
- bulk variability testwork;
- Energy load testwork;
- Recycling;
- pilot plant trials (x3).

In addition to this test work, ad hoc metallurgical test work was conducted based on outcomes suggested by the Project Management team. All the test work conducted has been subject to an independent peer review. The peer review was conducted by Dr Leon Lorenzen of Lorenzen Consultants.

Bench Scale Test Work

FYI's bench scale test work outlined the subsequent test work steps required to refine the process flow sheet and mass balances for improved process optimization and greater confidence in the capital and operating inputs.

A number of attritioning tests were undertaken on the composites to determine the optimum conditions to maximise alumina recovery and grade for feed stock to the Kwinana refinery. Variables tested for attritioning included duration, intensity, density and size separation. Results concluded that the optimum screen size for recovery and grade was 106 µm with conditions of:

- 5-minute duration;
- solids density of 50% solids w/w.

Subsequent to attritioning, the samples were calcined to generate feedstock ready for further processing and purification.

In summary the bench scale testing involved detailed analysis on:

- acid leaching optimum. As part of the acid leaching test work, the following variables were tested: temperature, duration of leach, analytical grade vs industrial HCl;
- precipitation:
    - evaluation of the number of precipitation stages;
    - evaluation of the impact of stage recovery; and
    - evaluation of the impact of gas sparge flux rates.
- calcination, north and south sample indicating Al_2O_3 grades of 99.75% and 99.8% respectively;
- calcination – impact of crucible types; and
- calcination – Impact of crucible loading masses.

All experiments looked at determining the optimum in all sub-process by varying inputs including but not limited to:

- duration/rate;
- feed stock;
- temperature;
- reagent purity;
- mass balance; and
- measure the effect on product grade, purity.

Additional recommendation work that was completed as follow up metallurgical test work for the updated DFS included:

- test additional variability samples, encompassing composites selected based on spatial, depth and grade variations;
- further attrition test work on feed samples excluding the siliceous cap existing within the deposit as well as highlighting variations based on depth of the ore;
- further test work surrounding the impact of the number of precipitation stages on the final product; and
- locked-cycle test work allowing determination of the impact of recycle streams within the leaching and precipitation stages on the rejection of impurities to the final product.

Locked Cycle Test Work

The locked cycle phases of test work were conducted to determine the impact of the recycle and bleed streams within the leaching and precipitation stages on the rejection of impurities to the final product.

The first locked cycle was completed on the master composite sample and 1 ppm detection limits for the solution assays were sufficient for this locked cycle testing. The second locked cycle was conducted on the pilot composite, generated for use in the upcoming pilot plant.

The locked cycle test work provided the following outcomes:

- reduction in HCl leach recovery from ~94% to ~93%, likely due to the recirculating load of Al back into the leach in solution resulting in insufficient HCl for complete leach recovery;
- all cycles returned HPA assays of 99.992% - 99.998% Al_2O_3; and
- impurities did not appear to be building in recycle streams as evidenced by Na and Fe reported as below 1 ppm for continuous cycles from Precipitation stage 3.

The second locked cycle was conducted to assess the impact of the removal of the evaporation stage from the flowsheet, as well as the impact of the inclusion of centrifuging of the ACH precipitate products rather than vacuum filtration methods.

To provide comparable data, the locked cycle was broken into two stages: the first being four cycles utilising vacuum filtration, the second stage consisting of four cycles with the centrifuge for solid liquid separation. Allowing a direct comparison for the impurity and water balance between the two solid/liquid separation technologies.

Photos of the centrifuge to be used in the second half of the second Locked cycle are presented below.

Centrifuge & control system

Centrifuge – closeup

Master Composite Locked Cycle Testwork

The master composite locked cycle test work involved a total of six cycles with assay analysis of all major streams providing an indication of the impact of recycle streams on the rejection of impurities throughout the circuit.

Overall flowsheet balances per cycle were completed for aluminium, sodium, iron and potassium. The overall major findings from the master composite locked cycle testwork are as follows:

- Aluminium mass in the bleed and recirculating streams is not building through the cycles indicating that aluminium had balanced throughout the flowsheet for the six cycles;
- low recycle mass of impurities reporting to the recirculating streams highlighting the effectiveness of the location for the bleed streams;
- overall total impurities balance presenting no trend of increasing or decreasing mass indicating they are not building throughout the flowsheet;
- HCl leach aluminium recoveries ranging from 92.3% to 94.4%, plateauing through the locked cycle. Leach results indicate that the introduction of the recirculating streams have a minor effect (reduction) on the overall aluminium recovery, but rapidly equilibrate providing there is sufficient free acid to leach the meta-kaolin present in the leach feed;
- challenges presented during the evaporation stage with the feed solution nearing solubility limits of aluminium resulting in the crystallisation of aluminium throughout all six cycles in the evaporator product. This therefore led to significant variability in evaporation stage mass reductions ranging from 25.4% for cycle 1 to as low as 2.6% (averaging 10.9%) for subsequent cycles;
- significant impurity reductions with increasing precipitation stage indicated by Na, Fe and K feed grades all reported below 2,500, 20 and 10 mg/L for precipitation stages 1 to 3 respectively.

High Purity Alumina Analysis Master Composite Locked Cycle

The final six calcined products from the master composite locked cycle were submitted to Ultratrace for assay analysis via X-Ray Fluorescence (**XRF**) and Laser Ablation (**LA**). Summarised final product assays are indicating grades ranging from 99.994% to 99.999% Al_2O_3.

Cycle	Sum of LA	Sum of Metal XRF	Sum of LA and Metal XRF	HPA Grade
#	ppm	ppm	ppm	% Al_2O_3
1	2.17	16.34	18.51	**99.998**
2	23.06	38.86	61.92	**99.994**
3	15.57	4.67	20.24	**99.998**
4	5.58	29.06	34.64	**99.997**
5	5.29	0.00	5.29	**99.999**
6	2.80	14.01	16.81	**99.998**

Master composite locked cycle final product analysis summary

Pilot composite locked cycle test work

The pilot composite feed grades were selected based on the first three years of Run of Mine material, designed to cover the initial three years of mine life and payback period for the Project. The target alumina and deleterious element grades for the pilot composites are presented in the table below.

Analyte	Target	Back Calculated Head Grade
	%	%
Al_2O_3	24.80	25.55
Fe_2O_3	1.16	0.93
SiO_2	63.88	62.87
TiO_2	8.82	0.89
CaO	0.02	0.03
Na_2O	0.14	0.14
K_2O	0.37	0.58
MgO	0.08	0.07

Pilot composite target and actual summarised head grades

The pilot composite locked cycle involved a total of eight cycles with assay analysis of all major streams providing an indication of the impact of recycle streams on the rejection of impurities throughout the circuit.

Overall flowsheet balances per cycle have been completed for aluminium, sodium, iron, potassium and chrome. The overall major findings from the pilot composite locked cycle test work are as follows:

- Aluminium mass in the bleed and recirculating streams is not building through the cycles indicating that aluminium had balanced throughout the flowsheet for the eight cycles;
- total aluminium balance is consistent, ranging from 88 – 95% with lower aluminium reported exiting the system due to inefficient sample splitting for the final ACH and biases in final HPA mass due to only a portion being calcined;
- implementation of centrifuging after Cycle 4 resulted in an overall increase in the mass of impurities reporting to the filtrate of each precipitation stage and subsequent reduction in impurities reporting to the wash;

- Chrome metal units out are consistently higher than metal units in due to the leach residue samples being pulverised in a hardened steel, chrome based pulverising bowl therefore contaminating the sample with chrome;
- Fe and Cr grades reporting to the filtrate and wash streams appear to increase from Cycle 4 onwards indicating potential contamination of the streams due to corrosion and leaching of the centrifuge;
- HCl leach aluminium recoveries ranging from 83.3% to 94.2%;
- significant impurity reductions with increasing precipitation stage indicated by Na, Fe, K and Cr feed grades all reported below 2,250, 70 and 7 mg/L for Stages 1, 2 and 3 respectively.

Pilot Composite Locked Cycle Final Product Analysis

The final eight calcined products from the pilot composite locked cycle were submitted to Ultratrace for assay analysis via X-Ray Fluorescence and Laser Ablation. The final product assays indicated grades ranging from 99.920% to 99.998% Al_2O_3.

Cycle	Sum of LA	Sum of Metal XRF	Sum of LA and Metal XRF	HPA Grade
	ppm	ppm	ppm	% Al_2O_3
1	11.9	69.73	81.63	**99.992**
2	5.74	76.76	82.5	**99.992**
3	4.71	44.97	49.68	**99.995**
4	6.54	11.67	18.21	**99.998**
5	13.32	13.99	27.31	**99.997**
6	11.93	9.35	21.28	**99.998**
7	117.7	681.77	799.47	**99.920**
8	37.82	267.72	305.54	**99.969**

Pilot composite locked cycle final product analysis

The final two cycles were assessed for external contamination of the final product and found to be contaminated through the storage practices utilised for the testing.

Variability Testwork

The purpose of the variability test work was to assess the range of metallurgical performance that might be expected throughout the orebody so that the company understands the impact of the deposit characteristics resulting in a more consistent and reliable HPA grade.

The variability test work program was undertaken using sample intervals that were collected following completion of a drilling campaign conducted at the Project from 2018 and 2019.

The variability test work program involved a total of ten (10) composites representing the variable grade, depth and spatial distribution from the initial 3-year ore zone. Each composite underwent the complete process flowsheet beginning with beneficiation through to final precipitation and calcination, generating HPA product for analysis.

Composite samples were selected for their various variability to the mainstream feedstock to assess:

- spatial variation;
- Alumina feed grade variation;
- deleterious element grade variations; and
- lithological variations.

Head Assay Analysis

The head assay analysis of the ten variability composites were indicating:

- Al_2O_3 grades ranging from 20.3% to 28.9%;
- Fe_2O_3 grades ranging from 0.4% to 2.4%;
- K_2O grades ranging from 0.04% to 2.89%;
- Na_2O grades ranging from 0.08% to 0.24%;
- TiO_2 grades ranging from 0.5% to 1.5%;
- MgO grades ranging from 0.02% to 0.12%; and
- SiO_2 grades ranging from 59.1% to 70.0%.

Attritioning Testing

The ten variability composites underwent attritioning at optimum conditions. The attrition tests were conducted utilising a standard Denver attritioning cell under the following conditions:

- 50% solids w/w;
- 5-minute duration;
- attritioning speed of 1,300 RPM; and
- wet screening cut size of 106 µm.

The fine leach feed generated from attritioning the variability composites concluded:

- no significant impact of attritioning on alumina recovery to the -106 µm fraction with recoveries ranging from 60.9% to 99.5% compared to initial feed recoveries of 58.7% to 99.5%;
- relatively consistent -106 µm fraction alumina grades ranging from 30.5% to 37.0% compared to initial calculated feed grades ranging from 19.8% to 28.1%; and
- iron recoveries to the -106 µm fraction ranging from 57.0% to 94.1% with Fe_2O_3 grades ranging from 0.3% to 2.5%.

HCl Leach Testing

Following attrition testing the -106 µm size fractions for each of the variability composites were calcined at 750°C and leached in industrial grade 28% HCl. The hydrochloric acid leach tests were conducted at the following conditions:

- 20% solids w/w;
- 180-minute duration;
- heating to 80°C, allowing to reach reaction temperature and maintaining 80°C for the remainder of the test;
- atmospheric pressure;
- industrial grade HCl; and
- 28% HCl w/w.

The leach results were:

- final alumina recoveries ranging from 83.6% to 94.9%;
- varied alumina leach kinetics were observed across the ten tests, with alumina recoveries ranging from 22.6% to 41.2% after a 30-minute duration;
- overall Fe_2O_3 recoveries ranging from 81.4% to 93.9%;
- overall Na_2O recoveries ranging from 43.4% to 90.8%; and
- significant variation in overall K_2O recoveries ranging from 6.9% to 81.8%.

Precipitation and Water Leach Testing

The leach liquors generated from the HCl leach tests on each variability composite underwent three stages of Aluminium Chloride precipitation. The three stages of precipitation targeted aluminium stage recoveries of 95.0%, 87.5% and 87.5% respectively.

Precipitation gas addition flux rates were maintained at consistent flux rates of 1.7 L/min/L, slightly increased to those proposed for the final plant design to ensure results align with final design.

The solids generated from the first and second precipitation stages were water leached in distilled water, targeting an aluminium concentration of 60,000 mg/L with the leach liquor acting as the feed for the following precipitation stage.

The results for the precipitation testing undertaken on the variability composites were:

- stage 1 aluminium recoveries ranging from 90.3% to 94.1% and averaging 92.5%, marginally lower than the 95.0% target;
- stage 2 aluminium recoveries ranging from 81.5% to 88.4%, averaging 86.0% marginally lower than the target 87.5%; and
- stage 3 aluminium recoveries ranging from 85.9% to 89.6%, averaging 87.6% compared to the target 87.5%.

Final Product Analysis

A sub-split of the final stage 3 precipitation products for the variability composites underwent a 2 – stage calcine at temperatures of 750°C and 1250°C respectively. The final calcined products from each variability composite were submitted to Ultratrace for assay analysis via X-Ray Fluorescence and Laser Ablation. All composites were also submitted to Eurofins Materials Science (**EAG**) Laboratories for GDMS analysis allowing for confirmation and confidence in the product grades reported from XRF/LA.

All variability composites achieved final high purity alumina products ranging from 99.997% to 99.998% Al_2O_3 via GDMS methods.

Composite	XRF / Laser Ablation		GDMS
	Al_2O_3 %	Al_2O_3 % Dup	Al_2O_3 %
VC1	99.9878		**99.9976**
VC2	99.9914		**99.9971**
VC3	99.9995		**99.9976**
VC4	99.9969	99.9991	**99.9981**
VC5	99.9936		**99.9972**
VC6	99.9983		**99.9977**
VC7	99.9977		**99.9977**
VC8	99.9996		**99.9977**
VC9	99.9978		**99.9977**
VC10	99.9989	99.9983	**99.9975**

Table 4-9 Variability test work - final product Alumina results summary

Variability HPA assay grade discrepancies between the GDMS assays and XRF/LA assays highlighted the limitations of XRF/LA assay techniques compared to the GDMS assay method.

The variability test work report recommended:

- conduct XRD analysis on all variability composites to assess the mineralogical variation in the ore throughout the first three years of mining. This analysis will further allow for correlations to be made between potassium feldspar grade, alumina recovery and provide a greater insight into the impact of mineralogy on the leach process;
- confirm current results or reduced impurity grade by employing a centrifuge as a solid liquid separator for a variability sample as opposed to the vacuum filtration used for previous testing stages;
- conduct a fourth precipitation stage on select variabilities to determine whether a 99.999% HPA product can be generated or whether purity limits have been reached by the current methods; and
- conduct calcinations after each stage of precipitation whilst using a centrifuge to determine a product purity curve for each stage, providing further insight and confidence into the purification stages.

Pilot Plant Operation and Test Work

The Company has conducted three separate successful HPA production pilot plant trials to date. The pilot plant trials were designed to test functional operations of the flowsheet design and to observe and analyse the continuous "end to end" process operation for scale up factors for inclusion into the proposed full-scale commercial plant.

Each pilot plant trial operated continuously "end to end" for a period of one week each trial on a 24/7 basis. During each trial, the pilot plant met or exceeded FYI's modeled operational performances, demonstrating the potential for commercial production of HPA as per the pre-feasibility study's assumptions.

The pilot plant demonstrated that FYI's unique HPA flowsheet could operate on a continuous basis and an increase in production capacity was possible.

Each FYI pilot study followed the best scale up practices to replicate commercial production. The manually observed results from each pilot plant was consistent with the previously reported test work and validated prior pilot plant trial results.

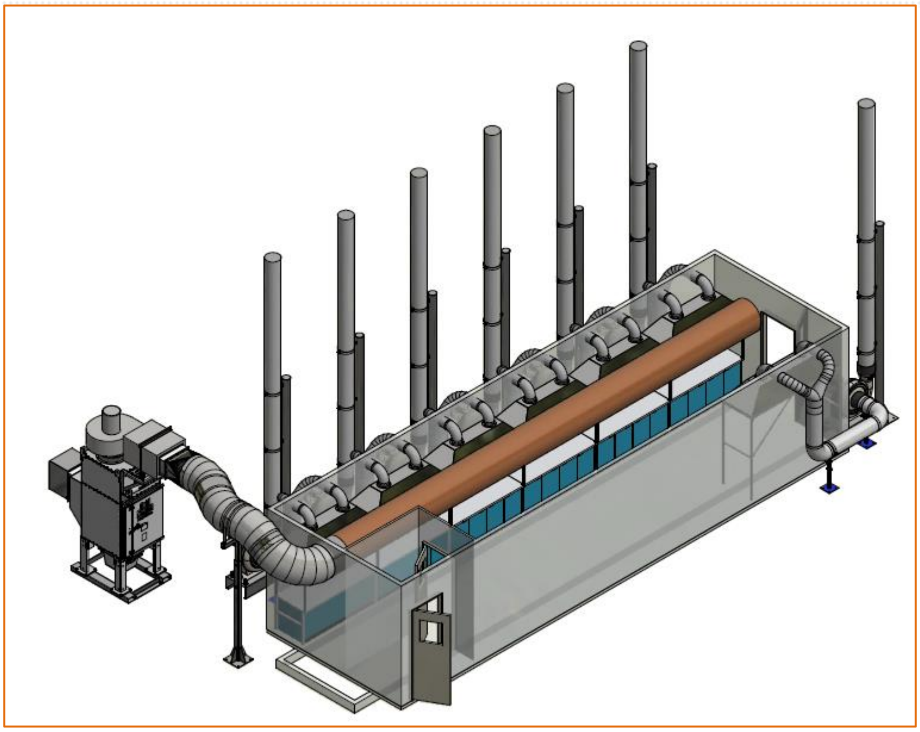
The successful trial production provides FYI with a complete metallurgical assessment of the product behavior and characteristics throughout the refining process. Energy balances were developed to determine the requirements for heating and cooling inputs, along with a model for all other inputs (costs) used in the process including providing projections for reagent consumptions.

Augmenting the pilot plant trials, FYI undertook various product trial variation work to investigate and optimise flowsheet and materials handling modifications to the plant which examined the potential to improve upon the targeted 4N HPA.

The variation results were very encouraging, providing a sound interpretation of batch, locked cycle and variability testing for incorporation into the design and construction of the continuous pilot plant.

In addition to demonstrating that the target grade of 99.99% Al_2O_3 could be produced on a continuous basis from kaolin feed material, the pilot plant provided information that will be used to enhance engineering design criteria for a full-scale plant.

The pilot plant trials improved the level of understanding of the various unit processes, recycle streams, mass balances and materials of construction. Minor modifications to the pilot plant could potentially yield HPA in excess of 99.99% Al_2O_3.



Isometric view of FYI's purpose-built pilot plant facility in Welshpool

FYI's innovative process flowsheet was demonstrated through three separate pilot plant operations, all designed to provide confidence in the deliverability and operability of the three main processing stages – beneficiation, leach and precipitation / purification. The pilot plant comprehensively validates the operating and design parameters used in the updated DFS study.

FYI pilot plant in operation

Additional Materials Handling Test Work

Across all test work activities (locked cycle, variability testing, pilot plant), during the DFS period a number of experiments and investigations needed to be conducted to resolve unforeseen challenges and issues presented during the test work.

A number of experiments and investigations were conducted during the DFS inclusive of:

- additional characterisation work surrounding the precipitation stages;
- experiments included HCl leach settling test;
- testing of Filtration rates for HCl Leach products;
- evaporation testing on leach liquors at varied target HCl w/w%;
- precipitation testing at varied HCl flowrates;
- laser sizing analysis;
- optimised precipitation settling and air-blown filtration tests; and
- precipitation optimisation with varied precipitation stage recoveries of 70, 80 and 90% to determine the overall impact of final product purity.

Materials of Constructions for Abrasive and Corrosive High Purity Products

As requirements for increased purity materials for manufacturing is increasing, so too is the demand for materials of construction that can withstand the corrosive and abrasive nature of the materials being produced. For example, the abrasion of handling systems for high purity alumina introducing contamination into the final product.

Constant wear on materials of construction such as hopper liners, conveyor systems and pipe lining can introduce impurities into the process or final product through either mechanical or chemical corrosion. Processes required to generate the high purity product are typically conducted at elevated temperatures and pressures, further increasing the likelihood of contamination of the final high purity product.

The proposed area of research will be around materials chemistry and assessing potential new materials of construction to withstand the mechanical and chemical corrosion from the processes generating the high purity products.

FYI is coordinating research program proposals to support and address the above key themes. FYI is hopeful that during FY2021, various research projects will be commenced to help address these underlying dynamics in FYI's HPA process.

Through its relationship with Curtin University, FYI has engaged a number of high purity alumina consultants to assist the Company with its process, peer review and the recycle of the waste streams.

Peer Review

For an independent review check of the DFS technical content, FYI mandated Dr Leon Lorenzen to provide a peer review of the metallurgical test work for quality and relevance of the work and to provide any possible recommendations. Dr Lorenzen was recommended via Future Batteries Industry as a specialist in high purity minerals/materials and impurity / contamination control.

Dr Lorenzen's key competencies relevant to the Project include:

- Extensive management and working experience in mineral processing, chemical engineering, waste management, water management and renewable energy sectors;
- Trusted advisor to all levels within the mining and chemical industries as well as finance and academic institutions.
- Professionally registered to operate in many countries and recognised as Competent Person and Qualified Person in the fields of Chemical Engineering and Mineral Processing Internationally.
- Extensive experience in managing and coordinating multi-disciplinary and integrated research programmes and industry projects covering all aspects for example the mineral value chain, i.e. exploration and geology, mining and planning, geo-metallurgy and geophysics, processing,
- infrastructure and optimisation across the value chain.

Dr Lorenzen provided valuable recommendation and his general feedback was that the test work to date was well designed, thoroughly executed and well reported.

5. HPA Markets

Demand

CRU forecast the 4N and higher HPA demand to grow rapidly at approximately 19% CAGR from 2021 to 2028. CRU also predict that the market for high quality and reputable 4N will start to dip into supply deficit as current production will be unable to keep pace with the demand growth.

Securing supply of high-quality feedstock remains an issue for the customer markets for both the surging electric vehicle and battery markets as well as the light-emitting diode and sapphire glass production industries. HPA remains the best material available for both applications for price, durability and efficiency.

Total market growth is forecast to rise to approximately 104,000tpa by 2028 from the current level of approximately 30,000tpa.

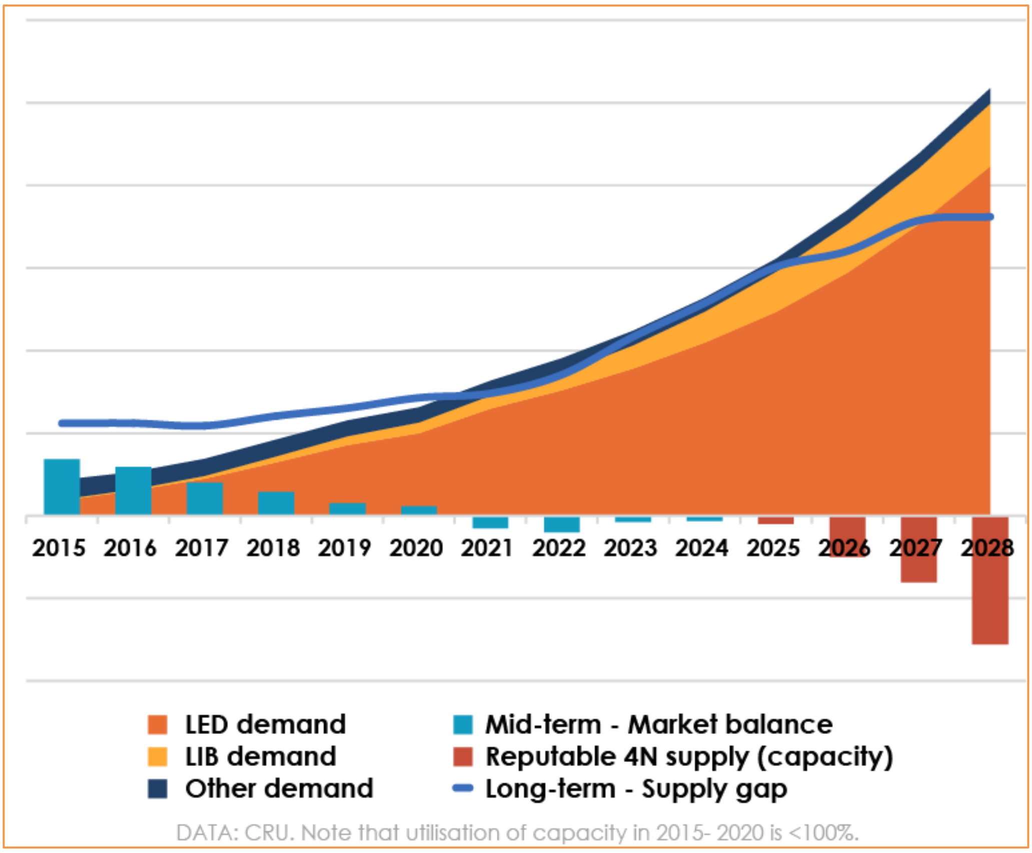
FYI is proposing to produce both 4N and 5N products to meet the market demand for "performance" driven HPA.

4N is forecast to grow at ~18% GAGR from 2021 t0 2028 from a base of ~30,000tpa (2021)

5N is forecast to grow at ~22% GAGR from 2021 t0 2028 from a base of ~5,000tpa (2021)

In terms of sales volumes, assuming unconstrained by supply of 4N+ HPA, demand is forecast to grow from ~30 kt in 2021 to over 104 kt in 2028, a CAGR of 18.7%. Pricing has been noted by CRU to be in the range of:

- US$15/kg for mis-represented, off-specification product largely centering on the Chinese domestic market
- US$56/kg for premium, high quality and reliable supply and specialist applications
- US$100/kg (up to) for spot and small parcels

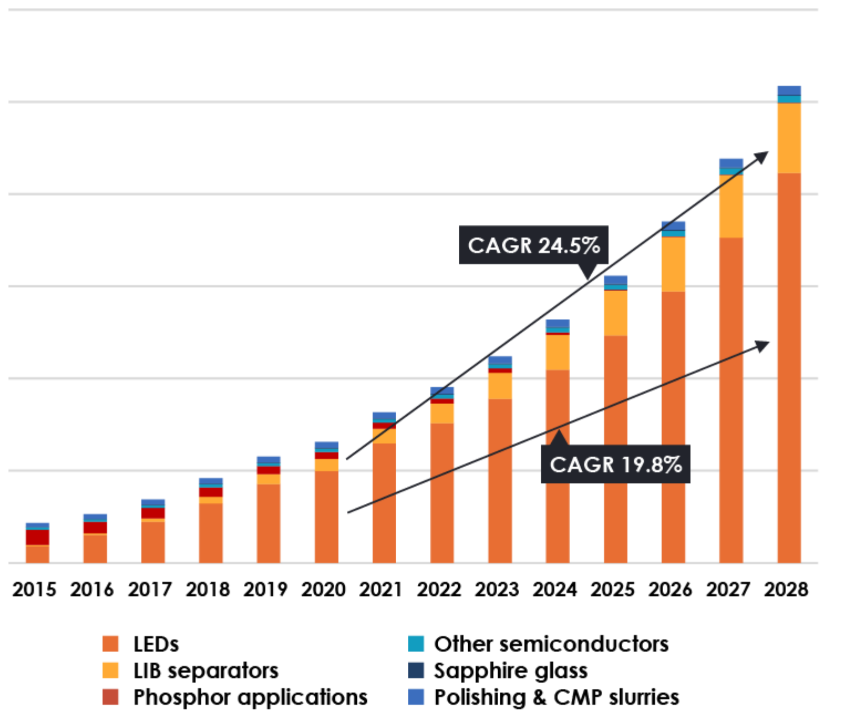


Forecast HPA Demand by End-Use

HPA has specific chemistry and physical characteristics (such as high brightness, hardness, and corrosion resistance) that makes it a superior material in applications such as LED's, semiconductor substrates, li-ion battery separators, optical lenses, bio-medical devices, and others.

LEDs are expected to replace traditional lighting applications completely as they are sustainable, durable, and most critically, extremely energy efficient. HPA in powdered form is a major component in protective coatings and used as a phosphor material in plasma displays. In Asia-Pacific, government funding has fueled the manufacturing capacity investments for electronic companies, which in turn is expected to fuel the demand for HPA during the analysis period.

Whilst no benchmarks for product standardisation of characteristics or pricing assessment exists, there appears to be a genuine growth in the HPA market across all 4N and 5N applications according to CRU HPA report March 2021.



SOURCE: CRU

Lithium-ion Battery Separator Demand Growth

- LIB and EV demand represent the largest growth sector for HPA demand over the coming decade
- HPA demand is driven in part, by growth from the lithium-ion (LIB) battery separator usages in the rapidly growing in electrical vehicle market. [source: 2021 CRU High Purity Alumina Market Study].
- Outstanding growth is forecast in the LIB separator market – a 19% CAGR, from 3,200t in 2021 to 15, 200t in 2028
- The average cell volume of batteries is also growing, as LIBs tend more towards electric vehicle rather than consumer handheld electronics.
- Ceramic separators offer the highest combination of temperature performance, safety and life cycle – as a result, in the forecast period, they are expected to achieve mass commercialisation in EVs.

The HPA derived ceramic coated separators (CCS) application in LiB's is forecast to experience rapid growth. Anticipated uptake in this market is expected to rise from 36% market share in 2018 to ~80% by 2028.

The predominant driver of the LIB separator growth is the rise in demand for electric vehicles.

Acceleration of the EV growth is expected as a result of China's 2-Credit Policy (announced in September 2017 and introduced in April 2018) and China's Battery Manufacturing Legislation, which was announced late 2017. The policy stipulates that manufacturers must sell a certain proportion of EV vehicles, rated according to a credit system and the legislation stipulates that battery manufacturers must create batteries with a minimum charge density, scale, maximum price, etc. The impact of China's policy and legislation change is highlighted in the below graph.

Outlook for Key Drivers of HPA Demand

Static lighting makes up the largest end-user sector for LEDs with 44% of consumption, followed by automotive with 31%. LED usage in signs is expected to grow fastest, with a 2021-28 CAGR of ~9.2%.

Electric vehicles (**EV**) and hybrid vehicle (**HEV**) shipments are set to grow strongly over the forecast period, more than doubling between 2021 and 2028.

Especially in Europe, investment continues to transition towards renewable energy for electric vehicles, supporting the shift to new responsibly produced raw material supplies. The EU's ambition is to be carbon neutral by 2050.

FYI's goal is to produce its HPA responsibly and meet the customers' requirements in this regard.

Electric vehicle manufacturers have recently indicated further actions to promote responsibly produced battery raw materials, in particular.

- BMW Group is targeting new supplies by country of origin and is developing a revised sustainability strategy for its entire value chain;
- Volvo has announced it will become the first car maker to implement global traceability by applying blockchain technology. Traceability of raw materials, like HPA, used in the production of lithium-ion batteries is one of the main sustainability challenges faced by car makers. Volvo stated that "customers can drive electrified Volvos knowing the material for the batteries has been sourced responsibly";

The below table will show the major investments underway to establish new battery manufacturing capacity of more than 200 GWh for EV's in Europe. Please note that also other investments are planned in the US and across Asia.

Company	Country	City	Year	Start GWh	Later GWh	Details
Volkswagen	Germany	Salzgitter	2024	16	24	JV with Northvolt: 70 electrified models by 2030. Construction start 2024
CATL	Germany	Erfurt	2022	14	24	Ground-breaking ceremony took place in Oct 2019. Investment 1.8m euro
Hyperdrive	England	Sunderland	2014	2.5	2.5	Opened July 2019, capacity to produce up to 30,000 vehicle and batteries annually
Leclanche	Germany	Willstätt	2020	1	1	2018 joint venture with Exide Industries, India's largest manufacturer of batteries
PSA Group	France	Unknown	2030	48	48	PSA group and SAFT (part of Total) form joint venture, investment 5m euro
SVOLT	Germany	Unknown	2023	20	24	SVOLT Energy Technology (ex-China's Great Wall Motor Supply to BMW AG
Terra E Holding	Germany		2028	32	32	Consortium of 17 German companies won government support for the project
Freyr	Norway	Mo I Rana	2023	32	32	Plans for a "Nordic Battery Belt" with at least ten plants are in the pipeline
Northvolt	Sweden	Skelleftea	2021	16	32	Funding completed in 2019, Construction start in 2019, US$1b equity raised
Farasis Energy	Germany	Bitterfeld	2022	10	10	Supply batteries to Daimler
LG Chem	Poland	Wroclaw	2022	6	70	In 2022 the factory is expected to reach a production capacity of 65-70 GWh a year
SK Innovation	Hungary	Komarom	2021	7.5	7.5	Production of third generation cells
Samsung SDI	Hungary	Goed	2020	3	15	That facility has the capacity to turn out batteries for 50,000 EVs a year
BYD	Europe		202X	?	?	The company is backed by Warren Buffett's Berkshire Hathaway Inc
Tesla Giga Berlin	Germany	Berlin	202X	?	?	It will also serve for assembly of the Tesla Model Y, annual capacity of 500,000 EVs
Total 2020 - 2028				**208**	**322**	

The demand for HPA has gained traction and is expected to grow at a CAGR of 18.0% in terms of volume during the analysis period, owing to increase in demand from applications such as LED bulbs, electronic displays, automotive, and medical. This trend is anticipated to continue with surge in adoption of HPA by end users and emerging technological developments in the electronics industry.

The forecast increase in penetration of LEDs in the lighting market and rise in applications of HPA in smartphones, smartwatches, and tablets are the major factors propelling the growth of the global market.

Pricing

The different applications in which HPA is used mean that the different producers will have varying HPA product requirements for grade, physical characteristics etc of the final product. This will lead to different pricing between the LiB and LED markets for example.

The primary drivers of HPA pricing and most likely key determinants for price support are:

HPA market deficit
CRU have determined through their recent market study commissioned by FYI (March 2021), that a large market deficit of "performance" 4N and 5N material will emerge between 2023 and 2024 and will exist for some time until expansion or new supply comes to the market. The inelasticity of the sapphire/LED and the high energy density / safety aware LiB demand suggests that the tightening of stocks will have a upward impact on prices.

Mis-quoted HPA supply and disruptions
CRU state that there is limited ability for current supply, particularly Chinese sourced. The CRU report suggests that either through genuine inability to produce specification, quality control on the product and mis-quoting pricing for lower purity material, a poor international reputation will reduce the ability for Chinese material to undercut production.

Traceability of product
An increasing requirement from the customer perspective is the demand on having the traceability and provenance of the HPA and the ability to warrant purity, specification and ESG rating by the producer / supplier. This will limit the effect of pricing and volume interference from lower quality and swing producers.

The following factors are important in determining the value of HPA:

Opaque market
There are a limited number of producers in the market and nearly all are private companies, meaning there is limited publicly available information regarding pricing and completed transactions. Quality of the product is critical. Accordingly, there is also no recognised benchmark price for HPA.

Heterogeneity of products
Although impurity levels are largely comparable between products, the distribution of impurities, physical characteristics and consistency of supply are equally important factors in determining product value. This is particularly true of the deleterious materials such as iron and sodium which are particularly detrimental in both the LiB and LED markets – and of which, FYI HPA material is extremely low. This provides opportunity for FYI HPA to have an advantage in the market place.

Chinese products and industry dynamics
Fierce competition in the Chinese LED industry has seen producers seek to cut production costs by using lower quality products. This has resulted in some Chinese producers using sub-4N HPA products to produce sapphire substrates, although such material is often still advertised, and sold, as 4N. Thus, effectively a two-tier market has evolved, with quality and prices inside China much lower than those outside of China.

Product specifications

Bulk density of pellets must be at least 2.2g/cm3 for use in making synthetic sapphire, while silicon must not exceed 20ppm and iron must be less than 10ppm. Furthermore, for powdered products used in high quality applications, such as for LIB separators, mean particle size should be around 0.5µm, with tight grain size distribution. However, product specifications are highly dependent upon end-use application, with prices changing accordingly.

Relationship building

A key component of the HPA industry is establishing long-term relationships between suppliers and consumers. The tight tolerances in manufacturing processes mean that consumers need to ensure a quality product can be delivered consistently to specification, particularly where there are safety implications, such as in LIB separator coating applications.

Consumers are generally prepared to pay higher prices if consistency of supply and reliable quality of HPA can be guaranteed.

From a customer perspective, an increasing consideration for product selection and strengthening of trading partner relationships, other than confidence in supply of consistent quality and purity assurance, is the producer having strong ESG credentials. This feature of FYI's HPA production will provided potential customers with additional reassurance of not only high product quality and purity – but also of high corporate governance and product traceability.

FYI is continuing to build relationships with a number of key selected groups in S.E Asia, Europe and North America.

Outlook for Prices

Price Drivers

The primary drivers of upward price pressure are:

(a) increasing production costs, particularly in China where electricity and environmental costs are rising,
(b) a supply deficit looming in 2023-24,
(c) increased intermittent and / or disrupted supply, and
(d) a strong demand outlook

Further volumes coming out of the market will help to support prices. The price pressure parameters in Australia are relatively stable and alternate supplies are limited at present.

Outlook

Over the medium to long term, we believe that the strong outlook for demand is likely to drive prices well above current levels.

The limited ability of Chinese producers to compete in the higher quality 4N market should allow for stronger prices in the "performance" 4N and 5N market segment, with the added benefit of its positive outlook for demand growth makes this market an attractive proposition for the Company.

Electric vehicle market growth in particular is likely to drive strong premiums for high-quality 4N with consistent physical properties in the near to medium term, and this should provide strong price support to high quality >4N products.

Risks and Caveats

Experience in other industries has shown that Chinese producers have the desire and resources to push into the production of technologically advanced materials and can often close knowledge gaps quickly. Should Chinese producers increasingly seek to participate in the high-power LED market, prices could decline sharply if there is a repeat of the situation observed in low- and medium-power LEDs.

Manufacturers often over-engineer new technology, but over time find ways to cut back on input quality or reduce material use without compromising product quality over the longer term.

Market Engagement

FYI has a strong market engagement with potential off-take and intermediary groups. FYI has met directly with representatives of potential customers and reputable current producers, key traders in mainland China, Japan, Taiwan and South Korea to continue to develop relationships, discuss the Project's progress and potential cooperation.

FYI has provided key targeted groups with internally generated HPA from the Company's pilot plant trial production. This HPA is representative of the material designed for commercial production by FYI. The potential customers receiving this material are currently assessing and qualifying the HPA for suitability in their various applications.

Feedback from all engaged groups at to the quality and purity specifications of FYI's HPA material has been excellent. The very encouraging results has initiated follow up rounds of additional HPA sample for qualification and detailed discussion with various ranked key groups. FYI will continue to manage the HPA product qualification process with these engaged groups as well as other interested parties.

It is expected that the qualification and assessment process will lead to off-take agreements and/or potentially in investment in the asset (via a Joint Venture) or indeed, in the Company.

Adopted Pricing for the Updated DFS.

FYI has developed a methodology to establish a conservative and realistic sales price for HPA, which is used in the revised NPV financial model.

This methodology includes sourcing of price indications from:

1. independent price forecasts and price revealing by industry research experts CRU and Allied;
2. web-based commodity trading platforms;
3. purchasing of product from an established commodity retailer / trader; and
4. FYI's own market intelligence studies - having direct face to face meetings with small and large manufacturers and traders in China, Japan and South Korea.

Pricing information used for the updated DFS was derived from:

1. CRU and Allied research reports and presentations including price forecasts for the period 2021 to 2028;
2. Pricing on web-based commodity trading platforms for HPA was evidenced in retail spot prices for 4N ranging from US$30,000/t to US$35,000/t;
3. Invoiced price for HPA (used in independent metallurgical test work and verification of purity) – US$100,000/t (small parcel); and
4. Canvassing of approximately 30 separate groups indicated the price range for 99.99% HPA was between US$15,000/t (China) and US$37,000/t (South Korea).

In order to calculate the HPA price for the updated DFS and revised NPV, FYI allowed for an adjustment of spot pricing versus contract, end-user versus trader and applied a conservative basket pricing of 4N and 5N revenues of US$26,400/t.

6. Risks and Opportunities

Risks

FYI is committed to a risk management framework and a set of processes which effectively identifies and manages risk in a business. These processes include:

- Identification of risks
- Assessment of risks to determine their severity and potential impact
- Evaluation of risk to determine risk retention or mitigation
- Treatment of risks deemed unacceptable to the business
- Communication and consultation of risk management activities
- Review of risks, mitigation strategies, actions and the risk management process.

The project Risk Management Plan is aligned with the *AS/NZS ISO 31000:2009 – 'Risk Management – Principles and Guidelines'*.

The identification and management of risks and opportunities in the project has had a positive effect on the updated DFS outcomes.

Benefits of the risk analysis include a more considered and comprehensive detailed study, the reduction of project forecast costs through design improvements and effective management of human and material resources for optimal schedule, cost and safety outcomes.

Risk Management Policy

The Risk Management Policy sets the environment for determining how risk will be managed within the business. The Policy integrates into the business planning framework, corporate governance framework and broad vision of the business.

FYI recognizes that the business is exposed to certain levels of risk in its undertakings. Some risks are generated through external forces beyond the control of the Company, and some are generated through the activities of the business. The success of the business is based on how risk is managed. FYI aims to incorporate both entrepreneurial activities required for commercial success together with the discipline of well-developed strategies and processes for minimizing adverse outcomes.

7. Additional Opportunities

By-product Revenue Streams

Testing of the kaolin in Cadoux has shown that the Project has the potential to produce commercial volumes of high purity quartz (**HPQ**). HPQ is a high value material used in specialty applications including solar panel glass.

FYI produces two major streams of inert silica waste from the HPA refining process:

1. from the kaolin beneficiation process at Cadoux; and
2. as inert silica or HPQ from the refining of concentrate in Kwinana.

With the Company's ESG objectives, FYI has evaluated the transitioning of this waste into valuable revenue streams. FYI has undertaken a number of classification and analysis of the inert silica waste with both streams meeting high grade specifications for HPQ.

The evaluation of these potential waste recycling and additional revenue streams is ongoing. No fininacial benefit from the potential HPQ revenue has been incorporated into the revised NPV.

5N Purity Product

FYI has successfully completed three separate pilot plant runs tin support of the Company's HPA project development strategy. Based on the validation of the Company's metallurgical process, the achieving of 5N (see ASX announcement 11th February 2021) and achieving average purity of 99.997% for its high purity trials, FYI believes as a result that incorporating a 5N product into the Company's revenue stream is realistic.

FYI has included the production of approximately 15% or 1,500tpa to the forecast total production of 10,000tpa HPA. A 5N product produces greater margins, and the forecast is supported by a growing market demand to warrant the inclusion into revenue model and updated NPV.

Kwinana Industrial Area (KIA)

The KIA represents a tremendous opportunity for FYI in terms of leveraging off the precincts "Industrial Symbiosis" and by-product exchanges (or circular industry). The KIA has significant industrial development associated with the battery industry development and value chain that is set to emerge over the next few years. The $16bn of direct contribution to Western Australia's economy is an ideal platform for the collegiate interests of proponents within the KIA to leverage off the by-product commercial exchanges. FYI will be a direct beneficiary of the circular industry, by-product recycling and waste legacy reduction programs that are employed by the proponents in the KIA, of which FYI will be one. This utilization and reduction of waste will have a material impact to the Company's opex and capex as well as future ESG rating.

Expanded HPA Production

The HPA market has a strong growth forecast of > 18% CAGR across all categories, according to CRU 2021 report. Whilst current demand for HPA stands at approximately 30,000tpa, CRU forecast annual demand to grow to approximately 104ktpa by 2028. FYI believes that, to take advantage of the market growth, the Company foresees a possible case where it will maneuver to expand production further to meet the demand and to maintain a material position within the market.

FYI, puts forward an expanded production case of 10,000tpa of HPA in the updated DFS. It is possible, depending on market demand and competition from alternative supply sources, that production may be further increased in time.

Industry Engagement

FYI sees strong growth in the HPA industry in both the E-mobility and energy storage (the Lithium-Ion Battery - **LIB**) markets as well as the sapphire glass and phosphor (LED) industry. Key to the growth of these markets is research and development into the increase in applications and product expansion.

FYI is engaging with various development groups to explore different markets and HPA applications. One avenue that is of particular interest because of the level of opportunity is the Future Battery Industry Cooperative Research Centre (**FBI CRC**). FYI is a founding member of the FBI-CRC research initiative program and supports various projects through funding, providing technical assistance and soft donation through supplying high quality HPA for use in the research studies.

The FBI-CRC research initiatives will enable Australian industry, governments and academics to optimise the cost competitiveness and productivity of the Australian energy storage metals, materials and systems industry to meet growth in markets, companies and exports. The program will enable value creation, sustainability and global competitiveness through the battery value chain.

FYI will be direct beneficiary of the cutting-edge development programs that emerge from some of the various development programs.

Future Batteries Cooperative Research Program (FBI-CRC)

The FBI-CRC was established in 2019 as a national initiative for the further development of battery related studies with the intention to develop and commercialise advanced battery applications. FYI is an associate partner and significant contributor to the CRC. FYI has provided the below study hypothesis:

Improved Assay Techniques for Lower Detection Limits

Changing and advances in technology have driven demand for higher purity materials as feed sources for manufacturing. As product impurities have been increasing, the technologies available to provide a rapid, accurate and precise assay to the required detection limits have failed to keep up with demand.

8. Environmental and Social Governance

The challenge for most modern mining operations is to operate within, and to maintain, acceptable operating limits of environmental and social standards.

The Environmental Challenges

The mining sector faces many material environmental, social and governance (ESG) issues. Certain mining operations can have significant and long-lasting environmental and social impacts on the community.

These ESG issues include:

- Excessive energy use and greenhouse gas emissions
- Disproportionate effluent and waste production
- Land degradation and negative impact on biodiversity
- High water use
- Community Relations
- Community Health and Safety concerns

Environmental Benefits

An important objective for the Company is to develop the Project sustainably and through environmentally friendly methods. Relative to normal mining practices and to the traditional refining pathway for HPA, FYI's carbon production, contribution to greenhouse gas and environmental footprint is very low.

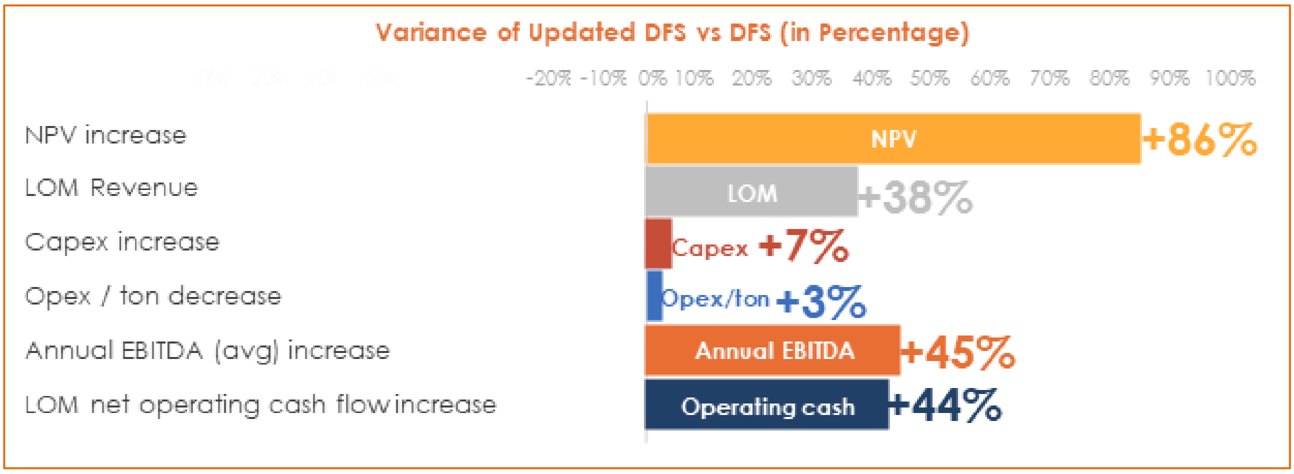
FYI has made significant efforts during the development of the Company's HPA Project strategy to address the ESG, sustainability and legacy issues. FYI is establishing strong frameworks and transitioning the Company to increase its ESG standards along with instigating long-term programmes and initiatives to reduce its legacy impact and potential risks.

Along with designing its HPA Project and process flowsheet to minimise its environmental impact and greenhouse gas contribution, FYI also recognises its social and governance requirements. FYI has combined these practices to identify and improve legacy issues to achieve best practices to be a leader in the sector. To quantify FYI's ESG footprint, the Company is currently being assessed and rated by an independent industry rating service.

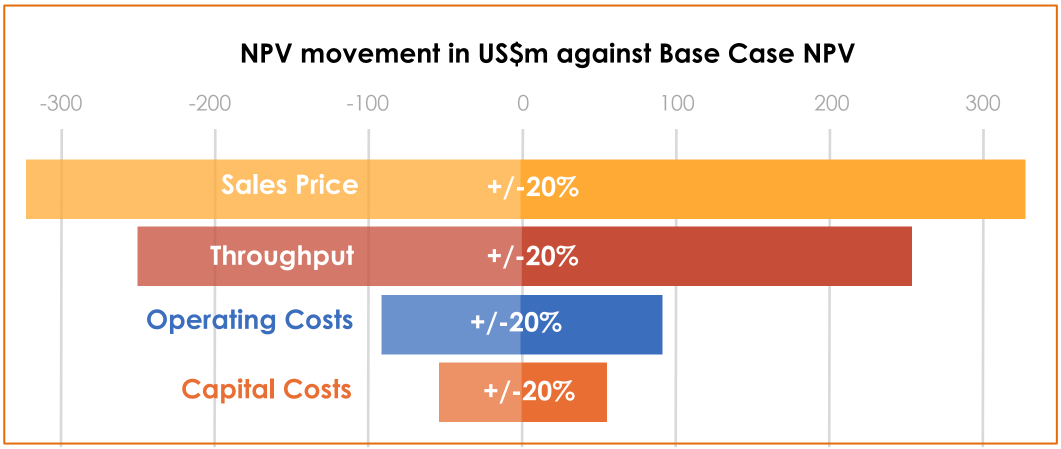
9. Sensitivities of updated DFS

FYI's HPA project is a long life, high margin, low environmental impact operation. This is non-typical to most mining-based projects. Indeed, the mining component of FYI's HPA project is approximately 10% of the overall project capital requirement. As such, the impact and sensitivity changes to FYI's business case and financial model to various changes in key operating drivers is characteristic to the Company. The updated DFS examines the sensitivity effects of varying a number of the key drivers, such as cost and revenue impacts, to assess their effects on the project value.

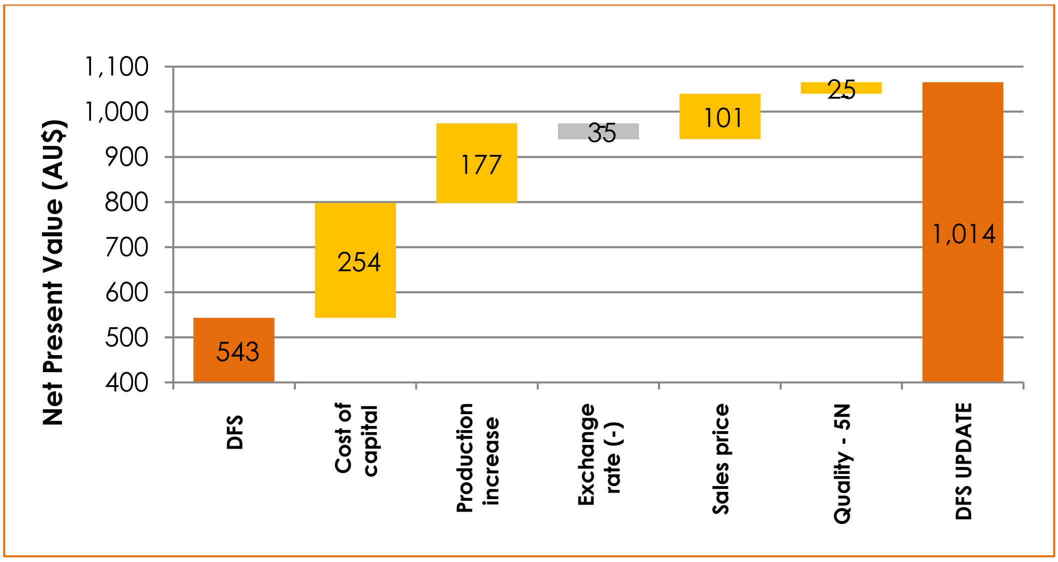
The Project's sensitivity analysis of the updated DFS, at 8% discount rate, and changes to input by +/- 20%, is shown below represented in a Tornado Graph. The Project is highly sensitive to the sales price, throughput and less to Operating and Capital Costs.



Updated DFS variance to initial DFS



FYI updated DFS sensitivity Tornado graph



Water fall graph of Updated DFS reconciliation to initial DFS

10. Updated DFS Conclusion

The focus of the updated DFS has been to further evaluate the feasibility of the development of the Company's high quality, long life and fully integrated HPA project.

With outstanding project metrics and strong guiding ESG standards, FYI has demonstrated excellent progress in the development of its innovative, fully integrated, high quality, HPA project since the publication of the initial DFS.

In presenting an updated DFS and revised NPV including the increased production case of approximately 10,000 tonnes per annum incorporating both 4N and 5N HPA revenue streams and using an 8% discount rate for the calculation in the discounted cashflow forecast, FYI continues to demonstrate the use of validated and conservative inputs into the Study.

FYI has incorporated the studies of top tier HPA consultants whose extensive research and development and test work including a substantive pilot plant test program, detailed engineering design and cost studies support and validate the outcomes of the updated DFS.

With the foundation of the prior studies and progress in development of the HPA project since the initial DFS, economic parameters and inputs into the updated DFS and revised NPV. summarises the Material Assumptions, project risks, HPA marketing and other key project inputs.

The study is underpinned by a high confidence Ore Reserve and Mineral Resource estimate.

FYI's Cadoux kaolin deposit is a unique combination of favourable geology, chemistry and physical characteristics that presents as an ideal source of HPA feedstock resulting in excellent project economics of lowest cost quartile capex and opex.

The corresponding processing route developed by the Company, combined with the location of the refinery in Kwinana and its proximity to the source of inexpensive reagents and utilities, helps drive FYI's low capital and operating costs.

The alignment of low-cost production and value drivers to the high forecast demand in the various HPA markets places FYI in a favourable position amongst its peers.