

The Manager Companies - ASX Limited
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ASX Announcement
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(6 pages)

COMPLETION OF \$40M STRATEGIC PLACEMENT TO ACCELERATE ALPHA SAPPHIRE

- **\$40M Strategic Placement to AustralianSuper, Orica Limited and other large shareholders to accelerate the development of Alpha Sapphire**
- **Strategic Placement Offer Price of \$0.73 per share which represents a narrow premium to the 20-day VWAP of \$0.7243 as at 1 November 2023**
- **Fully funds Alpha Sapphire's Phase B roll-out by matching the \$30M QCMBTF funding**
- **Establishes high value downstream user of HPA from the HPA First Project**
- **Updated Sapphire growth financials confirm robust business case**

Alpha HPA Limited (**Alpha** or **the Company**) (ASX: A4N) is pleased to announce that it has received binding commitments from AustralianSuper, Orica Limited and other large shareholders to raise \$40 million through the issue of approximately 54.8 million new fully paid ordinary shares in Alpha (**New Shares**), representing 6.2% of Alpha's existing shares on issue, at an offer price of \$0.73 per New Share (**Offer Price**) (**Strategic Placement**).

The Strategic Placement provides matching funding to the recently announced \$30M funding (ASX: 28 September 2023) from the QIC Critical Minerals and Battery Technology Fund (**QCMBTF**), as well as general working capital.

Subject to satisfying the remaining conditions precedent to the drawing of both tranches of the QCMBTF facility, a total of \$60M funding will be available to fully fund Phases A and B of the roll-out of the Alpha Sapphire Project (in total, the first 50 sapphire growth units).

Phases A and B of the Alpha Sapphire Project are projected to generate sufficient future cashflows to fund the future expansion through to completion of Phase C (being a further 50 sapphire growth units, taking the total number of sapphire growth units to 100).

Dependent on final production rates from Alpha's existing HPA First Project Stage 1 facility in Gladstone, Alpha Sapphire Phases A and B are expected to be either wholly or substantially supplied with HPA tablet feedstock from the Company's HPA First Project Stage 1.

The Strategic Placement is a strong endorsement of Alpha Sapphire and a significant corporate milestone in funding the Alpha Sapphire business through to positive cash flow.

We are pleased to welcome AustralianSuper, Australia's largest institutional investor, to the Alpha register.

Alpha Managing Director, Rimas Kairaitis said, "Alpha is delighted to announce this strategic placement to match QIC's recent \$30M funding commitment. These funds now see the Alpha Sapphire business fully funded for its first 50 crystal growing units and through to positive cash flows, with a strong platform to expand to 100 units. We are pleased to introduce AustralianSuper as a new shareholder to the business, in addition to welcoming the ongoing support of Orica."

BACKGROUND

In March 2023, Alpha entered agreements with Ebner-Fametec, to provide for the staged entry by Alpha into the production and sale of synthetic sapphire glass utilising Ebner-Fametec sapphire growth technology and utilising Alpha's custom high purity alumina (**HPA**) tablets as feedstock.

Ebner Industrieofenbau GmbH (**Ebner**) Group is a large family owned Austrian manufacturer with over 70 years history in the design and construction of industrial furnaces for the heat treatment of metals. Ebner is a global market leader in numerous application areas and has over 1,400 employees with production sites in Europe, Asia and USA. Ebner has been active in R&D development and commercialisation activities in the field of LEDs and semiconductor materials since 2005. The synthetic sapphire growth technology has been developed by a wholly owned Ebner subsidiary (**Ebner-Fametec**).

Alpha has agreed with Ebner to purchase and roll-out sapphire growth units in the following phases:

- **Phase A:** Purchase and installation of an initial 2 synthetic sapphire growth units: *Now Underway*
- **Phase B:** Purchase and installation of a further 48 synthetic sapphire growth units: *Total 50*
- **Phase C:** Purchase and installation of a further 50 synthetic sapphire growth units: *Total 100*

In June 2023, the agreement between Alpha and Ebner-Fametec was expanded to include a Letter of Intent to work co-operatively on an additional, large-scale expansion of the Australia based sapphire growth installation, to be referred to as the '**Nova Phase**'. The Nova Phase will contemplate the purchase, construction, installation and operation of up to an additional 1,000 synthetic sapphire growth units.



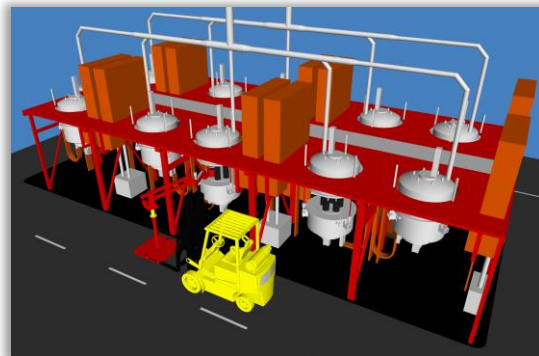
Sintered HPA feed material from the HPA First Project



Sapphire blanks and boule



Twin set of sapphire growth units (Fametec Austria)



Commercial module (10 growth units)

It is anticipated that Alpha Sapphire will become a significant customer of the HPA First Project in Gladstone. Should Alpha Sapphire scale to reach Nova Phase (additional 1,000 units), the business will consume between 3,000 and 4,000 tonnes of HPA per annum, representing a material user of HPA from the Stage 2 HPA First Project.

SAPPHIRE MARKET

Alpha's view is that our ability to supply premium HPA feedstock intersects with three favourable market dynamics within the synthetic sapphire market to provide a unique opportunity for Alpha to enter the downstream synthetic sapphire market.

1. DEMAND GROWTH FROM NEW APPLICATIONS

Synthetic sapphire wafers are the dominant substrate in LED lighting. The increasing adoption of mini-LEDs and micro-LEDs, in smartwatch, smartphone, television, and other electronic displays is predicted to grow to global LED revenue of US\$17 billion by 2026, with wafer demand for micro-LEDs forecast to grow at a CAGR >500% between 2023-2027 (*source MarketWatch Inc*). The adoption of micro-LEDs is driven by significant reductions in power draw and an improved user experience. The forecast mini and micro LED demand is also directly linked with attendant HPA feedstock demand.

2. TECHNOLOGICAL DISRUPTION: THE FAMETEC MCSAP TECHNOLOGY

Ebner-Fametec's sapphire crystal growth process, known as the McSAP (Multi c-Axis Sapphire) achieves +60% utilisation of the crystal boule (compared to ~35-40% for current industry standard) with ~50% power saving (per kilogram of grown crystal) realised through greater utilisation per crystal boule and growth of multiple boules per production run, realising a significantly lower energy production.

This combination results in a materially lower costs and lower carbon footprint than other crystal growth processes. The McSAP process is accordingly considered a well-suited complement to Alpha's low carbon HPA feedstock in achieving LED substrate with the lowest-carbon footprint.

3. SUPPLY CONCERNS

Globally, high technology sectors are experiencing an intensifying global trend towards de-risking/re-shoring and friend-shoring supply chains.

Traditionally, Russian and Chinese companies have dominated synthetic sapphire growth, accounting for >80% market share. However, there is now a growing thematic amongst end-users to diversify supply to be sourced from preferred jurisdictions.

In addition, the end-user sectors are placing stronger emphasis to decarbonise supply chains to meet emission targets. With sapphire growth being an energy intensive process, the Ebner-Fametec lower energy technology, combined with Alpha's ability to access renewable energy, provides an attractive alternative to the higher carbon intensity of the current global sapphire glass producers.

SAPPHIRE GROWTH FINANCIALS

Alpha has undertaken a detailed assessment of the business opportunity presented by synthetic sapphire growth. This includes direct engagement with end-users in both the LED and sapphire optics markets and includes detailed price discovery with respect to expected pricing and processing costs.

Alpha considers the financial opportunity for sapphire glass growth to be robust, driven by:

- The favourable market supply and demand dynamics described above.
- The higher utilisation of sapphire using the McSAP sapphire growth technology.
- The more efficient use of energy in the McSAP sapphire growth technology.
- The available price of renewable electrical energy.

Based on a range of scenario splits between sales to the Optics and LED end markets, Alpha has modelled EBITDA returns below as being achieved once the 50 growth units are at steady state operation post FY25, and once the 100 growth units are in steady state operation post FY26.

	Annual EBITDA (USD) - post QIC Royalty		
	Per single growth unit	Per 50 growth units	Per 100 growth units
Base case	\$516,000	\$25,800,000	\$51,600,000
High case	\$693,000	\$34,600,000	\$69,300,000

The EBITDA returns above are uncertain and subject to change and have been estimated based on the following inputs and assumptions:

- Sapphire growing costs and consumable inputs from Ebner-Fametec, based on 2023 actuals.
- Sapphire optics revenues based on interviews with end-users and actuals sourced from due diligence with existing sapphire growing counterparties (2022).
- Processing costs for sapphire to optics sourced directly from due diligence with existing sapphire growing counterparties (2022).
- Sapphire revenues and processing costs for LED end use sourced directly from existing sapphire suppliers to the LED market (2023).
- Electricity pricing built from direct (indicative) quoted supply numbers from QLD based renewable generators (2023).

ALPHA SAPPHIRE BUSINESS STATUS

The joint engineering team of Alpha and Ebner-Fametec are co-ordinating the construction and installation layout for the first two sapphire growth units purchased as per Phase A of the Ebner-Fametec agreement. The construction of the units remains on schedule, with first equipment deliveries due late 2023, for installation and commissioning in early 2024 with Alpha supplied sintered HPA pucks from the HPA Project Stage 1 production. Phase A of Alpha Sapphire is estimated to produce approximately 7 metric tonnes of synthetic sapphire per year and enable large scale qualification samples and small-scale sales.

Alpha Sapphire has advanced discussions with respect to securing a competitive source of renewable energy linked with a suitable site for the Phase B and C roll-out of the Alpha Sapphire business unit (100 sapphire growth units).

Interlinked with the renewable energy supply discussions, Alpha Sapphire has narrowed the evaluation of site locations to three suitable sites in Queensland, which each provide for a rapid deployment of Phase B and Phase C.

STRATEGIC PLACEMENT DETAILS

Under the Strategic Placement, the Company will issue approximately 54.8 million New Shares at an issue price of \$0.73 per New Share (**Offer Price**), raising gross proceeds of approximately \$40.0 million. New Shares will be issued in a single tranche under the Company's available placement capacity under Listing Rule 7.1.

The Offer Price of A\$0.73 per New Share, represents a:

- 6.4% discount to the last closing price of A\$0.78 on 1 November 2023.
- A narrow premium to the 20-day VWAP of A\$0.7243 as of 1 November 2023.

Proceeds from the Strategic Placement will be used to accelerate the development of the Alpha Sapphire Project, including the purchase and installation of 48 sapphire growth units from Ebner-Fametec, and provide balance sheet flexibility.

Macquarie Capital (Australia) Limited and Bell Potter Securities Limited acted as Joint Lead Managers to the Strategic Placement.

About the HPA First Project

The Company's HPA First Project represents the commercialisation of the production of high purity aluminium materials using the Company's proprietary, exclusively licensed solvent extraction and HPA refining technology. The disruptive, low-carbon process technology provides for the extraction and purification of aluminium from an industrial feedstock to produce 4N (>99.99% purity) and 5N (>99.999% purity) aluminium materials for sale into high technology markets including the semiconductor, lithium-ion battery and LED lighting sectors.

Alpha completed a Definitive Feasibility Study in March 2020 following a successful pilot plant campaign in 2019.

Alpha is now in production at its HPA First Project Stage 1, Precursor Production Facility. The Stage 1 facility is being expanded to produce the full range of Alpha's high-purity aluminium materials with \$15.5M grant funding from the Australian Government.

The Company is now in the mature phases of market outreach and project financing with respect to the full scale Stage 2 HPA First Project, with the expectation of positioning Stage 2 to Final Investment Decision.

Since the Definitive Feasibility Study in March 2020 there have been material upward capital expenditure and operating cost pressures on all new major projects, including in Queensland, Australia and worldwide. These increased capital expenditures will also impact Stage 2 of the HPA First Project. As per the marketing update to ASX dated 18 October 2023, the Company has also noted an improved pricing environment for its high purity aluminium materials.

The Company looks forward to providing a detailed update once these items are finalised.

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Forward looking statements

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