JANUARY 9th 2026 **CORPORATE RELEASE**

Lake Hope High Purity Alumina (HPA) Project Update
Strong CRC-P Research Progress on membrane technology and the importance of potash

- Significant technical progress made in the first 12 months of the A$2.87M Cooperative Research Centre programme (CRC-P) in applying membrane technology to Impact's patented 3-stage HPA process, which supported the successful Pre-Feasibility Study on Lake Hope.
- Membrane crystallisation being assessed for recovering sulphate of potash (SOP) crystals by-product from Stage 1 of the HPA process, with high-purity SOP (>94%) achieved to date.
- High water recovery obtained from SOP brine, generating high-purity water suitable for reuse in the process thus lowering operating costs, water footprint and environmental impact.
- Pathway identified for magnesium (Mg)-potash, with Mg captured during ore washing and selectively reintroduced into potash crystallisation to produce higher-value fertiliser products.
- Potential breakthrough iron-removal technology emerging from Stage 2 of the HPA process, hydrochloric acid circuit testwork, offering a potential low-cost method for key impurity control.
- New potential standalone pathway identified for large-scale potash and acid production, independent of the HPA flowsheet, that could lead to an additional mining project at Lake Hope and surrounding lakes.
- Eutectic-Freeze Crystallisation technology currently being assessed for integration into flowsheets via private company Brinetec Pty Ltd's installed bench prototype, offering more options for potash crystallisation and wastewater management.

Figure 1. Crystals of high-purity Sulphate of Potash (K_2SO_4) produced by direct membrane crystallisation, offering lower Capex and Opex compared to conventional SOP crystallisers.

Impact's Managing Director, Dr Mike Jones, said:

"The first year of CRC-P work has achieved notable technical progress, significantly boosting the value of the Lake Hope project. Our teams at ECU and CPC Engineering are demonstrating clear pathways to lowering operating costs, enhancing water efficiency, and producing high-value fertiliser by-products—especially high-purity SOP and Mg-potash. As our understanding of potash crystallisation deepens, we have recognised a much larger potash opportunity that could develop alongside the Lake Hope Project. Additionally, we have identified a brine freezing technology that may further enhance the economics of potash production.

These outcomes, based around elegant membrane technologies, strongly support the advantages of our patented HPA process for producing low-carbon, low-waste HPA and also highlight the potential to fully realise the commercial opportunities of the Lake Hope project. We are very excited to see what further discoveries we can make in 2026 as we receive results from our ongoing extensive testwork".

Mineral Recovery Research Centre's Leader and CRC-P Lead Investigator, Associate Prof. Amir Razmjou, said:

We are pleased with the strong progress to date in integrating membrane technologies into the HPA production flowsheet. The results are promising in reducing the water footprint and environmental impact, while enabling high-purity SOP production and recovering waste energy to minimise overall energy input. In 2026, we expect further advances in membrane integration across the flowsheet, alongside pilot-scale development and optimisation of the key process steps.

Impact Minerals Limited (ASX: IPT) is pleased to report that significant technical progress has been achieved during the first 12 months of the A$2.87 million Cooperative Research Centres Projects (CRC-P) programme supporting the development of its 80%-owned Lake Hope High Purity Alumina (HPA) Project in Western Australia.

The programme, carried out in partnership with CPC Engineering and the Mineral Recovery Research Centre (MRRC) at Edith Cowan University (ECU), is accelerating the commercialisation of Impact's patented low-cost, low-carbon process for producing HPA by focusing on integrating membrane technology into the HPA flowsheet (ASX Release October 22nd 2024).

The MRRC at ECU is a world-leading institute in applying membrane technologies, which have been widely used in the water-treatment industry for decades, and now extend to mining and critical minerals applications. A broad range of membrane platforms is available, including established micro-, ultra-, and nano-filtration, as well as reverse osmosis, alongside emerging membrane distillation and membrane crystallisation systems, and more specialised ion- and compound-selective membranes.

Based on current results, Impact believes that integrating membrane technology into the existing flow sheet could lead to significant savings in both capital and operating costs for the proposed benchmark production of 10,000 tonnes per annum of HPA outlined in the Lake Hope Pre-Feasibility Study (PFS) (ASX Release June 17th, 2025). The PFS demonstrated very strong economic prospects for the project, with one of the lowest operating costs per tonne of HPA globally. The technology may also facilitate modular HPA production, which could be a key factor in speeding up entry into the HPA marketplace.

Impact notes that there have been no material changes to the results of the PFS since its publication and that all material assumptions have not changed.

Patented Metallurgical Flowsheet

In simple terms, Impact's patented metallurgical process to produce HPA is a straightforward three-stage process:

Stage 1: an alkaline leach that yields high-purity potash as a valuable liquid byproduct;
Stage 2: a hydrochloric acid (HCl) leach of the solid residue from Stage 1, which produces aluminium chloro-hexahydrate (ACH); and
Stage 3: subsequent calcination of the ACH to produce HPA (ASX Releases February 27th, 2024 and June 17th, 2025).

Figure 2 shows a simplified version of the flow sheet, highlighting the three stages and the locations where five types of membranes (numbered 1 to 5) can be implemented to enhance the flow sheet. These are

1. Membranes for water use, including recycling and reuse of process water, and ensuring any wastewater discharges meet environmental standards.
2. Membranes for the recovery of specific minerals or elements.
3. Membranes to aid acid sparging and the production of the HPA precursor ACH.
4. Membranes for acid recovery.
5. Membranes for solid waste management.

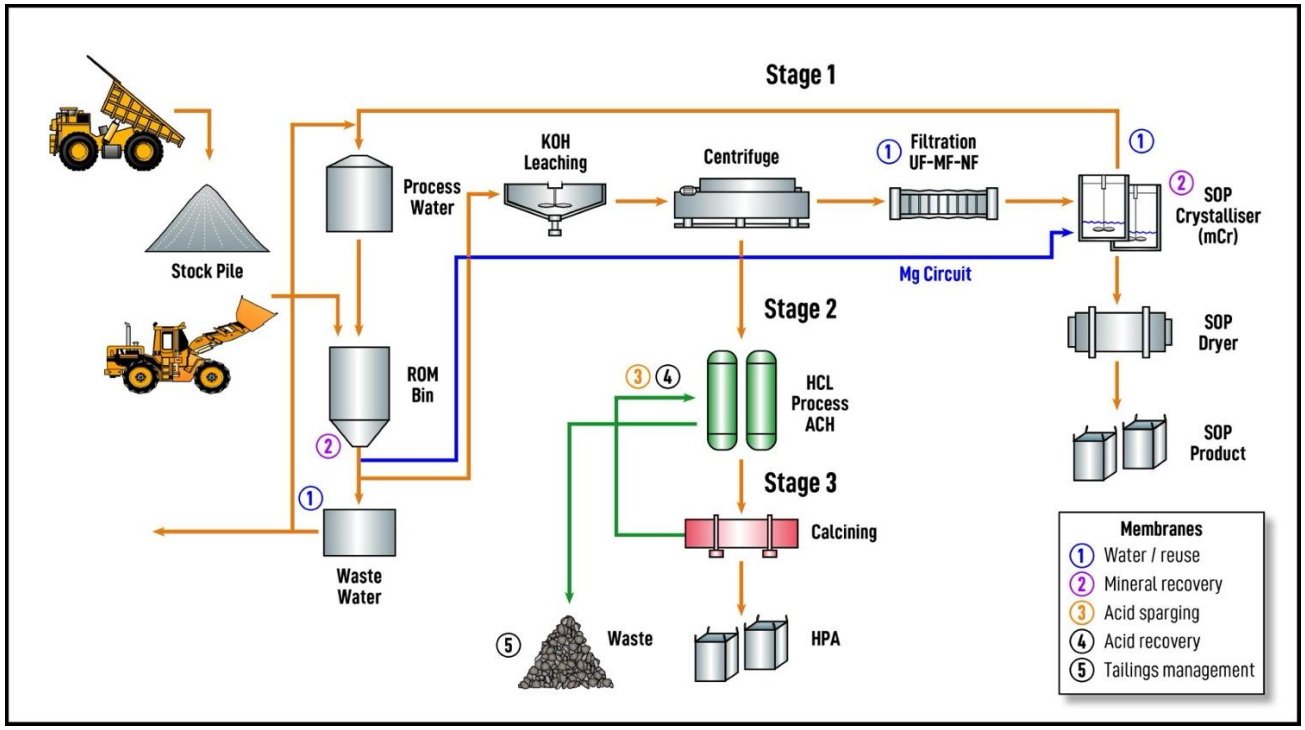

Figure 2. Patented metallurgical flowsheet for Impact's 3-stage HPA process. Stage 1 is shown in detail with Stages 2 and 3 simplified for this report.

The CRC-P research has several key workstreams based around these membranes:

- **Stage 1: Potassium hydroxide (KOH)-based leaching and potash by-product recovery.** This stage, where most work has been done, is the focus of this report.
- **Stage 2: HCl recycling and rejuvenation.** As part of this work, a potential breakthrough method for low-cost iron impurity removal from HCl has been identified, with key results due later in Q1. It is referred to as the **Direct Iron Extraction Method (DFE).**
- **Alternatives to HCl leaching of the Stage 1 residue.** Work is underway to investigate alternatives to HCl leaching of the Stage 1 residue, as this could offer, among other benefits, an elegant method to potentially provide a cheaper feedstock for, and integrate with, the HiPurA process (owned by Alluminous Pty Ltd (Impact 50%); ASX Release, April 24, 2025).

Substantial progress has been achieved across all workstreams, particularly in potash by-product recovery, as summarised below. Further details on the other workstreams will be provided as results become available. Overall, the progress further demonstrates the technical elegance and commercial strength of the Lake Hope process, including its ability to generate significant fertiliser by-product credits that materially offset HPA operating costs.

Key Results from Stage 1 of the Flowsheet: Potash Production and Water Recovery

Impact's patented process employs potassium hydroxide (KOH) to selectively extract alumina from Lake Hope clay at temperatures below 90°C, resulting in a brine rich in SOP. At the time of the PFS, limited test work had been completed on the potash by-product, which prevented the inclusion of its potential economic benefits in the PFS economic model. However, it was estimated that potash sales could potentially provide an offset byproduct credit that would reduce the net operating cost per tonne of HPA produced by 25% (ASX Release June 17 2025). As noted above, the residue from Stage 1 may also be a potential feedstock for the HiPurA process.

Given this potential economic benefit, the main focus this year has been on potash production. Major achievements, all at bench scale, include:

1. Membrane crystallisation has been successfully demonstrated for direct SOP recovery, with K_2SO_4 crystals achieving a purity of greater than 94% (Figure 1). This has the potential to increase purity and eliminate, or reduce the required size of, conventional SOP crystallisers, thus potentially offering savings in both capital expenditure (Capex) and operating expenditure (Opex).
2. The high-purity SOP is the result of the development of a full microfiltration–ultrafiltration–nanofiltration pretreatment membrane system which removes >99% of the particles in the SOP brine. This delivers high-quality brine feed for crystallisation, reagent recycling and water-reuse loops.
3. High water recovery rate from the SOP brine has been achieved.
4. The recovered water is of high purity and can be reused as process water or discharged as waste (Figure 2).
5. A pathway to premium Mg-potash products has been identified. Testwork shows that a membrane can selectively capture magnesium during the initial ore-washing phase. This can be selectively reintroduced into the SOP crystallisation stage to produce bespoke Mg-enriched potash, which may command a premium fertiliser price (Figure 2). This pathway is being researched further.

More about potash: a potential new development project for Lake Hope

Potash is in high demand globally as a fertiliser. As a simplification, there are two main products: Muriate of Potash (MOP, potassium chloride, KCl) and Sulphate of Potash (SOP, potassium sulphate K_2SO_4), with SOP commanding a significant premium over MOP. Australia currently imports virtually all of its MOP and SOP for a market estimated at about 500,000 tonnes per annum (tpa). Under the PFS for Lake Hope, for 10,000 tpa of HPA production, estimated SOP production as a byproduct is about 20,000 tpa.

Over the past 5 to 10 years, there was a surge of projects aiming to produce potash from groundwater in and around the salt lakes of central Western Australia, with many hundreds of millions of dollars spent on exploration and development funding. These projects all utilised evaporation ponds as the key element in the crystallisation process. However, due to unexpected technical difficulties associated with the evaporation sequence and unforeseen weather conditions, all but one of these projects is currently on hold or has been relinquished.

As part of Impact's research into Lake Hope, a different metallurgical flowsheet from the HPA process has been identified that could potentially allow for the direct production of potash from the clays in Lake Hope and surrounding lakes. The process does not require evaporation ponds. A valuable acid by-product would also be generated, and the work already completed under the CRC-P for potash crystallisation remains highly relevant to this new process.

Initial economic assessment suggests that the process could create a significant opportunity to develop a large-scale mining project alongside the HPA project, producing key commodities in high demand by the agricultural and chemical sectors. This has the potential to add considerable value to the entire Lake Hope project.

Results from the initial test work on the new process are expected to be available by early February, providing a better understanding of the potential for potash and acid production. If the results are encouraging, resources of potash may be able to be defined from previous drilling not only at Lake Hope but also from other lakes within the greater Lake Hope project area.

Eutectic Freeze Crystallisation

As part of Impact's interest in potash crystallisation, the company has been collaborating with Brinetec Pty Ltd, a private firm that owns a unique, practical technology for freezing brines and liquids, both natural and those generated in metallurgical processes. As the temperature of brines and liquids decreases, they will gradually crystallise into ice (water) and a concentrated brine that will then crystallise various salts, depending on the lowest temperature reached and leaving behind a concentrated brine.

Based on previous test work across a broad range of brine compositions and thermodynamic and economic modelling by Brinetec, Impact believes that the technology could have significant applications for the Lake Hope project, especially when used in conjunction with membrane technology. For instance, it could further reduce capital and operating costs for wastewater treatment, as well as accelerate potash crystallisation, both as a byproduct of the HPA process and from the potential new process for larger-scale potash production.

A bench-scale prototype for the Brinetec process has now been installed at the MRRC, with results from initial experiments in the byproduct potash crystallisation expected soon. Brinetec has also built a demonstration plant, which is currently being relocated to the same facility that houses the HiPurA HPA pilot plant owned by Alluminous Pty Ltd.

Impact is also considering leveraging the broader applications of the Brinetec process.

Next Steps

The following work is underway across the different workflows:

1. Preparation of a large, 500 kg homogenised sample of Lake Hope clay to be used as feedstock for a scale-up to a pilot plant for Stage 1 of the Lake Hope process covering initial alkaline leaching and subsequent crystallisation of potash. Work to date has been at bench scale.
2. Continued bench scale evaluation of membranes and membrane crystallisation to increase the SOP purity to a premium grade.
3. This will be combined with continued work on design and procurement of membrane rigs and crystallisation modules for water recovery and general brine management.
4. Continued bench scale evaluation of the Direct Iron Extraction method with scale-up should testwork results warrant.
5. Evaluation of the results of testwork from the new potash extraction process and determination of potash resources across the Lake Hope project. These would be in addition to the alumina reserves identified for the HPA project.
6. Continued work on integration with the HiPurA process.

Dr Michael G Jones

Managing Director

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