



# HILL END GOLD LIMITED

ACN 072 692 365

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The Manager  
ASX Announcements Office  
Australian Securities Exchange  
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Sydney NSW 2000

ASX: HEG, HEGOC

## HPA Project acquisition completed

### Highlights

- HEG Limited and project vendors have satisfactorily completed the conditions precedent for the acquisition of the High Purity Alumina (HPA) Project.
- HEG has issued 8M shares and paid \$100,000 to the vendors to acquire 100% of the HPA Project, tenements, project information and Pure Alumina Pty Ltd, a company associated with Tolga Kumova and Tom Eadie.
- Success fees as HEG shares will be issued to the vendors upon the completion of the HPA Project Preliminary Feasibility Study, the Definitive Feasibility Study demonstrating project viability and the Offtake Agreement.
- HEG has completed resource drilling on the HPA Project's initial kaolin deposit at Yendon, Victoria and has outlined a deposit 3-4 times larger than expected from earlier drilling.
- Aircore drilling over an area of more than 25 hectares has intersected continuous, primary kaolin-containing material up to depths greater than 20m, with overburden of only 1-2m.
- Assay and metallurgical test samples have been dispatched to ALS Global laboratory in Perth.
- Optimal beneficiation sizing test work will be followed by assaying and resource estimation.
- SRK Consultants have been appointed for resource estimation and sign-off.
- HPA purification test work of an initial bulk sample is expected to be completed by the end of October and full test work and other studies for the Preliminary Feasibility Study by early 2018.
- A placement in two tranches by Cps Capital Group Pty Ltd as lead broker is to raise \$0.6M.

Tolga Kumova says "I am extremely pleased with the excellent and early progress that the HEG team has achieved for the HPA Project. The larger deposit outlined by drilling and superior kaolin qualities demonstrated through the recent metallurgical testing, indicate a powerful economic case for the project. Combining this with exponential growth rates being witnessed by high purity alumina end markets, the investment case speaks for itself.

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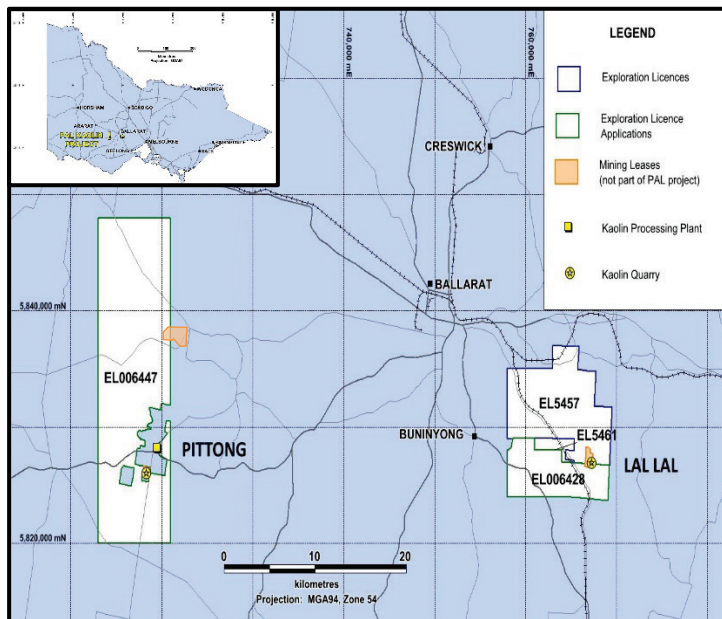
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## HPA Project (100%: Victoria – EL5457, EL5461)

On 17 July 2017, HEG Limited announced it entered into a binding asset Sale and Purchase Agreement to acquire a HPA Project (high purity alumina) including the rights, title and interests in granted exploration licences, tenement applications and the entire issued share capital of Pure Alumina Pty Ltd (ACN 618 881 137), a company associated with Tolga Kumova and Tom Eadie. The terms of the agreement have been advised in previous announcements and are summarised as follows:

- HEG will be operator of the assets and will pay for all costs;
- On completion of conditions precedent, HEG will issue 8M shares and pay \$100,000 in cash to the vendors who have the right to appoint one director to the HEG board;
- On completion of a Prefeasibility Study, HEG will issue 20M shares to the vendors and HEG will own the tenements, HPA information and related rights;
- Completion of a viable Definitive Feasibility Study (DFS) is expected to occur within 2 years and at such time HEG will issue \$1.5M shares to the vendors at the lesser of 20c per share and 30 day VWAP, with a floor price of 10c per share;
- If viable DFS not achieved within two years then \$100kpa payments, pro rata per month, until achieved or up to 31 December 2022; and
- Upon receipt of sales contract for 100% offtake arrangement for 1.5 time payback period, HEG will issue \$0.5M shares to the vendors at the lesser of 20c per share and 30 day VWAP, with a floor price of 10c per share.

The HPA Project tenements (Exploration Licences 5457 and 5461 and Exploration Licence applications 006447 and 006428) are located near Ballarat, Victoria at Pittong and Lal Lal in areas where kaolin mining and processing has continued for decades.



### HEG HPA Project location near Ballarat, Victoria

The Yendon kaolin deposit near Lal Lal, Victoria is located on EL5457 and EL5461. Previous drilling of the Yendon kaolin deposit for the paper and filler markets was done during the 1980s and outlined a primary kaolin deposit with low contaminant material: ideal feedstock for the HPA purification process. Resource drilling has now been completed on a part of the Yendon deposit with an aircore program of 122 holes on a mostly 50m x 50m grid within EL5461. The drilling has outlined a large extension to the north east of the previously drilled 'Trevors' area, in the 'Dam' area. Given the size, depth and continuity of the Dam area material, it is planned to be the base deposit for the HPA Project.

## High Purity Alumina background information

High purity alumina (HPA) is a product consisting of  $\text{Al}_2\text{O}_3$  with a purity level that is greater than 99.99% (4N). Its largest use is in the established high-growth markets of LED lighting and high temperature / high resistance electronics, such as the insulation separator in lithium batteries.

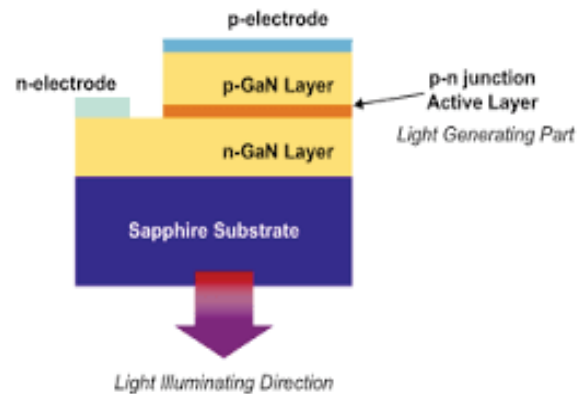
HPA has unique properties of high hardness, excellent insulation and temperature resistance and is chemically inert and corrosion resistant, which make it attractive as feedstock for a wide and increasing range of synthetic sapphire applications and semi-conductor manufacturing. In particular, the unique chemical properties of HPA make it an important material in the development of high performance electronics.

The main use for HPA is in the manufacture of synthetic sapphire for many high growth applications:

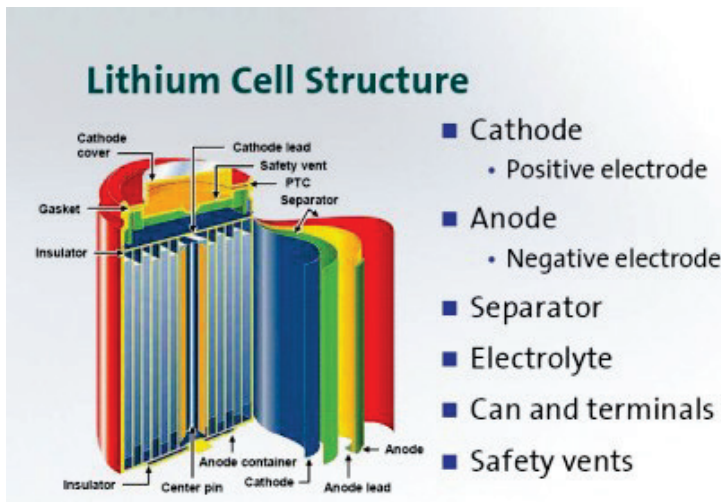
### LED Lighting



Synthetic sapphire Substrate in high brightness LED chips has excellent heat resistance / electrical resistance and transparency for low energy, high power and long life span LED lighting.

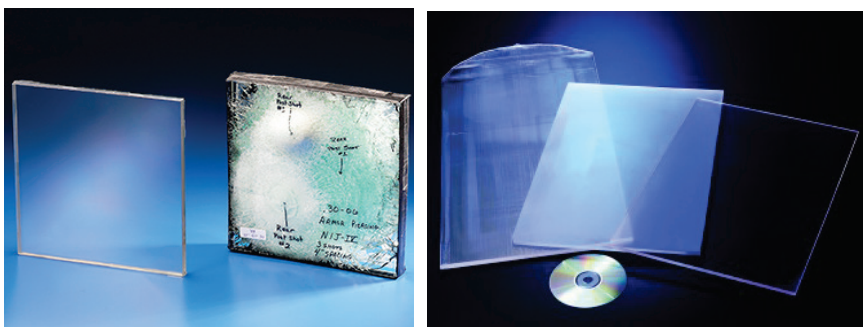


### Lithium batteries



Synthetic sapphire coating of the lithium battery Separator ensures high insulation between the Anode and Cathode and excellent heat resistance: the larger the battery, higher the charge density and faster the charge rate, then the thicker the synthetic sapphire coating.

### Optical applications



Synthetic sapphire is second in hardness to diamond and has excellent optical properties, making it ideal for smart phone screens and military transparent armour. It is inert and corrosion resistant for harsh environments and medical applications.

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The market for HPA has shown strong growth over the last few years, and with expected growth in battery demand, environmentally friendly LED lights and increasing uses for synthetic sapphire, this growth is expected to continue. In addition, there are a number of new technologies that will benefit from a low cost HPA feedstock allowing the unique properties of synthetic sapphire to be applied more widely.

HEG intends to produce a significant proportion of the global demand for HPA at a low cost. Reduction in the product cost profile over time will encourage substitution of HPA/synthetic sapphire in products containing high strength, scratch-resistant glass and expected new uses in electronics, military and medical technologies will broaden the market base and drive demand.

HEG has assembled a highly experienced team to undertake the necessary studies to determine the optimum processing route and complete process design and project costing. The aim is to become the supplier of choice for the HPA market by:

- Meeting customer specs every time
- Providing consistency of supply
- Working with customers to develop optimum specification for new technologies

This will be achieved by:

- Producing a consistent kaolin feedstock for the HPA facility
- Using a range of metallurgical technologies to produce reliable products
- Reducing the consumable and energy requirements and maintaining stable process parameters
- Developing close working relationships with our customers to become their supplier of choice
- Continued research into process improvements to reduce costs and improve efficiency

Through the acquisition of Pure Alumina Pty Ltd and the vendor's Ballarat tenements, HEG has secured a high quality feed stock resource in the kaolin deposits at Pittong and Lal Lal. Drilling has been completed on the Yendon deposit near Lal Lal and the key characteristics that make this deposit preferable to similar material is its easy beneficiation to a fine-grained, high purity kaolin, low level of impurities and relative ease of removing those impurities. This combination is expected to allow for a very low cost processing route.

Initial metallurgical test work for the HEG HPA Project was completed for the Due Diligence exercise and was very promising as a 'proof of concept'. Approximately 1.5 tonne of samples from the Yendon resource drilling have been dispatched to the ALS Global laboratory in Perth for beneficiation and purification test work to start immediately.

Initial leach testing showed that the kaolin is very amenable to an acid leach process to remove impurities. It is possible that we may not need high temperature, high pressure leaching in the early stages of the process, again reducing operating costs and also the size of the processing infrastructure. This is being examined in the next stage of detailed metallurgical test work and part of the feasibility studies.

The Yendon resource delineation and estimation is now anticipated to be completed by October 2017 owing to the greater number of drill intersection samples. A composite bulk sample of the drilled deposit will be metallurgically tested under the management of BHM Process leading to the design of the kaolin beneficiation plant, the high purity alumina purification facility and HPA product specification.

The preliminary feasibility study for the HPA Project is planned to be completed in early 2018.

**Forward-looking Statements**

This announcement contains forward-looking statements which are identified by words such as 'anticipates', 'forecasts', 'may', 'will', 'could', 'believes', 'estimates', 'targets', 'expects', 'plan' or 'intends' and other similar words that involve risks and uncertainties. Indications of, and guidelines or outlook on, future earnings, distributions or financial position or performance and targets, estimates and assumptions in respect of production, prices, operating costs, results, capital expenditures, reserves and resources are also forward-looking statements. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions and estimates regarding future events and actions that, while considered reasonable as at the date of this announcement and are expected to take place, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, the directors and management. We cannot and do not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this announcement will actually occur and readers are cautioned not to place undue reliance on these forward-looking statements. These forward-looking statements are subject to various risk factors that could cause actual events or results to differ materially from the events or results estimated, expressed or anticipated in these statements.

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