



**Altech Chemicals**  
Limited

## ASX ANNOUNCEMENT AND MEDIA RELEASE

2 December 2016

# ALTECH SUBMITS MINING PROPOSAL AND MINE CLOSURE PLAN FOR MECKERING

### Highlights

- Meckering mining proposal and mine closure plan submitted to DMP
- Proposed mining activity is a simple quarry style operation, no drill and blast required
- Two month mining campaign first 3 years kaolin feedstock
- Year-round kaolin container loading operation at Meckering site
- Containers shipped to HPA plant in Johor via port of Fremantle, Western Australia

Altech Chemicals Limited (Altech/the Company) (ASX: ATC) is pleased to advise that further to its 20 May 2016 announcement of the grant of mining lease M70/1334 at Meckering, Western Australia the Company has now submitted a mining proposal (MP) and mine closure plan (MCP) to the Department of Mines and Petroleum (DMP). The submission marks the next stage of development of the Company's proposed Meckering kaolin mine, which will provide feedstock for its proposed Malaysian high purity alumina (HPA) plant.

At Meckering, Altech is planning to mine approximately 140,000 tonnes of kaolin once every three years; mining will take place in short two-month mining campaigns. The resultant raw kaolin ore will be stockpiled, then containerised into standard shipping containers at the rate of approximately 42,055tpa and shipped to Johor, Malaysia via the port of Fremantle, Western Australia.

The Company's Meckering mining lease M70/1334 contains a Mineral Resource estimation of **12.7 million tonnes @ 29.5% Al<sub>2</sub>O<sub>3</sub>** (alumina) in the minus 300 micron (µm) kaolin fraction with a cut-off grade of 25% Al<sub>2</sub>O<sub>3</sub> (refer Table 1). This represents over 250 years of feedstock supply for the Company's proposed HPA plant. Based on the Mineral Resource, a maiden Ore Reserve of **1.2 million tonnes @ 30% Al<sub>2</sub>O<sub>3</sub>** (alumina) in the minus 300 micron (µm) kaolin fraction with a cut-off grade of 25% Al<sub>2</sub>O<sub>3</sub> was estimated (refer Table 1). The Ore Reserve will support an initial 30-year mine life based on 4,000tpa of HPA production<sup>1</sup>. Mine development at Meckering is expected to commence in approximately 12 months, subject to funding and approvals.

Altech managing director Mr Iggy Tan said, "*The Company is delighted to have rapidly progressed to the next stage of development at Meckering, with the submission of a mining proposal and an associated mine closure plan in preparation for mine development in 2017.*"

"*The submission marks another important step in the development of the Company's HPA project*", Mr Tan concluded.

<sup>1</sup> Refer ASX Announcement titled "Altech Improves Financial of its HPA Project with BFS Update" dated 16 March 2016.

Altech confirms that all material assumptions underpinning the production target and financial information derived from the production target continue to apply and have not materially changed.

Table 1. M70/1334 (Meckering) Maiden Ore Reserve & Mineral Resources (JORC 2012)

|   | Category     | Quantity (Mt) | Yield % of minus 300µm | Minus 300µm Al <sub>2</sub> O <sub>3</sub> (%) |
|---|--------------|---------------|------------------------|--|
| <b>Ore Reserve</b>                                  | Proved       | 0.45          | 69                     | 30.1   |
|   | Probable     | 0.77          | 71                     | 30.0   |
|   | <b>TOTAL</b> | <b>1.22</b>   | <b>70</b>              | <b>30.0</b>                                    |
| <b>Mineral Resources</b><br>(including Ore Reserve) | Measured     | 1.5           |                        | 30.0   |
|   | Indicated    | 3.3           |                        | 30.0   |
|   | Inferred     | 7.9           |                        | 29.1   |
|   | <b>TOTAL</b> | <b>12.7</b>   |                        | <b>29.5</b>                                    |

### Mining Proposal

The relatively low annual tonnage of kaolin feedstock required for the proposed HPA plant means that the Meckering mine will be a simple quarry style operation. No blasting is required due to the highly weathered nature of the kaolin mineralisation. The mine plan, pit design and associated Ore Reserve for the proposed Meckering mine confirms a 30-year mine life at Meckering, providing over 1.2Mt of high-quality, alumina-rich kaolin feedstock to supply the proposed HPA plant.

### Proposed Site Layout

The Company's proposed Meckering site layout was designed to optimise the proposed mining, haulage, waste placement, water storage and site rehabilitation. The run of mine (ROM) stockpile is designed to hold around 140,000t of material and will be located directly adjacent of the kaolin mine. Mined ore will be hauled directly from the mining area to the ROM stockpile. A lay down yard adjacent to the ROM will be used to fill standard 20' containers, which will be loaded onto trucks for transportation to Fremantle port.

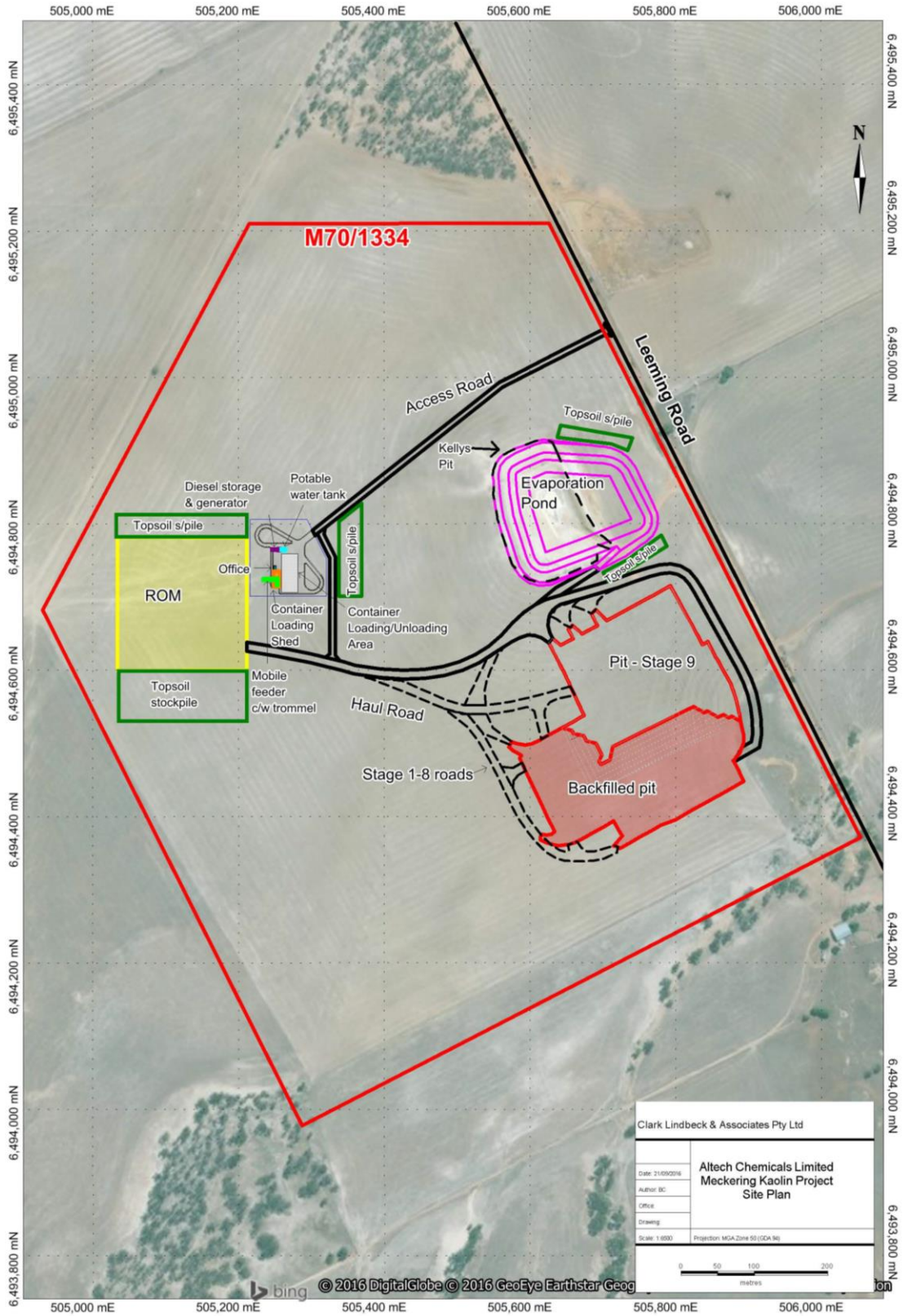
A conventional truck/excavator open pit mining method was selected due to the near surface presence of the kaolin ore. The flat-lying nature of the deposit will allow mining to proceed at a constant strip ratio.

The Meckering container loading facility will consist of a:

- conventional front end wheel loader (3.5m<sup>3</sup> bucket), which will be used to reclaim the kaolin ore from the ROM stockpile;
- trommel unit, which will screen the kaolin ore and reject any material >12mm;
- telescopic conveyor unit that will extend the full length of a 20' container and slowly retract during loading, enabling consistent distribution of the kaolin ore along the length of the container;
- loading shed to house the above screening equipment; and
- an office space, which includes lunch room and toilet facilities.

Once loading of the container is complete, it is lifted and stacked in the loading yard by a heavy-duty forklift. This forklift is also utilised for truck loading and unloading empty containers.

Figure 1. Proposed Meckering Site Layout





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## Site Facilities

The Meckering container loading facility is a two-man operation that is intended to operate on weekdays during daylight hours throughout the year. The facility consists of a loading shed, an office/lunchroom and toilet facility, and an area designated for the loading and unloading of containers. Potable water is trucked to the site and stored in a potable water tank. Electrical requirements are met by a small diesel generator. Diesel storage facilities and bowser allow for refuelling of mobile equipment, light vehicles and generators.

## Transport Route

The Company's Meckering tenement M70/1334 is located approximately 130km east of Perth and 8km south-east of the town of Meckering in the Wheatbelt region of Western Australia. The tenement is accessible via a number of well-maintained gazetted public roads, which link directly to the Great Eastern Highway (as per Figure 4 below). The distance from the Meckering site to the Fremantle port is approximately 150km. Haulage of approximately 42,000tpa of containerised kaolin ore from the Meckering site will be undertaken by Altech's freight partner, Seatram.

Figure 2. Proposed Meckering Site Layout (Container Loading Facility)

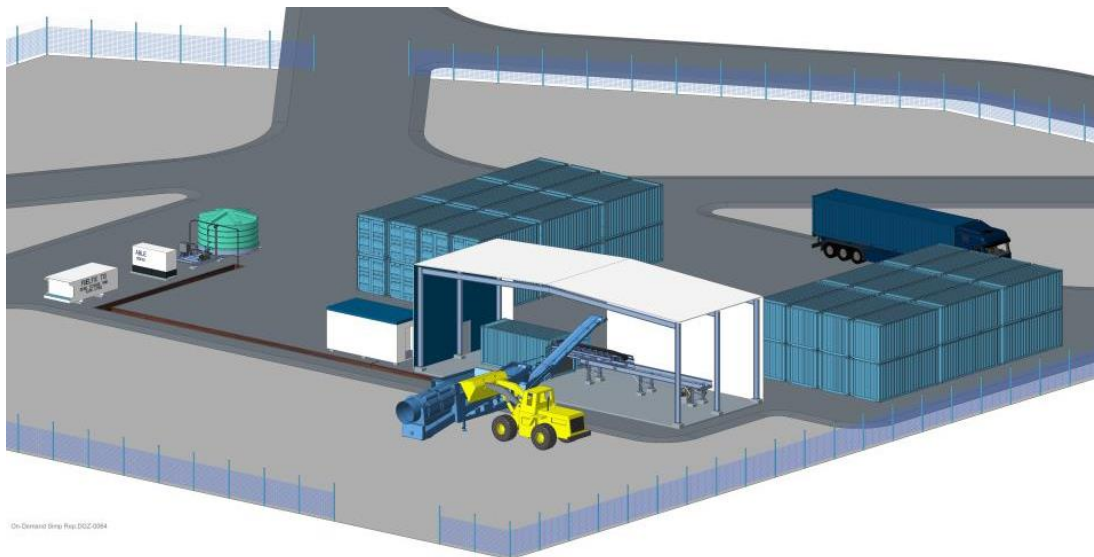


Figure 3. Proposed Loading Facility Elevation

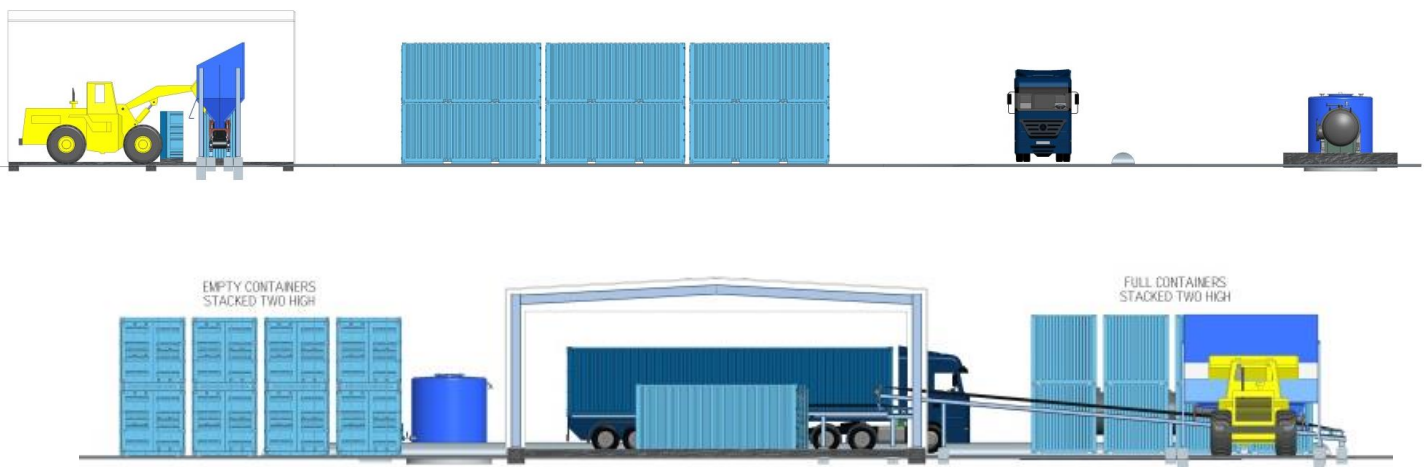


Figure 4. Site Access Roads



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**About Altech Chemicals (ASX: ATC)**

Altech Chemicals Limited (Altech/the Company) is aiming to become one of the world's leading suppliers of 99.99% (4N) high purity alumina (HPA) (Al<sub>2</sub>O<sub>3</sub>).

HPA is a high-value, high margin and highly demanded product as it is the critical ingredient required for the production of artificial sapphire. Artificial sapphire is used in the manufacture of substrates for LED lights, semiconductor wafers used in the electronics industry, and scratch-resistant artificial sapphire glass used for wristwatch faces, optical windows and smartphone components. There is no substitute for HPA in the manufacture of artificial sapphire.

Global HPA demand is approximately 25,315tpa (2016) and demand is growing at an annual rate of 16.7% (2016-2024), primarily driven by the growth in worldwide adoption of LEDs. As an energy efficient, longer lasting and lower operating cost form of lighting, LED lighting is replacing the traditional incandescent bulbs.

Current HPA producers use an expensive and highly processed feedstock material such as aluminium metal to produce HPA. Altech has completed a Bankable Feasibility Study (BFS) for the construction and operation of a 4,000tpa HPA plant at Tanjung Langsat, Malaysia. The plant will produce HPA directly from kaolin clay, which will be sourced from the Company's 100%-owned kaolin deposit at Meckering, Western Australia. Altech's production process will employ conventional "off-the-shelf" plant and equipment to extract HPA using a hydrochloric (HCl) acid-based process. Production costs are anticipated to be considerably lower than established HPA producers.

The Company is currently in the process of securing project financing with the aim of commencing project development in Q2-2017.



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### **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 our 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.

### **Competent Persons Statements – Meckering Kaolin Deposit**

The information in this announcement that relates to Mineral Resources and Ore Reserves is extracted from the report entitled "Maiden Ore Reserve at Altech's Meckering Kaolin Deposit" released on 11 October 2016; the report is available to view of the Company's website [www.altechchemicals.com](http://www.altechchemicals.com). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources and Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement 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 market announcement.