

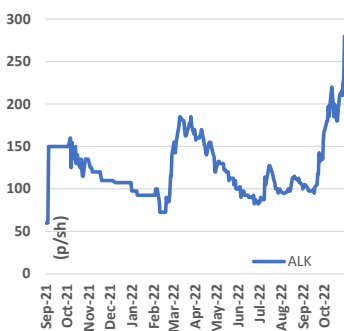
25<sup>th</sup> November 2022

**Sector: Lithium, Energy, EVs**

Lithium hydroxide production

**Market data**

Markets	LSE Main Market
Ticker	ALK
Price (p/sh)	265
12m High (p/sh)	265
12m Low (p/sh)	72
Ordinary shares (m)*	7.19
FD share capital (m)	7.19
Mkt Cap (£m)	19.4



Source: Alpha

**Description**

Alkemy is seeking to develop a UK-based refinery to produce a low carbon-footprint lithium hydroxide product to supply the burgeoning European battery market. [www.alkemycapital.co.uk](http://www.alkemycapital.co.uk)

**Board & key management**

Non-Exec Chair	Paul Atherley
NED	Sam Quinn
NED	Helen Pein
CEO (TVL)	John Walker

**Analyst**

phil.swinfen@shardcapital.com  
020 7186 9008  
Phil Swinfen

# Alkemy Capital Investments plc

## Europe’s largest lithium hydroxide refinery is Go!

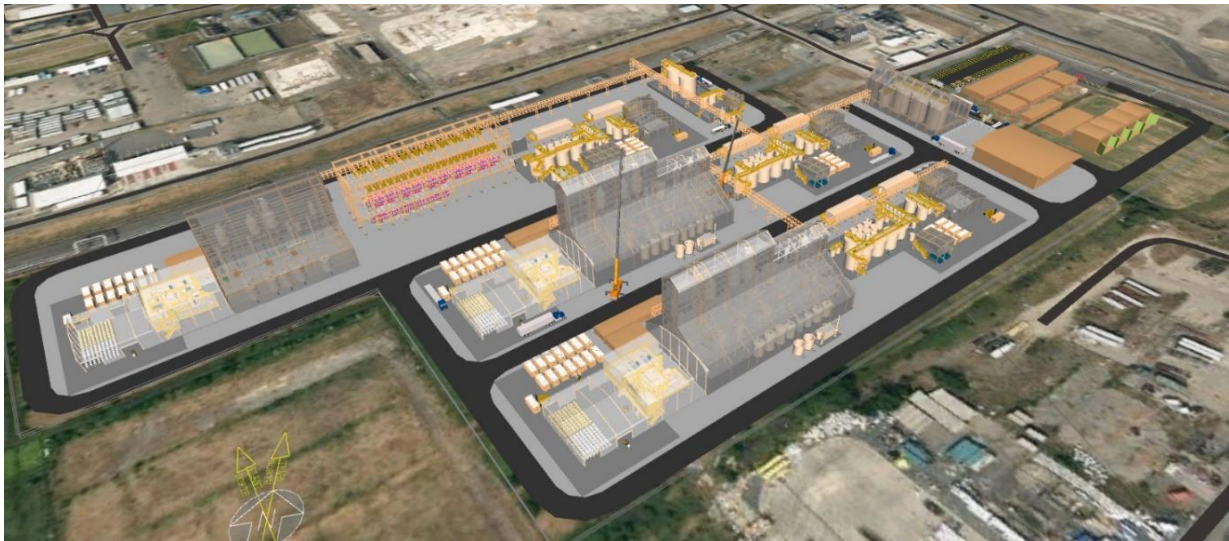
Alkemy’s 100%-owned subsidiary Tees Valley Lithium (TVL) has received full planning permission to build its planned world-class, low carbon, lithium hydroxide refining facility at the Wilton International Chemical Park in the Teesside Freeport, UK. The facility, the first of its kind in the UK and the largest in Europe will process a variety of lithium feedstocks to produce a low-carbon footprint, battery-grade lithium hydroxide product suitable to supply the rapidly expanding European and UK battery market for electric vehicles (“EVs”) and renewable energy storage. With full approval now granted, the facility is shovel ready and on track for first production in 2025.

- ▶ **Green light.** TVL, Alkemy’s 100%-owned subsidiary has received full planning permission to go ahead with the planned construction of its lithium hydroxide (LHM or LiOH) refinery and conversion facility located at the Wilton International Chemical Park in the Teesside Freeport, UK. The planning permission was granted by Redcar & Cleveland Borough Council and follows the completion of a full EIA (Environmental Impact Assessment) in conjunction with local consultation over an 18-month period. TVL has appointed Wave International as Lead Engineering and Technical Partner for the development of the processing facility at Teesside.
- ▶ **Does what it says on the tin.** Unlike other jurisdictions worldwide which can be fraught with delays, uncertainty and permitting issues, there has been no such timeline drag for TVL. The key driver of this has been TVL’s excellent site selection decision in choosing the “plug & play” Wilton International Chemicals Park in Teesside. TVL has always stated that the location offers a fast-track permitting route and the company’s decision has now been validated. In addition, the established industrial and port location offers a plethora of other advantages almost too numerous to list. Highlights include; access to infrastructure (road, rail, port, power, gas, water, steam etc), access to a technically skilled workforce, easy logistics access to key reagents and industrial customers on the doorstep. The TVL refinery will be 100% certified green energy operation from day zero, planning to utilise power from renewable sources and green hydrogen.
- ▶ **A major win for Alkemy and Teesside.** Gaining planning permission is clearly very good news for Alkemy but it’s also a major win for Teesside and the surrounding area. The creation of 1,000 jobs and many other ancillary benefits for the local community is equally as exciting. Alkemy is at the forefront of creating a new long-term and sustainable industry in Europe that has full support of key stakeholders. TVL will now advance with engineering studies ahead of construction in 2023.
- ▶ **Project reminder.** TVL envisages production of 96,000tpa of low-carbon battery-grade lithium hydroxide via phased development, comprising 4 processing trains, each with a 24,000tpa capacity. The April 2022 Feasibility indicated project economics: post-tax NPV<sup>8</sup> of £2.2bn, a post-tax IRR of 32.9%, a 26% EBITDA margin and short payback period. With no requirement to develop a mining operation, first production is anticipated in 2025. For further details, refer to our initiation note “*The missing link in Europe’s lithium evolution*” 5<sup>th</sup> August 2022.
- ▶ **The problem and the solution.** The electric vehicle industry is producing a seismic shift in lithium demand. Alkemy sees 700GW of European gigafactory capacity by 2025 and projected demand of >650ktpa of lithium chemicals. Current lithium hydroxide production capacity in Europe is zero. Instead of shipping spodumene around the globe, TVL plans to import high-grade lithium feedstocks such as technical grade lithium carbonate, lithium sulphate and recycled products to reduce the carbon footprint. Alkemy plans to build a facility in Australia to serve as a refining hub, working with global metals trader Traxys to source spodumene feedstock and convert it to lithium sulphate to supply the TVL plant at Teesside and provide a lower carbon link to the European battery market. Additionally, TVL is partnering with a division of the bp plc group to investigate switching fuel from natural gas to green hydrogen as bp develops its green-hydrogen electrolytic production facility, also at Teesside. TVL is also in discussion with several off-take customers including gigafactories and electric vehicle OEMs.
- ▶ **De-risked, valuation increased.** Although gaining planning permission may have seemed inevitable for such a quality industrial site, it is nonetheless a major de-risking event and box ticked. To reflect this, we adjust our risk multiple from 0.1x NAV to 0.2x NAV which increases our indicative valuation from 614p/sh to 1228p/sh which implies ALK is trading at 0.22x to our highly risked NAV, with a 4.6x return to the current share price. We stress this is based only on a highly-risked NAV valuation of Train 1 (24,000tpa) and compelling upside is available from both capacity increases and higher lithium prices.

Gaining full planning permission is huge milestone for Alkemy and a pivotal development for the company given the industry race to establish a European source of lithium hydroxide. Whilst competitors are in danger of missing the lithium window, Alkemy is firmly at the front of the pack.

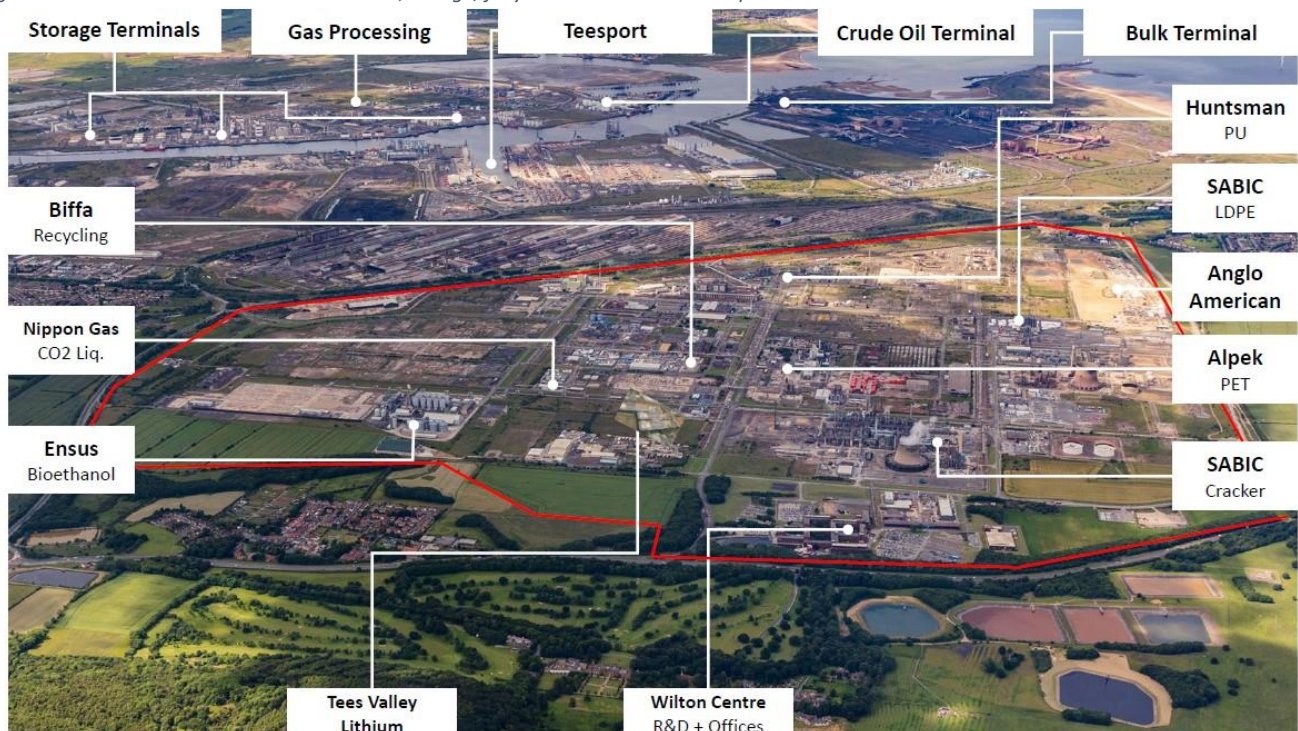
**Disclaimer:** Attention of readers is drawn to important disclaimers printed at the end of this document. *This document is published solely for information purposes and is not to be construed as a solicitation or an offer to buy or sell any securities, or related financial instruments. It does not constitute a personal recommendation as defined by the Financial Conduct Authority, nor does it take account of the particular investment objectives, financial situations or needs of individual investors.*

Figure 1 - Image of the proposed processing facility at the Wilton International Chemical Park, Teesside Freeport, UK



Source: Alkemy Capital Investments plc, Class 4 Feasibility Study

Figure 2 - Wilton International Chemical Park, a large, fully serviced industrial complex



Source: Sembcorp

---

## Disclaimer

*This document has been prepared and issued by Shard Capital Partners LLP ("Shard Capital"), which is authorised and regulated by the Financial Conduct Authority (FRN: 538762).*

*This document constitutes a minor non-monetary benefit. This document is a marketing communication and not independent research. As such, it has not been prepared in accordance with legal requirements designed to promote the independence of investment research.*

*This document is published solely for information purposes and is not to be construed as a solicitation or an offer to buy or sell any securities, or related financial instruments. It does not constitute a personal recommendation as defined by the Financial Conduct Authority, nor does it take account of the particular investment objectives, financial situations or needs of individual investors. The information contained herein is obtained from public information and sources considered reliable. However, the accuracy thereof cannot be guaranteed.*

*The information contained in this document is solely for use by those persons to whom it is addressed and may not be reproduced, further distributed to any other person or published, in whole or in part, for any purpose, at any time, without the prior written consent of Shard Capital. This document may not be distributed to any persons (or groups of persons) to whom such distribution would contravene the UK Financial Services and Markets Act 2000. This document is not directed at persons in any jurisdictions in which Shard Capital is prohibited or restricted by any legislation or regulation in those jurisdictions from making it available. Persons into whose possession this document comes should inform themselves about, and observe, any such restrictions.*

*Shard Capital or its employees may have a position in the securities and derivatives of the companies researched and this may impair the objectivity of this report. Shard Capital may act as principal in transactions in any relevant securities or provide advisory or other service to any issuer of relevant securities or any company connected therewith.*

*None of Shard Capital or any of its or their officers, employees or agents accept any responsibility or liability whatsoever for any loss however arising from any use of this document or its contents or otherwise arising in connection therewith. The value of the securities and the income from them may fluctuate. It should be remembered that past performance is not a guarantee of future performance. Investments may go down in value as well as up and you may not get back the full amount invested. The listing requirements for securities listed on AIM or ISDX are less demanding and trading in them may be less liquid than main markets. If you are unsure of the suitability of share dealing specifically for you then you should contact an Independent Financial Adviser, authorised by the Financial Conduct Authority.*

*By accepting this document, the recipient agrees to the foregoing disclaimer and to be bound by its limitations and restrictions.*