



GENERAL DETAILS	
Role Title	Minerals & Metals Technical Internship x 2
Department	Engineering
Reports to (manager)	Project Manager
Location	Home based
Duration & Start Date	Flexible on both but ideally for a minimum of 8 weeks
ABOUT GREEN LITHIUM REFINING LIMITED	
<p>Our vision at Green Lithium Refining Limited is clear: we're working to enable our planet's transition to sustainable energy.</p> <p>We are on an exciting journey to build the first large-scale lithium refinery in the UK. Once commissioned, our refinery will produce high-purity lithium chemicals for use in lithium-ion batteries and will drive the UK and Europe's electric vehicle revolution. As a team, we aspire to best-in-class environmental credentials and are working hard to ensure our refinery is as environmentally sound as possible, choosing processes, equipment and partners who champion this and help us achieve our mission.</p> <p>Traditionally, lithium refining has been a dirty process reliant on burning fossil fuels and creating harmful waste products. Our refining process creates valuable by-products which can be used in other industries and will also benefit from the burgeoning green energy sector in the North-East: the location of our first refinery.</p>	
TYPICAL TASKS	
<p>Green Lithium would like to support 2 technical placements through Women in Mining UK's Summer Internship Programme. Both placements will be chemistry based, with one focusing on lithium whilst the other will focus on our by-product of analcime sand.</p> <p>Our lithium products, which include battery-grade lithium hydroxide monohydrate and lithium carbonate, will require an innovative new alkali leach hydrometallurgy process to achieve our low carbon, sustainable refinery. The hydrometallurgy will be used in conjunction with pyrometallurgy and crystallisation. Our plan is to integrate hydrogen fuel, carbon capture and energy recycling to achieve our goals. We plan to explore alternative lithium-bearing minerals (in addition to spodumene concentrate) as potential feedstock materials to the refinery. This also extends to other lithium salts extracted either from recycled batteries, brine refineries or from partially processed material.</p>	



Our by-product of analcime is a filter cake containing predominantly analcime and calcium carbonate. We are working with a UK university to develop a downstream product to ensure there is no waste. The primary potential downstream application is as a construction product.

The work will include research and development, intellectual property development, process design and development, testing, experimentation, analysis checking the product for code compliance, and support to development of a commercial model. It will also include working with potential downstream partners that are also looking at potential applications for this product.

The outputs from these roles feed into the wider business and as a result the interns will have a rare opportunity to work cross-functionally in a business, with exposure to Supply Chain, Commercial, Engineering, Project Management and Finance.

- Technical Expertise
 - Develop, define and share an in-depth chemical expertise on your product.
 - Develop process flow sheets for the product.
- Product Development
 - Working across the business, support the design development of the process.
 - Support the process for technology selection for the refinery.
- Construction support
 - Working with designers and technology partners to ensure Green Lithium's requirements are met.
 - Support the design and procurement of an intermediate scale-up plant.

ESSENTIAL REQUIREMENTS

Application/Energy	Excellent communication skills with the ability to articulate clearly Highly self-motivated Professional work ethic and behaviour Consistent positive attitude Team player in a diverse and inclusive environment
Knowledge	Chemical Engineering, Process Engineering or Geological Sciences (either in progress or a recent graduate of) Knowledge of or an interest in battery metals / EV market would be an advantage
Technical Skills	Have strong oral and written fluency in English

PURPOSE

Green Lithium Refining Limited has 5 values: Sustainable, One Team, Responsible, Excellence and Agile. We believe the true power of a team can only be unlocked when you recognise and embrace the diversity of a team and provide an inclusive environment which allows everyone to achieve.

We're delighted to be participating in WIM UK's Internship Programme as we recognise the value of encouraging women into the sector and also our responsibility to grow and develop future talent. Green Lithium is a small, closely knit team and as a result of this, the interns will have a unique opportunity to focus on their role whilst also being exposed to wider business issues.