

CRITICAL MINERALS ASSOCIATION UNITED KINGDOM (CMA UK) ENVIRONMENTAL, SOCIAL & GOVERNANCE WORKING GROUP

## Building the UK's Green Economy: Breaking Down Barriers for Responsible Sourcing of Critical Minerals



## Source Certain - Provenance Verification

Source Certain scientific technology, TSW Trace® enables the verification of the origin of input materials with specificity to the mine of origin. This can set the foundation for more trusted and resilient critical mineral supply chains by enhancing the integrity, transparency, trust and compliance behind origin-based claims (ESG) associated with critical minerals. TSW Trace® works alongside blockchain and certifications so clients can leverage the combined power of provenance science, certification, unique identification and information sharing to drive the highest standard of integrity within their supply chain.

Source Certain scientifically links the raw and processed materials carrying the ESG claims back to the mines and downstream processing facilities that deliver on those ESG claims. In doing so, it helps mitigate the risk of 'greenwashing', introduces transparency into the supply chain and allows a scientific and independent verification of product and origin claims carried within a digital or paper-based chain of custody or traceability systems.

TSW Trace was first applied to link stolen or smuggled gold back to its mine of origin and was often referred to as 'gold fingerprinting'. TSW Trace® was used to assess forensic evidence in criminal investigations globally including several high-profile cases.

This scientific technology analyses the relationship between a product and its

environment by analysing trace elements, isotopes, chemicals, and molecules that are naturally absorbed by the product from the environment. We use this information to create a unique reference chemical fingerprint for the product and its matching location of origin. This fingerprint allows us to verify a product back to a specific point of origin from any point in the supply chain.

A good practical example of this is the collaboration between Source Certain and Cornish Lithium. This project intends to address growing consumer interest in product provenance and ethical sourcing.

Source Certain plans to apply its scientific provenance verification technology TSW Trace® to establish a reference database of all Cornwallsourced lithium. The samples in the database would then be cross-referenced against lithium in the battery supply chain to verify its UK origin.

Cornish Lithium and SCI are hopeful their work will form a foundation for developing a transparent and accountable lithium supply chain for batteries in the UK.

Source Certain's provenance technology will provide the level of precision to verify the origin of lithium mined by Cornish Lithium.

