

Silex World Introduces Blockchain-Secured Platform for Verified Critical Materials Supply Chains

Blockchain-secured platform verifies origin, processing and chain-of-custody for rare earth and critical materials supply chains.

LEEDS, YORKSHIRE, UNITED KINGDOM, May 6, 2026 /EINPresswire.com/ -- [Silex World Ltd](https://www.silexworld.com/), a University of Leeds spinout focused on clean critical materials processing, today announced the integration of a blockchain-secured system into its materials platform, enabling verified, auditable supply chains for rare earth elements and other strategic materials.



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The system combines Silex World’s rare earth recovery and low-energy processing technologies with a patented digital layer that records and verifies material origin, processing pathway, and chain-of-custody from feedstock through to finished product. The result is a fully traceable, circular supply chain designed to meet the increasing regulatory and procurement requirements of Western markets.

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Critical materials supply chains now require proof, not promises. Our platform delivers verified origin, process integrity and compliance from feedstock to final product”

Michael Hodges

As part of its commercialisation strategy, Silex World is progressing the rollout of production facilities in India, establishing an operational base for processing rare earth-bearing materials. The blockchain layer is designed to sit across this infrastructure, ensuring that materials entering global supply chains can be independently verified at each

stage.

Demand for traceable and compliant critical materials is accelerating across defence,

automotive, and energy sectors, driven by regulatory frameworks in the United States and Europe. Procurement standards are increasingly requiring proof of origin, processing integrity, and non-reliance on restricted supply chains.

Silex World's platform is designed to meet these requirements by enabling:

- * Immutable tracking of materials from waste or primary feedstock through to final product
- * Verified chain-of-custody aligned with defence and industrial procurement standards
- * Certification of origin and processing pathway for compliance with U.S. and EU regulations
- * Integration of recycled and secondary materials into auditable, trusted supply chains

By embedding verification directly into the production process, the system allows materials to move from recovery to manufacturing with full transparency—supporting both circularity and compliance without adding friction to industrial workflows.

Michael Hodges, Founder of Silex World Ltd, said: "Supply chains for critical materials are no longer just about availability—they are about verification. If you cannot prove origin and process, you increasingly cannot sell into key markets."

He added: "This platform ensures that materials are not only produced, but provably compliant. That is what unlocks access to defence, energy, and advanced manufacturing supply chains in the U.S. and Europe."

The platform has been developed to support emerging requirements around supply chain transparency, including defence procurement standards and critical materials regulations in allied markets. Silex World is currently engaging with industrial partners, government agencies, and investors to deploy blockchain-secured supply chains alongside its processing infrastructure.

The company believes this approach establishes a new standard for critical materials—combining domestic production capability, circular recovery, and verifiable provenance within a single integrated system.

About Silex World Ltd—Silex World Ltd is a clean technology company focused on the recovery and processing of critical materials, including rare earth elements, using environmentally sustainable methods. A spinout from the University of Leeds, the company is developing scalable solutions to enable circular supply chains and reduce dependence on imported refining capacity.

Image is for illustrative purposes only.

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