

Silex World Targets Urban Mining as New Source of Critical Materials for Advanced Manufacturing

Silex World targets urban mining to recover rare earths and strategic materials from electronics, magnets, manufacturing scrap and industrial waste.

LEEDS, WEST YORKSHIRE, UNITED KINGDOM, September 2, 2026 /EINPresswire.com/ -- [Silex](#) World Ltd, a University of Leeds spinout focused on [critical materials](#) processing, today announced an increased focus on urban mining as part of its strategy to develop diversified sources of rare earth elements and other strategic materials for advanced manufacturing.

The company believes that some of the most important future sources of critical materials may already exist above ground—in discarded electronics, permanent magnets, manufacturing scrap, industrial residues and other material streams generated by modern economies.

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conventional recycling.

The company's objective is to develop processing systems capable of transforming complex secondary feedstocks into materials that can re-enter industrial supply chains and support new manufacturing.



Silex World Targets Urban Mining

Silex World's technology platform is being developed to process multiple feedstocks, including:

- * End-of-life permanent magnets
- * Electronic and electrical equipment
- * Manufacturing scrap
- * Rare earth-bearing industrial residues
- * Strategic metal-containing secondary materials
- * Selected mineral and industrial feedstocks

The company believes this flexibility could allow regional processing facilities to draw materials from multiple sources rather than depending upon a single mine, waste stream or supply route.

Michael Hodges, Founder of Silex World Ltd, said:

"We need to change the way we think about resources. A significant proportion of tomorrow's critical materials may already be sitting inside the products, factories and waste streams around us today."

He added:

"Urban mining is not simply about recycling. The real opportunity is creating the processing capability required to turn secondary resources back into strategic industrial materials."

From Waste Stream to Supply Stream

The challenge with many secondary materials is not necessarily their availability.

The challenge is economically recovering, separating and processing the valuable materials they contain.

Modern permanent magnets, electric motors, electronics, manufacturing waste and industrial residues can contain strategically important elements, but those materials are frequently distributed across complex products and mixed waste streams.

Silex World is developing an integrated approach intended to connect recovery with processing. Its platform combines material recovery technologies with continuous low-energy processing, modular infrastructure, multi-feedstock capability and digital traceability.

The objective is to create a pathway through which materials can move from waste and secondary resources back into verified industrial supply.

Building Regional Sources of Critical Materials

Silex World believes urban mining could become particularly important as governments seek to establish more resilient domestic and regional critical materials supply chains.

Unlike conventional mineral deposits, secondary resources are often concentrated around cities, manufacturing centres and established industrial regions—the same locations where demand for strategic materials is increasing.

Processing these materials closer to where they arise could reduce transportation requirements while creating new domestic sources of strategic materials.

This approach could also complement conventional mining.

Silex World does not believe recycled materials alone will satisfy the expected growth in global demand for critical minerals. Instead, the company sees primary resources, industrial residues and recycled materials becoming increasingly interconnected within diversified supply chains.

UK Technology, International Deployment

Silex World is developing its technologies in the United Kingdom while progressing its international deployment strategy, including activities in India.

India's substantial manufacturing economy, growing electronics sector and expanding automotive and renewable-energy industries create significant potential secondary material streams alongside increasing domestic demand for critical materials.

The company believes combining UK-developed processing technology with regional industrial capability could provide a model for recovering strategic materials closer to both their source and their eventual manufacturing markets.

Similar opportunities exist across the United Kingdom, Europe, North America and other industrial economies.

Creating a Circular Critical Materials Economy

Silex World's longer-term objective is to help establish processing infrastructure capable of accepting materials from multiple sources and returning recovered strategic materials to productive economic use.

Rather than treating recycling, mining and manufacturing as separate industries, the company believes the future critical materials economy will increasingly connect them.

Michael Hodges added:

"The materials required for the next generation of manufacturing do not always have to start their journey underground. Increasingly, they can start in the products and industrial materials we have already produced."

Through the development of scalable recovery and processing technologies, Silex World aims to help transform urban and industrial material stocks into a new generation of strategic resources supporting electrification, renewable energy, defence, electronics, robotics and advanced manufacturing.

About Silex World Ltd

Silex World Ltd is a University of Leeds spin-out company developing technologies for critical materials recovery, rare earth recycling, advanced materials processing, industrial minerals upgrading, and sustainable manufacturing systems. The company is focused on creating scalable solutions that support resilient and circular supply chains for strategic materials.

Michael Hodges

Silex World Ltd

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