CRITICAL MINERALS ASSOCIATION (UK)

DECEMBER 2023

UK HOUSE OF COMMONS COMMITTEE REPORT ON ‘BUILDING CRITICAL MINERALS RESILIENCE’

CHINA IMPOSES EXPORT RESTRICTIONS ON RARE EARTH PROCESSING TECHNOLOGIES

GSBF & CMA (UK) 3RD ANNUAL CONFERENCE ARTICLE AND VIDEO NOW AVAILABLE
Welcome to our December CMA (UK) monthly newsletter featuring updates on the critical minerals space. Read on for:

- UK HoC Committee Report on ‘Building Critical Minerals Resilience’
- GSBF & CMA (UK) 3rd Annual Conference Article and CP Video
- UK DBT Publishes Task & Finish Group Independent Report
- China Imposes Export Restrictions on Rare Earth Technologies
- CMA (UK) Finance Paper Recommends New Fiscal Strategy for UK
- Australia Updates Critical Minerals List & Adds Strategic Materials
- UKRI Launches Innovation Challenge with Ionic Technologies
- £1.8M Funding and Planning Approval For Hemerdon Mine
- HyProMag Produces First Recycled Magnets at Tyseley Energy Park
- Northern Lithium, Evove and Sheers Signs Partnership
- Dalradian Finds UK Critical Mineral in Tyrone Mine
- Imerys British Lithium Wins Prestigious Franco-British Award
- Circulor Confirms SQM’s End-to-End Supply Chain Traceability
- IEA Publishes Critical Mineral Supply Chain Risk Report
- United Nations Urges Aligned Global Action on Critical Minerals
- US Committee Recommends Creation of Critical Minerals Reserve
- News Round Up
- Events Calendar

This month’s newsletter has been put together by Eileen Maes, CMA (UK).

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Would you like to feature in a future edition? Contact our editor Eileen at eileen@criticalmineral.org
13 months ago, the Foreign Affairs Committee launched an inquiry into the security of the UK's access to critical minerals. After receiving oral evidence from 13 witnesses and written evidence from 51 others-- of which CMA (UK) was called upon for both-- the Committee has concluded that UK Governments for the past 3 decades have "failed to recognise the importance of critical minerals to the UK."

Jeff Townsend, co-founder of CMA (UK), was quoted saying that within industry, there has been concern for years about the acute vulnerabilities in the UK's supply chains. He began raising the issue with Government in 2012 and has "been banging my head against a brick wall ever since".

Like the Committee, the CMA (UK) welcomes the Government's recognition for a need for a strategy and its participation in the Minerals Security Partnership. We hope UK Government will respond to this call action with much-needed vigour and urgency.

READ THE REPORT HERE
An in-depth article about the GSBF & CMA (UK)'s 3rd Annual Conference on the UK Opportunity for Critical Minerals is now available to read on our website.

The article exhibits photos from the day and a video summary of the event by Critical Productions. We dive into the details of various sessions, including the APPG Breakfast Reception hosted by Cherilyn Mackrory MP, Minister Ghani’s speech at our Drinks Reception, and the thought-provoking talking points of the conference’s presentations and panels.

Our speakers—experts from across industry, finance, law, government, and academia—highlighted the importance of building supply chain resilience, and discussed how policy can enable UK industry to achieve its Green Industrial Revolution and Net Zero ambitions.

READ THE ARTICLE HERE
On 10 December, the UK Department for Business & Trade published the Task and Finish Group’s independent report on ‘Industry Resilience for Critical Minerals’.

The report outlines where dependencies and vulnerabilities exist across the UK’s industry sectors, and provides recommendations to UK Government on how to support industry to promote resilience and diversity in critical mineral supply chains.


**READ THE REPORT HERE***
On 21 December, China banned the export of technologies used in industrial processes to extract and separate rare earths. The move is a step forward in its strategy to protect its dominance over several critical mineral supply chains, as nations such as Australia, Canada, the European Union, and the United States have set out policies and support packages to develop their critical minerals sectors.

Rare earths are a group of 17 elements used to manufacture products from lasers to magnets found in electric vehicles, wind turbines, and consumer electronics. China is currently the world's top miner and processor of these elements. In 2022 it accounted for 70% of the world's production.

The technology ban follows China’s implementation of export restrictions on other critical minerals such as gallium and germanium in August, and several types of graphite product in December.

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We are pleased to see UK Government taking these recommendations on board and highlighting the importance of critical minerals and their supply chains to advanced manufacturing. Though the release of the UK’s Critical Minerals Strategy and subsequent ‘Refresh’ usefully present the government’s critical minerals ambitions, the Strategy needs a clear delivery plan and, most significantly, effective fiscal backing from HM Treasury. The UK Government is yet to take advantage of its toolkit to re-position the UK as an attractive investment destination and secure our supply chains.

We would like to thank our members for their valuable contributions to this paper which provides a series of recommendations to the UK Government, as well as details about the financing options available, what it means to compete internationally, and the price of inaction.

READ THE FINANCE PAPER [HERE](#)
On 16 December, the Australian government published its updated Critical Minerals List.

New additions to the list include arsenic, fluorine, molybdenum, selenium, and tellurium. Helium has been removed to coordinate Australia's list of critical minerals more effectively with international partners.

The Australian government has also published its Strategic Materials List to include materials vital for the energy transition that are currently not experiencing supply chain vulnerability. Minerals on this Strategic Minerals List include aluminium, copper, nickel, phosphorus, tin and zinc.

The Hon Madeleine King MP said: “The Critical Minerals List and Strategic Materials List will be updated on an as-needed basis, as economic and geostrategic dynamics evolve." The next comprehensive review of the list is due in 2026.

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Ionic Technologies was developed at Queen's University Belfast's QUILL Research Centre, the oldest and most established centre dedicated to studying ionic liquids. The company is seeking innovators who can provide a solution to the initial demagnetisation and pre-processing of end-of-life high performance magnets to enable the recycling, processing, and separating of rare earth oxides.

UK-based organisations are invited to apply with their solutions. Successful projects will be awarded up to £25k over 3 months to explore their solution with the challenge holder, with the possibility of further adoption upon successful trials.

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On 19 December, Tungsten West's Hemerdon tungsten-tin mine received a £1.8 million lifeline investment and vital planning approval from Devon County Council.

There had been fears that Hemerdon mine would close, but this new cash injection allows Tungsten West to continue with its plans to receive permits, update a feasibility study, and attract more investment, with the goal to be in full production by 2025 and employing 300 people.

CEO Neil Gawthorpe said: "I am pleased to share that Devon County Council has now approved the Section 73 application for increased aggregate volume movements. This coupled with the positive results on the aggregates test work, lay the foundations of a robust aggregates opportunity alongside our core tungsten and tin businesses. We look forward to updating the feasibility study with permits in hand so that we can secure the future of the Hemerdon Mine."

READ ON HERE
On 12 December, HyProMag Ltd announced the first production of recycled rare earth magnets in the UK on a commercial scale in over 20 years, a major milestone in securing critical raw materials for the energy transition.

Production of recycled rare earth magnets at Tyseley Energy Park in Birmingham is being developed by the University of Birmingham and HyProMag, which is owned by Mkango’s 79.4% held subsidiary Maginito Limited. Further production runs are planned in the coming weeks to provide customer and project partner samples.

Commercial production at Tyseley is targeted for mid-2024, with initial throughput targeted at 20 tonnes per annum (tpa) of rare earth magnets and alloys, scaling up to a minimum of 100 tpa in subsequent months. Larger scale up scenarios of up to 1,000 tpa are currently being evaluated.
On 19 December, 3 companies from the north of England--Northern Lithium, Evove, and Sheers--signed an agreement aimed at delivering the UK’s first commercial-scale Direct Lithium Extraction (DLE) plant that combines UK-developed technology, UK sourced lithium-bearing saline brines, and UK process engineering expertise.

Successful production of battery-grade lithium from Northern Lithium’s Northern Pennine Orefield brines was achieved at Evove’s UK DLE Test Centre in August 2023. Now partnered with process engineering experts Sheers, the three parties are working towards the design and delivery of a commercial-scale, UK-manufactured DLE plant.

Domestic supply of lithium is central to the UK’s Battery Strategy, and vital to achieve electrification and Net Zero by 2050. Northern Lithium is targeting commercial production of up to 10,000 tonnes of battery-grade lithium per year within the next decade, to supply the UK’s gigafactories and electric vehicle (EV) manufacturing industry.

READ ON HERE
Dalradian has announced that their polymetallic mine in Tyrone, Northern Ireland, contains tellurium, antimony, bismuth, molybdenum and cobalt—all metals listed on the UK’s critical mineral list.

Dalradian’s CEO Patrick Anderson, said: “The UK’s goal of accelerating domestic mineral production will only be achieved through large-scale investment by companies such as ours. Since 2009, we’ve brought over $400 million of investment and completed a huge amount of exploration, engineering, and environmental work. Planning approval will trigger the creation of 1,000 jobs, a major supply chain spend and tax payments—all amounting to $2 billion over the life of the project.”

An update of the UK’s Critical Minerals List is expected in 2024. A wider range of candidates are being assessed for inclusion, including copper.
On 7 December, Imerys British Lithium won the prestigious Franco-British Trade and Investment Partnership Award.

Run as a collaboration between the British Embassy in Paris and Franco-British Chamber, the Awards celebrate success stories between France and the UK across strategic sectors, underlining shared business priorities as a key part of the Franco-British bilateral relationship.

This year French multinational company Imerys SA entered into a partnership with British Lithium Limited-- with Imerys contributing land, mineral rights, and infrastructure, and British Lithium contributing its technical team, patented technology, and world-class lithium pilot plant in Cornwall.

This visionary collaboration between Imerys and British Lithium will enable the production of half a million EVs, and is a significant step toward a world with clean transportation.

READ ON HERE
On 6 December, Circulor confirmed end-to-end supply chain traceability for SQM’s lithium operation at Salar de Atacama that has achieved IRMA 75 in an audit by The Initiative for Responsible Mining Assurance (IRMA) to downstream customer Volvo Cars.

SQM’s Salar de Atacama operation has become the world’s first lithium mining operation to achieve IRMA 75. IRMA is the most comprehensive, rigorous, and transparent mining standard in the world, developed over more than 10 years with input from numerous stakeholders. The IRMA audit approach evaluates operations across 26 areas, including water management, human rights, and carbon emissions.

“This is a first-ever for the industry,” said Douglas Johnson-Poensgen, CEO of Circulor. “The coming together of credible third-party audits with material traceability will change the game in terms of how we evaluate the responsibility and sustainability of our supply chains and products.”

READ ON HERE
On 12 December, the International Energy Agency (IEA) published a report on Sustainable and Responsible Critical Mineral Supply Chains to aid policymaking in the space.

The report investigates and outlines how critical mineral production is affected by Environmental, Social and Governance (ESG) issues, and presents 5 recommendations to limit the impact of these factors to strengthen supply chains for a just energy transition.

The report also draws attention to 6 areas that must be considered to mitigate supply chain risks: water, greenhouse gas emissions, biodiversity, human rights and communities.

Complimentary to the report, the IEA updated its Critical Minerals Policy Tracker for the second time since its launch in 2022 to include new policies, laws, and regulations introduced in 2023.

**READ THE REPORT HERE**
On 6 December, the United Nations (UN) released a statement urging coordinated global action on Critical Raw Materials (CRM). With the effects of surging demand, geopolitical uncertainties affecting supply, and significant environmental and social concerns linked to CRM extraction, all 5 UN Regional Commissions as well as international experts at COP28 have called for urgent international coordination to ensure the expected expansion of the CRM economy does not undermine Net Zero.

UNECE Executive Secretary Tatiana Molcean said: “Delivering the decarbonisation needed for the Paris Agreement depends on huge quantities of [CRMs]. Therefore, leaders and industry are responsible for ensuring their extraction and use are as sustainable as possible.”
On 12 December, the US House of Representatives Select Committee on Strategic Competition between the US and China recommended US Congress to authorise the creation of a critical mineral ‘resilient resource reserve’.

The recommendation was published in a report alongside 150 other policy recommendations. The adoption of such a reserve would be intended to “insulate American producers from price volatility and [China’s] weaponisation of its dominance in critical mineral supply chains”.

The reserve would also prioritise critical metals with a low US domestic production and import dependence on China. Cobalt, manganese, rare earths, vanadium, gallium, graphite, germanium and boron are all critical minerals that fall under this category, the report states.
The following news articles from Argus Media, Mining Weekly, Mining Magazine, Financial Times, and others, provide an overview of critical mineral mining for:

- Cobalt
- Copper
- Graphite
- Lithium
- Nickel
- Manganese
- Rare Earth Elements
- Tin
- Tungsten
- Vanadium

The Critical Minerals Association (UK) takes no credit for any articles and makes no endorsement of any of the content.
Cobalt

• Asia
  ○ China: CMOC Group [07.12.23]
    ▪ CMOC boosts cobalt output by 144% and expands operations in Congo and Indonesia despite crashing prices, on track to overtake Glencore as world’s largest producer.
    ▪ Read the article here.

• North America
  ○ Canada: Canada Silver Cobalt Works [18.12.23]
    ▪ Exploration drilling commences at Lowney-Lac Edouard in Quebec, targeting prospective areas for nickel-cobalt-copper mineralisation identified in airborne geophysical survey.
    ▪ Read the article here.

  ○ USA: Strategic Metals [18.12.23]
    ▪ Appian Capital Advisory LLPa announces $230m financing for miner and battery metals producer to build Missouri-based cobalt-nickel mine.
    ▪ Read the article here.

• Oceania
  ○ Australia: AGL [04.12.23]
    ▪ Australian energy giant AGL to install nickel-hydrogen battery at Torrens Island power station.
    ▪ Read the article here.
Copper

• Asia
  ○ Afghanistan [20.12.23]
    ▪ Foreign Minister Amir Khan Muttaqi meets with China special envoy Yue Xiaoyang, insisting on the re-opening of Aynak copper mine, the world’s second-largest copper deposit.
      ▪ Read the article here.

• Africa
  ○ DRC: Critical Metals Plc [20.12.23]
    ▪ Operator of Molulu copper-cobalt advances project, with ore sales expected to recommence in Q1 2024.
      ▪ Read the article here.
  ○ Zambia: Mopani Copper Mines [01.12.23]
    ▪ Zambia selects United Arab Emirates’ International Resources Holdings (IRH) as new strategic equity partner in Mopani Copper Mines
      ▪ Read the article here.

• South America
  ○ Chile: Marubeni Corporation [20.12.23]
    ▪ Japan’s Marubeni reaches agreement with JX Metals Corporation to acquire additional 3.27% stake in Minera Los Pelambres Copper Mine and 20.0% stake in Pan Pacific Copper Co., Ltd.
      ▪ Read the article here

      ▪ Marubeni partners with UK-based Antofagasta Plc to invest in expansion project at Minera Centinela.
      ▪ Read the article here.
Graphite

• Africa
  ◦ Tanzania: Marula Mining [01.12.23]
    ▪ Geofields commences phase 1 of exploration work at Nyorinyori graphite project and NyoriGreen graphite project.
    ▪ Read the article here.

  ◦ Tanzania: Walkabout Resources Ltd [20.12.23]
    ▪ Walkabout Resources takes vital step towards full operation and producer status with commissioning underway at Lindi Jumbo Graphite Mine.
    ▪ Read the article here.

• Asia
  ◦ Kazakhstan: Sarytogan Graphite Ltd. [18.12.23]
    ▪ First spheroidized graphite produced from Sarytogan graphite deposit with ultra-high purity of 99.998%.
    ▪ Read the article here.

• North America
  ◦ Canada: Cullinan Metals Corp. [11.12.23]
    ▪ Cullinan successfully completes ground exploration program at Lac-des-Îles West Graphite Property in Quebec, identifying 1-15% mineralisation.
    ▪ Read the article here.

  ◦ USA: South Star Battery Metals [29.11.23]
    ▪ Company receives US$3.2M DoD grant to boost graphite output in US by advancing Feasibility Study for flagship BamaStar Graphite Project in Alabama.
    ▪ Read the article here.
Lithium

• North America
  ○ Canada: Pinnacle Minerals [20.12.23]
    ▪ Pinnacle Minerals signs formal agreement with E&D Fund to acquire 75% stake in the Adina East lithium project in Quebec.
    ▪ Read the article here.

• Oceania
  ○ Australia: Ark Energy [20.12.23]
    ▪ 275 MW/2,200 MWh lithium-iron phosphate battery to be built in New South Wales selected as strategic project under Electricity Infrastructure Roadmap.
    ▪ Read the article here.

  ○ Australia: Alkem [20.12.23]
    ▪ Shareholders vote to accept $10.6bn merger offer from US chemicals major Livent, forming one of the biggest lithium companies in the world, set to be named Arcadium Lithium.
    ▪ Read the article here.

• South America
  ○ Chile: Azure Minerals [19.12.23]
    ▪ Chilean miner SQM partners with Gina Rinehart’s Hancock Prospecting to bid $1.1 billion for prized lithium asset in the mineral-rich Pilbara.
    ▪ Read the article here.
Manganese

- **Africa**
  - Gabon: Eramet [20.12.23]
    - Eramet signs 10-year manganese ore supply agreement for Vibrantz’s lithium-ion batteries.
    - [Read the article here.](#)
  - South Africa: Giyani Metals [20.12.23]
    - Giyani’s IDC-funded battery manganese demo plant to be built in Johannesburg, with commercial plant to be built in Botswana.
    - [Read the article here.](#)

- **Asia**
  - China: Firebird Metals Ltd [06.12.23]
    - Firebird Metals progresses key activities towards becoming near-term producer of battery-grade manganese sulphate.
    - [Read the article here.](#)
  - India: MOIL Ltd [13.12.23]
    - State-owned MOIL announces 51:49 stake strategic partnership with Gujarat Mineral Corporation Limited (GMDC) for mining operations in Gujarat.
    - [Read the article here.](#)

- **North America**
  - USA: Element 25 Ltd [19.12.23]
    - Planned high-purity manganese sulphate processing facility in Louisiana approved for US$57 million in tax incentives.
    - [Read the article here.](#)
Ni
ckel

• Asia
  ○ China: Tsingshan Holding Group [17.12.23]
    ▪ China’s largest nickel producer set to raise up to HK$2.39bn in initial public offering of a battery-making subsidiary.
    ▪ Read the article here.

• Europe
  ○ Russia: Nornickel [18.12.23]
    ▪ To boost domestic nickel sales, Russian mining and metals giant Nornickel joins project to build stainless steel plant
    ▪ Read the article here.

• North America
  ○ USA: Atlas Minerals [19.12.23]
    ▪ Société Minière Georges Montagnat (SMGM) signs commercial agreement for the supply of nickel ore to Atlas’ first commercial plant.
    ▪ Read the article here.

• Europe
  ○ UK: London Metals Exchange [04.12.23]
    ▪ ING analysis reports a poor year for nickel, and forecasts nickel prices to continue to underperform in 2024.
    ▪ Read the article here.
Rare Earth Elements

• Asia
  ○ Indonesia [20.12.23]
    ▪ Indonesian Energy & Mineral Resources Ministry commence studies to map potential of extracting rare earths from domestic coal.
    ▪ Read the article here.

• North America
  ○ Canada: Vital Metals [19.12.23]
    ▪ Government monitors Chinese $5.3 million investment in struggling Australian firm that owns Canada’s only operating rare earths mine.
    ▪ Read the article here.
  ○ USA: Brook Coal Mine [01.12.23]
    ▪ Wall Street banker pays $2 million for Brook coal mine in Wyoming only to discovers $37 billion worth of REEs.
    ▪ Read the article here.
  ○ USA: Cornell University [19.12.23]
    ▪ Researchers discover genetically engineering bacterium Vibrio natriegens can optimise the efficiency of purifying rare earth elements.
    ▪ Read the article here.

• Europe
  ○ UK: Mkango Resources [13.12.23]
    ▪ Commercial-scale rare earth magnet recycling will begin in the UK in mid-2024 with Mkango completing its first production run this month.
    ▪ Read the article here.
Tin

- North America
  - USA: Fourth Power [12.12.23]
    - Battery technology using liquid tin stores energy at “almost half the sun’s temperature”; receives $19m in funding from Bill Gates' energy innovation vehicle.
    - Read the article here.

- Oceania
  - Australia: Metals X Limited [16.11.23]
    - Updated ore reserve estimate and life of mine plan indicates Renison tin mine in Tasmania will continue operating until 2035.
    - Read the article here.

Tungsten

- Europe
  - Spain: Tomra Mining [30.11.23]
    - Installation of X-Ray transmission ore sorter at Saloro Tungsten mine in Barruecopardo boosts grade and reduces costs.
    - Read the article here.

  - UK: Tungsten West [19.12.23]
    - Plymouth’s under-threat tungsten and tin mine receives £1.8 million lifeline investment and vital planning approval.
    - Read the article here.
Vanadium

• Europe
  ○ UK: VanadiumCorp Resources Inc [05.12.23]
    ▪ Vanadium electrolyte-processing plant completed and ready for inspection; products to be shipped to Quebec facility for reassembling.
    ▪ Read the article here.

• North America
  ○ USA: Pacific Northwest National Laboratory [30.11.23]
    ▪ Vanadium redox flow battery with 24-hour discharge duration to be built and tested in joint project between PNNL and technology provider Invinity Energy Systems.
    ▪ Read the article here.

• Oceania
  ○ Australia: Australian Vanadium Ltd [15.12.23]
    ▪ AVL completes construction of electrolyte facility in Perth for manufacturing vanadium redox flow battery (VRFB) energy storage systems, with annual production capacity projected at 22MWh.
    ▪ Read the article here.

  ○ Australia: Surefire Resources NL [04.12.23]
    ▪ Surefire announces results of pre-feasibility study for flagship Victory Bore Project in Western Australia, close to existing infrastructure and transport links.
    ▪ Read the article here.
EVENTS CALENDAR

JANUARY

  - Register here

- World Economic Forum | WEF 54th Annual Meeting | Davos-Klosters, Switzerland | 15 - 19 January
  - More information here

FEBRUARY

- HYVE | Invest in Mining Indaba 2024 | CTICC, Cape Town, South Africa | 5 - 8 February
  - Register here

- Beacon Events | Mines and Money Miami 2024 | James L. Knight Centre, Miami, USA, | 22 - 23 February
  - Register here

Interested in upcoming events?
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