CRITICAL MINERALS MENTIONED AT UK-AUSTRALIA MINISTERIAL MEETING
BUILDING A CIRCULAR ECONOMY FOR CRITICAL MATERIALS
WELCOMING BRITISH LITHIUM TO CMA!
CMA ESG PAPER IN INNOVATION NEWS NETWORK
Welcome to our February Critical Minerals Association monthly newsletter & updates on the critical minerals space.

Read on for:

- Critical Minerals Mentioned at Australia-UK Ministerial Meeting
- POST: Mining and the Sustainability of Metals
- CMA: Building a Circular Economy for Critical Materials
- USGS Publishes 2022 Critical Minerals List
- CMA: How Should the UK Source Critical Minerals Responsibly
- Webinar Highlights: ‘Breaking Ground - The Diversification of the Angolan Mining Sector’
- The Geological Society of London: Energy Transition
- Welcoming British Lithium to the Association
- Giyani Metals Updates K. Hill Resource
- Cornish Metals Signs Additional Mineral Lease at South Crofty
- Tirupati Graphite Signed UK Marketing & Distribution Agreement with Minrais
- Minviro to be Part of CSyARES Project
- Cornish Lithium Partners with iGas Energy
- E-Tech Resources Reports Diamond Drill Intercepts
- Circular Partners with Element 25
- Q&A with Giyani Metals
- Critical Minerals News
- Glencore, Britishvolt to Build Battery Recycling Plant in the UK
- Biden Announces Investments into Domestic Critical Minerals Projects
- Fasken’s Annual Seminar Series

This month's newsletter has been put together by Olimpia Pilch, CMA's Business Development & Communications Associate!

Kirsty & Jeff

Got a suggestion? Want to feature in next month's newsletter? Contact olimpia@criticalmineral.org

Want to learn more? Check out our website: https://www.criticalmineral.org/ & follow us on Twitter @CMA_Minerals
On 21 January 2022, Minister for Foreign Affairs and Minister for Women Senator the Hon Marise Payne and Minister for Defence the Hon Peter Dutton MP hosted the Secretary of State for Foreign, Commonwealth and Development Affairs the Rt Hon Elizabeth Truss MP and Secretary of State for Defence the Rt Hon Ben Wallace MP for the Australia-UK Ministerial Consultations (AUKMIN).

Ministers underscored the importance of building more secure, resilient and sustainable supply chains, including in critical minerals and particularly rare earths and battery minerals. They committed to driving greater links between the two countries’ private sectors, focused on connecting stakeholders at key points of the supply chain to bolster two-way trade and investment.

**READ ON HERE**
The UK is an important stakeholder in the modern mining industry. Although the UK production of metals is low, many of the world’s largest mining companies are headquartered in the UK, investors and markets in the UK are a significant source of finance for the industry, and the London Metal Exchange is the largest market for the trade of metals.

The oversight of mining, and the supply of mined materials (including metals and finished products that contain them) falls across several government departments, including DEFRA, BEIS, DIT and FCDO. The Government is drafting a UK Critical Minerals Strategy in 2022 as part of its Net Zero Strategy. The UK imports ~40 million tonnes of metal year from a diverse global supply chain, that includes the EU (10%), China (12%) and South Africa (6%). Trade and procurement are important mechanisms for the UK to secure responsible supplies of metals.

The Earth is likely to have sufficient metal ore deposits to meet projected demand over coming decades. However, there are concerns about the reliability of metal supplies.

READ ON HERE
The urgent need to create a global framework to support a circular economy for critical materials is detailed by Ian M London, Executive Director of C2M2A, with support from Jeff Townsend and Kirsty Benham, Founders of CMA.

Critical materials are fundamental to both advanced and clean technologies. Access to a secure supply of these materials is key to maintaining quality of life, geopolitical and economic stability and is necessary for the transition to a climate-neutral global economy.

The United Kingdom’s Critical Minerals Association (CMA) and the Canadian Critical Minerals and Materials Alliance (C2M2A) organised and hosted an industry-led, two half-day bilateral workshop held on December 9 and 10, 2021. Participants were drawn from industry, academia, and government from both countries.

READ ON HERE
The US Geological Survey (USGS) has released the final list of 50 critical minerals that the domestic economy requires for economic and national security.

The new list builds on the initial 2018 version, adding 15 new minerals to the list and removing four others.

Much of the increase in the new list results from splitting the rare earth elements and platinum group elements into individual entries rather than including them as ‘mineral groups.’ The 2022 list of critical minerals adds nickel and zinc while removing helium, potash, rhenium and strontium.

“Critical minerals play a significant role in our national security, economy, renewable energy development and infrastructure,” said Tanya Trujillo, assistant secretary of the interior for water and science. “USGS data collection and analysis scans the horizon for emerging issues in crucial supply chains, and every three years identifies the nation’s current vulnerabilities to potential disruptions.”

READ ON HERE
How Should the UK Source Critical Minerals Responsibly

The Critical Minerals Association’s ‘Blueprint for Responsible Sourcing of Critical Minerals’ outlines how the UK needs to secure critical minerals to enable the UK’s Green Industrial Revolution.

Critical minerals are the building blocks of renewable energy technologies and are essential in enabling the UK’s Green Industrial Revolution. We need these materials for technologies such as wind turbines, solar panels, electric vehicles (EVs), battery storage, and the underpinning net zero infrastructure.

READ ON HERE
READ THE BLUEPRINT HERE

Pictured: Hemerdon Mine Site. Courtesy of Tungsten West
On 1st February 2022, the Critical Minerals Association (CMA) had the privilege of bringing together the UK and Angolan Government agencies and the critical minerals industry to showcase that Angola is open for mining and foreign investment, alongside the Department for International Trade (DIT) and the British Embassy in Luanda.

Dr Jacinto Rocha, President and CEO, Angola National Agency of Mineral Resources: “This is the vision we have: a clean, environmentally-compliant mining sector”

**RECORDING & HIGHLIGHTS HERE**

**BREAKING GROUND: THE DIVERSIFICATION OF THE ANGOLAN MINING SECTOR**

**TUES, 1 FEB @ 9 AM GMT**

- UK DEPARTMENT FOR INTERNATIONAL TRADE (DIT)
- ANGOLA NATIONAL AGENCY OF MINERAL RESOURCES (NAMR)
- GEOLOGICAL INSTITUTE OF ANGOLA - PLANAGEO
- UK-ANGOLA CHAMBER OF COMMERCE
- PENSANA
- ANGLO AMERICAN
Energy Transition Discussion Meeting: What does Geoscience need to do now for a sustainable transition to net-zero?

The shift to a net-zero carbon future is a pressing international effort. Geosciences play a pivotal role in enabling this increasingly urgent energy transition, driving innovation, supporting business and facilitating a sustainable and socially just transition.

The online event is free to attend and will be organised and hosted by Responsible Raw Materials!

MORE INFO HERE

ENERGY TRANSITION

Join us for a hybrid discussion meeting - online and at Burlington House, London.

What does geoscience need to do now for a sustainable transition to Net Zero?

26 - 27 APRIL 2022
We are delighted to announce that British Lithium has become a member of the Critical Minerals Association.

British Lithium is a lithium technology and development company operating in the SW of England. Recently, British Lithium announced completion of their £4 million integrated lithium pilot plant in Cornwall, and the production of battery-grade lithium at pilot scale from the mica in granite using their patented Mi-Sep™ and Li-Sep™ chemical-free technologies powered by renewables.

Welcome to the association!
Giyani Metals has announced an updated mineral resource estimate for the K.Hill manganese project, in Botswana, which states a 31% increase in indicated resources and a 121% increase in inferred resources for the project.

The new estimate incorporates a southerly extension of the K.Hill deposit, called K.Hill Extension, which underwent reverse circulation drilling in 2021.

The indicated resource now comprises 2.1-million tonnes grading 19.3% manganese oxide, for 401 000 t of contained manganese oxide or about one-million tonnes of high-purity manganese sulphate monohydrate (HPMSM), before processing recoveries are applied.

The inferred resources amount to 3.1-million tonnes at an average grade of 16.9% manganese oxide, equating to about 530 000 t of contained manganese oxide or about 1.3-million tonnes of HPMSM.
Cornish Metals announced that it has reached an agreement with Sir Ferrers Vyvyan of Trelowarren in Cornwall to lease certain mineral rights owned by the Vyvyan family.

The mineral lease covers an area of 222 hectares and is valid for 25 years. The lease will enable Cornish Metals to explore and mine within all the mineral right areas owned by the Vyvyan family inside the South Crofty Underground Permission Area, and explore certain other mineral right areas adjacent to the South Crofty property.

The terms of the lease require Cornish Metals to pay an annual rent, plus a tin price-based sliding scale net smelter return royalty on production of any minerals recovered from the leased area.

Sir Ferrers Vyvyan, owner of Trelowarren, stated, “We are delighted to have reached agreement with Cornish Metals over our interests at South Crofty. Vyvyans, both with “Y” and “I”s, have been involved with mining in the Camborne area since the 16th century and we hope this project creates many new jobs in the County.”
Tirupati Graphite has signed an exclusive UK marketing and distribution agreement with Minralis for a range of graphite-based flame retardant products.

The products have been developed by TSG, over which Tirupati has a binding option to acquire 100%, which is targeting the UK where there is need for new flame retardant technology following the Grenfell Tower tragedy.

TSG and Minralis have been working in collaboration on product tests with several buyers and have achieved approval from a number of key clients, said the statement.

Minralis has already received an order for 66 tons of one of TSG's products, CarboflameX, valued at US$200,000 and to be delivered in three shipments.

READ ON HERE
Minviro partners with BEC GmbH, Circularise, Grundfos, and the global Rare Earth Industry Association (REIA) in a three-year EIT RawMaterials funded innovation project to build a blockchain based Circular System for Assessing Rare Earth Sustainability (CSyARES). This will help companies improve transparency and sustainability of their supply chains when it comes to critical and rare earth materials.

Dr Robert Pell, Founder and CEO of Minviro: "Life cycle assessment is the most robust methodology for measuring environmental performance, and Minviro have been working with raw material projects to identify and reduce their environmental footprint. We are excited to be involved in the CSyARES project, which seeks to establish integration of forward-thinking applications from all partners to synergise environmental, supply chain and standard compliance in the REE value chain – a truly comprehensive tool to help secure sustainable critical material streams in Europe.”

READ ON HERE
Cornish Lithium announced that it has agreed a Heads of Terms with IGas Energy, a British energy company and the parent company of geothermal heat developer GT Energy UK, to work together to evaluate suitable sites where geothermal heat can be developed on a commercial basis.

Cornish Lithium has secured extensive land and mineral rights agreements in the South West of England, and has developed 3D models of the sub-surface geology and mineral potential of the region utilising historic records combined with data from modern sources such as satellite imagery, geophysical data and drone mapping.

Cornish Lithium will work with IGas to develop shallow geothermal projects in Cornwall that can supply renewable heat to industrial end users and will also evaluate the potential to extract lithium from the geothermal waters. IGas will bring its experience of well design, drilling and operational management to the projects.

READ ON HERE
E-Tech Resources announced additional assay results from the first diamond drilling campaign completed at the Eureka REE Project, located in central Namibia. The results from these eight holes, all of which have intersected mineralisation, have confirmed the presence of mineralisation in Zones 1 and 2 at depth and its southward extension along strike. The deposit remains open both along strike and at depth.

READ ON HERE

News Release

We Are Reporting Diamond Drill Intercepts of REE Bearing Dykes Beyond the Current Resource

TSX-V: REE
FSE: K2i
Circulor announced a collaborative partnership with Element 25 to establish full manganese traceability and dynamic tracking of CO2 and environmental, social and governance (ESG) standards for products produced from Element 25’s Butcherbird Project (Butcherbird).

E25’s partnership with Circulor plays a critical role in E25 demonstrating traceability and ESG compliance for its manganese products as part of its strategic pathway to Zero Carbon Manganese. Real-time, digital visibility of dynamic ESG metrics, including CO2 intensity and energy mix used, will be made available to downstream market participants, including offtake partners.

Circulor’s platform will also enable E25 to demonstrate its fulfilment of United Nations Sustainability Development Goals and the European Commission’s Battery Regulation.
In our latest Q&A session, we caught up with Robin Birchall, CEO at Giyani Metals. Giyani is a mineral resource company focused on the advancement of its manganese assets within the Kanye Basin in south-eastern Botswana, Africa.

Q&A topics:
- Giyani’s background
- Role of manganese in EVs
- Operating in Botswana
- Giyani’s ESG activity and aspirations

READ ON HERE
Critical Minerals News

The following February news articles from Argus Media, Mining Weekly, Mining Magazine, and others, provide an overview of critical mineral mining for:

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

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

• Africa
  ○ DRC [18.2.22]
    - Mounting demand for cobalt has multinational mining companies restarting and expanding mines in the Democratic Republic of Congo, where reports of human rights abuses persist.

• Europe
  ○ Brussels: Umicore [17.2.22]
    - Speciality metals refiner Umicore is enjoying record profits as battery materials boom, but the company is racing to avert a slowdown in sales as its cobalt-heavy chemicals fall out of favour with carmakers.

• North America
  ○ USA: Glencore [9.2.22]
    - Glencore Plc agreed to an offtake deal with Missouri Cobalt LLC, giving the world’s biggest commodity trader more exposure to the crucial battery ingredient.
Copper

• Europe
  ○ UK: Antafogasta [24.2.22]
    ▪ Antofagasta profits rise 77% thanks to booming demand for copper despite COVID-19 pandemic and drought conditions.
    ▪ https://miningglobal.com/supply-chain-and-operations/antofagasta-posts-us-4-8bn-earnings-on

• Africa
  ○ DRC: Zijin Mining [24.2.22]
    ▪ Zijin Mining, China, announced on Wednesday that its joint venture copper mine project in the Democratic Republic of Congo (DRC) will spend $50 million to upgrade and improve its metal production capacity and output.

• Latin America
  ○ Chile: Codelco [10.2.22]
    ▪ Chilean state miner Codelco, the world’s top copper producer, said that it will seek certification from the Copper Mark sustainability initiative for all its operations by the end of 2023.
Graphite

• Europe
  ○ **Sweden: Leading Edge [14.2.21]**
    - Leading Edge Materials has said it is considering restarting production at its permitted and fully-built Woxna graphite mine, in Sweden, citing improved market conditions.

  ○ **Sweden: Talga Resources [24.2.22]**
    - Talga Resources has produced Europe’s first battery anode with the commissioning of its Electric Vehicle Anode (EVA) qualification plant, in Sweden.

• North America
  ○ **USA: Syrah Resources [15.2.22]**
    - Australian industrial materials firm Syrah Resources will expand its Louisiana facility to process graphite used in electric vehicle batteries.
    - [https://www.mining.com/web/syrah-resources-to-expand-louisiana-graphite-processing-facility/](https://www.mining.com/web/syrah-resources-to-expand-louisiana-graphite-processing-facility/)

• Oceania
  ○ **Australia: Renascor Resources [2.2.22]**
    - Renascor has received a $185 million conditional loan from the federal government to mine what it says is the "world’s second largest graphite deposit", as Australia strives to become a global player in critical minerals.
Lithium

• Asia
  ○ China [23.2.22]
    ■ The discovery of a vast deposit of lithium near Everest has raised the prospect that China will start mining the highly coveted metal, which is critical in making batteries for electric vehicles.
    ■ [https://www.thetimes.co.uk/article/vast-lithium-deposit-near-everest-could-put-china-in-driving-seat-xwb8hm27h](https://www.thetimes.co.uk/article/vast-lithium-deposit-near-everest-could-put-china-in-driving-seat-xwb8hm27h)

• Europe
  ○ France [17.2.22]
    ■ France should start exploiting its own lithium resources to meet increased demand stemming from a shift away from fossil fuels, Barbara Pompili, the country's environment minister, said in a video interview published by business daily Les Echos.
  ○ Germany: Rock Tech Lithium [24.2.22]
    ■ Rock Tech Lithium has announced that it has submitted the required documentation for the application for the first partial permit for the construction of its lithium hydroxide converter in Guben/Brandenburg, Germany.
    ■ [https://batteryindustry.tech/rock-tech-lithium-starts-permitting-process-for-europes-first-lithium-hydroxide-converter/](https://batteryindustry.tech/rock-tech-lithium-starts-permitting-process-for-europes-first-lithium-hydroxide-converter/)
  ○ UK: Cornish Lithium [24.2.22]
    ■ UK lithium mining company Cornish Lithium is planning an IPO later this year as it looks to supply the UK automotive battery industry from 2026.
Manganese

• Europe
  ○ Czech Republic: Euro Manganese [10.2.22]
    ▪ Euro Manganese announces closing of C$8.5 million strategic investment by European Bank for Reconstruction and Development.

• Oceania
  ○ Australia: Accelerate [9.2.22]
    ▪ Accelerate Resources has identified 30 new surface manganese prospects at its Braeside West manganese project using LiDAR and high-resolution imagery.
Nickel

• Global [24.2.22]
  - Disruption to nickel supplies likely, as Russia was the world’s third-largest nickel producer in 2020, the last year for which data has been compiled. During 2020, it produced 270,000 metric tonnes or roughly one-tenth of total global production.

• Asia
  - Japan: Tokyo University [24.2.22]
    - Copper, nickel play important role in the development of next-gen 2D materials.

• Europe
  - Belgium: Aurubis [16.2.22]
    - Aurubis, Europe’s largest copper producer, said it plans to build a 70 million euro ($79.5 million) recycling plant in Belgium to expand the production of recycled nickel along with copper.

• North America
  - Canada: Grid metals [23.2.22]
    - Grid Metals provides exploration and corporate update for nickel and lithium properties.
Tungsten

• Asia
  ○ South Korea: Almonty [25.2.22]
    - Almonty Industries has received firm commitments from an institutional investor to raise $1.5 million, which will enable drawdown of a loan funding construction of the Sangdong Tungsten Mine in South Korea.

• Europe
  ○ UK: Tungsten West [15.2.22]
    - Tungsten West steps up £45m revamp of vast Plymouth tungsten mine. Top-of-the-range equipment on order and construction work due to start on new sorting plant as company eyes full production in 2023.
    - https://www.business-live.co.uk/economic-development/tungsten-west-steps-up-45m-23087887

• Oceania
  ○ Australia: Group 6 [23.2.22]
    - Following a string of regulatory approvals for its wholly-owned Dolphin tungsten mine in Tasmania, emerging producer Group 6 has confirmed it will ramp up construction activities at the site using an environmentally-friendly approach.
Rare Earth Elements

• North America
  ○ USA: MP Materials [22.2.22]
    ▪ MP Materials announced it has been awarded a $35 million contract through the U.S. Department of Defense Industrial Base Analysis and Sustainment Program to support the construction of a commercial-scale processing facility for heavy rare earth elements at Mountain Pass.

• Oceania
  ○ Australia: Hastings Technology Metals [5.2.22]
    ▪ Hastings Technology Metals is the first rare earths projects developer to receive the financial backing of the Federal Government, courtesy of a $140 million loan from the Northern Australian Infrastructure Facility (NAIF).
  ○ Australia: Peak Rare Earths [14.2.22]
    ▪ Chinese rare earth producer Shenghe Resources has agreed to buy a 19.9% stake in Australia-based Peak Rare Earths for $28m (A$39.25m).
Miner and commodities trader Glencore (LON: GLEN) has tied up with electric vehicle (EV) battery start-up Britishvolt to build a new plant to recycle lithium-ion batteries in the UK.

The facility will help reuse expensive key raw materials like cobalt and lithium, the companies said on Thursday.

The plant will be built at the site of a Glencore operation in Northfleet, east of London and is set to launch in 2023, with the long-term aim of being 100% powered by renewable energy.

The deal is the third major step the Swiss mining giant has taken in the past weeks towards tapping into the further recycling sector. In late January, it partnered up with Moroccan mining company Managem to produce cobalt from recycled battery materials at a plant near Marrakech.
US President Joe Biden on Tuesday announced several investments in the domestic production of key critical minerals and materials, as the country moves to break its dependence on China and secure a ‘Made in America’ supply chain.

In a White House statement, Biden announced that MP Materials had been awarded $35-million in public funding from the Department of Defense (DoD) to support the construction of a commercial-scale processing facility for heavy rare earth elements (HREEs) at its facility in Mountain Pass, California.

HREEs are essential inputs in many critical defence and commercial technologies and are less abundant than light rare earth elements (LREEs). In 2020, the DoD committed $9.6-million to MP Materials Stage 2 optimisation, a project under way to restore LREE processing capabilities at Mountain Pass.

READ ON HERE
Fasken's Annual Seminar Series

The Shift to Electric Vehicles and What it Means for Canadian Mining and our Automotive Sector
Wednesday, March 2, 2022 | 08:00 - 09:30 ET

Moving the Dial on Equity, Diversity and Inclusion in the Mining Industry
Wednesday, March 2, 2022 | 11:30 - 13:00 ET

Effective and Enforceable Dispute Resolution
Wednesday, March 2, 2022 | 15:30 - 17:00 ET

The Future of Nuclear Power-Environmental, Economic, Health and Safety and Political Considerations
Thursday, March 3, 2022 | 08:00 - 09:30 ET

Technological Risks and Cybersecurity in the Mining Industry: On the Path to Strategic Risk Planning
Thursday, March 3, 2022 | 11:30 - 13:00 ET

Getting your Permits and Authorizations in Quebec - An Inside Look
Thursday, March 3, 2022 | 15:30 - 17:00 ET

MORE INFO HERE
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- less common metals
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