



**SPECIAL
EDITION**

CRITICAL MINERALS ASSOCIATION

2021 OVERVIEW

**DECEMBER 2021 SPECIAL EDITION -
CRITICAL MINERALS ASSOCIATION: A YEAR IN REVIEW**

**POLITICAL HIGHLIGHTS
CMA'S KEY EVENTS IN 2021
BREAKFAST CHAT HIGHLIGHTS
DECEMBER NEWS STORIES**



2021 Overview

Welcome to our Special Edition newsletter bringing you the highlights of 2021.

Read on for:

- A Year In Review
- Becoming a Member
- CMA Highlights
 - Critical Minerals Make Waves in Parliament
 - CMA Influences UK's Net Zero Strategy 2021
 - CMA Publishes ESG Paper 'A Blueprint for Responsible Sourcing of Critical Minerals'
 - CMA Gives Oral Evidence to Parliament Environmental Audit Select Committee
 - Attending the 17th International Rare Earths Conference
- Online & In-person Events 2021
 - Critical Minerals & UK's Green Industrial Revolution Conference
 - Australia Takeover - Creating Responsible & Secure Supply Chains
 - CMA at G7 in Cornwall
 - Strategic, Secure & Successful: The Australian Approach to Critical Minerals
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 - Defining Criticality - What Makes a Critical Mineral?
 - UK Government's Ten Point Plan for a Green Industrial Revolution & the Role of Critical Minerals
 - Universities & Critical Mineral Supply Chains
- Interview Highlights of 2021
- December News Stories

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

Kirsty & Jeff

SUBSCRIBE TO OUR NEWSLETTER UNDER 'CONTACT'

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



CMA 2021: A Year In Review

We would like to thank all of those who have supported the association throughout the incredibly busy year. Our 2021 highlights included:



8 NEW MEMBERS



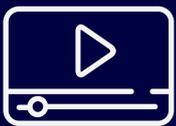
3 REPORTS



15 ONLINE EVENTS



3 IN PERSON EVENTS



6 INTERVIEWS



INFLUENCED UK'S NET-ZERO STRATEGY



Becoming a Member of the Critical Minerals Association

Our membership offers the opportunity to collaborate with industry experts across the entire critical minerals value chain to tackle common challenges and inform society on the importance of critical minerals.

Benefits of joining:

POLICY DEVELOPMENT

Develop global policy recommendations for your sector by bringing together expert knowledge and industry best practices. Create unified influence on government to achieve collective goals.

GOVERNMENT EVENTS

Receive latest updates from the UK's All-Party Parliamentary Group for Critical Minerals and invites to upcoming events. Meet representatives from across Government and hear from policymakers and MPs.

NETWORKING

Meet representatives across the critical minerals value chain and enjoy opportunities for relationship building, networking and discussion.

MEDIA & OUTREACH

Showcase your work and modern, responsible mineral extraction and processing to a wide range of stakeholders including the Government.

MINING OF THE FUTURE

Drive progress in the sector through the collective resolution of challenges faced in the critical minerals sector. Collaborate on delivering a coherent image of modern mining to society by showcasing Environmental, Social, Governance best practices and mining's vision for a better tomorrow.

FIND OUT MORE ABOUT MEMBERSHIP HERE



CMA Influences UK Net Zero Strategy 2021

The Critical Minerals Association (CMA) welcomes the UK Government's recognition of the importance of critical minerals in achieving net-zero in the newly published Net Zero Strategy 2021.

“The UK Government’s statement of commitment to support the industry is a huge step in the right direction. The industry is finally gaining the recognition it deserves as fundamental to achieving UK’s Net-Zero ambitions. We look forward to working with the UK Government to ensure the UK is regionally competitive and not only promotes but also attracts responsible mining and investment.” – Jeff Townsend, Founder, CMA

[**READ ON HERE**](#)

Deep Dive - Critical Minerals, Supply Chains and Net Zero

The transition to Net Zero means new supply chains are becoming critical to the UK's energy production. Critical minerals are metals and non-metals that are vital for a defined economic activity and for the well-being of the country, yet whose supply may be at risk owing to geological distribution, lack of substitutes and/or other factors. Such minerals provide materials essential for components in many of today's rapidly growing clean energy technologies – from off-shore wind turbines to electric vehicles. The World Bank suggests that the production of minerals such as graphite, lithium and cobalt, could increase by nearly 500% by 2050 to meet the growing demand.²¹

- Ensuring the UK has a reliable supply of critical minerals and metals;
- Establishing an enabling environment for growing the sector in the UK;
- Showing leadership through working bilaterally and multilaterally to support work on international standards to extend and strengthen the circular economy in technology-critical minerals;
- Ensuring our work to build critical mineral supply chain resilience supports our international development priorities;
- Using our R&D resource to build a better understanding of markets and prices to help mitigate the impact of supply shocks



ESG Paper: A Blueprint for Responsible Sourcing of Critical Minerals

Enabling the UK's Green Industrial Revolution

A Blueprint for Responsible Sourcing of Critical Minerals

Environmental, Social and Governance (ESG)

Monday 12th July 2021 marked a milestone achievement for the Critical Minerals Association and our members. We were delighted to launch our ESG Paper 'A Blueprint for Responsible Sourcing of Critical Minerals'.

The paper outlines challenges and opportunities for the UK to be a world leader in mining and sourcing critical minerals responsibly.

[READ THE PAPER HERE](#)

Our ESG Paper Launch Event is available online. We present several recommendations for the UK Government to consider what measures it could take to ensure that critical minerals are sourced responsibly.

[HIGHLIGHTS & RECORDING HERE](#)



Parliament Environmental Audit Select Committee - CMA Gives Oral Evidence

06

CMA's Jeff Townsend gave oral evidence for the Environmental Audit Committee on **Wednesday 16 June 2021**.

Speaking to the Committee's Parliamentary members, Jeff outlined the challenges faced by the UK in relation to current global market trends and proposed a number of actions the UK and its government needs to take to ensure the UK is viewed as competitive regionally, in the global race to the new green economy.

[READ PRESS RELEASE HERE](#)

WE ARE QUESTIONING

Industry experts

**on actions needed to establish and support
a battery electric vehicles UK supply chain**

Watch live on Wednesday 16 June at 2.30pm



PRESS RELEASE - 15th March: Critical Minerals Make Waves in Parliament

07

Critical Minerals took centre stage for the first time in the UK Parliament with a morning meeting between the UK and Australia and also the first House of Commons Chamber debate on critical minerals in the evening.

Alexander Stafford MP said:

"Critical minerals are absolutely vital for our low carbon industrial capabilities and post-Covid recovery. In fact, these minerals are becoming more and more important by the day. Without them, our society just cannot function.

The consequences of instability in the critical minerals supply chain would be terrible for both the economy and our wider net zero ambitions.

I am so pleased to have been able to lead this important debate. The government must now take swift action to diversify these supply chains and reduce our reliance on unstable providers."

READ ON HERE



**THE PARLIAMENTARY
DEBATE CAN BE
FOUND HERE**



Our 2021 Events Highlights

At the Critical Minerals Association, we are passionate about bringing people together to share thoughts and ideas to collaboratively solve the challenges around critical mineral supply chains.

By bringing together diverse minds and experiences across the critical minerals value chain, we can begin to address issues and put together practical solutions that support industry and wider society.

In 2021 we held several public and closed-door events for the industry, governments and wider stakeholders:



4 ONLINE GOVERNMENT TRAINING COURSES



5 BREAKFAST CHATS



3 WEBINARS



2 HYBRID EVENTS



1 IN-PERSON EVENT



3 APPG CRITICAL MINERAL DISCUSSIONS



Critical Minerals & UK's Green Industrial Revolution

The Critical Minerals Association teamed up with The Geological Society Business Forum and IOM3 to deliver a three-part hybrid event, including breakfast in parliament, a conference live-streamed from The Geological Society and, a drinks reception on 30th November 2021.

We welcomed the Minister of Industry, Lee Rowley's speech outlining support for the domestic critical minerals sector. We were also grateful to Alexander Stafford MP and Baroness Northover for their ongoing championing of critical minerals.

Thank you to all of those that attended in person and online!

READ ON HERE





CMA G7 Event: Importance of Mining to Society



The Critical Minerals Association is delighted to have hosted the G7 Event, 'Importance of Mining to Society', on 11th June. The in-person event took place at Cornwall House in Falmouth. The event was moderated by Jeff Townsend, Co-founder of CMA. Our speakers were:

- Lucy Crane, Chair of CMA Perception of Mining Group, Senior Geologist at Cornish Lithium
- John Murray, Founding Principal of Swann Group

The event highlighted mining's key role in delivering the green energy transition and presented the challenges that lie ahead.

HIGHLIGHTS & RECORDING HERE



CMA G7 EVENT: THE IMPORTANCE OF MINING TO SOCIETY

Join the Critical Minerals Association in Falmouth at the G7 Event:

- Jeff Townsend, Co-founder of CMA
- Lucy Crane, Senior Geologist, Cornish Lithium
- John Murray, Founding Principal of Swann Group

FRI, 11 JUNE @ 10AM BST

Cornwall House, Falmouth & LIVESTREAM





Australia House Drinks Reception



On 2nd December 2021 the Critical Minerals Association hosted a joint event with Austrade, the State Governments of Western Australia, Queensland, and South Australia at the Australian High Commission in London.

The drinks reception brought together the UK and Australian government and industry representatives from across the critical minerals value chain, including miners, financiers, processors, service providers and technology.

International collaboration is essential to delivering the UK's Industrial Strategy and ensuring that the raw materials necessary for the green energy transition are sourced as responsibly as possible.





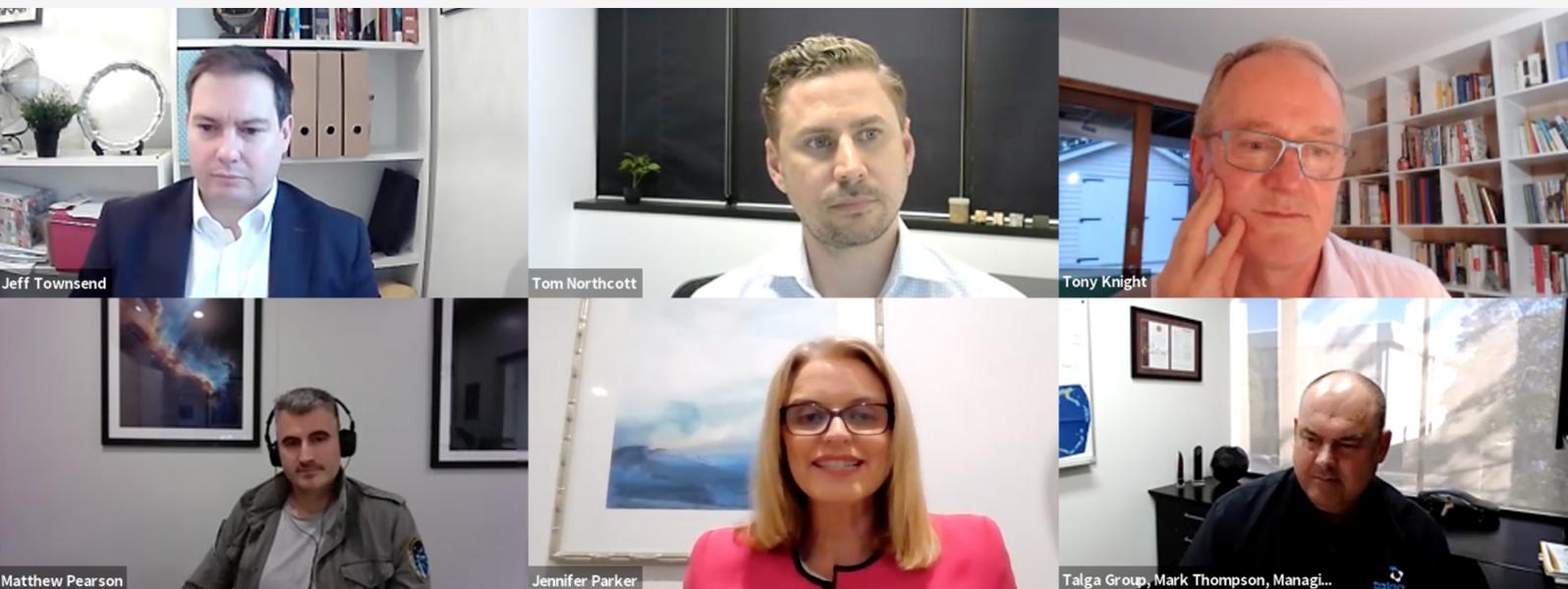
Webinar: Building Responsible & Secure UK - AUS Supply Chains

The Critical Minerals Association collaborated with Austrade and the State Governments of Western Australia, Queensland, and South Australia to deliver a webinar and parallel workshops as part of the Australia Takeover on the 24th of November 2021.

The virtual event, which began with an overview of the Australian opportunity, brought together insights into what is happening in Australia and provided an opportunity for open discussion on how the UK and Australia can collaborate to build secure and responsible critical mineral supply chains.

[READ ON HERE](#)

[Australia Takeover Website Here](#)





Australian Approach to Critical Minerals

The Critical Minerals Association hosted the APPG Critical Minerals event, 'Strategic, Secure & Successful: The Australian Approach to Critical Minerals,' on Monday 15th March 2021 led by:

- Alexander Stafford MP, Vice-Chair, APPG Critical Minerals
- The Hon George Brandis QC, the Australian High Commissioner to the United Kingdom
- Her Excellency Vicki Treadell CMG, MVO, the British High Commissioner for Australia
- David Grabau, Senior Investment Specialist, Australian Trade and Investment Commission

HIGHLIGHTS & RECORDING HERE



STRATEGIC, SECURE & SUCCESSFUL: THE AUSTRALIAN APPROACH TO CRITICAL MINERALS



- Alexander Stafford MP, Vice Chair, APPG Critical Minerals
- The Hon George Brandis QC, the Australian High Commissioner to the United Kingdom
- Her Excellency Vicki Treadell CMG, MVO, the British High Commissioner to Australia
- David Grabau, Senior Investment Specialist, Australian Trade and Investment Commission

MON, 15 MAR @ 10AM GMT



The EU-UK Trade Deal & Critical Mineral Supply Chains Post Brexit

On Monday 25th January 2021, CMA hosted a webinar to discuss the effect of Brexit on critical minerals and implications on supply chains. The discussion featured insights from:

- Steve Double MP, Chair of the All-Party Parliamentary Group (APPG) for Critical Minerals
- Guy Winter, Partner at Fasken

Guy Winter provided a legal review on the EU-UK trade agreement, its impact on the UK Critical Minerals sector and the opportunities it provides to deliver the UK Government's Industrial Strategy & Green Industrial Revolution.

HIGHLIGHTS & RECORDING HERE



All Party Parliamentary Group for Critical Minerals



THE EU-UK TRADE DEAL & CRITICAL MINERAL SUPPLY CHAINS POST-BREXIT - DISCUSSION



- Steve Double MP, Chair of the All Party Parliamentary Group for Critical Minerals
- Guy Winter, Partner, Fasken

MON, 25 JAN @ 12 - 1PM GMT



Canada's Critical Minerals Approach

On the 26th May 2021, the Critical Minerals Association (UK) and the UK All-Party Parliamentary Group (APPG) for Critical Minerals were delighted to host an event on Canada's Critical Minerals Approach and welcome:

- Susan le Jeune d'Allegeershecque CMG, British High Commissioner to Canada
- Shawn Tupper, Associate Deputy Minister, Natural Resources Canada
- Jeff Labonté, Assistant Deputy Minister for Lands and Minerals, Natural Resources Canada
- Mark Smith, Mining Sector Manager, UK Government Department for International Trade

HIGHLIGHTS & RECORDING HERE



APPG CRITICAL MINERALS: CANADA'S CRITICAL MINERALS APPROACH

- Steve Double MP, Chair of the All-Party Parliamentary Group for Critical Minerals
- Susan le Jeune d'Allegeershecque CMG, British High Commissioner to Canada
- Shawn Tupper, Associate Deputy Minister, Natural Resources Canada
- Jeff Labonté, Assistant Deputy Minister for Lands and Minerals, Natural Resources Canada
- Alexander Stafford MP, Vice-Chair of the All-Party Parliamentary Group for Critical Minerals
- Mark Smith, Mining Sector Manager at Department for International Trade (DIT)



ESG: Track, Trace & Provenance

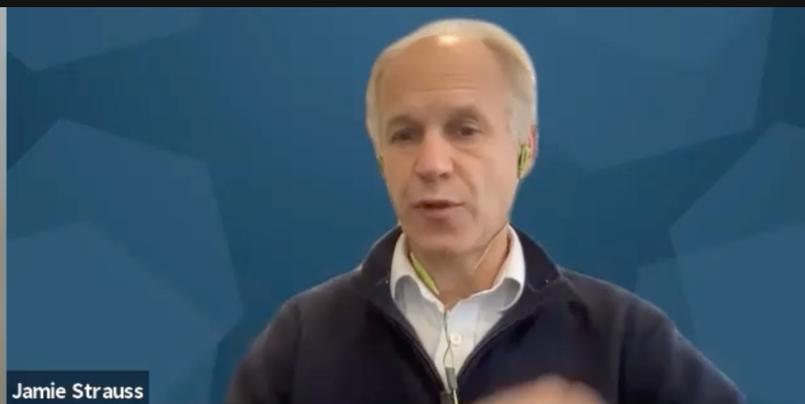
We were delighted to host a breakfast chat on 'ESG: Track, Trace & Provenance', with Douglas Johnson-Poensgen of Circular, Nathan Dubrich, Source Certain International, Jamie Strauss of Digbee.

The discussion centred around the importance of track, trace and provenance of critical minerals in ensuring that the benefits of ESG compliance are kept throughout the supply chain.

[READ ON HERE](#)

Interested in insights from Mining Magazine focusing on how ESG-friendly supply chains will 'open up' capital?

[READ ON HERE](#)



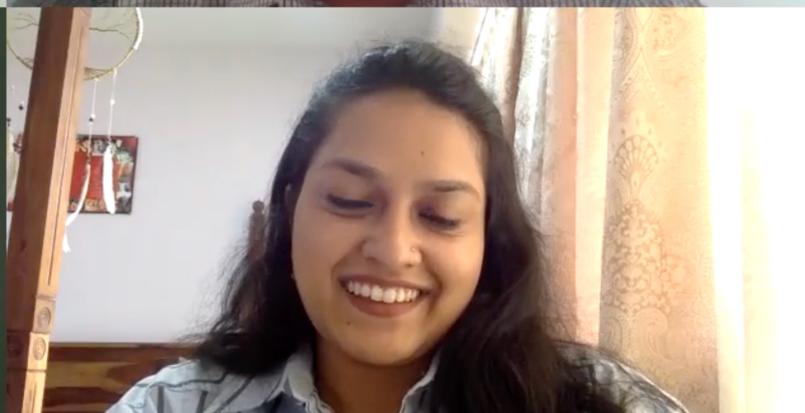


The UK's Need for a Midstream Industry

On the 29th of June 2021, the Critical Minerals Association held its latest breakfast chat webinar, 'The UK's Need for a Midstream Industry,' with the discussion focussing on how the UK can position itself to be viewed as more competitive regionally.

There are numerous benefits to operating a midstream industry. If you operate in the primary sector, you must sell your product to companies in the midstream, whereas in the midstream, you can benefit from the highest level of value creation. A midstream industry can also provide the latest technologies, research and development for the nation as a whole, and benefit from serving high end customers.

HIGHLIGHTS & RECORDING HERE





Defining Criticality - What Makes a Critical Mineral?

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On the 27th of July 2021, Jeff Townsend moderated CMA's breakfast chat, 'Defining Criticality - What Makes a Critical Mineral?' alongside Jack Bedder from Roskill, Andrew Clifton from Rolls Royce, and Allison Britt from Geoscience Australia.

The discussion focused on how a critical mineral can be defined and what determines the 'criticality' of a metal or mineral. The panellists considered different perspectives and approaches to defining criticality across the industry, including the upstream and downstream, academia and government.

HIGHLIGHTS HERE



DEFINING CRITICALITY - WHAT MAKES A CRITICAL MINERAL?

- Allison Britt, Director: Mineral Resources Advice and Promotion, Geoscience Australia
- Andrew Clifton, Sustainability Manager - Engineering & Design, Rolls Royce
- Jack Bedder, Director - Head of Research & Business Development, Roskill
- Jeff Townsend, Co-founder, Critical Minerals Association

TUES, 27 JULY @ 9AM BST





UK Government's Ten Point Plan for a Green Industrial Revolution & the Role of Critical Minerals

The Critical Minerals Association's Breakfast Chat, on the 9th of February 2021, discussed the UK Government's recently announced Ten Point Plan for a Green Industrial Revolution and the role of critical minerals in its delivery.

The UK Government's Ten Point Plan for a Green Industrial Revolution can be read [here](#).

The Ten Point Plan will mobilise £12 billion of government investment, and potentially 3 times as much from the private sector, to create and support up to 250,000 green jobs.

HIGHLIGHTS & [RECORDING HERE](#)





Universities & Critical Mineral Supply Chains

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The Critical Minerals Association hosted the 'Universities & Critical Mineral Supply Chains' breakfast chat on Monday 29th March 2021 discussing how universities are taking a lead in shaping critical mineral strategies. We were joined by:

- Dr Sarah Gordon, Imperial College London
- Professor Allan Walton, University of Birmingham
- Dr Gavin Mudd, RMIT University
- Professor Frances Wall, Camborne School of Mines, University of Exeter

HIGHLIGHTS & RECORDING HERE



UNIVERSITIES & CRITICAL MINERAL SUPPLY CHAINS

- Dr Sarah Gordon, Honorary Lecturer, Imperial College London
- Professor Frances Wall, Professor of Applied Mineralogy, Camborne School of Mines, University of Exeter
- Professor Allan Walton, Professor of Critical and Magnetic Materials, University of Birmingham
- Dr Gavin Mudd, Department of Environmental Engineering, RMIT University

MON, 29 MAR @ 9AM GMT





Critical Minerals Association at 17th International Rare Earths Conference

The Critical Minerals Association team was invited to attend the 17th International Rare Earths Conference in London hosted by Metal Events.

The conference talks covered industry insights, project pitches, future outlooks and the latest research including potential for REE extraction from fly ash.

Jeff Townsend was delighted to give an overview of the CMA and our work centred around bringing the industry and governments together to create secure and responsible supply chains.

It was fantastic to meet key international players in the upstream and midstream sectors alongside our members Roskill, Mkango, Pensana, E-tech Resources and Minviro.

**METAL
EVENTS
LIMITED**

A fresh approach to hosting mining
& metal events around the world





Q&A with Veera Johnson, Founder, Circular

Veera Johnson, Founder, Circular

Circular enables suppliers and buyers to follow raw materials through the production process.

Q: What is your vision for the future of mining and recycling in terms of ESG and traceability?

A: Circular has the vision and mission to solve the urgent, environmental & societal challenge which is at a tipping point; the need for transparent supply chains to reduce the impact of climate change. I believe that Circular's journey has only just started and that we have so much more to achieve globally.



[READ THE Q&A HERE](#)

Whilst we all know that transparency is a key driver for climate action, our vision would be that in the next two years more and more organisations that are involved in mining, manufacturing and recycling of materials embrace the need for transparency and, adopt solutions like Circular to support the energy transition away from fossil fuels and dynamically measure the impact they're having on the environment and society.



Critical Minerals News

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

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

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

Cobalt

- Global [23.12.21]

- A paper published in Metals has considered the recovery of cobalt from spent lithium-ion batteries as a method to meet the growing demand for the material from sectors such as transportation.
- <https://www.azom.com/news.aspx?newsID=57728>

- Africa

- DRC [21.12.21]

- Should the cobalt for EVs come from the Congo of the seafloor?
- <https://spectrum.ieee.org/seafloor-cobalt>

- DRC [17.12.21]

- Social consequences of green energy must be assessed in addition to environmental impacts, researchers say.
- <https://news.northwestern.edu/stories/2021/12/understanding-cobalts-human-cost/>

- Asia

- China [17.12.21]

- China's supply surplus of cobalt sulphate shrank to around 62 mt in metal content in November. However, the surplus may turn to a deficit of around 607 mt in metal content in December.
- <https://news.metal.com/newscontent/101697578/china's-supply-surplus-of-cobalt-sulphate-may-turn-to-deficit-on-reduced-output>

- South Korea: Cobalt Blue [15.12.21]

- South Korea is playing the key role in driving the market for critical 'green' minerals just as Japan did at the start of the iron ore boom decades ago that changed the mining industry forever.
- <https://www.proactiveinvestors.com.au/companies/news/969259/cobalt-blue-attends-landmark-talks-with-korean-president-to-discuss-ethical-supply-of-cobalt-969259.html>

Copper

- Asia

- China: Zijin [27.12.21]

- Zijin Mining said it had started production at its Qulong copper mine in Tibet, one of the largest in top metals consumer China, adding a new source of supply to the market for next year.
 - <https://www.reuters.com/markets/commodities/chinas-zijin-starts-production-giant-tibet-copper-mine-2021-12-27/>

- Europe

- Russia: Udokan Copper [26.12.21]

- Udokan Copper, one of the companies owned by Russian billionaire Alisher Usmanov's holding firm USM, announced that it has joined the UN Global Compact.
 - <https://www.mining.com/russias-largest-new-copper-deposit-to-be-developed-under-un-global-compact-guidelines/>

- Latin America

- Chile: Antofagasta [29.12.21]

- Chilean miner Antofagasta has agreed to supply copper concentrate to some Chinese smelters at treatment and refining charges of \$65 a tonne and 6.5 cents per lb next year, two sources with knowledge of the matter said.
 - <https://www.reuters.com/business/energy/chiles-antofagasta-agrees-2022-copper-charges-with-some-chinese-smelters-sources-2021-12-29/>

Graphite

- Global [20.12.21]

- According to Benchmark Mineral Intelligence, there will be a global graphite deficit starting in 2022, and demand from the battery sector is expected to rise 30% annually until 2030.
- <https://electrek.co/2021/12/20/graphite-will-be-in-deficit-from-2022-heres-what-ev-battery-makers-need-to-do-to-secure-the-critical-mineral/>

- Asia

- China [15.12.21]

- As they scour the globe for the lithium, nickel and cobalt resources needed to keep China on top in the electric vehicle (EV) stakes, Chinese battery and EV makers are fretting about the supply of another mineral closer to home - graphite.
- <https://www.reuters.com/business/autos-transportation/china-ev-battery-makers-grapple-with-graphite-squeeze-2021-12-15/>

- India: Tirupati Graphite [9.12.21]

- Tirupati consolidates its position as the green graphite producer, as Vatomina comes on stream.
- <https://www.proactiveinvestors.co.uk/companies/news/968762/tirupati-consolidates-its-position-as-the-green-graphite-producer-as-vatomina-comes-on-stream-968762.html>

- Oceania

- Australia: Syrah Resources [22.12.21]

- Syrah Resources said it had signed a four-year deal to supply graphite anode materials to electric carmaker Tesla from its plant in the U.S. state of Louisiana, sending the Australian company's shares soaring 32%.
- <https://www.reuters.com/markets/deals/australias-syrah-resources-soars-graphite-supply-deal-with-tesla-2021-12-22/>

Lithium

- Europe

- Germany: Vulcan Group [8.12.21]

- Automotive giant Volkswagen has closed a deal to source CO2-free lithium produced by the Vulcan Group in Germany's Upper Rhine Valley to supply its European battery cell factories, in an effort to reach climate neutrality and lessen its dependence on overseas suppliers such as Australia or Chile.
 - <https://www.rechargenews.com/energy-transition/enough-for-a-million-cars-volkswagen-to-source-zero-carbon-lithium-from-german-volcanic-region/2-1-1118472>

- Sweden: Northvolt [14.12.21]

- Swedish battery and cell manufacturer and Portuguese oil firm at 'Aurora' joint-venture could produce lithium hydroxide for enough batteries for 700,000 e-cars from 2026 on.
 - <https://www.rechargenews.com/energy-transition/once-in-lifetime-opportunity-northvolt-and-galp-plan-lithium-conversion-in-portugal/2-1-1123206>

- Latin America

- Argentina: Livent [13.12.21]

- German automaker BMW has signed a deal whereby Livent, a company that has invested \$US 640 million to extract lithium in the Argentine province of Catamarca, will become the brand's second-largest supplier of the mineral in 2022.
 - <https://en.mercopress.com/2021/12/13/bmw-signs-deal-to-buy-argentine-lithium>

- Argentina: Rio Tinto [22.12.21]

- Rio Tinto adds to lithium business with an \$825m Argentina deal.
 - <https://www.ft.com/content/bd1a1ae1-745e-4953-9f17-eab52ce7051c>

Manganese

- Africa

- Botswana: Giyani Metals [22.12.21]

- Giyani Metals Corp. has completed its initial exploration drilling campaign at the Otse manganese oxide prospect and updated exploration at the K.Hill Project.
 - <https://miningglobal.com/supply-chain-and-operations/giyani-updates-botswana-manganese-projects>

- Oceania

- Australia: Element 25 [13.12.21]

- Element 25 is poised to recommence manganese production at Butcherbird following processing plant modifications and repairs.
 - <https://www.proactiveinvestors.com.au/companies/news/968923/element-25-poised-to-recommence-manganese-production-at-butcherbird-following-processing-plant-modifications-and-repairs-968923.html>

Nickel

- Africa

- Tanzania: Kabanga [13.12.21]

- Kabanga Nickel is ready to put its 'money where its technology is in the pursuit of production from a highly prospective nickel-copper-cobalt asset in Tanzania, according to Keith Liddell, Executive Chairman.
 - <https://im-mining.com/2021/12/13/lifezone-hydromet-tech-blueprint-puts-kabanga-nickel-pole-refining-position/>

- Asia

- Vietnam: Blackstone Minerals [23.12.21]

- Advanced explorer Blackstone Minerals has announced a 73% boost to the global mineral resource at its Ta Khoa project in northern Vietnam to 485,000 tonnes of contained nickel.
 - <https://smallcaps.com.au/blackstone-minerals-announces-boost-global-resources-ta-khoa-nickel-project/>

- North America

- Canada: Li-Cycle [15.21]

- The Canadian battery recycler Li-Cycle has concluded a still non-binding memorandum of understanding with the South Korean chemical group LG Chem and its battery division LG Energy Solution for the supply of scrap from battery production and complete lithium-ion batteries for recycling as well as for the purchase of nickel.
 - <https://www.electrive.com/2021/12/15/li-cycle-and-lg-enter-into-recycling-and-nickel-agreement/>

Tin

- Europe

- UK: Cornish Metals [8.12.21]

- Mining company Cornish Metals has discovered “multiple zones” of high-grade copper and other precious metals at its United Downs project in Cornwall.
 - <https://www.business-live.co.uk/economic-development/test-drilling-historic-cornish-mine-22389761>

- Oceania

- Tasmania: Venture [16.12.21]

- Venture Minerals has ended the year with a bang after new drilling at its Mount Lindsay tin-tungsten project in Tasmania included a monster-sized 147m drill intersection going 1 per cent tin and 0.2 per cent tungsten.
 - <https://thewest.com.au/business/public-companies/venture-lands-monster-tin-hit-in-tasmania-c-4977426>

- South America

- Bolivia: Andean Precious Metals [14.12.21]

- Andean Precious Metals said it has launched a life-of-mine expansion study at the San Bartolome mine silver mine in Bolivia which will incorporate possible tin production.
 - <https://www.miningmagazine.com/simulation-optimisation/news/1423393/andean-precious-metals-looks-to-mine-tin>

Rare Earth Elements

- Asia

- China [30.12.21]

- The merger of three rare earth element producers in China — China Minmetals Rare Earth, Chinalco Rare Earth & Metals and China Southern Rare Earth Group — could affect global prices at a time when demand for REEs is rising due to their use in electric vehicles and other 'green energy' technology, some analysts say.
 - <https://www.mining.com/merger-of-chinese-rare-earth-producers-could-affect-prices-analysts-say/>

- Japan [22.12.21]

- The Japanese government decided to restrict access to the nation's rare earth resources to a roster of approved miners to protect offshore deposits within its exclusive economic zone.
 - <https://asia.nikkei.com/Politics/Japan-to-limit-rare-earth-mining-to-protect-offshore-deposits>

- Malaysia: Lynas Rare Earths [30.12.21]

- Lynas Rare Earths Ltd said it has got environmental approvals from Malaysian authorities to build a permanent disposal facility for water leached purification residue in the country.
 - <https://www.reuters.com/business/energy/australias-lynas-gets-regulator-nod-disposal-facility-malaysia-2021-12-30/>

- North America

- USA: USA Rare Earths [12.12.2021]

- USA Rare Earth announced that it expects to produce nearly half of the critical minerals listed in the US Geological Survey's revised list of raw materials deemed crucial for national security and the economy.
 - <https://www.mining.com/usa-rare-earth-to-produce-nearly-half-of-critical-minerals-in-usgs-updated-list/>



Improving Perceptions of Mining - 2021 Highlights

Perception of mining and mineral extraction is a significant challenge that affects the entire industry. Responsible mining today involves stakeholder engagement, environmental social governance requirements, increased gender diversity and technological advancement. But many people are unaware of how mining has been changing.

To tackle this huge challenge in shifting how people understand mining, the industry must collaborate to educate society and to regain their trust through a track record of adhering to best practices.

Critical minerals are the building blocks of our society, without extraction, green alternatives and technological advances are not possible.

To make the Green Transition a reality, we will need more miners, geologists, chemists, processors, environmentalists, ESG specialists, technology leaders and innovators, than ever before. But first, we need to inspire and educate young people on why mining and extraction are so crucial to society.

Our Perception of Mining Chairs, Ben Lepley, Lucy Crane and Becky Paisley, supported by our working group, have been working tirelessly all year to reach out and engage with important initiatives that are encouraging young people to engage in science. Read on for a variety of initiatives you can support.



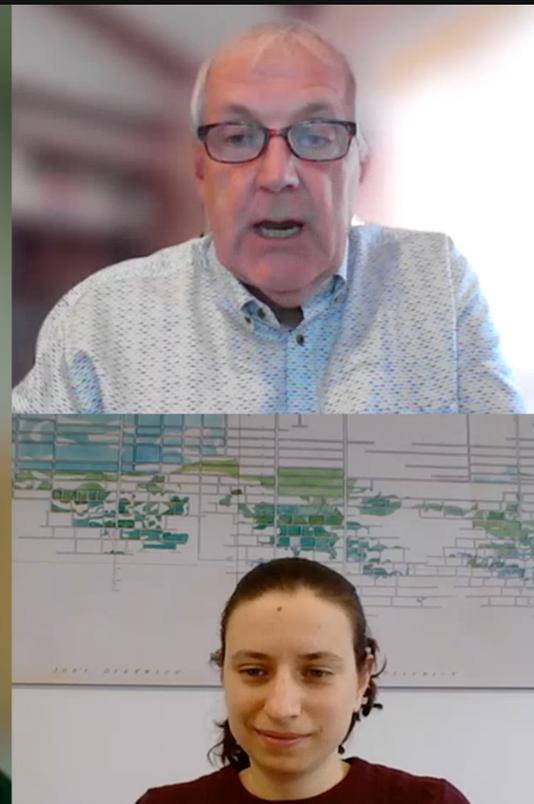
Responsible Mining is the Key to a Better Tomorrow



Inspiring the Next Generation of Earth Scientists

Chairs of CMA's public perception of mining group Dr Rebecca Paisley & Ben Lepley interviewed Professor Richard Herrington, Head of Earth Sciences Department, Natural History Museum (NHM).

Richard explains how mining is the solution to our climate crisis and stresses just how essential it is that young people realise that mining is crucial to building a better tomorrow. Metals and minerals underpin our infrastructure. They are in our phones, laptops, cars and are the building blocks of renewable energy technologies.



HIGHLIGHTS HERE



The Briefcase of Mineral Applications - Interview with Dr Miho Taka

Chairs of the CMA's Perception of Mining Group Lucy Crane & Ben Lepley interviewed Dr Miho Taka, Assistant Professor in Peacebuilding at the Coventry University Centre for Trust, Peace and Social Relations.

HIGHLIGHTS & RECORDING HERE



TRY OUT THE BRIEFCASE HERE



The Blair Project - STEM & Electric Vehicles

The Critical Minerals Association's Perception of Mining group Chairs Lucy Crane, Cornish Lithium and Ben Lepley, SRK Consulting invited Nile Henry, founder & CEO of The Blair Project (and self-confessed tech nerd) to chat about his role in raising awareness of electric vehicle technology and encouraging more young people from diverse backgrounds to get involved in STEM subjects.

READ ON HERE



'A lot of young people are passionate about climate change, but they need to know what career opportunities exist' - Nile Henry, The Blair Project



Social Mobility Foundation: Mining for a Green Future

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CMA took part in the Social Mobility Foundation's Biology and Chemistry Virtual Placement on 4th August 2021.

CMA founding members, Minviro and SRK Consulting introduced 69 Year 12 & S5 students to Geoscience.

Read on to discover the relationship between Geoscience / Biology/ Chemistry and how mining and minerals are part of the green energy transition.

HIGHLIGHTS HERE

"Mining for a green future completed changed my perspective on the importance of mining. We are so used to mining being demonised in the climate change campaign that we forget how necessary it is. The session also made me want to look into Geology." - Student Feedback

The Social Mobility Foundation logo is displayed on a dark blue rectangular background. The text "SOCIAL MOBILITY FOUNDATION" is written in white, uppercase letters. The letters "S", "M", and "F" are significantly larger than the other letters and are positioned at the start of their respective words. There are small horizontal lines above the "I" in "SOCIAL", above the "O" in "MOBILITY", and above the "U" in "FOUNDATION".

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MORE ON SOCIAL MOBILITY FOUNDATION HERE



CMA Interviews The Royal Society of Chemistry - Elements in Danger

The Critical Minerals Association's 'Perception of Mining Group' Chairs, Lucy Crane, Cornish Lithium & Ben Lepley, SRK Consulting did a brilliant interview with the Royal Society of Chemistry about their work on the circular economy and critical raw materials with:

- Dr Karen Stroobants, Science Policy Unit Lead
- Elisabeth Ratcliffe, News and Media Executive, leading on communications and thought leadership campaigns



HIGHLIGHTS & RECORDING HERE





Technology Metals for a Green Future - Camborne School of Mines

The Critical Minerals Association's 'Perception of Mining Group' Chairs, Lucy Crane, Cornish Lithium, & Ben Lepley, SRK Consulting, interviewed the creators and main contributors of Camborne School of Mines's: 'Technology Metals for a Green Future' Massive Open Online Course (MOOC).

HIGHLIGHTS & RECORDING HERE



FREE COURSE AVAILABLE HERE



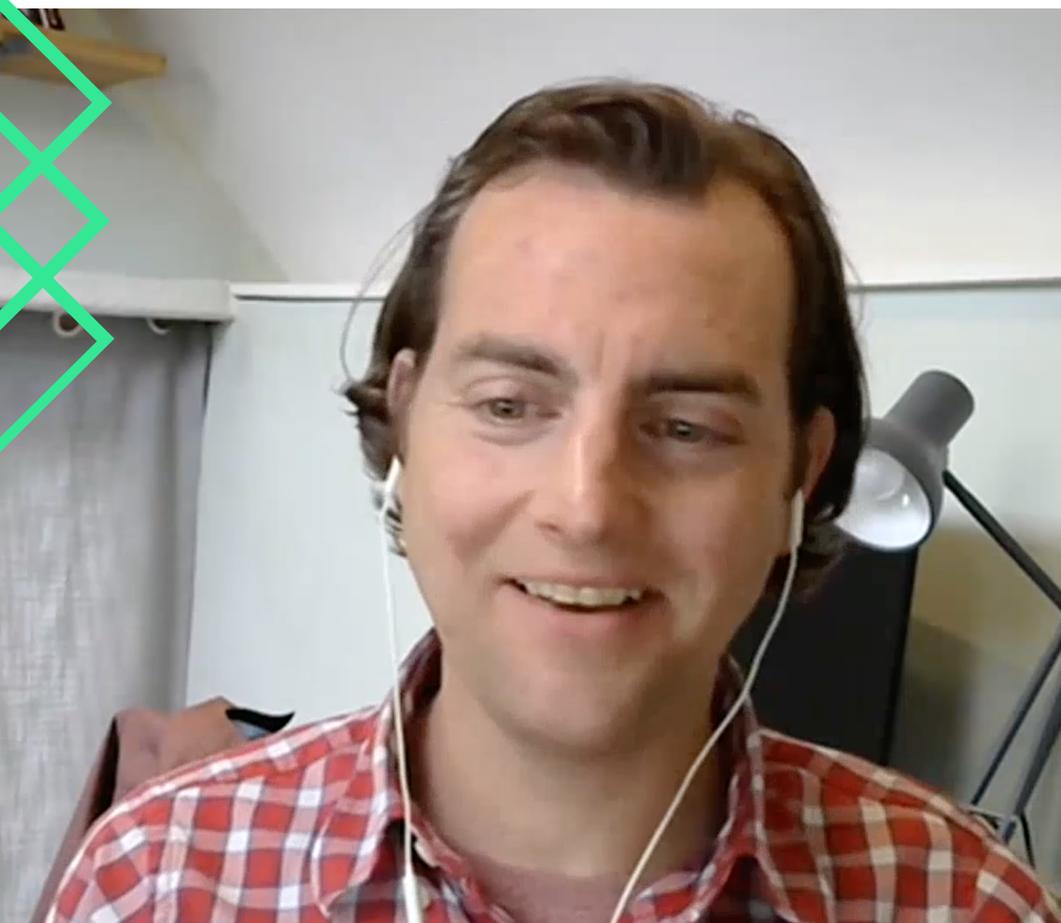
Interview with Oliver Heathman, Roskill

Co-chairs of the CMA's Perception of Mining Group Lucy Crane & Ben Lepley interviewed Oliver Heathman, Sustainability and Cost Analysis Manager at Roskill.

The interview examines the current demand context for critical raw materials and electric vehicle trends, how the industry is responding to the challenges in meeting this demand, and what this means for jobs in the critical resources industry.

HIGHLIGHTS & RECORDING HERE

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www.criticalmineral.org

Twitter: @CMA_Minerals

Linkedin: Critical Minerals Association

Contact: kirsty@criticalmineral.org

Company number 12419306