



CRITICAL MINERALS ASSOCIATION

OCTOBER 2020

APPG CRITICAL MINERALS EVENT - GLOBAL TAILINGS
CMA BREAKFAST CHAT: INTERNATIONAL CRITICAL
MINERALS
WELCOMING CMA MEMBERS - TECHMET & SATARLA
UPDATES FROM ROSKILL, MINVIRO, CORNISH LITHIUM,
CORNWALL RESOURCES
CMA INTERVIEW BARRY WILLS, MEI CONFERENCES
NEWS STORIES



October 2020

01

Welcome to our October Critical Minerals Association monthly newsletter & updates on the critical minerals space.

Read on for:

- Upcoming APPG Critical Minerals Event: "Global Industry Standard on Tailings Management"
- CMA Breakfast Chat: International Critical Mineral Supply Chains
- Welcoming CMA's newest members: Satarala & TechMet
- Roskill: IEA sets out ambitious EV requirements
- Cornish Lithium Crowdfunding Campaign
- Strategic Minerals: Update on Redmoor Project
- Minviro's New Website
- Interview with Dr Barry Wills, MEI Conferences
- News Stories

This month's newsletter has been put together by Camborne School of Mines MSc Exploration Geology graduate **Olimpia Pilch** - contact her on [LinkedIn!](#)

Kirsty & Jeff

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'CONTACT'**

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

*Want to learn more? Check out our website:
<https://www.criticalmineral.org/> & follow us on twitter
[@CMA_Minerals](https://twitter.com/CMA_Minerals)*



APPG Critical Minerals Event: 'Global Industry Standard on Tailings Management' - 9th Nov



The **APPG Critical Minerals** in association with the Critical Minerals Association is hosting its first **APPG Critical Minerals Virtual Event** in support of the recent launch of the 'Global Industry Standard on Tailings Management.'

The event will be on **Monday 9th November at 13:00 - 14:00 GMT** and will be moderated by the Bishop of Birmingham, David Urquhart, with an introduction from Steve Double MP, Chair of APPG Critical Minerals.



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TO ATTEND THE WEBINAR REGISTER HERE



APPG CRITICAL MINERALS VIRTUAL EVENT - GLOBAL TAILINGS REVIEW

Moderated by: Lord Bishop of Birmingham

Introduction by: Steve Double MP, Chair APPG Critical Minerals

Adam Matthews, Church of England Pensions Board
Aidan Davy, International Council on Mining & Metals
Antonia Mihaylova, Global Tailings Review
Lucas Brown, The Foreign, Commonwealth & Development Office

MON 9 NOVEMBER @ 13:00 -14:00 GMT



International Critical Mineral Supply Chains

03

On the 27th October, our 4th breakfast chat - 'International Critical Mineral Supply Chains' brought together an insightful discussion on the global capabilities for vertical integration of ethical & sustainable critical mineral supply chains with:

- Jack Bedder, Director at [Roskill](#)
- William Dawes, CEO at [Mkango Resources](#)
- Clovis Meath Baker CMG OBE, Former Director of Intelligence, [GCHQ](#) & Associate Fellow, [RUSI](#)

HIGHLIGHTS & RECORDING HERE



Roskill



**BREAKFAST CHAT-
INTERNATIONAL CRITICAL
MINERAL SUPPLY CHAINS**

**TUES 27 OCT
@9-10AM GMT**



*With Roskill, Mkango Resources & Former
Director of Intelligence, GCHQ*



Welcoming CMA's newest member: TechMet

The Critical Minerals Association is delighted to welcome our newest member – TechMet!

TechMet is a private company building world class projects that produce, process and re-cycle “technology metals” critical to EVs, renewable energy systems and energy storage. TechMet’s vision is to create a technology metals champion with strategic control over significant production of the key metals that will define and power the 21st century global economy.

They recently announced a ground-breaking \$25M investment by the US International Development Finance Corporation and featured in September 2020’s Economist briefing – ‘The changing geopolitics of energy America’s domination of oil and gas will not cow China’.

TECHMET



BRAZILIAN NICKEL



US VANADIUM





Welcoming CMA's newest member: Satarla

The Critical Minerals Association is delighted to welcome our newest member – **Satarla!**

Satarla is a global network of risk management experts who provide bespoke risk management training, consulting and research.

Mining is at Satarla's core. Founders Sarah, Tankiso and Laura all met whilst working for one of the worlds largest mining companies. They saw the benefit that truly integrated, enterprise-wide risk management can bring to an organisation that wants to be sustainable yet also provide a profit to its shareholders.

In May 2020, Satarla organised 'Responsible Raw Materials' – an impressive one-week online conference bringing together a range of speakers across the ESG space.

Welcome to the Group!





Roskill:

06

IEA sets out ambitious EV requirements

The **International Energy Agency (IEA)** released its flagship [World Energy Outlook publication](#), focussing on the impact of COVID-19 on the energy sector and the prospects for accelerated energy transitions.

Jack Bedder highlights, "the IEA pays considerable attention to what it would mean for the global energy sector to reach net-zero emissions by 2050".

The report explores a scenario called Net Zero Emissions by 2050 (NZE2050) and focusses on the key requirements for the next decade. The scale of emission reduction required over the next decade for NZE2050 is significant:

- Total CO2 emissions would need to fall by around 45% from 2010 levels by 2030,
- CO2 emissions from the power sector required to decline by around 60%.



[CLICK HERE TO READ ON](#)

Roskill

@ROSKILL_INFO



Cornish Lithium Exceeds Crowdfunding Target

07

Following Cornish Lithium's announcement of "globally significant" grades of lithium within geothermal waters, reported in September, the crowdfunding campaign exceeded its initial target of £1.5m hitting £3m within three hours. **A total of £5.2m was raised.**

Marketplace - "Lithium may fuel a mining revival in England's Cornwall".

Cornwall Live - "One lithium company drilling for the "21st Century gold rush" metal lithium in Cornwall has been forced to close down its fundraising campaign after three days because it raised too much."

"I am delighted to have the opportunity to re-evaluate the geological potential of Cornwall in light of the "Battery Revolution" that is going to transform all our lives over the coming decades. The presence of lithium in geothermal brines offers significant transformational potential for the Cornish economy. Using modern technology, we can also see the great potential that remains in Cornwall for other metals which are vital in today's society."

- Jeremy Wrathall, Founder & CEO of Cornish Lithium

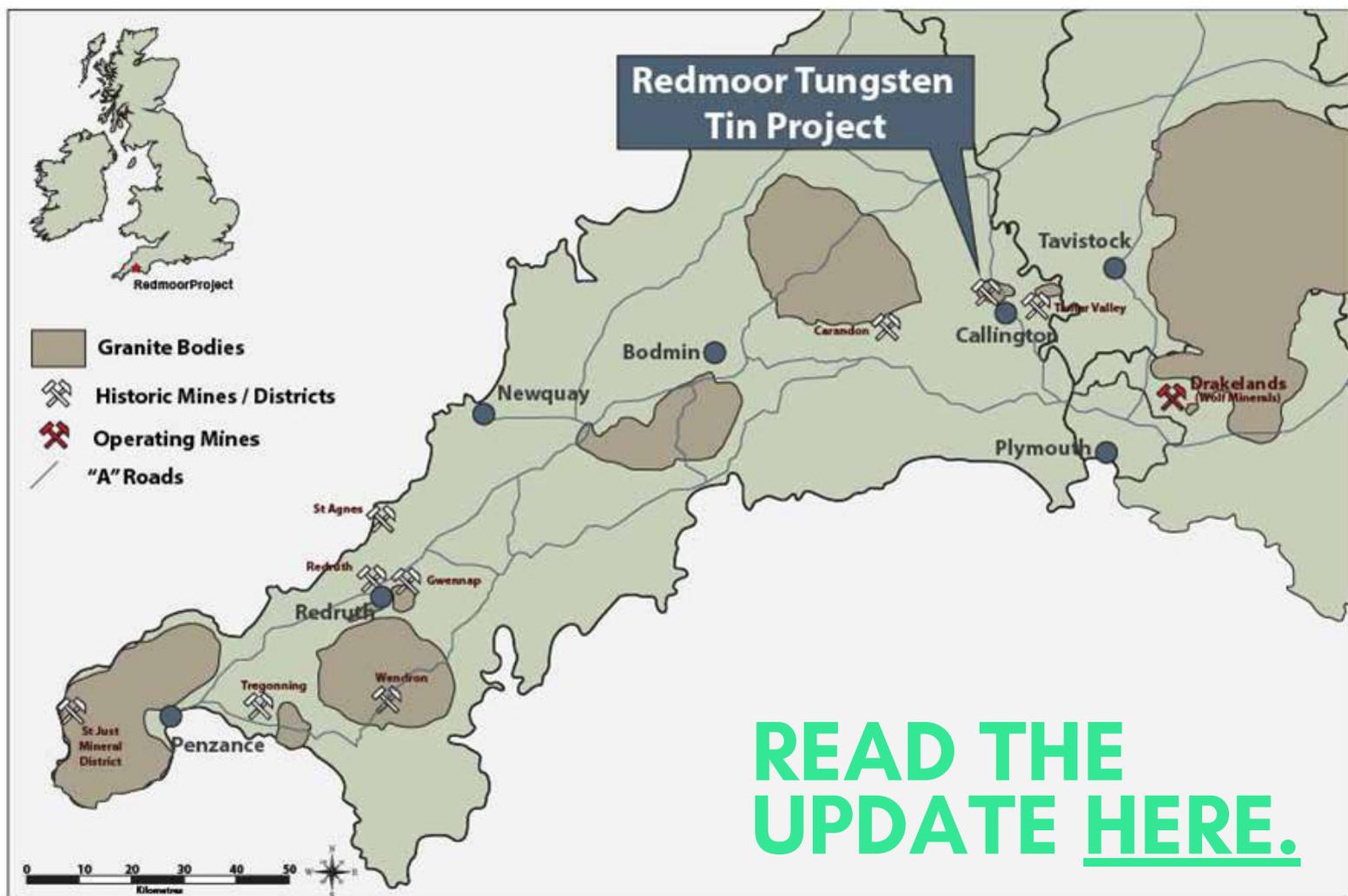


Positive Update on Redmoor Project

Strategic Minerals reported an **increase** in its estimated international rate of return to **29%**, up from 19%, with a net present value of \$128 million using consistent metal price assumptions.

"Wardell Armstrong's updated independent financial model and mining study clearly validate the resilience of the project to variations in metal price, as well as illustrating the improved economics associated with mining high grade feed early in the project life."

- Peter Wale, Executive Director





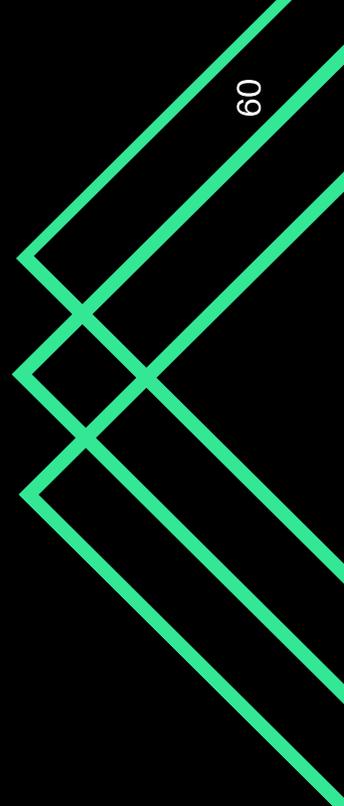
Minviro's New Website



MINVIRO

Minviro has a new website

Click here to explore:
www.minviro.com



Our Offering

The Minviro Life Cycle Assessment (LCA) is an approach to quantify the environmental impacts for raw material extraction, processing and refining. Minviro has experience with a number of technology metal projects, completing ISO-compliant LCA studies for rare earths elements, lithium, graphite, nickel, manganese, copper and cobalt projects. Minviro uses state-of-the-art approaches to quantify a range of impact categories including climate change, water use, land use, acidification, toxicity impacts. This data allows scientifically robust communication of environmental impacts to a range of stakeholders including local communities, governments, investors, OEMs and other consumers.



Quantifying and reducing environmental impacts for raw material projects

[Learn more about Minviro Consulting](#)

01

Quantify

Quantify impacts by carrying out a life cycle assessment. We can work with you to collect all the data for a LCA and compare the environmental performance of your project against a range of benchmarks in your industry.

02

Mitigate

Identify environmental 'hotspots' in your project. Minviro can provide insights into the most appropriate and effective impact mitigation to drive down a range of environmental impacts for your project.

03

Communicate

Share the ISO-compliant and trusted LCA results to external stakeholders, with offtakers, investors, local communities or downstream users highlighting your commitment to sustainability.



“There wouldn’t be a society as we know it without mining” - Dr Barry Wills

The Critical Minerals Association's 'Perception of Mining Working Group' Co-Chair, Ben Lepley, SRK Consulting interviewed Dr Barry Wills covering the following:

- How have you been involved in getting young people interested in minerals exploration/ processing/ engineering?
- How has the industry changed in terms of diversity over your 51-year career?
- What do critical minerals mean to you?
- What are the challenges and opportunities to bringing more young people into STEM subjects and mining careers?



**WATCH THE
INTERVIEW
HERE.**



Critical Mineral News

The following October news articles from Mining Weekly, Mining.com, Reuters, Roskill, Argus Media, and others, provides an overview of critical mineral mining for:

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

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

Cobalt

- Global (21.10.20)

- Cobalt, nickel price rally lifts EV Metal Index to 2020 high.
- <https://www.mining.com/cobalt-nickel-price-rally-lifts-ev-metal-index-to-2020-high/>

- Global (9.10.20)

- Chasm between copper, cobalt and nickel exploration success and future demand.
- <https://www.mining.com/chasm-between-copper-cobalt-and-nickel-exploration-success-and-future-demand/>

- North America

- Canada: First Cobalt (28.9.20)

- World Class Technology Investors Believe in Canadian Cobalt Exploration.
- <https://www.mining.com/sponsored-content/world-class-technology-investors-believe-in-canadian-cobalt-exploration/>

- South America

- Brazil: Jervois (29.9.20)

- Jervois to buy cobalt, nickel refinery in Brazil
- <https://www.mining.com/australias-jervois-to-buy-cobalt-nickel-refinery-in-brazil/>



Copper

- Global (28.10.20)
 - New copper composite to support wider EV adoption
 - <https://www.mining.com/new-copper-composite-material-to-support-wider-ev-adoption/>
- Global (21.10.20)
 - Despite price rise, copper at historic low against gold. Since the end of March, the price of the base metal has recovered, rising from \$4,900 per tonne to over \$6,600 per tonne by the end of September.
 - <https://www.mining.com/despite-price-rise-copper-at-historic-low-against-gold/>
- Global (21.10.20)
 - RANKED: Top 10 lowest cost copper mines according to the all-in sustaining cost (AISC) metric widely used in the mining industry since 2013 for its comprehensive and transparent look at an operation's costs.
 - <https://www.mining.com/featured-article/ranked-top-10-lowest-cost-copper-mines/>
- North America
 - Canada (22.10.20)
 - Kodiak Copper has released complete assay results for drillhole MPD-20-004 – after reporting partial assays in September – and new assays for drillhole MPD-20-002, which were completed at the Gate zone within its wholly owned MPD project in British Columbia.
 - <https://www.mining.com/kodiak-reports-long-copper-gold-intercepts-from-mpd-project-in-bc/>
- North & Latin America (20.10.20)
 - Copper snapshot: Eight companies with promising assets
 - <https://www.mining.com/copper-snapshot-eight-companies-with-promising-assets/>

Lithium

- Global (8.10.20)
 - Global lithium demand expected to double by 2024.
 - <https://www.mining.com/global-lithium-demand-expected-to-double-by-2024/>
- Global (22.10.20)
 - Lithium: Highlights from Roskill's Lithium Team client briefing
 - <https://roskill.com/news/lithium-highlights-from-roskills-lithium-team-client-briefing/>
- Global (9.10.20)
 - Roskill White Paper: Sustainability of energy and emissions for lithium production
 - <https://roskill.com/news/roskill-white-paper-sustainability-of-energy-and-emissions-for-lithium-production/>
- Latin America
 - Chile (9.10.20)
 - Chile has a calming message for car makers worried about lithium supplies
 - <https://www.mining.com/web/chile-has-a-calming-message-for-car-makers-worried-about-lithium-supplies/>
- Europe
 - UK: Cornish Lithium (19.10.20)
 - Lithium may fuel a mining revival in England's Cornwall
 - <https://www.marketplace.org/2020/10/19/lithium-may-fuel-a-mining-revival-in-englands-cornwall/>

Graphite

- Global (15.10.20)

- Showa Denko, world's largest producer of synthetic graphite electrode, announces merger of subsidiaries
- <https://roskill.com/news/graphite-showa-denko-announces-merger-of-subsidiaries/>

- North America

- Canada: Nouveau Monde (22.10.20)

- Natural graphite developer Nouveau Monde Graphite signed a collaboration agreement with Forge Nano for the use of the latter's proprietary coating technology based on Atomic Layer Deposition (ALD). It aims to use this technology to produce high-value coated spherical graphite.
- <https://roskill.com/news/graphite-nouveau-monde-graphite-signs-agreement-on-advanced-coatings-for-battery-anode-material/>

- Asia

- China (22.10.20)

- Graphite, magnesium compounds: New winter environmental protection controls in China
- <https://roskill.com/news/graphite-magnesium-compounds-new-winter-environmental-protection-controls-in-china/>

- Europe

- Switzerland: Imerys (2.10.20)

- Imerys to expand battery-grade synthetic graphite output at its Bodio plant.
- <https://roskill.com/news/graphite-imerys-to-expand-battery-grade-synthetic-graphite-output/>

Nickel

- Global (11.10.10)

- A report by IDTechEx states concerns around the environmentally-conscious supply of the metal are also on the rise as demand for nickel is on the rise.
- <https://www.mining.com/as-demand-for-nickel-grows-so-do-environmental-concerns-report/>

- Asia

- Indonesia sees China firms lead 'commitment' for \$35bn nickel investments(23.10.20)
 - Indonesia expects investment in nickel processing and petrochemicals, double to \$35 billion by 2033, led by investors from China seeking to expand their businesses in Southeast's biggest economy.
 - <https://www.mining.com/web/indonesia-sees-china-firms-lead-commitment-for-35bn-nickel-investments/>

- North America

- Canada: Glencore in nickel supply talks with EV battery makers (16.10.20)
 - Global miner and commodities trader Glencore is close to securing nickel supply deals with automakers and battery producers amid a looming squeeze in the market.
 - <https://www.mining.com/web/tesla-in-talks-with-bhp-over-nickel-supply-pact/>

- Oceania

- Australia: BHP in talks with Tesla (6.10.20)
 - Tesla in talks with BHP over nickel supply pact as nickel demand is forecast with anticipated Tesla expansion.
 - <https://www.mining.com/web/tesla-in-talks-with-bhp-over-nickel-supply-pact/>

Tin

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- Global (21.10.20)
 - Tin use contracted by -5.4% in 2019 with a further decline of -5.9% forecast for 2020, according to the sixteenth annual survey carried out by the International Tin Association.
 - <https://www.mining.com/tin-use-sees-mixed-results-amidst-covid-19-pandemic/>

Tungsten

- Europe
 - UK: Strategic Minerals (8.10.20)
 - Strategic Minerals provides positive update on Redmoor project
 - <https://roskill.com/news/tungsten-tin-strategic-minerals-provides-positive-update-on-redmoor-project/>

Manganese

- North America
 - USA: Tesla (8.10.20)
 - Tesla plans increased use of manganese within cathode chemistry mix for its mid-range EV fleet
 - <https://roskill.com/news/manganese-tesla-plans-increased-use-of-manganese-within-cathode-chemistry-mix-for-its-mid-range-ev-fleet/>
- Global (7.10.20)
 - Tentative recovery of the global manganese industry.
 - <https://www.argusmedia.com/en/news/2148028-manganese-demand-turning-a-corner?backToResults=true&selectedMarket=Metals>

Rare Earth Elements

- Global (11.10.20)
 - Scientists tap into new rare earths deposits. neodymium and dysprosium.
 - <https://www.mining.com/scientists-find-new-way-to-tap-into-rare-earth-deposits/>
- Asia
 - China: Hitachi Metals (8.10.20)
 - Hitachi Ltd. to sell Hitachi Metals including NdFeB magnet patent and production facilities.
 - <https://roskill.com/news/rare-earths-hitachi-ltd-to-sell-hitachi-metals-including-ndfeb-magnet-patent-and-production-facilities/>
- North America
 - Canada: Appia Energy (22.10.20)
 - Appia Energy advances its rare earths project in Saskatchewan.
 - <https://www.mining.com/sponsored-content/appia-energy-advances-critical-rare-earths-project-in-saskatchewan/>
 - USA (1.10.20)
 - Trump issues new order to spur rare earths mining, declaring a national emergency in the mining industry.
 - <https://www.mining.com/trump-issues-new-order-to-spur-rare-earths-mining/>
- Europe
 - UK: Pensana (28.9.20)
 - Pensana Rare Earths has appointed Wood Group to study the potential for the company to set up a rare earth oxide production facility in Britain.
 - <https://www.mining.com/web/pensana-rare-earths-looks-into-uk-processing-facility/>



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Roskill

FASKEN



DIAMOND FIELDS
RESOURCES



TECHMET





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