

Summer 2026

Chairman's Chat



Source: IOM3

It was originally planned to be a more modest affair, however the Summer 2026 newsletter has grown into more of a bumper edition. This is no bad thing; it simply reflects that much has happened in recent weeks. Welcome once again to our readers, we hope you will find something of interest.

Just when we thought our work was done on the MTG 2025 conference '*Advances in Mining Technology and Mineral Supply*', back it came with a refusal to be forgotten. The reason being, one of our speakers has been awarded the Thornton Medal in the [IOM3 Awards & Prizes 2026](#). This award is for the best presentation by a speaker at a conference, event or webinar organised by IOM3 or an IOM3 Technical Group. Quite an accolade when one considers the number of eligible events across the broad spectrum of IOM3. Congratulations to Mark de Geus of Intellisense for his presentation 'An artificially intelligent mining value chain: Real-time decision

optimisation in theory and practice'. The written, co-authored paper can be found in the conference proceedings, available as an [e-book version](#).

Staying with the IOM3 Awards, the MTG leadership team is pleased that once again the Mann Redmayne Medal A has been awarded in 2026. The medal, along with a certificate and £450 is awarded for the best paper published in the IOM3 journal *Mining Technology: Transactions of the Institutions of Mining and Metallurgy*. Congratulations to Dr Nadia Bustos et al. for their paper 'Analysis of induced stress during construction and production stages of draw bells in block caving mines'.

In the Spring newsletter, the MTG outlined its involvement in the inaugural IOM3 Mining Masterclass for school teachers. The event took place in June, hosted by Cornish Lithium and organised by the IOM3 Education and Outreach team, and was a great success. Read on for further details within an extended version of our regular feature *Mining Education Matters*, which includes a short review of the global education scene and news of IOM3 mining courses. Please also look up the significant contributions from MTG leadership team members Andrew Fulton and Norman Jackson to the mentoring feature in *Materials World* for July/August. I would also recommend the main article on the subject by Mark Burnett, it is a well-crafted and compelling piece, and I am sure it will resonate likewise with many members.

As you will see inside, momentum is building for the MTG webinar series on the mining lifecycle. The first session took place in June, with the next one scheduled for October. Similarly, the 5th International Conference on Shaft Design and Construction, supported by the MTG, has attracted over 60 abstracts for papers to be presented in London next year. In this and the next edition of the newsletter, we are running a 2-part 'Technical Review of Artisanal & Small-Scale Mining in Africa', by guest author Thagip Habiballah.

Other news about the Mining Remediation Authority includes an update on a major ground movement and resident evacuation incident at Coalsnaughton in Scotland, and the launch of its mine plans online viewer platform. Last but not least, Ground Engineering Subgroup news, PERC updates and the onset of a new IOM3 affiliated local society mining events calendar complete this edition of the MTG newsletter.

Finally, a reminder that you are welcome to get in touch with the MTG leadership team at: mtg@iom3.org.

Stop Press

Coalsnaughton ground movement due to historic mining

On 27 July 2026 the UK government [announced](#) its support for residents displaced by mining-related ground movement at a housing estate in Coalsnaughton, Clackmannanshire, Scotland (see page 4).

Wales rejects final opencast coal mine expansion proposal

Plans to extend the Glan Lash Mine in Carmarthenshire by mining company Bryn Bach Coal Ltd have been rejected (see page 4).

BHP and BOTON partner to advance sustainable mining conveyor technology

BHP and Wuxi BOTON Technology have signed a global framework agreement to develop sustainable and automated conveyor systems for mining operations (see page 4).

Upcoming events

IOM3 Mining Technology Group (MTG) webinar series

New for 2026, the MTG webinar series about the full mining life cycle is underway, with at least four sessions scheduled from June 2026 through February 2027. Each webinar will feature two presentations, showcasing current technologies, best practices, and emerging trends. Further details on page 9.

Daw Mill Colliery Lecture - 1 September 2026 (CWMS)

A Coventry & Warwickshire Materials Society (CWMS) lecture hosted by the Warwickshire Area of IMechE and presented by Wyn Griffith, the President of Western Institute of Mining and Minerals. The talk will take a brief look at the history of Daw Mill and the modern equipment which was purchased, along with the modern mining methods employed to enable Daw Mill Colliery to become the one of the most productive mines in Europe prior to its sad closure due to an underground fire in 2013. See link for online and in person attendance: [CWMS Lecture](#).

IOM3 Annual General Meeting 2026

Tuesday 8 September 2026 at 297 Euston Road, London, NW1 3AD and online, 12.00pm start. See [web site](#) for the agenda and free registration.

Mining & Critical Minerals Europe Conference & Exhibition – 20-21 October 2026

Taking place in the Hilton London Metropole, the exhibition aims to highlight critical mineral processing, mining investment trends, exploration opportunities, precious, base & bulk metals, financing models, ESG, sustainability goals, commodities forecasts and technological innovations that play a crucial role in shaping the new era of mining & energy industry. See link to register attendance: [MCMECE 2026](#)

IOM3 contacts

A question often asked is where to find a list of IOM3 management/staff with contact details. [It's here!](#)

Editorial team

Colin Comberbach, Darron Dixon & Martha Needs

IOM3 contact - David Arthur (david.arthur@iom3.org)

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News and views

MTG Leadership

Coalsnaughton ground movement due to mining

As reported by [IOM3](#) and other outlets, residents of 97 homes at The Glen housing estate, Coalsnaughton, Clackmannanshire, Scotland, evacuated for their safety during May 2026, will now be supported by the UK government*. This follows an eight-week investigation by the Mining Remediation Authority (MRA) confirmed the cause of recent ground movement to be linked to historic coal mining.



Source: UK GOV under OGL licence v3.0

In its [press release](#) dated 27 July the UK government also announced that the MRA will take over management of the incident response – with the priority to ensure the safety and wellbeing of every resident. Furthermore, any costs incurred by the Scottish Government and Clackmannanshire Council for the incident response will be reimbursed, where they fall under the Mining Remediation Authority's remit.

The latest MRA investigation included camera scans, underground surveys, geophysical investigations, weekly LiDAR surveys, borehole drilling and monitoring instrumentation.

All evacuated residents will now be protected by the law - with the government meeting the costs of making homes safe. Where properties have suffered significant damage, alternative support could be made available to residents. For homes with the most serious damage, residents may be offered an option for the government to purchase their property at its full market value prior to the incident, as well as additional support to relocate if required.

The MRA reports to have contacted all affected households to put immediate support in place and explain the next steps, depending on their individual circumstances. This includes working closely with Clackmannanshire Council and local partners to meet the residents' immediate needs, such as temporary accommodation. Each household will be allocated a named Community Support Account Manager to guide them through this process and help them access the available support. Clackmannanshire Council is providing [regular updates](#) to residents, with several meetings having been held for the purpose.

For technical information about the case, original ground investigation and grouting reports, plus new investigation and monitoring data, visit the [dedicated MRA web page](#). Some of the latest findings, analysis and conclusions are contained in the MRA's [Coalsnaughton Incident Investigation Summary](#) report. This came after the MRA mobilised specialists to investigate the incident, including ground, groundwater, geophysical, monitoring and laboratory assessments. It states: the evidence reviewed indicates that the most probable primary cause is subsidence linked to historic coal mining beneath the site; several worked or potentially worked coal seams have been identified, and previous ground treatment appears to have

provided only partial mitigation; other possible causes, including shallow infrastructure failure, shallow landsliding, near-surface bedrock slip and wider geological movement, have been investigated but are considered less likely based on the available data; further investigation over the next few weeks is needed to confirm the detailed mechanism, understand any secondary effects and help determine the next steps.

**Under the Coal Mining Subsidence Act 1991, the UK Government has a duty to remedy coal mining subsidence damage, including funding repairs to make homes safe again or, where appropriate, providing alternative solutions.*



Inclined core drilling (generic example)

Source: Colin Comberbach

Wales rejects final opencast coal mine expansion proposal



Source: Google Earth

- Carmarthenshire council refused plans to produce 85,000 tonnes of coal at the closed Glan Lash mine near Llandybie, owned by Bryn Bach Coal Ltd. It is the second time an extension plan has been rejected since the opencast mine closed in 2019. The mine opened in 2012 on a licence permitting the extraction of 92,500 tonnes of coal over four-and-a-half years.
- Carmarthenshire council said the application had been refused as it was contrary to the policies set out within Carmarthenshire County Council's Local Development Plan. The [decision notice](#) stated that the proposals would conflict with a number of policies on biodiversity and the environment.
- In its application, the company stated that it had developed 'a niche non-thermal market for premium quality anthracite', with considerable demand for its coal from industries ranging from water filtration and battery production to green steelmaking. Bryn Bach Coal Ltd has six months to appeal the decision.

BHP and BOTON partner to advance sustainable mining conveyor technology

BHP has entered into a global framework agreement with Wuxi BOTON Technology to accelerate the development of innovative and sustainable conveyor systems for the mining industry. In addition to supplying conveyor products, the partnership will now include joint technology development, life cycle services, sustainability initiatives, and enhanced global support.

A key focus of the collaboration will be the advancement of automation in mining conveyor operations. Building on previous work at Escondida Mine, the companies plan to explore intelligent technologies such as AI-based belt alignment systems, digital X-ray scanning, longitudinal rip detection, and robotic inspection tools.

The two companies also intend to address environmental concerns by considering the introduction of a Supply Chain Partner Programme. This includes initiatives to monitor and reduce carbon emissions across the mining supply chain by tracking emissions from raw material sourcing and manufacturing through to operations and conveyor belt recycling.

The companies will also investigate new recycling methods to improve circularity and reduce environmental impacts.



Escondida Mine, Chile

Source: [BHP](#)

Mining Education Matters

Jasneet Kaur (IOM3 Education & Outreach)

Success of the inaugural IOM3 Mining Masterclass

Fifteen secondary school teachers from across the UK travelled to Cornwall to attend the first two-day IOM3 Mining Masterclass on 26 & 27 June 2026. The aim was to give teachers a full picture of mining that challenged their perceptions and would allow them to pass their understanding on to the young people they teach. The teachers came from different subject backgrounds which ranged from science, design and technology to geology. The course was hosted by Cornish Lithium which gave the teachers a chance to explore the company's lithium mining operations and learn all about the work being carried out to support the UK's future supply of critical minerals. The two days were packed with presentations, practical activities and a site tour. One of the highlights of the course was the hands-on activities. In an activity created by IOM3, the teachers handled real ore samples and explored the UK's critical minerals and how they can incorporate this important topic in their classrooms. Minerals Matter and Cornish Lithium also carried out two very exciting practicals with the teachers focused on the mining industry.



Mining Masterclass lecture

Source: IOM3



Mining Masterclass practical exercise

Source: IOM3

Camborne School of Mines staff attended both days to give lectures and explain various educational pathways into the mining industry. The class also heard from various professionals in the mining sector during a careers session. This included a presentation, Q&A discussions and advice from members of the MTG leadership team who sat on the event steering group and were in attendance. It was important for us to highlight the diverse range of opportunities in the mining industry. We were also delighted that IOM3 President Christine Blackmore was able to join the Masterclass over the two days.

The feedback from the attendees was very positive with teachers leaving the course with increased confidence, practical classroom resources and a better understanding of the importance of mining plays in supporting modern technologies and the transition to a more sustainable future.

'Excellent speakers/educators. So engaging and informative.'

Finally, many thanks to our generous sponsors and partners for making this Mining Masterclass possible:



Mining Association of the UK (MAUK)



Midland Institute of Mining Engineers



Univ. of Exeter, Camborne School of Mines



Minerals Matter



ABMEC



Worshipful Company of Armourers & Brasiers



BAM UK & Ireland



Imerys



Western Institute of Mining & Minerals



MinSouth

Colin Comberbach (MTG Chair)

Mentoring in mining

MTG members and associates played a prominent role in the latest feature on CPD and mentoring in the July/August 2026 edition of IOM3's main magazine, Materials World. '[Passing the baton](#)', where mentors and mentees across different disciplines shared their experiences, included insights from interviews held with mining industry stalwarts and MTG leadership team colleagues Andrew Fulton (CEO of Anglesey Mining and Immediate Past President of the Mining Association of the UK) and Norman W Jackson (Consultant Mining Engineer). Promoted for publication by members of the MTG leadership team was a main feature article '[Forging future leaders](#)' by Mark Burnett, (Principal Geologist at AMC Consultants and Past President of MinSouth) - an excellent piece on why mentoring matters in minerals and mining, and definitely not to be missed!

IOM3 Training Academy - Introduction to Mining course

Following the success of earlier sessions, this one-day course is back to provide a comprehensive overview of the mining industry, covering fundamental concepts, processes and terminology. It is designed for participants seeking to understand the basics of the mining industry, including all stages of the mining life cycle from exploration to post-closure.

After the course participants will be able to:

- Define key mining terms and concepts
- Explain the stages of the mining lifecycle
- Identify the main types of mining and processing methods
- Describe the basic processes of mineral exploration and extraction
- Recognise the importance of environmental and social considerations in mining
- Discuss the global impact of mining on the economy and society



Source: IOM3

Virtual course via Zoom - 9:30 to 16:30 on 14 October 2026.

Full details of content, registration and prices, including various discounts, for the course can be found via the links on the relevant [IOM3 training page](#).

IOM3 grants to support knowledge exchange

The IOM3 grants programme has been designed to support students and early career researchers in attending international conferences, participating in field trips, or engaging with exchange programmes for overseas learning/research. It is open to IOM3 Undergraduate and Postgraduate student and Associate members (for a minimum of 12 months as on 1 September 2026) working within the materials, minerals and mining sector in academia or industry.

Each year a maximum of two large research grants of up to £3,000.00 and twenty travel awards (of up to £500 each) will be presented. The grants programme is funded by the IOM3 Education & Outreach Trust, a registered charity created to develop interest, recognise excellence and support professional development across all areas of the materials cycle.

Further details are available on the [Grants to Support Knowledge Exchange](#) web page.

Whilst not specific to only mining interests, MTG members are encouraged to share the news that such educational support is available.

Darron Dixon (University of Leeds)

The global mining education scene

Mining remains one of the world's most important industries, supplying the raw materials needed for construction, manufacturing, energy generation, transportation, and emerging technologies. As mining evolves to meet the demands of sustainability, digitalisation, and energy transition, mining education is undergoing significant transformation across the globe.

Traditionally, mining education has focused on technical disciplines such as geology, mining engineering, mineral processing, metallurgy, and geotechnical engineering. Leading institutions in mining countries including Australia, Canada, the United States, South Africa, Chile, and the United Kingdom have long been recognised for producing highly skilled graduates who support the industry's workforce requirements. Universities such as the University of Queensland, Curtin University, Colorado School of Mines, McGill University, the Camborne School of Mines (CSM) and the University of the Witwatersrand continue to play key roles in shaping mining professionals and conducting industry-relevant research.

In recent years, the sector has faced challenges related to declining enrolments in mining-specific programmes. Many students perceive mining as a traditional industry with uncertain long-term prospects, despite growing demand for critical minerals such as lithium, copper, nickel, cobalt, and rare earth elements. This demand, driven by renewable energy systems, electric vehicles, and advanced technologies, has renewed interest in mining careers and highlighted the need for a new generation of qualified professionals.



Source: CSM

A notable trend in global mining education is the increasing emphasis on interdisciplinary learning. Modern mining engineers require knowledge beyond technical mining methods. Programmes now commonly include subjects such as environmental management, sustainability, community engagement, occupational health and safety, data analytics, automation, artificial intelligence, and project management. The goal is to prepare graduates to operate in a complex environment where social responsibility and technological innovation are as important as operational efficiency.

Digital transformation is also reshaping educational approaches. Universities are incorporating virtual reality training, remote operations simulations, drone technology, and digital mine planning software into their curricula. These tools allow students to gain practical experience while reflecting the technologies increasingly used in modern mining operations. Industry collaboration has become another defining characteristic of mining education worldwide. Mining companies frequently partner with universities to fund research, provide internships, support scholarships, and help develop curricula aligned with industry needs. Such partnerships ensure graduates possess relevant skills and improve employment outcomes.

Looking ahead, the global mining education landscape will be shaped by the dual pressures of sustainability and technological advancement. Educational institutions must continue to adapt their programmes to address climate goals, responsible resource development, and workforce digitalisation. By doing so, they will help create a new generation of mining professionals capable of supplying the minerals essential for economic development while meeting society's expectations for environmental and social performance.

MTG webinar series 2026

Rob Thomas

The MTG has commenced its new webinar series based on the mining lifecycle. Latest news follows.

Webinar 1 - Discovery & Orebody Knowledge:

Our inaugural webinar took place on **25 June 2026**. We heard from:

Fraser Gardiner MAIG MIMMM (CEO, Aberdeen Minerals)

- 'Digital workflows in mineral exploration decision-making in North East Scotland'

James McFarlane BSc, MSc, MCSM, CGeol FGS, FNEIMME, CEng QMR FIMMM, RPGeo MAIG, FIQ
(Managing Partner & Principal Consultant, R2C Mining Consultancy)

- 'How not to stuff up your mineral deposit'

Catch up on demand on the [webinar page](#).

Webinar 2- Operating Mines - Design & Construction:

This next webinar is due to take place on **8 October 2026**, with two more great speakers:

Mark Scrutton BEng, ARSM, CEng, FIMMM (Group Mine Planning Director, Imerys)

- 'Strategic Mine Planning - The link from Resource Geology to Mining Operations'

Jack Gleadowe (Cornish Metals)

- Title TBC (based on construction and commissioning new plant at South Crofty Mine)

Check for updates and registration on the [webinar page](#).

Webinar 3 - Operating Mines: Optimisation & Performance:

Scope: Full Operations → Processing → Digital Transformation

- Mining and processing methods (open pit, underground, comminution, metallurgy).
- Automation, digital twins, IoT, and operational efficiency.
- Integration of electrification and renewable energy in operations.
- Tailings

Webinar 4 - Closure & the Future of Mining:

Scope: Closure → Post-Mining Land Use → Future Trends

- Technical closure planning (backfilling, stabilisation, water management).
- Repurposing sites: renewables, pumped hydro, biodiversity, heritage.
- Circular economy, critical minerals, and what the mine of 2050 could look like.

Provisional programme (subject to change)

Each webinar to run for an hour with two speakers and time for questions:

- | | |
|------------------------------|-----------------------------|
| • Webinar 1 - 25 June 2026 | • Webinar 3 - November 2026 |
| • Webinar 2 - 8 October 2026 | • Webinar 4 - February 2027 |

Technical Review of Artisanal & Small-Scale Mining in Africa

Thagip T. Habiballah, CEng, MIMMM, FIMechE - RIDA Group

Introduction

Artisanal and Small-Scale Mining (ASM) has transitioned from a peripheral, poverty-driven activity into a foundational driver of Africa's rural economies and critical mineral supply chains. Operating across gold, diamonds, copper, cobalt, and 3T minerals (tin, tantalum, tungsten), ASM directly employs over 45 million people globally^[1], with the majority in Sub-Saharan Africa, and indirectly supports millions more. Driven by historic high gold prices and the global energy transition's hunger for critical minerals, the sector is rapidly expanding. However, this boom has intensified profound environmental degradation, structural geological hazards, and complex economic dualities. This technical review evaluates the contemporary mechanics of ASM, details its ecological and geological footprints, unpacks its macroeconomic impacts, and critiques evolving state-led formalization frameworks across the continent. This is part 1 with a focus on technical and operational aspects of ASM. Part 2, on ESG and strategic outlook, will follow in the next newsletter.

1.0 Technical and operational practices

ASM relies heavily on labour-intensive methods, utilizing basic mechanical principles to exploit deposits that are often economically non-viable for large-scale corporate mining. However, as global mineral demand has surged, the technology has evolved from purely manual tools to a hybrid of rudimentary mechanization and complex chemical processing.

1.1 Extraction techniques and mechanical shaft mining

The choice of extraction technique depends entirely on whether the target mineral (primarily gold, cobalt, or gemstones) is hosted in alluvial (surface/riverbed) or hard-rock (subterranean) deposits.

1.1.1. Hard-rock subterranean mining (shaft sinking)

When minerals are locked in deep geological veins, miners sink vertical shafts, which can range from 10 to over 50 metres deep.

- **The Mechanism:** Excavation is driven by manual labour using picks, chisels, and heavy sledgehammers. To break through resilient host rock (like quartz reefs), miners resort to thermal shock—building intense wood fires against the rock face overnight and throwing cold water on it to crack the ore—or using illicit, improvised explosives.
- **Haulage and Ventilation:** Once the vein is reached, horizontal tunnels (drives) are excavated blindly along the strike of the mineralization. Ore is packed into sacks and hauled to the surface using manual, wooden windlass systems (man-powered cranks using braided ropes). Air is forced into deeper shafts using basic surface compressors connected to flexible plastic tubing.

1.1.2. Alluvial and eluvial open-cast mining

This technique targets unconsolidated gravels in riverbanks, active riverbeds, or ancient floodplains.

- **The Mechanism:** Miners clear overburden to reach the mineral-bearing gravel layer. In highly manual operations, this is done with shovels. In semi-mechanized operations, miners deploy high-pressure water hoses powered by small diesel generators to wash down entire hillsides or riverbanks into a muddy slurry.

1.2. Processing and beneficiation technology

Once the raw ore is brought to the surface, it must undergo liberation (crushing) and concentration to separate the valuable minerals from the worthless gangue (waste rock).

[1] Rachel Perks, A new era of renewal in artisanal mining, World bank: <https://www.worldbank.org/en/news/opinion/2025/02/14/a-new-era-of-renewal-in-artisanal-mining>

1.2.1 Comminution (crushing and milling)

To free microscopic or fine-grained minerals from quartz or country rock, the ore must be reduced to a fine powder.

- **Primary Crushing:** Hand-held sledgehammers are used to break boulders into gravel-sized pieces.
- **Secondary Milling:** The gravel is fed into ball mills or modified agricultural hammer mills (often called crushers). These are locally fabricated, diesel-driven rotating drums containing heavy steel balls or swinging metal hammers that pulverize the rock into a fine slurry or dry dust.

1.2.2. Gravity separation (concentration)

Because gold and critical minerals like tantalum or tin are significantly denser than quartz and silicate waste rock, gravity separation is the primary physical mechanism used to concentrate the ore.

- **Sluicing:** The pulverized ore slurry is poured over a sloped wooden or metal trough called a sluice box. The bottom of the sluice is lined with riffles (trapping bars) and rough textiles, such as outdoor carpets, heavy blankets, or specialized miner's moss. As the slurry flows downward, the lighter waste material is washed away, while the high-density mineral particles sink and become trapped.
- **Panning:** The trapped concentrate from the carpets is washed into a wide, shallow conical pan. The miner uses a rhythmic, circular swirling motion underwater. The centrifugal force and differential settling velocity cause the lighter sands to spill over the lip, leaving a concentrated 'head' of heavy minerals at the bottom.

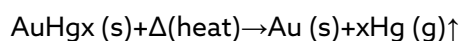
1.2.3. Chemical extraction and amalgamation technology

In Artisanal and Small-Scale Gold Mining (ASGM), physical gravity separation can only capture coarse gold. To extract fine, liberated gold particles, miners rely on chemical processing, predominantly using mercury, though cyanidation is rapidly rising in semi-mechanized hubs.

Mercury (Hg) is used because it readily wets and dissolves gold (Au), forming a heavy, solid alloy called an amalgam at ambient temperatures.

1. **Amalgamation:** Miners add liquid elemental mercury directly to the concentrated heavy sands, often kneading it by hand or placing it inside the milling drums. The chemical affinity allows the mercury to selectively bind with the gold:

$$\text{Au (s)} + x\text{Hg (l)} \rightarrow \text{AuHg}_x \text{ (amalgam)}$$
2. **Filtration:** The excess liquid mercury is squeezed out through a porous fabric (like a piece of cloth or a fine shirt), leaving behind a silver-coloured, dough-like ball of solid gold-mercury amalgam.
3. **Burning/Retorting:** The amalgam ball is placed in an open pan or metal shovel and heated directly with a propane blowtorch or charcoal fire. Because mercury has a relatively low boiling point (357°C) compared to gold (2,865°C), the heat volatilizes the mercury into a toxic gas, leaving behind a porous, yellowish mass of 'sponge gold':



1.2.4. The shift to vat cyanidation

In advanced artisanal hubs (such as parts of Sudan, Tanzania, and Ghana), miners have graduated from mercury to basic vat cyanidation.

- **Technology:** They construct cheap, brick-lined or plastic-lined vats on-site. The tailings from initial sluicing - which still contain significant amounts of fine gold - are soaked in a weak solution of sodium cyanide (NaCN).

Mechanism: The solution is aerated, causing the gold to dissolve into a liquid form (pregnant solution). The gold is then recovered either by adding zinc dust (cementation) or by absorbing it onto activated carbon columns, which are subsequently burned or chemically stripped to yield highly pure gold. This technology represents a significant leap in chemical sophistication and gold recovery efficiency (up to 65%-80%, compared to mercury's 30%-40%).

A quiet revolution in open access

Keith Nicholls

Introduction

Some weeks ago an email alerted me to a significant change that I still find hard to believe. The Mining Remediation Authority (MRA) web viewer suddenly included a tick box opening for 'Mine Plans'. There had been rumours this was coming, but when it did come it was born without fanfare, it just appeared, seemingly pretending it had always been there...

Mine plans online

The MRA's archive is of course vast (120,000 plus documents). In addition to their statutory 'Abandonment' plans, which followed the 1872 Coal Mines Regulation Act, they hold many other documents sourced from leases, agreements and working plans. The records are not limited to coal mine workings either, with extensive records of 'Other Minerals' held in 'OM' folders.

All of this is now available for public consumption via an easy-to-use digital interface, built with the cooperation of the British Geological Survey. As long as you can find your site on a map, you can navigate via a series of folders and sub-folders to your drawing of interest with its own unique Catalogue Number. Joyfully, in this digital age, the grid system is based on the old Ordnance Survey County Series Quarter Sheets, so each graticule square on the map is 400 yards x 400 yards. Click on your square and a listing of folders appears within which the individual drawings sit.

The web page itself can be found here: [Mining Remediation Authority Map Viewer](#).

The MRA has also published a useful guidance document for those not familiar with mine plan interpretation: [Understanding Mine Plans](#).

Discussion

Digging a little deeper, this does raise some issues for those of us who prepare reports based on historical 'desk study' type information. How, for example, does the availability of this information sit with the requirements of the CDM regulations? In particular to what extent is the free availability of this information pertinent to a Client who is required to 'provide building information to every designer and contractor working on the project'. Similarly, as a designer required to 'provide sufficient information', where does this sufficiency test fall in an area impacted by legacy mining?

It is also intriguing to consider the role of those providing low-cost budget 'Coal Mining Reports' and the question of negligence. With the easy availability of this extensive archive material is it now the case that not reviewing all the drawings that impinge on a development site could be considered negligent?

All in all this is a huge step forward for those of us who work in this space and the MRA must be congratulated.



Source: Mining Remediation Authority Map Viewer

5th International Conference on Shaft Design & Construction (SDC2027)

Alan Auld

Following the recent successes of the International Symposium on Ground Freezing (2023) and Advances in Mining Technology & Mineral Supply (2025), the IOM3 Mining Technology Group (MTG) will once again figure in the delivery of an international conference. [SDC2027](#) is the fifth in a series of landmark conferences spanning over six decades:

- 1959 – *Shaft Sinking and Tunnelling*, London (Institution of Mining Engineers)
- 1989 – *Shaft Engineering*, Harrogate (Institution of Mining and Metallurgy)
- 2012 – *3rd International Conference on Shaft Design and Construction*, London (IOM3)
- 2019 – *4th International Conference*, Toronto (Canadian Institute of Mining, Metallurgy and Petroleum – CIM)

In May 2027, the series will return to London, once again organised by IOM3, in collaboration with CIM. The latest edition will continue to provide a unique platform for exchanging ideas, sharing project case histories, and advancing technical knowledge in both civil engineering and mining shaft construction. MTG leadership team member Dr Alan Auld is the leading light and Chairman of SDC2027, supported on its organising committee by colleagues from the MTG and Ground Engineering Subgroup, together with a cohort of international experts in the sector.

Venue & dates

11–13 May 2027 at One Whitehall Place, London SW1A 2HE.

Who should attend?

Professionals involved in the design, planning, construction, operation, rehabilitation and closure of shafts in both mining and civil engineering contexts. Whether you're an engineer, project manager, consultant, contractor, academic, or supplier, SDC2027 offers valuable insights and networking opportunities.

Call for papers

The call for technical papers received a healthy response, with 65 abstracts having been accepted by the organising committee. All authors have been notified and issued with the Authors Guidelines.

Registration

The launch for registration and conference programme will take place from 1 October 2026 once IOM3 has updated its new system as part of a significant digital transformation project.

Sponsors & exhibitors

Don't miss out, select from a range of [sponsorship and exhibition](#) packages available to join the growing list of Gold, Silver, Dinner and other Sponsors and Co-Supporters.

Key dates

- 30 November 2026 | Final paper submission deadline

Ground Engineering Subgroup (GES) activities

Emily Wood

The Ground Engineering Subgroup (GES) has continued to deliver content for the mining and ground engineering community through its recent webinar programme. This spring, GES hosted 'Applying Ground Models in the Design and Construction of Infrastructure Projects', bringing together industry and academic experts to explore how robust ground models support improved decision-making, risk management and design optimisation across major infrastructure and underground construction projects. More recently, the subgroup delivered 'Digital Technology, InSAR & AI Used in Integrated Monitoring for Mine Sites & Landscape Scale Projects', showcasing innovative approaches to geotechnical monitoring and demonstrating how digital technologies, remote sensing and artificial intelligence are helping the industry move from reactive monitoring towards proactive risk management.

Together, these events reflect GES's commitment to knowledge sharing, technical excellence and fostering collaboration across the mining, geotechnical and wider ground engineering sector. Both webinars are now available on demand through the IOM3 website for members who wish to catch up or revisit the presentations.

On-demand webinars:

- Applying Ground Models in the Design and Construction of Infrastructure Projects: <https://www.iom3.org/resource/applying-ground-models-in-the-design-and-construction-of-infrastructure-projects.html>
- Digital Technology, InSAR & AI Used in Integrated Monitoring for Mine Sites & Landscape Scale Projects: <https://www.iom3.org/resource/digital-technology-insar-ai-used-in-integrated-monitoring-for-mine-sites-landscape-scale-projects.html>

GES is preparing further international webinars focused on ground engineering and geotechnical innovation, while continuing to support initiatives that promote professional development and industry competency. Recent activity has included support for the Register of Ground Engineering Professionals (RoGEP), including promotion of the newly launched Progressive Route to Specialist and Advisor registration pathways, alongside ongoing engagement with Ground Forum competency discussions across the sector. Find out more about the new RoGEP registration routes: [RoGEP Progressive Route](#).

All these activities reflect our commitment in GES for knowledge sharing, professional recognition, and building a more connected ground engineering community. If you want to find out more or would like to contribute to a GES event, webinar or article please contact Emily Wood.

Contacts:

If you wish to hear more or get involved, please contact:

- | | |
|-----------------------------------|--|
| • David Waring (GES Chair) | david.waring@uk.bp.com |
| • Iain McKechnie (GES Vice-Chair) | iain.mckechnie@bam.com |
| • Emily Wood (GES Secretary) | emily.wood@bam.com |

PERC News

Andy Birtles

There are several exciting developments and plans occurring in PERC that have been initiated since the previous edition of this newsletter was published! These include:

- PERC AGM
- New look website
- Formal valuation code
- Events

PERC AGM

The PERC AGM was held in Dublin Eire (with hosts being the Institute of Geologists of Ireland) on 4th and 5th June 2026. The 4th June was a one-day training event on the topic of 'Critical Raw Material Resource Classification and Reporting using UNFC and CRIRSCO'. This course was well attended and is pertinent as the Critical Raw Materials Act references UNFC, and the 'correlation' between UNFC and the CRIRSCO approach of estimating Mineral Resources was explained in detail.

The AGM was held on 5th June, with good representation in person by the Participating Organisations. Fiona Cessford (who also presented ESG/ SLO aspects) and Andy Birtles (who presented the IOM3 report and the changes to the PERC Standard website) represented IOM3. Liz de Klerk attended 'virtually'.

The Chairman (Antonio Maldonado) indicated the following:

- Strong collaboration with CRIRSCO (Ed Sides is the current Chairperson, and Mark Burnett is a representative)
- Active participation in INTRAW (<https://intraw.eu/>) activities
- Limited engagement with ERMA (<https://erma.eu/>) and EIT Raw Materials (<https://eitrawmaterials.eu/>)
- Better engagement required with regulators and stakeholders

The Participating Organisations presented their reports. It is no surprise that the IOM3 and Geological Society of London (GSL) have significant membership, and the number of persons in the IOM3 with QMR accreditation is currently 126, as well as active collaborative groups for PERC and for QMR accreditation. It was suggested that this type of approach/ accreditation could be considered for other Participating Organisations with large diversified membership.

New look website

Following a review of the website by co-opted members, PERC is pleased to present the 'new look' version. This has resulted in the PERC Reporting Standard 2021 having its own page ("PERC Standard") and other relevant documentation being included under 'PERC Library'. This currently includes the following:

- Summary Guide
- Fact Sheets
- Evaluation Report Template
- An Integrated Approach
- Glossary
- PERC Definitions
- Competent Person's Report (CPR)
- List of RPOs
- Previous versions (of the PERC Standard)

'User Resources' and 'News' have links to many PERC related available documents and previous events, and 'Training' indicates the courses and events that are currently planned. Any Participating Organisations and IOM3 members who think that training and events could benefit from inclusion here should contact the Communications Sub-committee to determine if this can be accommodated.

Mineral Valuation

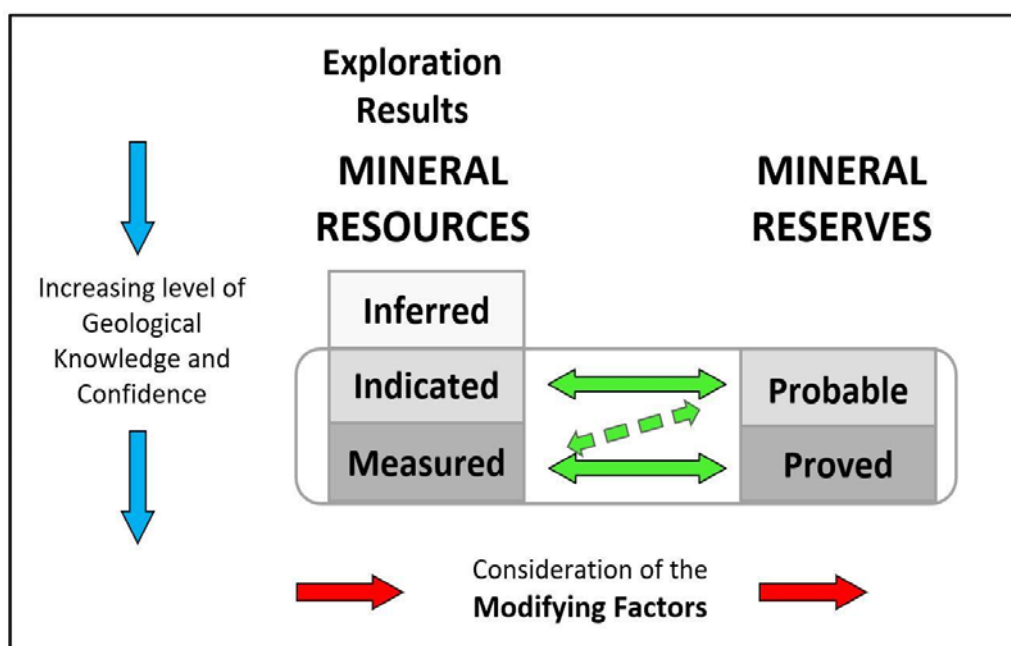
This is an exciting new development to bring PERC into line with the template developed by the International Mineral Valuation Committee, and to offer a 'European' approach in line with SAMVAL, CIMVal and VALMIN, as well as the other recognised approaches to the valuation of mineral projects and operations. A draft has been developed and is currently undergoing internal review. It is considered that the revised version of this document will be presented for external review towards the end of 2026.

Events

Other events that may be of interest are presented below:

24 June to 30 July: Online See <https://percstandard.org/training/> for details and the dates and times for each of the eight modules that were presented by PERC-GSL. Other events can also be found here for the benefit of all members of the Participating Organisations.

Any Participating Organisations and IOM3 members who think that training and events could benefit from inclusion should contact the [Communications Sub-committee](#) to determine if this can be accommodated.



PERC Standard Figure 1

Source: PERC

Affiliated Local Societies' news and events

MTG Leadership

The following events have taken place or are currently planned for 2026. Additional information relating to Affiliated Local Societies can also be accessed from the [IOM3 website](#). Members can also sign up to updates on forthcoming ALS events via their MyIOM3 account under Edit profile\My preferences. Unless otherwise shown, each society lecture programme for 2026/27 is to be confirmed in due course.

Please check with the relevant society for venue and timing details prior to attendance.

CorIE

Meetings are generally held at the Chapel Lecture Theatre, Penryn Campus, commencing at 6:00 pm. More information on the IOM3 website or via email to secretary@thecornishinstituteofengineers.com.

MIMinE

Meetings are generally held on the second Thursday of the month at Knottingley or Mansfield Mines Rescue Stations (MRSs), with video conference facilities for those who cannot attend in person at the MRSs at Rhondda and Fife, usually commencing at 4:00pm.

Additional information: www.themime.org.uk/events/.

10 October 2026 AGM and Member's Dinner - Mount Pleasant Hotel, Doncaster

MinSouth

Meetings are generally held on the second Thursday of the month at various venues, usually commencing at 6:00 pm. Registration is normally required.

Additional information: minsouth.org.uk/.

17 September 2026 British Tunnelling Society Lecture: National Grid Grain to Tilbury Tunnel and Vertical Shaft Sinking Machine Speaker (Organisation) Speakers from Ferrovia BEMO JV & National Grid – The Institution of Civil Engineers 1 Great George Street, Westminster.

6-7 October 2026 British Tunnelling Society Exhibition & Lecture – QE II Broad Sanctuary, Westminster.

MIS

Meetings are generally held on the second Wednesday of the month, commencing at 6:00 pm.

Additional information can be accessed on the [IOM3 website](#).

NEIMME

Meetings are generally held on the second Thursday of the month at Neville Hall in Newcastle upon Tyne, with video conference facilities available for those who cannot attend, commencing at 6:00 pm.

Additional information can be accessed on the [IOM3 website](#) and at mininginstitute.org.uk/.

WIMM

Meetings are generally held on the first Monday of the month at the William Smith Building, Keele University, usually commencing at 7:00 pm. The meetings/ lectures can also be attended using the Zoom application.

Additional information can be accessed from the [IOM3 website](#) or by email to the WIMM Secretary (honsec.wimm@gmail.com).