



IQM

INSTITUTE OF QUARRYING MALAYSIA

Newsletter

FOR MEMBERS CIRCULATION ONLY

Jul - Dec 2024 KDN NO: PP8487/06/2013(032604)

MESSAGE FROM THE EDITOR

IQM continues to pursue its main charter of providing professional training to the quarrying fraternity. Year 2023/2024 had been a busy year for IQM. All our existing activities and courses have been running in full scale and participation had been very encouraging and we hope to continue with the same trend for the next half of 2024.

A couple of existing courses had been revamped to meet the current demand of the industry, namely:

1. Professional Drone Pilot Certification for the Mineral Industry - It involves a lot of practical hands-on training and it has been rescheduled to 4 days of intensive drone application-based training designed for the mining & quarrying industry
2. OSH Coordinator Certification for the Mineral Industry - Under Occupational Safety and Health Act 2022, Section 29A, an employer with five or more employees at his place of work needs to appoint an employee as an occupational safety and health coordinator. This means every mining and quarry operator needs to send their personnel to be trained as OSH coordinator. With the above requirements, IQM has revamped and improved the previous OSH course. The improved course is tailor made for the mining and quarry industry to meet the requirement of OSH Act 2022, Mineral Development Act and State Quarry Rules. This will be a 5 days course with 3 days for OSH Coordinator module and 2 days for mining and quarrying safety module with an assessment after each module.

New courses being formulated this year are :

1. Professional ESG Certification - This 2 1/2 days course will equip participants with practical knowledge in ESG concept and its potential implementation in the industry, ability to describe and adopt the ESG concepts, to also understand the significance of greenhouse gas (GHG) inventory and recognize the potential benefits of effective GHG management, including cost savings, brand reputation and market competitiveness.
2. Effluent Sampling & Analysis - This 2 day course will require lab testing and IQM will be working with USM Penang to hold the course at their premise using their lab facilities. We are currently working out the cost of renting their premise and usage of their facilities. We hope to organise the course by early December 2024.

Our Mega Event for the year, IQM Conex 2024 Quarry Conference and Exhibition, is just around the corner. The event will be held at the Palm Garden Hotel, IOI Resort City, Putrajaya from 22-23 October 2024. This year's theme will showcase the importance of 'Smart Quarries: AI & Top Trending Technologies (SQ-AT 2024)'. Do mark your calendar, and we look forward to seeing everybody from the industry at this mega event.

Not forgetting the Membership, IQM wishes to remind members to renew their membership for year 2024 especially all QMC & QMPC holders who wish to maintain their certification.

INTERNATIONAL AFFILIATIONS:



The Institute of Quarrying
United Kingdom



The Institute of Quarrying
Australia



The Institute of Quarrying
Southern Africa



The Institute of Quarrying
New Zealand



The Institute of Quarrying
Malaysia



The Institute of Quarrying
Hong Kong



2024 IQM COURSES AND ACTIVITIES

JANUARY

16 - 18 January
Legislation Course for
Quarrying 2024 (IQM)

**IQM
NEWSLETTER**

30 - 31 January
Blast Monitoring
Course 1/2024 (IQM)

FEBRUARY

19 - 24 February
Training Course for
Shot-Firers 1/2024
(IQM)

CNY HOLIDAYS

MARCH

4 - 9 March
Training Course for
Shot-Firers 2/2024
(Kuching)

27 March
Shot-Firers Exam

PUASA MONTH

**IQM CONEX 2024
ANNOUNCEMENT**

APRIL

**QUARRY
DIRECTORY 2024
(out for sale)**

23 - 25 April
Crushing & Screening
Course 1/2024
(KK, Sabah)

**HARI RAYA
HOLIDAYS**

MAY

14 - 15 May
Blast Monitoring Course
2/2024 (FYS, Penang)

28 - 30 May
Drilling Course 1/2024
(IQM)

JUNE

4 - 7 June
Professional Drone
Pilot Certification
(IQM)

19 - 21 June
Crushing & Screening
Course 2/2024 (IQM)

29 June
22nd AGM / Technical Talk
(IQM/Four Points by
Sheraton)

JULY

1 - 5 July
Environmental
Management Course
1/2024 (Kuching)

15 - 20 July
Training Course for
Shot-Firers 3/2024 (IQM)

25 July
Shot-Firers Exam

29 Jul - 2 Aug
OSH Coordinator
Certification for Mineral
Industry 1/2024 (IQM)

AUGUST

5 - 9 August
Environmental
Management Course
2/2024 (KK, Sabah)

13 - 15 August
Quarry Planning &
Design (IQM)

27 - 28 August
Quarry Economics
(IQM)

SEPTEMBER

9 - 13 September
Environmental
Management Course
3/2024 (IQM)

23 - 27 September
OSH Coordinator
Certification for Mineral
Industry 2/2024
(Kuching)

OCTOBER

30 Sept - 5 October
Training Course for
Shot-Firers 4/2024
(IQM)

21 - 23 October
IQM Conex 2024
(Palm Garden Hotel,
IOI Resort)

NOVEMBER

7 November
Shot-Firers Exam

18 - 20 November
Professional ESG
Certification
(IQM)

DEEPAVALI HOLIDAYS

26 - 28 November
Structural Geology &
Streographic Projection
(FYS, Penang)

DECEMBER

3 - 4 December
Effluent Sampling &
Analysis
(USM Penang)

**CHRISTMAS/
NEW YEAR
HOLIDAYS**



ANNUAL SUBSCRIPTION FOR 2024

Please be informed that your Membership Subscription Fee for year 2024 is due for payment. Payment can be made by crossed cheque / bank draft / Online Transfer to :

INSTITUTE OF QUARRYING MALAYSIA BHD

Maybank 014187208342

(Kindly fax / email bank transaction advice)

Payment should reach us not later than 31st March 2024. If you have any queries or need any clarification on your membership status kindly contact Madam Nirmala Devi at Tel : 03-80624194 / Email : nirmala@iqm.com.my.

The following subscription rates apply for 2024

Fellow (FIQ)	:	RM250.00
Member (MIQ)	:	RM200.00
Technical Member (TMIQ)	:	RM190.00
Associate	:	RM180.00
Student	:	RM 25.00



I _____ Membership No : _____

enclose my crossed cheque/bank draft/money order no. _____

for RM _____ being Membership Fee for year _____ payable to

INSTITUTE OF QUARRYING MALAYSIA BHD.

E-mail : _____ Handphone No : _____

Membership Payment Scheme

To encourage members to retain their membership on a long term basis,
IQM is offering a new membership scheme :

***Membership fee paid in advance for three (3) years,
entitles member to one (1) year free membership (3+1).***

This will benefit not only the member but also reduce the administration cost.
IQM hopes more members will accept this beneficial scheme.

TO ALL RECIPIENTS OF QMC & QMPC

CONTINUING PROFESSIONAL DEVELOPMENT

The Institute is here to recognise and promote the professionalism of people working within the quarrying industry. Professionalism is created through a combination of work experience and qualifications. Continuing Professional Development (CPD) is the process of continual improvement and personal development that documents your career.

We believe that undertaking CPD is a way of ensuring that the qualifications that you have earned are kept up to date.

With effect from 2023, all QMC & QMPC holders have a mandatory 20 hours/year of CPD required, to maintain your certification and should be an active member of IQM. Attached is the CPD Record Form with examples of activities that qualify for CPD hours.

The QMC & QMPC will now have an expiration date. All certificates issued before 2021 will not be recognized. You will be required to renew your certs by completing the relevant forms. The Certificates have a validity date of 3 years (renewable every 3 years). We encourage all recipients of the QMC and QMPC to submit their renewal with the summary of CPD Record Form for this year. A renewal fee of RM40.00 will be charged for each certification and you will receive a new certificate with an IC size card.

If you are not yet a member of IQM, you can download the membership form from our website www.igq.com.my, complete the form and submit together with payment.

For further enquires on the above, kindly contact Madam Nirmala Devi at :

Tel : 03-80624194 / 5, Fax : 03-80618258, email : nirmala@igq.com.my

QMC / QMPC RENEWAL FORM

I _____ Membership No : _____

wish to renew my QMC / QMPC for year _____

Old Certificate No. : _____

Enclose is my renewal fee of **RM40.00** transferred online to

Institute of Quarrying Malaysia Bhd - Maybank 014187208342

Email : _____

Handphone No : _____

SUMMARY OF CONTINUING PROFESSIONAL DEVELOPMENT (CPD) RECORD

Name :

Membership No: Year:

CPD Requirements: 20 hours per year

	Category	Date	CPD Activity / Topic CPD Provider	Allowable hours	Total hours
1	Related Training Activities			No Limit	
2	Informal Learning • On job learning			Maximum 10 hours per year	
3	Conference and Technical Talk			No Limit	
4	Presentation and Papers			Maximum 15 hours per year	
5	Services in Related Activities			Maximum 15 hours per year	
6	Informal Learning • Private study			Maximum 5 hours per year	
			TOTAL		

Sign:

Date:



IQM CONEX 2024

HRD CORP CLAIMABLE

SMART QUARRIES: AI & TOP TRENDING TECHNOLOGIES SQ-ATT 2024

22 - 23 October 2024

Palm Garden Hotel
Putrajaya, a Tribute Portfolio Hotel,
IOI Resort City, 62502 Putrajaya, Malaysia.

Organised By



INSTITUTE OF QUARRYING
MALAYSIA

Supported By



DEPARTMENT OF MINERAL &
GEOSCIENCE MALAYSIA

Smart Quarries : AI & Top Trending Technologies (SQ-ATT 2024) 22 & 23rd October 2024



IQM CONEX 2024

The unique theme for this year's high-profile informative **CONEX** international quarrying conference and exhibition during this fascinating technological era is '**Smart Quarries: AI and Top-trending Technologies**' (**SQ-ATT 2024**). Artificial Intelligence (AI) is concisely the development or simulation of human intelligence for machines where they are programmed to learn, think and help in problem-solving activities. AI encompasses the combination of various unique technologies such as machine learning, digital vision, natural language processing and robotics. Smart Top-trending Technologies and good work practices likewise need to be resourceful, effective and achievable to produce positive outcomes aimed towards optimum performance and cost savings in overall quarrying operations. Cost-effective technologies and efficient work practices should thus focus on the overall optimum quarry production setup with the aim to further increase operational profits and improve quarry site management. The competent selection of any appropriate smart technological systems will definitely confidently further progress the ever-dynamic quarrying sector to another level of World-Class Excellence.

Based on the outstanding track record and strong support of the Government and industry for past internationally-acclaimed **IQM CONEX** Conferences; this year's **SQ-ATT 2024** Conference event is definitely going to be another Great Success on outstanding technology-transfer and corporate networking. Highlights of hot topics on pioneering and state-of-the-art AI and Top-trending Technological Applications for economic success of the global quarrying industry planned for the upcoming informative yet fascinating **SQ-ATT 2024 Quarrying Conference and Exhibition** include 'AI Technology and Applications', 'Top-trending Technologies worldwide', 'Smart Drones for Economic Quarry Management', 'AI & Autonomous Vehicle Technologies in Quarry Transport', 'Latest Smart Technological Trends in Rock Blasting/Fragmentation', 'Cost-effective Applications of AI and Smart Technologies in Rock Drilling', 'Integrated Smart Technologies for Optimisation of Quarry Operations' and 'Application of AI in Economic Crushing & Screening'.

This high-status **IQM CONEX** function is acknowledged as the de-facto international quarrying conference for all with so many unique and exciting technical topics are scheduled for presentation at this event. The main objective of **SQ-ATT 2024** Conference is to allow the various international and national government agencies, quarrying industry captains, equipment manufacturing technology experts, academia, quarry personnel and aspiring university graduates a practical high-impact international platform to network at the local and international level; and experts to present state-of-the-art technologies and cost-saving practices and success stories to further progress this economic sector to another level of Global Excellence - a 'win-win' setup for all.

THIS CONFERENCE IS REGISTERED UNDER HRDC CLAIMABLE COURSE. COMPANIES ARE ENCOURAGED TO UTILISE THEIR TRAINING FUND AND FOR THOSE WHO ARE LOOKING AT ACCUMULATING CPD HOURS ARE ENCOURAGED TO JOIN.

KINDLY CONTACT THE IQM SECRETARIAT FOR THE EVENT BROCHURE AT :

TEL : 603-80624194 / 80624195

EMAIL : nirmala@iqm.com.my / admin@iqm.com.my / ainikhalid@iqm.com.my



INSTITUTE OF QUARRYING MALAYSIA
22nd ANNUAL GENERAL MEETING & TECHNICAL TALK
SPONSORED BY
AUSTIN POWDER MALAYSIA SDN BHD
HELD ON 29TH JUNE 2024
FOUR POINTS BY SHERATONG PCHONG, SELANGOR

Topic

**Advancement in Rock Blasting Techniques: Integrating Drones,
O-Pit 3D Blast Design and WipFrag Fragmentation analysis
in Quarry and Mining in Malaysia**



IQM COUNCIL 2024/2025

Chen Nyet Lin
Hj Nurul Huda bin Romli
Assoc. Prof. Ir. Dr. Eric Goh
Ir Muhammad Faiz Zainuddin
Ir Norhamidi Md Din
Mr Pang Kang Ngen
Mr Lee Wen Han, Vincent
Mr Baljeet Singh Kernail Singh
Ir Toh Kar Wai

President
Deputy President
Deputy President
Hon. Secretary
Hon. Treasurer
Council Member
Council Member
Council Member
Council Member

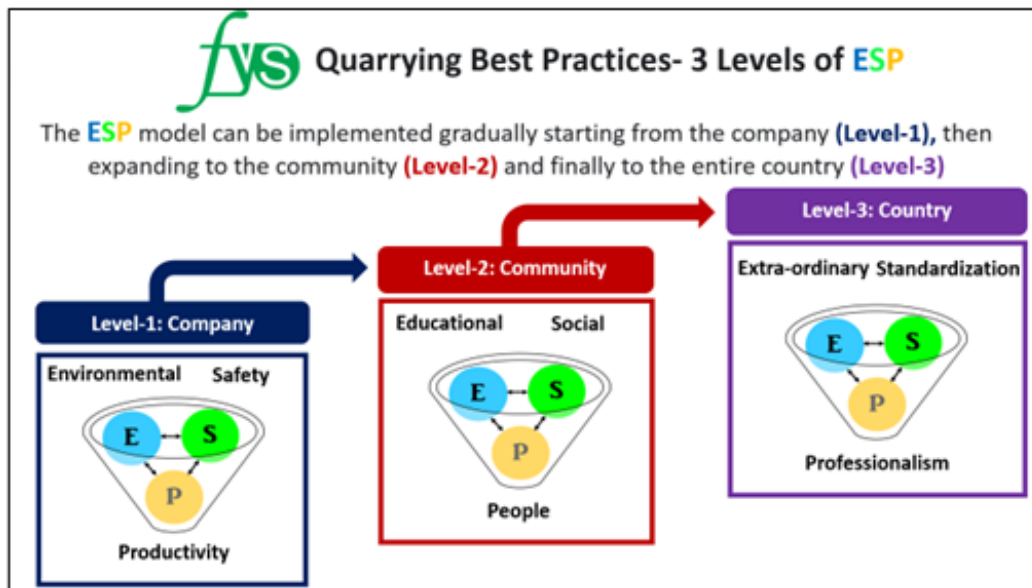
Beyond conventional quarry towards Malaysia first quarry tourism. Realising the Potential of “Green-Quarry EduTourism”

22 April 2024 (Monday), Earth Day reminds citizens of the world of the importance of environment conservation and sustainability, encouraging us to come together and take action for a healthier planet and brighter future. Earth day raises awareness and inspires change to protect Earth's natural resources for future generations. Our Earth is an amazing place, but it needs our help to thrive!

FYS plant 111 Agarwood tree at 2519, MK17, Jalan Berapit, 14000, Bukit Mertajam, Pulau Pinang (FYS quarry entrance) to create Agarwood Garden open for public to visit by appointment to support Penang 1 million tree planting program in conjunction with Earth day. The angel number 111 means to take chances, try out new things represent good luck and achievement.



ESP model is in line with ESG that promotes all aspect of sustainability by focusing on Environmental, Safety and Productivity (ESP) that not only minimize the impact of the environment but also improve liveability of local community for co-existence. Ultimately, the way forward of the model can lead to rebranding Malaysia Quarry Industry and upgrading Quarryman career professionalism for Malaysia.



“FYS has turn crisis into opportunity. Turn complain to recognition and acceptance, so it is an effort that nobody thinks it is possible but FYS has make it possible because want to continue be a responsible corporate citizens”. Quoted by YAB Chief Minister of Penang Tuan Chow Kon Yeow when he visited FYS on 26 March 2022.



FYS has shared the best practices ESP which has positive impact to the industry, society and country. You can make the difference too.

We are not great BUT we are important. Let's shine quarry industry together. Alone only can do a little. Together we can do more.

Prepared by
Zeems Foo Kheng Sin (FIQ)
FYS Marketing Sdn Bhd Chairman



Blast Off! New Diploma in Surface Mining Explosives Engineering

The Institute of Quarrying (IQ), EPC Groupe, and the University of Derby have collaborated to develop a new, accredited University Diploma in Surface Mining Explosives Engineering.

Created as part of a wider response to a growing need for specialized knowledge and skills across the mineral products sector, the new diploma specifically addresses a highlighted need from the explosives industry for a globally recognized qualification in explosives engineering. This groundbreaking, one-year level 5 course aims to meet the current and evolving demands of the explosives sector, ensuring improved safety (targeting zero incidents), professionalism, improved public perception, and operational excellence.

For individuals looking to build fulfilling careers within the sector, this diploma

provides a pathway to further qualifications that will underpin their ongoing personal and professional development.

Ben Williams, managing director of EPC-UK, said: 'From the beginning, passion and purpose have been the pillars in creating this diploma level learning opportunity with its scope to successfully upskill our industry. We began course design discussions with Chris Rowan of the University of Derby in 2022, and since then a dedicated team with extensive industry knowledge has worked passionately to bring the programme to life. Speaking as the Chairperson of the IQ, I understand the enhanced educational benefits that industry-led qualifications deliver and am extremely proud of Chris and the team for making this enabling diploma a learning and development reality.'

Blended learning

The diploma comprises a blended distance-learning model, which allows learners to access online educational materials which are then supplemented by several face-to-face sessions, undertaken at EPC-UK's head office training facility in Alfreton, Derbyshire. This provides an opportunity for students to learn away from the work environment and to further develop their knowledge by engaging with other professionals.

To ensure the integrity of the diploma and its relevance to the industry, the diploma is the culmination of the work of four industry experts – Dr Chris Rowan FIQ, Julian Smallshaw FIQ, Dr Geoff Adderley MIQ, and Dan Richards MIQ – who worked together to deliver the qualification. Their ambition is to deliver a high-quality experience that will provide

learners with a range of benefits, including:

1. Preparing individuals to be operationally and technically effective in management and engineering positions in the explosives industry by providing them with the tools to achieve this, a strong theoretical base, and a range of skills relevant to today's business practice.
2. Developing the learner's knowledge and understanding of the explosives products and services sector and the context in which they operate, including global and environmental influences.
3. The ability to analyse the properties, characteristics, and performance of explosives used in aggregate production, and the techniques used to manage product quality to satisfy end-user requirements.
4. Gaining a critical appreciation of the operational and business-related aspects of developing and operating an explosives products and services operation, including methods of production, transportation, safety, and use.
5. How to critically evaluate the appropriateness of different approaches to solving problems and how to effectively apply these in a work context.
6. Being able to plan and implement activities or projects to improve practices within the explosives products and services sector generally, and specifically within their own area of work.
7. Understanding how to work within the legislative framework about the field of explosives manufacture, transport, storage, and use.
8. Working collaboratively with others on activities and showing skills in teamwork, negotiation, and organization which develop the learner's capacity to work across their organization and be positively responsive to change.
9. Providing individuals with an increased capacity to learn, as well as a foundation for independent lifelong learning.



Three-module structure and assessment

The diploma is separated into three key modules:

Geology, Surveying & Drilling Operations: covering an in-depth exploration of rock properties and the geological factors affecting mining operations; comprehensive training on advanced surveying tools and software, emphasizing blast-related applications; and a detailed study of various drilling methods, equipment selection, set-up procedures, and their downstream benefits, combined with a focus on business ethics in drilling operations.

Explosives & Blasting Operations: covering the history and types of explosives and their classification; the properties and characteristics of explosives that influence

explosive performance; insights into different detonators and initiation systems, their uses and patterns; the core principles of designing effective blasts; and detailed procedures and safety measures for conducting shotfiring operations.

Safety, Health, Environment & Sustainability: covering legislation and best practice governing health, safety, and environmental practices; training and competence, ensuring training to highest standards to manage misfires, fly-rock, and other hazards; environmental considerations to address air quality, vibration, noise, and dust management; and sustainable practices to promote long-term environmental stewardship.

Each module has two equal assessment components: coursework and an open-book ➤

University Diploma in Surface Mining Explosives Engineering

Who could benefit?

- Operational managers, assistant managers, and supervisors: Those with significant industry experience but limited formal qualifications seeking to enhance their competence.
- Graduate employees: Individuals with degrees in related fields, such as mining engineering or geology, looking to specialize in explosives.
- Industry suppliers/manufacturers' employees: Professionals seeking to deepen their sector knowledge to better serve industry clients.
- Consultants: Those aiming to broaden their understanding of the mineral products environment to improve their service offerings.
- Entry-level individuals: School leavers with English and/or Maths GCSEs seeking a career in the commercial explosives sector.
- Ex-military personnel: Veterans transitioning into civilian roles within the explosives industry.

Eligibility criteria

- Employment affiliation: Learners must be employed or have an affiliation with an employer.
- Nomination and review: Learners should be nominated following a review or discussion with their line manager or recruitment manager.
- Capability and competence: Learners identified by their organizations as capable of succeeding in the programme.
- English language proficiency: Demonstrated capability equivalent to GCSE English Language or IELTS 6.0.

Further information

The first cohort of students on the diploma will start their studies this September. To find out more about the course and to register your interest, visit: www.quarrying.org/explosives; or contact IQ direct by calling: (0115) 972 9995; or email: mail@quarrying.org



Blasting diploma team (L-R): James Thorne, Institute of Quarrying and Mineral Products Qualifications Council; Geoff Adderley, EPC-UK; Julian Smallshaw, Institute of Quarrying; Chris Rowan, University of Derby; Dan Richards, EPC-UK; and Ben Williams, EPC-UK

end assessment. All assessment is completed online to facilitate distance learning. Each learner also receives a copy of IQ's 'Explosives in Quarrying' textbook to supplement their studies. This textbook has recently been updated and is available to purchase from the IQ online shop at: shop.quarrying.org

James Thorne, chief executive officer of the IQ, said: 'This new diploma is a significant and important development for the explosives industry. We are proud to be part of this tripartite collaboration and its resulting implementation via our trusted partners at EPC-UK and the University of Derby. Education is critical to personal professional development, and we are proud to add this to our portfolio of opportunities for our members.'

The expertise behind the new diploma

Dr Geoff Adderley MIQ - Blasting technology development manager, EPC-UK: In his current role, Geoff is responsible for the development, testing, and application of new technologies to support blasting processes, as well as the development and delivery of training courses in both surface and underground blasting.

Geoff completed his PhD in 'The Effect of Tunnel Blast Design on Vibration' at Camborne School of Mines in 2009 having previously studied Mining Engineering at an undergraduate level, before going on to achieve Chartered Engineer status in 2014. He is a member of the Institute of Quarrying and the Institute of Materials, Minerals and Mining, and sits on the Quarries National Joint Advisory Committee (QNJAC) Drilling and Blasting working group, and the Federation of European Explosives Manufacturers' Blasting Practices working group.

He has worked in operational, consulting, and commercial roles covering a variety of commodities in both the UK and Australia, gaining significant experience in drilling and blasting activities in operations ranging from quarries to large-scale surface mining, as well as in underground mining and special effects. Beyond blasting, Geoff has also worked as a mining consultant working on other parts

of the extractive process from mine design to backfill systems.

With a strong emphasis on research and development, Geoff has worked on several publications covering subjects from blast vibration analysis to the application of drone technology in the sector.

Julian Smallshaw FIQ - Head of education and standards, Institute of Quarrying:

Julian has worked in the extractives industry all his life. After graduating from the University of Leeds Mining Department with a BSc in Quarrying he focused on operational management. He ran a range of mineral extractives operations throughout the UK, but more recently managed multi-million-tonne operations in the Middle East.

He joined the Institute of Quarrying as head of education and standards working closely with stakeholders and educational institutions to develop and run a range of qualifications and training for the industry.

Julian is a Fellow of the Institute of Quarrying and a Fellow of the Higher Education Academy in the UK. He also holds a Post Graduate Diploma in Education and an OFQUAL Industry Expert (The UK Government Office of Qualifications and Examinations Regulation).

Chris Rowan FIQ - Senior lecturer in mineral products, University of Derby:

Chris has more than 45 years' experience in the mineral extractives industry, including in the UK, the Middle East, and Africa. Working in many roles from quarry manager to country manager, Chris says he has been fortunate to work in varying cultures that have helped develop his knowledge and love of a career that has been his life.

One of his greatest achievements was setting up a new asphalt production and laying business in Qatar, in the Middle East, where, from a blank page, he set the business on the road to become one of the company's flagship operations.

As a previous alumni of the Doncaster Assisted Private Study (DAPS) qualification, Chris understands the importance of 'lifelong learning' and giving clear progression pathways to those who wish to improve and

enhance their career opportunities.

Returning from Nigeria, in Africa, in 2015 Chris joined the University of Derby's Centre for Mineral Products as programme leader for the Asphalt Technology programmes, then took on the role of programme leader for Mineral Extractives and Cement in 2017.

As far back as the Hillhead 2022 show, Chris was approached by EPC and IQ and asked if it would be possible to develop a university diploma in Surface Mining Explosives Engineering. Following initial meetings to agree the content of the diploma, Chris worked tirelessly over 18 months with EPC, IQ, and the University of Derby to get the three-module, level 5 university diploma validated, which happened in May this year.

The diploma has now been validated by the University of Derby, which clearly shows how the programme aligns with the UK's Quality Code for Higher Education and articulates the principles of UK higher education.

Dan Richards MIQ - Senior explosives engineer, EPC-UK:

Dan Richards is a Chartered Engineer and a member of both the Institute of Materials, Minerals and Mining and the Institute of Quarrying. Joining EPC-UK in 2018, Dan's role as senior explosives engineer sees him providing and overseeing technical engineering support for both internal and external customers. In this role, he serves as a technical expert, offering guidance on explosive products, developing best practices, and ensuring safety across all activities.

He is also heavily involved in training, developing, and delivering industry courses, seminars, and presentations on explosives applications. His work in research and development focuses on advancing blasting techniques and technologies.

Dan holds a bachelor's degree in mechanical engineering and a master's degree in mining engineering, complemented by industry-specific certifications relating to blasting and unmanned aircraft systems. His career has afforded him valuable experience across the UK and Ireland, enhancing his expertise in diverse geological conditions and operational challenges. Actively involved with QNJAC, Dan plays a key role in shaping industry-wide safety and operational guidelines.