

The global network for
the materials cycle.

I.M3 Institute of Materials,
Minerals & Mining

2022 ANNUAL REPORT & FINANCIAL STATEMENTS

The annual report and financial statements have been prepared in accordance with the accounting policies set out on pages 68 to 71 and comply with the Charity's Royal Charter, the Charities Act 2011 and Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their financial statements in accordance with the financial reporting standard applicable in the UK and Republic of Ireland (FRS102) (effective 1 January 2019).

IOM3 supports professionals in materials, minerals, mining and associated technical disciplines to be champions of the transition to a low-carbon, resilient & resource efficient society. It seeks to be the best professional membership body it can be by providing modern, flexible services; quality technical content; and value for money.

Our activities promote and develop all aspects of the Materials Cycle, from exploration and extraction, to characterisation, processing and application, to product recycling, repurposing and reuse.

Public benefit

Materials form an integral and important part of all our lives. The materials cycle covers the exploration and extraction of raw materials, processing them into industrial/engineered materials, application of these materials, recycling of waste and the ultimate disposal of waste in an environmentally friendly way. It is more important than ever that the scientists, engineers and technologists involved in the materials cycle are qualified and experienced to make the best use of materials in terms of economics, efficiency and sustainability for the benefit of all. The objectives and activities of the Institute (see page 52) have been designed to support the wider materials, minerals and mining community, together with government and other interested parties, to achieve these ideals.

The Institute has referred to the Charity Commission's guidance on public benefit when reviewing its aims and objectives and in planning future activities.

Vision

Our vision is to be recognised as the global leader for professionals involved with the materials cycle.

Mission

- To promote the science, design, engineering and technology of materials, minerals and mining and their practical applications.
- To facilitate qualifications, professional recognition and development, and to deliver knowledge, information and networking services to a global membership and wider community.

I.M3 Institute of Materials, Minerals & Mining

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The Institute of Materials, Minerals & Mining (IOM3) is a body incorporated by Royal Charter (company no RC000267) and a charity registered in England & Wales (269275) and in Scotland (SC050586).

Patron: The Late Queen Elizabeth II

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Now my time as President of IOM3 has come to an end, I look back on another busy and productive year for the Institute with many successes to celebrate across the breadth of our activity and member interests.

In a turbulent world, the work of our members across all sectors is more important than ever. The inter-related issues of the cost of living crisis, energy security, geo-political instability and the urgent need for climate action continue to affect us all to a greater or lesser degree. But they also highlight the key relevance of materials, minerals and mining, in meeting these global challenges.

Thanks to the commitment of our team, hard-working volunteers and members we have been able to continue to adapt to our changing world and deliver on many of our strategic priorities supporting professionals in materials, minerals and mining to play their part in the transition to a more sustainable, net-zero society. It remains our goal to provide the best possible service and value for money to our members. In that light it has been particularly pleasing to see the sustained growth in our membership and the increasing influence of IOM3 representing our sectors in national and international policy.

2022 saw new members across all grades exceed 2,000 for the first time ever in one year. This was supported by the continued success of our membership and registration workshops and the implementation of our simplified grade structure agreed in 2021. We welcomed new members from across our communities to both Executive Board and Advisory Council, increasing our diversity, and launched the new Technical Communities Structure to better reflect the range of interests of our members. A return to in-person recruitment events, saw student members exceed 3,000 for

PRESIDENT'S OVERVIEW

the first time. A great success especially after two years of restricted engagement with universities through the pandemic. This was supported by the excellent work of our Student and Early Career Committee, culminating in the newly launched Student and Apprentice Awards, which it was my pleasure to present at the Education and New Fellows' dinner.

Participating in the Institute Awards has been one of the very best aspects of my Presidency; to gain an insight into the truly exceptional work of professionals in materials, minerals and mining around the world and have the opportunity to meet so many of them at awards events has been both humbling and inspiring. The careful review conducted throughout 2022 will further strengthen this, ensuring our awards continue to be representative of our profession and membership into the future. As in previous years a personal highlight was the final of the Young Persons' World Lecture Competition. This year saw competitors from six nations compete and was won by Rathosivan Gopal from Malaysia. Yet again the judges were dazzled by the quality of the presentations and left confident that the future of our profession is in good hands. ►

Neil Glover FREng CEng FIMMM IOM3 President (2021-2022)

'Thanks to the commitment of our team, hard-working volunteers and members we have been able to continue to adapt to our changing world and deliver on many of our strategic priorities supporting professionals in materials, minerals and mining to play their part in the transition to a more sustainable, net-zero society.'



The growth in our external influence has seen us contribute to policy development in areas as diverse as UK Advanced Materials strategy, green steel, waste water pollution from abandoned metal mines and critical materials. We have also been able to provide important input on the future skills required in the UK to address the challenges of the net-zero transition and the sustainable supply of critical minerals and materials that it will demand. Through this activity we are able to represent the strength, breadth and expertise of our membership and the key importance of the whole materials cycle. 2022 has also seen continued strengthening of our digital content with an active programme of podcasts, webinars, virtual and hybrid events and the creation of our new digital training platform. I was delighted to be able to personally participate in events ranging from the hybrid 'COP26 and Beyond ... The Pathway to Net-Zero' to the launch of our multi-media series 'Materials Change: Resourcing Net Zero' in partnership with Content With Purpose; both of which serve to spotlight the importance of materials, minerals and mining. All of this enabled by the continued development of our digital capability initially established through 2019/20's Project Optimus.

Over the last year we have also delivered significant milestones in the IOM3 estates strategy. The sale of the Stoke office sees us reduce our footprint to our two sites in Grantham and London. Here we have been able to improve the environmental performance and useability of our space through essential refurbishments and

energy efficiency improvements and have continued with the important work of cataloguing our heritage and library collections, with our online catalogue now exceeding 160,000 records.

2022 saw the end of an era for our country and the Institute with the passing of Her late Majesty Queen Elizabeth the Second, our patron of many years. I would like to take this opportunity to express my appreciation for her long support and that of her late husband Prince Philip to our Institute and the wider UK science and engineering community.

It has been a real privilege to be President of our Institute for the last two years and, now I come to hand-over that honour, I would like to offer my successor Kate Thornton all my best wishes for her time in office. I would also like to give my sincere thanks to my fellow trustees and to all of the volunteers and IOM3 team who make everything we do possible. I would also like to particularly mention my predecessor Professor Serena Best who is now stepping down as Past President and Chair of Trustees after many years of dedicated service to the Institute; her advice and wisdom will be very much missed.

'2022 saw the end of an era for our country and the Institute with the passing of Her late Majesty Queen Elizabeth the Second, our patron of many years.'

It is a great honour and privilege to become the President of IOM3. I have had the great fortune to have worked with several past presidents during nearly 15 years of volunteering and I hope to continue the amazing work that they have started.

I would like to thank our immediate Past President Neil Glover who has done a brilliant job leading us through a turbulent two years that has seen Covid lockdowns, a war in Ukraine and the ongoing energy and cost of living crisis.

Looking forward, sadly, I don't see anything easing in the near future and we will ensure that IOM3 continues to meet its members needs now and in the future. However, as Neil rightly points out – our members are in the unique position to able address some of these current and upcoming issues, such as climate action, and make a positive societal impact in a way not seen before.

One of the issues that we will need to address is we are now in the fourth ►

'One of the issues that we will need to address is we are now in the fourth industrial revolution, and the way we work will rapidly change. As a membership body we need to ensure that we provide the right training and developmental opportunities to allow our members to meet this change head on and become leaders in their field.'

INCOMING

PRESIDENT'S

LOOK AHEAD

industrial revolution, and the way we work will rapidly change. As a membership body we need to ensure that we provide the right training and developmental opportunities to allow our members to meet this change head on and become leaders in their field. IOM3 has a specific volunteer group looking at ways to meet member needs and we hope to see articles and other outputs from them this year. In addition, they are working closely with the training team to ensure new courses address and meet the changing industrial demands.

While we have seen great improvements in membership numbers over the past few years (a huge thank you to the membership team and the volunteers who have helped deliver this) we sadly continue to see fewer students applying for degrees or careers within the materials, minerals and mining sectors. I hear so often 'I just sort of fell into it' or 'I didn't know this existed' and in the future I would love to see a reverse in numbers and ideally 'It's because of IOM3 I found out about ...'. I have fortunately heard one of these stories first hand, as a colleague chose her career after attending the first ever Materials Matter, hosted by the Student & Early Career Group and Dr Diane Aston in 2015. It was amazing to hear how one event and conversation impacted on their university and career choices and has inspired me to see if this is something we can continue to do. One focus during my presidential term is to try and find ways to promote the wealth of opportunities that a career within these areas offer.

One area I am keen to champion is equity, diversity and inclusion (EDI) as it is important to so many of our members. IOM3 and its five member networks (Able Different Member Group (ADM3), Ethnic Minorities in Materials, Minerals & Mining (EMM3),



IOM3Pride Group, Student & Early Career Group (SEC) and Women in Materials, Minerals & Mining (WIM3) have done a brilliant job in recent years making this a priority to ensure we aren't overlooking the needs of members.

While we have made great strides forward with EDI, we must continue to put a focus on it and not rest on our laurels. That is why I am proud to see IOM3 publish its results on the diversity of its membership and team. We chose to publish this despite not having a complete dataset as we want to be open and transparent with our members. During 2023, we will introduce a more comprehensive diversity data collection system. We understand that you may not be comfortable sharing this with us and that is completely OK. If you feel comfortable and safe in doing so, I urge all members to update this information when requested to later this year. By knowing the diversity of our members we will be able to better meet your needs and ensure that we are delivering an inclusive environment at our events.

During Neil's term as President there was a significant push on sustainability following COP26 and IOM3 and its communities

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hosted a range of brilliant events and webinars on the subject. This great work looks set to continue following the launch of the IOM3 Sustainable Future Awards. I look forward to hearing and promoting the great work so many of you are doing in this sector.

I also look forward to meeting as many members as possible during my Presidency. In the meantime however, if there is anything of concern or you would like to make a suggestion, please do not hesitate to get in touch via email and I will answer as soon as I can. With the ongoing cost of living crisis, I would also implore any members or employees, past or present, affected to contact the Member's Benevolent Trust which may be able to provide assistance.

In 2022, IOM3 has continued its charitable work to advance and develop all aspects of materials, minerals, and mining, including by being the best professional membership body it can be.

Supporting professionals in those fields to be champions of the transition to a low-carbon, resilient and resource-efficient society remained central to that work. In order to help showcase this role, we partnered with Content With Purpose to produce the multi-media campaign Material Change: Resourcing Net Zero. This uses videos, podcasts, interviews and articles to explain how crucial our sectors are for the future, and how exciting a career in them can be.

CEO'S REVIEW

'A real feature for IOM3 this year has been the continued growth in members, especially at the Member grade, with that passing 5,500 for the first time ever.'

A real feature for IOM3 this year has been the continued growth in members, especially at the Member grade, with that passing 5,500 for the first time ever. All in all, over 2,000 new members joined IOM3 in 2022 – again, a record for organic recruitment. Again and again, we hear that members are joining because they see the importance and relevance of IOM3 for their lives, both in terms of the access to technical content and to professional recognition for themselves, and because of the desire to see the voice of professionals in materials, minerals, and mining be heard in the public and policy debates. The extensive range of webinars, podcasts, conferences, training events, articles and policy papers that the IOM3 community has produced this year to support this is hugely impressive. ▶

Dr Colin Church CEnv FIMMM IOM3 Chief Executive

'The extensive range of webinars, podcasts, conferences, training events, articles and policy papers that the IOM3 community has produced this year to support this is hugely impressive.'



Some of the highlights of this activity include:

- 38 IOM3-hosted events with almost 4,000 registrations from 44 countries
- 16 IOM3 Investigates... podcast episodes, expanding a programme of episodes that has been listened to over 7,000 times since its launch
- Delivery of the *Materials World* facelift, providing a cleaner look that allows clear representation of all our activities and showcases the diversity of multidisciplinary content
- *Materials World* and its editorial team being shortlisted for several publishing awards over the year, receiving a highly commended as Best In-house Magazine by Memcom
- Continued improvement in impact factors for many of our scholarly journals
- Unveiling of a new platform for online teaching and learning, including updated qualifications in packaging technology
- Restarting face to face outreach and teacher support activity to help share the importance of a career in materials, minerals, and mining
- Seeing the UK Government finally produce a – pretty decent – strategy on critical minerals, as IOM3 had been calling for
- Engagement with Government departments on a number of other developing policy issues, such as the call for evidence on the challenges and opportunities for UK advanced materials and the consultation on legally binding environmental targets

'The Technical Communities form one of the four pillars of IOM3 and play an important role in generating and sharing technical content, supporting our influencing work and creating professional networks. Their activities also contribute to our nine technical themes: Digital, Energy, Health, Infrastructure, Manufacturing, Mining, Skills, Sustainability, and Transport.'

Digital, Energy,
Health, Infrastructure,
Manufacturing, Mining, Skills,
Sustainability, & Transport

In 2022, we also implemented the final phases of the governance modernisation programme. This involved the launch of the new structure for our Technical Communities in April and revisions to our Bye-laws in September.

We now have twenty two groups covering the technical interests of IOM3 members, each with its own Leadership Team of active supporters and volunteers, aided by the IOM3 team. The Technical Communities form one of the four pillars of IOM3 and play an important role in generating and sharing technical content, supporting our influencing work and creating professional networks. Their activities also contribute to our nine technical themes: Digital, Energy, Health, Infrastructure, Manufacturing, Mining, Skills, Sustainability, and Transport.

Our Bye-laws, which are approved by the Privy Council Office and form a major part of our constitution, have been updated to reflect things like being able to hold general meetings online and using gender-neutral language throughout. The main change though was to update the membership grade structure, removing some confusion and unnecessary complexity. We now have 5 voting grades – Technician, Associate, Member, Fellow and Honorary Fellow – plus Affiliate and Student. This makes the grades easier for everyone to understand and for actual and potential members to see where their career might take them.

As Neil Glover says, 2022 also saw the end of an era for both IOM3 and the wider nation with the passing of Her late Majesty Queen Elizabeth II, our Patron since 1952. Both Her Majesty and late Prince Philip were great supporters of IOM3 and of the wider engineering and scientific community. I'd like to express the

heartful appreciation of IOM3 for all their encouragement and assistance over the past seventy years.

More parochially, our thoughts are also with the families and friends of those members of IOM3 who passed away during the year. I would particularly like to mention our former Honorary Treasurer, Dr 'Mick' May, whose long and distinguished service to the Institute was so valuable.

In what has been a pretty consistent theme for the past few years, 2023 looks fit to offer its own challenges and problems for IOM3 and its members.

As the cost of living crisis continues to bite, it will be more important than ever that IOM3 supports its members in their professional journeys and helps them overcome the barriers and stumbling blocks that may occur. We've started that by keeping our membership fee increase well below inflation, and will continue it though ongoing provision of the best membership services, technical content, professional development, and networking opportunities we can. We also hope to be able to extend our influencing activity still further and to work with more partners to spread the word about the value of a career in materials, minerals, and mining.

Last but by no means least, my huge thanks to the hundreds of active supporters and volunteers in different roles such as assessors, Technical Community leadership group members and Trustees, who enable IOM3 to carry out its work on behalf of its members. And thank you to the wonderful team here at IOM3 for another year of high quality delivery.



HIGHLIGHTS
OF THE YEAR

This annual report reflects the work, aims and objectives of IOM3 in 2022. IOM3 continued to strive to be the best professional membership body by providing modern, flexible services; quality technical content; and value for money. During 2022 over 2,000 new members joined the Institute which is a new record for organic recruitment.

The work on Project Optimus (the digital transformation development) continued as the Institute used a new email platform for a full 12 months, learning how to better reach members by discipline and interest. The new system was also used for awards judging, reducing waiting times through live chat and advertising digitally across iom3.org.

IOM3 continued to deliver on its charitable objectives through its Corporate Strategy, focused on membership, content, professional development and influence in public and policy debates. Highlights of 2022 from all IOM3 activities are described in the following pages. IOM3 is thankful to the work of supporters and volunteers contributing at all levels and across all sectors, both in the UK and overseas. The Trustees would also like to acknowledge the hard work and dedication of the team at IOM3.



- 2022 member survey launched
- Launched *Materials World* redesign

January



- IOM3 submitted evidence as part of call on UK Advanced Materials
- IOM3 submitted evidence to the Environmental Audit Committee inquiry into green steel

March



- YPLC UK Final returned to The Armourers' Hall, London, UK

May



February

- Member toolkit added to IOM3 website



April

- New IOM3 Technical Community structure launched
- IOM3 shortlisted for two Professional Publishers Association Awards



June

- Celebrated 20 years of IOM3
- IOM3 responded to the consultation on legally binding environmental targets and contributed to a joint Environmental Policy Forum submission





- London building closed for repairs and refurbishment

July



- New IOM3 membership grade structure launched
- New Bye-laws came into effect
- 297 refurbishment completed
- IOM3 highly commended in Memcom Excellence Awards for Best In-House Magazine

September



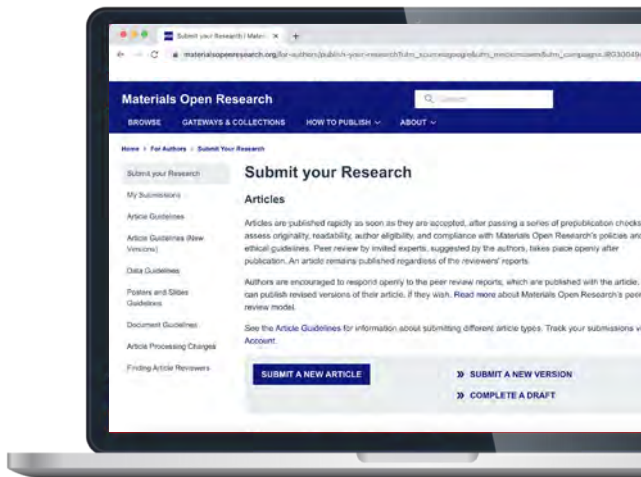
- Rathosivan Gopal of Malaysia won online YPWLC 2022
- EFRA committee published plastic waste report as part of its inquiry, informed by oral evidence given by Chair of the IOM3 Packaging Group

November



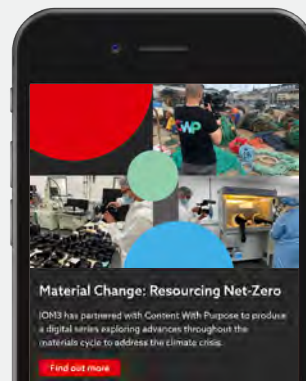
August

- Materials Open Research published first articles and welcomes submissions



October

- Digital series champions materials, minerals, and mining in driving net-zero
- IOM3 submitted a response to the net-zero review call for evidence



December

- IOM3 launched new route for IEng to progress to CEng
- IOM3 celebrated 2022 Awards & Prizes winners



Membership

The membership team had a busy year and achieved a 1.2% growth in individual member numbers and an income derived from membership surpassing £1.5m. Due to the Russian invasion of Ukraine in February 2022, IOM3 was, and is still unable to renew membership for individuals who are resident and working in Russia. This unfortunately has negatively impacted member growth.

Despite this the Member (MIMMM) community has grown to 5,585 (from 5,275 in 2021), and the Fellow (FIMMM) community has stabilised with 2,634 at the end 2022 (in comparison to 2,633 in 2021). In addition to MIMMM and FIMMM growth, 158 members were awarded Associate (AIMMM) or Technician (TIMMM) grades.

Likewise, the number of members seeking professional registration continued to be high. IOM3 recorded 155 new Engineering Council Registrants (CEng, IEng & EngTech), 28 new Science Council Registrants (CSci, RSci & RSciTech) and 15 new Council for the Environment Registrants (CEnv & REnvP).

The demand for membership workshops continued with 60 membership and registration 'Become a FIMMM', 'CEng in day' and other Science Council and Society for the Environment professional registration workshops. These were held virtually across the year with more than 511 members attending. The programme will continue in 2023.

MIMMM

5,585

5,275

Comparison of membership numbers for Fellow, Member and Student grades for 2022 compared with 2021 (dotted lines)

FIMMM

2,634

2,633

UG Student & Apprentice

2,386

2,125

PG Student

690

573

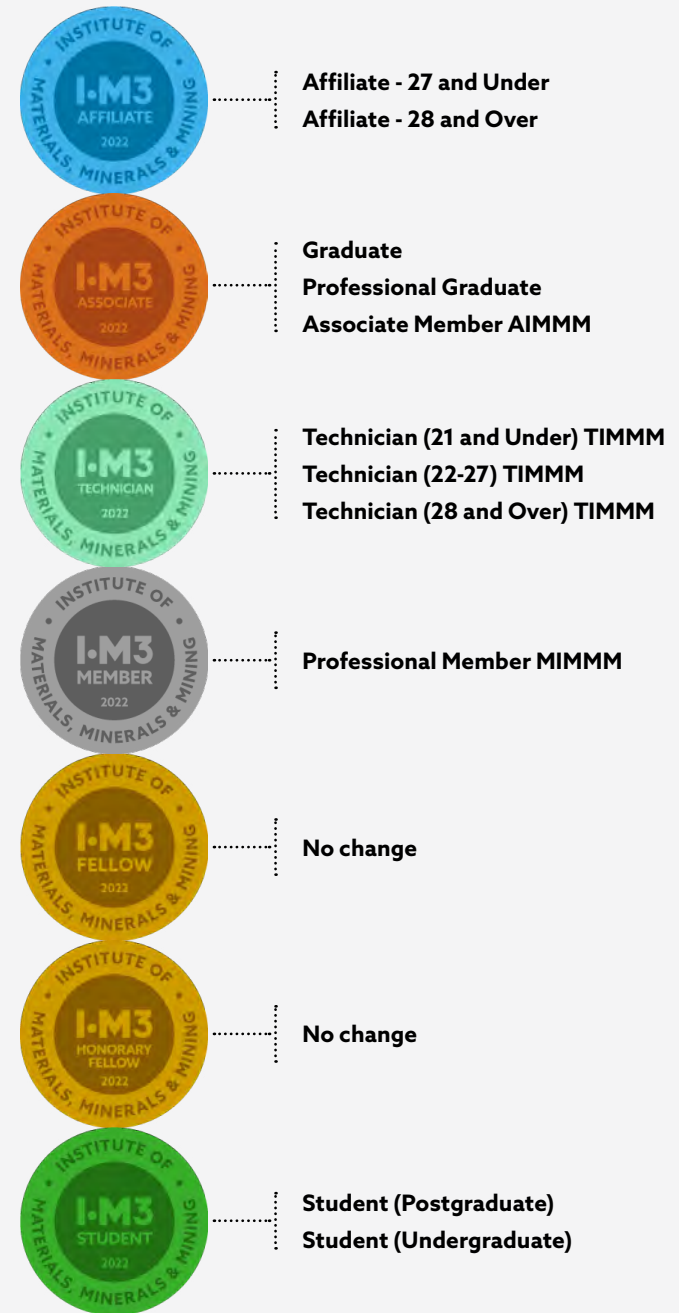
Following a positive vote by members at the 2021 AGM and Privy Council Office approval, amendments to the IOM3 grade structure were agreed and implemented. The previous structure was introduced in 1997 to map onto the formation stages leading to professional engineering registration through the Engineering Council SARTOR 3 system, which had long since been defunct.

The Graduate, Professional Graduate and Associate Member grades were merged into a new voting grade called Associate, and the Undergraduate student grade and Postgraduate student grades were merged into a single Student grade. This has two levels: one for undergraduates and apprentices, and the other for postgraduates. The new structure provides a clearer progression path through our grades, from Student to Fellow.

Right: New IOM3 grade structure diagram

New grades below.

Old grades below which merged in to the new grade.

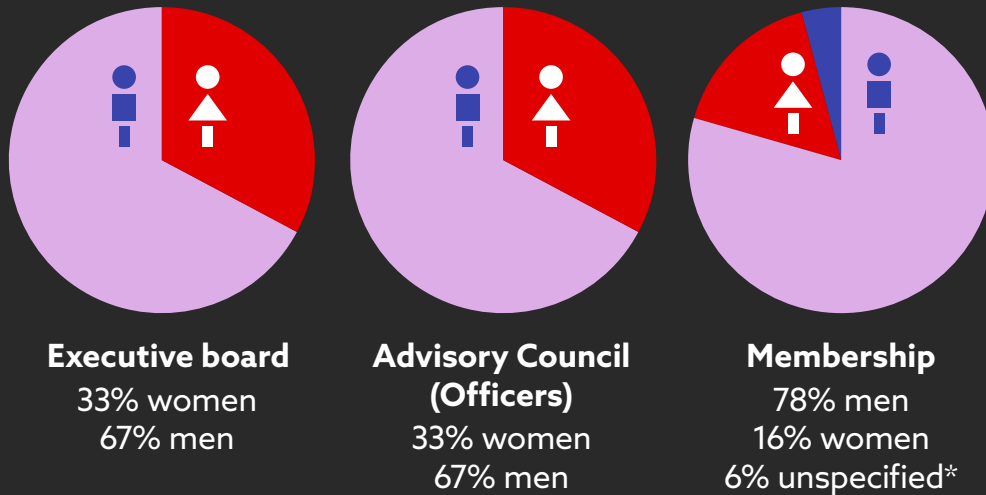


Diversity & inclusion

The Institute continued to support inclusion and diversity for our team, members and communities. Internally we supported employees to share their life experiences where comfortable to improve understanding within our team. Our Equity, Diversity and Inclusion (EDI) Lead also joined a Professional Engineering Institute group with representatives from similar bodies to discuss ways to work together on data collection and analysis to inform how we can better support members and attract new people to our communities. We also had our first recipient of the IOM3 Outstanding Contribution Award for EDI.



Above: Avery Cunningham at the 2022 Special & Publication Awards Lunch Reception



'Science and engineering has a place for everyone. Everyone can feel included and celebrated in this place. It's great to see the Institute take steps to recognise these different things and working towards making a better place for everyone in materials.'

Avery Cunningham AIMMM,
Outstanding Contribution Award for EDI

* Data taken from name prefix where available.

Student & Early Career (SEC)

In 2022 the Student & Early Career Group welcomed Dr Aimee Goodall CSci MIMMM and Dr Ilija Rasovic MIMMM as their new Chair and Vice-Chair for 2022-23. Again, 2022 was a productive year with over 100 student and early career members and non-members joining online events. Dr Kyle Marshall CEng MIMMM, Dr Tannaz Pak CEng MIMMM and Sarah Boad CEng CSci FIMMM took part in *'Road to Chartership'*, a free event for student and early career professionals on why they should aspire to becoming chartered.

Prof MariaPia Pedefferri delivered the annual Art Lecture *'Interference Colours on Titanium: from Science to Art'*, which covered an electrochemical method of painting which exploits the peculiarity of oxide growth. Former Chairs of the SEC Committee also gave presentations on their career progression with useful advice to benefit those in the early stages of their career.

'I didn't see it coming. I thought the other presentations were incredible and I just feel honoured the judges felt mine was worthy of winning compared to everybody else as the standard was so high.'

*Lauren Eggleton, Young Persons' Lecture Competition
UK Final Winner*

SEC Committee members published two collective pieces on networking tips and how they got into materials science while Dr Aimee Goodall started her Chartership journey and is continuing to share her experience via an online blog.

In 2022 IOM3 offered multiple opportunities to share knowledge and skills whilst launching the *'Student & Early Career Professional Development resources'*. The page includes relevant news items, podcasts and events for members and non-members. Two SEC Committee members featured in the Materials World Professional Development section on careers in product compliance and materials failures, with more members contributing to articles throughout the year.

For the 2022 Starpack Schools and Students competition, 22 judges made up an independent panel of packaging and design experts who came together to judge work created by young designers. 281 entries were received across both competitions and were marked on innovation, design, sustainability, quality and market potential.



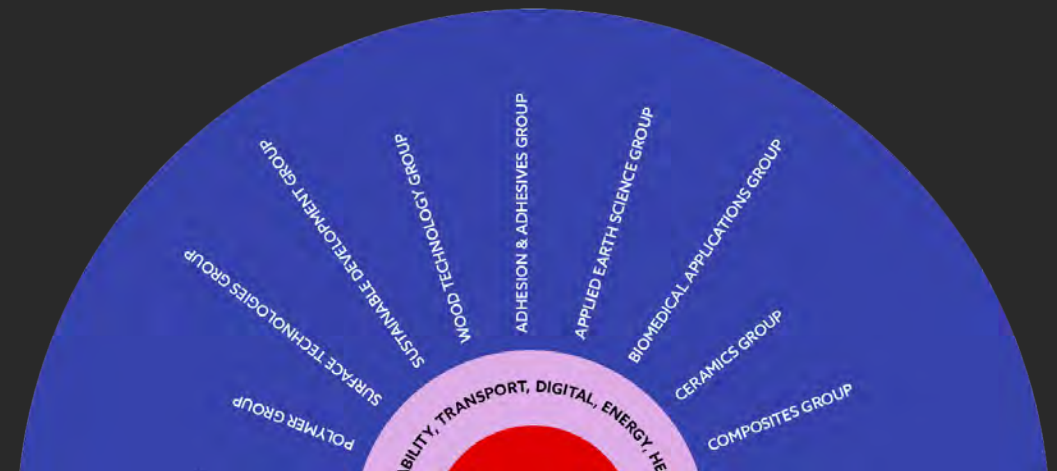
Technical communities

April 2022 saw the launch of the new Technical Community (TC) structure after nearly two years of extensive review and consultation across the membership. The new structure has 22 groups including two new groups covering Materials Characterisation & Properties, and Materials Processing & Manufacturing. Each group has a clear identity, consistent naming, structure and operation to optimise the benefit to members, and enhance the opportunities for increasing the awareness and influence of the Institute externally. During the year, Chairs and Leadership Teams were appointed with all 22 groups being active by the late summer.

The year also saw a review of how the Technology Communities Board (TCB) operates following recommendations from the Trustees. As a result, new TCB members are being recruited during 2023. The other key change saw each Strategic Advisor (SA) become responsible for one of the nine overarching IOM3 technical themes (Digital, Energy, Health, Infrastructure, Manufacturing, Mining, Skills, Sustainability, and Transport) which underpin all our technical activity. This change to the SA role is to further encourage TC collaboration. Each SA will look after two or three TC groups along with a dedicated IOM3 team member to foster good communication and working together towards the broader objectives of the Institute.



In December IOM3 held a virtual TC Forum which worked well and set the scene for an in-person meeting in March 2023. This will allow the TC chairs, SAs and IOM3 team members to share best practice and foster strong working relationships, building on the positive changes made during the year. Early in 2023 we are recruiting an additional team member to support both the TC and policy activities.

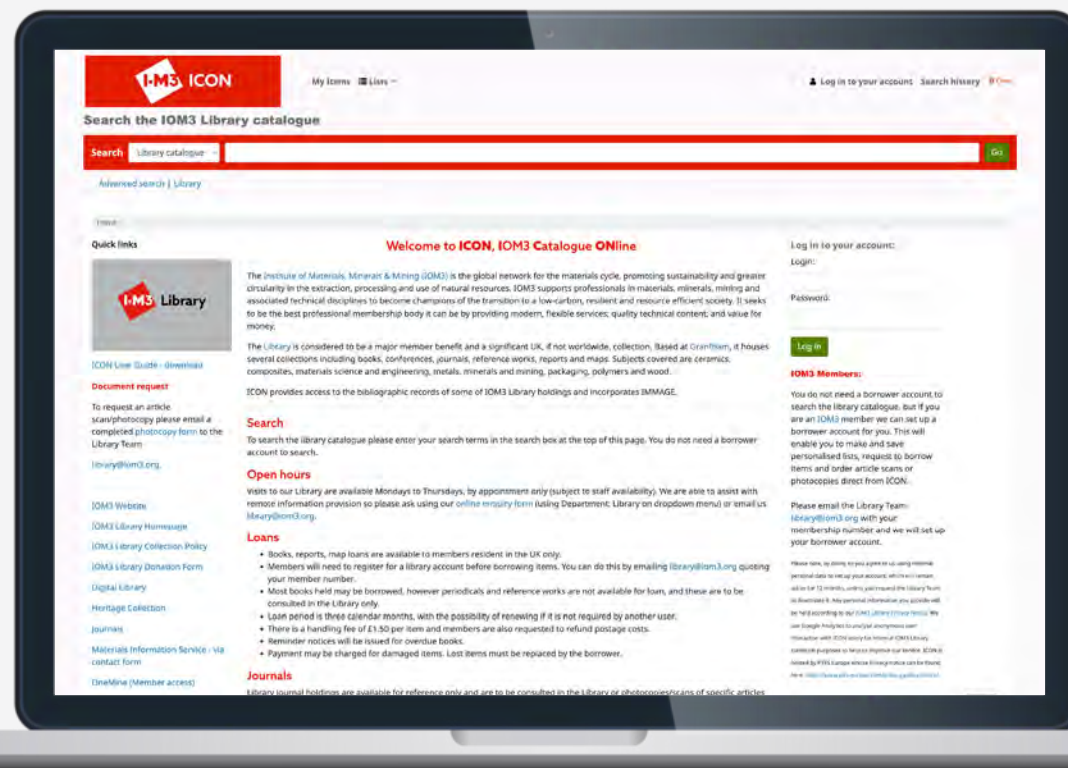


Library & journals

Our focus in 2022 was on continuing with cataloguing the items on our 3km of shelves. Our online library catalogue ICON now has over 160,700 bibliographic records including books, journals, articles, maps, reports, theses and webinars. We supplied 40 scans of papers and responded to 120 technical enquiries. In addition, the Library is part of a network of engineering institute libraries who are willing to offer reciprocal library services, including visits in person, to our members.

'The library in particular, and IOM3, are an amazing source of information for the mining and metallurgical world.'

P Mackey



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bibliographic
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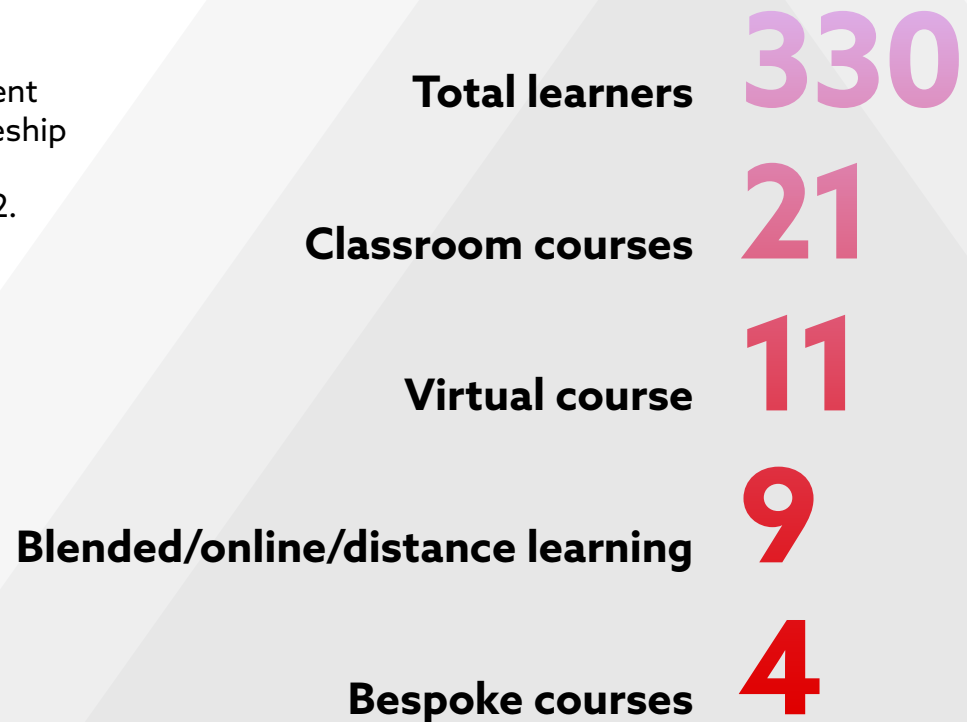


Education & training

2022 saw a welcome return to the classroom with over half of the Training Academy's programme being face-to-face teaching, the remainder being virtual courses, or distance learning. The launch of our new online learning site in the autumn facilitated the introduction of the revised PIABC Level 3 and Level 5 packaging qualifications and in the first half of 2023 more of our distance learning programmes will move to this platform. In addition, we ran four INFORM webinars to showcase innovation in materials, minerals and mining.

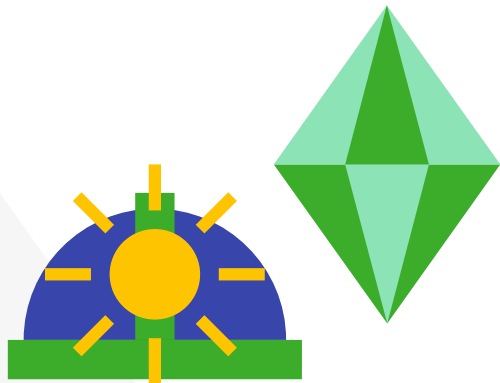
Through PIABC, we continue to act as the end point assessment organisation for the Level 3 Composites Technician apprenticeship standard and were thrilled that a recent graduate of the programme received the Institute's Royal Charter Prize in 2022. We look forward to continuing to recognise the success of Level 3 apprentices in 2023 and to start the EPA process for apprentices on the Level 6 Materials Science Technologist and Level 7 Materials Process Engineer standards.

In Education and Outreach, the Magic of Materials course at St Paul's School ran successfully in the summer, and we were delighted to return to running two Polymer Study Tours for teachers which received glowing feedback. We look forward to expanding these and the Materials Matter events in 2023.



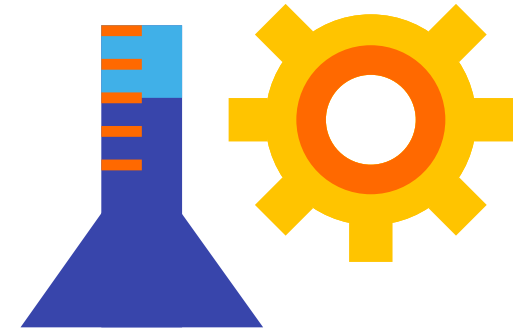
'From the beginning of the course, I was made to feel welcome and at ease by all facilitators. The knowledge and expertise presented by Alicia and Diane was outstanding.'

Simon Brown



'I thoroughly enjoyed myself during the two day course and it has given me a fantastic opportunity to develop greater understanding and knowledge of the plastics industry. By basing the course in industry it has provided me with in-depth insight into plastics manufacturing and how polymers can support the environmental issues prevalent today and in the future.'

David Houghton



'It was fantastic; the tours were incredible and delivery of the content of polymers by both yourself and your colleague were also brilliant. We all thoroughly enjoyed it and it was a great opportunity to meet up with other UTC staff delivering similar content.'

Mrs D Owen



Content & magazines

A rebrand of Materials World magazine during 2022 delivered a cleaner look that allows clear representation of all our activities and showcases the diversity of multidisciplinary content. Editorial, design and journalistic capabilities have been recognised with one of the team's Staff Writers nominated for a Newcomer Award by the Professional Publishers Association, and the magazine was highly commended as Best In-house Magazine by Memcom focusing on member value.

The magazines team continued to build strong relationships with the Technical Communities following their restructure, encouraging synergies to expand on content areas as identified in our reader survey last year. The 'unwrapped' copies of Materials World continue to be received well. The initiative rolled out in July 2021 was shortlisted for the Professional Publishers Association 2022 Sustainability Award and has saved around 680kg, so far, in single-use (and hard to recycle) polywrap.

'For a materials scientist, being in the IOM3 magazine is akin to an appearance in Vogue for those working in fashion.'

Laurie Winkless, Physicist, Science Storyteller, Consultant

IOM3 noted good daily interaction with our online industry news – these are some of the most popular pages of the website in terms of regular engagement. Sixteen 'IOM3 Investigates...' podcast episodes were released which focused on issues relevant to professionals working in materials, minerals and mining sectors.

In June the Institute marked 20 years since the merger of the Institute of Materials and the Institution of Mining and Metallurgy. In the pages of Materials World we looked back at the notable milestones since the summer of 2002, talked to Professor Sir Colin Humphreys CBE FREng FRS CEng FIMMM, the first President of IOM3, and searched the archives for how the creation of IOM3 was covered in print at the time.



**IOM3 saved
around 680kg
in single-use
polywrap**

Continuing the partnership that was announced in 2021, IOM3 collaborated with Content With Purpose to present 'Material Change: Resourcing Net Zero'. The digital series explored our industry's role in addressing the climate crisis through film, interviews, podcasts and social media content. On 19 October, 1 Birdcage Walk, London, played host to the documentary premier and was followed by a panel discussion on a handful of the topics raised. The evening was a great opportunity to celebrate the important work many are doing to ensure a more sustainable future.

'One of the pluses of IOM3 and its journal Materials World is that it opens up vistas into research and development of materials and technology beyond one's speciality. I have found this expansion of intellectual horizons very stimulating over many years. I have also been encouraged by the mentoring role the organisation has taken on for the younger cohort of scientists and technologists with whom the future lies.'

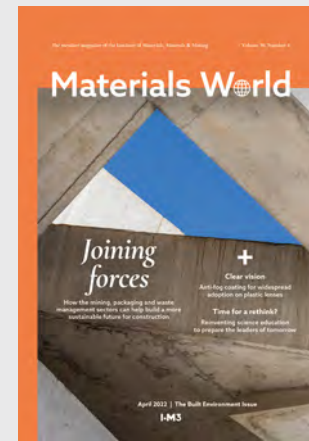
Dr David Ian Bevege AIMMM

'I really enjoy the quality and variety of Materials World magazine. As a reader, I enjoy the breadth of interest that the Institute covers brought together into feature themes. As a contributor, I embrace the opportunity to represent my Technical Community and to collaborate with other Technical Communities on subjects that are of interest to us both.'

Jude Allan MIMMM, IOM3 Packaging Group Chair



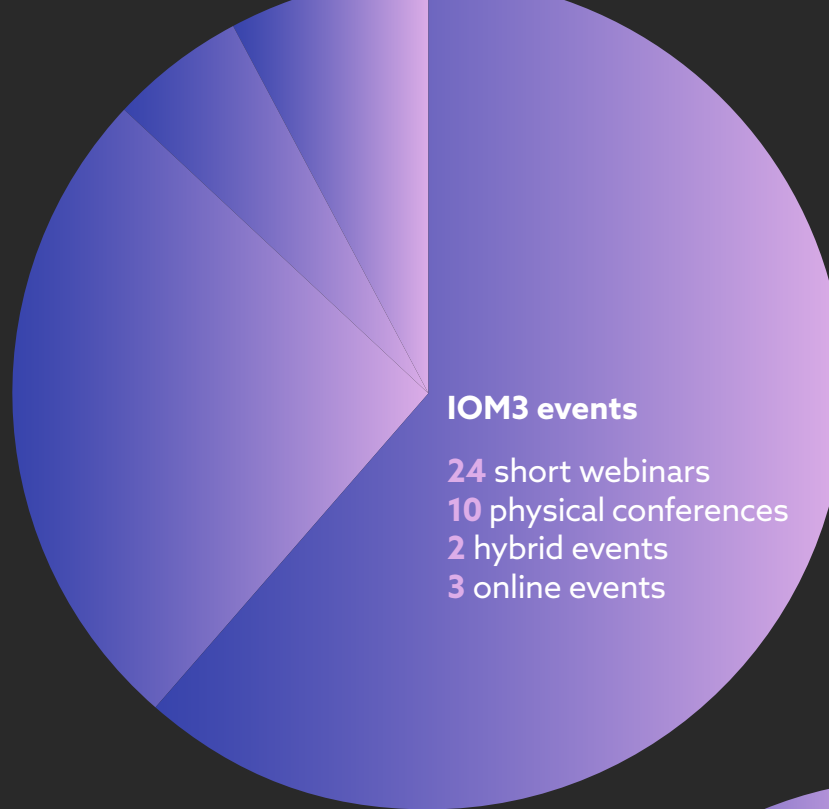
Materials World covers from 2022



Events

The return to face-to-face events in 2022 was well received. Whilst the continuation of online events remains important, the ability for networking in person still rates as an essential return on investment for our delegates. IOM3 delivered 39 events in 2022 which included 24 short webinars, ten physical conferences, two hybrid events and three exclusively online events. 5,123 delegates registered for our events during 2022, of that 2,729 were IOM3 members (53%).

June saw the winners of the 2022 Starpack Schools and Students awards announced. An independent panel of packaging and design experts came together to judge packaging created by young designers. The 281 entries received across both competitions were marked on innovation, design, sustainability, quality and market potential.



Engagement at our webinars averaged 49% of registrants watching the live broadcast. Across the whole year's programme (physical, hybrid and virtual) on average 17% of delegates were students and 28% of all registrants were from outside the UK.

Throughout 2022 IOM3 continued to co-sponsor select external events that align with the Institute's mission of promoting and developing all aspects of the Materials Cycle. These include London Packaging Week 2022, Packaging Innovations & Empack 2022, LGBTQ+ STEMinar 2022, UK Metals Expo 2022 and Advanced Engineering 2022.

2023 will see the Events Team host four major international conferences. RubberCon 2023, the topical conference series owned by the International Rubber Conference Organisation, will be held at the University of Edinburgh in May, followed by the 15th World Conference on Titanium, Ti-2023, at the Edinburgh International Conference Centre in June. SteelSIM, the 10th International Conference on Modelling and Simulation of Metallurgical Processes in Steelmaking will take place at the University of Warwick in September, and in October the 11th International Symposium on Ground Freezing returns to the UK for the first time since 1988.



'Great networking opportunity for someone new to the sector/industry. Everyone was friendly and a pleasure to engage with.'

Delegate at Timber 2022 (July 2022)

'Plenty of networking opportunities and useful contacts.'

Delegate at Cement & Concrete Science (Sept 2022)



Mineral Processing &
Extractive Metallurgy 2022
Presents

Geometallurgy

'Great conference, great content, great support from IOM3 staff, pretty smooth experience.'

Delegate at Geometallurgy 2022 (July 2022)

Manufacture & Materials for
Fission & Fusion Net-zero

'Fantastic range of speakers, who all presented well on their topics.'

Delegate at Manufacture & Materials for Fission & Fusion Net-zero (Dec 2022)

'A very well organised and interesting conference. Excellent to talk amongst the UK surface engineering community, and hear about the different work underway.'

Delegate at Surface Technology Innovations for Net-zero by 2050 (Oct 2022)

'A good chance to network and see the sort of work happening across the world.'

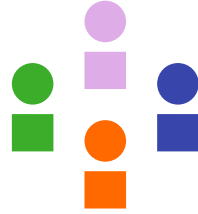
'Meeting face to face at a conference for the first time in 2 years. As a "senior", it is good to meet with "juniors" over coffee breaks.'

Delegates at International Conference on Adhesion 2022 (Sept 2022)

Surface Technology
Innovations for
Net-zero by 2050

Adhesion
2022

Policy & influence



Through the expertise and experience of our members, IOM3 continues to inform and influence key policy decisions across a range of important agendas. In 2022, IOM3 responded to relevant consultations, calls for evidence and parliamentary inquiries, collaborated with partners, contributed to government thinking and helped members to understand key policy changes.

IOM3 made a number of formal submissions in 2022, including:

- Department for Business, Energy & Industrial Strategy designing a climate compatibility checkpoint for future oil and gas licensing in the UK Continental Shelf consultation
- Department for Business Energy & Industrial Strategy call for evidence on UK advanced materials
- Environmental Audit Committee inquiry into green steel as part of its work on technological innovations and climate change
- Department for Environment Food & Rural Affairs consultation on legally binding environmental targets focussing on the proposed targets to reduce river pollution from abandoned metal mines, halve residual waste and the future possibility of a resource productivity target
- Independent net-zero review call for evidence

Partnership working has continued with joint consultation responses and activities. These included working on the skills required for the transition as part of the Environmental Policy Forum (EPF) and providing joint evidence to the House of Lords Science and Technology Committee inquiry into people and skills in UK STEM with the National Engineering Policy Centre (NEPC). IOM3 also contributed to the development of the Science Council Climate Conference which took place in September.

Members represented IOM3 to share knowledge and help shape important policy decisions. These included part of the UK delegation that participated in the UK Global Expert Mission on Critical Materials, as well as President Neil Glover representing IOM3 as a member of the government's Critical Minerals Expert Committee, which played a pivotal role in shaping the UK Critical Minerals Strategy.

Throughout 2022 IOM3 kept members up to date and informed about important policy developments. These included commenting on key government announcements and sharing important updates with members via IOM3 news. Policy discussion events, including 'COP26 & beyond' brought together stakeholders from across the value chain to discuss the challenges and opportunities following the climate summit in Glasgow, and an event on 'Packaging EPR, what do you need to know?' helped to demystify the packaging policy reform.

Communications & design

In 2022 IOM3 continued to use an integrated emailing system which produces monthly updates and allows members and non-members to opt-in to communications by material, sector, and community. The system allows us to send and track more targeted communications to bring in links to content directly from the website, saving much manual work.

During the year, we increased our IOM3 news content (90 items/8 blogs) and continued to celebrate a number of calendar days throughout 2022 including Pride Month, Global Recycling Day, International Women in Engineering Day and more.

Our social media presence continues to grow, recording over 18,200 LinkedIn followers, 12,932 Twitter followers, 3,800 Facebook followers and 942 Instagram followers at the end of December 2022.

Right: *Material Change: Resourcing Net Zero* film stills

'This series (Material Change: Resourcing Net Zero) offers unique insight into the work of inspirational professionals who are providing, managing, and protecting vital resources for a sustainable future. It has been a pleasure to tell their stories, and we hope this inspires everyone across the materials cycle and beyond to embrace progress towards net-zero.'

Max Smith, Managing Director, CWP

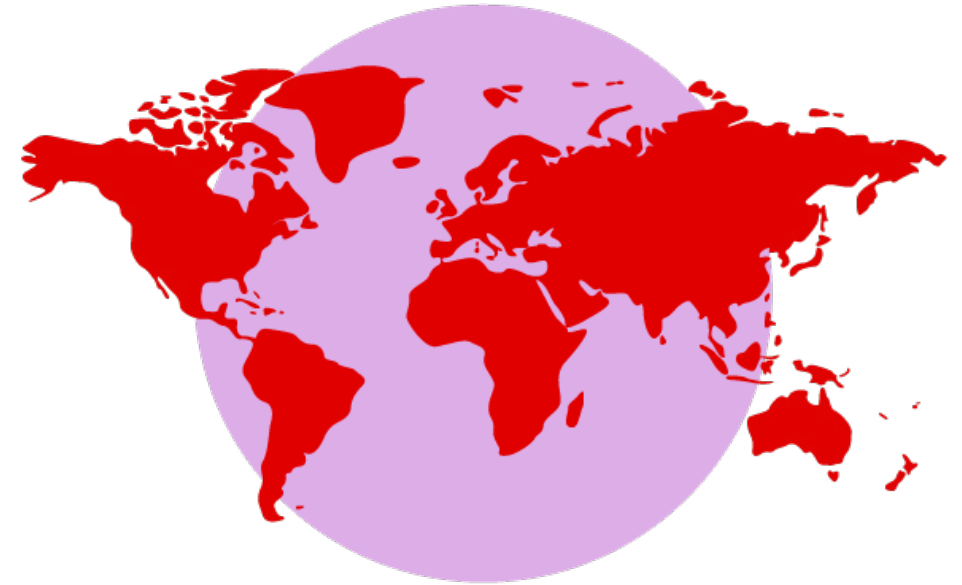


IOM3 team

2022 was a challenging year for IOM3, as for most organisations, with expected but significant flux within our team. The whole team navigated the changes and pressure exceptionally well whilst working hard to deliver excellent products and services to our members.

Hybrid working continued to be well received by the team, who enjoy the opportunity to meet physically with their colleagues while having the ability to have some focused time remotely. The whole team continues to meet twice a year for training and team building events.

Below: The IOM3 team at the 2022 London team day



International

During 2022, Martin Cox CEng FIMMM was confirmed as the Chair of the IOM3 International Affairs Committee. The partnership between IOM3 and ASM International continued during the year with two webinars in June and November on aluminium and nickel respectively, which in total received over 700 registrations. IOM3 is continuing to establish international links in India, Ireland, and Argentina as part of its international strategy.

Digital transformation

The Institute's digital systems continued to develop and be enhanced during 2022 in order to support IOM3 activities in all areas. One of the main digital projects in 2022 was the Technical Communities restructure, which involved a significant data mapping exercise for our member interests and setting up a full set of new web pages for all of the new Technical Communities, with new logos and branding.

Another restructuring exercise took place with the IOM3 membership grades changes, where significant work was required to ensure that the new grades structure was implemented smoothly on our database and was also reflected in the website content. Some changes were introduced to the design of the website to make navigation less confusing and to assist users in finding content of interest. The restructured Business Partner programme resulted in an attractive new style of landing page with icons to signpost users to information. This will be replicated in some other landing pages in future for clearer and easier navigation.

A system has been established across all of our activities to ensure that emails are co-ordinated and customised as far as possible to people's interests. Our regular newsletters are now well established with good open rates. We have been measuring the effectiveness of our various communications in order to optimise the sharing of information on our activities to members and non-members.

The Preside website software was upgraded to a newer version, providing improved functionality and performance, and a move to cloud hosting will take place during 2023. In 2023 we will also start to implement engagement scoring on our customer-facing systems to be able to track engagement of members and non-members and understand where this can be improved. The aim is also to develop a membership benefits statement in future. Other digital projects planned for the year include collection of diversity data, integration of the ICON digital library and further enhancements to membership, registration and financial processes.



Venues

The end of 2022 saw the completion of sale of our Stoke site taking the Institute from three sites to two, London headquarters and the Boilerhouse in Grantham. During the summer of 2022 the London office benefited from a significant investment in its building infrastructure with a new roof, and a new low carbon resource-efficient heating and cooling system, completely removing the site's reliance on natural gas. Investment also included a change to LED occupancy sensor lighting to provide long term savings on carbon and energy costs. Removal of our entrance staircase has created a secure first floor office which will allow IOM3 to lease this floor in its entirety to generate further income to support our charitable activity.

Our pledge to net-zero goal set in 2020, to reduce our Scope 1 and 2 emission to 70tCO₂e by 2030 across all our sites, has been achieved well ahead of schedule by reaching around 43tCO₂e in 2022. We would like to thank the team for helping us to overachieve on this target and look forward to seeing what further improvements we can make.

The IOM3 London office has also joined the Mayor's Business Climate Challenge where we are working with other organisations to share knowledge and create carbon savings of 10% in the next year. Our Scope 3 targets were created on estimated data and 2022 provides a truer baseline of data including calculations for commuting, business travel and investments. With the expanded reporting capabilities we are currently reviewing a new target for Scope 3 emissions. Plans for 2023 include further investment at both sites in energy saving improvements, security and AV equipment.

IOM3s pledge to net-zero goals set in 2020, to reduce our Scope 1 and 2 emission to 70tCO₂e by 2030 across all our sites, has been achieved well ahead of schedule by reaching around 43tCO₂e in 2022





Podcasts created in 2022.



**AWARDS, MEDALS
& PRIZES**

A major review of the Institute's awards took place during 2022. Over the course of its history, IOM3 had accumulated over 55 personal achievement and publication awards and prizes, the majority of which are presented annually at different occasions. Although relevant at the time of launch, they no longer accurately reflected the Institute we know today.

The number of awards and prizes led to confusion and ineligible nominations and made promoting the awards more difficult. Following an audit of the awards process, a review of the programme was carried out to streamline processes and to repurpose and combine existing awards to address the breadth of IOM3 disciplines, broadly in line with the Technical Communities review. Following a period of consultation with the IOM3 Trustees, Committees and Leadership Groups, a number of changes to the personal achievement awards were introduced for the 2023 awards.

The Institute will be launching the new IOM3 Sustainable Future Awards in 2023 to recognise, encourage and highlight the champions from the materials, minerals and mining sectors who are advancing the transition to a low-carbon, resilient and resource efficient society. The awards ceremony will be held as the closing highlight of a week of content focussed on sustainability in October.



Above: The 2022
Premier Awards Dinner

'It's always fantastic to be recognised for your achievements. For industrialists it's important to have a mechanism for being recognised for your contribution. It is a good example for others who want to aspire to this.'

*Prof Andrew Lewis FEng FIMMM,
Gold Medal 2022*

'When I look at other winners of this year and also the previous winners of all these prestigious awards of the Institute, the researchers and scientists that I admire a lot, so I feel truly honoured I can have my name listed among them.'

Dr Han Zhang CSci MIMMM, Silver Medal 2022

'It feels absolutely amazing to be a 2022 award winner. Really humbling as well. Having looked at past winners in the Leslie Holliday Prize, I am very honoured to be in the same group of people.'

Dr Sue Halliwell, Leslie Holliday Prize 2022

Personal achievement awards

| | | | |
|---|---|--|---|
| Bessemer Gold Medal | Prof Robertus Boom CEng MIMMM, Emeritus Professor, Delft University of Technology | Dowding Medal & Prize | Stuart Leflay Key Expert for Aluminium, Primetals Technologies |
| Chapman Medal | Prof Rachel Williams, Professor of Ophthalmic Bioengineering, University of Liverpool | Frank Paine Packaging Award | Iain Ferguson CEnv FIMMM, The Co-operative Group |
| Griffith Medal | Prof Judith Driscoll FEng CEng FIMMM, Professor of Materials Science, University of Cambridge | Gold Medal | Prof Andrew Lewis FEng FIMMM, Principal Scientist, Calla Lily Clinical Care Ltd & Director, Alchemed Bioscience Consulting Ltd |
| Medal for Excellence | Alan Kirk CEng HonFIMMM, Former Chief Mechanical Engineer, British Coal Corporation | Grunfeld Award & Medal | Dr Katerina Christofidou, Lecturer in Metallurgy, University of Sheffield |
| Silver Medal | Dr Han Zhang CEng CSci MIMMM, Senior Lecturer in Materials Science, Queen Mary University of London | Hadfield Medal & Prize | Dr Sara Hornby CEng FIMMM, Principal & Owner, Global Strategic Solutions |
| Sir Andrew Bryan Medal | Dr Phil Bischler CEng CSci FIMMM, Consultant, Magnox Electric Plc | Hancock Medal | Alan Bickley CEng FIMMM, Visiting Professor, University of Strathclyde |
| Swinburne Medal | Prof Anthony Ryan OBE, Professor of Physical Chemistry, University of Sheffield | Ivor Jenkins Medal | Prof Jose Manuel Torralba, Director, IMDEA Materials Institute |
| Award for Innovation in Defence, Safety & Security Materials | Dr Eoin O'Keefe FIMMM Stealth Materials Senior Technical Consultant, QinetiQ Plc | | |



| | | | |
|---|--|---|--|
| John Hunt Medal | Prof Lorenz Ratke, Retired, Former Head of Department, DLR Institute of Materials Research | Rowbotham Medal | Dr Robert V Dennis-Pelcher, Global Raw Material Development & Approvals Principal Scientist, The Goodyear Tire & Rubber Company |
| Kroll Medal & Prize | Dr Julian Jones CEng FIMMM, Professor of Biomaterials, Imperial College London | Stokowiec Medal & Prize | Cathy Bell, Research & Forensic Metallurgy Manager, Liberty Special Steels |
| Leslie Holliday Prize | Dr Sue Halliwell, Operations Manager, Composites UK Limited | T B Marsden Professional Medal | Peter Haslehurst FIMMM, Retired, former CEO & Chairman of Luxfer PLC |
| Outstanding Contribution Award for Equality, Diversity & Inclusion (NEW in 2022) | Avery Cunningham GradIMMM, Director of Membership, oSTEM | Thornton Medal | <i>Innovating with the public (PVC 2021)</i> Prof Mark Miodownik MBE FREng CEng HonFIMMM, Lecturer, University College London |
| Platinum Medal | Prof Catherine M F Rae, Professor of Superalloys, Fellow & Director of Rolls-Royce University Technology Centre, University of Cambridge | Tom Bell Surface Engineering Medal | Prof Robert Wood FREng FIMMM, Professor of Surface Engineering & Tribology, University of Southampton |
| Prince Philip Award | Zotefoams plc | Tom Colclough Medal & Prize | Dr Philip R Kirkwood, Director, Micro-Met International |
| Robert Perrin Award | Dr Sarah-Jane Potts MIMMM, Technology Transfer Fellow, SPECIFIC, Swansea University | Verulam Medal & Prize | Dr Emma Claxton CEng FIMMM, Programme Manager for UltraFan Validation, Rolls-Royce |
| Rosenhain Medal & Prize | Dr Dimitrios Papageorgiou, Lecturer in Materials Science, Queen Mary University of London | | |



Publication awards

Adrian Normanton Prize

Effects of residual elements during the casting process of steel production: A critical review

Ishwar Kapoor, Claire Davis & Zushu Li

Alan Glanvill Award

Flexible piezoresistive strain sensor with high sensitivity based on carbonised waste thermosetting resin

Lei Wang, Dong Xiang, Wanqiu Zhu, Chunxia Zhao, Yuntao Li, Hongchang Han, Ping Wang & Jie Wang

Composite Award

Characterisation of tape-based carbon fibre thermoplastic discontinuous composites for energy absorption

Sachin Francis, Thomas Bru, Leif E Asp, Maciej Wysocki & Christopher Cameron

James S Walker Award

Wear of carbon black reinforced natural rubber compounds

Philip Antonio Hurrell, Queen Mary University of London

Materials World

Unintended consequences

Darryn Quayle, Worley

Mann Redmayne Medal A

Value chain excellence: Managing variability to stabilise and exploit the mine value chain

Martyn L Bloss, Geoff W Capes, Russell Seib, Liam V Alford, Jack L Light, Ilnur Minniakhmetov & Chris Nielsen

Pfeil Award

Athermal electric field effects in flash sintered zirconia

Jian Dong, Mattia Biesuz, Vincenzo M Sglavo, Milad Kermani, Xiaojia Su, Theo Saunders, Chunfeng Hu & Salvatore Grasso

2021 Vanadium Award (Retrospective)

Improvement of Strength-Ductility Balance by the Simultaneous Increase in Ferrite and Martensite Strength in Dual-Phase Steels

Elango Chandiran, Naoya Kamikawa, Yu Sato, Goro Miyamoto, and Tadashi Furuhashi

Williams Award

Rapid alloy prototyping for strip steel development: DP800 steel case study

Y Zhu, C Slater, S Connolly, D Farrugia & C Davis

'It was great to meet the 2022 winners, it's always good to meet people from across all our different membership activities, and to see the great work they are doing.'

Neil Glover FREng CEng FIMMM, President of IOM3



Above: The Special & Publication Awards Lunch held in December 2022



Below: IOM3 President Neil Glover presenting the 2022 Local Society of the Year Award to SMEA representatives Dr Colleen Mann and Mr Mark Tomlinson



Above: Winners at the 2022 Premier Awards Dinner

Below: Nicky Davies (left) presenting the Robert Perrin Award to Dr Sarah-Jane Potts



Awards from other bodies

Beilby Medal & Prize

Prof Sahika Inal, King Abdullah University of Science & Technology

Charles Hatchett Award

What is the role of Nb in nickel-rich layered oxide cathodes for lithium-ion batteries?

Fengia Xin, Hui Zhou, Yanxu Zong, Mateusz Zuba, Yan Chen, Natasha A Chernova, Jianming Bai, Ben Pei, Anshika Goel, Jatinkumar Rana, Feng Wang, Ke An, Louis F J Piper, Guangwen Zhou & M Stanley Whittingham

Local Society Awards

Local Society of the Year Award

Midland Institute of Mining Engineers (MIMinE)
Southern Counties Materials, Minerals & Mining Society (SCMMMS)

Outstanding Service Awards

Dr Simon Hogg FIMMM (EMMS)
Michael McLoughlin CEng FIMMM (MinSouth)

Student & Apprentice Awards

| | |
|---------------------|-------------------------|
| Category 1 | Britoni Farrer-Williams |
| Category 2 | Callum S W Partridge |
| Category 4 | Martina Piemonte |
| Royal Charter Prize | Britoni Farrer-Williams |

'It is truly a once in a lifetime opportunity. I learned a lot throughout the process.'

Rathosivan Gopal,
2022 YPWLC winner

Competitions

Young Persons' Lecture
Competition

Young Persons' World
Lecture Competition

Lauren Eggleton,
North East

Rathosivan Gopal,
Malaysia



IOM3 Funding

Grants to support
knowledge exchange

Callum Aaron Smith
Laura Stefanini
Gengyao (Felix) Wei
Alexander Bruce Matheson
Christian Bechteler
Matthew James McArdle
Aaron Todd
John Donald Morley
Luke Peter Malone
Emily Rose Lewis
Dominic Skeat
Jack William Bonfield
Callum Smith

Bursaries to support learning

Financial review

Overview

2022 was a year of two halves with a number of IOM3 activities and in-person events picking up in the second half of the year. As a result overall IOM3 income increased by 3.6% compared to 2021 (from £3,859k in 2021 to £3,997k in 2022). The IOM3 team and trustees continued to maintain operating cost control throughout the year while ensuring high quality services continued to be provided to members. We are pleased to report that IOM3 finished the year with a combined operating surplus of £13k (2021 – £63k deficit). It should also be noted that if depreciation and defined benefit pension scheme running costs and deficit funding are excluded, IOM3 operating results show an operating surplus of £449k (2021 - £400k) reflecting stellar performance of activities IOM3 team have direct responsibility for. After taking into account unrealised losses on the market value of IOM3 investment portfolio and actuarial gains on the defined benefit pension scheme, IOM3 ended 2022 with an overall deficit of £957k (2021 – surplus of £2,070k).

As can be seen from the graphs on page 59, membership subscriptions continue to represent the majority of IOM3 income, closely followed by scientific journal royalties. Combined, these two income streams generate nearly two-thirds of IOM3 income. IOM3 Training Academy continued to perform strongly during the year and its successful re-launch in September 2022 helped generate a further 8% of overall income. The IOM3 consultancy agreement with UNESCO Russia came to a contractual end in March 2022 and understandably was not renewed, leading to a significant decline in consultancy income compared to prior years.

Investments review

Most of the IOM3 investments portfolio is managed by BlackRock Charities Growth & Income Fund, a sustainable investments fund which aims to provide a return on investment (net of fees) over a period of 5 or more consecutive years through an increase to the value of the assets held and/or income received from those assets whilst adhering to the Fund's environmental, social and governance criteria. IOM3 trustees adopted a policy of maximising total returns from investments commensurate with acceptable risk for a charitable organisation.

With the conflict in Ukraine, rapidly rising inflation and political uncertainty, 2022 proved to be one of the most challenging market environments recorded in history with meaningfully negative returns across equity and fixed income assets. In 2023 key challenges remain high inflation, more restrictive central bank policies, geopolitical tensions and a potential European energy crisis. The trade-off faced by central banks of taming inflation by hiking interest rates or preserving growth is likely to be a principal focus of 2023. Additionally, volatility surrounding energy markets, driven by the ongoing conflict in Ukraine, expected economic growth momentum and weather patterns is likely to continue.

Fund net performance (% net return)

| | 2022 | 2021 | |
|--------------------|-------|-------|---|
| Fund | -9.7% | 11.5% | Benchmark: 30% UK FTSE All-Share ex Investment Trusts, Tobacco, Aerospace & Defence, Beverages Index; 30% MSCI World SRI Index (GBP); 20% Bloomberg Barclays GBP Gilts Index; 10% IPD All Balanced Funds Property Index; 10% Cash (3M SONIA compounded in arrears). |
| Benchmark | -9.3% | 14.5% | |
| | 2022 | 2021 | |
| Distribution yield | 3.1% | 2.3% | The distribution yield represents the ratio of distributed income over the last 12 months to the fund's current net asset value. |

BlackRock Charities Growth & Income Fund risks:

- Smaller companies risk. Smaller company investments are often associated with greater investment risk than those of larger company shares.
- Liquidity risk. The Fund's investments may have low liquidity which often causes the value of these investments to be less predictable. In extreme cases, the Fund may not be able to realise the investment at the latest market price or at a price considered fair.

Reserves review

Trustees policy on reserves is to:

- Set aside sufficient reserves to fund the net book value of all tangible fixed assets and the cost of future capital expenditure requirements. These amounts are held in the asset development fund and total £10,680k at 31 December 2022.
- Set aside reserves to develop and improve the quality of services provided by the Institute. These reserves are held in the services development fund and total £57k as at 31 December 2022.
- Retain sufficient liquid reserves to cover the future expenditure of charitable, management and administrative costs of up to one year. This level of reserves is considered appropriate to allow the Institute to be managed effectively, to provide a buffer for uninterrupted services and to achieve the long-term objectives of the Institute.

IOM3 unrestricted investments portfolio was valued at £6,580k at 31 December 2022 and represents 140% of the budgeted operating

expenditure for 2023. The trustees consider this level of reserves sufficient to achieve the long-term objectives of the Institute. In addition, the trustees are also looking at ways of maximising the use of IOM3's fixed assets and broadening the use of restricted funds.

The trustees set a budget for net expenditure of £203k for 2023 to support ongoing initiatives for the development of membership, training and conference programmes.

Principal risks and uncertainties

Trustees have identified the following major risks facing the Institute:

- Loss of members through the ageing population and economic impact within the industry;
- Failure of IT systems and compromise to the use of the membership database as a result of cyber security breach;
- Difficulty in maintaining and growing current streams, in particular royalties generated from the scientific journal publishing;
- Financial impact of the deficit of the defined benefit pension scheme on the Institute's future strategy;
- Reputational and financial impact resulting from adverse volunteer actions;
- Major adverse change in investment values;
- Major adverse change in the UK and global economy.

The risk register is being reviewed and updated on a regular basis and the trustees, employees and professional advisors are taking steps to mitigate these risks and minimise their impact on the Institute's future performance.



**STRUCTURE &
GOVERNANCE**

The oldest nation-wide constituent of this Institute was created in 1869. The Institute of Materials, Minerals and Mining is a body incorporated by Royal Charter (RC000267) dated 25 July 1975 and modified on 26 June 2002 and is a Registered Charity in England & Wales (269275) and in Scotland (SC050586).

Governance Modernisation

Following on from the governance changes that created the Advisory Council, the Executive Board and the four pillars of IOM3 in 2019 (Phases 1 and 2), the Trustees consulted members on the third phase of changes; a further modernisation of the Bye-laws. These changes were agreed by members at the 2021 Annual General Meeting, received approval from the Privy Council Office in August 2022 and came into force on 7 September 2022. The main changes in this revision are:

- A simpler, more streamlined membership grade structure
- Formally allowing for General Meetings to be held in a hybrid manner (ie both in person and online attendance)
- Clarifying some issues around Executive Board members
- Ensuring gender-neutral language is used throughout
- Creating a new professional registration ('Qualified for Minerals Reporting', or QMR) for members involved in mineral resources and reserves reporting

Phase 4 of our Governance Modernisation – a restructuring of our Technical Communities – came into effect in April 2022 following almost three years of discussion and consultation. We now have 22 Technical Communities covering the breadth of areas of IOM3 member interest, each of which contributes to the nine over-arching themes. This restructure seeks to maximise the contribution the Technical Communities and their Leadership Teams make to delivering benefits to members and to wider society.

Executive Board

IOM3 is managed by an Executive Board, the members of which are the trustees of the Institute. They are drawn from senior members of the Institute and are responsible for the ongoing management of strategy and performance of the Institute. The members of the Board include those who are following the presidential succession, and members involved as chairs of other activity boards.

Advisory Council

The Advisory Council forms part of the Institute's new governance structure which was approved by Privy Council in August 2019 and implemented on 5 November 2019. The Advisory Council exists to advise the Executive Board on major strategic decisions and strategic planning and consists of the Officers of the Institute together with 22 members representing the Technical Communities, five representing the Member Networks, eight members representing Grades and seven members representing UK and overseas regions.

Governance committees

The Executive Board is supported by three governance committees (Audit, Nominations and Remuneration) that have standard responsibilities. In addition, the Awards Committee also reports to the Executive Board.

Audit Committee

The Audit Committee keeps under review the effectiveness of the Institute’s financial reporting, internal control policies and operating procedures, together with a broad remit to review all elements and levels of Institute governance and function.

Awards Committee

The Awards Committee oversees the operation of the Institute’s Awards programme and is responsible for making recommendations to the Executive Board accordingly.

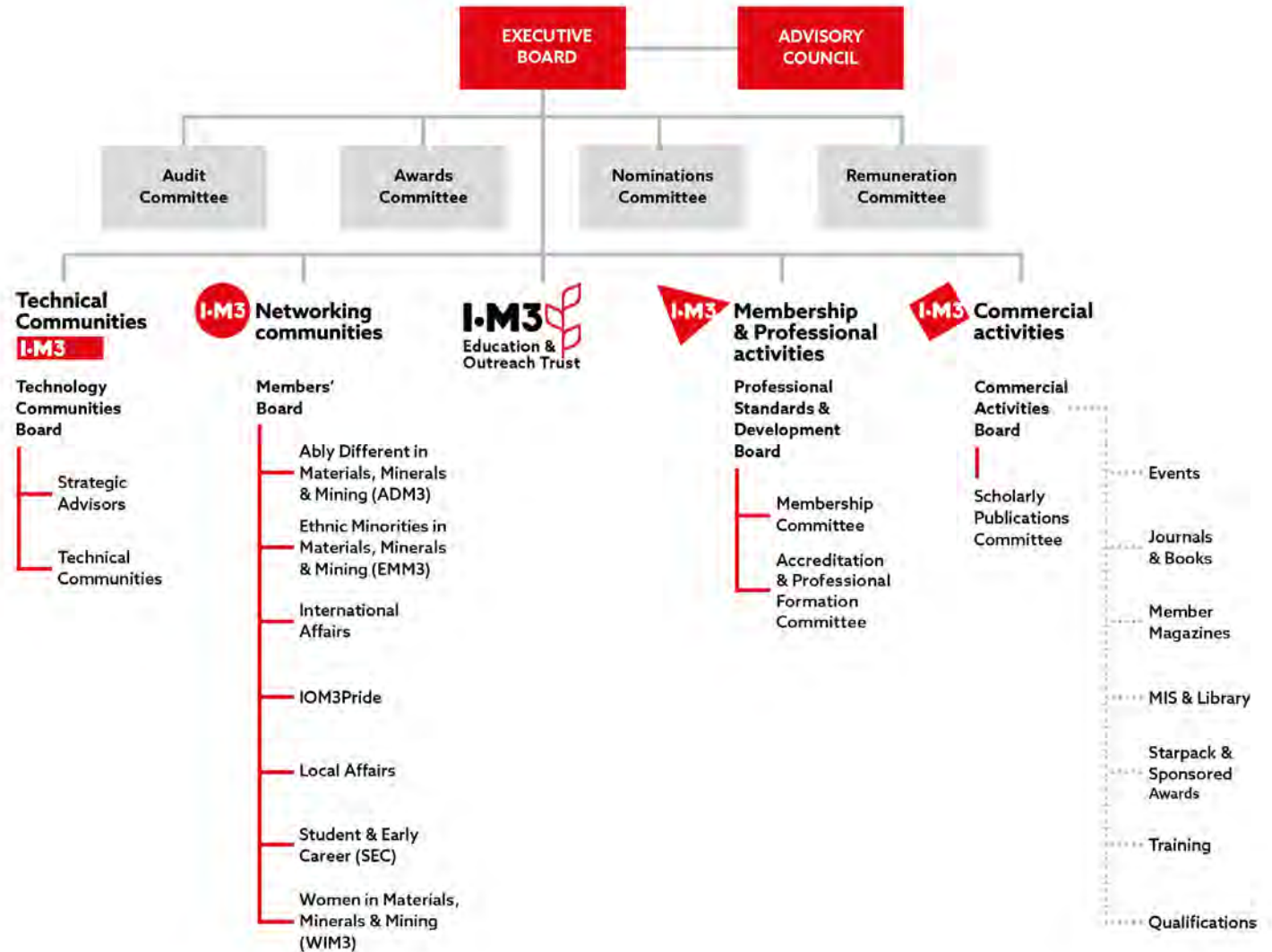
Nominations Committee

The Nominations Committee leads the process for appointment to the Executive Board, Institute Officers and Chairs of Primary Boards and other Boards which are not already prescribed by regulations or election.

Remuneration Committee

The Remuneration Committee aims to ensure that levels of remuneration are in line with the performance and needs of the Institute and the institutional sector.

Alongside those four committees, the work of IOM3 is organised in four pillars.



Technology Communities Board (TCB)

The TCB is responsible for overseeing and co-ordinating the work IOM3 does as a 'Learned Society'. This means our activities to promote and share knowledge on materials, minerals and mining. With the help of the nine Strategic Advisors, it does through the 22 Technical Communities (special interest groups) that sit under it. These act as a focus of expertise within the broad range of technical sectors embraced by IOM3. Each group holds regular meetings and, through its supporting networks, organises a programme of events to promote and develop its discipline. Each also has an online presence and communicates its activities to members and non-members alike through web content, newsletters and social media. Events organised by the technical groups are open to all and serve to inform about the latest developments within the discipline as well as providing networking opportunities for people from academia, industry and government, often in an international context. Networking events attract non-members from the UK and overseas, who can make up a significant proportion of the event audience.

Members' Board

The Members' Board is responsible for co-ordinating the Institute's activities in the regions and other member networks. The Institute has a network of affiliated societies throughout the UK, as well as overseas groups. Events and activities co-ordinated by local groups and societies are also supported through the technical community structure. The Members' Board also looks after the interests of the Member Networks, currently Aply Different in Materials Minerals & Mining, Ethnic Minorities in Materials, Minerals & Mining, IOM3Pride, Student & Early Career and Women in Materials, Minerals & Mining.

Aply Different in Materials, Minerals & Mining Group (ADM3)

Aply Different is a voluntary network of IOM3 whose goal is to achieve equality of opportunity professionally for IOM3 members identifying as disabled and allies such as family members, carers and work colleagues. Together, it will do this by advancing the interests of disabled people, raising awareness and supporting equality of opportunity for IOM3 members in materials, minerals and mining and supporting equity, diversity and inclusion within the wider STEM community.

Ethnic Minorities in Materials, Minerals & Mining (EMM3)

The long-term goal of this group is to promote equality of opportunity professionally for ethnic minorities within the materials, minerals and mining industries. In the short term, the focus will be around gathering data from members belonging to minority groups to understand any issues they may face in the industry or in education and how IOM3 can help to address these. The group will also promote the creation of inclusive policies within the Institute, as well as raising awareness with regards to issues such as unconscious biases in the workplace

International Affairs Committee

The IAC is responsible for communications between the Institute and its international communities. It also encourages the development of new activities and communities outside the UK.

IOM3Pride

IOM3Pride is a voluntary network of IOM3 whose goal is to achieve equality of opportunity professionally for LGBTQ+ identifying IOM3 members. It aims to do this by highlighting issues related to LGBTQ+ individuals in materials, minerals and mining and supporting equity, diversity and inclusion within the wider STEM community.

Local Affairs Committee

IOM3 has a network of Affiliated Local Societies (ALS) across the UK. These are independent organisations which run their own programmes of events and activities locally, and by affiliation with IOM3 receive funding and support. Some ALS also engage with local schools, universities and businesses to provide valuable support for teaching and learning. The Local Affairs Committee is responsible for communications between the Institute and its ALS.

Student & Early Career (SEC)

The Younger Members' Committee (YMC) was established in 1967 to represent the views and interests of the Institute's younger members, and is one of the longest running committees in our history. The YMC officially changed its name to Student & Early Career (SEC) Group in June 2020 following consultation with its membership. It organises various events and activities throughout the year.

Women in Materials, Minerals & Mining (WIM3)

IOM3 Women in Materials, Minerals & Mining (WIM3) was established in 2012 to provide a focus for women members within the Institute and help support them in their careers. Its leadership team has organised several successful events around the UK which have attracted female members at all stages of their career and provided valuable networking opportunities for women.

Professional Standards & Development Board

Professional affairs within the Institute are overseen by the Professional Standards & Development Board, which deals with membership, qualifications and accreditation.

Membership Committee

The membership committee is responsible for the evaluation of membership applications for both Institute grades and professional registration such as Chartered Engineer, Chartered Environmentalist, or Chartered Scientist.

Accreditation & Professional Formation Committee (APFC)

The APFC oversees the standards and processes for the accreditation of academic programmes, and company Initial Professional Development (IPD) schemes to meet the requirements for registration levels for which IOM3 has licences, in the UK and abroad.

Commercial Activities Board

The Commercial Activities Board is responsible for trading strategy development and co-ordination of revenue generation activities other than membership. This includes charitable activities such as the provision of information on materials, minerals and mining through Institute publications, conferences, training and information services. It also has oversight of Materials Institute Services Ltd, a wholly owned subsidiary of the Institute responsible for IOM3 venue hire and other non-charitable trading activities.

Objectives & activities

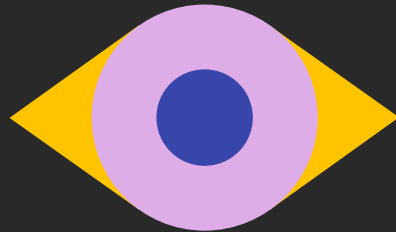
The charitable objects of IOM3, as set out in the Royal Charter, are:

To advance and develop all aspects of science, engineering and technology as applied to the discovery, exploration, development, characterisation, exploitation, processing, application and re-cycling of materials, minerals and fuels, to further and co-ordinate education, training and practice in these disciplines and to facilitate the acquisition, preservation and dissemination of knowledge pertaining to these disciplines, provided that in pursuing these objects, in so far as they may be similar to those of existing organisations, the Institute shall use its best endeavours to co-operate with them and to ensure that its activities are complimentary to those of such organisations.

Our Corporate Strategy sets two objectives for IOM3:

To support professionals in materials, minerals, mining to be champions of the transition to a low-carbon, resilient & resource efficient society.

To be the best professional membership body it can be.

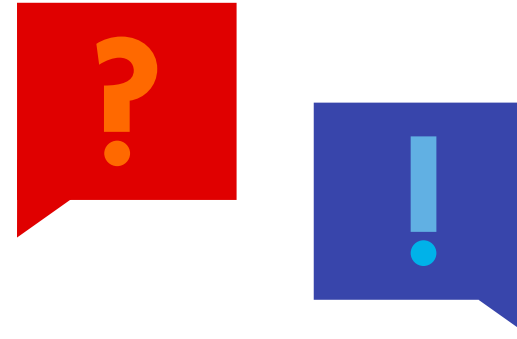


Through our activities we aim to:

Raise the profile of our sectors as technologies vital to the health and wealth of the nation; engage in public, policy and media debate to increase the visibility of materials, minerals, and mining

IOM3 has always worked closely with Government in relation to the delivery of new technology to industry. We are also increasingly deploying the expertise of our members to influence the public, media and policy debates that have materials, minerals and mining aspects, including through participation in Government advisory groups and contributing to public and parliamentary consultations. Our communications efforts also explain the vital importance of materials, minerals and mining to our future society.

Stimulating innovation in the extraction, use and application of materials, IOM3 organises both UK and worldwide competitions to develop a broad understanding of the importance of materials, minerals and mining, and such events engage with schools, students and businesses from the UK and beyond. Separately IOM3 provides an extensive range of awards both to members and non-members who have provided outstanding contributions to our communities and professions.



Support people within the materials, minerals and mining sectors to address the societal challenges we face today such as climate change, equity, diversity and inclusion, etc

The Sustainable Future theme brings together many of the IOM3 activities that seek to ensure our members and wider society understand how materials, minerals and mining need to contribute to the transition to a low-carbon, resilient and resource efficient society. Both individually, and as part of the wider networks of engineering, environmental and scientific professional institutions, IOM3 encourages and promotes the participation of under-represented and minority groups in the engineering, environment, and science professions. To help support and encourage individuals in STEM careers who share particular characteristics or non-technical interests, IOM3 has created five Member networks (ADM3, EMM3, IOM3Pride, SEC and WIM3).

Support and encourage education in materials, minerals and mining to attract young people to the profession

IOM3 accredits a number of university, college and industry courses in the UK and overseas, and provides a special low-cost membership package for undergraduates, which is often sponsored by local societies or by their university. A thriving Student & Early Career Group organises regular events for students and early career members. IOM3 has an active education programme that enriches the teaching of materials, minerals and mining in the curriculum and promotes careers within our sphere of influence. We provide help, advice and teaching materials free of charge to teachers that have signed up to our School Affiliate service and to date over 1,200 schools have registered. Our schools presentations have so far been delivered to more than 100,000 pupils throughout the UK. The team also organises study days for teachers and events to allow older pupils to interact with young people already working in the sector. We also - through the IOM3 Education & Outreach Trust - provide financial support for schools, students and early career researchers.

Provide a central resource of expertise and information through content; disseminate information through conferences, events, publications, online resources and social media; increase the visibility of new technology to industry; provide networking opportunities through technical, local and other activities to increase interaction between industry, academia and government

IOM3 publishes technical books, learned journals and member magazines and organises conferences on materials, minerals and mining related subjects. The publishing of technical books and learned journals is outsourced to Taylor & Francis. Access to this material is available to both members and non-members. In-house teams publish the member magazines and organise the majority of conferences. IOM3 maintains an extensive resource of technical and historical publications that form the core of our information and library services, a source of expertise accessible to all. The IOM3 Technical Enquiries service provides consultancy and advice services to anyone who needs access to expertise in materials, both individuals and organisations. Of the 1,500 enquiries routinely handled each year, 50% originate from the UK public. The Business Partner Programme enables organisations to visibly associate themselves with IOM3 and access its resources and work programmes. Confirmed subscribers to date include Lucideon, National Composites Centre and Lloyds Register.

IOM3 itself organises dozens of events every year covering a wide range of topics of relevance to professionals in materials, minerals and mining. In addition, we partner with other organisations to support similar activities, including the UK-wide network of local societies affiliated to IOM3, our international affiliated societies, other UK and international professional bodies and learned societies and other like-minded organisations.

Provide our members with benefits, services and opportunities to support their careers

IOM3 technical communities, boards and committees are all composed of active supporters and volunteers (ASVs) drawn from the IOM3 membership, who freely give their time and expertise to deliver the Institute's charitable purposes and professional activities, develop our communities and provide peer review processes where needed. IOM3 depends on the engagement of our members in the broad range of our activities and could not deliver our objectives effectively without their significant contribution. IOM3 members play a prime role in promoting our objects and providing public benefit. Accordingly, a wide range of member services and benefits have been developed in pursuance of our objectives and to attract new members. Benefits of membership include professional recognition, networking opportunities to share knowledge and experience, free technical enquiry services, a choice of members' magazine, a members' business centre and use of facilities, discounted conference fees, training courses and publications, and additional online services. In addition, the regulation of the profession provides benefits to both members - who are recognised as competent and professional - and to wider society.

IOM3 provides support to our worldwide membership through our UK offices, our technical communities and societies, and our network of affiliated local societies and national groups. Career progression is recognised through various grades of membership and IOM3 is licensed to deal with applications for Chartered Engineer, Incorporated Engineer, Engineering Technician, Chartered Environmentalist, Registered Environmental Practitioner, Chartered Scientist, Registered Scientist and Registered Science Technician status.

Statement of Trustees' responsibilities

The Trustees are responsible for preparing the Trustees' Report and the financial statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

The Law applicable to charities in England & Wales requires the Trustees to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the group and charity and of the incoming resources and application of resources of the group and charity for that period. In preparing these financial statements, the Trustees are required to:

- Select suitable accounting policies and then apply them consistently
- Observe the methods and principles in the applicable Charities SORP
- Make judgements and estimates that are reasonable and prudent
- State whether applicable United Kingdom accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements
- Prepare the financial statements on the going concern basis unless it is inappropriate to presume that the charity will continue in business

The Trustees are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the group and charity and enable them to ensure that the financial statements comply with the Charities Act 2011, the Charity (Accounts and Reports) Regulations and the provisions of the Royal Charter and Bye-laws. They are also responsible for safeguarding the assets of the group and charity and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities. The Trustees are responsible for the maintenance and integrity of the group and charity and financial information included on the charity's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Trustees, senior boards & professional advisors

Details of the current Board and Committee members can be found at www.iom3.org/about-us/governance.html

Executive Board & Trustees

Prof Serena M Best, Chair and Immediate Past President (to December 2022)

Neil E Glover, President (to December 2022);
Chair and Immediate Past President (from January 2023)

Dr Kate Thornton, Senior Vice-President (to December 2022);
President (from January 2023)

Christine A Blackmore, Vice-President (to December 2022);
Senior Vice-President (from January 2023)

Prof Michael R Clinch, Vice-President

Dr Graham A Ormondroyd, Vice-President (from December 2022)

Vikas Mawkin, Honorary Treasurer (until March 2023)

Dr Philip J E Bischler, Chair of Members' Board (to January 2022)

Martyn A Jones, Chair of Student & Early Career Committee (to January 2022);
Chair of Members' Board (from February 2022)

Dr Aimee L Goodall, Chair of Student & Early Career Committee (from February 2022)

Martin C Cox, Chair of International Affairs Board (from February 2022)

Dr Christopher W Corti, Chair of Professional Standards & Development Board (to July 2022)

Dr David Stewart, Chair of Professional Standards & Development Board (from September 2022)

Jan C H Lewis, Chair of Commercial Activities Board

Prof Mark R Jolly, Advisory Council Representative (until April 2022)

Judith Allan, Advisory Council Representative (from April 2022)

David Seath, Advisory Council Representative

Robert G Siddall, co-opted (from September 2022)

Dr Maurizio Carano, co-opted (February 2022 – March 2023)

Board of Directors, IOM Communications Ltd.

The following served as directors during the year:

| | |
|---------------------------|-------------|
| Chair/Director | J C H Lewis |
| Directors/trustees | Dr C Church |
| Company Secretary | J Bugajeva |

Board of Directors, Materials Institute Services Ltd.

The following served as directors during the year:

| | |
|--------------------------|--|
| Directors | Dr C Church N E Glover K Harrison J C H Lewis |
| Company Secretary | J Bugajeva |

Board of Directors, PIABC Ltd.

The following served as directors during the year:

| | |
|--------------------------|--|
| Directors | Dr C W Corti (to July 2022) Dr C Church N E Glover |
| Company Secretary | J Bugajeva |

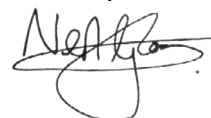
Key management personnel

| | |
|--|----------------------|
| Chief Executive | Dr C Church |
| Finance Director | J Bugajeva |
| Director of Communications | Dr I A N Staniaszek |
| Director of Operations & Professional Development | K Harrison |
| Director of Membership & Professional Standards | EUR ING I J Bowbrick |
| Director of Business Support | C Marriott |

Professional advisors

| | |
|----------------------------|---|
| Bankers | Santander UK plc 4th Floor 100 Ludgate Hill London EC4M 7RE |
| Solicitors | Howes Percival LLP 3 The Osiers Business Centre Leicester LE19 1DX |
| Auditors | RSM UK AUDIT LLP 25 Farringdon Street London EC4A 4AB |
| Investment Managers | Blackrock Investment Management (UK) Ltd 12 Throgmorton Avenue London EC2N 2DL |
| Actuaries | First Actuarial LLP Second Floor, The Square Basing View, Basingstoke Hampshire RG21 4EB |

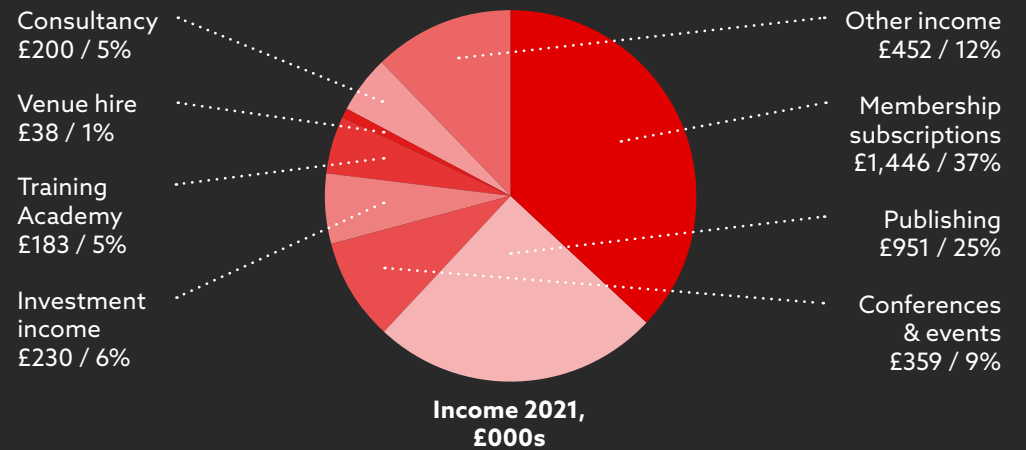
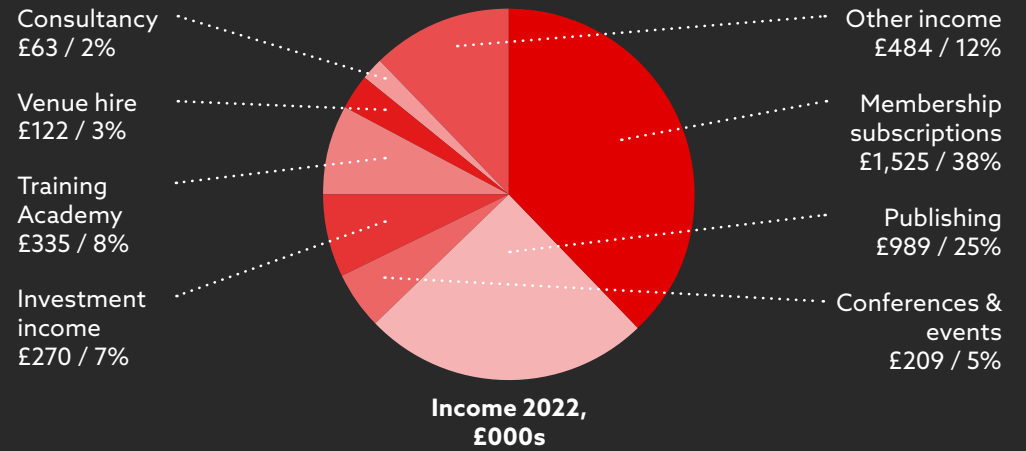
This report was approved by the trustees on 25 May 2023



Neil Glover



FINANCIAL **STATEMENTS**



The following pages detail financial activities for the year ended 31 December 2022, reflecting operating performance, assets and obligations. Income for the year 2022 are summarised in the chart above.

Independent auditor's report to the trustees of the Institute of Materials, Minerals & Mining

Opinion

We have audited the financial statements of The Institute of Materials, Minerals and Mining (the 'parent charity') and its subsidiaries (the 'group') for the year ended 31 December 2022 which comprise Consolidated Statement of Financial Activities, the Consolidated and parent charity Balance Sheets, the Consolidated and parent charity Statement of Cash Flows and notes to the financial statements, including significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including FRS 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland" (United Kingdom Generally Accepted Accounting Practice).

In our opinion the financial statements:

- give a true and fair view of the state of the group's and parent charity's affairs as at 31 December 2022 and of the group's and parent charity's incoming resources and application of resources for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Charities and Trustee Investment (Scotland) Act 2005, regulations 6 and 8 of the Charities Accounts (Scotland) Regulations 2006 (as amended) and the Charities Act 2011.

Basis for opinion

We have been appointed auditors under section 44(1)(c) of the Charities and Trustee Investment (Scotland) Act 2005 and under section 151 of the Charities Act 2011 and report in accordance with regulations made under those Acts.

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the group and parent charity in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions relating to going concern

In auditing the financial statements, we have concluded that the trustees' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the group's or parent charity's ability to continue as a going concern

for a period of at least twelve months from when the financial statements are authorised for issue.

Our responsibilities and the responsibilities of the trustees with respect to going concern are described in the relevant sections of this report.

Other information

The other information comprises the information included in the annual report other than the financial statements and our auditor's report thereon. The trustees are responsible for the other information contained within the annual report. Our opinion on the financial statements does not cover the other information and, we do not express any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the course of the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

Matters on which we are required to report by exception

We have nothing to report in respect of the following matters where the Charities Accounts (Scotland) Regulations 2006 (as amended) and the Charities Act 2011 require us to report to you if, in our opinion:

- the information given in the financial statements is inconsistent in any material respect with the trustees' annual report; or
- proper and sufficient accounting records have not been kept by the parent charity; or
- the parent charity financial statements are not in agreement with the accounting records and returns; or
- we have not received all the information and explanations we require for our audit.

Responsibilities of trustees

As explained more fully in the statement of trustees' responsibilities set out on page 55 the trustees are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the trustees determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the trustees are responsible for assessing the group and parent charity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the trustees either intend to liquidate the group or parent charity or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

The extent to which the audit was considered capable of detecting irregularities, including fraud

Irregularities are instances of non-compliance with laws and regulations. The objectives of our audit are to obtain sufficient appropriate audit evidence regarding compliance with laws and regulations that have a direct effect on the determination of material amounts and disclosures in the financial statements, to perform audit procedures to help identify instances of non-compliance with other laws and regulations that may have a material effect on the financial statements, and to respond appropriately to identified or suspected non-compliance with laws and regulations identified during the audit.

In relation to fraud, the objectives of our audit are to identify and assess the risk of material misstatement of the financial statements due to fraud, to obtain sufficient appropriate audit evidence regarding the assessed risks of material misstatement due to fraud through designing and implementing appropriate responses and to respond appropriately to fraud or suspected fraud identified during the audit.

However, it is the primary responsibility of management, with the oversight of those charged with governance, to ensure that the entity's operations are conducted in accordance with the provisions of laws and regulations and for the prevention and detection of fraud.

In identifying and assessing risks of material misstatement in respect of irregularities, including fraud, the group audit engagement team:

- obtained an understanding of the nature of the sector, including the legal and regulatory frameworks that the group and parent charity operates in and how the group and parent charity are complying with the legal and regulatory frameworks;
- inquired of management, and those charged with governance, about their own identification and assessment of the risks of irregularities, including any known actual, suspected or alleged instances of fraud;
- discussed matters about non-compliance with laws and regulations and how fraud might occur including assessment of how and where the financial statements may be susceptible to fraud.

As a result of these procedures we consider the most significant laws and regulations that have a direct impact on the financial statements are FRS 102, Charities SORP (FRS 102), Charities and Trustee Investment (Scotland) Act 2005, regulations 6 and 8 of the Charities Accounts (Scotland) Regulations 2006 (as amended), the Charities Act 2011, the parent charity's governing document. We performed audit procedures to detect non-compliances which may have a material impact on the financial statements which included reviewing the financial statements disclosures including the Trustees' Report and remaining alert to new or unusual transactions which may not be in accordance with the governing documents.

The most significant laws and regulations that have an indirect impact on the financial statements are those in relation to the General Data Protection Regulation. We performed audit procedures to inquire of management whether the group is in compliance with these law and regulations.

The group audit engagement team identified the risk of management override of controls as the area where the financial statements were most susceptible to material misstatement due to fraud. Audit procedures performed included but were not limited to testing manual journal entries and other adjustments, evaluating the business rationale in relation to significant, unusual transactions and transactions entered into outside the normal course of business and challenging judgments and estimates.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at <http://www.frc.org.uk/auditorsresponsibilities>. This description forms part of our auditor's report.

Use of our report

This report is made solely to the charity's trustees, as a body, in accordance with section 44(1)(c) of the Charities and Trustee Investment (Scotland) Act 2005, and regulation 10 of the Charities Accounts (Scotland) Regulations 2006 (as amended) and the Charities Act 2011. Our audit work has been undertaken so that we might state to the charity's trustees those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the charity and its trustees as a body, for our audit work, for this report, or for the opinions we have formed.

RSM UK Audit LLP is eligible to act as an auditor in terms of section 1212 of the Companies Act 2006

RSM UK Audit LLP

RSM UK AUDIT LLP
Statutory Auditor
Chartered Accountants
25 Farringdon Street
London
EC4A 4AB

Date: 5 June 2023

RSM UK AUDIT LLP is eligible
to act as an auditor in terms of
Section 1212 of the Companies
Act 2006

Consolidated statement of financial activities for the year ended 31 December 2022

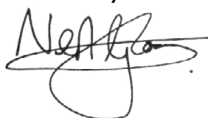
| | Notes | Unrestricted funds General £'000 | Unrestricted funds Designated £'000 | Restricted funds £'000 | Permanent endowment £'000 | Total funds 2022 £'000 | Total funds 2021 £'000 |
|--|-------|--|---|------------------------------|---------------------------------|---------------------------------|---------------------------------|
| INCOME AND ENDOWMENTS FROM: | | | | | | | |
| Donations and legacies | 4 | 42 | - | - | - | 42 | 57 |
| Charitable activities | | | | | | | |
| Membership and related activities | | 1,805 | - | - | - | 1,805 | 1,641 |
| Charitable trading activities | 3 | 1,517 | - | - | - | 1,517 | 1,610 |
| Other trading activities | 13 | 286 | - | - | - | 286 | 321 |
| Investments | | 212 | 3 | 55 | - | 270 | 230 |
| Other income | 10 | 77 | - | - | - | 77 | - |
| Total income | | 3,939 | 3 | 55 | - | 3,997 | 3,859 |
| EXPENDITURE ON: | | | | | | | |
| Raising funds | 13 | 236 | - | - | - | 236 | 202 |
| Charitable activities | | | | | | | |
| Membership and related activities | | 2,776 | 1 | 64 | - | 2,841 | 2,385 |
| Charitable trading activities | 3 | 906 | - | - | - | 906 | 1,335 |
| Total expenditure | | 3,918 | 1 | 64 | - | 3,983 | 3,922 |
| Operating income/(expenditure) | | 21 | 2 | (9) | - | 14 | (63) |
| Net losses/(gains) on investments | 12 | (911) | (11) | (211) | - | (1,133) | 759 |
| Net expenditure/(income) | | (890) | (9) | (220) | - | (1,119) | 696 |
| Other recognised gains/(losses) | | | | | | | |
| Gains on revaluation of fixed assets | 10 | - | 86 | - | - | 86 | 84 |
| Actuarial gains on defined benefit pension schemes | | 76 | - | - | - | 76 | 1,290 |
| NET MOVEMENT IN FUNDS | | (814) | 77 | (220) | - | (957) | 2,070 |
| Reconciliation of funds | | | | | | | |
| Total funds brought forward | | 2,871 | 11,863 | 2,506 | 33 | 17,273 | 15,203 |
| TOTAL FUNDS CARRIED FORWARD | | 2,057 | 11,940 | 2,286 | 33 | 16,316 | 17,273 |

Consolidated and charity balance sheets as at 31 December 2022

| | Notes | Group | | Institute | |
|---|-------|----------------|----------------|----------------|----------------|
| | | 2022 £'000 | 2021 £'000 | 2022 £'000 | 2021 £'000 |
| FIXED ASSETS | | | | | |
| Intangible assets | 9 | 238 | 350 | 238 | 339 |
| Tangible assets | 10 | 11,370 | 11,334 | 11,370 | 11,334 |
| Heritage assets | 11 | 456 | 456 | 456 | 456 |
| Investments | 12 | 8,504 | 9,637 | 8,504 | 9,637 |
| Total fixed assets | | 20,568 | 21,777 | 20,568 | 21,766 |
| CURRENT ASSETS | | | | | |
| Stock and work in progress | 14 | 80 | 54 | 80 | 13 |
| Debtors | 15 | 1,556 | 1,483 | 1,527 | 1,546 |
| Cash at bank and in hand | | 30 | 99 | 6 | 1 |
| Total current assets | | 1,666 | 1,636 | 1,613 | 1,560 |
| CREDITORS: Amounts falling due within one year | 16 | (2,929) | (2,929) | (2,899) | (3,207) |
| NET CURRENT LIABILITIES | | (1,263) | (1,293) | (1,286) | (1,647) |
| NET ASSETS BEFORE PENSION LIABILITY | | 19,305 | 20,484 | 19,282 | 20,119 |
| Defined benefit pension scheme liability | 22 | (2,989) | (3,211) | (2,989) | (3,211) |
| NET ASSETS AFTER PENSION LIABILITY | | 16,316 | 17,273 | 16,293 | 16,908 |
| THE FUNDS OF THE CHARITY | | | | | |
| ENDOWMENT FUNDS | 18 | 33 | 33 | 33 | 33 |
| RESTRICTED INCOME FUNDS | | | | | |
| Restricted funds | 19 | 2,286 | 2,506 | 2,286 | 2,506 |
| UNRESTRICTED FUNDS | | | | | |
| General funds | | 2,057 | 2,871 | 2,034 | 2,506 |
| Designated funds | 20 | 10,986 | 10,996 | 10,986 | 10,996 |
| Revaluation reserve | 20 | 954 | 867 | 954 | 867 |
| TOTAL CHARITY FUNDS | | 16,316 | 17,273 | 16,293 | 16,908 |

The financial statements on pages 64 to 95 were approved and authorised for issue by the trustees and signed on their behalf by:

Mr N Glover,
Trustee and President 2022
on 25 May 2023



Dr K Thornton,
Trustee and Senior Vice President 2022
on 25 May 2023



Consolidated and charity statement of cash flows for the year ended 31 December 2022

| | Notes | Group | | Institute | |
|---|-------|---------------|---------------|---------------|---------------|
| | | 2022 £'000 | 2021 £'000 | 2022 £'000 | 2021 £'000 |
| Cash flows from operating activities: | | | | | |
| Net cash used in operating activities | T1 | (29) | (386) | 51 | (409) |
| Cash flows from investing activities: | | | | | |
| Dividends, interest and rents from investments | | 270 | 230 | 270 | 230 |
| Purchase of intangibles | | (29) | (47) | (35) | (47) |
| Purchase of property, plant and equipment | | (393) | (36) | (393) | (36) |
| Proceeds from sale of property, plant and equipment | | 347 | - | 347 | - |
| Net cash provided by/(used in) investing activities | | 195 | 147 | 189 | 147 |
| Change in cash and cash equivalents in the reporting period | | 166 | (239) | 240 | (262) |
| Cash and cash equivalents at the beginning of the reporting period | | (713) | (474) | (811) | (549) |
| Cash and cash equivalents at the end of the reporting period | T2 | (547) | (713) | (571) | (811) |

T1 Reconciliation of net income/ (expenditure) to net cash flow from operating activities

| | <i>Group</i> | | <i>Institute</i> | |
|---|----------------|---------------|------------------|---------------|
| | 2022 £'000 | 2021 £'000 | 2022 £'000 | 2021 £'000 |
| Net expenditure/(income) for the reporting period (as per the statement of financial activities) | (1,119) | 696 | (777) | 698 |
| Adjustments for: | | | | |
| Depreciation and amortisation charges and impairment of fixed assets | 314 | 300 | 309 | 295 |
| (Gains)/losses on disposal of fixed assets | (77) | - | (77) | - |
| Losses/(gains) on investments | 1,133 | (759) | 1,133 | (759) |
| Pension costs | (146) | (132) | (146) | (132) |
| Dividends, interest and rents from investments | (270) | (230) | (270) | (230) |
| (Increase)/decrease in stocks | (26) | 207 | (67) | (10) |
| (Increase)/decrease in debtors | (73) | (29) | 19 | (241) |
| (Increase)/decrease in creditors | 235 | (439) | (73) | (30) |
| Net cash used in operating activities | (29) | (386) | 51 | (409) |

T2 Analysis of cash and cash equivalents

| | <i>Group</i> | | <i>Institute</i> | |
|--|---------------|---------------|------------------|---------------|
| | 2022 £'000 | 2021 £'000 | 2022 £'000 | 2021 £'000 |
| Cash in hand | 30 | 99 | 6 | 1 |
| Bank overdraft | (577) | (812) | (577) | (812) |
| Total cash and cash equivalents | (547) | (713) | (571) | (811) |

Accounting Policies

Basis of financial statements

The Institute of Materials, Minerals and Mining (“the Charity”) is an unincorporated charity domiciled in England. The address of the Charity’s registered office and principal place of business is 297 Euston Road, London NW1 3AD.

The Charity’s principal activities and the nature of the Charity’s operations are described in the Trustees’ Report on pages 52-54.

The financial statements have been prepared in accordance with Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) (effective 1 January 2019) – (Charities SORP (FRS 102)), the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) and the Charities Act 2011.

The Institute of Materials, Minerals and Mining meets the definition of a public benefit entity under FRS 102. Assets and liabilities are initially recognised at historic cost or transaction value unless otherwise stated in the relevant accounting policy notes.

The financial statements are prepared in sterling, which is the functional currency of the Charity. Monetary amounts in these financial statements are rounded to the nearest £1,000.

Preparation of the accounts on a going concern basis

The Trustees confirm that at the time of approving these financial statements, there is a reasonable expectation that the Institute has adequate resources to continue for the foreseeable future. In arriving at this conclusion, the Trustees have taken into account the current and anticipated financial performance in the current economic conditions and the charity’s reserves position. The trustees have considered the forecasts for 2023 and 2024. The Trustees are however satisfied that the charity has adequate reserves and strategies in place

to deal with the economic impact as it develops and have therefore concluded that it remains appropriate to prepare the financial statements on the going concern basis.

Group financial statements

The financial statements consolidate the results of the wholly owned subsidiary companies and companies over which the Institute exercises dominant influence on a line-by-line basis. The members’ benevolent funds are not consolidated because they are under independent control.

Details of the Institute’s total incoming resources and net movement in funds are shown in the notes.

Income

Income is recognised when the charity has entitlements to the funds, any performance conditions attached to the items of income have been met, it is probable that the income will be received and the amount can be measured reliably.

Subscription income represents the amount received in respect of current and past years. Amounts received in advance are carried forward to the following year and subscriptions in arrears have not been anticipated.

Income from conferences represents the amount receivable in respect of the current year. Amounts received in respect of conferences to be run in future years are carried forward to the following year.

Income from Government and other grants is recognised when the charity has entitlement to the funds, any performance conditions attached to the grant are met, it is probable that the income will be received and the amount can be measured reliably.

Incoming resources from grants, where related to performance and specific deliverables, are accounted for as the charity earns the right to consideration by its performance.

Other income is recognised where there is entitlement, probability of receipt and the amount can be measured with sufficient reliability.

Expenditure

Expenditure is recognised once there is a legal or constructive obligation to make a payment to a third party, it is probable that settlement will be required and the amount of the obligation can be measured reliably.

All expenditure is accounted for on an accruals basis and has been classified under headings that aggregate all costs related to the category. Where costs cannot be clearly attributed to particular headings they have been allocated to activities on a basis consistent with the use of the resources. Overheads have been allocated on the basis of head count.

Grants and prizes are awarded annually, mainly to affiliated societies and individuals.

Allocation of support costs

Support costs comprise employment, establishment and administration costs in support of the charitable activities of the Institute. Allocations of these costs are made to the various activities of the Institute using standard rates based on staff time involved on each activity and facility usage. The basis on which support costs are allocated is set out in note 7.

Donated services and materials

Where services are provided to the Institute as a donation that would normally be purchased from suppliers, this contribution is included in the financial statements at an estimate based on the value of the contribution to the Institute.

Heritage Assets

A description of heritage assets held by the Charity is given in note 11. These assets were valued in February 2019 and details are given in note 11.

The heritage assets have been recognised in the Institute's balance sheet at 31 December 2018 at this valuation. The Trustees reviewed the value of the heritage assets and are in agreement that there was no change in value as at 31 December 2022.

Tangible fixed assets depreciation and amortisation

Individual fixed assets are capitalised where the purchase price exceeds £1,500.

Depreciation is calculated by reference to the cost of fixed assets using the straight line method at rates considered appropriate having regard to their expected useful lives. The bases used are:

| | |
|------------------------------------|----------------------------|
| Freehold Property (excluding land) | 2% p.a. |
| Leasehold property | over the term of the lease |
| Furniture | 15%-20% p.a. |
| Equipment | 20%-33% p.a. |

Impairment reviews are carried out where there is an indication that the recoverable amount of a fixed asset is below its net book value. Any such impairments are charged through the statement of financial activities in the year in which the impairment occurs.

Freehold property is accounted for using the revaluation method with the building element depreciated at a rate of 2% per annum and revalued to its market value at the end of the financial year. The net value of gains on revaluation are held in the revaluation reserve.

The Institute's freehold property is recognised in the financial statements at its market value as at 31 December 2022.

Intangible fixed assets

Intangible fixed assets, including patents and software, are amortised at rates calculated to write off the assets on a straight line basis over their estimated useful economic lives. Where it is not possible to make a reliable estimate of the useful life of an intangible asset, the life shall not exceed five years. Impairment of intangible assets is reviewed where circumstances indicate that the carrying value of an asset may not be fully recoverable.

Investments and investment income

Listed investments are shown at market value at the balance sheet date. Realised and unrealised gains or losses are taken to the fund to which they relate via the Statement of Financial Activities in the year in which they arise. Unlisted investments are held at cost. Income is included together with the tax related credit in the financial statements of the year in which it is receivable. Investment income and any gain or loss on the asset development and service development designated funds is taken to general funds.

Stocks and work in progress

Sundry stocks are valued at cost. Work in progress is valued at cost and includes staff and other overheads.

Debtors

Trade and other debtors are recognised at the settlement amount due after any trade discount offered. Prepayments are valued at the amount prepaid net of any trade discounts due translated at the rate of exchange ruling at the balance sheet date. Transactions in foreign currencies are recorded at an internal rate of exchange ruling at the date of the transaction. All differences are taken to the statement of financial activities.

Cash at bank and in hand

Cash at bank and in hand includes cash and short term highly liquid investments with a short maturity of three months or less from the date of acquisition or opening of the deposit or similar account.

Creditors and provisions

Creditors and provisions are recognised where the charity has a present obligation resulting from a past event that will probably result in the transfer of funds to a third party and the amount due to settle the obligation can be measured or estimated reliably. Creditors and provisions are normally recognised at their settlement amount after allowing for any trade discounts due.

Financial instruments

The Institute only has financial assets and financial liabilities of a kind that qualify as basic financial instruments. Basic financial instruments are measured at their settlement value.

Foreign currencies

Assets and liabilities denominated in foreign currencies are translated at the rate of exchange ruling at the balance sheet date. Transactions in foreign currencies are recorded at an internal rate of exchange ruling at the date of the transaction. All differences are taken to the statement of financial activities.

Operating leases

The rentals under operating leases are charged to the statement of financial activities on a straight line basis over the lease term.

Irrecoverable VAT

Irrecoverable VAT incurred in respect of the year is included in the statement of financial activities except for any amounts relating to capital expenditure which are included in the cost of fixed asset additions.

Pension costs

The Institute participates in both a defined benefit scheme and defined contribution schemes.

Under the defined benefit scheme, the Institute makes contributions to The Institute of Materials Pension and Life Assurance Scheme. Pension costs are assessed in accordance with actuarial advice and based on the most recent actuarial valuation of the scheme. The scheme was closed to new entrants during 2002 and was closed to accrual on 31 December 2021.

The assets of the scheme are held independently from the Institute in separate trustee administered funds. Full actuarial valuations, by a professionally qualified actuary, are obtained at least every three years, and updated to reflect current conditions at the balance sheet date. Fair value is based on the market price information and in the case of quoted securities is the published bid price.

The pension scheme assets are measured at fair value. The pension scheme liabilities are measured using the projected unit method and discounted at the current rate of return on a high quality corporate bond that has been rated at AA or equivalent basis of equivalent term and currency. A pension scheme asset is recognised in the balance sheet only to the extent that the surplus may be recovered by reduced future contributions or to the extent that the Council have agreed a refund from the scheme at the balance sheet date. A pension liability is recognised to the extent that the group has a legal obligation to settle the liability.

The actuarial gain or loss arising in the year included under 'other recognised gains or losses'. Contributions are charged to expenditure so as to spread the regular cost of pensions over the expected working lives of the employees in the scheme. Any difference between the cumulative amounts charged and contributions paid is included as an asset or liability on the balance sheet.

The interest element of the defined benefit cost represents the change in present value of scheme obligations relating to the passage of time and is determined by applying a discount rate to the opening present value of the benefit obligation, valuing into account material changes in the obligation during the year. The expected return on plan assets is based on an assessment made at the beginning of the year of long-term market returns on scheme assets adjusted for the effect on the fair value of plan assets of the contributions received and benefits paid during the year. The difference between the expected return on plan assets and the interest costs is recognised in the consolidated SOFA (Statement of Financial Activities) as pension finance income or within resources expenses as appropriate.

Under the defined contribution schemes, the Institute contributes to group personal pension plans providing benefits for some employees. Pension costs are based on current salaries and charged to the statement of financial activities in the year in which they are due.

Critical accounting estimates and assumptions

The Institute makes estimates and assumptions concerning the future. The resulting estimates and assumptions will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are those used by the scheme actuary in calculating the Institute's defined benefit scheme liability (see note 22 for details).

Revaluation of freehold property: the revaluation is based on the building element of freehold properties depreciated at a rate of 2% per annum and revalued to its market value at the end of the financial year.

Institute funds and reserves policy

Funds held by the Institute are:

- Unrestricted general funds – these are funds that can be used in accordance with the charitable objects at the discretion of the Council. The Institute's policy is to maintain sufficient liquid reserves to cover the future expenditure of charitable and administrative costs for up to one year.
- Designated funds – these are funds set aside by Council out of unrestricted general funds for specific future purposes or projects. The revaluation reserve within designated funds represents the value of gains on revaluation of freehold property.
- Restricted funds – these are funds that can only be used for particular restricted purposes within the objects of the Institute. Restrictions arise when specified by the donor or when funds are raised for particular restricted purposes.
- Permanent endowment fund – the income of the Mining Club is dealt with in a restricted fund that provides grants for travel, study or attendance at international conferences related to the minerals industry.

Further explanation of the nature and purpose of each fund is included in the notes to the financial statements.

Notes to financial statements

1. Consolidated statement of financial activities for the year ended 31 December 2021

| | Notes | Unrestricted funds General £'000 | Unrestricted funds Designated £'000 | Restricted funds £'000 | Permanent endowment £'000 | Total funds 2021 £'000 | Total funds 2020 £'000 |
|---|-------|--|---|------------------------------|---------------------------------|---------------------------------|---------------------------------|
| INCOME AND ENDOWMENTS FROM: | | | | | | | |
| Donations and legacies | 4 | 52 | - | 5 | - | 57 | 90 |
| Charitable activities | | | | | | | |
| Membership and related activities | | 1,641 | - | - | - | 1,641 | 1,535 |
| Charitable trading activities | 3 | 1,610 | - | - | - | 1,610 | 1,299 |
| Other trading activities | 13 | 321 | - | - | - | 321 | 276 |
| Investments | | 176 | 2 | 52 | - | 230 | 259 |
| Total income | | 3,800 | 2 | 57 | - | 3,859 | 3,459 |
| EXPENDITURE ON: | | | | | | | |
| Raising funds | 13 | 202 | - | - | - | 202 | 172 |
| Charitable activities | | | | | | | |
| Membership and related activities | | 2,314 | 1 | 70 | - | 2,385 | 3,146 |
| Charitable trading activities | 3 | 1,335 | - | - | - | 1,335 | 483 |
| Total expenditure | | 3,851 | 1 | 70 | - | 3,922 | 3,801 |
| Operating (expenditure)/income | | (51) | 1 | (13) | - | (63) | (342) |
| Net gains/(losses) on investments | 12 | 597 | 7 | 155 | - | 759 | (293) |
| Net income/(expenditure) | | 546 | 8 | 142 | - | 696 | (635) |
| Other recognised gains/(losses) | | | | | | | |
| Gains on revaluation of fixed assets | 10 | - | 84 | - | - | 84 | 84 |
| Actuarial gains/(losses) on defined benefit pension schemes | | 1,290 | - | - | - | 1,290 | (576) |
| NET MOVEMENT IN FUNDS | | 1,836 | 92 | 142 | - | 2,070 | (1,127) |
| Reconciliation of funds | | | | | | | |
| Total funds brought forward | | 1,035 | 11,771 | 2,364 | 33 | 15,203 | 16,330 |
| TOTAL FUNDS CARRIED FORWARD | | 2,871 | 11,863 | 2,506 | 33 | 17,273 | 15,203 |

2. Charity only statement of financial activities for the year ended 31 December 2022

| | Unrestricted funds General £'000 | Designated £'000 | Restricted funds £'000 | Permanent endowment £'000 | Total funds 2022 £'000 | Total funds 2021 £'000 |
|--|--|---------------------|------------------------------|---------------------------------|---------------------------------|---------------------------------|
| INCOME AND ENDOWMENTS FROM: | | | | | | |
| Donations and legacies | 466 | - | - | - | 466 | 255 |
| Charitable activities | | | | | | |
| Membership and related activities | 1,664 | - | - | - | 1,664 | 1,528 |
| Charitable trading activities | 1,501 | - | - | - | 1,501 | 1,275 |
| Investments | 212 | 3 | 55 | - | 270 | 230 |
| Other income | 77 | - | - | - | 77 | - |
| Total income | 3,920 | 3 | 55 | - | 3,978 | 3,288 |
| EXPENDITURE ON: | | | | | | |
| Charitable activities | | | | | | |
| Membership and related activities | 2,636 | 1 | 64 | - | 2,701 | 2,269 |
| Charitable trading activities | 921 | - | - | - | 921 | 1,080 |
| Total expenditure | 3,557 | 1 | 64 | - | 3,622 | 3,349 |
| Net losses/(gains) on investments | (911) | (11) | (211) | - | (1,133) | 759 |
| Net expenditure/(income) | (548) | (9) | (220) | - | (777) | 698 |
| Other recognised (losses)/gains: | | | | | | |
| Gains on revaluation of fixed assets | - | 86 | - | - | 86 | 84 |
| Actuarial gains on defined benefit pension schemes | 76 | - | - | - | 76 | 1,290 |
| NET MOVEMENT IN FUNDS | (472) | 77 | (220) | - | (615) | 2,072 |
| Reconciliation of funds | | | | | | |
| Total funds brought forward | 2,506 | 11,863 | 2,506 | 33 | 16,908 | 14,836 |
| TOTAL FUNDS CARRIED FORWARD | 2,034 | 11,940 | 2,286 | 33 | 16,293 | 16,908 |

3. Charitable trading activities

| | 2022 £'000 | 2021 £'000 |
|--|---------------|---------------|
| TURNOVER | | |
| Publishing | 989 | 970 |
| Conferences and exhibitions | 193 | 356 |
| Information services | - | 4 |
| Training services | 335 | 280 |
| Incoming resources | 1,517 | 1,610 |
| COST OF CHARITABLE TRADING ACTIVITIES | | |
| Publishing | 72 | 526 |
| Conferences and exhibitions | 430 | 484 |
| Information services | 5 | 6 |
| Training services | 399 | 319 |
| Expenditure | 906 | 1,335 |
| NET CONTRIBUTION FROM CHARITABLE TRADING ACTIVITIES | | |
| Publishing | 917 | 444 |
| Conferences and exhibitions | (237) | (128) |
| Information services | (5) | (2) |
| Training services | (64) | (39) |
| Net income | 611 | 275 |

4. Donations and legacies

During 2021, the charity made an application under the government coronavirus job retention scheme to assist with the financial impact of the Covid-19 pandemic. The amount claimed in 2021 totalled £12k and was recognised within donations and legacies. No amount was claimed in 2022.

| | 2022 £'000 | 2021 £'000 |
|------------------|---------------|---------------|
| Other donations | 42 | 45 |
| Government grant | - | 12 |
| | 42 | 57 |

5. Other trading activities

The Institute has a policy to generate income from its property facilities when not required for its own purpose. Related expenditure includes direct costs, employment costs and relevant overheads. These activities are undertaken by Materials Institute Services Ltd (see note 13: Subsidiary undertakings).

6. Investment income

| | 2022 | | 2021 | |
|---------------------------|-----------------------|---------------------|-----------------------|---------------------|
| | Unrestricted £'000 | Restricted £'000 | Unrestricted £'000 | Restricted £'000 |
| Listed securities | | | | |
| Growth & Income fund | 209 | 37 | 174 | 31 |
| Fixed interest | 1 | 4 | 1 | 4 |
| UK equities | 4 | 14 | 3 | 17 |
| Cash and cash equivalents | 1 | - | - | - |
| | 215 | 55 | 178 | 52 |

7. Total resources expended

Summary

| | 2022 £'000 | 2022 £'000 | 2021 £'000 | 2021 £'000 |
|--|---------------|---------------|---------------|---------------|
| Direct charitable costs | | 754 | | 779 |
| Employment costs | | | | |
| Salaries | 1,671 | | 1,678 | |
| Social security costs | 189 | | 177 | |
| Pension costs | 301 | | 285 | |
| Temporary and other staff costs | 97 | | 76 | |
| Redundancy costs | 26 | | 1 | |
| | | 2,284 | | 2,217 |
| Establishment costs | | | | |
| Property costs | 286 | | 240 | |
| Information technology | 182 | | 169 | |
| Depreciation and amortisation | 314 | | 300 | |
| | | 782 | | 709 |
| Administration costs | | | | |
| Travel, meeting and committee expenses | 24 | | 16 | |
| Postage and telecommunications | 33 | | 49 | |
| Printing and stationery | 14 | | 16 | |
| Finance costs | 20 | | 19 | |
| Professional fees | 67 | | 111 | |
| Office and other costs | 5 | | 6 | |
| | | 163 | | 217 |
| | | 3,983 | | 3,922 |

Breakdown of costs of activities

| | <i>Direct costs</i> £'000 | <i>Support costs</i> £'000 | <i>2022 Total</i> £'000 | <i>2021 Total</i> £'000 |
|---------------------------------|------------------------------|-------------------------------|----------------------------|----------------------------|
| Charitable activities | | | | |
| Membership and related services | 508 | 2,333 | 2,841 | 2,385 |
| Charitable trading activities | 215 | 691 | 906 | 1,335 |
| | 724 | 3,024 | 3,748 | 3,720 |
| Costs of raising funds | | | | |
| Activities for raising funds | 31 | 205 | 236 | 202 |
| | 754 | 3,229 | 3,983 | 3,922 |

Support cost breakdown by activity

Employment costs are allocated to activities based on the cost of the estimated time spent on those activities.

Establishment and administration costs are apportioned to activities on the basis of employment costs.

Admin costs include governance, finance, HR, IT and sales and marketing costs, which are apportioned to activities on the basis of employment costs.

| | <i>Employment costs</i> £'000 | <i>Establishment costs</i> £'000 | <i>Admin costs</i> £'000 | <i>2022 Total</i> £'000 | <i>2021 Total</i> £'000 |
|---------------------------------|----------------------------------|-------------------------------------|-----------------------------|----------------------------|----------------------------|
| Membership and related services | 1,654 | 562 | 117 | 2,333 | 2,056 |
| Charitable trading activities | 496 | 156 | 39 | 691 | 898 |
| Activities for raising funds | 134 | 64 | 7 | 205 | 189 |
| | 2,284 | 782 | 163 | 3,229 | 3,143 |

Employee information

| | 2022 No. | 2021 No. |
|--|-------------|-------------|
| The average number/(full time equivalent) employees during the year was | 41(37) | 44(42) |
| The number of employees who earned more than £60,000 per annum including benefits was: | | |
| £60,001 - £70,000 | 2 | 2 |
| £70,001 - £80,000 | 2 | 2 |
| £110,001 - £120,000 | 1 | 1 |
| The number of employees who earned more than £60,000 per annum and accrued benefits in the Institute's pension scheme was: | | |
| Money purchase scheme | 5 | 5 |

| | 2022 £'000 | 2021 £'000 |
|---|---------------|---------------|
| Total remuneration of key management personnel, including benefits during the year was | 504 | 495 |
| Total employer National Insurance contributions paid on the key management personnel remuneration | 59 | 55 |
| Total amount of redundancy payments made during the year was | 26 | 1 |
| Contributions to the pension funds during the year were: | | |
| Defined benefit scheme | 200 | 251 |
| Money purchase scheme | 103 | 76 |

The key management personnel of the charity are detailed on page 57.

Total expenditure includes

2022
£'000

2021
£'000

| | | |
|---|----|----|
| Auditor's remuneration | | |
| Audit fee – current year | 50 | 43 |
| Accountancy, taxation and other services | 4 | 4 |
| Travel expenses paid to 5 (2021: 6) Trustees for attending Executive board and other meetings | 1 | 1 |
| Travel expenses paid on behalf of 15 (2021: 13) Trustees for attending Executive board and other meetings | 3 | 1 |
| Operating lease charges | 39 | 38 |

None of the Council members received any remuneration in either year.

2022
£'000

2021
£'000

| The total future minimum lease payments under non-cancellable operating leases | Land and buildings | Other | Land and buildings | Other |
|--|--------------------|-------|--------------------|-------|
| Within one year | 29 | 8 | 29 | 8 |
| Within two to five years | 115 | 12 | 115 | 20 |
| After five years | 101 | - | 129 | - |

Other transactions with trustees

No Trustees directly or indirectly received any remuneration during the years ended 31 December 2022 and 2021.

8. Transfers between funds

There were no transfers between funds during 2022 or 2021.

9. Intangible fixed assets

| | <i>Group and parent Website and software £'000</i> | <i>Group only £'000</i> | <i>Total £'000</i> |
|--------------------------|--|-----------------------------|------------------------|
| Cost | | | |
| 1 January 2022 | 803 | 25 | 828 |
| Additions in the year | 29 | - | 29 |
| Reclassification in year | 25 | (25) | - |
| 31 December 2022 | 857 | - | 857 |
| Amortisation | | | |
| 1 January 2022 | 464 | 14 | 478 |
| Charge for the year | 136 | 5 | 141 |
| Reclassification in year | 19 | (19) | - |
| 31 December 2022 | 619 | - | 619 |
| Net book value | | | |
| 31 December 2022 | 238 | - | 238 |
| 31 December 2021 | 339 | 11 | 350 |

10. Tangible fixed assets

| | <i>Freehold property held for sale £'000</i> | <i>Freehold property £'000</i> | <i>Short leasehold property £'000</i> | <i>Furniture, fittings & equipment £'000</i> | <i>Total £'000</i> |
|--------------------------|--|------------------------------------|---|--|------------------------|
| GROUP AND PARENT | | | | | |
| Cost or valuation | | | | | |
| 1 January 2022 | 270 | 13,217 | 2,221 | 1,040 | 16,748 |
| Additions in the year | - | 200 | - | 193 | 393 |
| Disposals in year | (270) | - | - | - | (270) |
| 31 December 2022 | - | 13,417 | 2,221 | 1,233 | 16,871 |
| Depreciation | | | | | |
| 1 January 2022 | - | 2,506 | 2,062 | 846 | 5,414 |
| Charge for the year | - | 86 | 25 | 62 | 173 |
| Revaluation | - | (86) | - | - | (86) |
| 31 December 2022 | - | 2,506 | 2,087 | 908 | 5,501 |
| Net book value | | | | | |
| 31 December 2022 | - | 10,911 | 134 | 325 | 11,370 |
| 31 December 2021 | 270 | 10,711 | 159 | 194 | 11,334 |

10. Tangible fixed assets (continued)

The Institute's freehold land and buildings are accounted for using the valuation method. Both of the Institute's freehold properties were revalued at their present market value at the end of 2018. The London property was revalued at its present market value of £10.7m by Neil Burch MRICS on 31 March 2019. The next formal valuation of freehold properties is due to take place in 2024.

Trustees have reviewed the value of freehold properties at 31 December 2022 by reference to CBRE index and to the open market, and are satisfied that there is no impairment to value of freehold properties.

The Stoke property was sold in December 2022 for £346k. A gain on disposal of £76k is included in other income.

Other income also includes gains of £1k on disposal of IT equipment.

11. Heritage assets

In addition to the assets outlined in note 10, the Institute owns a collection of paintings and artefacts of historic and scientific importance which is deemed to be heritage assets as defined under SORP (FRS 102). The collection comprises portraits, paintings, artefacts and sculptures, which the Institute has commissioned, acquired or received as a donation to either enhance the fabric of its building or to celebrate its history in science, engineering and technology.

The Institute maintains a comprehensive register of these assets. The Institute's heritage assets were valued in February 2019 by Penny Bingham (MRICS), an independent Fine Art Valuer, at a combined value of £287k. Separately, the Institute's Mining Lamp collection was valued in May 2016 by David Rimmer of the Miners Lamp Society at a combined value of £169k.

Both independent valuers consider that the resale value of individual heritage assets is very sensitive to the number of potential purchasers with the ability and willingness to pay.

The heritage assets were recognised in the Institute's balance sheet at 31 December 2018 at valuation and have been subsequently held at valuation subject to annual review for indications of any impairment.

Trustees have reviewed the assets at 31 December 2022 and do not consider there to be any impairment.

12. Investments

| | <i>Group and Institute</i> | | <i>Institute</i> | |
|---|----------------------------|--------------|------------------|--------------|
| | <i>2022</i> | <i>2021</i> | <i>2022</i> | <i>2021</i> |
| | <i>£'000</i> | <i>£'000</i> | <i>£'000</i> | <i>£'000</i> |
| Analysis of movements in the year | | | | |
| Opening market value | 9,637 | 8,878 | 9,637 | 8,878 |
| Revaluations | (1,133) | 759 | (1,133) | 759 |
| Closing market value | 8,504 | 9,637 | 8,504 | 9,637 |
| Invested as follows | | | | |
| <i>Listed investments</i> | | | | |
| Black Rock Growth & Income fund | 7,735 | 8,811 | 7,735 | 8,811 |
| Fixed interest | 132 | 160 | 132 | 160 |
| UK equities | 634 | 663 | 634 | 663 |
| <i>Unlisted investments</i> | | | | |
| Cash and cash equivalents | 3 | 3 | 3 | 3 |
| Subsidiary undertakings | - | - | - | - |
| Closing market value | 8,504 | 9,637 | 8,504 | 9,637 |
| At the balance sheet date, the following investments represent more than 5% of the portfolio by market value | | | | |
| Black Rock Growth & Income fund | 7,735 | 8,811 | 7,735 | 8,811 |
| Charishare (UK equities common investment fund) | 567 | 588 | 567 | 588 |
| Historical cost at 31 December | 5,342 | 5,342 | 5,342 | 5,342 |

13. Subsidiary undertakings

The Institute has four subsidiary organisations:

- IOM Communications Ltd (company number 3285009, charity number 1059475), a charitable trading company limited by shares.
- The Institute of Packaging (company number 786826, charity number 295762), a company limited by guarantee.
- Materials Institute Services Ltd (company number 2882544), a company limited by shares.
- PIABC Ltd (company number 10371273) a company limited by shares.

All subsidiary companies are incorporated in the UK and file accounts with the Registrar of Companies. The accounts of IOM Communications Ltd, Materials Institute Services Ltd and PIABC Ltd are audited. IOM Communications Ltd and Materials Institute Services Ltd and PIABC Ltd are wholly owned subsidiaries. The Institute holds 100 shares of £1 each in IOM Communications Ltd, one share of £1 in PIABC Ltd and 2 shares of £1 each in Materials Institute Services Ltd.

Materials Institute Services Ltd undertakes income generating activities of the Institute of Materials, Minerals and Mining. PIABC Ltd undertakes membership related activities on behalf of the Institute of Materials, Minerals and Mining. The Institute of Packaging did not trade in 2022 or 2021.

IOM Communications Limited

2022
Total
£'000

2021
Total
£'000

| Results | | |
|-------------------------------|-------|-----|
| Charitable trading activities | 17 | 335 |
| Total incoming resources | 17 | 335 |
| Charitable trading costs | (15) | 255 |
| Donation to the Institute | 374 | 80 |
| Total outgoing resources | 359 | 335 |
| Net incoming resources | (342) | - |
| Balances brought forward | 342 | 342 |
| Balances carried forward | - | 342 |

| Balance sheets at 31 December | | |
|--|---|-------|
| Fixed assets | - | 11 |
| Current assets | - | 554 |
| Creditors: amounts falling due within one year | - | (223) |
| Net current assets | - | 342 |
| Shareholders' funds | - | 342 |

Summaries of the 2022 results and balance sheets for IOM Communications Ltd, Materials Institute Services Ltd and PIABC Ltd together with comparative figures for 2021, where applicable, are shown in this note. The net assets of The Institute of Packaging at 31 December 2022 and 31 December 2021 were £nil.

IOM Communications Ltd previously undertook charitable trading activities of the Institute of Materials, Minerals and Mining. These activities were transferred to The Institute of Materials, Minerals and Mining by the end of 2022. IOM Communications Ltd ceased to trade at the end of 2022 and will remain a dormant company for the foreseeable future.

13. Subsidiary undertakings (continued)

Materials Institute Services Limited

| | 2022 <i>Total</i> £'000 | 2021 <i>Total</i> £'000 |
|--|-------------------------------|-------------------------------|
| Results | | |
| Turnover | 286 | 321 |
| Total incoming resources | 286 | 321 |
| Costs | 236 | 202 |
| Donation to the Institute | 50 | 119 |
| Total outgoing resources | 286 | 321 |
| Net incoming resources | - | - |
| Balances brought forward | 23 | 23 |
| Balances carried forward | 23 | 23 |
| Balance sheets at 31 December | | |
| Current assets | 52 | 143 |
| Creditors: amounts falling due within one year | (29) | (120) |
| Net current assets | 23 | 23 |
| Shareholders' funds | 23 | 23 |

13. Subsidiary undertakings (continued)

PIABC Limited

| | 2022 <i>Total £'000</i> | 2021 <i>Total £'000</i> |
|--|----------------------------|----------------------------|
| Results | | |
| Turnover | 140 | 113 |
| Total incoming resources | 140 | 113 |
| Costs | 140 | 113 |
| Total outgoing resources | 140 | 113 |
| Net incoming resources | - | - |
| Balances brought forward | 1 | 1 |
| Balances carried forward | 1 | 1 |
| Balance sheets at 31 December | | |
| Current assets | 15 | 16 |
| Creditors: amounts falling due within one year | (14) | (15) |
| Net current assets | 1 | 1 |
| Shareholders' funds | 1 | 1 |

14. Stock and work in progress

| | <i>Consolidated</i> | | <i>Institute</i> | |
|------------------|---------------------|---------------|------------------|---------------|
| | 2022 £'000 | 2021 £'000 | 2022 £'000 | 2021 £'000 |
| Work in progress | 78 | 53 | 78 | 12 |
| Sundry stocks | 2 | 1 | 2 | 1 |
| | <u>80</u> | <u>54</u> | <u>80</u> | <u>13</u> |

15. Debtors

| | | | | |
|--------------------------------------|--------------|--------------|--------------|--------------|
| Trade debtors | 1,352 | 1,304 | 1,324 | 1,251 |
| Other debtors | 4 | 8 | 3 | 6 |
| Prepayments and accrued income | 200 | 171 | 200 | 169 |
| Amount due from subsidiary companies | - | - | - | 120 |
| | <u>1,556</u> | <u>1,483</u> | <u>1,527</u> | <u>1,546</u> |

16. Creditors: Amounts falling due within one year

| | | | | |
|--|--------------|--------------|--------------|--------------|
| Trade creditors | 212 | 142 | 212 | 74 |
| Taxes and social security costs | 227 | 229 | 227 | 228 |
| Subscriptions and orders paid in advance | 1,626 | 1,525 | 1,588 | 1,447 |
| Other creditors and accruals | 287 | 221 | 287 | 214 |
| Amounts due to subsidiary companies | - | - | 8 | 432 |
| Bank overdraft | 577 | 812 | 577 | 812 |
| | <u>2,929</u> | <u>2,929</u> | <u>2,899</u> | <u>3,207</u> |

Subscriptions and orders paid in advance

| | | | | |
|----------------------|--------------|--------------|--------------|--------------|
| At 1 January | 1,525 | 1,646 | 1,447 | 1,348 |
| Recognised in year | (1,506) | (1,580) | (1,429) | (1,340) |
| Provided for in year | 1,607 | 1,459 | 1,570 | 1,439 |
| At 31 December | <u>1,626</u> | <u>1,525</u> | <u>1,588</u> | <u>1,447</u> |

17. Analysis of net assets between funds at 31 December 2022

| Group | Unrestricted funds | | Restricted | Permanent | Total |
|-------------------------------------|--------------------|---------------------|----------------|----------------------------|---------|
| | General £'000 | Designated £'000 | funds £'000 | Endowment fund £'000 | |
| Intangible assets | 238 | - | - | - | 238 |
| Tangible fixed assets | 193 | 11,177 | - | - | 11,370 |
| Heritage assets | - | 456 | - | - | 456 |
| Investments | 6,580 | 82 | 1,809 | 33 | 8,504 |
| Current assets | 964 | 225 | 477 | - | 1,666 |
| Current liabilities | (2,929) | - | - | - | (2,929) |
| Net assets before pension liability | 5,046 | 11,940 | 2,286 | 33 | 19,305 |
| Pension liability | (2,989) | - | - | - | (2,989) |
| Total net assets | 2,057 | 11,940 | 2,286 | 33 | 16,316 |

| Institute | Unrestricted funds | | Restricted | Permanent | Total |
|-------------------------------------|--------------------|---------------------|----------------|----------------------------|---------|
| | General £'000 | Designated £'000 | funds £'000 | Endowment fund £'000 | |
| Intangible fixed assets | 238 | - | - | - | 238 |
| Tangible fixed assets | 193 | 11,177 | - | - | 11,370 |
| Heritage assets | - | 456 | - | - | 456 |
| Investments | 6,580 | 82 | 1,809 | 33 | 8,504 |
| Current assets | 911 | 225 | 477 | - | 1,613 |
| Current liabilities | (2,899) | - | - | - | (2,899) |
| Net assets before pension liability | 5,023 | 11,940 | 2,286 | 33 | 19,282 |
| Pension liability | (2,989) | - | - | - | (2,989) |
| Total net assets | 2,034 | 11,940 | 2,286 | 33 | 16,293 |

17. Analysis of net assets between funds at 31 December 2021

| Group | Unrestricted funds | | Restricted funds £'000 | Permanent Endowment fund £'000 | Total funds £'000 |
|-------------------------------------|--------------------|---------------------|---------------------------|-----------------------------------|----------------------|
| | General £'000 | Designated £'000 | | | |
| Intangible assets | 350 | - | - | - | 350 |
| Tangible fixed assets | 243 | 11,091 | - | - | 11,334 |
| Heritage assets | - | 456 | - | - | 456 |
| Investments | 7,492 | 93 | 2,019 | 33 | 9,637 |
| Current assets | 926 | 223 | 487 | - | 1,636 |
| Current liabilities | (2,929) | - | - | - | (2,929) |
| Net assets before pension liability | 6,082 | 11,863 | 2,506 | 33 | 20,484 |
| Pension liability | (3,211) | - | - | - | (3,211) |
| Total net assets | 2,871 | 11,863 | 2,506 | 33 | 17,273 |

| Institute | Unrestricted funds | | Restricted funds £'000 | Permanent Endowment fund £'000 | Total funds £'000 |
|-------------------------------------|--------------------|---------------------|---------------------------|-----------------------------------|----------------------|
| | General £'000 | Designated £'000 | | | |
| Intangible fixed assets | 339 | - | - | - | 339 |
| Tangible fixed assets | 243 | 11,091 | - | - | 11,334 |
| Heritage assets | - | 456 | - | - | 456 |
| Investments | 7,492 | 93 | 2,019 | 33 | 9,637 |
| Current assets | 850 | 223 | 487 | - | 1,560 |
| Current liabilities | (3,207) | - | - | - | (3,207) |
| Net assets before pension liability | 5,717 | 11,863 | 2,506 | 33 | 20,119 |
| Pension liability | (3,211) | - | - | - | (3,211) |
| Total net assets | 2,506 | 11,863 | 2,506 | 33 | 16,908 |

18. Permanent endowment fund

The income of the Mining Club is dealt with in a restricted fund that provides grants for travel, study or attendance at international conferences related to the minerals industry.

| Group and Institute | Balance at 1 January 2022 £'000 | Incoming resources £'000 | Resources expended £'000 | Investment gains/(losses) £'000 | Transfers between funds £'000 | Balance at 31 December 2022 £'000 |
|---------------------|------------------------------------|-----------------------------|-----------------------------|------------------------------------|----------------------------------|--------------------------------------|
| Mining Club | 33 | - | - | - | - | 33 |

19. Restricted funds

The income of these restricted funds is to be used for the following purposes:

Stanley Elmore Fellowship, Bosworth Smith Trust, Edgar Pam Fellowship and G Vernon Hobson Bequest - to provide grants to assist post-graduate research, together with the unexpended balance of Mining Club income.

IOM3 Education & Outreach Trust - to support the award of grants and bursaries to students and young professionals in the fields of materials, minerals and mining.

Andrew Carnegie Trust Fund - to support the award of scholarships and awards in the field of materials.

Tom Seaman Travelling Scholarship Fund is for the purpose of awarding scholarships to persons who are engaged in or associated with the coal mining industry.

The Metals & Metallurgy Trust Fund - to support the award of grants, scholarships and prizes in the field of metals and metallurgy.

Other funds include:

- A G Charleton Fund - to award prizes to deserving students at the Imperial College of Science Technology and Medicine.
- Centenary Student Sponsorship Fund - to provide membership benefits of the Institute to students.
- Dixie Dean Bursary Fund - to provide bursaries for foreign students associated with the packaging industry.

| Group and Institute | Balance at 1 January 2022 £'000 | Incoming resources £'000 | Resources expended £'000 | Investment gains/ (losses) £'000 | Transfer between funds £'000 | Balance at 31 December 2022 £'000 |
|-----------------------------------|--|--------------------------------|--------------------------------|---|---------------------------------------|--|
| Stanley Elmore Fellowship | 724 | 17 | (42) | (73) | - | 626 |
| IOM3 Education & Outreach Trust | 5 | - | (12) | - | 685 | 678 |
| Andrew Carnegie Trust Fund | 742 | 16 | (9) | (40) | - | 709 |
| Bosworth Smith Trust | 311 | 7 | - | (33) | (285) | - |
| Tom Seaman Travelling Scholarship | 305 | 7 | - | (32) | (280) | - |
| Metals & Metallurgy Trust Fund | 128 | 2 | - | (10) | (120) | - |
| Edgar Pam Fellowship | 115 | 3 | - | (12) | - | 106 |
| G Vernon Hobson Bequest | 75 | 2 | - | (7) | - | 70 |
| Other funds | 26 | 1 | - | (4) | - | 23 |
| Prize funds | 75 | - | (1) | - | - | 74 |
| | 2,506 | 55 | (64) | (211) | - | 2,286 |

During the year Charity Commission granted permission for objects of Metals & Metallurgy Trust Fund, Bosworth Smith Trust and Tom Seaman Travelling Scholarship to be aligned with the objects of IOM3 Education & Outreach Trust. Subsequently, the above named trusts were merged into the IOM3 Education & Outreach Trust.

Prize funds include the RT Holland Fund, Dennis Chapman Medal Award, Frank Fitzgerald Medal and other funds set up for the award of medals or money to appropriate recipients.

Further information about scholarships, bursaries, professional and travel grants including details of case studies are shown on our website www.iom3.org/scholarships-grants-and-bursaries.

20. Designated funds

The designated funds have been set up for the following purposes:

- Asset development fund – representing selected amounts (at cost or market value less depreciation) invested in freehold and leasehold properties, furniture, equipment and computers used for the functional purposes of the Institute and amounts set aside to meet future capital requirements as deemed appropriate by the trustees.
- Services development fund – representing amounts designated by Council to develop and improve the quality of services provided by the Institute.
- Sir Julius Wernher Memorial Fund – representing amounts designated to provide for memorial lectures.
- Packaging education fund – representing amounts set aside to promote and develop packaging education.
- Materials education fund – representing income generated for and costs relating to the promotion of materials education in schools.
- Robert A Moore Fund – representing amounts designated to promote the aims of the Institute in the name of Robert A Moore.

| | <i>Balance at</i> 1 January 2022 £'000 | <i>Incoming</i> <i>resources</i> £'000 | <i>Resources</i> <i>expended</i> £'000 | <i>Gains/</i> <i>(losses)</i> £'000 | <i>Balance</i> <i>at 31</i> <i>December</i> 2022 £'000 |
|----------------------------------|---|--|--|---|--|
| Asset development fund | 10,680 | - | - | - | 10,680 |
| Revaluation reserve | 867 | - | - | 86 | 953 |
| Services development fund | 57 | - | - | - | 57 |
| Sir Julius Wernher Memorial Fund | 168 | 3 | (1) | (11) | 159 |
| Packaging education fund | 50 | - | - | - | 50 |
| Materials education | 24 | - | - | - | 24 |
| Robert A Moore Fund | 17 | - | - | - | 17 |
| | 11,863 | 3 | (1) | 75 | 11,940 |

21. Cumulative unrealised investment gains

| | <i>Consolidated</i> | | <i>Institute</i> | |
|------------------|---------------------|---------------|------------------|---------------|
| | 2022 £'000 | 2021 £'000 | 2022 £'000 | 2021 £'000 |
| General fund | 2,144 | 3,055 | 2,144 | 3,055 |
| Designated funds | 26 | 37 | 26 | 37 |
| | 2,170 | 3,092 | 2,170 | 3,092 |
| Restricted funds | 517 | 727 | 517 | 727 |
| | 2,687 | 3,819 | 2,687 | 3,819 |

22. Pension schemes

22.1 Introduction

The Institute operates a funded defined benefit occupational pension scheme. The assets of the scheme are held separately from those of the Institute and are invested in an insured fund administered by the Prudential Assurance Company Limited and Mobius Life Fund administered by Mobius Life Limited. Under the terms of the Trust Deeds, the scheme is administered by the Trustees.

The scheme was closed to new members during 2002 and closed to accrual on 31 December 2021. New employees are given the opportunity to join the group personal pension arrangements with Royal London. The group personal pension plan is a defined contribution benefit scheme and complies with the stakeholder legislation.

At the year end, the scheme had 64 deferred members.

Results of the most recent triennial actuarial valuations, at 1 January 2016, 2019 and 2022 showed the following results.

| | 2016 £'000 | 2019 £'000 | 2022 £'000 |
|--|---------------|---------------|---------------|
| Market value of the scheme's assets | 13,970 | 13,641 | 14,639 |
| Liability for projected accrued benefits | (15,593) | (17,330) | (19,105) |
| (Deficit) | (1,623) | (3,689) | (4,466) |

Arrangements have been made for the deficit shown by the actuarial valuation at 1 January 2022 to be funded at the rate of:

- £220k p.a. payable in a lump sum during years ending 31 December 2023 - 2025.
- £100k p.a. increasing at 3.5% payable in equal monthly instalments from 1 January 2026 to 31 December 2034.
- £2,175k payable on 31 December 2034.

22.2 Principal actuarial assumptions

A valuation of the defined benefit pension scheme assets and liabilities at 31 December 2022 under FRS102 has been carried out by a qualified independent actuary. The projected unit valuation method has been used. The major financial assumptions used by the actuary were:

| Years ended | 2022 % p.a. | 2021 % p.a. |
|---|----------------|----------------|
| Discount rate | 4.80 | 1.90 |
| Price inflation – pre-retirement (RPI) | 3.00 | 3.00 |
| Consumer Prices Inflation – pre-retirement (CPI) | 2.60 | 2.70 |
| Rate of increases of pensions in payment (RPI) | 3.00 | 3.00 |
| Rates of increases of pensions in payment – (CPI) | 2.00 | 2.10 |
| Revaluation of deferred pensions (non-GMP) | 2.60 | 2.70 |

The following demographic assumptions were used in the valuation:

| | Year ended 31/12/2022 | | Year ended 31/12/2021 | |
|---|------------------------|------------|------------------------|------------|
| | As for post retirement | | As for post retirement | |
| Mortality pre-retirement | S3PMA CMI 2021 1% | | S3PMA CMI 2020 1% | |
| Mortality post-retirement | Males | Females | Males | Females |
| Life expectancy for a current 65 year old in 2022 | 86.1 years | 88.7 years | 86.2 years | 88.6 years |
| Life expectancy at age 65 for an individual aged 45 in 2022 | 87.0 years | 89.8 years | 87.2 years | 89.8 years |

22.3 Amounts recognised in the balance sheet for defined benefit scheme

| | 2022 £'000 | 2021 £'000 |
|--|----------------|----------------|
| Present value of defined benefit obligation | (12,860) | (17,251) |
| Fair value of scheme assets | 9,871 | 14,310 |
| Pension scheme liability recognised in the balance sheet | <u>(2,989)</u> | <u>(3,211)</u> |

22.4 Changes in present value of defined benefit obligation

| | 2022 £'000 | 2021 £'000 |
|---|---------------|---------------|
| Defined benefit obligation at 1 January | (17,521) | (18,295) |
| Service cost | - | (60) |
| Interest cost | (327) | (235) |
| Member contributions | - | (20) |
| Benefits paid | 577 | 558 |
| Actuarial gains/(losses) | 4,411 | 531 |
| Defined benefit obligation at 31 December | (12,860) | (17,521) |

22.5 Changes in fair value of scheme assets

| | 2022 £'000 | 2021 £'000 |
|---|---------------|---------------|
| Plan assets at 1 January | 14,310 | 13,662 |
| Return on plan assets (excluding net interest on defined benefit obligations) | (4,335) | 759 |
| Interest income | 268 | 176 |
| Employer contributions | 204 | 251 |
| Member contributions | 1 | 20 |
| Benefits paid | (577) | (558) |
| Plan assets at 31 December | 9,871 | 14,310 |

22.6 Major categories of scheme assets

| | % | % |
|---------------------|-----|-----|
| Equities | 24 | 19 |
| Corporate bonds | 3 | 9 |
| LDIs | 10 | 9 |
| Properties | - | 1 |
| Cash | 2 | 1 |
| Annuities | 27 | 24 |
| Other assets | 34 | 37 |
| Total scheme assets | 100 | 100 |

22.7 Amounts recognised in the statement of financial activities

The actual return on scheme assets was a loss of £4,062k (2021: Gain - £935k)

The Institute expects to contribute £220k to its defined benefit pension scheme in 2023.

The actuarial gains recognised in the statement financial activities were £76k and the total cumulative net losses recognised from 2002 to 2022 amounted to £3,998k

Amounts recognised in net incoming resources are as follows:

| | 2022 £'000 | 2021 £'000 |
|----------------------|---------------|---------------|
| Current service cost | - | 60 |
| Net interest cost | 59 | 59 |
| Net charge | 59 | 119 |

22.8 Outstanding pension contributions at the year end

Contributions for the defined benefit scheme amounting to £nil (2021 - £5k) were outstanding at the year-end. Contributions for the defined contributions schemes amounting to £14k (2021 - £10k) were outstanding at the year-end.

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The Institute of Materials Minerals & Mining (IOM3) is a body incorporated by Royal Charter (company no RC000267) and a charity registered in England & Wales (269275) and in Scotland (SC050586).