The global network for the materials cycle.

### Institute of Materials, Minerals & Mining

financial statements in accordance with the financial reporting standard applicable in the UK and Republic of Ireland (FRS102) (effective 1 January 2019).

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

### 2021 ANNUAL REPORT & FINANCIAL STATEMENTS

IOM3 supports professionals in materials, minerals, mining and associated technical disciplines to become heroes of the transition to a low-carbon, resource efficient society, not villains. We seek to be the best professional membership body we 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 from the earth, 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.

### Institute of Materials, Minerals & Mining

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297 Euston Road, London NW1 3AD

#### **IOM3** Grantham

The Boilerhouse, Springfield Business Park, Caunt Road, Grantham NG31 7FZ

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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: HM The Queen.

#### Trustees' Report

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It was my great pleasure and privilege to become President of the Institute of Materials, Minerals & Mining at the beginning of 2021 - though what a time to choose. I was very conscious of the challenge of taking over from Professor Serena Best CBE FREng CEng FIMMM, who led us so effectively through the uncertainties and difficulties of 2020. None of us could have foreseen the events of the last two years and the changes which have taken place in our lives, and many of us will have faced severe issues both at work and at home. The Institute has been in no way exempt from these problems and it is testament to the

resilience and resourcefulness of our membership, volunteers and the IOM3 staff that we were able to quickly adapt and sustain our activities throughout this unprecedented period. I am grateful for all your ongoing support.

I had hoped that 2021 would see a rapid return to a more normal environment and that I would be able to participate fully as President in the wider activities of the Institute. It is my great regret that I have not been able to do that and have been unable to meet as many of you as I would have wished in person, through local society, technical community, or technical events.

# PRESIDENT'S OVERVIEW

That said, a return to physical events has, more recently, become possible, and it was a real highlight for me to attend the Annual Dinner of the Midlands Institute of Mining Engineers in October. A wonderful evening with good food, good company, and a fascinating insight into the important work of a key part of our membership. A great opportunity to appreciate the breadth of skills and activities within IOM3 – which I truly believe is our key strength.

In my Inaugural Address, I spoke about the strong relevance of our profession to the global challenges we all face. Materials, minerals and mining will truly be at the heart of delivering the necessary technological solutions for a decarbonised future. The IOM3 Sustainable Future theme throughout 2021 emphasised the role of materials professionals in the run up to COP26. Under this theme, we enjoyed a wide range of activities including a week of webinars, podcasts, regular COP26 bulletins and a joint report with the Henry Royce Institute highlighting the contribution

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

'It is testament to the resilience and resourcefulness of our membership, volunteers and the IOM3 staff that we were able to quickly adapt and sustain our activities throughout this unprecedented period.'

'Materials, minerals and mining will truly be at the heart of delivering the necessary technological solutions for a decarbonised future. The IOM3 Sustainable Future theme throughout 2021 emphasised the role of materials professionals in the run up to COP26.'

of materials to the UK Government's 10 point plan. To meet these challenges will require all of us, across the materials cycle, to play our part and will require international collaborations. In that light it was wonderful to contribute to the first webinar on 'Sustainability in Materials Engineering' as part of our new partnership with ASM International. These events and activities have been just a few examples of the progress made to deliver against our strategic priorities of membership, professional development, content and influence.

Our ability to continue to offer a vibrant programme of online events and content has been enabled by the work done in previous years to transform our website and IT platform - Project Optimus. A project which was delivered at the perfect time to enable us to meet the challenges of digital working. Through this we have been able to continue the highly successful membership workshops and deliver a more than 3% growth in our overall membership, a very significant achievement which helped to underpin better than expected financial performance.

We have also been able to host our latest Advisory Council and Annual General Meeting in Sheffield as hybrid events, enabling a wider attendance and representation than was possible through purely physical meetings, supporting our commitment to increase equality, diversity and inclusion across our governance and membership. Another significant milestone has been the launch of our Ably Different Member Group (ADM3), alongside the active Women in Materials, Minerals & Mining (WIM3), IOM3Pride, Ethnic Minorities in Materials, Minerals & Mining (EMM3) and Student & Early Career (SECC) Groups.

Finally, it was inspiring to be a judge at the 2021 Young Persons' World Lecture Competition (YPWLC) and to enjoy brilliant speakers from China, UK, South Africa, Hong Kong, Canada, Russia and Malaysia. The future of our profession is evidently in great hands.

Once again, I wish to thank all the staff and volunteers who have worked so hard to make the Institute a success through challenging times and I look forward very much to meeting more of you this year.

# IOM3 Presidential Address... Meet Neil Glover FIMMM

### WATCH NOW



During 2021, IOM3 continued to seek to fulfil its charitable objects and deliver its strategy to be the best professional membership body it can be, whilst supporting professionals in materials, minerals and mining to be heroes of the transition to a low-carbon, resource efficient society, not villains. In what turned out to be another year where forward planning had its limits, here are some of the highlights.

Like many other professional bodies, we started the year unsure of what would happen to our members and their involvement with IOM3. I am delighted therefore with the growth in numbers of members during 2021, especially at MIMMM level. This is a great endorsement of the efforts IOM3 has made to make itself more relevant and useful to professionals in materials, minerals and mining in the UK and beyond. It is also thanks to some sterling effort by active supporters and volunteers as assessors, and the IOM3 team in administering the demand.

IOM3 delivered a strong set of events in 2021. Alongside our now normal programme of webinars, it had very much been hoped that the big PVC conference could be run with an in-person element in 2021, but events conspired against this, so the switch to fully virtual was made. This ended up being very successful, with a strong technical programme that was extremely well-received. September saw the very positive Sustainable Future week, showcasing the role of professionals in materials, minerals, and mining in the transition to a low-carbon,

## CEO'S REVIEW

'Like many other professional bodies, we started the year unsure of what would happen to our members and their involvement with IOM3. I am delighted therefore with the growth in numbers of members during 2021, especially at MIMMM level.'

resource-efficient society. It was also the month of the first ever properly hybrid IOM3 conference – the European Electric Steelmaking Conference (EESC) – held in Sheffield and online. The virtual element used the same platform as deployed for PVC, which has proven itself over the last eighteen months as capable and very user-friendly.

The Annual General Meeting was also held at EESC, again as a hybrid meeting. Alongside the regular agenda, members adopted the new, simpler membership structure proposals and some other modifications as part of the third phase of our governance modernisation. These changes – once approved by the Privy Council – will be brought into effect, hopefully during 2022. ▶



The IOM3 website offering has continued to develop, with the introduction of daily industry news stories, a weekly content alert, and an expansion of the material relating to affiliated local societies. The results of the 2021 reader survey for the member magazine *Materials World* (MW) informed the exciting changes we planned in 2022. Both *Materials World* and *Clay Technology* are also now available electronically to all members (via the MyIOM3 page when logged into the website).

In addition to the existing training and development offering, IOM3 introduced some new courses in 2021. Perhaps the most popular new one was looking at life cycle analysis (LCA). Held in the autumn, this was so popular more runs are scheduled in 2022. IOM3 also continued to deliver end-point assessment services for several materials, minerals, and mining apprenticeships.

Building on the work last year, IOM3 was also able to get involved in more policy discussions in 2021. This included input to the consultation on 'advanced materials' definitions relevant to the National Security and Investment Bill in January and continued with responses to the major packaging reform consultations in the early summer. Other highlights include joining forces with the National Engineering Policy Centre for a submission to the UK Government on its future investment plans, and with the Henry Royce Institute to set out how materials, minerals and mining are essential to all ten points of the Government's plan for a green industrial revolution. Finally, in October it was gratifying to see the Government in the UK's Net Zero Strategy commit to producing a national strategy on critical raw materials, something IOM3 has been calling for all year.

In 2021, IOM3 continued to develop its active supporter and volunteer cohort with the appointment of a new Vice-President, Mike Clinch, and five new Technical, Member and Professional Community Chairs. Two new members were also elected to join the Advisory Council, and IOM3 also established its Commercial Activities Board (CAB), which oversees our non-membership activities. Four new members joined the Awards Committee at its spring meeting, and later in the year, two new members were appointed to the Audit Committee.

Thank you to each of the new additions to leadership roles in the Institute for coming forward, and a corresponding heartfelt thanks to those who have moved on, especially Peter Haslehurst, who stepped down as the Chair of our Audit Committee after significant service in that and other roles over many decades, and Phil Bischler, who stepped down at the end of the year as a Trustee and Chair of the Members' Board, again after substantial service to IOM3 over many years.

2022 is shaping up to be another exciting and challenging year for IOM3 and its members. As economies around the world come to terms with living with COVID-19 and adapting to new ways of working, IOM3 will continue its journey to provide professionals in materials, minerals and mining with the best membership services, technical content, professional development, and networking opportunities it can. The simplification of IOM3 membership grades and the reform of its Technical Communities' structure will be important parts of this work. The Glasgow Climate Summit may well be over, but the urgency with which all need to act to address the transition to a low-carbon, resource efficient society remains,

'2022 is shaping up to be another exciting and challenging year for IOM3 and its members. As economies around the world come to terms with living with COVID-19 and adapting to new ways of working, IOM3 will continue its journey to provide professionals in materials, minerals and mining with the best membership services, technical content, professional development, and networking opportunities it can.'

and IOM3 will continue its role here. This will include actively participating in the policy debates, for example in the work to reform packaging recycling provisions and to develop a national strategy for critical raw materials. IOM3 will also continue to improve its own environmental performance in line with our sustainability policy and as a signatory to the Professional Bodies' Climate Action Plan and the Pledge to Net Zero.

Finally, some thanks. Thank you 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 great team here at IOM3 for another year of amazing effort and excellent delivery, helping us to become the best professional membership body we can be and to deliver on our charitable objects.

#### **Appointments during 2021**

#### **Community Chairs:**

Martin Griffin (ADM3)
Paul Hogg (Composites)
Cheryll Pitt (Light Metals)
Ambrose Taylor (Adhesion and Adhesives)
Emma Wilcox (Sustainable Development)

#### **Advisory Council:**

Hannah Hilton-Tapp (Students) Mike Scott (Affiliates)

#### **Awards Committee:**

Gemma Dixon Jim Hannigan Stephen Kukureka Andrew Spowage

#### Commercial Activities Board (CAB):

Michael Agyeman Maurizio Carano Jim Hannigan Kristina Lawson Daniel Parvaz Tina Rippon

#### **Audit Committee:**

Sarah Hinton David Seath

# HIGHLIGHTS OF THE YEAR

This annual report reflects the work, aims and objectives of the Institute in 2021. The continuing uncertainty surrounding the global pandemic had an impact on our operations, including financial reports, events schedule and venue hire. This impact has been reflected throughout the report.

IOM3 showed no sign of slowing down in 2021 despite the pandemic. Our membership team saw a year-on-year growth of 3.8%, the development of our new website and CRM systems allowed better communication with our members, and our events and training schedule was busier than ever.

We launched our Sustainable Future theme in 2021 to build momentum towards the Glasgow climate summit (COP26) delivering activities including a series of events, podcasts, blogs and industry news as we move towards net-zero. The work on Project Optimus (our digital transformation project) continued with the introduction of a new email system and awards judging process as well as the launch of a live chat and digital advertising functionality.

IOM3 continued with delivery of its Business Plan (2021-2023), focused on membership, content, professional development and influence in public and policy debates. Highlights of 2021 from all IOM3 activities are described in the following pages. IOM3 is thankful to all our active 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.



- IOM3 commits to 'Sustainable Future' theme throughout 2021 to celebrate COP26
- Site-wide digital advertising enabled on IOM3 website

#### January



- IOM3 appoints Commercial Activities Board members
- Women in Materials, Minerals & Mining (WIM3) launches 'Inspiring women in materials, minerals and mining' podcast series theme

#### March

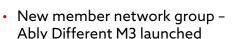


 IOM3 becomes Associate Member of On-Pack Recycling Label

**February** 

- · Live chat enabled
- 'Monthly member update' email launched on our new integrated email system
- Our weekly website content digest email went live

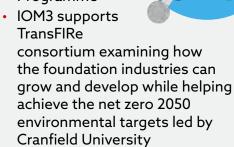




 Dr Michael Clinch FIMMM was appointed the Institute's new Vice-President.







 Our biggest online event, PVC 2021 takes place drawing in more than 400 delegates

#### May



- Launch of IOM3 Approved service
- IOM3 submits response to the Extended Producer Responsibility (EPR) for Packaging and Introducing a Deposit Return Scheme (DRS) consultations
- IOM3Pride celebrates Pride Month with a podcast discussing intersectionality





 Materials World goes naked, removing its plastic in a bid to reduce our carbon footprint



- August
- IOM3 responds to government plans to boost hydrogen economy
- The major review of our Technical Communities completed and approved by Trustees





- IOM3 partners with T&F to launch Open Research publishing platform
- Sustainable Future Week takes place with more than 10 webinars across 5 days in the lead up to COP26.
- Governance changes approved at the Annual General Meeting

#### September



- Young Persons' World Lecture Competition takes place virtually
- COP26 bulletin launched
- IOM3 launches partnership with ASM-International

#### **November**

#### • October

- IOM3 joins signatories for Professional Bodies Climate Action Charter
- The Henry Royce Institute and IOM3 launch materials UK ten point plan for a green industrial revolution



#### December

- 2021 Awards celebration takes place
- SECC hosts annual Future of Materials conference



#### Membership

The Membership team had a busy year and achieved a 3.8% growth in individual member numbers and an income derived from membership surpassing £1.4 million for the first time. This was despite there being no increase in membership fees in 2021 from 2020.

Another major achievement of the Membership Team in 2021 was managing and processing the number of individuals seeking and being awarded a professional grade of membership, which has reached a record high. A total of 816 individuals were awarded MIMMM, which brought the MIMMM community to more than 5,000 for the first time and a total of 154 members were awarded or reinstated as FIMMM reaching a record of 2,700. An additional 88 members were awarded AIMMM and TIMMM.

Likewise, the number of members seeking professional registration also continued to be high. IOM3 recorded 194 new Engineering Council Registrants (CEng, IEng & EngTech), 35 new Science Council Registrants (CSci, RSci & RSciTech) and 19 new Council for the Environment Registrants (CEnv & REnvP). The Institute's undergraduate student member recruitment has re-started after a hiatus caused by the pandemic.

The demand for membership workshops continued with 52 membership and registration 'Become a FIMMM', 'CEng in day' and other Science Council and Society for the Environment professional registration workshops held virtually across the year and more than 320 members attending. The programme will continue in 2022.

'IOM3 is a strong organisation and helps to promote the collective materials discipline both nationally and internationally. I am a great believer in synergy and being stronger by working together.'

Sarah Cartmell FIMMM

CEnv & REnvP

CSci, RSci & RSciTech

CEng, IEng & EngTech

AIMMM & TIMMM

MIMMM

FIMMM

IIGHLIGH IS OF THE YEA

The IOM3 member toolkit launched, providing members with a digital membership badge appropriate to their grade to promote their professional standing. Members can access a digital badge relating to their grade to use on email signatures or on printed correspondence, as well as social media posts/profiles.

In November 2021, IOM3 partnered with ASM International, a leading body for people involved with materials science and engineering in the USA, to offer mutual e-membership, a leading body for people involved with materials science and engineering in the USA. A joint webinar programme building on this partnership will run throughout 2022.

The third all-member survey was prepared in late 2021 focused on understanding the impacts of COVID-19 on members and gaining an idea of members' experience of inclusion, diversity and equality issues in their professional lives. The full details will be published in due course.



'Since joining IOM3 I have been astounded by the level of support, professionalism and resources this Institute offers.'

Patrick Plummer CSci FIMMM Chief Mining Geologist (Geoscientist), TradeTech LLC

'The membership workshops held by IOM3 were very helpful in understanding the importance of Continuing Professional Development and how it could be useful in career growth.'

Dr Santosh Kumar MIMMM

















































## HIGHLIGHTS OF THE YEAR

### Student & Early Career Committee (SECC)

SECC held a series of online events throughout 2021 open to IOM3 members and non-members with more than 300 registrations.

Katie Best ACC, Founder & Director at Taylor Best delivered the very successful webinar 'Finding and using your power and influence' no matter how junior you are in March. While Sofie Boons (aka The Alchemical Jeweller) delivered this year's Art Lecture on finding solutions for the visualisation and containment of invisible substances, concepts and scents through the design of jewellery and objects. Other events included 'Life cycle assessment for early career researchers' and joint events with MAPP ('Road to Chartership') and IOM3 WIM3 ('Securing a new role in 2021').

Thad a fantastic time at the IOM3
Future Materials Conference. Having the opportunity to present some of my most exciting research, as well as meeting lots of interesting and passionate researchers, really made for a great day.'

Anna Tholen from Loughborough University, UK, winner of the Future of Materials Prize



Committee members shared their views in the two opinion pieces 'Pressure to perform in student & work life' and 'Dear self from 5 years ago.' The group also produced our first student newsletter in April 2021 designed for those in their early careers or studying, to keep members up to date with SECC activity.

In December, we held the Future Materials Conference with the support of Rolls-Royce plc, Henry Royce Institute and MIDAS. At our first in-person event in two years, researchers from around the UK joined together to present their talks on topics ranging from bio-based plastics, metamaterials to organic metal frameworks and sustainable aluminium. During the year we welcomed Dr Alastair Houston and Liz Scoffins on the Committee.

# HIGHLIGHTS OF THE YEAR

#### **Diversity & inclusion**

IOM3 has made significant progress towards creating a more inclusive and diverse environment for all who interact with it, and is committed to continue supporting, promoting, and creating a dialogue for under-represented and minority groups in science and engineering in the future.

In 2021, IOM3 participated in the Royal Academy of Engineering/ Science Council Diversity and Inclusion Progression Framework self-assessment in 2021. The aim of the Framework is to help professional bodies in science and engineering to track and plan their progress on diversity and inclusion. IOM3 needs to establish an overall, planned and coherent approach to improving its performance on IDE and is seeking to improve its EDI data with the member survey in 2022.

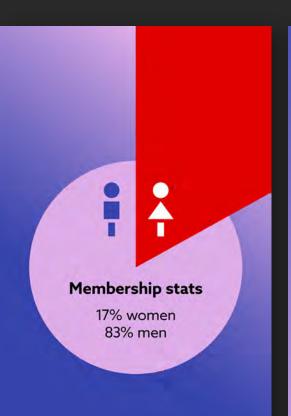
In line with National Inclusion Week in October 2021, IOM3 launched a progress report on diversity and inclusion celebrating some of the achievements over the last two years made in EDI as well as highlighting areas of improvement.

'The broad reach IOM3 has allows groups like ours to inform the members of issues they may not be aware of. Our industries are often not as diverse and inclusive as others and educating our members can help bring positive change to these sectors.'

Sam Grisa, former Chair of EMM3

#### In 2021, IOM3:

- Committed to avoiding single-gender speaker panels at its conferences
- Materials World has featured conversations on neurodiversity, LGBTQ+ engineers, Women in STEM, Black Miners in the UK and more
- New award in 2022 to recognise someone who promotes IDE in materials, minerals, and mining
- IOM3 and UKRI set up a project to promote inclusion, diversity and equality in the foundation industries and their supply chains
- Celebrated several calendar awareness days throughout 2021, including Pride Month, UK Recycle Week and Women in Engineering Day.



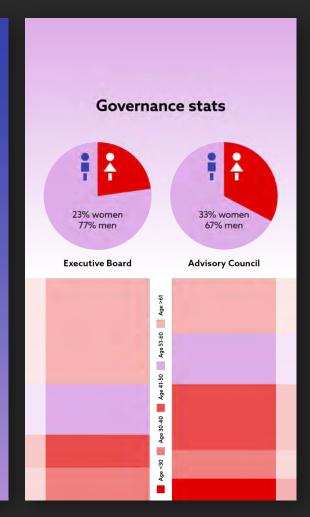
IOM3 has five member network groups promoting diversity within the field of materials, minerals & mining

I-M3 ADM3

I-M3 EMM3

I-M3 PRIDE

I-M3 SECC





## **HIGHLIGHTS OF THE YEAR**

#### **Technical communities**

Covering the breadth of technical interests of IOM3 members, Technical Communities play an essential role in enabling delivery of the Institute's charitable activities by providing state of the art technical content and supporting the work of IOM3 in advising Ministers as well as offering networking and career support opportunities for members.

Virtual meetings continued within the Technical Communities throughout 2021. This has proven to be a success, allowing a greater mix of people to engage and increased the effective use of volunteer time. Our Technical Communities hosted a range of webinars with groups working together, the highlights of which included the Sustainable Future week in September, the ongoing NMA monthly webinar series, energy materials for the future and recycling linked to aluminium and packaging.

IOM3 continued with its review of the technical communities (Governance Modernisation: Phase 4) following the Governance changes in 2019 to modernise the Institute and further improve member services.

member services.



The Trustees approved the changes to Technical Communities in 2021, for rollout and launch in April 2022

These include the following changes:

- A new structure with 22 Technical Community groups, including the formation of two new groups
- Group naming, logos and branding will be consistent and in line with the IOM3 visual identity
- Each Technical Community group will have a dedicated public web page in keeping with the IOM3 visual identity
- Each Technical Community group will have a leadership group comprising a chair and up to 15 IOM3 members who will steer activities against a range of agreed objectives to ensure delivery of benefits to members.

We would like to thank all our active supporters and volunteers for Institute dedicated time, bringing value to our members.



Right: New signage at the IOM3 Library in Grantham.

# Advances in Applied Ceramics Structural, Functional and Bloceramics

#### Library & journals

The new library signage was completed during 2021 and the team was able to welcome back visitors by appointment. Following on from the introduction of ICON in 2020, we continued to enhance our digital catalogue and began work to display heritage items in Grantham.

#### Ironmaking Steelmaking



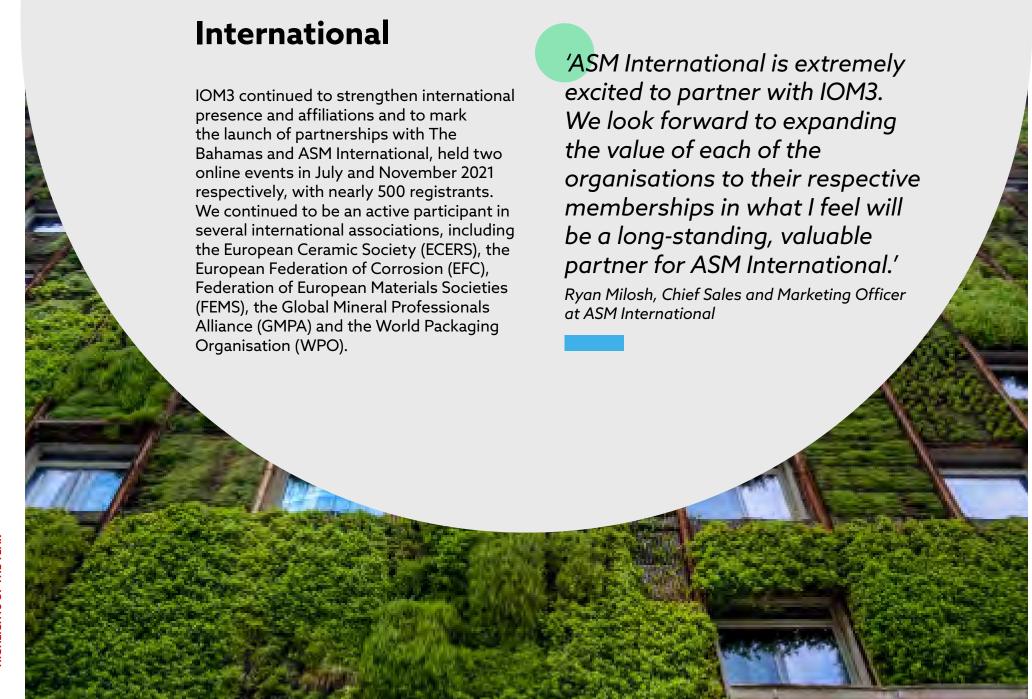
IOM3 continued its partnership with journal publisher Taylor & Francis (T&F) and launched a Materials Open Research platform, utilising T&F's open research publishing arm, F1000. This enables IOM3 and future affiliate partners in the materials science field to be the first adopters of a more open and transparent approach to publishing materials science research. Impact factors improved for many of our existing journals including *International Wood Products Journal* and *Ironmaking & Steelmaking*. Overall, IOM3 journal articles were downloaded more than a million times in 2021, another record.





Thanks for your invaluable assistance. I never knew, for example, that there were such things as slag collections of such variety – it's amazing.'

Arthur Kay, IOM3 Library Enquiry



# HIGHLIGHTS OF THE YEAR

#### **Education & training**

The IOM3 Business Partner Programme launched in May 2021. A subscription to the programme delivers the opportunity for organisations to visibly associate themselves with the Institute and access IOM3 resources and work programmes. Confirmed subscribers in 2021 included CBMM, Renishaw, Beta Technology and Lucideon.



'I always jump on any course from Clayton. I think I may have taken all his courses now. Thanks to IOM3 for all the support and assistance. I will watch out for what's next.'

> Fracture and Fatigue Failure Analysis course attendee

'Thanks to IOM3 for the certificate. I enjoyed the course and will look out for future courses that are of relevance to my CPD (at age nearly 67).'

Dr Bernard P Rochard, Joinedup Rail Limited



The IOM3 training academy ran six INFORM webinars throughout 2021. This recently launched opportunity allows organisations to utilise the webinar format to deliver technical or educational content while also generating the opportunity to increase their profile and that of their product or service.

We welcomed the return of in-person teaching for some courses. 10 webinars took place within the IOM3 Training Academy with more than 1,000 registrations.

End point assessment for the Level 3 Composites standard continues and we have become the End Point Assessment Organisation for two further materials, minerals and mining apprenticeships at level 6 and level 7.

#### **Content & magazines**

2021 saw an increased effort to produce content in collaboration with technical communities. This resulted in a breadth of content in *Materials World* magazine across topics including, but not limited to packaging, mining, construction, energy transition, biomedical engineering, iron and steel, the circular economy, surface engineering, transport, materials science and technology, and geotechnical engineering.

Responses to *Materials* World reader survey

'Always a good balance of content between extraction, production and uses of materials.'

The print content is supported by online daily news as well the ongoing 'IOM3 Investigates...' podcast series, with 24 episodes across the year focused on issues relevant to our members.

Materials World carried out a survey of its readers in 2021 to ensure we continue to produce content that best suits members' needs. This received responses across the breadth of the disciplines, with positive feedback and valuable pointers on where we can expand our offering while maintaining balance in coverage.

The magazine sees a fresh design developed in-house ready for launch in 2022, in line with the new IOM3 brand and to improve readability. Our new cover design gives us flexibility to showcase content beyond the feature theme to better meet diverse member interests.

We also improved our environmental credentials with the majority of UK copies now being delivered 'naked' (without any wrapper). All other copies are now delivered in a paper wrapper for recyclability at kerbside. The switch has saved around 285kg so far in single-use polywrap in the six months to January 2022.

'Materials World is an excellent example of what a professional association's magazine should be like. It is both technical and highly readable. More of the same!' 'Covers a wide range of subjects, not just scientifically but also other things that benefit membership such as CPD.'











Materials World covers from 2021.













# HIGHLIGHTS OF THE YEAR

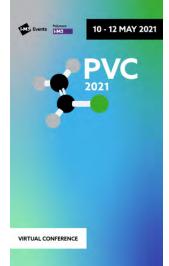
#### **Events**

Postponed from 2020, the Polymer Society's flagship PVC2021 took place virtually, welcoming more than 400 delegates and 60 high-quality presentations across 7 key topic themes. This was the first IOM3 Event of this scale to take place online and the team received some great feedback. The next PVC event will take place in 2024.

Due to the ongoing uncertainty regarding international travel, the European Electric Steelmaking Conference was held as a hybrid event. This was our first hybrid event, the live-stream and AV were delivered by O-Films into an online platform for virtual attendees. The in-person conference was hosted in Sheffield and attracted 110 delegates, with a further 90 joining online.

Following the postponement of the Rolls for Rolling Mills conference due to continued international travel restrictions, a successful series of webinars focusing on key themes facing the rolling mill/metal rolling industry took place across June and July 2021. The next Rolls6 conference will take place in 2024.

The IOM3 Natural Materials Association continued with its well-supported, monthly lunchtime webinars on various topics such as anthropology, mycelium, protein-based materials and more. While the Rubber in Engineering group celebrated more than 1,000 delegates signing up for its four online afternoon technical meetings.







The International Conference on Manufacturing of Advanced Composites (ICMAC 2021) was virtual event success with over 100 delegates tuning in for the three-day programme.

Following the success of the virtual conference on 9-12%Cr CSEF Steels in February, IOM3 were approached by the European Collaborative Creep Committee to run their first virtual conference.

SECC, IOM3Pride and WIM3 held a number of virtual events during 2021 and further plans are in place to build on this success with more events for our member groups in 2022.

The annual Starpack Competition continued with more than 160 entries in the students' competition and 120 schools' entries – there was no shortage of excellent work. For students, the judges awarded 64 highly commended, 32 bronze, 15 silver and 9 gold stars. The judges also awarded 58 highly commended, 20 bronze, 15 silver and 9 gold stars in our schools' competition.

Packaging is essential to our modern day lives, but it is often misunderstood as a villain not a hero. I am really excited about the Starpack competition to encourage students to take up packaging design as a career. This is a great opportunity to showcase your ideas. We are so impressed with this year's entries, and we really appreciate the effort from everyone.'

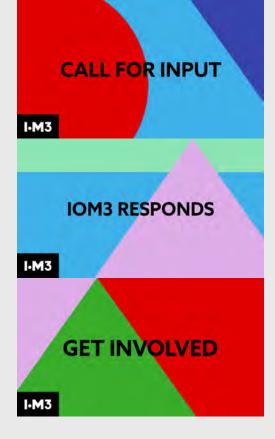
Jude Allan MIMMM, Chair of the Packaging Society

The team in charge of the event were excellent. They were friendly, ensured that everyone had what they needed and went out of their way to help as they could. Timings were kept to and, in my opinion, the event was a success.'

Delegate attending EEC 2021

The option of remote participating, even with on-demand recordings is a great idea. In a normal situation, I wouldn't have time to attend physically three days of a conference, in this way I had the opportunity to follow all the presentations interesting to my working field. I hope to have this option available even when conferences could be also in the traditional way.'

Delegate attending PVC 2021



#### **Policy & influence**

IOM3, through the expertise of its members, informs and responds to key policy debates across a range of important agendas. In 2021, IOM3 submitted several responses to Parliamentary and Governmental consultations, as well as producing contributions in collaboration with partners.

IOM3 members made a significant contribution to the definitions of advanced and critical raw materials as proposed under the National Security and Investment Bill mandatory notification sectors consultation.

Responses to the major packaging reform consultations on UK-wide Extended Producer Responsibility (EPR) and Introducing a Deposit Return Scheme (DRS) in England, Wales and Northern Ireland were submitted. The government responses to these consultations are due in 2022.

IOM3 also responded to further consultations and parliamentary inquiries – from the Science and Technology Committee inquiry into the role of batteries and fuels cells in achieving net zero, to the revised Waste Prevention Programme for England. IOM3 jointly submitted a response with CIWM to the draft policy statement on environmental principles and responded to the Spending Review through a joint National Engineering Policy Centre (NEPC) submission and a letter to the Chancellor from members of the Science Council.

The Chair of the IOM3 Packaging Society, Jude Allan MIMMM, represented IOM3 at The House of Commons Environment, Food and Rural Affairs (EFRA) Committee evidence session in its inquiry into plastic waste.

IOM3 also partnered with other organisations to deliver joint activities throughout the year such as the IOM3-Henry Royce Institute report highlighting the critical role of materials in delivering the Government's Ten Point Plan and the 'Decarbonising construction: building a new net zero industry' NEPC report.

IOM3 is involved in a number of activities or groups including, the UK Plastics Pact, Environmental Policy Forum and the National Engineering Policy Centre.



### Communications & design

In 2021, IOM3 launched our new integrated emailing system (MessagePipes) producing monthly updates to our members as well as a new student and early career newsletter. The new email communications system allows us to send and track more targeted communications to bring in links to content directly from the website, saving much manual work. We also introduced a new monthly events update and advertising on this will begin in 2022.

IOM3 responded to UK Government announcements including UK Budget and Spending Review, Environment Bill, Build Back Greener report, Government Innovation Strategy and the Transport Decarbonisation Plan. IOM3 published its End of Year Review in December 2021.

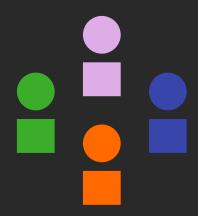
During the year, we increased our IOM3 news content (207 items/13 blogs) and continued to celebrate a number of calendars days throughout 2021 including Black History Month, Pride Month, Global Recycling Day, International Women in Engineering Day and more.

Our social media presence continues to grow with 12,000 Twitter followers, over 15,000 LinkedIn followers, 3,800 Facebook followers and 758 Instagram likes.

The IOM3 Design Team worked on the redesign of Materials World and Clay Technology for launch in 2022 in line with the new branding, as well as producing the design of new tote bags printed at the beginning of September 2021 to be used at all future events. This minimises waste as promotional items are not event specific in line with our new visual identity and have excellent environmental credentials. Grantham and London signage was completed at the end of 2021 to reflect the new visual identity.

#### IOM3 team

Early in 2022, IOM3 launched the use of an online learning platform for our team. The platform allows the team unlimited access to online training courses for both their professional and personal development. Hybrid working has been well received by the team, who are enjoying the opportunity to meet physically with their colleagues while having the ability to have some focused time remotely. The whole team will meet twice per year for training and team building events.



#### Digital transformation

IOM3 continued work on our Digital Transformation project (Project Optimus) throughout 2021. Visitor numbers to the website increased significantly over the course of the year. A month-on-month comparison for 2020 and 2021 showed as much as 90% improvement in site sessions over the same month in the previous year

2021 saw the introduction of a useful online chat facility for users to interact with the IOM3 team in real time, a new system for online judging of the 2021 Awards & Prizes, digital advertising functionality across the whole site, web pages on the newly launched Business Partner Programme and IOM3 Approved service, and a host of other improvements in functionality leading to more efficient processes and easier member data reporting and management.

'This was an exciting and challenging project for the integrated transformation team with our partner Bluelight CRM. Deep integration of Microsoft Dynamics with a new members' area and website is delivering great digital services for professionals and the public. We're delighted to see the success since launch and look forward to working with IOM3 on their continuing digital transformation journey.'

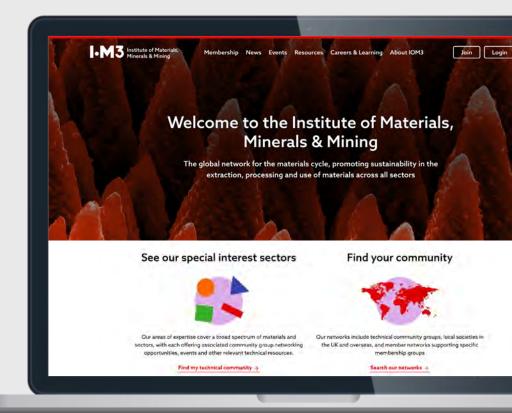
Alex Skinner, CEO of Pixl8

'Modern fresh look. Seems well organised when trying to navigate around the pages.'

> 'Colour balance, modern style, easy format for finding of any information.'

The new IOM3 website was shortlisted for the MemCom Excellence Awards 2021 in October and IOM3 was awarded Best Digital Transformation at the International & European Association Awards 2021 by the Association of Association Executives (AAE) in December.

Further digital enhancements are continuing during 2022, including the implementation of the membership grades and technical communities restructuring plans as well as work on member engagement and diversity data.



'I think the website is much improved and I really like the design overall. It is very easy to find information now. I really like everything that has been done.'

## **HIGHLIGHTS OF THE YEAR**

#### Sustainable future week Reaching net-zero Monday 6 - Friday 10 September

#### Sustainable Future

In 2021, IOM3 introduced the 'Sustainable Future' theme to help build momentum towards the Glasgow climate summit (COP26) by delivering a wide range of activities including events, podcasts and additional content as part of this theme. The theme will continue throughout 2022 following COP26 as we move towards net zero. IOM3 organised 33 events, produced 4 podcasts, 7 blogs and during the last 6 months of 2021 published 31 articles and 151 editorial items on the theme of Sustainable Future.

IOM3 committed to climate action through helping to develop and being a founding signatory of the Professional Bodies Climate Action Charter. The aim of this initiative is to help support members across all professions in addressing the challenge of implementing the Paris Agreement. Sustainable Future week held in September 2021 was a success with more than 700 registrations over the course of the week with 10 webinars, covering all aspects of IOM3 activity with highlights linked to resource efficiency, critical raw materials, energy transition/carbon capture and storage/hydrogen, energy/battery materials and people.

The communications team also launched the COP26 bulletin to keep members updated on what was happening during the two weeks of COP26.







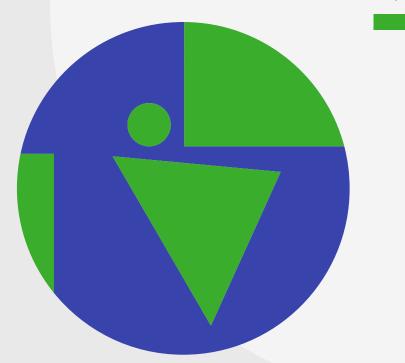






'As a founding member of the Professional Bodies Charter, IOM3 has taken a vital step in leveraging their unique expertise and experience to support professional bodies, large and small, to join in the ambition to create a green and prosperous economy for everyone.'

Geraint Northwood, E3G



'Professionals in materials, minerals and mining have crucial roles to play the changes and technologies required to enable the transition to a low-carbon, resource-efficient society. As the global network for the materials cycle, IOM3 is committed to helping this vital effort, both in our own actions (for example as a signatory of the Pledge to Net Zero) and in the support we offer members and wider society through sharing technical information, education and advice.'

IOM3 CEO Colin Church CEnv FIMMM

#### Venues

Following the change of work style during COVID-19, IOM3 redesigned our offices to support a new, hybrid style of work, with most members of the IOM3 team spending two days per week in either our Grantham or our London hub, and the rest remotely. Trustees also agreed to sell IOM3 Stoke office.

IOM3 has committed to reducing our scope 3 greenhouse gas emissions by changing suppliers for stationery who provide 'green deliveries,' removal of single use plastics from coffee machines, assessing our business and commuter travel emissions. We also increased our recycling rate to 48% with the aim to improve on this during 2022.

Plans for 2022 include developing/ renovating the members' business centre and heritage library.



Well located venue with professional staff and superb quality and choice of catering, at excellent value for money.'

Wells Plastic

Just wanted to say a quick thank you to the whole team at IOM3. Any queries were dealt with promptly and efficiently. Would highly recommend this venue.'

Sapphire Financial Planning

## AWARDS, MEDALS & PRIZES

IOM3 awards numerous medals and prizes in recognition of outstanding contributions to science, technology and management across all disciplines in materials, minerals and mining.

Awards are presented for personal achievement and published work as well as for outstanding contributions to the Institute and its activities. Some awards are aimed specifically at earlier career stages, others recognise technological developments or contributions to education. Awards are presented at special occasions throughout the year, and some award winners deliver lectures to which all members are invited. In 2021, IOM3 has launched a new Equality, Diversity and Inclusion (EDI) award recognising outstanding contribution to promoting EDI within IOM3 and the wider materials, minerals and mining communities.

Prizes are also presented to the best students in specific disciplines and IOM3 runs competitions such as the Young Persons' Lecture Competition to recognise communication and presentation skills. Full details of IOM3 awards and prizes are published on the IOM3 website at www.iom3.org/iom3-awards.













It is an honour to win this award, there are a lot of very well-known names on the list of previous award winners so it is nice to be included in this list.'

Dr Faye Smith OBE CEng FIMMM, Winner of Leslie Holliday Prize



It's a huge honour to be winning this nationally and internationally recognised Early Career award and I feel very grateful and blessed to be working with such wonderful people who nominated me and to the Institute for making this fantastic opportunity available to me.'

Dr Stella Pedrazzini MIMMM Winner of Silver Medal

### Personal achievement awards

Bessemer Gold Medal

Griffith Medal & Prize

Medal for Excellence

Silver Medal

Sir Andrew Byran Medal

Gold Medal

Colwyn Medal

**Dowding Medal & Prize** 

Frank Fitzgerald Medal

& Travel Grant

Futers Gold Medal

Grunfeld Memorial Award & Medal

Hadfield Medal & Prize

Harvey Flower Titanium Prize 2020 (retrospective)

**Hume-Rothery Prize** 

Institute's Technician Medal

Ivor Jenkins Medal

John Hunt Medal

John James Ferriola

Prof Maria-Magdalena Titirici

ProfGradIMMM

Robin Hickson CEng CSci FIMMM

Dr Stella Pedrazzini MIMMM

Stuart Patrick FIMMM

Dr Richard P Thackray MIMMM

Prof Liqun Zhang

Joseph Lee CEng MIMMM

Dr Nathan Cooze CEng CSci MIMMM

Prof Samuel Kingman CEng FIMMM

Dr Edward J Pickering CEng CSci

**MIMMM** 

Dr David Hanlon

Dr Thomas B Britton CEng CSci

**FIMMM** 

Dr Bengt Hallstedt

Bernard Donnachie lEng FIMMM

Roger Lawcock CEng FIMMM

Prof Peter Lee FREng CEng CSci

FIMMM

Kroll Medal & Prize

Leslie Holliday Prize

**Outstanding Contribution** 

**Awards** 

Platinum Medal

**Robert Perrin Award** 

Rosenhain Medal & Prize

Rowbotham Medal

Stokowiec Medal & Prize

T B Marsden Professional

Medal

Thomas Medal & Prize

Thornton Medal

Tom Colclough Medal & Prize

Verulam Medal & Prize

Prof Osman M Bakr FIMMM

Dr Faye Smith CEng FIMMM

George Lee CEng FIMMM

Prof William E Lee FREng

Dr Grant Gibson

Dr Robert Lianqi Zhao Hoye CEng

CSci FIMMM

John McQuilliam

Stephen Bastow

Melvyn G Warrender CEng FIMMM

Gill Thornton

Prof Dave Worsley FIMMM

Matt Green CEng MIMMM

Prof Eduardo Saiz





### **Publication awards**

**Adrian Normanton Prize** 

Billiton Gold Medal

Douglas Hay Medal

James S Walker Award Materials World Medal

Pfeil Award

Vanadium Award 2020 (Retrospective) Williams Award Stephen Spooner, Claire Davis

& Zushu Li

Veeranjaneyulu Rayapudi & Nikhil Dhawan

Martyn L Bloss, Geoff W Capes, Russell Seib, Liam V Alford,

Jack L Light, Ilnur Minniakhmetov

& Chris Nielsen

Mohammed Deera

Carina Joannidis

M Biesuz, G Taveri, A Duff, E Olevsky, D Zhu, C Hu & S Grasso

J Klemm-Toole, M Burnett, A J Clarke, J G Speer & K O Findley

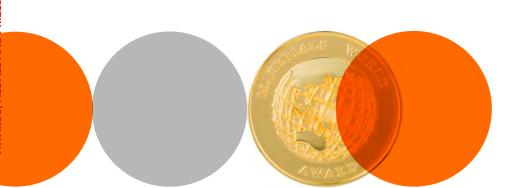
Dharm Jeet Gavel, Qingshi Song, Allert Adema, Jan van der Stel, Jilt Sietsma, Rob Boom & Yongxiang Yang

### Awards from other bodies

Beilby Medal & Prize
Charles Hatchett Award

Dr Pola Goldberg Oppenheimer

Huajun Liu, Haijun Wu, Khuong Phuong Ong, Tiannan Yang, Ping Yang, Pranab Kumar Das, Xiao Chi, Yang Zhang, Caozheng Diao, Wai Kong Alaric Wong, Eh Piew Chew, Yi Fan Chen, Chee Kiang Ivan Tan, Andrivo Rusydi, Mark B H Breese, David J Singh, Long-Qing Chen, Stephen J Pennycook, Kui Yao





### **Education Awards**

A T Green Award

R H Craven Award

**Royal Charter Prize** 

Technician of the Year Award (Cat A) **Emily Milan** 

Zhuoqi Li (Special commendation)

Zexiang Han

Daniel George Mills

Maya Constable

Right: Education Award winners





Above: Winners at the Special & Publication Awards Lunch held in December 2021

Below: Dr Philip Bischler CEng CSci FIMMM awarded for his contribution to the Institute for 25 years





Above: Winners at the 2021 Premier Awards Dinner

Below: Dr Stella Pedrazzini MIMMM, winner of the Silver Medal



### **Local Society Awards**

Local Society of the Year Award

The Midland Institute of Mining

Engineers (MIMine)

**Outstanding Service Awards** 

Dr Rod Stace CEng FIMMM

(SMMMI)

Dr Martin Tuffs CEng FIMMM

(EMMS)

Jeremy Plimmer FIMMM (EMPkgS)

David Baker FIMMM (MPG)

Alan Dickson FIMMM (IOM3 WA)

### **Grants & Bursaries**

Mining Club Award / Tom Seaman Travelling

Scholarship

**G Vernon Hobson Bequest** 

Centenary Scholarship / Mining Club Award / Tom Seaman Travelling

Scholarship

**Bosworth Smith Trust Fund** 

Stanley Elmore Fellowship

**Bosworth Smith Trust Fund** 

Tessa Lee

Waheed Gbenga Akande

Zachary Lang

Belinda Hawes

Luis Salinas

Matthew Alan Goodey

'If you are even considering participating in YPLC, then go for it! Win or lose, you will learn so much along the

way, and it is such an excellent opportunity to

practice communicating your work. Be confident,

practice away, and have lots of fun.'

Hannah Ramsay, 2021 YPWLC winner



Young Persons' Lecture Competition

Young Persons' World Lecture Competition

Mia Maric (North West & North Wales) Hannah Ramsay (Canada)



### Financial review

### **Overview**

Like elsewhere in the world, IOM3 operations were impacted by Covid19 pandemic in 2021. Despite this, a number of IOM3 activities picked up in the second half of the year and as a result overall IOM3 income increased by 11.5% compared to 2020 (from £3,459k in 2020 to £3,859k in 2021). The IOM3 team and trustees continued maintaining operating cost control throughout the year while ensuring high quality services continue being provided to members. As a results IOM3 finished the year with a combined operating deficit of £63k – a significant improvement on 2020 deficit of £342k. After taking into account unrealised gains on the market value of IOM3 investment portfolio and actuarial gains on the defined benefit pension scheme, IOM3 finished 2021 with an overall surplus of £2,070k (2020 – deficit of £1,127k).

As it can be seen from the graphs on page 59, membership subscriptions continue to represent majority of IOM3 income, closely followed by scientific journal royalties. Combined, these two income steams generate nearly two-thirds of IOM3 income. With a number of events postponed from 2020 taking place and restart of in-person events in the autumn of 2021, conference and events activity saw a return to normality with £356k income generated, compared to just £10k in 2020. IOM3 Training Academy continued to successfully operate its online programme and welcomed some students back into the classroom towards the end of the year, ensuring a return of pre-pandemic income generation (2021 - £257k, 2020 – £167k). On the other hand, having lost a number of tenants

in London and clients' reluctance to return to physical meetings, venue hire activity continued to struggle throughout the year with income decreasing from £126k in 2020 to just £38k in 2021.

### Investments review

Most of 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.

Although the fund delivered a positive return, it underperformed its composite benchmark by 3%. Absolute performance was driven by the Fund's global equity exposure with UK equities also contributing strongly. Relative to benchmark, the portfolio manager's asset allocation decisions and underlying stock decisions both detracted from returns. However, positive exposure to active European equity funds and clean energy thematic investments was offset by the underperformance of the UK equity portfolio and high-growth oriented positions.

Fund net performance (% net return)

	2021	2020
Fund	11.5%	10.1%
Benchmark	14.5%	4.1%

Benchmark: 30% FTSE All-Share ex investment trusts, tobacco, aerospace & defence and beverages (GBP), 30% MSCI World SRI

Index (GBP), 20% Bloomberg Barclays GBP Gilts Index (GBP), 10% IPD All Balanced Funds Property Index (GBP), 10% cash.

Heading into 2022, portfolio management added 'Internet of Things' thematic equity basket to reflect expected growth in this area and Low Carbon Transition Energy basket, which invests in those energy companies best aligned with the transition to a low carbon economy. Rising inflation and impact of the conflict in Ukraine on the global economy represent key concerns at the start of 2022

### Reserves review

The 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 2021.
- 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 2021.
- 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 £6,896k at 31 December 2021 and represents 161% of the budgeted operating expenditure for 2021. The trustees consider this level of reserves sufficient to achieve the long-terms 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.

In light of the challenges presented by the continuing Covid19 pandemic trustees set a budget for net expenditure of £617k for 2022 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.

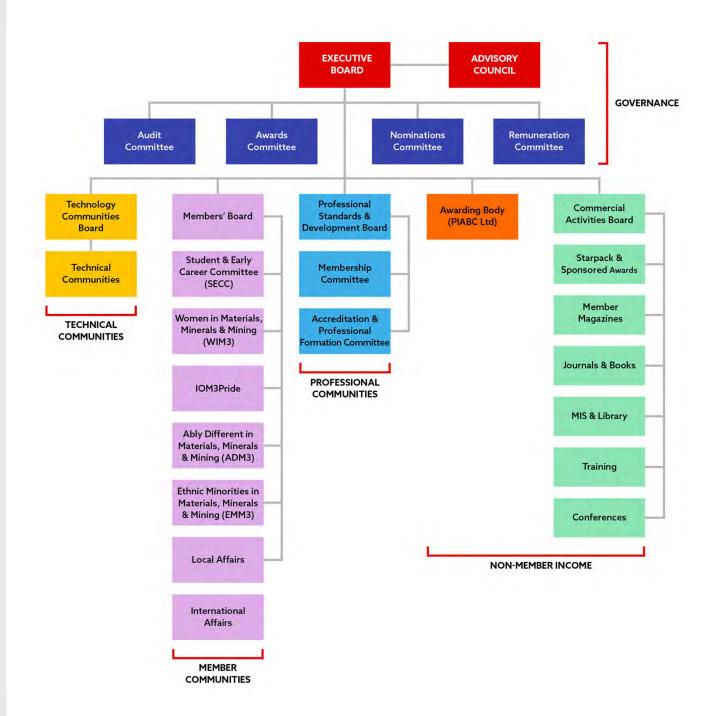
The risk register is being reviewed and updated on a regular basis and the trustees, employees and professional advisors are taking steps to mitigate these risks and minimise their impact on the Institute's future performance.

## 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).

### Structure, governance & management

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



# STRUCTURE, GOVERNANCE & MANAGEMENT

### Executive Board

IOM3 is managed by an Executive Board, most members of which are the trustees of the Institute. The trustees 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 21 members representing the Technical Communities, eight members representing Grades and seven members representing UK and overseas regions.

### Governance committees



### **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.

### Technology Communities Board •



The Institute's structure is designed to provide enhanced networks for learned society activities in addition to regionally organised affiliated society events. In effect, members can become involved in any number of these communities that deal with their own interest areas, albeit that many of the activities developed by the communities will be on a national or an international scale.

### 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 other member networks, including Women in Materials, Minerals & Mining, Student & Early Career, IOM3Pride, Ethnic Miniorities in Materials, Minerals & Mining and Ably Different in Materials, Minerals & Mining.

### Student & Early Career Committee (SECC)

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 Committee (SECC) in June 2020 following consultation with its membership. It organises various events and activities throughout the year.

### Women in Materials, Minerals & Mining Committee

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. The WIM3 committee 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.

### IOM3Pride

IOM3Pride is a voluntary committee 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 equality, diversity and inclusion within the wider STEM community.

### 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.

### **Local Affairs Committee**

IOM3 has a network of Affiliated Local Societies across the UK and abroad. These are independent organisations which run their own programmes of events and activities, but by affiliation with IOM3 receive funding and support. The Local Affairs Committee is responsible for communications between the Institute and its Affiliated Societies.

### Ethnic Minorities in Materials, Minerals & Mining (EMM3)

The long-term goal of the group is to promote equality of 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 in regards to issues such as unconscious biases in the workplace.



### Ably Different Member Group (ADM3)

Ably Different is a voluntary committee 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, we 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 equality, diversity and inclusion within the wider STEM community.



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

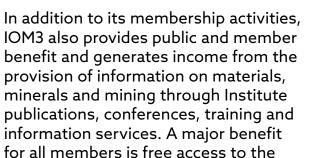
### Membership Committee

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

### Income generating activities



Materials Institute Services Ltd is a wholly owned subsidiary of the Institute, responsible for IOM3 venue hire and other non-charitable trading activities.

Institute's Technical Enquiry Service,

which includes a telephone helpline and

### **Commercial Activities Board**

on-site specialist support.

The commerical activities board is responsible for trading strategy development and co-ordination of revenue generation 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 and mining to become heroes of the transition to a low-carbon, resource efficient society, not villains; and

To be the best professional membership body we can be by providing modern, flexible services, quality technical content and value for money.

### Through our activities we aim to:

- Raise the profile of our sector as a technology vital to the health and wealth of the nation
- Support people within the materials, minerals and mining sectors to address the societal challenges we face today such as climate change
- Provide a central resource of expertise and information through content
- Support and encourage education in materials, minerals and mining to attract young people to the profession
- Disseminate information through conferences, events, publications, online resources and social media
- Provide networking opportunities through technical, local and other activities to increase interaction between industry, academia and government
- · Increase the visibility of new technology to industry
- Engage in public, policy and media debate to increase the visibility of materials, minerals, and mining
- Provide our members with benefits, services and opportunities to support their careers

The Technical Communities (special interest groups) 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 network of committees and members, 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.

A network of Affiliated Local Societies (ALS) in the UK and a number of national groups overseas provide activities at a local level, delivering a regular programme of lectures, site visits and seminars that are open to all. Some ALS also engage with local schools, universities and businesses to provide valuable support for teaching and learning.

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 1200 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.

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 Committee organises regular events for students and early career members. The Women in Materials, Minerals and Mining group promotes networking for women in the materials profession and strives to provide support for women in STEM careers. New member network initiatives include IOM3 Pride, Ethnic Minorities in Materials, Minerals

and Mining as well as Ably Different in Materials, Minerals and Mining. IOM3 technical communities, boards and committees are all composed of active supporters and volunteers mostly drawn from the IOM3 membership, who freely give their time and expertise to further the Institute's 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. 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. IOM3 collaborates with many like-minded societies in the UK and overseas.

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, though we are working to make this even more effective. 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 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.

Stimulating innovation in the 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. There is a regular programme to ensure that employees are involved in the direction and progress of IOM3. Employees are consulted and kept fully informed on issues of concern to them. Training and development appropriate to the goals of IOM3 are assessed on a regular basis and provided both internally and externally.

### Statement of trustees' reponsibilities

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.

## TRUCTURE, GOVERNANCE & MANAGEMENT

### Trustees, senior boards & professional advisors (from 1 January 2021 to 20 May 2022)

### **Executive Board and Trustees**

Prof S M Best, Chair and Immediate Past President (from Jan 2021)

Mr N E Glover, President (from Jan 2021)

Dr K Thornton, Senior Vice-President (from Jan 2021)

Ms C A Blackmore, Vice-President

Dr M R Clinch, Vice-President (from April 2021)

Mr V Mawkin, Honorary Treasurer

Dr P J E Bischler, Chair of Members' Board (until Dec 2021)

Dr C W Corti, Chair of Professional Standards and Development Board

Prof M R Jolly, Advisory Council representative (until March 2022)

Mr M A Jones, Chair of Student & Early Career Committee (until Feb 2022) Chair of Members' Board (from Feb 2022)

Mr J C H Lewis, Chair of Commercial Activities Board and of IOM Communications

Mr D Seath, Advisory Council representative

Mr R G Siddall, co-opted

Ms J Allan, Advisory Council representative (from April 2022)

Mr M C Cox, Chair of International Affairs Board (from Feb 2022)

Dr A L Goodall, Chair of Student and Early Career Committee (from Feb 2022)

Dr M Carano, Co-opted (from Feb 2022)

Board of Directors, IOM Communications Ltd.

The following served as directors during the year:

Chair	Mr J C H Lewis			
Directors/trustees	Dr C Church			
Company Secretary	Mrs J Bugajeva			

Board of Directors, Materials Institute Services Ltd.

The following served as directors during the year:

Directors	Dr C Church Mr N E Glover
	Ms K Harrison Mr J C H Lewis
Company Secretary	Mrs J Bugajeva

# STRUCTURE, GOVERNANCE & MANAGEMENT

### Board of Directors, PIABC Ltd.

The following served as directors during the year:

Directors	Dr C W Corti (from Mar 2021) Dr C Church Mr N E Glover (from Mar 2021)
Company Secretary	Mrs J Bugajeva

### Key management personnel

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

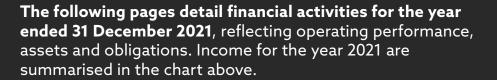
### Professional advisors

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

This report was approved by the trustees on 31 May 2022

Neil Glover

## FINANCIAL STATEMENTS



### 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 2021 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 2021 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.

- 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.

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.

### 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.

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

RSMA UK AMIL LLP

RSM UK AUDIT LLP Statutory Auditor Chartered Accountants 25 Farringdon Street London EC4A 4AB Date: 8 June 2022

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 2021

		Unrestr General	icted funds Designated	Restricted funds	Permanent endowment	funds 2021	funds 2020
	Notes	£′000	£′000	£′000	£′000	£′000	£′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	-	-	F	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

Total

Total

Institute

Group

### Consolidated and charity balance sheets as at 31 December 2021

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 E Glover, Trustee and President 2021-22 on 31 May 2022

Mr V Mawkin, Honorary Treasurer on 31 May 2022

		2021	2020	2021	2020
	Notes	£′000	£′000	£′000	£′000
FIXED ASSETS					
Intangible assets	9	350	437	339	421
Tangible assets	10	11,334	11,380	11,334	11,380
Heritage assets	11	456	456	456	456
Investments	12	9,637	8,878	9,637	8,878
Total fixed assets		21,777	21,151	21,766	21,135
CURRENT ASSETS					
Stock and work in progress	14	54	261	13	3
Debtors	15	1,483	1,454	1,546	1,305
Cash at bank and in hand		99	75	1	-
Total current assets		1,636	1,790	1,560	1,308
CREDITORS: Amounts falling due within one year	16	(2,929)	(3,105)	(3,207)	(2,974)
NET CURRENT LIABILITIES		(1,293)	(1,315)	(1,647)	(1,666)
NET ASSETS BEFORE PENSION LIABILITY		20,484	19,836	20,119	19,469
Defined benefit pension scheme liability	22	(3,211)	(4,633)	(3,211)	(4,633)
NET ASSETS AFTER PENSION LIABILITY		17,273	15,203	16,908	14,836
		-			

THE FUNDS OF THE CHARITY					
ENDOWMENT FUNDS	18	33	33	33	33
RESTRICTED INCOME FUNDS					
Restricted funds	19	2,506	2,364	2,506	2,364
UNRESTRICTED FUNDS					
General funds		2,871	1,035	2,506	668
Designated funds	20	10,996	10,988	10,996	10,988
Revaluation reserve	20	867	783	867	783
TOTAL CHARITY FUNDS		17,273	15,203	16,908	14,836

### Consolidated and charity statement of cash flows for the year ended 31 December 2021

		Gro	ир	Insti	tute
	Notes	2021	2020	2021	2020
		£′000	£′000	£′000	£′000
Cash flows from operating activities:					
Net cash used in operating activities	T1	(386)	(344)	(409)	(332)
Cash flows from investing activities:					
Dividends, interest and rents from investments		230	258	230	258
Purchase of intangibles		(47)	(325)	(47)	(325)
Purchase of property, plant and equipment		(36)	(99)	(36)	(99)
Proceeds from sale of investments		-	225	-	225
Purchase of investments		-	(225)	-	(225)
Net cash provided by/(used in) investing activities		147	(166)	147	(166)
Change in cash and cash equivalents in the reporting period		(239)	(510)	(262)	(498)
Cash and cash equivalents at the beginning of the reporting period		(474)	36	(549)	(51)
Cash and cash equivalents at the end of the reporting period	T2	(713)	(474)	(811)	(549)

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

	Group		Instit	tute
	2021	2020	2021	2020
	£′000	£′000	£′000	£′000
Net income/(expenditure) for the reporting period				
(as per the statement of financial activities)	696	(635)	698	(635)
Adjustments for:				
Depreciation and amortisation charges and impairment of fixed assets	300	263	295	258
Losses/(gains) on investments	(759)	293	(759)	293
Pension costs	(132)	(118)	(132)	(118)
Dividends, interest and rents from investments	(230)	(258)	(230)	(258)
Decrease/(increase) in stocks	207	(43)	(10)	-
(Increase)/decrease in debtors	(29)	(997)	(241)	(1,206)
(Decrease)/increase in creditors	(439)	1,151	(30)	1,334
Net cash used in operating activities	(386)	(344)	(409)	(332)

T2 Analysis of cash and cash equivalents

	Group		Instit	ute
	2021 2020		2021	2020
	£′000	£′000	£′000	£′000
Cash in hand	99	75	1	-
Bank overdraft	(812)	(549)	(812)	(549)
Total cash and cash equivalents	(713)	(474)	(811)	(549)

## **IOM3 FINANCIAL STATEMENTS**

### **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 2022 and 2023. 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 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 on the agreement that there was no change in value as at 31 December 2021.

### 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.

Both of the Institute's freehold properties are recognised in the financial statements at their market value as at 31 December 2021.

### 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.

## **IOM3 FINANCIAL STATEMENTS**

### 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 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

 Consolidated statement of financial activities for the year ended 31 December 2020

						rotar	rotar
		Unresti General	ricted funds Designated	Restricted funds	Permanent endowment	funds 2020	funds 2019
	Notes	£'000	£'000	£'000	£'000	£′000	£′000
INCOME AND ENDOWMENTS FROM:	7,000	2000	2 000	2 000	2 000	2 000	2 000
	4	90			_	90	13
Donations and legacies Charitable activities	4	90	-	-	-	90	13
		1 525				1 525	1 505
Membership and related activities		1,535	-	-	-	1,535	1,595
Charitable trading activities	3	1,299	-	-	-	1,299	2,156
Other trading activities	13	276	-	-	-	276	249
Investments		200	2	57	-	259	295
Total income		3,400	2	57	-	3,459	4,308
EXPENDITURE ON:							
Raising funds	13	172	-	-	-	172	251
Charitable activities							
Membership and related activities		3,086	-	60	-	3,146	3,211
Charitable trading activities	3	483	-	-	-	483	1,440
Total expenditure		3,741	-	60	-	3,801	4,902
Operating (expenditure)/income		(341)	2	(3)	-	(342)	(594)
Net (losses)/gains on investments	12	(269)	9	(33)	-	(293)	1,208
Net (expenditure)/income		(610)	11	(36)	-	(635)	614
Other recognised gains/(losses)							
Gains on revaluation of fixed assets	10	-	84	-	-	84	84
Actuarial losses on defined benefit pension schemes		(576)	-	-	-	(576)	(1,172)
NET MOVEMENT IN FUNDS		(1,186)	95	(36)	-	(1,127)	(474)
Reconciliation of funds							
Total funds brought forward		2,221	11,676	2,400	33	16,330	16,804
TOTAL FUNDS CARRIED FORWARD		1,035	11,771	2,364	33	15,203	16,330

Total

Total

	Unrestr General £'000	icted funds Designated £'000	Restricted funds £'000	Permanent endowment £'000	Total funds 2021 £'000	Total funds 2020 £'000
INCOME AND ENDOWMENTS FROM:						
Donations and legacies	250	-	5	-	255	1,009
Charitable activities						
Membership and related activities	1,528	-	-	-	1,528	1,494
Charitable trading activities	1,275	-	-	-	1,275	-
Investments	176	2	52	-	230	259
Total income	3,229	2	57	-	3,288	2,762
EXPENDITURE ON:						
Charitable activities						
Membership and related activities	2,198	1	70	-	2,269	3,104
Charitable trading activities	1,080	-	-	-	1,080	-
Total expenditure	3,278	1	70	-	3,349	3,104
Net gains/(losses) on investments	597	7	155	-	759	(293)
Net income/(expenditure)	548	8	142	-	698	(635)
Other recognised (losses)/gains:						
Gains on revaluation of fixed assets	-	84	-	-	84	84
Actuarial gains/(losses) on defined benefit pension schemes	1,290	-	+	-	1,290	(576)
NET MOVEMENT IN FUNDS	1,838	92	142	-	2,072	(1,127)
Reconciliation of funds						
Total funds brought forward	668	11,771	2,364	33	14,836	15,963
TOTAL FUNDS CARRIED FORWARD	2,506	11,863	2,506	33	16,908	14,836

# 3. Charitable trading activities

	2021	2020
	£′000	£′000
TURNOVER		
Publishing	970	1,534
Conferences and exhibitions	356	9
Information services	4	97
Training services	280	187
	1,610	1,827
Internal contribution for costs included in sales	-	(528)
Incoming resources	1,610	1,299
COST OF CHARITABLE TRADING ACTIVITIES		
Publishing	526	495
Conferences and exhibitions	484	244
Information services	6	38
Training services	319	234
	1,335	1,011
Internal contribution to sales	-	(528)
Expenditure	1,335	483
NET CONTRIBUTION FROM CHARITABLE TRADING ACTIVITIES		
Publishing	444	1,039
Conferences and exhibitions	(128)	(235)
Information services	(2)	59
Training services	(39)	(47)
Net income	275	816

	2021	2020
	£′000	£′000
Other donations	45	45
Government grant	12	45
	57	90

# 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: Subsidary undertakings).

#### 6. Investment income

	2021		20.	20
	Unrestricted £'000	Restricted £'000	Unrestricted £'000	Restricted £'000
Listed securities				
Growth & Income fund	174	31	86	15
Fixed interest	1	4	36	16
UK equities	3	17	72	25
Overseas equities	-	-	8	1
	178	52	202	57

# 7. Total resources expended

# Summary

	2021 £′000	2021 £′000	2020 £′000	2020 £′000
Direct charitable costs		779		725
Employment costs				
Salaries	1,678		1,739	
Social security costs	177		182	
Pension costs	285		327	
Temporary and other staff costs	76		57	
Redundancy costs	1		-	
		2,217		2,305
Establishment costs				
Property costs	240		220	
Information technology	169		159	
Depreciation and amortisation	300		258	
		709		637
Administration costs				
Travel, meeting and committee expenses	16		19	
Postage and telecommunications	49		51	
Printing and stationery	16		13	
Finance costs	19		7	
Professional fees	111		40	
Office and other costs	6		4	
	_	217		134
		3,922		3,801

#### Breakdown of costs of activities

	Direct	Support	2021	2020
	costs	costs	Total	Total
	£′000	£′000	£′000	£′000
Charitable activities				
Membership and related services	329	2,056	2,385	2,618
Charitable trading activities	437	898	1,335	1,011
	766	2,954	3,720	3,629
Costs of raising funds				
Activities for raising funds	13	189	202	172
	779	3,143	3,922	3,801

# 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.

	Employment	Establishment	Admin	2021	2020
	costs	costs	costs	Total	Total
	£′000	£′000	£′000	£′000	£′000
Membership and related services	1,460	452	144	2,056	2,165
Charitable trading activities	642	194	62	898	793
Activities for raising funds	115	63	11	189	118
	2,217	709	217	3,143	3,076

# Employee information

	2021	2020
	No.	No.
The average number/(full time equivalent) employees during the year was	44(42)	51 (47)
The number of employees who earned more than £60,000 per annum including benefits was:		
£60,001 - £70,000	2	1
£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 Instit	ute's pensio	n scheme
was:		
Defined benefit scheme	-	-
Money purchase scheme	5	4

	2021	2020
	£′000	£′000
Total remuneration of key management personnel, including benefits during the year was	495	459
Total employer National Insurance contributions paid on the key management personnel remuneration	55	49
Total amount of redundancy payments made during the year was	1	-
Contributions to the pension funds during the year were:		
Defined benefit scheme	251	246
Money purchase scheme	76	84

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

# Total expenditure includes

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

Other	transactions	with	trustees
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No Trustees directly or indirectly received any remuneration during the years ended 31 December 2021 and 2020.

	£′000	£′000
Auditor's remuneration		
Audit fee - current year	47	37
Accountancy, taxation and other services	4	4
Travel expenses paid to 6 (2020: 0) Trustees for attending Executive board and other meetings	1	-
Travel expenses paid on behalf of 13 (2020: 0) Trustees for attending Executive board and other meetings	1	-
Operating lease charges	38	43

2021	2020
£′000	£′000

2021

2020

The total future minimum lease payments under non-cancellable operating leases	Land and buildings	Other	Land and buildings	Other
Within one year	29	8	15	5
Within two to five years	115	20	107	18
After five years	129	-	120	-

## 8. Transfers between funds

There were no transfers between funds during 2021 or 2020.

# 9. Intangible fixed assets

	Group and parent	Group only	
	Website and software	Patent costs	Total
	£′000	£′000	£′000
Cost			
1 January 2021	904	41	945
Additions in the year	47	-	47
Disposals in year	(148)	(16)	(164)
31 December 2021	803	25	828
Amortisation			
1 January 2021	483	25	508
Charge for the year	129	5	134
On disposals	(148)	(16)	(164)
31 December 2021	464	14	478
Net book value			
31 December 2021	339	11	350
31 December 2020	421	16	437

# 10. Tangible fixed assets

	Freehold property held for sale £'000	Freehold property £'000	Short leasehold property £'000	Furniture, fittings & equipment £'000	Total £′000
GROUP AND PARENT					
Cost or valuation					
1 January 2021	-	13,487	2,221	1,004	16,712
Additions in the year	-	-	-	36	36
Reclassification in year	270	(270)	-	-	-
31 December 2021	270	13,217	2,221	1,040	16,748
Depreciation					
1 January 2021	-	2,506	2,037	789	5,332
Charge for the year	-	84	25	57	166
Revaluation	-	(84)	-	-	(84)
31 December 2021	-	2,506	2,062	846	5,414
Net book value					
31 December 2021	270	10,711	159	194	11,334
31 December 2020	-	10,981	184	215	11,380

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## 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 2021 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 revalued at its present market value of £270k by Nick Deavall MRICS on 1 April 2019. In March 2021 the Trustees agreed to dispose of the Stoke property. An offer was accepted in December 2021 and the property was subsequently reclassified as freehold property held for sale.

#### 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 2021 and do not consider there to be any impairment

# 12. Investments

	Group and Institute		Insti	tute
	2021	2020	2021	2020
	£′000	£′000	£′000	£′000
Analysis of movements in the year				
Opening market value	8,878	9,169	8,878	9,169
Additions at cost	-	225	-	225
Disposals at opening market value	-	(223)	-	(223)
Revaluations	759	(293)	759	(293)
Closing market value	9,637	8,878	9,637	8,878
Invested as follows				
Listed investments				
Black Rock Growth & Income fund	8,811	8,102	8,811	8,102
Fixed interest	160	169	160	169
UK equities	663	604	663	604
Overseas equities	-	-	-	-
Unlisted investments				
Cash and cash equivalents	3	3	3	3
Subsidiary undertakings	-	-	-	-
Closing market value	9,637	8,878	9,637	8,878
At the balance sheet date, the following investments represent more than 5	% of the por	rtfolio by mar	rket value	
Black Rock Growth & Income fund	8,811	8,102	8,811	8,102
Charishare (UK equities common investment fund)	588	503	588	503
Historical cost at 31 December	5,342	5,342	5,342	5,342

2021

342

342

2020

## 13. Subsidary 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 and one share of £1 in PIABC Ltd. IOM Communications Ltd holds 2 shares of £1 each in Materials Institute Services Ltd.

IOM Communications Ltd undertakes the charitable trading activities of the Institute of Materials, Minerals and Mining. 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 2021 or 2020.

#### **IOM Communications Limited**

	2021	2020
	Total	Total
	£′000	£′000
Results		
Charitable trading activities	335	1,827
Total incoming resources	335	1,827
Charitable trading costs	255	1,011
Donation to the Institute	80	816
Total outgoing resources	335	1,827
Net incoming resources	-	-
Balances brought forward	342	342
Balances carried forward	342	342
Balance sheets at 31 December		
Fixed assets	11	16
Current assets	554	960
Creditors: amounts falling due within one year	(223)	(634)
Net current assets	342	342

Summaries of the 2021 results and balance sheets for IOM Communications Ltd, Materials Institute Services Ltd and PIABC Ltd together with comparative figures for 2020, where applicable, are shown in this note. The net assets of The Institute of Packaging at 31 December 2021 and 31 December 2020 were £nil.

Shareholders' funds

# 13. Subsidary undertakings (continued)

# Materials Institute Services Limited

	2021	2020
	Total	Total
	£′000	£′000
Results		
Turnover	321	276
Total incoming resources	321	276
Costs	202	172
Donation to the Institute	119	103
Total outgoing resources	321	275
Net incoming resources	-	1
Balances brought forward	23	22
Balances carried forward	23	23
Balance sheets at 31 December		
Current assets	143	111
Creditors: amounts falling due within one year	(120)	(88)
Net current assets	23	23
Shareholders' funds	23	23

# 13. Subsidary undertakings (continued)

# PIABC Limited

	2021	2020
	Total £'000	Total £'000
Results		
Turnover	113	41
Total incoming resources	113	41
Costs	113	41
Total outgoing resources	113	41
Net incoming resources	-	-
Balances brought forward	1	1
Balances carried forward	1	1
Balance sheets at 31 December		
Current assets	16	1
Creditors: amounts falling due within one year	(15)	-
Net current assets	1	1
Shareholders' funds	1	1

14.	Stock and	work in	progress

	Consolidated		Institute	
	2021 2020		2021	2020
	£′000	£′000	£′000	£′000
Work in progress	53	258	12	-
Sundry stocks	1	3	1	3
	54	261	13	3

## 15. Debtors

Trade debtors	1,304	1,286	1,251	1,178
Other debtors	8	70	6	55
Prepayments and accrued income	171	98	169	72
Amount due from subsidiary companies	-	-	120	-
	1,483	1,454	1,546	1,305

# 16. Creditors: Amounts falling due within one year

Trade creditors	142	136	74	69
Taxes and social security costs	229	410	228	410
Subscriptions and orders paid in advance	1,525	1,646	1,447	1,348
Other creditors and accruals	221	364	214	163
Amounts due to subsidiary companies	-	-	432	435
Bank overdraft	812	549	812	549
	2,929	3,105	3,207	2,974

Subscriptions and orders paid in advance

At 1 January	1,646	738	1,348	351
Recognised in year	(1,580)	(464)	(1,340)	(341)
Provided for in year	1,459	1,372	1,439	1,338
At 31 December	1,525	1,646	1,447	1,348

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

	Unrestricted funds		Restricted	Permanent Endowment	Total
	General	Designated	funds	fund	funds
	£′000	£′000	£′000	£′000	£′000
Group					
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

	Unrestricted funds		Restricted	Permanent Endowment	Total
	General	Designated	funds	fund	funds
	£′000	£′000	£′000	£′000	£′000
Institute					
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

# 17. Analysis of net assets between funds at 31 December 2020

	Unrestricted funds		Restricted	Permanent Endowment	Total
	General	Designated	funds	fund	funds
	£′000	£′000	£′000	£′000	£′000
Group					
Intangible assets	437	-	-	-	437
Tangible fixed assets	373	11,007	-	-	11,380
Heritage assets	-	456	-	-	456
Investments	6,896	85	1,864	33	8,878
Current assets	1,067	223	500	-	1,790
Current liabilities	(3,105)	-	-	-	(3,105)
Net assets before pension liability	5,668	11,771	2,364	33	19,836
Pension liability	(4,633)	-	-	-	(4,633)
Total net assets	1,035	11,771	2,364	33	15,203

	Unrestricted funds		Restricted	Permanent Endowment	Total
	General	Designated	funds	fund	funds
	£′000	£′000	£′000	£′000	£′000
Institute					
Intangible fixed assets	421	-	-	-	421
Tangible fixed assets	373	11,007	-	-	11,380
Heritage assets	-	456	-	-	456
Investments	6,896	85	1,864	33	8,878
Current assets	585	223	500	-	1,308
Current liabilities	(2,974)	-	-	-	(2,974)
Net assets before pension liability	5,301	11,771	2,364	33	19,469
Pension liability	(4,633)	-	-	-	(4,633)
Total net assets	668	11,771	2,364	33	14,836

#### 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.

	Balance at 1 January 2021 £'000	Incoming resources £'000	Resources expended £'000	Investment gains/ (losses) £'000	Transfers between funds £'000	Balance at 31 December 2021 £′000
Group and Institute						
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.

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 or 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.

	Balance at 1 January 2021 £'000	Incoming resources £'000	Resources expended £'000	Investment gains/ (losses) £'000	Balance at 31 December 2021 £'000
Group and Institute					
Stanley Elmore Fellowship	711	14	(50)	49	724
Andrew Carnegie Trust Fund	681	18	-	43	742
Bosworth Smith Trust	287	6	(3)	21	311
Tom Seaman Travelling Scholarship	282	6	(4)	21	305
Metals & Metallurgy Trust Fund	120	3	-	5	128
Edgar Pam Fellowship	112	2	(7)	8	115
G Vernon Hobson Bequest	69	2	(1)	5	75
Other funds	23	6	(1)	3	31
Prize funds	79	-	(4)	-	75
	2,364	57	(70)	155	2,506

- 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.

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.

					Balance
	Balance at				at 31
	1 January	Incoming	Resources	Gains/	December
	2021	resources	expended	(losses)	2021
	£′000	£′000	£′000	£′000	£′000
Asset development fund	10,680	-	-	-	10,680
Revaluation reserve	783	-	-	84	867
Services development fund	57	-	-	-	57
Sir Julius Wernher Memorial Fund	160	2	(1)	7	168
Packaging education fund	50	-	-	-	50
Materials education	24	-	-	-	24
Robert A Moore Fund	17	-	-	-	17
	11,771	2	(1)	91	11,863

## 21. Cumulative unrealised investment gains

gains	2021 £′000	2020 £′000	2021 £′000	2020 £′000
General fund	3,055	2,458	3,055	2,458
Designated funds	37	30	37	30
	3,092	2,488	3,092	2,488
Restricted funds	727	572	727	572
	3,819	3,060	3,819	3,060

Consolidated

Institute

#### 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 67 deferred members.

Results of the most recent triennial actuarial valuations, at 1 January 2013, 2016 and 2019 showed the following results.

	2013	2016	2019
	£′000	£′000	£′000
Market value of the scheme's assets	7,361	13,970	13,641
Liability for projected accrued benefits	(9,201)	(15,593)	(17,330)
(Deficit)	(1,840)	(1,623)	(3,689)

Arrangements have been made for the deficit shown by the actuarial valuation at 1 January 2019 to be funded at the rate of:

- £200k p.a. payable in a lump sum during years ending 31 December 2020 2022.
- £73k p.a. increasing at 2.8% payable in equal monthly installments from 1 January 2023 to 31 December 2034.

## 22.2 Principal actuarial assumptions

A valuation of the defined benefit pension scheme assets and liabilities at 31 December 2021 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	2021	2020
rears ended	% p.a.	% p.a.
Discount rate	1.90	1.30
Price inflation - pre-retirement (RPI)	3.00	2.50
Before 2030		-
After 2030		-
Consumer Prices Inflation - pre-retirement (CPI)	2.70	2.10
Future salary increases	N/A	0.50-2.10
Rate of increases of pensions in payment (RPI)	3.00	2.50
Rates of increases of pensions in payment - (CPI)	2.10	1.80
Revaluation of deferred pensions (non-GMP)	2.70	2.10

The following demographic assumptions were used in the valuation:

	Year ended	31/12/2021	Year ended 31/12/2020		
Mortality pre-retirement	As for post retirement		As for post	retirement	
Mortality post-retirement	S3PMA CMI 2020 1%		S3PMA CMI 2019 1%		
	Males	Females	Males	Females	
Life expectancy for a current 65 year old in 2021	86.2 years	88.6 years	86.1 years	88.5 years	
Life expectancy at age 65 for an individual aged 45 in 2021	87.2 years	89.8 years	87.2 years	89.7 years	

# 22.3 Amounts recognised in the balance sheet for defined benefit scheme

	2021	2020
	£′000	£′000
Present value of defined benefit obligation	(17,251)	(18,295)
Fair value of scheme assets	14,310	13,662
Pension scheme liability recognised in the balance sheet	(3,211)	(4,633)

2020

2021

22.4	Changes in present value of
	defined benefit obligation

	£′000	£′000
Defined benefit obligation at 1 January	(18,295)	(17,115)
Service cost	(60)	(48)
Interest cost	(235)	(336)
Member contributions	(20)	(20)
Benefits paid	558	675
Actuarial gains/(losses)	531	(1,451)
Defined benefit obligation at 31 December	(17,521)	(18,295)

# 22.5 Changes in fair value of scheme assets

	2021	2020
	£′000	£′000
Plan assets at 1 January	13,662	12,942
Return on plan assets (excluding net interest on defined benefit obligations)	759	875
Interest income	176	255
Employer contributions	251	245
Member contributions	20	20
Benefits paid	(558)	(675)
Plan assets at 31 December	14,310	13,662

# 22.6 Major categories of scheme assets

	70	70
Equities	19	20
Corporate bonds	9	9
LDIs	9	-
Properties	1	1
Cash	1	1
Annuities	24	27
Other assets	37	33
Total scheme assets	100	100

# 22.7 Amounts recognised in the statement of financial activities

The actual return on scheme assets was a gain of £935k (2020: £1,130k)

The Institute expects to contribute £200k to its defined benefit pension scheme in 2022.

The actuarial gains recognised in the statement financial activities were £531k and the total cumulative net losses recognised from 2002 to 2021 amounted to £4,074k

Amounts recognised in net incoming resources are as follows:	2021 £′000	2020 £′000
Current service cost	60	48
Net interest cost	59	81
Net charge	119	129

# 22.8 Outstanding pension contributions at the year end

Contributions for the defined benefit scheme amounting to £5k (2020 - £6k) were outstanding at the year-end. Contributions for the defined contributions schemes amounting to £10k (2020 - £11k) were outstanding at the year-end.

#### 23 Post Balance Sheet events

A decision was taken in January 2021 to transfer trade and assets of IOM Communications Limited to either the parent charity, The Institute of Materials, Minerals and Mining or a fellow subsidiary, Materials Institute Services Limited by the end of the next financial year, from which point IOM Communications Limited will cease to trade. Therefore IOM Communications Limited financial statements have been prepared on a non-going concern basis. No adjustments are necessary to amounts included in these financial statements as a result of the application of the non-going concern basis of accounting.

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