



Annual Report and Accounts

2021/22

Met Office Annual Report and Accounts 2021/22

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Our purpose

Helping you
make better
decisions
to stay safe
and thrive



The Met Office is here to help you make better decisions to stay safe and thrive. That means giving you the best weather and climate information when it matters to you most.

It is the ends, not the means, that is most important. We focus on making a difference and delivering greater benefit to you.

We only make an impact when our data, products, science, services and advice get into the hands of those who use it to shape their lives, and the lives of those around them.

We deliver our services through exceptional scientific, technological and operational expertise. Behind this is a team of excellent people, working with you to deliver extraordinary impact, making us one of the most trusted forecasters in the world.

Since our foundation in 1854, the Met Office has pioneered the science of meteorology and its application. To this day, we continue to push the boundaries of science and technology, so that we can meet the demands of today and the future.

We are a key part of the weather and climate community, uniting scientific leaders from every corner of the globe, delivering extraordinary impact and benefit to the world around us.

Helping you stay safe



84%

of the UK public **trust** the Met Office to provide weather forecasts when it matters to them.

3

named storms and **two red warnings** in one week.

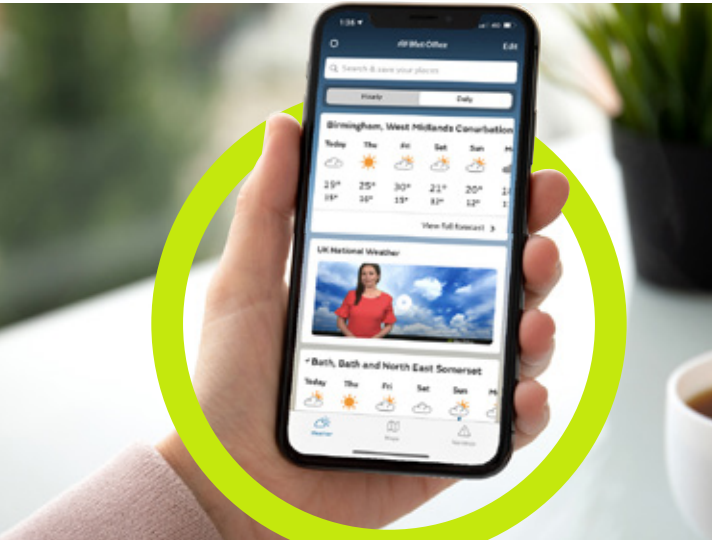
Storms Dudley, Eunice and Franklin in February 2022 brought remarkable weather, matched by the efforts of colleagues across the Met Office to help the public stay safe during such severe weather.



450

Met Office experts helped in the writing of the Technical Report for the Third **Climate Change** Risk Assessment.

Laid before Parliament in January 2022.



2.3m

users of our app during Storm Eunice, our **biggest app usage ever**.

20

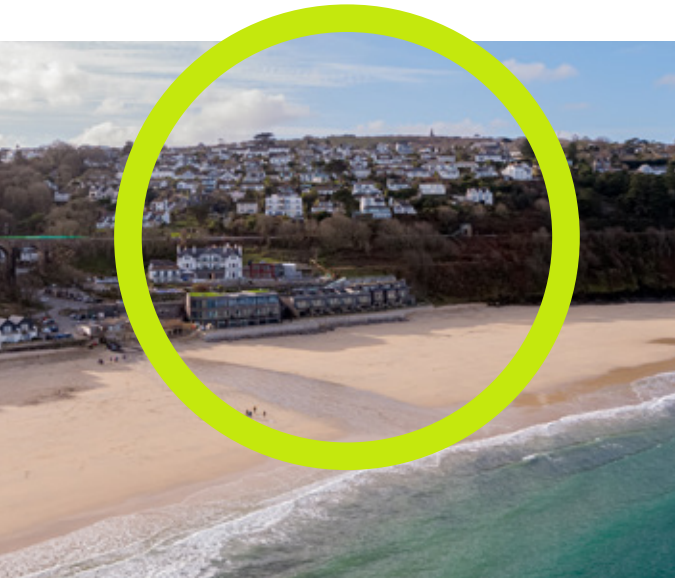
After 20 years, the Met Office's Mobile Met Unit (MMU) completed its support to **military operations** in Afghanistan.



3.4m

impressions a day on Twitter at times of **severe weather**.

Helping you stay safe



G7

Met Office experts provided detailed forecast advice to **support** the safe hosting of the G7 Summit in Cornwall.

We issued our first **extreme heat warning** for the UK in July 2021 as temperatures exceeded 32 °C in parts of southern England.

Our warning was communicated widely with 1,800 pieces of media coverage.



900

Multiagency resilience meetings attended by our Civil Contingency Advisors, including 30 Scottish Government Resilience Room (SGoRR) and 3 Cabinet Office Briefing Room (COBR) meetings, helping to protect the UK from the worst of our weather.









We have supported the UK's response to the conflict in **Ukraine**, providing detailed weather and climate information to aid humanitarian actions in the region.

Our partnership with AVTECH in supporting aircraft route planning with high resolution weather data has the potential to save **1.24m tonnes** of carbon emissions each year.



Our social media following continues to **grow**, with a combined reach of

1.9m

-  918k
-  474k
-  215k
-  161k
-  134k
-  26k

Helping you thrive



In April 2021 we announced our partnership with **Microsoft** to build the world's most powerful supercomputer dedicated to weather and climate.

91%

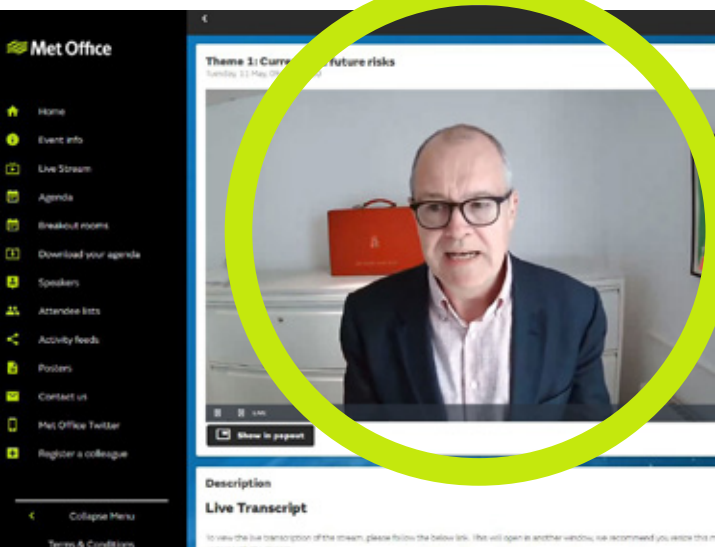
of our **customers** trust the Met Office as the provider of weather and climate services.



34

Met Office scientists **contributed** to IPCC Sixth Assessment Reports.

In Working Group 1 alone, 1,090 Met Office papers and book chapters were cited 3,900 times, 18 Met Office datasets were cited 170 times and 23 Met Office models were cited 194 times.

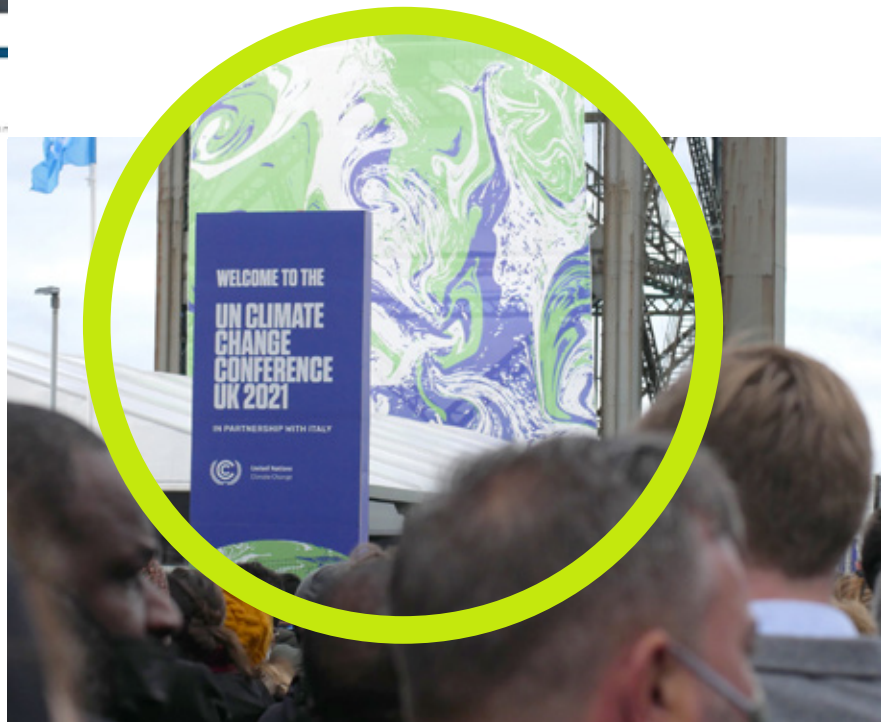


In the run up to COP26 the Met Office hosted **Science for a resilient future**, a Climate Science Conference.

Demonstrating the science questions to be answered to support a future more resilient to our changing climate.

At **COP26**, the Met Office jointly hosted the Science Pavilion.

In conjunction with the World Meteorological Organization (WMO) and the Intergovernmental Panel on Climate Change (IPCC), we supported the negotiating teams from around the world with the robust scientific evidence they need to inform their decision making.



Since the launch of our **Net Zero Strategy**, our reported emissions for 2021/22 have reduced by 56%.

This was achieved by switching to a new, zero carbon electricity tariff, reduction in business travel, and reduced observational flights. While business travel and observational flights are expected to increase in the coming year, this is still a huge step forward in our Net Zero ambitions.

Helping you thrive

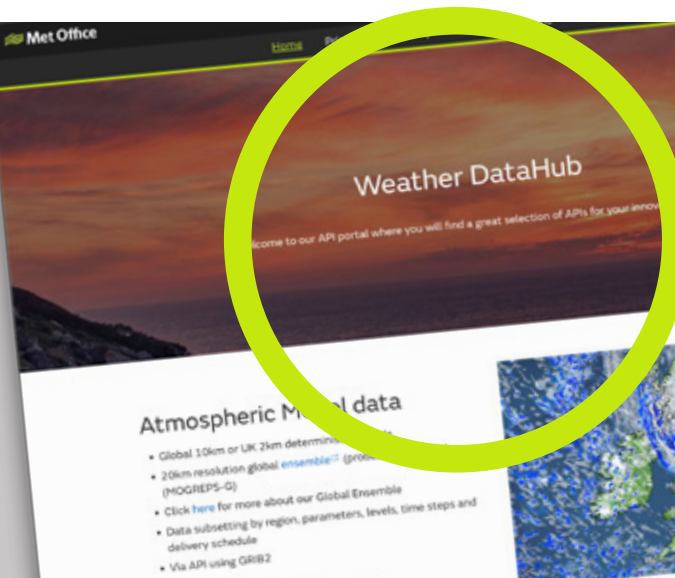


£200m

Our FCDO-funded international development activities in Africa resulted in over £200 million in socio-economic benefits through the production, translation and use of co-produced weather and climate information.

1,300

We launched early careers strategy with **1,300 applications** for industrial placements in 2021.



The Met Office Weather DataHub was launched to give easier access to our data. Since it went live in September, it's delivering over 32TB of data a month, equivalent to downloading **4.2 million songs**.



10 years of holding the Wildlife Trusts' Biodiversity Benchmark for our Exeter HQ site.

We work closely with Devon Wildlife Trust and have a dedicated team of volunteers who complete regular site surveys for birds, butterflies and reptiles. Our bee orchids continue to thrive, having increased from one in 2008 to 390 last year.

We took a key role in shaping the **International Exchange of Data**, in which all 193 members of the WMO share weather and climate-related information.



Our Net Promoter Score has risen from +30 to +45 over the last 18 months, showing positive movement in **customer experience** and onward recommendation.

Statement from the Chair



ROB WOODWARD

Over the last year, the Met Office has continued to evolve its longer-term strategy while ensuring reliable delivery of our trusted services that are essential to so many people in the UK and around the globe. Following the announcement at the beginning of the year of the agreement to build our next generation of supercomputer, we have continued to refine and develop our strategy to exploit the social and economic benefits that this new infrastructure can help us deliver. Our purpose remains to help people make better decisions relating to weather and climate to help them stay safe and thrive.

Our work to implement the new supercomputer, build the infrastructure within which it will operate, and then secure the benefits from our wider supercomputer exploitation programme will help cement the Met Office's role underpinning the objectives of our owning department, BEIS, and wider government. It will help the UK build back better after the pandemic, levelling up across the country, reinforcing the UK's presence as a science superpower and making a major contribution to the work to tackle climate change.

We are proud to be a focus for science and innovation in the South West of the UK, promoting and nurturing the development of talent in the region. The changes we are implementing to embrace hybrid working will create new opportunities to grow talent across the country, facilitating a wider range of career paths for people from different backgrounds and regions and enhancing the diversity of our teams.

As the pandemic continued we have hosted – and participated in – a large number of successful virtual conferences; these not only save greenhouse gas emissions but also enable access for a wider range of participants. We have learned much about how to strengthen collaboration and co-operation when we cannot meet in person.

The United Nations Conference of the Parties (COP26) in Glasgow was the most important world event in the fight to combat climate change since the Paris Agreement in 2015. COP26 was also a superb opportunity to showcase the science of the Met Office. Our scientists played a major role in compiling the Intergovernmental Panel on Climate Change's (IPCC) Sixth Assessment Report and we supported UK government preparations as the host

nation. We were privileged to co-host the Science Pavilion alongside the World Meteorological Organisation and the Intergovernmental Panel on Climate Change. Indeed, we have been heartened that commentators have seen the importance attributed to science at the conference as a watershed moment. Since the conference we have continued to evolve our strategy to ensure that our research and innovation, supported by our continued investment, is focussed on delivering the next steps in understanding how to mitigate and adapt to our changing climate.

Our plans to implement a new supercomputing infrastructure are groundbreaking and a key component of our strategy for the rest of the decade. While we have encountered some challenges from global supply chain issues, especially with semiconductor availability, we have worked closely with our partner Microsoft to establish a delivery pathway for implementation. Looking forward, we have scoped our supercomputer exploitation programme to deliver real impact and benefit to our customers, with both more accurate and more relevant weather forecasts and more sophisticated climate



The effective red and amber warnings from the Met Office and the impressive civil contingency response undoubtedly saved lives.



change projections. The new core computational models we are developing will allow a greater use of ensembles (a technique to assess multiple scenarios) to deliver more robust and usable forecasts. As we have refined the customer-centric anchor of our strategy, we have recognised the importance, over longer term horizons, of developing partnerships to extend our reach and deliver the greatest impact and benefit. We will also work to develop the tools that our operational meteorologists use to provide timely and effective advice when supporting critical and life-saving services.

While I have focussed on our strategic plans and the longer-term benefits these can deliver, I must also congratulate the whole Met Office team for the quality of our regular forecasts and the essential services that keep people safe. Staff have demonstrated huge commitment and a passion for their work, have adapted to the ongoing challenges from the pandemic, and not missed a beat in meeting the highest of customer expectations. In particular, I would highlight the early and effective red and amber warnings for Storm Arwen in November 2021, and storms Dudley, Eunice, and Franklin in February 2022. These storms featured

some of the most damaging winds the country had seen for many years and the impressive civil contingency response undoubtedly saved lives. Feedback from our customers confirmed how much they value our work.

I cannot close without mention of the heart-breaking events and level of suffering in Ukraine. The Met Office has responded in a number of different areas to support government during the crisis, whether helping decision makers understand the impact of weather conditions on agriculture and economies in the region and further afield, or supporting our defence forces and NATO colleagues.

I am grateful for the support of the Board – both my more established colleagues and the new members who stepped into the role at the beginning of the year – in helping guide the organisation through these exciting and challenging times. Above all, I am grateful for the unceasing commitment of Met Office staff who have delivered such high-quality services despite the continuing pandemic and uncertain times around the world, forecasting our ever changing weather and advancing essential climate science.

Chief Executive's summary



PROFESSOR PENELOPE ENDERSBY

As the second year of pandemic working draws to a close, the Met Office has kept evolving and we have delivered our core business successfully and confidently. As we move into a more stable situation with respect to COVID, we are now looking to capitalise on the opportunities hybrid working creates. Remote working has enabled us to look nationwide for recruits and see record numbers attend international workshops and conferences with minimal carbon expenditure. We have learned to maximise the value of the occasions we can be together, working out when these are still our best option.

Our services continue to evolve too. In July 2021, in consultation with Public Health England and the Devolved Administrations, we issued our first extreme heat warning for the UK within the National Severe Weather Warning Service. With increased frequency and severity of heatwaves, we need to consider not just human health impacts, but also infrastructure and environmental impacts. The Extreme Heat impact statements were agreed following research with key sector stakeholders including representatives from the Public Weather Service (PWS) Customer Group, marine safety, transport, emergency responders as well as members of the public.

In February 2022, we experienced one of the most remarkable and busiest weeks ever for the Met Office in its 168-year history. Three storms named in the one week, two Red Weather Warnings and some of the highest wind speeds we've seen recorded in over 30 years. Storm Eunice was named four days before the storm was even expected to develop, let alone bring its impacts, a true example of how improved ensembles have given us much greater confidence in expected outcomes. It was really gratifying to witness how the accuracy of our forecasts was matched by the effectiveness of the response, with our whole chain of partners from media to civil contingencies and from flood teams to transport acting promptly on the warnings to minimise harm and damage to people and property.

2021/2 has been a period of extraordinary weather extremes worldwide with catastrophic flooding in Germany and Australia, extreme heat in the US and Canada, and a severe tropical cyclone in Indonesia. This reinforces the seriousness of the global impacts we are now experiencing from climate change.

The Met Office played a major role in COP26, hosted by the UK in Glasgow in November. Of course, most of our science and influence had already happened before the

negotiators at COP26 met, with the Intergovernmental Panel on Climate Change (IPCC) Assessment report published in August 2021. The findings of the report are the starkest yet that human-driven climate change is affecting every region of our planet and every part of the climate system. It also reminds us that the case is clear; there is no scientific reason to delay action and it is now time for everyone to listen to that science. We will continue to build and champion the science, especially the IPCC and its major reports, and the urgency of action.

At the event itself science played the most prominent ever role at any COP. The Met Office co-hosted a Science Pavilion with the World Meteorological Organization and Intergovernmental Panel on Climate Change, and Met Office scientists also supported the UK negotiators directly. I was privileged to attend in person and feel immense pride in the quality, scale, and professionalism of the Met Office's contribution throughout COP and beyond.

The focus is now on COP legacy and building on the momentum generated from the conference while the UK maintains the presidency until we hand over to Egypt at COP27.



“Climate science played the most prominent ever role at any COP yet and we will we will continue to build and champion the science and the urgency of action.”



Back at the office, we have continued to deliver on our strategic priorities, including laying the groundwork for our new supercomputer. This year we have started to port our scientific codes from one computing infrastructure to another, in preparation for the step change it will bring to improve weather forecasting accuracy and climate change understanding.

In order to realise the benefit from vastly increased computing power, we are remaking our entire data infrastructure from the computer model to the data delivery to handle the huge quantities of data. We are already making it easier for users to access the data which is most relevant to them through standardised APIs, and working to streamline our products and services to enable us to remove near duplicate legacy offerings. This will be a major change programme affecting every step of our data journey.

In recognition of the leadership and significant investment made in technology to help us understand climate change, I was honoured to be awarded the 2021 British Supercomputer Society Medal. This recognition of ‘making IT good for society’ is very much a reflection of the effort and commitment of many

teams at the Met Office, recognising equally our sustainable technological innovation and our contribution to climate understanding.

Among our other strategic actions, we have now identified a science-based pathway to achieving our target of being a carbon neutral organisation in 2030 and we have established processes to measure and monitor this going forward. We have already halved our identified carbon emissions from their peak, having moved our main site and supercomputer power supply to 100% zero carbon electricity. We are now starting to tackle the harder challenges of supply chain and travel emissions, but we are on track for our 2030 aims.

Last year I commented that I was particularly proud of the progress we had made with our Equality, Diversity, and Inclusion strategic action. Our focus and efforts here have been recognised this year by the National Centre for Diversity who confirmed our successful achievement of the Investors in Diversity award. This is a tremendous achievement and provides us with a bespoke approach for improving a range of practices in the workplace. Gaining this accreditation truly is a milestone in our ongoing journey to ensure the Met Office is a great place to work. Equally

we have made big strides in our diversity reporting and management information (MI), which I’m pleased to say allows the Met Office to effectively track recruitment and progress throughout the organisation.

Despite aforementioned challenges, our People Survey results show that we have maintained our employee engagement in the civil service upper quartile, holding almost steady after two years of rapid improvement. We have worked hard to care for staff wellbeing as two years of uncertainty has taken its toll on personal resilience.

At the time of writing, the distressing situation unfolding in Ukraine and the associated anxiety for global security is further impacting us all. We take pride in our mission to support and contribute to the UK’s defence and security and will continue to ensure the Met Office plays its part in the national effort.

In summary, at home and abroad, together or dispersed, at peace or at war, Met Office staff continue to contribute to our core purpose of helping you make better decisions to stay safe and thrive and I am both grateful to all for their efforts and immensely proud of the progress we continue to make despite the many challenges we have faced.

Met Office at a glance

About the Met Office

We combine deep expertise and world-class research and innovation to deliver accessible, relevant weather and climate services that meet the needs of government, industry and citizens – both for today and tomorrow. Using billions of observations from aircraft, buoys, satellites and ships all over the world, alongside the powerful capacity of our supercomputing technology and advanced atmospheric simulations, we generate thousands of tailored forecasts and briefings, every single day. Recognised as one of the world's most accurate forecasters, we help you make better decisions to stay safe and thrive.



Pioneering science

Our pioneering experts work at the forefront of weather and climate science and technology, helping shape the worldwide response to our changing weather and the impacts of a changing climate. Significant investments in our weather observations networks, supercomputing technology, weather and climate modelling and processing capability allow us to continue to push the boundaries of scientific, technological, and operational expertise.

We provide evidence on climate change to the UK Government through the UK Climate Change Risk Assessment, including at COP26, and internationally through the Intergovernmental Panel on Climate Change (IPCC) with key scientists as part of the 6th assessment report.

To ensure we stay at the forefront of meteorological research we are investing in the UK's most powerful supercomputer which will take weather and climate forecasting to the next level. Our Cyber Security Enhancement Programme (CSEP) will allow us to stay abreast of threat changes and security opportunities. Implementing scientific and technological improvements and updates to our models is an ongoing process. Work on our latest parallel suite (PS45) is being completed and will soon be made operational as Operational Suite 45.

Trusted services

The social and economic benefits of our services run broad and deep. As a direct result of our services, airlines are able to reduce costs and fly safely, retailers can adapt their offering in response to upcoming weather and consumer trends, and energy providers can improve output and productivity. The UK Armed Forces use our briefings to plan missions around the weather, while scientists in the Antarctic use our team at Rothera Base to conduct their research safely. Through the UK's National Severe Weather Warning Service, government, industry and citizens are able to protect assets and minimise the risks of severe weather.

Our innovative content and delivery platforms, such as the Met Office weather app, which has been downloaded by millions of users since 2016, ensure every one of our forecasts and briefings is easy to access and understand.

We are involved in a new project, Future Flight Challenge, aimed at increasing our understanding of the real life and practical uses of electric and autonomous air vehicles. The £30m project aims to develop and test a remotely operated drone system for industrial and urban environments. The futuristic system, which uses similar technology to autonomous cars, will enable remote inspection and monitoring of industrial sites such as construction and oil and gas, as well as urban sites, such as road and rail telecoms infrastructure and live emergency services support.

Global impact

Much of our strength lies in the expertise and dedication of our people, and collaborative relationships with partner organisations in the UK and around the globe. At home, the impact of our forecasts and warnings have seen millions of people protected from the impacts of severe weather. Overseas, we provide leadership across the international meteorological community, playing a key role in drawing up the International Exchange of Data agreement which allows for the sharing of weather and climate-related information to the benefit of the inhabitants of all 193 participating nations.

Through strong partnerships with national meteorological services in Africa and south Asia, we continually build capacity, advance science, and improving the quality, accessibility and use of weather and climate information services and strengthening forecasting systems for the benefit of all.

Strategic Anchor Reports

Our purpose is clear: we are here to help you make better decisions to stay safe and thrive. It drives what we do, focusing us on making a difference to the people we serve, always delivering greater benefit and impact from our science and technology through the services we provide.

Our strategy set out three anchors that are the main themes that allow us to deliver on our purpose

- Excellent people and culture
- Exceptional science, technology and operations
- Extraordinary impact and benefit

These anchors capture everything we do in achieving our purpose.

The Met Office has an annual set of performance measures which are agreed by the Met Office Board as a representative set of measures of how well the organisation is performing. The Key Performance Indicators (KPIs) are framed around the delivery and impact of the three strategic anchors, and related strategic actions, with a further KPI for financial performance and regulatory compliance.

Strategic actions are key short-to-medium term priority activities that are critical to the future success of the Met Office. They do not capture everything the Met Office will do but show where we must prioritise our efforts to achieve the Met Office vision. Delivery measures assess our delivery of products and services to our customers, together with our internal operating systems and process effectiveness.

Performance against agreed milestones for each action or measure is monitored and reported on throughout the year. Performance against these measures is then linked to Met Office-wide corporate performance pay. This encourages employee engagement in driving the performance of the Met Office, as all employees can benefit.

Despite the ongoing and significant challenges posed during the period, the Met Office has delivered 17 of the 19 targets we set ourselves on our strategic actions. Having a clear vision of the future has been instrumental in the selection and focus of our strategic actions and will continue to do so. Our corporate vision to be 'Recognised as global leaders in weather and climate science and services in our changing world' provides us with a clear picture of where we are heading.



Having a clear vision of the future has been instrumental in the selection and focus of our strategic actions and will continue to do so.





Excellent people and culture

The success of every organisation depends upon the quality and commitment of its people. That is even more true in a high-skill, scientifically driven organisation like the Met Office. Over the last year our people have hardly missed a beat in a difficult and challenging time. They have remained committed to our purpose with the latest People Survey showing 83% proud to tell others they work for the Met Office and 86% understanding how their work contributes to our purpose.

The excellence of our people has been seen widely through the year, such as through the contribution of our climate experts within the International Panel on Climate Change Sixth Assessment Report, at the COP26 Glasgow Climate Summit and our contribution to the 3rd UK Climate Change Risk Assessment. Our weather experts continue to deliver daily operational forecasts – especially at times of severe weather such as during Storms Dudley and Eunice, regularly contributing to the news agenda.

Through this year our expertise has been recognised across a number of external awards ranging from our education outreach activities, social media communications, and staff engagement.

Progress this year

As part of our strategic action to enable and develop our people, we successfully agreed an early careers strategy, which sets out our plans for targeting recruitment to increase the diversity of our staff. Through the programme we have actively taken on over 50 industrial placements and apprentices during the year and saw over 1,300 applications for our industrial placement programme for the coming year. Alongside this we have refreshed our outreach strategy and have continued to deliver activities through our Virtual Science Camps, reaching over 1,000 young people across the country.



The Met Office People Survey 2021 showed 83% of staff are proud to tell others they work for the Met Office and 86% of staff understand how their work contributes to our purpose.



In addition, supported by our value to be experts by nature, we have focused on building our employees' active membership of professional bodies, driving accreditation or registration across all our professions. We have strengthened our own internal professions frameworks, building skills profiles and communities of practice to support our colleagues in sharing their expertise across the organisation.

Coronavirus has remained a dominant presence through the last year and has required us to remain flexible in the way we work. Keeping our colleagues mentally and physically safe and able to thrive has stayed at our core, while ensuring that we have continued to deliver our critical services. To support our staff, we have implemented a new wellbeing strategy which has created a shared responsibility to all aspects of wellbeing. We have developed a community of Champions and Mental Health First Aiders, expanded learning, and put in place tools to support wellbeing conversations. One active part of this is the introduction of a wellbeing payment to our staff to support them in this area.

Our strategic action to evolve to our future normal has also placed wellbeing at its heart. It has involved us developing plans, actions and enablers for a new working environment, successfully establishing team charters for hybrid working, adapting our physical environment and setting out flexible working principles. We have adapted so that people can work anywhere in the UK, which has shown positive benefits in recruiting and retaining staff. Recruiting in this way has started to help in the diversity

of our employees. The resurgence of COVID-19 and the reintroduction of restrictions in early 2022 meant that, like many organisations, we have had to adapt our plans rapidly to meet the needs of our staff.

To be recognised as a great place to work requires a strong relationship between the organisation and its employees. One element of this is through our relationship with the trade union Prospect. We have seen positive progress through initiatives such as the Met Office/Prospect Joint Working Group and have published details of our collaborations for staff. We recognise that there is still some work to do in partnership with Prospect to deliver a truly collaborative relationship for the benefit of all.

To succeed in delivering our vision, the Met Office will need to draw on talented people from the most diverse range of backgrounds and thinking styles. A coordinated approach to enhancing ED&I at the Met Office via our ED&I Strategy and Action Plan will enable us to show progress in this area, with clear provision of comparative diversity statistics. Recognising we are at the beginning of a journey in this area, we have seen early progress within our diversity statistics, creating sound baselines on our staff demographics and our recruitment challenges for the coming years

The pandemic has led to both opportunities and challenges across the employment market. Greater opportunities for flexible working and more vacancies within the wider marketplace has meant that we have needed to respond to this in

our own recruitment. Building on our recently refreshed values, we have successfully placed them at the centre of our job descriptions and developing values-based recruitment practices. In addition, we have created a new employee prospectus to increase applicants based on alignment with our culture and values.

Looking ahead

As we look ahead, we will continue to invest in excellence in people leadership, ensuring we have a community of managers of the right size and skill. Recognising our recruitment challenges, we will also be refreshing our employee value proposition, including pay and allowances, and demonstrating the benefits of working for a world-class organisation. At the same time, we are moving from considering our future normal to learning how to work effectively in a hybrid way for the long term.



TAMMY LILLIE
CHIEF PEOPLE OFFICER

Exceptional science, technology and operations

The Met Office's success as a world-leading provider of weather and climate science hinges on its ability to continue to deliver exceptional science, technology and operations. This in turn requires constant improvements in underpinning capabilities and research, which is why so much effort over the last year has focussed on the delivery of the new supercomputer in partnership with Microsoft. This will bring a phased, 18-fold increase in supercomputing power over our existing capability over the next 10 years.

Progress this year

We began refreshing our Research and Innovation Strategy in 2021 to ensure that it remains fit for purpose with the new cloud-based "supercomputing as a service" approach. This work has helped to articulate the role of a weather and climate science national capability, with a deliberate choice to use the same definitions of national capability as those used by our academic partners. Without these partnerships, we would not be able to develop and deliver such high-quality weather and climate science.

Over the last year we have seen climate and weather repeatedly taking the spotlight in the global media, with frequent coverage of Met Office science. Whether it was supporting the UK Government to deliver a successful COP26, or providing timely and accurate weather warnings for the named storms Dudley, Eunice and Franklin, the Met Office continues to be a trusted source of information and guidance underpinned by exceptional science.



Whether supporting the UK Government to deliver COP26 or providing timely and accurate weather warnings for the named storms Dudley, Eunice and Franklin, the Met Office continues to be a trusted source of information and guidance underpinned by exceptional science.



The supply-chain impacts of the pandemic have been far-reaching, resulting in a global shortage of silicon computer chips. This has caused an unavoidable delay to the delivery of our next supercomputer by at least six months. Despite this, the strategic action devoted to delivering our future supercomputing capability is ensuring that we are well positioned to both deliver and make the most of the next supercomputer and adjacent capabilities, while maintaining our operational resilience. There is a considerable amount of effort involved in this, including migration of over 2 billion computer files (a process which began in 2021 and will continue into 2023). In 2021, we successfully moved several operational services onto a new programming interface management service. This is just one of the underpinning infrastructure elements that will be needed to provide a robust platform that is suitable for the future of supercomputing.

A highly significant piece of work required for capitalising on new developments in supercomputer architectures is captured within the delivering next-generation modelling capability strategic action. Over the last year, we've made some exciting advancements in this area, with up to 16 different projects underway at any given time. There has been much excitement over the excellent progress under this workstream, including the first working prototype of our next generation global model. In addition, there has been good progress developing new software for the processing of observations needed to initialize forecasts.

All of this will mean that in the future, we will be able to produce weather forecasts that are more accurate than ever before. As part of our ongoing work to continually improve our forecasts, over the last year we have developed a new set of metrics for assessing the performance of our numerical weather prediction systems and to demonstrate our world-leading position in global forecast accuracy. This set of measures is challenging and will better reflect improvements in large-scale circulation global ensemble predictions, as well as weather metrics in UK ensemble predictions.

Looking ahead

Moving forward, the Met Office must expand its ambitions across Science and Technology in order to remain competitive in an increasingly crowded space. The work we have already begun in developing the next generation of models will take us to where we need to be, but it will require sustained effort over multiple years. This is why future work across extraordinary science, technology and operations will continue to focus on next-generation modelling capability, and will explore opportunities in Machine Learning, Artificial Intelligence and Digital Twins.

We are making good progress on the business case for the 'supercomputer exploitation programme'. This will make sure we have the necessary capability to deliver a 'Data Factory' that's fit for the future. Our vision is for this so-called 'Data Factory' to produce automated, robust data sets that answer our customers'

questions, using the very best available underpinning climate and weather models.

Whatever the future holds, we will continue to support the UK Government as we chart out a path towards a resilient Net Zero, helping the world to stay safe and thrive in a changing climate.



PROFESSOR STEPHEN BELCHER
CHIEF OF SCIENCE AND TECHNOLOGY

Extraordinary impact and benefit

Everything we do is focused on delivering greater benefit and impact to our customers. This year we balanced the prioritisation of our resources between doing what we do now even better and critical activities to support the transition to cloud-based supercomputing.

Progress this year

The last 12 months have been an important year for climate science. With the successful delivery of COP26, we firmly positioned our climate expertise to the globe. The legacy of this event, along with the

publication of the Sixth Assessment Report and 3rd UK Climate Change Risk Assessment, all of which we have contributed to, provides a firm base to build upon as we seek to work with others to multiply the use, impact and benefit of our expert climate services.

We have made steady progress on Product Migration and Disposal, delivering the first draft of our product and services catalogue, with discovery, analysis and evaluation of these products underway. This analysis will inform ongoing work with customers to consolidate and refresh products within our portfolio as we transition to new systems, maximising our impact.

We have begun identifying and piloting opportunities that will leverage our supercomputer partnership across digital and climate services, working with both Microsoft and mutual partners. Highlights so far are co-creating Microsoft's Minecraft Education Edition Climate Worlds, supporting the Artificial Intelligence for Environmental Sustainability Accelerator programme, and making our open climate data even more accessible by leveraging Esri's platform. These pilot activities will inform our partnership plan.



“

As we continue to develop our supercomputing capabilities we will work with governments, industries and citizens to demonstrate the socio- and economic benefits of our weather and climate services.”

”

Good progress has been made delivering our Net Zero strategy, with critical infrastructure, building management, and business travel plans underway. We also had our baseline methodology scrutinised externally with three of the four categories passing and only supply chain and procurement requiring enhancements.

Within the Future of Operational Meteorology strategic action, we have defined and received approval to procure replacement visualisation and production tools for our Meteorologists. While we evaluate potential suppliers, we have concentrated on what we can deliver now. Improved accessibility of a much wider set of observational data has been made available to our experts within the existing visualisation system and we have also developed a prototype data assimilation model to provide improved situational analysis in convective situation.

Benefits from these improvements will increase accuracy of two hour ahead forecasts within our expert weather services supporting customers in the moment decisions. We received positive feedback from our warning services this year, particularly for the week with three storms - demonstrating our value when it matters.

Greater ease, access and usability of even more of our data externally became possible through a fully operational Weather Data Hub, advancing us towards release of the larger data sets we have available such as multi-model ensembles.

We deepened our understanding of public and customer trust and perceptions of accuracy during the journey to achieving the Trust and Engagement targets. Early in the year our metrics reflected a market trend identified within the Edelman Trust Barometer for decreasing trust in Government. We were delighted to see metrics recover and exceed targets later in the year, with high levels of awareness for storms Dudley (97%) and Eunice (99%). The UK Public Perception Survey climate metric has risen from 7% to 23%.

Despite the challenges of the pandemic, the Met Office has continued to publish high quality scientific outputs. 2020 saw 458 peer-reviewed articles published by Met Office authors, an increase of 28 over 2019. The impact and quality of these publications is reflected in the Met Office's h-index increasing to 263 (i.e. at least 263 papers from Met Office authors now have at least 263 citations each). This work cannot be done alone; one of the major scientific strengths of the Met Office is its fruitful scientific collaborations. In 2020, Met Office scientists co-authored papers with scientists from 650 different institutions. From 2018 to 2020 the Met Office has published 887 publications in the most prestigious journals (ranked in the top 25% of all journals).

Looking ahead

We will build on this year's achievements to deliver greater impact and benefit from the Met Office's rapidly increasing weather and climate data and visualised

content, increasingly working with collaborators and partners.

As we continue to develop our supercomputing capabilities we will work with governments, industries and citizens to demonstrate the socio- and economic benefits of our weather and climate services.

We will build upon the legacy of COP26 to increase climate awareness and the global impact of our pioneering science as the UK hands over the Presidency of COP to Egypt.

Our data and content will become increasingly available, and we will work with partners to ensure the information is easy to discover and use in "market places" as well as direct from us.

We will increasingly share our knowledge and experience with the world within thought leadership to shape the useful advancement and application of weather and climate science to benefit the society.



IAN CAMERON
MARKETS DIRECTOR

KPI summary

KPI 1 - Excellent people and culture

● EPC 1.1

Values central to our job descriptions, recruitment process, performance reviews and reward.

● EPC 1.2

Future normal project plan, actions and enablers for return to new normal agreed.

● EPC 1.3

Recruitment plan showing clear measures on positive action taken on equality, diversity and inclusion with clear provision to capture comparative year diversity statistics.

● EPC 1.4

Signed off early career strategy.

● EPC 1.5

Recognised as “Experts by Nature” by learning and development, participation in professional bodies, number of people receiving professional registration, participation in International communities.

● EPC 1.6

Outcome plan produced with trade union to increase collaborative working and evaluate success.

● FULLY ACHIEVED

● NOT FULLY ACHIEVED

KPI 2 - Exceptional science, technology and operations

● ESTO 2.1

Supercomputer – deliver all 4 programme outputs:
 (a) Deliver a set of supercomputing supplier strategic engagement objectives
 (b) Simulation code porting commencement
 (c) MASS data migration commencement
 (d) Develop a technology, architecture and service delivery blueprint for usage of the supplier’s platform.

● ESTO 2.2

NWP prediction metrics basket:
 (a) Trend improvement in skill of large-scale circulation global ensemble predictions
 (b) Trends in weather metrics in UK ensemble predictions
 (c) Assessment of Global and Regional metrics for improvements over time.

● ESTO 2.3

Next Generation Modelling Systems – delivery of 2 out of 3 programme outputs:
 (a) Deliver improvements in computational capability for seamless NGMS-based global predictions.
 (b) Develop initial capability for credible NGMS-based regional forecasts.
 (c) Develop initial JEDI-based observation processing capability that works with current data assimilation system.

● ESTO 2.4

Common Data Platform – delivery of 2 out of 3 programme outputs:
 (a) Strategy for CDP developed and approved.
 (b) Next Generation Post Processing capabilities blueprint designed/aligned with Supercomputing capability.
 (c) API management go-live.

KPI 3 - Extraordinary impact and benefit

● EIB 3.1

Trust and engagement – achieve basket of measures on reach, trust, reputation and usefulness.

● EIB 3.2

Data services - global output from MOGREPS available via an operationally supported and sustainable public task proposition using the DataHub service for access.

● EIB 3.3

Expert weather services

(a) customer feedback on warning services from our three main sectors.

(b) making convective nowcasting data operational and 24/7 UK 'Nowcasting' surge resource.

● EIB 3.4

Climate services – achieve basket of measures on increased reach, quality and volume of services following COP26.

● EIB 3.5

Thought leadership – Quality and impact of publications and international science leadership.

KPI 4 - Finance and environmental, social and governance

● FESG 4.1

Adjusted operating profit per budget baseline of £12.6m

● FESG 4.2

Total revenue per budget baseline of £253.7m

● FESG 4.3

Net Zero – travel and total emissions targets

● FESG 4.4

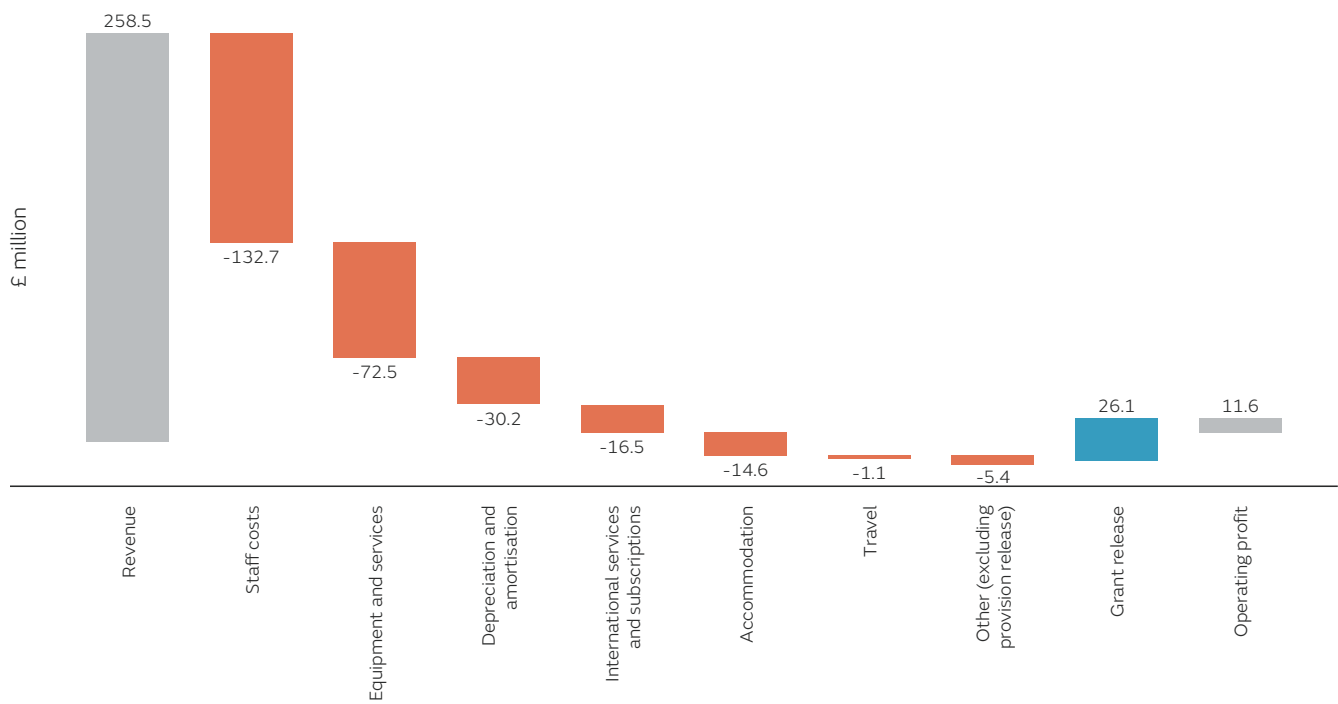
Demand Management – Investment and Bid Committee decision making based on a single demand funnel delivered by an organisation-wide demand management process

Financial review

Summary

The Met Office met both of its financial targets for the year:

Operating profit



Revenue

Total revenue was at a similar level to 2020/21. In the previous financial year £6.9m of funding for the procurement of the Met Office's next generation of Supercomputer was treated as income. As this programme is now in its implementation phase, funding in 2021/22 has been received in the form of grant funding and so has been offset against associated operating costs. This reduction was offset by additional revenue in other areas including an additional £4m of revenue on our core Public Weather Contract and an additional £2.3m of revenue for Defence services.

Operating costs

Operating costs reduced by £5.0m. However, the change is affected by movements on accruals or provisions in the previous and current years.

Staff costs in the previous year included an additional £2.8m of accrued costs for untaken leave during the Coronavirus pandemic. The accrual for these costs was reduced by £0.8m in 2021/2 giving a total change of £3.6m year-on-year.

For non-staff operating costs, the Met Office also incurred additional expenditure in the early stages of preparing for the implementation of our next generation of supercomputer (£18.2m). This has been offset entirely by associated grant funding received. This grant funding is new and is offset directly against the associated costs of delivery and so operating costs in 2021/22 appear lower.

Other operating costs in 2021/22 also appear to be £8.4m higher as 2020/21 costs were reduced by the release of an unneeded provision for an unsuccessful reclaim of funding by the European Commission. 2021/22 costs were increases by the creation of a £3.3m provision for settlement of legal proceedings.

Dividend

Total dividend payable to our owner, BEIS, is £8.5m (2020/21 £6.5m).

Cash flows and liquidity

The Met Office holds cash balances primarily to meet short term commitments as they fall due. In the medium to long term the Met Office also meets commitments to EUMETSAT for the funding of meteorological satellite programmes.

Cash balances held increased from £29.8m to £99.3m. Operating activities generated a cash surplus of £57.3m. This includes £37.1m of supercomputer grant funding received, of which £18.9m has been carried forward. Loan funding of £99.0m was received to support continued investment in EUMETSAT satellite programmes. Payments to acquire assets, including payments to EUMETSAT, were £56.2m. Loan repayments (£23.6m) and dividend payments (£6.5m) were also made.

Borrowing

Under the Met Office Trading Fund Order and Framework Document, the sole provider of loan funding is the Met Office's sponsor department, BEIS. Therefore, exposure to liquidity risk is limited to these arrangements. As at 31 March 2022, £230.4m in loans were outstanding (31 March 2021, £152.2m). Loan funding requirements are anticipated to continue in future years to finance the UK contribution to the EUMETSAT satellite programmes. These loans fund the initial investment cost in these programmes. The investment is recovered from the Public Weather Service when the programmes become operational. Loan repayments in a given period are funded by the working capital generated by Met Office trading. Loan balances and working capital are reviewed as part of the Met Office's long-term planning to ensure that any borrowing remains affordable.

Our values

Our values are our guiding principles. They reflect who we are and what we stand for here at the Met Office. Our values underpin every decision we make and the way in which we get our work done each and every day.



We're a force for good.

Our planet matters. The time is now, and we're the people to make a difference. That's why we take our environmental and social impact seriously. We're a force for good in our core products, in making sure that people stay safe and thrive and in our contribution to world understanding of climate change. But it's also about reducing our impact and looking for ways to make a positive difference to our environment and our community.



We're experts by nature.

We gain our expertise through hard work and by focusing on our strengths. Of course, we're not born with our expertise but it's in our nature to be curious - always learning and developing to do things better. We trust in each other's expertise and take pride in being the best in our field.



We live and breathe it.

Helping people make better decisions to stay safe and thrive is what we live for. Their lives guide our decisions and their trust guides our actions. We show a genuine passion for what we do, put our purpose at the heart of all decision making and take great pride in the impact we make on people's lives every day. We consider customers and employees needs first and always act with integrity.



We're better together.

Great minds don't always think alike. And we like it that way. We believe partnerships, inclusivity and honesty make us far greater than the sum of our parts. We stand together, we listen, respect and support one another.



We keep evolving.

When we're not looking up, we look ahead. We push the boundaries to make tomorrow better for our customers. Forecasting the future is one thing. Creating it is another. We're never satisfied with the state of the art as it is now. We don't stand still, we're always pushing ourselves to achieve more.



It's who we are.

Equality, diversity and inclusion

We recognise that to achieve our purpose we need to have a diversity of both thought and staff and an inclusive culture. In October 2021 we updated our equality, diversity and inclusion (ED&I) objectives to be more outward focused and in January 2022 we published our new Equality, Diversity and Inclusion Strategy. This strategy, along with our People Strategy work, aligns to the Civil Service Diversity and Inclusion Strategy 2022-25.

How are we perceived in the jobs market?

92%

would **recommend** the Met Office to a friend.

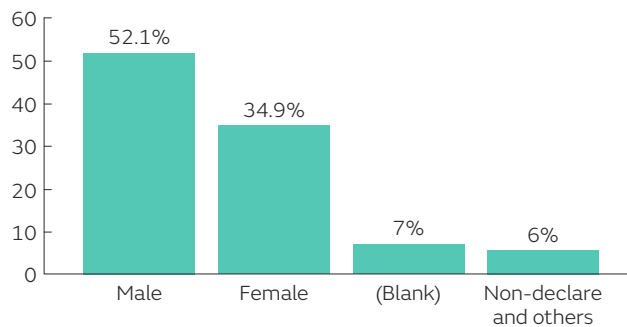
glassdoor

Objective 1

Engaging with and understanding the diversity of our people and those we serve

We have seen a steady increase in the number of colleagues completing the protected data self-declaration. By March 2022 this had reached 91% of staff. (69% of our staff declared in March 2021 and 43% in 2020).

Gender identity



Gender identity per grade shown as % of overall headcount

Civil Service Grades	Male	Female	Identifies in another way	Unknown	Chose not to declare	Total
Senior Civil Servant	0.3%	0.1%	0.0%	0.0%	0.0%	0.4%
Grade 6	4.9%	2.1%	0.1%	0.4%	0.3%	7.8%
Grade 7	10.8%	6.9%	0.1%	1.3%	0.9%	20.0%
Senior Executive Officer	16.3%	11.2%	0.4%	1.9%	2.1%	31.9%
Higher Executive Officer	13.1%	9.5%	0.1%	2.0%	1.3%	26.0%
Executive Officer	4.5%	3.1%	0.1%	0.8%	0.6%	9.2%
Administrative Officer	1.2%	1.4%	0.0%	0.5%	0.1%	3.0%
Administrative Assistant	0.8%	0.7%	0.1%	0.2%	0.1%	1.8%

More information on our significant equality, diversity and inclusion activity can be found in our first Annual Equality, Diversity and Inclusion Report.

Our 2021 People (Staff) Survey showed that 1 in 5 staff (20%) have a disability. This figure is up from a 16% declaration in 2020.

We are now capturing ED&I sensitive data from our staff and applicants and establishing it from those we serve, such as our Unified Model (UM) Partners. The data helps us manage change, communications, and also work towards achieving our other objectives.

Objective 2

Advancing equality of opportunity

The percentage of women in our Board of Directors is 43% in March 2022 (2021: 46%).

Our Board representation meets and exceeds the Hampton-Alexander target of 33% female to 77% male for FTSE100 companies.

We are committed to supporting career pathways into the Met Office and this year launched an Early Careers Strategy, targeted locations which would increase the diversity of our staff, and took on 18 industrial placements. To assess how we have been progressing on our industrial placements in a competitive market, we subscribe to Rate My Placement who awarded us:



Best Student Employer

Awarded 1st in Government / Not for Profit Best 60 Medium-sized Student Employers 2020-2021

Our newly planned intranet involved our Accessibility and Disability Network from the start and has been designed to work with various assistive software used by our staff.

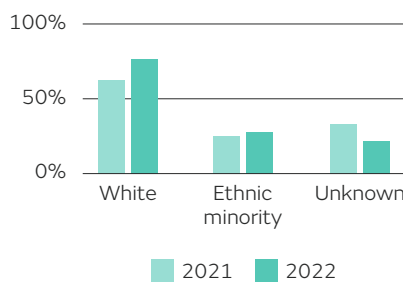
Felicity Liggins, Education Outreach Manager won the Royal Meteorological Society Michael Hunt Award for her STEM education and outreach activities. Our Science Camps this year went virtual and reached over 1,000 young people across the UK.

Objective 3

Increasing representation of under-represented groups at all levels

Since 2021 we have created robust baselines on our staff demographics and our recruitment challenges. This is enabling us to create targeted actions to address under-represented groups.

Staff ethnicity split



We responded to the Government inquiry into diversity in STEM and are working with partners and Government to encourage minority groups to take up careers in STEM (Science, Technology, Engineering, and Maths).

Objective 4

Zero tolerance to bullying, harassment and discrimination

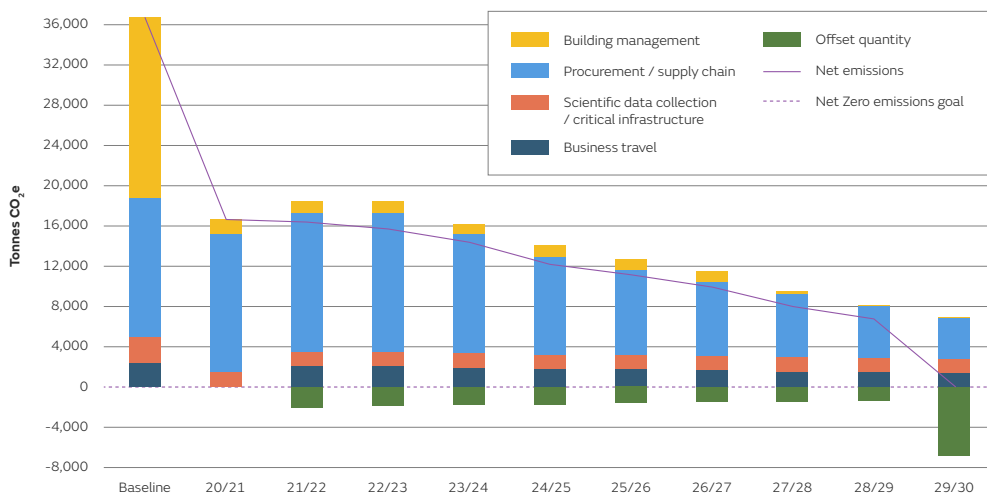
In 2021, we launched a new ED&I course “Better Together” to improve understanding of ED&I issues with a key focus on behavioural change. We also launched additional digital guidance for staff, to ensure staff understand expectations in the hybrid digital world.



The environment and sustainability

As an organisation, we are only too aware of the consequences of increased greenhouse gas emissions. In the last year, the concentration of carbon dioxide (CO₂) in the atmosphere exceeded pre-industrial levels by more than 50% for the first time. The latest instalment of the IPCC’s Sixth Assessment Report, to which the Met Office was a major contributor, outlines the types of action that need to be taken if the world is to keep temperature increases well below 2°C.

The Met Office took the decision last year to set out a target to achieve net zero. After completing a comprehensive analysis of our baseline emissions, we charted a pathway to reach carbon neutrality by 2030, reducing our identified emissions by 81% and offsetting the residual emissions that we could not remove in the timescale. We have published our planned journey on our website and the profile of our proposed reductions is shown below.



Having laid out our longer term goal, 2021-22 was the first year we have set specific targets to reduce emissions across the business which we are pleased to have achieved. We divided the emissions we needed to tackle into the four categories below:



Building management

Electricity and gas usage, including powering and cooling our supercomputing infrastructure.



Procurement and supply chain

This includes the supply of research and data-intensive information from partners as well as the purchase of manufactured items from suppliers.



Scientific data collection / critical infrastructure

This refers largely to emissions from collecting meteorological observations and scientific research flights along with other services critical to the Met Office’s operations and customer services.



Business travel

Staff travel that supports the Met Office’s core activities.

The first major action we took was to decarbonise our power supply. Our supercomputer uses large amounts of electricity, both to power the processing units and to cool our IT halls. We are now embarking on our third year using zero carbon electricity derived predominantly from renewable sources such as wind and solar, supplemented by nuclear energy. In future years, our supercomputer will be operated from our partner's dedicated data centres and these too will run on renewable energy.

While business travel remained subdued as the pandemic continued, we have taken the opportunity to communicate our future plans to all staff so that, as demand for travel to support customers and meet with scientific collaborators rebounds, we monitor and manage our travel emissions effectively. While commuting emissions have also reduced as a result of home and hybrid working, we have committed to review these and incorporate them into our calculations the year after next.

The biggest challenge we face going forward will be to start making inroads into our supply chain emissions, which now form the largest proportion of our overall carbon footprint. We have started to engage with our major partners such as EUMETSAT and ECMWF to understand the nature and scale of their emissions. As they formulate their own plans, we will learn what they can do to reduce their own – and thereby our share of

their – emissions. Like the Met Office, many partners and suppliers also use large amounts of electricity for data processing and we are optimistic that as they too move to fossil fuel free power supplies, there is scope for their emissions to drop.

This year, we have offset emissions for the first time, in line with our pathway. As the IPCC Assessment Reports and the UK's Committee on Climate Change have indicated, carbon removal will be required to supplement even the most rapid carbon reductions, given the intractable nature of some emissions. The emissions we purchased this year have been certified to the highest standards by ICROA and VCS. Next year we plan to investigate whether there are options to contribute to nature-based solutions in the South West region and other areas around the country where our operational staff are deployed.

As part of our efforts to support our local environment we were very proud to mark the 10th anniversary of our achievement of the Wildlife Trusts' Biodiversity Benchmark Award for our headquarters site at Exeter, where our Property Management team and staff-led Biodiversity Working Group work to protect and enhance biodiversity. While we occupy a relatively limited amount of land, we have successfully created a number of thriving and more diverse natural habitats which also give a great deal of pleasure to staff and visitors on site.

The thrust of our environmental policy and net zero strategy is to ensure we take a holistic approach to tackling our carbon footprint. We have analysed where the science says we can make the biggest impact and based our actions around that. We recognise that we are all still learning what the implications of our actions are, but by acting now we can take a lead and encourage our partners and collaborators in the meteorological world to tackle the issues together.

Further details of our environmental policy and our sustainability report are available on our website. The more detailed report on the following pages provides further information on our progress and how we align with the Greening Government Commitments that we, our owning department BEIS and wider government work to achieve.

Sustainability report

Overall strategy for sustainability

As outlined previously, we are committed to meeting our objectives in a sustainable way. As well as minimising our environmental impact, we endeavour to act in a positive way in our dealings with our staff,

customers and suppliers and to maximise our contribution to the wider community.

During the year we have continued on our pathway to achieve Net Zero greenhouse gas emissions by 2030. Here we provide more detail on emissions, energy consumption, waste management and water usage as well

as more information on our biodiversity work and sustainable procurement.

We are also committed to meeting the Greening Government Commitments (GGC) 2021-2025 under BEIS, our owning department, and progress is reported centrally in the GGC Annual Report.

Greenhouse gas emissions (GHG) – Exeter and frontline sites		2018/19	2019/20	2020/21	2021/22
Non-financial indicators (tCO₂e)	Total gross emissions for scopes 1 & 2 (including white fleet)	17,709	16,483	14,659	13,655
	Fugitive emissions (refrigerant gas leaks from cooling units/systems)	31	299	265	55
	Gross emissions scope 3 - business travel (less white fleet)	2,654	2,207	96	280
Related energy consumption (MWh)	Electricity: non-renewable – see Performance Commentary	57,716	59,836	56,595	57,745
	Electricity: renewable – see Performance Commentary	-	-	-	-
	Electricity: good quality combined heat and power (GQCHP)	-	-	-	-
	Self-generated renewable (solar PV installation at HQ site)	236	253	229	252
	Natural gas	5,468	5,413	5,061	5,078
	Gas oil (diesel)	26	11	1,924	12
Financial indicators (£)	Expenditure on energy	6,704,577	7,731,729	7,633,897	7,991,965
	Expenditure on Carbon Reduction Commitment Energy Efficiency Scheme allowances (to 2018/19 after which scheme ceased)	286,772	N/A	N/A	389,054
					N/A

Energy

The energy consumed by our headquarters-based High-Performance Computer (HPC) accounts for most of our energy consumption and associated emissions. Electricity consumption for our Exeter offices and IT halls is at steady state. We seek to reduce our energy consumption where we can but cannot avoid the significant electricity requirements of the HPC

which underpins our work. During the last year, our electricity has been supplied under the ‘greenest’ tariff available to us, the EDF Renewable for Business (R4B) tariff. This tariff is classified as “100% renewable” and therefore is rated as “zero carbon” by Defra; we use this definition for monitoring our progress toward our Net Zero target. However, as a Central Government funded body, for the purposes of this annual report we report our energy usage in accordance

with the standard emissions factors for the UK electricity grid.

Our fugitive gas emissions relate to losses from our air conditioning units and chillers which we use to cool our IT. The losses are from instances when, despite regular maintenance taking place, the equipment, which is now near end of life, has suffered unexpected failures.

Gas consumption has remained steady. Gas is used to heat our building and despite low occupancy due to COVID we have not seen a significant reduction. This is due to the need to maintain a constant temperature in the building whilst increasing the fresh air input to meet COVID requirements.

The gas oil (diesel) consumption has returned to normal levels for regular maintenance running. In FY20/21, the standby generators came online to provide power for the super computers during a power interruption at our Exeter HQ.

Our Solar PV installation at our Exeter site continues to meet its projected outputs.

Travel

Travel continued to be restricted during this FY due to the COVID restrictions and we have continued

to use technology to facilitate virtual meetings. It is our intention to continue this where possible and develop our capability in this area.

If travel is required, our travel policy encourages staff to question whether their planned travel is essential. Where a business trip is necessary, then staff are encouraged to use the most sustainable form of transport.

A reduction in staff business travel is one of our Net Zero KPIs as well as being a focus of the Greening Government Commitments (GGC). We are aiming to reduce our business travel in line with our Net Zero pathway whilst continuing to meet our international commitments. We are planning to continue increasing the number of electric charging points both at our Exeter HQ and at UK sites we own in order to facilitate the move to an all-electric vehicle fleet by 2027 (in line with the GGC).

As part of our Net Zero Strategy, we have begun to offset our budgeted Business Travel emissions through a certified scheme facilitated by our travel provider Clarity. This saw us offset over 2,100 tonnes in this FY. We will continue to do this as we progress to our 2030 objective.

Waste and recycling

Our total waste arising at our Exeter site has increased on FY20/21 due to staff returning to work after the easing of COVID lockdown restrictions.

We have continued to achieve high recycling and recovery rates and have consistently achieved less than 1% of our waste going to landfill in line with the GGC. We have a wide range of recycling facilities on site which staff are encouraged to use.

In line with the GGC, we continue to work to reduce our total waste

Waste		FY18/19	FY19/20	FY20/21	FY21/22
Non-financial indicators (t)	Total waste arising	170.8	171.2	53.3	121.1
	Recycled and re-used	107.3	117.8	40.1	99.2
	Information communication technology waste recycled and re-used (externally)	14.2	19.6	5.2	9.5
	Composted	9.6	19.2	11.5	17.5
	Anaerobic digestion	30.5	28.0	2.7	3.6
	Incinerated/energy recovery	32.2	25.1	10.3	17.0
	Landfill	0.8	0.2	0.2	0.9
Financial indicators (£)	Total disposal cost	91,317	40,754	40,754	40,754

through initiatives such as reducing or removing Consumer Single Use Plastics (CSUP) in our catering and stationery supplies and ensuring that all our IT waste is either re-used or recycled.

Finite resources (Water)

We have metering at our headquarters to monitor and record our onsite water usage, most of which goes to cool our HPC.

We use a mix of mains water and softened borehole water for this purpose. In July 2020, our borehole enhancement project was completed, increasing our water softening capability to enable us to meet a higher proportion of the demand from the borehole. A portion of the incoming mains cold water is still used to mix with the softened borehole water in order to prevent corrosion issues occurring with the cooling towers as advised by our water treatment specialist.

Since April 2021, low building occupancy due to COVID has led to a further decrease in our mains water consumption and in consumption of our recycled water, the water discharged from our cooling towers and used to flush our toilets.

Water		FY18/19	FY19/20	FY20/21	FY21/22	
Non-financial indicators (m³)	Water consumption				17,330	
		Abstracted (borehole)	20,019	20,534	27,508	28,209
		Recycled water (discharge from cooling towers)	7,149	5,498	3,246	2,279
Financial indicators (£)	Water supply costs	68,311	64,897	39,936	35,480	

ICT and Digital (formerly Sustainable ICT)

We have adopted the ‘Greening Government: ICT and Digital Services Strategy’ and associated targets and provide membership to the Sustainable Technology Advice and Reporting team, who manage and deliver the Greening Government Commitments ICT reporting. We deliver an annual ICT and digital footprint, waste and best practice report.

Highlights include all our data bearing IT assets being data cleansed and then refurbished for re-use or, where this is not possible, being dismantled and recycled.

Biodiversity Action Planning

Our staff-led Biodiversity Working Group continues to work closely with colleagues in our Property Management team to protect and enhance biodiversity. In July 2021, we marked the tenth anniversary of our achievement of the Wildlife Trusts’ Biodiversity Benchmark Award for our headquarters site at Exeter with a visit and virtual talk from Devon Wildlife Trust CEO, Harry Barton.

Our achievement of the award was the culmination of work begun in 2008 to manage our site for biodiversity. Since then we have continued to improve year on year, managing our grassland to benefit different butterfly species and to promote botanical diversity, adding improvements such as a seasonal pond for amphibians, planting native trees, providing bee hotels, basking rocks, hibernacula and collecting observational data from our regular butterfly transects, bird surveys and reptile refugia checks.

Sustainable procurement

We continue to focus on developing links with Small and Medium Sized Enterprises (SMEs), delivering real benefits in terms of agility, flexibility and innovation. Where possible, we break down larger contracts to match market capacity, using a ‘lotting’ structure to encourage SME engagement in the competitive process. Expenditure with SMEs averaged 33% of spend in the last financial year, which is in line with the Government Target of 33% of spend with SMEs by 2022. In addition, the Commercial team are closely involved with the Environmental Policy Committee and are currently developing a baseline of supplier

carbon footprints to support our aim to achieve Net Zero emissions by 2030. The Commercial team have adopted the Central Government PPN (06/20) in relation to Social Value which embeds Social Value measures (including environmental measures) within the procurement evaluation on relevant contracts.

The team are also developing strategies and policy to incentivise suppliers to sign up to real, sustainable reductions in their carbon footprints as part of our overall approach to procurement. This work will include a road map which will set out our objectives and timescales for delivery. We are also collaborating with colleagues in other Government departments and BEIS to align our Net Zero strategies as well as identifying and aligning to best practice. As a signatory to the Government Prompt Payment Code, we are committed to making timely payments to suppliers, and are actively promoting and enforcing the cascade of such terms from strategic suppliers to their related sub-contractors.



Professor Penelope Endersby
Chief Executive
13 October 2022

Corporate governance report

Directors' report

The following items, required as part of the Directors' report, are included in the Governance Statement on page 42:

- Composition of the Met Office Board.
- Disclosure of other interests held by members of the Met Office Board.
- Disclosure of personal data-related incidents.

Statement of the Met Office and Accounting Officer's responsibilities

Under section 4(6)(a) of the Government Trading Funds Act 1973, HM Treasury has directed the Met Office to prepare a statement of accounts for the 2021/22 financial year in the form and on the basis set out in the Accounts Direction issued on 16 December 2021 and in guidance on accounting for grants received during 2017.

Accounts are prepared on an accruals basis and must give a true and fair view of the Met Office's state of affairs as at 31 March 2022 and of the income and expenditure, changes in taxpayers' equity, and cash flows for the financial year. In preparing the accounts, the Accounting Officer is required to comply with the requirements of the Government Financial Reporting Manual and in particular to:

- observe the Accounts Direction issued by HM Treasury, including the relevant accounting and disclosure requirements, and apply suitable accounting policies on a consistent basis;
- make judgements and estimates on a reasonable basis;
- state whether applicable accounting standards, as set out in the Government Financial Reporting Manual, have been followed, and disclose and explain any material departures in the financial statements;

- prepare the accounts on a going concern basis; and
- confirm that the Annual Report and Accounts as a whole is fair, balanced and understandable and take personal responsibility for the Annual Report and Accounts and the judgements required for determining that it is fair, balanced and understandable.

HM Treasury has appointed the Chief Executive of the Met Office as the Accounting Officer for the Trading Fund. Her responsibilities as Accounting Officer, including responsibility for the propriety and regularity of the public finances, for which she is answerable, for keeping of proper records and for safeguarding the Met Office's assets, are set out in Managing Public Money published by HM Treasury.

As the Accounting Officer, I have taken all the steps that I ought to have taken to make myself aware of any relevant audit information and to establish that the Met Office's auditors are aware of that information. So far as I am aware, there is no relevant audit information of which the auditors are unaware.

Governance statement

PROFESSOR PENELOPE ENDERSBY

Scope of responsibility and purpose of the governance statement

As Accounting Officer, it is my responsibility to ensure that there is a sound system of governance, risk management and internal control in place. The Met Office operates in accordance with the Framework Document agreed with the Department for Business, Energy and Industrial Strategy and business is conducted in accordance with Managing Public Money to ensure public money is safeguarded, properly accounted for and used economically, efficiently and effectively.

The Governance Statement, for which I, as Accounting Officer, take personal responsibility, gives a clear understanding of the dynamics of the Met Office and its control structures. These control structures provide an adequate insight into the business of the Met Office and its use of resources to enable me to make informed decisions about progress towards our strategic objectives and key performance indicators and, if necessary, steer performance back on track. In doing this, I am supported by a governance framework that includes the Met Office Board, its Executive and senior management and a robust assurance framework.

This statement also explains how the Met Office has complied with the principles of good governance and reviews the effectiveness of these arrangements.

Governance structure

Our governance structure - Executive Management

My colleagues and I, as members of the Executive Board, remain accountable to and open to challenge, advice and scrutiny from the Met Office Board. In turn, both the Executive Board and the Met Office Board are accountable to and act under delegated authority from our Ministerial Owner at the Department of Business, Energy and Industrial Strategy. (BEIS)

The Executive Board, which I chair, is the primary management forum for the Met Office. It brings together the Executive Directors who are responsible for implementation of our strategic objectives and delivery of our customer services. Last year, we undertook a review of our Directorate structure to align this with our corporate strategy and better meet the evolving needs of our customers. We also updated the Committees of the Executive Board to reflect cross-cutting responsibilities. A new operating model was introduced in March 2021 and our operating capability has matured and been further embedded in the Directorates during this financial year.

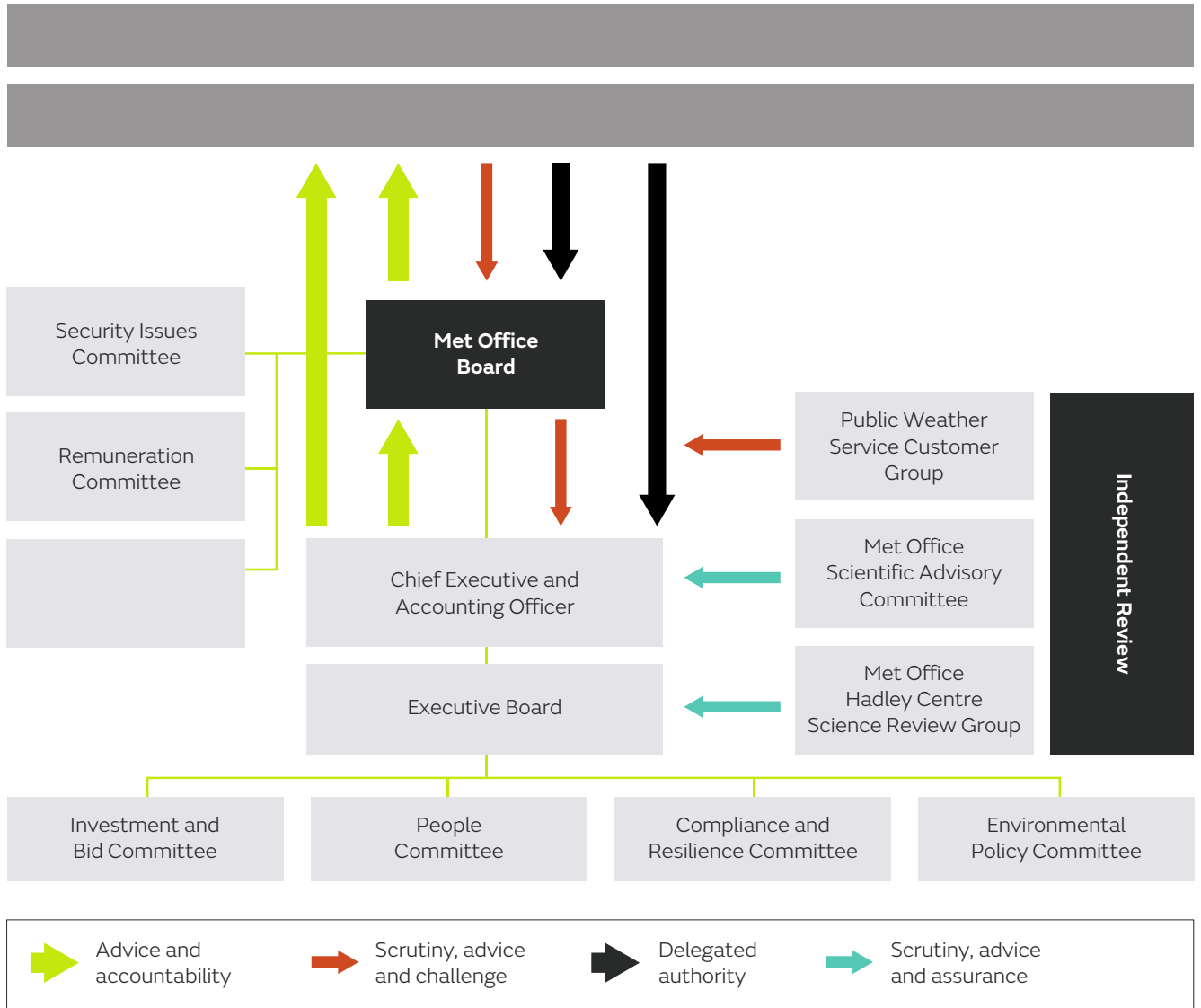
The Executive Board and I have ensured there is a clear allocation of roles and responsibilities within operational departments to facilitate the implementation of strategic objectives. The Directorate structure is designed to ensure the outputs of our scientific and technology research flow, through the development of new programmes and infrastructure, into the delivery of operational products

and services to meet the needs of, and provide real benefits to, our customers.

The Office of the Chief of Science and Technology, led by Prof. Stephen Belcher, incorporates the Science and Technology Directorates which provide the expertise and skills to design, build and support our national capability. The Programmes Directorate, headed by Elizabeth Harris, oversees our significant change programme, delivering new functionality to the Services Directorate which, under the leadership of Simon Brown, provides essential operational services to our wide range of customers. Customer relationships are owned by Ian Cameron's Markets Directorate, which in turn assesses future demand horizons and feeds this into planning for the next cycle of research and development. These Directorates are supported by the Chief Financial Officer's Directorate, under Nick Jobling and the People Directorate, headed by Tammy Lillie, ensuring we have the excellent people and culture to support our strategy.

Following the award of the new Supercomputer Contract, which is managed in line with the Government Major Projects Portfolio requirements, Charlie Ewen holds specific accountability for delivery of this programme and the delivery of its wider socio-economic benefits. To allow him to focus on this major challenge, the largest programme the Met Office has ever undertaken, Richard Bevan has taken on the day-to-day leadership of the Technology Directorate within the Office of the Chief of Science and Technology.

The Executive Board brings together the activities of the Directorates, co-ordinating the oversight and



There are a number of working groups providing specialist advice to the individual Committees.

NOTE: The Audit and Risk Assurance Committee provides advice and assistance to both the Board and the Accounting Officer; it also receives relevant reports from the Accounting Officer.

delivery of our business operations. Four Executive Committees support the Executive Board in its management and implementation of its responsibilities, facilitating communication and decision-taking for issues that cut across Directorates. The Investment and Bids Committee oversees and approves new spend and programmes, the People Committee oversees and monitors the consistent application of people policies across the organisation, the Compliance and Resilience Committee ensures the reliability of our critical infrastructure and compliance with operational requirements and the Environmental

Policy Committee oversees the implementation of our Net Zero strategy and our Environmental Management System.

In addition, the Office of the Chief Executive incorporates the Risk Management, Internal Audit and Legal functions as well as support to ensure the smooth and efficient operation of the Executive team and Met Office Board. It reports directly to me, as Accounting Officer, to ensure a direct flow of information on risk and assurance to the Executive Board and that I have a clear overview of our governance structure and control framework.

Role of the Met Office Board

The Met Office Board challenges and supports the Executive team and carefully scrutinises its proposals and performance, particularly in relation to the development of the Met Office’s long-term business strategy and delivery of the Corporate Plan. It agrees and monitors performance against annual Key Performance Indicators that are aligned with the strategy. In addition, the Met Office Board takes an overview of corporate risk and works with the Executive Board to agree the organisation’s risk appetite.

Met Office Board composition

The Chair is responsible for leading the Board and ensuring that it is effective in discharging its role. He is supported by additional independent non-executive directors (NEDs), chosen to bring diverse insights and relevant skills. The Met Office Board has three Committees – the Audit and Risk Assurance Committee, the Remuneration Committee and the Security Issues Committee, each chaired by a non-executive Board member.

The Board's membership aims to be diverse and to incorporate a range of skills, experience and viewpoints. Overall Board composition aims to reflect an appropriate mix of leadership experience from different backgrounds to guide the Met Office's strategy. Board members' specialisms include meteorology, science and data, customer and commercial management, experience of financial reporting and organisational controls. All bring a passion to champion the work of the Met Office. Appointments are made through the government's Public Appointments process and approved by the Minister. A BEIS representative sits alongside the independent NEDs and in addition, a Trade Union representative has right of attendance at Board meetings.

Having welcomed two new non-executive directors, Professor Jordan Giddings and Christine Ourmières-Widener, in March 2021, Anusha Shah, who has had a successful career in the field of environmental engineering, joined the Board on the 1st of April 2021. Sir John Beddington, who had provided the Board valuable and longstanding service, including a spell as interim Chair, retired on 30th April.

As well as myself, as Chief Executive, and four of my Executive Director colleagues, Charlie Ewen joined the Board on 29 July 2021 in his role as Senior Responsible Officer (SRO) for our supercomputer programme.

Clare Wasteneay, Head of Legal and Governance at The Coal Authority, another BEIS partner organisation, had been attending Board meetings as part of the BEIS 'Open Board' scheme to help develop a diverse selection of 'Board ready' candidates in future. Clare stepped down in February 2022 after her term came to an end.

Met Office Board activities in 2021/22

During 2021/22, the Met Office Board held six regular Board meetings. An additional meeting was held at the end of April to approve the 2021/22 budget, the key performance indicators (KPIs) for the coming year and also the new Customer Supplier Agreement with the PWSCG. A summary of each Board meeting is published on the Met Office website.

As a result of continuing COVID-19 restrictions, the majority of Board and Committee meetings again took place virtually. However, when the relaxation of travel restrictions permitted, two meetings were hosted at the Met Office in Exeter and one was held in Glasgow to coincide with the timing of COP26 to which the Met Office made a significant contribution. Going forward, we expect some meetings to be in person, some virtual and others hybrid; this will also allow us to reduce the carbon emissions and costs of associated travel.

A key role of the Board is to work with the Executive to develop and refine the Met Office's strategy. A strategy day was held in June looking at the continued evolution of the overall strategy, focussing in particular on the opportunities that could arise from the new supercomputer programme and the partnerships that could spring from it, alongside the development of our Impact and Benefit strategy. This strategic work was brought together at the end of the year when updates to the three strategic anchors were presented and the final draft of the new 5-year Corporate Plan was reviewed.

Key focus areas for the Board during the year included:

- **The delivery of and exploitation of the new supercomputer, including leveraging the partnership with Microsoft** - As SRO, Charlie Ewen outlined how the Board's governance role worked alongside structured reporting through to BEIS and Treasury. The programme team provided updates on the progress of building the new infrastructure and the plans to deliver the longer-term socio-economic benefits over the 10-year span of the programme. Clare Barclay, CEO of Microsoft UK, attended two Board meetings to report on progress and provide Microsoft's perspective on longer-term opportunities. The Board were also kept informed of the supply difficulties affecting major technology projects. The Board was kept abreast of the legal challenge which was ongoing throughout the year.
- **COP26** - Met Office support to the UK government in its role as President of COP26 and hosting of scientific events as part of the COP26 meeting in Glasgow in November 2021. The Board had a number of discussions prior to the conference to consider how to showcase its scientific research and contribution to the UN IPCC's Sixth Assessment Review. The November Board meeting took place in Glasgow, kindly hosted by Glasgow Caledonian University, when the impact of our climate work could be seen on the world stage. Equally important will be the legacy we take forward from the Conference and this was reviewed at the March Board meeting, alongside the annual reports from MOSAC and SRG which report on the progress and direction of our scientific research.

- The continued wellbeing of staff** - With the COVID-19 pandemic still widespread throughout the year, the Board received a number of reports about the wellbeing of staff as they adapted to changes in circumstances and ensured that critical services remained operational. Reports from the People Directorate along with the outcome of the People Survey provided assurance that, while many staff had found circumstances challenging, the mental health and wellbeing of staff was being prioritised. As well as reviewing the organisation's progress on equality, diversity and inclusion, representatives of two of the staff Diversity networks joined the October Board meeting to provide a 'shop floor' perspective.
- Future ways of working** - Recognising that ways of working are likely to change permanently post pandemic, the Board discussed the implications for staff of future working arrangements and how this might change the ways customers are supported and the resilience of critical weather services. The skills and capabilities required as the Met Office evolves were considered, both in terms of new ways of working and in the changes the new supercomputer programme will introduce.
- The Met Office's delivery of services to its customers** - The Met Office approved a new 5-year agreement with the Public Weather Service, its largest customer, with improved focus on performance outcomes. The Board invited the Chair of the PWSCG, Vice Admiral Duncan Potts, to attend the November meeting. While travel remained difficult during the year, the Board ensured it continued to interact with and understand the needs of its wide-ranging customer base over the year, often through virtual

presentations. Emma Howard Boyd, Chair of the Environment Agency, and Oliver Bratton, Network Strategy & Operations Director for Network Rail were two such guests and the visit to Scotland provided an opportunity to engage with a number of stakeholders such as Transport Scotland. A guest from Exeter University joined the session to discuss the opportunities in the field of machine learning and environmental intelligence.

- Financial performance, risk management and control** - The Board regularly discussed the Met Office's budget, financial performance and progress in meeting targets and key performance indicators (KPIs). It approved the Met Office's submission into the government's comprehensive spending review which outlines the planned funding for the next four years. The Board also receives comprehensive management information, in the form of dashboards and financial reports, allowing the Directors to monitor financial and business performance effectively and objectively.

The Board's oversight, supported by ARAC, of the Met Office's risk management and assurance framework received regular attention at Board meetings. As well as reviewing the Corporate Risk Register and approving the organisation's Risk Appetite, the Board received reports and assurance on a number of key areas of regulation and control that cut across all aspects of the Met Office. These included Health and Safety where improvements to the internal oversight structure have been considered, cyber security and resilience in the light of increased remote working and geopolitical threats and the Met Office's work to improve sustainability, reduce its emissions and chart a course to its own Net Zero target.

Role of Chief Executive and Accounting Officer

In my role as Chief Executive and Accounting Officer, I am responsible for the day-to-day leadership and management of the Met Office. I am accountable to the Ministerial Owner and the Met Office Board (acting, where appropriate, on the Ministerial Owner's behalf) for the performance of the Met Office in accordance with the Met Office Framework Document and Corporate Plan. As Accounting Officer for the Met Office, I am personally responsible and accountable to Parliament for the organisation and quality of management in the Met Office, including its use of public money and the stewardship of its assets. As Chief Executive, I chair the Executive Board, which is responsible for supporting me in the implementation of the Strategy agreed by the Met Office Board. I completed Accounting Officer's training during the year.

Audit and Risk Assurance Committee

The Audit and Risk Assurance Committee (ARAC) supports the Board in its responsibilities to assure that the organisation's system of risk management, control and governance is designed appropriately and works as intended to meet the needs of the Met Office. The Committee met four times during the year to review the organisation's performance and the framework for assessing and managing risk. It met with, and received reports from, the Chief Executive and other senior executives. It reviewed the work of external and internal audit and met regularly with the Corporate Risk Manager and risk owners. In line with good practice, the Chair met separately with the Head of Internal Audit and the External Audit partner without members of the executive management present.

The results of the Internal Audit team's work, including assurance

ratings for individual audits and summaries on the progress of the implementation of agreed actions, were reported to members of the Committee on a monthly basis, as well as at each Committee meeting. The Chair of ARAC reported to the Met Office Board after each meeting.

The Committee reviewed the nature and status of key corporate risks, along with details of mitigating actions being taken. Key risk areas were reviewed in detail, to better understand the management of those risks, particularly the governance arrangements for delivering the supercomputer, the programme of work to exploit the supercomputer capability, cyber risks and the challenges of ensuring the right skills in the short and long term. Additional ARAC workshops were held looking into pricing and cost allocation and at preparedness for the year-end.

In addition, the Committee received compliance reports on whistleblowing, counter fraud measures and data protection.

Remuneration Committee

The role of the Remuneration Committee is to ensure that senior management remuneration arrangements are appropriate and based upon achieving stretching objectives. It also approves the corporate performance award scheme and provides advice on wider Met Office reward issues. The Committee met twice, to approve awards for FY 2020/21 and to set objectives for FY 2021/22.

Security Issues Committee

The Security Issues Committee met in September 2021 and March 2022. It has oversight of those Met Office operations that operate at higher levels of security and helps support a number of government agencies. Meetings were held at secure facilities on two customer sites.

BEIS Sponsorship Team

The BEIS Sponsorship Team advises BEIS Ministers on the management of the Government’s interest in the Met Office. A BEIS representative sits on the Met Office Board and its Committees.

Additional review bodies

The following bodies provide additional independent review of Met Office activities:

- **Met Office Scientific Advisory Committee (MOSAC)** – provides an independent assessment of the quality and relevance of the Met Office’s scientific research which underpins our weather, climate and oceanographic services. The Committee comprises external independent experts in the field of climate science, meteorology, oceanography or numerical weather prediction drawn from UK universities, and from meteorological services and climate institutions of other countries. MOSAC is chaired by Dr Gilbert Brunet.
- **Met Office Hadley Centre Science Review Group (SRG)** – provides an independent review, on behalf of BEIS and the Department for Environment, Food and Rural Affairs, of the climate research carried out by the Met Office Hadley Centre. The SRG is chaired by Professor Rowan Sutton.
- **Public Weather Service Customer Group (PWSCG)** – oversees the Public Weather Service from a customer point of view, ensuring the quality, suitability and value for money of the service provided. The PWSCG comprises independent members and representatives from government departments, agencies, emergency responders, local authorities, the Scottish and Welsh Governments and the Northern Ireland Assembly. The PWSCG is chaired by Vice Admiral Duncan Potts and its Annual Report is available through the Met Office website.

Board and Committee attendance for the period 1 April 2021 to 31 March 2022

Board or committee member	Dates served	Met Office Board (MOB)	Audit and Risk Assurance Committee (ARAC)	Remuneration Committee (RemCom)	Security Issues Committee (SIC)
Total meetings during period		7	4*	2	2
Non-Executive Directors					
Rob Woodward Chair		7/7	4/4	2/2	2/2
Professor Sir John Beddington	Until 30 April 2021	1/1	-	-	-
Professor Alan Thorpe		7/7	4/4	2/2	1/1
James Partington BEIS Representative		6/7	2/4	1/2	-
Hunada Nouss Chair of ARAC		7/7	4/4	2/2	2/2
Catherine Quinn Chair of Remuneration Committee		7/7	4/4	2/2	2/2
Professor Jordan Giddings Chair of SIC from March 2022		7/7	-	2/2	2/2
Anusha Shah	From 1 April 2021	5/6	-	2/2	-
Christine Ourmières-Widener		7/7	4/4	1/2	-
Executive Directors					
Professor Penelope Endersby Chief Executive		7/7	4/4	2/2	2/2
Nick Jobling Chief Financial Officer		7/7	4/4	-	-
Professor Stephen Belcher Chief of Science and Technology		7/7	-	-	-
Tammy Lillie People Director		7/7	2/4	2/2	-
Charlie Ewen Technology Director, Chief Information Officer	From 29 July 2021	5/5	-	-	-
Simon Brown Services Director		7/7	--	--	-

NOTES:

- The Met Office Board held 6 regular Board meetings during the year. An additional Board meeting was held on 29th April 2021 to sign off the budget and corporate KPIs.
- A Board strategy day was held on 18 June 2021.
- Sir John Beddington stepped down from the Board at the meeting 30 April 2021.
- Jane Lancaster attended 4 Board Meetings as the Prospect Union Representative. Clare Wastenev, who is Head of Legal and Governance at the Coal Authority, attended 2 Board meetings as an observer under the BEIS 'Open Boards Scheme'.
- *The final ARAC meeting in the cycle for the financial year took place on 1 April 2022.
- Rob Woodward, Professor Penelope Endersby and Nick Jobling were not members of the Audit & Risk Assurance Committee (ARAC) but are regular attendees and are therefore included for completeness.
- Penny Holt (Chief Financial Officer at the National Physical Laboratory) was co-opted to ARAC to continue the provision of additional financial expertise and attended all 4 meetings.
- Paul Riches attended the ARAC instead of James Partington in May and September so there was a BEIS representative at all 4 meetings. Paul Riches attended the Remuneration Committee instead of James Partington in May.
- The National Audit Office appointed agents are invited to attend ARAC meetings where applicable and have attended all 4 meetings.
- Alan Thorpe stepped down from the Remuneration Committee & Security Issues Committee after the October board meeting.

Work of the Met Office Board and Committees

Evaluation of Board performance

The performance of the Met Office Board and the Audit and Risk Assurance Committee is evaluated each year. In line with best practice, an external evaluation was conducted in Autumn 2021, after a number of years of internal reviews. Following a selection process, Independent Audit were appointed to undertake the performance review. The review team concluded that the Board was working well noting the Chair had fostered positive, inclusive and constructive boardroom dynamics, the Board focused well on its main areas of responsibility (including future strategy, customers, people and culture, risk management and operations) and its Committees functioned effectively. Independent Audit highlighted a number of areas where the Met Office could consider building on these solid foundations. These included tackling executive succession planning, continuing to refine the Met Office strategy as high-level plans are 'operationalised' and embedding the Board's role complementing central government oversight of the major supercomputer programme.

Reviews of the Executive Board and its Committees are also conducted each year to assess their performance and effectiveness. Feedback is assessed and actions identified to improve effectiveness.

Conflicts of interest

The Met Office maintains a public Register of Interests that details company directorships and other significant interests held by Board members which may conflict with their responsibilities. The register has been reviewed at every Met Office Board meeting. Where appropriate, conflicts of interest were declared during 2021/22 and, if there was any perceived conflict, the member in question was excluded from the relevant conversation and any decisions made on that subject. The register is available to view by applying in writing to my Private Secretary at the Met Office, FitzRoy Road, Exeter EX1 3PB.

Compliance with the Corporate Governance Code

Where applicable, the Met Office has complied during 2021/22 with the provisions of Corporate Governance in Central Government Departments: Code of Good Practice April 2017.

Risk management

Risk management strategy and how the risk profile is managed

The Met Office continues to actively manage those risks that may impact upon the achievement of the Met Office Strategy.

Day to day risk management is fundamental to the continuing success of the Met Office's business. The identification, mitigation and escalation of risks is embedded as a key activity of Executive Directors and other senior leaders, across all business areas, programmes and projects.

Our risk management process is aligned with Government best practice, in particular The Orange Book. We adopt a pragmatic approach, seeking to achieve a balance between mitigation and acceptance of risk, with targets set for individual risks. Our Corporate risk management processes support this and enable us to assess the potential impact of identified risks against our corporate risk appetite. This means that we can understand our risks and respond proportionately.

As well as risks, we also assess corporate opportunities that may arise from changes in the external or internal landscape and can then focus management resource on exploiting those opportunities that are identified and we agree to pursue.

Accountability and responsibility framework for risk management

Group	Responsibility	Frequency
Met Office Board	<ul style="list-style-type: none"> Review corporate risk Review and approve Risk Appetite 	<ul style="list-style-type: none"> 2 x per year Yearly
Executive	<ul style="list-style-type: none"> Ownership and management of corporate risks Dedicated deep-dive risk review 	<ul style="list-style-type: none"> Quarterly 2 x year
Directors	<ul style="list-style-type: none"> Review and manage risks within their area, review significant business risks, opportunities, and issues 	<ul style="list-style-type: none"> Continuous, but with formal quarterly review
ARAC	<ul style="list-style-type: none"> Review and provide assurance on corporate risks 	<ul style="list-style-type: none"> 4 x per year
Corporate Risk Manager	<ul style="list-style-type: none"> Works across all levels of the Met Office to ensure quality and consistency in risk management 	<ul style="list-style-type: none"> Continuous

Risk management information is used throughout the organisation to inform:

- the annual planning process;
- key business decision-making processes such as corporate investment appraisals; and
- the assurance needs of the organisation.

Risk appetite

Our risk appetite is the amount of risk we are willing to seek or accept in the pursuit of our objectives. The Met Office's risk appetite framework was reviewed and approved by the Met Office Board in January 2022. We have defined thirteen primary risk categories, each of which has a defined risk appetite statement.

These risk appetite statements provide clear, consistent guidance for decision-making throughout the Met Office, setting an appropriate balance between uncontrolled innovation and excessive caution. Consideration of risk appetite improves the quality of risk conversations and enables us to prioritise our risks and manage them in an efficient manner.

Our risk appetite framework is reviewed annually to reflect any change to the organisation's corporate objectives and the external risk landscape.

Risk management assurance

The Corporate Risk Manager works across all levels of the Met Office to ensure quality and consistency in risk management. This includes undertaking quality assurance checks (to encourage compliance with risk management processes) and identifying areas of the business where risk management needs strengthening. Risk management training has been delivered online during the last year to raise awareness and offer practical advice on implementing effective management actions.

The Audit and Risk Assurance Committee reviews the Corporate Risk Register three times per year and undertakes deep-dive reviews on specific risks. This gives the Committee the opportunity to seek assurances on the management of risk from risk owners and the Corporate Risk Manager.

Key risks and issues arising

At the start of 2022 our corporate risk register includes the following key risks and opportunities:

- Due to increased pressures on public finances following the pandemic, there is a risk that we are unable to maintain the funding levels we require to sustain our national capability.
- Ensuring delivery of the supercomputing capability, from both a Generation 1 implementation and Benefits Realisation perspective, enabling the Met Office to deliver and fully realise the benefits from the Next Generation Modelling Systems.
- Ensuring the Met Office, which is entirely dependent on IT to complete its mission, counters cyber security threats (both internal and external) which could leave infrastructure at risk of disruption and potentially unable to deliver our life critical services. Includes ensuring appropriate steps are taken to protect and maximise the resilience on our services.

- Ensuring the skills, knowledge and competence of the workforce matches the needs of the Met Office to deliver its strategic objectives, during a period of challenging recruitment of staff with specialist skill sets.
- Opportunity: The new style of working adopted during the pandemic has driven some benefits to embed into our future approach, creating a more collaborative and inclusive workforce and changing workplace practices.

Other control and governance structures

Internal financial control

Financial authority and control are delegated throughout the Met Office. Different controls are applied depending on the level of financial commitment. Significant investments or commitments are subject to additional formal authorisation by the Investment and Bids Committee, Met Office Board or our owning Department, BEIS, depending on value.

Budgets, monthly forecasts and key performance indicators are used to monitor financial performance during the year. Variances and exceptions are highlighted, and corrective action is taken where necessary.

As well as ongoing operational controls, our audit plan assesses the potential risks around financial controls and any opportunities for fraudulent behaviour. Internal audits are conducted as part of planning to assure against these risks.

Functional Standards

The Cabinet Office notified all Accounting Officers in the autumn of 2021 of the requirement to comply with the 14 Government Functional Standards. The standards have been introduced as part of central

government's efficiency reforms. They set expectations for the governance, roles and accountabilities and practices needed for functional work across Government departments and their associated arm's length bodies.

Met Office owners for each standard were identified and they carried out an assessment to review compliance with the mandatory elements in each standard. From this initial assessment we identified nine functional standards were fully compliant, four were partially compliant and one standard relating to project delivery needed more attention. Plans are being put together to address issues found and will be implemented during the next financial year. In future, annual compliance reviews against each functional standard will be carried out.

Counter fraud and raising concerns

We incorporated Cabinet Office feedback from an earlier assessment of Government Counter Fraud Functional Standard GovS 013 into a revised Counter Fraud Strategy. This was submitted in April 2021 for peer review by BEIS, the Government Internal Audit Agency (GIAA) and the Atomic Energy Authority. Our Strategy has been assessed to be compliant and so the Met Office now meets all the mandatory requirements in GovS 013.

As an early adopter of GovS 013, we also engaged in the BEIS peer review process as a reviewer, conducting compliance reviews of three arm's length bodies. The peer review process has been a useful exercise in helping us to benchmark our own performance against other organisations in the BEIS family.

Part of our compliance with GovS 013 is having clear accountabilities for counter fraud and anti-bribery. There are three mandatory roles – Accountable Individual, Senior Lead and Counter Fraud Champion – and the Senior Lead accountability passed during the year from the Head of Legal to the Head of Internal Audit.

The Met Office has continued to be an active member of both the BEIS and cross-government counter fraud champions' networks and, as a member of the Cabinet Office Counter Fraud Functional Assurance Working Group, is contributing to the planning of how GovS 013 compliance will be assessed across government next year.

While levels of fraud impacting the Met Office have been low in recent years, there has been an increased threat of fraud perpetrated through exploiting online systems and social engineering. Like all organisations, the Met Office is potentially vulnerable to fraud attempts targeting suppliers and customers, for example by changing payment instructions. The best controls to defend against such attacks will continue to be assessed and updated.

Quality Management System

To ensure the provision of robust and reliable services to its customers, the Met Office implements a Quality Management System (QMS) in line with international standards (ISO9001). The QMS is subject to surveillance assessments by external auditors (LRQA) every six months and full re-certification every three years.

The organisation is now midway through the three yearly certification cycle and as last year, the external audits were conducted remotely. LRQA provided positive feedback on the continual maturity of the QMS and the audits identified only minor areas for attention.

Following the reorganisation completed in 2021, the Met Office is now in the process of transitioning from an initial operating capability to full operating capability. Work is underway to support the embedding of the new operating capabilities and ways of working. New business processes are being incorporated into the QMS; this work will be ongoing up to the next certification.

Alexander tax review

We promote transparency of the tax arrangements of our non-employed staff by ensuring we are fully compliant with the provisions in the Review of the tax arrangements of public sector appointees, HM Treasury, 2012. Contractor tax obligations are all assessed under HMRC IR35 Regulations, ensuring that the correct amount of tax is paid.

Business-critical models

The Met Office is compliant with the principles in The HM Treasury Aqua Book: Guidance on Producing Quality Analysis for Government. The Met Office puts Quality Assurance at the heart of its development processes for all our business-critical models (for example, the Unified Model and its applications for weather and climate science and services) and is therefore compliant with the MacPherson Review of the Quality Assurance of Government Analytical Models. The Met Office is in the process of developing major new systems:

- PRISM, a post-processing system based on the IMPROVER scientific approach for ensemble weather prediction, and;
- Next Generation Modelling Systems, a programme of work to reformulate and redesign the Met Office weather and climate prediction systems to allow exploitation of future generations of supercomputers.

Quality analysis/assurance throughout all development, including the application of secure segregated development processes, and the validation of the modelling system outputs ensures our models and codes are effective, efficient and safe to deploy and to preserve operational resilience. Risks to operational resilience are minimised through the “Parallel Suite” process, whereby scientific and technical upgrades to the modelling system are tested for long periods alongside the current operational system before going live.

Governance of knowledge and information assets

Knowledge and Information Management governance and policy making is managed under delegated authority from the Executive Board by the Chief Information Officer (CIO) who is the Senior Information Risk Owner (SIRO). The CIO is also the Executive Lead for Data, with overall accountability and ownership of the organisation’s environmental data and corporate information assets. These roles are supported by Information Asset Owners (IAOs) with accountabilities for data and data services, and for corporate information. Information Asset Guardians (IAGs) support the Data and Corporate IAOs in discharging their responsibilities. The Head of Knowledge and Information Management and the Head of Data have responsibility for setting the direction, defining principles and implementing policies in relation to data and corporate information management.

Together these roles ensure information across all data and corporate information portfolios is fit for purpose, used, shared and managed in accordance with its risk and criticality to the delivery of Met Office business objectives.

In 2021 the government published the Rose book for guidance on knowledge asset management in government. I am on the management group which oversees the government’s knowledge asset strategy and had early sight of the proposals. The Met Office is working to improve the maturity of our exploitation of our knowledge assets and intellectual property. Ian Cameron has been appointed as SRO for this work and we are developing a strategy for the exploitation and beneficial management of our knowledge assets in line with the guidance offered.

Governance of data and data services

The Head of Data is responsible for the management, governance and policy making for environmental data and data services aligned with the Data Strategy Framework, to provide open access to our data wherever possible and to innovate, operate in and stimulate the UK and global economies. The Head of Data acts under delegated authority from the Chief Information Officer (CIO)

The Data Management Group (DMG) is chaired by the Head of Data and they met remotely throughout the pandemic, providing a valuable forum for Data IAOs and internal stakeholders to share progress, exchange ideas and discuss and agree specific aspects of improving the way we manage environmental data assets and their appropriate use in external data provision services. Data IAOs are identified for each of the four data types (observations, predictions, guidance and research) and for data provision services to meet external demand. They manage their identified data assets and maintain a Data Catalogue. Business Impact Assessments are conducted to enable continuous review of the assets identified in the Asset Registers.

During this last year a Future Operating Model for data management has been developed and a maturity assessment of existing data management functions has been conducted. These will be used to shape our policies, future approach and roadmap for improvements in the way we manage environmental data and data services encompassing internal strategic drivers and the external data landscape within the UK (e.g. National Data Strategy) and internationally (e.g. WMO Data Policy).

Governance of corporate information

The Head of Knowledge and Information Management is responsible for the management, governance and policy making for corporate information assets reflecting adherence to HMG guidance and statutory obligations for information assets. She also manages the training and awareness programme for the IAO and IAG community, facilitating knowledge sharing and providing resources to support the IAOs and IAGs in carrying out their responsibilities.

Following the organisational re-design, a series of workshops were held with IAOs to confirm portfolio accountability and responsibilities for day-to-day management, addressing gaps that were identified the previous year. Business Impact Assessments have been conducted to review information risks. IAOs confirmed that Asset Registers are in place and action plans agreed for the continuous improvement of data and information asset management.

All new IAOs receive an induction programme as well as undertake mandatory training.

The Corporate Information Management Group (CIMG), chaired by the Head of Knowledge and Information Management, provides a forum for engaging IAOs in continuous improvement in the way we manage our corporate information, providing input into the deployment of enabling technology and guiding the response to evolving ways of working.

In response to the move to hybrid ways of working, the Knowledge and Information Management team has played a leading role in providing resources and support to ensure mechanisms and processes for knowledge sharing and capture are in place, enabling external collaboration in line with our information security policies and guidance.

Information / cyber security

Cyber security is rapidly evolving, and new threats become apparent every day. It is essential that any organisation is flexible and adapts accordingly to manage cyber risk. Offensive cyber capabilities that were once the preserve of the most sophisticated state actors are increasingly becoming available to mainstream criminals making the role of cyber security ever-more challenging. As a result, the organisation is continuing to invest in a cyber enhancement programme. The first tranche of the programme successfully completed in 2021 and the second tranche has now started.

There have been several significant global vulnerabilities over the past year. However, vulnerability management enhancements enabled expeditious responses and protected the organisation. Our innovative bite sized cyber security training has continued and is having a positive impact on culture and awareness. More in-depth scenario-based modules have been released as well as a specialised module aimed at the scientific community that develop computer code. There have been no significant cyber or personal data breaches during the year.

Information security is owned at Executive Director level by the Senior Information Risk Owner (SIRO). The SIRO is supported by the Information Asset Owners (IAOs) and Information Asset Guardians (IAGs). They work together to ensure business critical and sensitive information assets are risk managed appropriately so that the value of our information assets is protected as described by our risk appetite. The CISO (Chief Information Security Officer) reports to the Associate Director of Operational Technology and is responsible for

the Security Risk Advice team, cyber governance risk and compliance, Business Continuity, Security Testing, and the Cyber Security Operations Centre.

There is a Security and Resilience Management Group (SRMG) chaired by the CISO, which now meets monthly delivering wider governance and overseeing cyber security, physical security and business continuity. The SRMG reviews risks to Met Office resilience and progress with improvement plans and reports progress to the Compliance and Resilience Committee, a Committee of the Executive Board.

The Met Office has evidenced how it complies with the Security Policy Framework and the four Cabinet Office Security Standards by completing the Departmental Security Health Check. The Security Policy Framework has since been replaced by the Government Functional Standard 007 and is being used as part of the 2022 Departmental Security Health Check. Additionally, an independent review was carried out into the most appropriate cyber framework to manage the organisation's cyber risk and meet our customer requirements. As a result, the organisation has selected the globally recognised National Institute for Standards and Technology (NIST) Cybersecurity Framework and additional work is in progress to align to this standard.

Sanctions

In accordance with the international sanctions imposed in response to the conflict in Ukraine, the Met Office suspended all direct supplies of data to customers based in Russia and Belarus at the earliest opportunity. We continue to monitor all potential links to entities in, or connected with, Russia to ensure we do not contravene the developing financial and trade sanctions or UK export control law with regard to supplies having potential military use.

Monitoring governance performance and effectiveness

Internal Audit annual opinion

The Head of Internal Audit has given Moderate Assurance over the adequacy and effectiveness of the Met Office's systems of governance, risk management and internal control. The trend over the last three years shows steady progress. The opinion is based upon all the internal audit work performed (assurance and consultancy), engagement with other assurance providers such as the National Audit Office (NAO) and KPMG, Lloyd's Register Quality Assurance (LRQA) reviews of ISO compliance, information from the Executive Board and supporting Committees, the Corporate Risk Manager and staff in general. The opinion considers new findings as well as action taken by Management over the last year to address issues.

Corporate governance within the Met Office continues to improve. An audit of governance gave a moderate assurance rating, reflecting the effectiveness of changes brought about by the restructure and the redesign of the Committees of the Executive Board. The first compliance assessment against the Government Functional Standards shows a good level of compliance against the majority of the mandatory requirements. Plans are being agreed to address those areas where improvement is required.

Internal Audit assessed the systems of governance, risk and control through a planned programme of assurance-generating work throughout the year. All audits are risk based and the audit plan was adjusted to incorporate work on the Functional Standards and to conduct a lessons learned review, leading to improvements, where needed.

Annual assurance statements were obtained from Executive Directors describing the extent to which, and how, they have complied with internal rules, regulations and continued to adjust to the impact of COVID-19 and the new requirement to comply with Government Functional Standards. Internal Audit reviewed these statements and found no material issues or trends.

Accounting Officer review

I have based my opinion of our system of governance, risk management and internal control on a number of lines of evidence. These include the Internal Audit opinion, findings of external audits including the National Audit Office and ISO9001 and ISO14001 during the year, Directors' annual assurance statements, the view of our Audit and Risk Assurance Committee and routine monitoring of performance and control systems through our Executive Board's oversight of directorate and corporate KPIs.

I agree with the internal auditor's opinion that we have moderate but improving control overall. The new governance structures are well bedded in and we are finessing their use. There are plans in place to address all improvement areas raised, most especially organisational and process design and clarity and cyber assurance.

Significant governance and control issues

In June 2022 the Met Office and its owner, the Department for Business, Energy and Industrial Strategy (BEIS), jointly agreed an out of court settlement with a third-party claimant. The agreement resolves the proceedings regarding supercomputer procurement with no admission of liability from any party.

I have commissioned a lessons learned exercise from my internal audit team and in addition BEIS have commissioned an independent lessons learned review. The internal review concluded that procurement law and processes were followed, that there were no indications of a lack of governance or oversight and that there were no significant control failures. The independent review has not yet been finalised, but assurance has been provided that procurement processes were followed and there were no failures associated with governance or lack of controls. Lessons identified from the internal audit review are being taken forward and any lessons identified, applicable to the Met Office, from the independent review around the handling of the procurement and litigation processes will also be taken forward and the outcomes will be fully considered by the ARAC.

In last year's statement, I referred to the FP7 audit. During the year we reached a satisfactory outcome with the European Commission. This issue has now been resolved and the provision in our financial statements has been released.

Accounting Officer's conclusion

Taking into consideration all of the evidence provided with regards to the production of the Annual Governance Statement, I conclude that the organisation's overall governance, risk management and internal control structures are effective.



Professor Penelope Endersby
Chief Executive
13 October 2022

Remuneration and staff report

Remuneration report

Remuneration policy

The remuneration of those who serve on the Met Office Board is disclosed within this report.

The following Executive members of the Met Office Board were members of the Senior Civil Service:

- **Professor Penelope Endersby, Chief Executive**

The following Met Office Board members are also members of the Executive Board and are Met Office employees:

- **Nick Jobling, Chief Financial Officer**

- **Professor Stephen Belcher, Chief of Science and Technology**
- **Simon Brown, Services Director**
- **Charlie Ewen, Directory of Technology**
- **Tammy Lillie, Chief People Officer**

The Constitutional Reform and Governance Act 2010 requires civil service appointments to be made on merit on the basis of fair and open competition. The Recruitment Principles published by the Civil Service Commission specify the circumstances when appointments may be made otherwise.

Unless otherwise stated, the officials covered by this report hold appointments which are open ended. Early termination, other than for misconduct, would result in the individual receiving compensation as set out in the Civil Service Compensation Scheme. Further information about the work of the Civil Service Commissioners can be found at <http://civilservicecommission.independent.gov.uk>.

Total remuneration includes salary, nonconsolidated performance-related pay, benefits-in-kind and severance payments. It does not include employer pension contributions and the Cash Equivalent Transfer Value (CETV) of pensions.

Remuneration (audited)

	2021/22					2020/21				
	Salary	Other taxable allowances	Performance - related pay	Pension benefits ¹	Total	Salary	Other taxable allowances	Performance - related pay	Pension benefits ¹	Total
	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000
Penny Endersby	125-130	-	5-10	50	185-190	125-130	-	5-10	59	195-200
Nick Jobling	105-110	5-10	10-15	41	165-170	100-105	5-10	10-15	45	165-170
Stephen Belcher	140-145	-	10-15	55	210-215	135-140	-	10-15	54	200-205
Tammy Lillie (from 3 Aug 2020)	95-100	-	10-15	37	140-145	60-65 (90-95 full year equivalent)	15-20	10-15	24	95-100 (130-135 full year equivalent)
Simon Brown (from 28 Sep 2020)	90-95	-	10-15	36	140-145	45-50 (90-95 full year equivalent)	15-20	5-10 (10-15 full year equivalent)	18	65-70 (130-135 full year equivalent)
Charlie Ewen (from 1 Jul 2021)	70-75 (95-100 full year equivalent)	0-5 (5-10 full year equivalent)	5-10 (10-15 full year equivalent)	(6)	80-85 (110-115 full year equivalent)	-	-	-	-	

1. The value of pension benefits accrued during the year is calculated as (the real increase in pension multiplied by 20) plus (the real increase of any lump sum) less (the contributions made by the individual). The real increases exclude increases due to inflation or any increases or decreases due to a transfer of pension rights.

2. P Endersby's performance related pay is set under Senior Civil Service arrangements. Amounts reported in 2021/22 were earned in 2020/21 and paid in 2021/22

Salary includes gross salary, overtime, non-consolidated pay, recruitment and retention allowances. Performance-related payments reflect performance levels attained as assessed during the appraisal process. Payments are non-consolidated and

non-pensionable and represent part of Executive remuneration, which is at risk and must be re-earned each year. Amounts shown opposite relate to the performance attained in the relevant year and are paid in the following year.

Fair pay disclosures (audited)

Reporting bodies are required to disclose the relationship between the remuneration of the highest-paid director in their organisation and the lower quartile, median and upper quartile remuneration of the organisation's workforce.

	2021/22	2020/21
25 th percentile pay ratio	4.3	4.3
50 th percentile pay ratio	3.6	3.6
75 th percentile pay ratio	3.1	3.0

	2021/22		2020/21	
	Salary and allowances	Excluding performance related pay	Salary and allowances	Excluding performance related pay
	£'000	£'000	£'000	£'000
Highest paid Director (banded)	150-155	140-145	150-155	135-140
75 th centile employee	50	50	50	49
Median employee	42	40	42	40
25 th centile employee	35	32	36	33

	Highest paid director (banded)	Average for other employees
2021/22		
Salary and allowances (£'000)	140-145	41
% change	3.3%	-1.1%
Performance related pay (£'000)	10-15	3
% change	-12.0%	2.6%
2020/21		
Salary and allowances (£'000)	135-140	41
Performance related pay (£'000)	10-15	3

Total remuneration includes salary, non-consolidated performance-related pay and benefits-in-kind. It does not include severance payments, employer pension contributions and the cash equivalent transfer value of pensions

The above disclosures do not take account of amounts paid to contractors as it is not possible to

distinguish the amount received by individuals from the cost to the Met Office. The annualised costs of some contractors exceed the amount paid to the highest paid director above. This includes contractors who were also Directors and their cost to the Met Office has been disclosed elsewhere in the remuneration report.

No employees received remuneration in excess of the highest-paid director in either 2021/22 or 2020/21. The lowest staff remuneration in 2021/22 was £15,000 (2020/21: £17,831).

Pension entitlements for each Director (audited)

	Accrued pension at pension age as at 31 March 2022 and related lump sum	Real increase in pension and related lump sum at pension age	CETV at 31 March 2022	CETV at 31 March 2021	Real increase in CETV
	£'000	£'000	£'000	£'000	£'000
Penelope Endersby	55-60 plus a lump sum of 115-120	0-2.5 plus a lump sum of 0	1016	956	3
Nick Jobling	35-40	0-2.5	640	589	15
Stephen Belcher	25-30	2.5-5	408	352	36
Tammy Lillie (from 3 August 2020)	0-5	0-2.5	42	16	18
Simon Brown (from 28 September 2020)	0-5	0-2.5	31	10	14
Charlie Ewen	25-30	0	366	354	(6)

Civil service pensions

Pension benefits are provided through the Civil Service pension arrangements. From 1 April 2015 a new pension scheme for civil servants was introduced – the Civil Servants and Others Pension Scheme or alpha, which provides benefits on a career average basis with a normal pension age equal to the member's State Pension Age (or 65 if higher). From that date all newly appointed civil servants and the majority of those already in service joined alpha. Prior to that date, civil servants participated in the Principal Civil Service Pension Scheme (PCSPS). The PCSPS has four sections: 3 providing benefits on a final salary basis (classic, premium or classic plus) with a normal pension age of 60; and one providing benefits on a whole career basis (nuvos) with a normal pension age of 65. These statutory arrangements are unfunded with the cost of benefits met by monies voted by Parliament each year. Pensions payable under classic, premium, classic plus, nuvos and alpha are increased annually in line with Pensions Increase legislation.

These statutory arrangements are unfunded with the cost of benefits met by monies voted by Parliament each year. Pensions payable under classic, premium, classic plus, nuvos and alpha are increased annually in line with Pensions Increase legislation. Existing members of the PCSPS who were within 10 years of their normal pension age on 1 April 2012 remained in the PCSPS after 1 April 2015. Those who were between 10 years and 13 years and 5 months from their normal pension age on 1 April 2012 switch into alpha sometime between 1 June 2015 and 1 February 2022. Because the Government plans to remove discrimination identified by the courts in the way that the 2015 pension reforms were introduced for some members, it is expected that, in due course, eligible members with relevant service between 1 April 2015 and 31 March 2022 may be entitled to different pension benefits in relation to that period (and this may affect the Cash Equivalent Transfer Values shown in this report – see below). All members who switch to alpha have their PCSPS benefits 'banked', with those with earlier benefits in one of the final salary sections of the

PCSPS having those benefits based on their final salary when they leave alpha. (The pension figures quoted for officials show pension earned in PCSPS or alpha – as appropriate. Where the official has benefits in both the PCSPS and alpha the figure quoted is the combined value of their benefits in the two schemes.) Members joining from October 2002 may opt for either the appropriate defined benefit arrangement or a defined contribution (money purchase) pension with an employer contribution (partnership pension account).

Employee contributions are salary-related and range between 4.6% and 8.05% for members of classic, premium, classic plus, nuvos and alpha. Benefits in classic accrue at the rate of 1/80th of final pensionable earnings for each year of service. In addition, a lump sum equivalent to three years initial pension is payable on retirement. For premium, benefits accrue at the rate of 1/60th of final pensionable earnings for each year of service. Unlike classic, there is no automatic lump sum. classic plus is essentially a hybrid with benefits for service before 1 October 2002 calculated broadly as per classic and

benefits for service from October 2002 worked out as in premium. In nuvos a member builds up a pension based on his pensionable earnings during their period of scheme membership. At the end of the scheme year (31 March) the member's earned pension account is credited with 2.3% of their pensionable earnings in that scheme year and the accrued pension is uprated in line with Pensions Increase legislation. Benefits in alpha build up in a similar way to nuvos, except that the accrual rate is 2.32%. In all cases members may opt to give up (commute) pension for a lump sum up to the limits set by the Finance Act 2004.

The partnership pension account is an occupational defined contribution pension arrangement which is part of the Legal & General Mastertrust. The employer makes a basic contribution of between 8% and 14.75% (depending on the age of the member). The employee does not have to contribute, but where they do make contributions, the employer will match these up to a limit of 3% of pensionable salary (in addition to the employer's basic contribution). Employers also contribute a further 0.5% of pensionable salary to cover the cost of centrally-provided risk benefit cover (death in service and ill health retirement).

The accrued pension quoted is the pension the member is entitled to receive when they reach pension age, or immediately on ceasing to be an active member of the scheme if they are already at or over pension age. Pension age is 60 for members of classic, premium and classic plus, 65 for members of nuvos, and the higher of 65 or State Pension Age for members of alpha. (The pension figures quoted for officials show pension earned in PCSPS or alpha – as appropriate. Where the official has benefits in both the PCSPS and alpha the figure quoted is the combined value of their benefits in the two schemes, but note that part of that pension may be payable from different ages.)

Further details about the Civil Service pension arrangements can be found at the website www.civilservicepensionscheme.org.uk

A Cash Equivalent Transfer Value (CETV) is the actuarially assessed capitalised value of the pension scheme benefits accrued by a member at a particular point in time. The benefits valued are the member's accrued benefits and any contingent spouse's pension payable from the scheme. A CETV is a payment made by a pension scheme or arrangement to secure pension benefits in another pension scheme or arrangement when the member leaves a scheme and chooses to transfer the benefits accrued in their former scheme. The pension figures shown relate to the benefits that the individual has accrued as a consequence of their total membership of the pension scheme, not just their service in a senior capacity to which disclosure applies.

The figures include the value of any pension benefit in another scheme or arrangement which the member has transferred to the Civil Service pension arrangements. They also include any additional pension benefit accrued to the member as a result of their buying additional pension benefits at their own cost. CETVs are worked out in accordance with The Occupational Pension Schemes (Transfer Values) (Amendment) Regulations 2008 and do not take account of any actual or potential reduction to benefits resulting from Lifetime Allowance Tax which may be due when pension benefits are taken.

The real increase in CETV, reflects the increase in CETV that is funded by the employer. It does not include the increase in accrued pension due to inflation, contributions paid by the employee (including the value of any benefits transferred from another pension scheme or arrangement) and uses common market valuation factors for the start and end of the period.

Staff report

Staff numbers as at 31 March 2022 (audited)

	Full time equivalents			
	Male	Female	31 March 2022	31 March 2021
Directors	7	3	10	9
Other permanent staff	1,306	780	2,086	1,989
Met Office employees total			2,096	1,998
Temporary/agency staff			127	129
Total			2,223	2,127

Staff costs (audited)

	2021/22	2020/21
	£ '000	£ '000
Salaries, performance-related pay and allowances	88,410	90,752
Social security	9,650	9,438
Pension contributions	21,632	21,264
Early retirement and exit costs	(6)	676
Temporary/agency labour costs	13,013	14,769
Total staff costs	132,699	136,899

Staff costs show a reduction as the previous year included an additional £2.8m of accrued costs for untaken leave during the Coronavirus pandemic. The accrual for these costs was reduced by £0.8m in 2021/22 giving a total change of £3.6m year-on-year.

Sickness and absence data

In 2021/22 the average working days lost per person was 5.1 (2020/21 2.7 days).

Consultancy expenditure

In 2021/22 the Met Office spent £157,000 on consultancy costs (2020/21 - £296,000).

Staff turnover

In 2021/22 the Met Office had a staff turnover rate of 6.9%. Staff turnover is calculated as the number of leavers within the financial year divided by the average of staff in post during the financial year.

Off-payroll engagements

Off-payroll engagements as of 31 March 2022, for more than £245 per day and that last for longer than six months.

No of existing engagements as of 31 March 2022, for more than £245 per day and that last for longer than six months:	95
Of which...	
Number that have existed for less than one year at time of reporting.	60
Number that have existed for between one and two years at time of reporting.	14
Number that have existed for between two and three years at time of reporting.	17
Number that have existed for between three and four years at time of reporting.	4
Number that have existed for four or more years at time of reporting.	0

New off-payroll engagements, or those that reached six months in duration, between 1 April 2021 and 31 March 2022, for more than £245 per day and that last for longer than six months.

All New off-payroll engagements, or those that reached six months in duration, between 1 April 2021 and 31 March 2022, for more than £245 per day and that last for longer than six months:	84
Of which...	
Number assessed as in scope of IR35.	82
Number assessed as out of scope of IR35.	2
Number engaged directly (via Personal Service Companies contracted to BEIS) and are on the Met Office payroll.	0
Number of engagements reassessed for consistency/assurance purposes during the year.	0
Number of engagements that saw a change to IR35 status following the consistency review.	0

Off-payroll engagements of board members, and/or, senior officials with significant financial responsibility, between 1 April 2021 and 31 March 2022.

Number of off-payroll engagements of board members, and/or, senior officials with significant financial responsibility, during the financial year.	0
Total number of individuals on payroll and off-payroll that have been deemed 'board members, and/or, senior officials with significant financial responsibility', during the financial year.	11

Fees paid to non-executive directors (audited)

	2021/22	2020/21
	£'000	£'000
Rob Woodward	35-40	35-40
Professor Sir John Beddington (Until 30 April 2021)	0-5 (20-25 full year equivalent)	20-25
Hunada Nouss	15-20	15-20
Catherine Quinn	15-20	15-20
Professor Alan Thorpe	15-20	5-10 (15-20 full year equivalent)
Professor Jordan Giddings (From 15 March 2021)	15-20	0-5 (15-20 full year equivalent)
Christine Ourmières-Widener (From 15 March 2021)	15-20	0-5 (15-20 full year equivalent)
Anusha Shah (From 1 April 2021)	15-20	-
Robert Drummond (until 21 March 2021)	-	10-15 (15-20 full year equivalent)

James Partington attended in conjunction with his responsibilities at the Department for Business, Energy and Industrial Strategy and is not entitled to receive separate remuneration in undertaking Met Office duties.

Exit packages (audited)

Exit package cost band	Number of compulsory redundancies		Number of other departures agreed		Total number of exit packages by cost band	
	2021/22	2020/21	2021/22	2020/21	2021/22	2020/21
£0 - £10,000	-	-	-	1	-	1
£10,000 - £25,000	-	-	-	-	-	-
£25,000 - £50,000	-	-	-	3	-	3
£50,000 - £100,000	-	-	-	3	-	3
£100,000 - £150,000	-	-	-	1	-	1
£150,000 - £200,000	-	-	-	-	-	-
Total number of exit packages by type	-	-	-	8	-	8
Total cost £'000	-	-	-	532,186	-	532,186

Parliamentary accountability and audit report

Remote contingent liabilities (Audited)

The Met Office owns a 5% share of Mercator Ocean at a cost of €100,000. Mercator Ocean is the co-ordinating entity for Copernicus Marine Services, in which the Met Office participates.

The organisation is a 'société civile' (a not-for-profit organisation) under French law, meaning it has unlimited liability. As a shareholder the Met Office is exposed to liability risk in proportion to the shareholding. The organisation protects its shareholders through contractual mechanisms and through insurance. Also any residual claim would first be met from the assets of the organisation. Any contingent liability is considered to be extremely remote. In addition any contingent liability will cease to exist should the Met Office dispose of the shares, which it is able to do with six months' notice.

Losses and Special Payments (Audited)

During 2021/22 the Met Office incurred no reportable losses.

In June 2022 the Met Office and its owner, the Department for Business, Energy and Industrial Strategy (BEIS), entered into an agreement with Atos IT Services UK Ltd for joint payment of £24.0m. The agreement resolves the legal proceedings in relation to a procurement exercise for the awarding of a contract for supercomputer services with no admission of liability from any party. This settlement agreement, together with a separate agreement with BEIS, resulted in a special payment being made by the Met Office of £3.3m on 24 June 2022.



Professor Penelope Endersby
Chief Executive
13 October 2022

Certificate and Report of the Comptroller and Auditor General to the Houses of Parliament

Opinion on financial statements

I certify that I have audited the financial statements of the Met Office for the year ended 31 March 2022 under the Government Trading Funds Act 1973.

The financial statements comprise the Met Office's:

- Statement of Financial Position as at 31 March 2022;
- Statement of Comprehensive Income, Statement of Cash Flows and Statement of Changes in Taxpayers' Equity for the year then ended; and
- the related notes including the significant accounting policies.

The financial reporting framework that has been applied in the preparation of the financial statements is applicable law and UK adopted International Accounting Standards.

In my opinion, the financial statements:

- give a true and fair view of the

state of the Met Office's affairs as at 31 March 2022 and its retained loss for the year then ended; and

- have been properly prepared in accordance with the Government Trading Funds Act 1973 and HM Treasury directions issued thereunder.

Opinion on regularity

In my opinion, in all material respects, the income and expenditure recorded in the financial statements have been applied to the purposes intended by Parliament and the financial transactions recorded in the financial statements conform to the authorities which govern them.

Basis of opinions

I conducted my audit in accordance with International Standards on Auditing (UK) (ISAs UK), applicable law and Practice Note 10 Audit of Financial Statements of Public Sector Entities in the United Kingdom. My responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of my certificate.

Those standards require me and my staff to comply with the Financial Reporting Council's Revised Ethical Standard 2019. I have also elected to apply the ethical standards relevant to listed entities. I am independent of the Met Office in accordance with the ethical requirements that are relevant to my audit of the financial statements in the UK. My staff and I have fulfilled our other ethical responsibilities in accordance with these requirements.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Conclusions relating to going concern

In auditing the financial statements, I have concluded that the Met Office's use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

Based on the work I have performed, I have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the Met Office'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.

My responsibilities and the responsibilities of the Accounting Officer with respect to going concern are described in the relevant sections of this certificate.

The going concern basis of accounting for the Met Office is adopted in consideration of the requirements set out in HM Treasury's Government Financial Reporting Manual, which require entities to adopt the going concern basis of accounting in the preparation of the financial statements where it anticipated that the services which they provide will continue into the future.

Other information

The other information comprises information included in the Performance Report and the Accountability Report, but does not include the financial statements nor my auditor's certificate and report. The Accounting Officer is responsible for the other information.

My opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in my certificate, I do not express any form of assurance conclusion thereon.

In connection with my audit of the financial statements, my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or my knowledge obtained in the audit or otherwise appears to be materially misstated.

If I identify such material inconsistencies or apparent material misstatements, I am required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work I have performed, I conclude that there is a material misstatement of this other information, I am required to report that fact.

I have nothing to report in this regard.

Opinion on other matters

In my opinion the part of the Remuneration and Staff Report to be audited has been properly prepared in accordance with HT Treasury directions issued under the Government Trading Funds Act 1973.

In my opinion, based on the work undertaken in the course of the audit:

- the parts of the Accountability Report subject to audit have been properly prepared in accordance with HM Treasury directions made under the Government Trading Funds Act 1973;
- the information given in the Performance and Accountability Reports for the financial year for which the financial statements are prepared is consistent with the financial statements and is in accordance with the applicable legal requirements.

Matters on which I report by exception

In the light of the knowledge and understanding of the Met Office and its environment obtained in the course of the audit, I have not identified material misstatements in the Performance and Accountability Report.

I have nothing to report in respect of the following matters which I report to you if, in my opinion:

- I have not received all of the information and explanations I require for my audit; or
- adequate accounting records have not been kept by the Met Office or returns adequate for my audit have not been received from branches not visited by my staff; or
- the financial statements and the parts of the Accountability Report subject to audit are not in agreement with the accounting records and returns; or

- certain disclosures of remuneration specified by HM Treasury's Government Financial Reporting Manual have not been made or parts of the Remuneration and Staff Report to be audited is not in agreement with the accounting records and returns; or
- the Governance Statement does not reflect compliance with HM Treasury's guidance.

Responsibilities of the Accounting Officer for the financial statements

As explained more fully in the Statement of Accounting Officer's Responsibilities, the Accounting Officer is responsible for:

- maintaining proper accounting records;
- the preparation of the financial statements and Annual Report in accordance with the applicable financial reporting framework and for being satisfied that they give a true and fair view;
- ensuring that the Annual Report and accounts as a whole is fair, balanced and understandable;
- internal controls as the Accounting Officer determines is necessary to enable the preparation of financial statement to be free from material misstatement, whether due to fraud or error; and
- assessing the Met Office'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 Accounting Officer anticipates that the services provided by the Met Office will not continue to be provided in the future.

Auditor's responsibilities for the audit of the financial statements

My responsibility is to audit, certify and report on the financial statements in accordance with the Government Trading Funds Act 1973.

My 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 a certificate that includes my 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.

Extent to which the audit was considered capable of detecting non-compliance with laws and regulations including fraud

I design procedures in line with my responsibilities, outlined above, to detect material misstatements in respect of non-compliance with laws and regulations, including fraud. The extent to which my procedures are capable of detecting non-compliance with laws and regulations, including fraud is detailed below.

Identifying and assessing potential risks related to non-compliance with laws and regulations, including fraud

In identifying and assessing risks of material misstatement in respect of non-compliance with laws and regulations, including fraud, we considered the following:

- the nature of the sector, control environment and operational performance including the design of the Met Office's accounting policies, key performance indicators and performance incentives.
- Inquiring of management, the Met Office's head of internal audit and those charged with governance, including obtaining and reviewing supporting documentation relating to the Met Office's policies and procedures relating to:
 - identifying, evaluating and complying with laws and regulations and whether they were aware of any instances of non-compliance;
 - detecting and responding to the risks of fraud and whether they have knowledge of any actual, suspected or alleged fraud; and
 - the internal controls established to mitigate risks related to fraud or non-compliance with laws and regulations including the Met Office's controls relating to the Met Office's compliance with the Government Trading Funds Act 1973, Managing Public Money and the Meteorological Office Trading Fund Order 1996;
- discussing among the engagement team and involving relevant internal and external specialists, regarding how and where fraud might occur in the financial statements and any potential indicators of fraud.

As a result of these procedures, I considered the opportunities and incentives that may exist within the Met Office for fraud and identified the greatest potential for fraud in the following areas: revenue recognition, posting of unusual journals, complex transactions and bias in management estimates. In common with all audits under ISAs (UK), I am also required to perform specific procedures to respond to the risk of management override of controls.

I also obtained an understanding of the Met Office's framework of authority as well as other legal and regulatory frameworks in which the Met Office operates, focusing on those laws and regulations that had a direct effect on material amounts and disclosures in the financial statements or that had a fundamental effect on the operations of the Met Office. The key laws and regulations I considered in this context included the Government Trading Funds Act 1973, The Meteorological Office Trading Fund Order 1996, Managing Public Money and employment, taxation and pensions legislation.

Audit response to identified risk

As a result of performing the above, the procedures I implemented to respond to identified risks included the following:

- reviewing the financial statement disclosures and testing to supporting documentation to assess compliance with provisions of relevant laws and regulations described above as having direct effect on the financial statements;
- enquiring of management, the Audit and Risk Committee and in-house legal counsel concerning actual and potential litigation and claims;
- reading and reviewing minutes of meetings of those charged with governance and the Board and internal audit reports;
- in addressing the risk of fraud through management override of controls, testing the appropriateness of journal entries and other adjustments; assessing whether the judgements made in making accounting estimates are indicative of a potential bias; and evaluating the business rationale of any significant transactions that are unusual or outside the normal course of business.

I also communicated relevant identified laws and regulations and potential fraud risks to all engagement team members including internal specialists and remained alert to any indications of fraud or non-compliance with laws and regulations throughout the audit.

A further description of my responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of my certificate.

Other auditor's responsibilities

I am required to obtain evidence sufficient to give reasonable assurance that the income and expenditure reported in the financial statements have been applied to the purposes intended by Parliament and the financial transactions conform to the authorities which govern them

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

Report

I have no observations to make on these financial statements.

Gareth Davies

Comptroller and Auditor General

National Audit Office
157-197 Buckingham Palace Road
Victoria
London
SW1W 9SP

17 October 2022



Accounts

Statement of comprehensive income for the year ended 31 March 2022

		2021/22	2020/21
	Notes	£ '000	£ '000
Revenue	3	258,474	258,748
Operating costs	4	(246,906)	(251,900)
Operating profit		11,568	6,848
Finance income	5	29	10
Finance expense	6	(3,107)	(2,455)
Net finance expense		(3,078)	(2,444)
Profit for the financial year		8,490	4,404
Dividend payable to Department for Business Energy and Industrial Strategy	12	(8,500)	(6,500)
Retained (loss) / profit for the year		(10)	(2,096)
Other comprehensive income / (expenditure):			
Adjustment on adoption of IFRS 16		142	-
Net gain/(loss) on revaluation of property, plant and equipment		15,208	(253)
Net gain on revaluation of intangible assets		1,584	1,363
Revaluation reserve realised on impairment of non-current assets		-	-
Net gain / (loss) on cash flow hedges	15	214	(2,166)
Other comprehensive income / (expenditure)		17,148	(1,056)
Total comprehensive income / (expenditure) for the year		17,138	(3,152)

The notes on pages 70-89 form part of these accounts.

Statement of financial position as at 31 March 2022

	Notes	31 March 2022		31 March 2021	
		£ '000	£ '000	£ '000	£ '000
Non-current assets					
Property, plant and equipment	7		140,670		135,866
Intangible assets	8		326,954		284,889
Derivative financial assets	15		67		-
Other financial assets	21		91		91
Total non-current assets			467,782		420,846
Current assets					
Inventories	9	1,312		1,649	
Trade and other receivables	10	64,015		64,386	
Derivative financial assets	15	122		870	
Cash and cash equivalents	11	99,307		29,834	
Total current assets			164,756		96,739
Total assets			632,538		517,585
Current liabilities					
Trade and other payables	12	(94,186)		(73,540)	
Borrowings	14	(28,150)		(18,745)	
Lease liabilities	19	(638)		-	
Derivative financial liabilities	15	(191)		(1,087)	
Provisions for liabilities and charges	16	(5,153)		(181)	
Total current liabilities			(128,318)		(93,553)
Non-current assets plus net current assets			504,220		424,032
Non-current liabilities					
Trade and other payables	12	(12,806)		(20,369)	
Borrowings	14	(202,235)		(133,439)	
Lease liabilities	19	(1,993)		-	
Derivative financial liabilities	15	-		-	
Provisions for liabilities and charges	16	(9)		(185)	
Total non-current liabilities			(217,043)		(153,993)
Assets less liabilities			287,177		270,039
Capital and reserves					
Public dividend capital			58,867		58,867
Revaluation reserve			46,366		36,442
General reserve			181,946		174,946
Hedging reserve			(2)		(216)
Total Government funds			287,177		270,039

The notes on pages 70-89 form part of these accounts



Professor Penelope Endersby
Chief Executive
13 October 2022

Statement of cash flows for the year ended 31 March 2022

		31 March 2022	31 March 2021
	Notes	£ '000	£ '000
Cash flows from operating activities			
Operating profit		11,568	6,848
Adjustments for non-cash transactions:			
Depreciation charges (net of capital grants)	4, 7	10,690	9,242
Loss / (gain) on property plant and equipment	4	349	(639)
Amortisation	4, 8	11,933	12,263
Impairment of property, plant and equipment		-	-
Deferred grants released		(142)	(161)
Decrease / (increase) in inventories		336	(258)
Decrease / (increase) in trade creditors		213	(4,156)
Increase / (decrease) in trade and other payables		18,689	(3,386)
(Decrease) / increase in provisions for liabilities and charges		3,689	(3,845)
Net cash inflow from operating activities		57,325	15,908
Cash flows from investing activities			
Payments to acquire satellite data		(52,608)	(52,769)
Payments to acquire property, plant and equipment		(3,576)	(6,919)
Capital grants received	13	-	-
Proceeds from sale of property, plant and equipment		0	674
Payments to acquire intangible assets (excluding satellite data)		(22)	(41)
Payments to acquire other financial assets		-	-
Interest received		29	10
Net cash outflow from investing activities		(56,177)	(59,045)
Cash flows from financing activities			
Dividends paid		(6,500)	(8,500)
Loan advance received		99,000	49,000
Loan repayments		(23,623)	(16,787)
Payments on IFRS 16 leases		(552)	-
Net cash inflow from financing activities		68,325	23,713
Net increase / (decrease) in cash and cash equivalents	11	69,473	(19,424)
Cash and cash equivalents at 1 April		29,834	49,258
Cash and cash equivalents at 31 March	11	99,307	29,834

The notes on pages 70-89 form part of these accounts.

Statement of changes in taxpayers' equity for the year ended 31 March 2022

	Public dividend capital	Revaluation reserve	General reserve	Hedging reserve	Total
	£ '000	£ '000	£ '000	£ '000	£ '000
Balance at 1 April 2020	58,867	41,109	171,265	1,950	273,191
Comprehensive income					
Profit for the financial year	-	-	4,404	-	4,404
Dividend	-	-	(6,500)	-	(6,500)
Retained loss for the year	-	-	(2,096)	-	(2,096)
Other comprehensive income					
Movement on foreign currency cash flow hedge	-	-	-	(2,166)	(2,166)
Net gain on revaluation of satellite data	-	1,363	-	-	1,363
Net gain on revaluation of property, plant and equipment	-	(253)	-	-	(253)
Revaluation reserve realised as impairment of property, plant and equipment	-	-	-	-	-
Revaluation reserve realised on disposal of property, plant and equipment	-	(7)	7	-	-
Transfers between reserves	-	(5,770)	5,770	-	-
Total other comprehensive income/(expenditure)	-	(4,667)	5,777	(2,166)	(1,056)
Total comprehensive income/(expenditure) for 2021/22	-	(4,667)	3,681	(2,166)	(3,152)
Balance at 31 March 2021	58,867	36,442	174,946	(216)	270,039
Comprehensive income					
Profit for the financial year	-	-	8,490	-	8,490
Dividend	-	-	(8,500)	-	(8,500)
Retained loss for the year	-	-	(10)	-	(10)
Other comprehensive income					
Adjustment on adoption of IFRS 16	-	-	142	-	142
Movement on foreign currency cash flow hedge	-	-	-	214	214
Net loss on revaluation of satellite data	-	1,584	-	-	1,584
Net gain on revaluation of property, plant and equipment	-	15,208	-	-	15,208
Revaluation reserve realised on disposal of property, plant and equipment	-	(80)	80	-	-
Transfers between reserves	-	(6,788)	6,788	-	-
Total other comprehensive income/(expenditure)	-	9,924	7,010	214	17,148
Total comprehensive income/(expenditure) for 2021/22	-	9,924	7,000	214	17,138
Balance at 31 March 2022	58,867	46,366	181,946	(2)	287,177

A description of the nature and purpose of each reserve is provided in Note 1.

The notes on pages 70-89 form part of these accounts.

Notes to the accounts

01 Accounting policies

Basis of preparation

These financial statements have been prepared on a going concern basis and in compliance with an Accounts Direction dated 16 December 2021 and in accordance with Section 4(6)

(a) of the Government Trading Funds Act 1973. These statements also comply with the principles laid out in the 2021/22 Government Financial Reporting Manual (FReM) issued by HM Treasury, including additional guidance on the treatment of capital grants issued to the Met Office on the 20 February 2015.

The accounting policies contained in the FReM apply International Financial Reporting Standards (IFRS) as adapted or interpreted for the public sector context. Where the FReM permits a choice of accounting policy, the accounting policy which has been judged to be most appropriate to the particular circumstances of the Met Office for the purpose of giving a true and fair view has been selected.

The particular policies adopted by the Met Office are described below.

They have been applied consistently in dealing with items that are considered material to the accounts.

The accounts have been prepared under the historical cost convention, modified to account for the revaluation of property, plant and equipment, intangible assets and inventories.

Accounting developments and changes IFRSs, amendments and interpretations in issue but not yet effective or adopted

There are a number of IFRSs, amendments and interpretations that have been issued by the International Accounting Standards Board that are effective for financial statements after this reporting period. The Met Office has not adopted any of these revised standards early and none are anticipated to have a future material impact on the financial statements of the Met Office.

IFRS 16 Leases is due to be adopted by UK Government entities for 2022/23. The Met Office has taken the option to implement early from 1 April 2021. It replaces IAS 17, removing the distinction between operating leases (off-statement of financial position financing) and finance leases (on-statement of financial position financing) for lessors. IFRS 16 requires the recognition of all leases with terms over 12 months to be recognised as finance leases.

Details of the accounting policies adopted can be found later in this note under 'Key Accounting Policies'. Details of leases accounted for under IFRS 16 are provided in note 19.

Critical accounting policies and key judgements

Revenue from contracts with customers

Revenue comprises the accrued value of services (net of VAT) supplied to the private sector, Government departments and the wider public sector.

Most Met Office revenue is recognised against performance obligations delivered over time. These obligations are either simultaneously received and consumed by customers (e.g. forecast services or data sales), or are specialised, with no alternative use and an enforceable right to income for work performed to date (e.g. research).

A smaller number of performance obligations are recognised at a point in time where appropriate (e.g. training). Revenue for these obligations is recognised on completion of the service.

Revenue is either recognised on a cost-plus basis or based on the proportion of total services to be provided where the price is fixed.

Where payments received from customers are greater than the revenue recognised under the contract, the amount in excess of the revenue recognised is treated as a contract liability and included within trade and other payables. Where revenue is recognised as contract activity progresses and subject to the contractual arrangements, revenue is accrued. To the extent that the revenue is in advance of an invoice being raised, the amount is shown as a contract asset within trade and other receivables.

Other revenue

The Met Office receives revenue from funders where an agreement does not meet the requirements of IFRS 15 to be classified as revenue from contracts with customers. The agreements provide for funding to be given where agreed criteria are met or services performed. However, they do not contain an enforceable right for these services and so cannot be considered performance obligations.

Revenue for these agreements is recognised as the agreed criteria are met or services performed. The amount of funding is fixed and so revenue is recognised based on the proportion of criteria/services which have been met.

Valuation of property, plant and equipment

All property, plant and equipment are carried at fair value. In arriving at fair value a number of methods are used dependent on the nature of the asset.

Freehold land and buildings

Freehold land and buildings in continuing use are revalued by qualified valuers every five years, in accordance with the Practice Statements and Guidance Notes set out in the Appraisal and Valuation Manual of the Royal Institution of Chartered Surveyors.

Valuations are based on fair values for existing use from market-based evidence, except where the asset is considered specialised. These are assets where due to their location and/ or specification, market-based evidence is either not available or does not reflect the full characteristics of the asset.

Specialised assets are valued on the basis of depreciated replacement cost.

The quinquennial valuations are supplemented by a 'desk based' review carried out by a qualified valuer for the Exeter headquarters building and Science Park properties and for other assets by annual indexation using appropriate price indices.

A full valuation of all freehold land and buildings was carried out by the Valuation Office Agency (VOA) as at 31 March 2022.

Assets classed as Information Technology use historical cost as a proxy for fair value due to the shorter lives of these assets.

Depreciation on revaluation

Any accumulated depreciation at the date of revaluation is eliminated against the gross carrying amount of the asset, and the net amount is restated to the revalued amount of the asset.

EUMETSAT satellite data

The UK is a member of a member of the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) and the Met Office, as the UK National Meteorological Service, has the right to receive all EUMETSAT data, products and services to fulfil its official duty. The Met Office uses the data to generate its weather forecasts and climate predictions used to deliver services to its customers.

The Met Office makes contributions to satellite programmes operated by EUMETSAT. This share is determined by the UK's Gross National Income (GNI) compared to other member states. Each programme consists of multiple identical satellites over the life of the programme. These contributions are capitalised as intangible assets as a right to access and utilise data generated by the programme over its useful life.

Satellite programme life cycle and treatment of contributions

Programme stage	Activity	Treatment of contributions
Research	Scoping and design.	Expensed.
Development and construction	Development, construction, launch and commissioning of first satellite in programme.	Capitalised as intangible assets in the course of construction.
Operational	Becomes primary programme. Data received from first satellite. Remaining satellites in programme constructed, launched and commissioned.	Reclassified as satellite data assets and amortised. Additional contributions capitalised.
Post-operational	No longer primary programme. Data continues to be received as satellites maintained as 'hot-spares' or repurposed until final decommissioning.	Expensed.

Treatment of contributions to satellite programmes generating operational data

Contributions are treated differently at each stage of a programme's lifecycle (above).

Valuation

Intangible assets in the course of construction are valued at historic cost. Progress reports provided by EUMETSAT are used to identify any impairments and ensure that the programmes are still viable.

Once a programme becomes operational, it is revalued annually at the lower of depreciated replacement cost (DRC) and value in use.

The value in use calculation measures the expected future cashflows generated from the use of EUMETSAT satellite data and discounts this at an appropriate rate to determine a value that will be generated from the use of the data.

Amortisation

EUMETSAT satellite data assets are amortised using the straight-line method to allocate the costs of the programmes over their estimated useful lives. The amortisation charged in a period is calculated as the net book value of contributions made to date, plus the estimated amount of contributions over the remainder

of the programme's operational life divided by the number of years remaining in the programme's operational life. This method reflects the principle that the economic benefit of satellite data remains constant between individual satellites and over the programme's life.

Judgements and uncertainty in estimating future contributions

The value of contributions by the UK is determined by the UK's GNI relative to other member states. The share is fixed for three year periods based on an average GNI in the previous three years.

As contributions are paid in Euros, the value of future payments is also sensitive to future changes in exchange rates. Where contributions are hedged, the sterling contract value is used. For unhedged commitments a single planning rate is used. This rate is reviewed at least annually.

Judgements and uncertainty in estimating useful life

The useful lives of operational satellite programmes are initially based on design lifetimes specified by EUMETSAT. On successful launch of the final satellite in a programme, the useful life of the programme is reviewed and adjusted based on:

- actual lifetime of previous satellites in the programme,
- any issues experienced with existing satellites in a programme,
- expected operational dates for satellites in any successor programme.

Actual useful lives have historically exceeded design lifetimes and programmes have continued to produce data beyond the point where a successor programme has become operational. The useful life of a programme is therefore usually extended to match the expected operational date of its successor programme.

The lifetime is reviewed at least annually as planning assumptions for successor programmes are updated. These planning assumptions are subject to a high degree of uncertainty as the design and construction of the first satellite in the programme carries a high degree of risk.

De-recognition of satellite data assets

Once a programme has been replaced by its successor, its satellites may continue to generate useful data for open ended period. Individual satellites may be used as 'hot-spares' and provide backup to the new primary

Current and successor programmes and their life/planning assumptions

Programme	METEOSAT (Geostationary)	EUMETSAT Polar System
Current primary programme	Second Generation (MSG)	First Generation (EPS)
Remaining life at 31 March 2021	3.75 years	4.00 years
Remaining life at 31 March 2022	2.75 years	3.50 years
Successor programme	Third Generation (MTG)	Second Generation (EPSSG)
Planned to be operational	Q4 2023/24	Q3 2024/25

programme or may be repurposed to provide additional data.

Whilst a programme continues to generate data a programme asset is retained in the statement of financial position at a nil net book value. An asset is only de-recognised when the final satellite in that programme has been decommissioned.

Computer software and software licences

Assets classed as computer software or software licences use historical cost as a proxy for fair value due to the shorter lives of these assets.

Capital grants

Grant funded property, plant and equipment assets are capitalised at their fair value on receipt. Where the donor has imposed a condition on how the future economic benefits embodied in the grant are to be consumed, the grant is deferred within liabilities and is carried forward to future financial years to the extent that the condition has not yet been met. This will usually result in the grant being deferred until the asset is completed and in active use.

The grant is then released to the income statement to match depreciation costs associated with the asset. Where no condition is imposed, the grant is recognised immediately in the income statement.

Grant-funded assets are otherwise accounted for in the same way as other property, plant and equipment.

Key accounting policies

Research and development

The Met Office receives funding for a variety of research and development activities. This funding is treated as revenue attributable to the relevant business programme. Externally funded research and development costs are recognised based on the stage of completion of the project. Related revenues are recognised on an equivalent basis and in accordance with the revenue recognition policy outlined above. All research expenditure is charged to the income statement. Development expenditure is recognised in the income statement in the period in which it is incurred unless it is probable that economic benefits will flow to the Met Office from the asset being developed, the cost of the asset can be reliably measured and technical feasibility can be demonstrated. Where these criteria are met, it is capitalised as an intangible asset.

Retirement benefits

Met Office staff are covered by civil service pensions arrangements. These are unfunded multi-employer defined benefit schemes. However, since the Met Office is unable to identify its share of the underlying assets and liabilities they are accounted for as defined contribution schemes.

Contributions are paid at rates determined from time to time by the scheme's actuary. The Government Actuary's Department conducted a full actuarial valuation as at 31 March 2016. Details can be found in the resource accounts of the Cabinet Office: Civil Superannuation (www.civilservicepensionscheme.org.uk).

Full provision for early retirements is normally made in the year of retirement.

Property, plant and equipment

Recognition

Plant, equipment and information technology expenditure is capitalised where the useful life exceeds three years and the cost of acquisition and installation exceeds £10,000 (excluding VAT).

Depreciation

Freehold land and assets in the course of construction are not depreciated.

Depreciation on other assets is calculated to write off the cost, or value, by equal instalments over the asset's estimated useful life. The lives assigned to the principal categories of assets are as follows:

Plant and equipment
3-30 years

Information technology
2-12 years

Intangible assets

Computer software and licences

Where computer software forms an integral part of any hardware equipment (e.g. an operating system) this is capitalised under the hardware asset as a tangible asset.

Computer software and licences are capitalised where the useful life exceeds three years and the cost of acquisition and installation exceeds £10,000 (excluding VAT).

Amortisation is calculated using the straight-line method to allocate the cost of software and licences over their estimated useful lives of three to five years.

Leases

'IFRS 16 "Leases" has been implemented by the Met Office from 1 April 2021; this introduces a single lessee accounting model that requires a lessee to recognise assets and liabilities for all leases (apart from the exemptions included below).

The Met Office has applied IFRS 16 using the modified retrospective approach and therefore the comparative information has not been restated and continues to be reported under IAS 17 "Leases" and IFRIC 4 "Determining whether an arrangement contains a lease". The cumulative effect of adopting IFRS 16 is included as an adjustment to equity at the beginning of the current period. IAS 17 operating leases are included within the SoFP as a lease liability and right of use asset for the first time with changes made through the general fund as a cumulative catch-up adjustment. The calculation of the lease liability and right of use assets is included below.

The option to reassess whether a contract is, or contains, a lease at the date of initial application has not been used.

The definition of a contract is expanded to include intra-UK

government agreements where non-performance may not be enforceable by law. This includes, for example, Memorandum of Terms of Occupation (MOTO) agreements.

The Met Office has elected not to recognise right of use assets and lease liabilities for the following leases:

- intangible assets;
- non-lease components of contracts where applicable;
- low value assets (these are determined to be in line with capitalisation thresholds on Property, Plant and Equipment); and
- leases with a lease term of 12 months or less

Prior to the implementation of IFRS 16, the Met Office had no leases that were recognised as finance leases.

On transition the Met Office recognised an additional £3.4m of right of use assets and £2.3m of lease liabilities. When measuring lease liabilities, the HM Treasury discount rate in place at the time of transition (0.91%) was used. Leases entered into after 1 January 2022 used the HM Treasury discount rate of 0.95%.

A reconciliation of leases previously disclosed as operating leases under IAS 17 and those recognised as finance leases under IFRS 16 is provided below:

	Land and buildings	Other
	£'000	£'000
Total operating lease commitments disclosed at 31 March 2021	1,498	276
Recognition exemptions:		
Short-term (<12 months) leases	(383)	(8)
Low-value leases	-	(63)
Other minor adjustments to commitment disclosures	(36)	(30)
Adjustment to lease term assumptions	1,244	-
Finance lease liabilities before discounting	2,323	175
Discounted using HM Treasury discount rate	(177)	(1)
Total lease liabilities recognised under IFRS 16 at 1 April 2021	2,146	174

Financial assets

Trade and other receivables

Financial assets within trade and other receivables are initially recognised at fair value, which is usually the original invoiced amount or transaction price, and are subsequently carried at amortised cost adjusted for loss allowances for expected credit losses. Loss allowances are measured using lifetime expected credit losses under IFRS 9's simplified model.

Cash and cash equivalents

Cash and cash equivalents comprise cash in hand and current balances with banks and qualifying institutions, which are readily convertible to cash and are subject to insignificant risk of changes in value and have an original maturity of three months or less.

Cash also includes any surplus funds held by EUMETSAT that are attributable to the Met Office.

Other financial assets

The Met Office holds an interest in Mercator Ocean. Mercator Ocean is a not-for-profit entity and co-ordinates the Copernicus marine services, which provides free and open access to constantly updated information about the global ocean and the seas of the European region. The Met Office has a right to dispose of the interest at the same value as purchased. The interest is therefore held at amortised cost.

Financial liabilities

Trade and other payables

Financial liabilities within trade and other payables are initially recognised at fair value, which is usually the original invoiced amount, and subsequently carried at amortised cost.

Borrowings

Borrowings are recognised initially at the proceeds received. After initial recognition, financial liabilities are subsequently measured at amortised cost using the effective interest method.

Derivative financial instruments and hedge accounting

The Met Office uses derivative financial instruments such as foreign currency contracts to hedge the risks associated with changes in foreign exchange rates in relation to amounts payable to certain international bodies. The payments are in respect of annual subscriptions and contributions, including payments for satellite programmes.

The Met Office policy is to buy forward foreign currency for payments to international bodies as soon as amounts can be reliably estimated. The use of financial derivatives is governed by the Met Office's hedging strategy, approved by the Met Office Executive Board, which provides written principles on the use of financial derivatives consistent with the Met Office's risk management strategy. There is no trading activity in derivative financial instruments.

All the Met Office's derivative financial instruments are designated as cash flow hedging instruments. At the start of a hedging transaction, the Met Office documents the relationship between the hedged item and the hedging instrument together with its risk management objective and the strategy underlying the proposed transaction.

The Met Office also documents its assessment, both at the start of the hedging relationship and on an ongoing basis, of the effectiveness of the hedge in offsetting movements in the cash flow of the hedged items.

To the extent that the hedge is effective, changes in the fair value of the hedging instrument arising from the hedged risk are recognised directly in other comprehensive income rather than in the income statement. The ineffective portions of any gain or loss on the hedging instrument are recognised in the income statement.

Derivative financial instruments are initially measured at fair value on the contract date and are remeasured to fair value at subsequent reporting dates.

Capital and reserves

Public dividend capital

Public dividend capital represents the capital invested by the Ministry of Defence in the Met Office on becoming a Trading Fund on 1 April 1996.

Following a Machinery of Government change during 2011/12, the public dividend capital held by the Ministry of Defence was transferred to the Department for Business, Innovation and Skills. In 2016 the Department for Business, Energy and Industrial Strategy was created from the Department for Business, Innovation and Skills and the Department of Energy and Climate Change.

Public Dividend Capital is not an equity instrument as defined in IAS 32 Financial Instruments: Presentation.

General reserve

The general reserve represents the cumulative retained net income (after dividends) since the Met Office became a Trading Fund.

Revaluation reserve

The revaluation reserve reflects the unrealised element of the cumulative balance of indexation and revaluation adjustments to assets. Increases arising on revaluation are taken to the revaluation reserve. A revaluation decrease is charged to the revaluation reserve to the extent that there is a balance on the reserve for the asset and, thereafter, to the income statement.

Hedging reserve

The hedging reserve represents hedging gains and losses recognised on the effective portion of cash flow hedges.

02 Operating segments

The Met Office has no separate reportable business segments.

More than 80% of Met Office revenue is derived from UK sources. The Met Office Executive do not review the business on a geographical basis. A geographical analysis would not be necessary to aid users' understanding of these financial statements.

03 Revenue

A. Disaggregation of revenue from contracts with customers

	2021/22	2020/21
	£'000	£'000
Revenue from contracts with customers		
Citizen and Media	125,875	121,299
Defence	36,503	34,175
Energy, Environment and Space Weather	17,539	17,201
International	5,718	7,142
Transport	19,289	18,944
UK Government	28,784	24,850
Total revenue from contracts with customers	233,708	223,611
Other revenue		
UK Newton Fund	14,451	19,373
Strategic Priorities Fund	9,109	7,274
EU Horizon 2020 and FP7	1,206	1,590
Supercomputer programme	-	6,900
Total revenue	258,474	258,748

All revenue relates to products and services transferred over time.

Other revenue includes income generated by agreements that do not meet the requirements of IFRS 15.

The Met Office is a delivery partner for the Newton Fund Weather and Climate Science for Service Partnership and the Strategic Priorities Fund under grant agreements with BEIS. Revenue is recognised as costs associated with delivery of the programmes, by the Met Office and third parties, are incurred.

The Met Office also participates in the European Union's Horizon 2020 programme, and its predecessor the 7th Framework programme (FP7). These provide funding for research and innovation activities. The Met Office recognises revenue over time as costs are incurred and to the extent that those costs are recoverable under the rules of each programme.

The Met Office receives separate funding for the procurement, installation and running of the next generation supercomputer.

B. Assets and liabilities related to contracts with customers

	2021/22	2020/21
	£'000	£'000
Receivables included in trade receivables	15,202	15,202
Contract assets included in accrued income	15,988	20,690
Contract liabilities included in deferred income	35,402	16,524

Contract assets relate to amounts owed for work undertaken but for which no invoice has been raised at the reporting date. Contract assets are transferred to receivables when an invoice is raised. Contract liabilities are amounts received in advance from customers. Revenue is recognised and amounts transferred as work against these contracts is completed.

During the period £16,524,000 (2020/21: £14,236,000) of revenue was recognised that had been included in the contract liability at the start of the period.

C. Transaction price allocated to remaining performance obligations

The majority of Met Office revenue is derived from agreements with Departments or other bodies within the UK Government. Even where agreed for multiple years the amounts are subject to review as part of the UK Government Budget and Comprehensive Spending Review processes. The actual revenue recognised in each year will depend on performance against priorities agreed with customers during each financial year, and the Met Office's progress against them.

In accordance with the practical expedient in IFRS 15, the Met Office does not disclose information on unsatisfied performance obligations where the original underlying agreement is of less than 12 months duration.

04 Operating costs

		2021/22	2020/21
	Note	£ '000	£ '000
Staff costs			
Salaries, performance-related pay and allowances		88,410	90,752
Social security		9,650	9,438
Pension contributions		21,632	21,264
Early retirement and exit costs		(6)	676
Temporary/agency labour costs		13,013	14,769
Total staff costs		132,699	136,899
Equipment and services		72,525	63,917
International services and subscriptions		16,482	17,227
Depreciation		17,998	18,430
Amortisation		12,191	12,556
Accommodation		14,623	14,752
Travel and subsistence		1,129	755
Other operating costs		5,397	(2,995)
Release of Government Grants		(26,138)	(9,641)
Total operating costs		246,906	251,900
Operating costs include the following:			
Audit fees		88	76
Apprenticeship levy		426	419
Operating leases - plant and machinery		-	114
Operating leases - other		-	782
Lease payments on short-term or low value assets		199	-
Foreign currency (gains)/loss		(10)	231
Net loss / (gain) on disposal of non-current assets		349	(639)
Release of government grant income	13	(26,138)	(9,641)
Research and development expenditure		60,061	59,317
International services and subscriptions comprise the following:			
European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT)		3,763	4,129
European Centre for Medium-Range Weather Forecasts (ECMWF)		8,611	8,936
World Meteorological Organisation (WMO)		2,624	2,596
Network of European Meteorological Services (EUMETNET)		905	887
Other international services and subscriptions		579	679
		16,482	17,227
<p>Membership of these organisations enables the Met Office, on behalf of the UK, to engage in and benefit from, the European meteorological satellite programme and to receive support in its provision of medium-range weather forecasts and associated research. Membership also enables the Met Office, on behalf of the UK, to promote and benefit from co-operations between members in the exchange of observational data and forecasts, together with a widening range of environmental programmes.</p>			
Government grants are analysed as follows:			
BEIS Future Supercomputer		18,173	-
BEIS Current Supercomputer		7,401	8,838
BEIS Polar Satellite Transfer		259	291
Environment Agency Weather Radar Network Renewal		142	162
Department for Transport LIDAR project		163	345
UKRI (NERC) Monsoon 2 network upgrade		-	5
		26,138	9,641

05 Finance income

	2021/22	2020/21
	£ '000	£ '000
Interest receivable	29	10
Total finance income	29	10

06 Interest payable and similar charges

		2021/22	2020/21
	Note	£ '000	£ '000
On Department for Business, Energy and Industrial Strategy loans	14	3,083	2,455
On lease liabilities	19	24	-
Total interest payable and similar charges		3,107	2,455

07 Property, plant and equipment

The movements in each class of assets were:

	Land and buildings	Right of use assets land and buildings	Fixtures and fittings	Plant and equipment	Right of use assets vehicles	Information technology	Assets under construction	Total
	£ '000	£ '000	£ '000	£ '000	£ '000	£ '000	£ '000	£ '000
Cost or valuation:								
At 1 April 2021	82,381	-	12,097	85,199	-	111,250	1,676	292,603
Adjustments on transition to IFRS 16	-	3,168	-	-	191	-	-	3,359
Additions	-	1,149	337	557	15	1,173	1,352	4,583
Transfers	-	-	196	492	-	100	(788)	-
Disposals	-	-	-	(4,007)	-	(3,928)	-	(7,935)
Revaluation	9,607	-	1,190	8,241	-	-	-	19,039
At 31 March 2022	91,988	4,317	13,820	90,482	206	108,595	2,240	311,649
Depreciation:								
At 1 April 2021	164	-	7,713	56,808	-	92,052	-	156,737
Charged during year	2,245	754	969	3,737	95	10,196	-	17,996
Transfers	-	-	-	-	-	-	-	-
Impairment	-	-	-	-	-	-	-	-
Disposals	-	-	-	(3,657)	-	(3,928)	-	(7,585)
Revaluation	(2,409)	-	760	5,480	-	-	-	3,831
At 31 March 2022	-	754	9,442	62,368	95	98,320	-	170,979
Net book value:								
At 1 April 2021	82,218		4,384	28,392		19,198	1,676	135,866
At 31 March 2022	91,989	3,563	4,378	28,114	111	10,275	2,240	140,670

Property, plant and equipment (continued)

	Land and buildings	Fixtures and fittings	Plant and equipment	Information technology	Assets under construction	Total
	£ '000	£ '000	£ '000	£ '000	£ '000	£ '000
Cost or valuation:						
At 1 April 2020	85,419	12,066	83,350	106,459	2,256	289,550
Additions	-	75	314	2,432	4,358	7,179
Transfers	-	102	850	3,986	(4,938)	-
Disposals	(136)	(200)	(109)	(1,627)	-	(2,072)
Revaluation	(2,902)	54	794	-	-	(2,054)
At 31 March 2021	82,381	12,097	85,199	111,250	1,676	292,603
Depreciation:						
At 1 April 2020	189	6,899	52,542	82,516	-	142,146
Charged during year	2,353	1,011	3,903	11,163	-	18,430
Transfers	-	-	-	-	-	-
Impairment	-	-	-	-	-	-
Disposals	(101)	(200)	(109)	(1,627)	-	(2,037)
Revaluation	(2,278)	6	470	-	-	(1,802)
At 31 March 2021	164	7,713	56,808	92,052	-	156,737
Net book value:						
At 1 April 2020	85,230	5,167	30,807	23,942	2,256	147,403
At 31 March 2021	82,217	4,384	28,391	19,198	1,676	135,866

All land and buildings are held as freehold. The net book value of freehold land and buildings includes £16m of freehold land, which has not been depreciated. Freehold buildings are depreciated in full over their estimated life (not exceeding 50 years).

The freehold assets which comprise the Met Office's property portfolio were subject to a quinquennial valuation for financial reporting purposes in 2021/22 (values as at 31 March 2022), in accordance with the RICS Valuation Standards (6th Edition) by external valuers the Valuation Office Agency, who are regulated by the RICS.

The bases of valuation adopted is Existing Use Value as defined in the Standards. In carrying out the valuation, a number of the assets were identified as specialised as a result of their location and/or specification. As a result they are considered to be assets which would rarely, if ever, sell on the open market. For these assets the Depreciated Replacement Cost methodology has been used.

The sources of information and assumptions made in producing the various valuations are set out in the valuation report.

For further details of valuation and depreciation assumptions refer to Note 1 Accounting Policies.

For further details of assets held under leases see note 19.

The following net book values are included above for supercomputer related assets:

	2021/22 £'000	2020/21 £'000
Land and buildings	23,086	21,932
Information technology	3,212	9,635
Total	26,298	31,567

These assets are funded by capital grant.

08 Intangible assets

	EUMETSAT satellite data	Computer software	Software licences	EUMETSAT payments on account	Total
	£ '000	£ '000	£ '000	£ '000	£ '000
Cost or valuation:					
At 1 April 2021	339,528	3,093	935	268,981	612,537
Additions	7,426	-	22	45,224	52,672
Transfers	-	-	-	-	-
Disposals	-	-	(448)	-	(448)
Revaluation	7,442	-	-	-	7,442
At 31 March 2022	354,396	3,093	509	314,205	672,203
Amortisation:					
At 1 April 2021	324,034	2,709	905	-	327,648
Charged during year	12,069	103	19	-	12,191
Impairment	-	-	-	-	-
Disposals	-	-	(448)	-	(448)
Revaluation	5,858	-	-	-	5,858
At 31 March 2022	341,961	2,812	476	-	345,249
Net book value:					
At 1 April 2021	15,494	384	30	268,981	284,890
At 31 March 2022	12,435	281	33	314,205	326,954

	EUMETSAT satellite data	Computer software	Software licences	EUMETSAT payments on account	Total
	£ '000	£ '000	£ '000	£ '000	£ '000
Cost or valuation:					
At 1 April 2020	329,287	3,093	893	223,323	556,596
Additions	7,583	-	42	45,658	53,283
Transfers	-	-	-	-	-
Disposals	-	-	-	-	-
Revaluation	2,658	-	-	-	2,658
At 31 March 2021	339,528	3,093	935	268,981	612,537
Amortisation:					
At 1 April 2020	310,342	2,562	893	-	313,797
Charged during year	12,397	147	12	-	12,556
Impairment	-	-	-	-	-
Disposals	-	-	-	-	-
Revaluation	1,295	-	-	-	1,295
At 31 March 2021	324,034	2,709	905	-	327,648
Net book value:					
At 1 April 2020	18,945	531	-	223,323	242,798
At 31 March 2021	15,494	384	30	268,981	284,889

Intangible assets (continued)

The EUMETSAT satellite data intangible asset represents the value of all EUMETSAT observational data used in generating Met Office forecasts. This principally includes data from both the Meteosat geostationary satellite and polar orbiting satellite. The Met Office, as the UK's national meteorological service, has the right to access and use this data to generate its weather forecasts and climate predictions in fulfilling its Public Task. The Met Office makes contributions on behalf of the UK to EUMETSAT's programmes.

EUMETSAT payments on account represent the contributions made by the Met Office, on behalf of the UK, to the Meteosat Third Generation and Polar Second Generation satellite programmes. These programmes are currently in the build phase and are not expected to provide operational data until 2024 at the earliest.

Further information on the assumptions made and sensitivity of satellite asset data values to those assumptions is included in note 1 accounting policies.

09 Inventories

	31 March 2022	31 March 2021
	£ '000	£ '000
Meteorological equipment	1,277	1,611
Reserve equipment	15	16
Consumable stores	20	22
Total inventories	1,312	1,649

10 Trade and other receivables

	31 March 2022	31 March 2021
	£ '000	£ '000
Amounts falling due within one year:		
Trade receivables	18,775	15,276
Less: provision for impairment of receivables	(61)	(74)
	18,714	15,202
Other receivables	57	72
Accrued income	23,620	27,438
Prepayments	21,624	21,674
Total trade and other receivables	64,015	64,386

The carrying amount of receivables and current assets is a reasonable approximation to fair value.

Accrued income includes £589,000 relating to EU funding (£352,000 at 31 March 2021).

11 Cash and cash equivalents

		31 March 2022	31 March 2021
	Note	£ '000	£ '000
Balance at 1 April		29,834	49,258
Net change in cash and cash equivalent balances	18	69,473	(19,424)
Balance at 31 March		99,307	29,834
Cash held at commercial banks and in hand		1,847	2,276
Cash held with Government Banking Service		97,460	27,558
Balance at 31 March		99,307	29,834

The Met Office holds four Euro bank accounts, in which there were amounts totalling £907,000 at 31 March 2022 belonging to third parties (31 March 2021, four accounts totalling £712,000).

The Met Office Board have ring fenced £5 million to meet the costs of any claims covered by the Met Office's decision to self-insure against professional indemnity claims..

12 Trade and other payables

		31 March 2022	31 March 2021
	Note	£ '000	£ '000
Amounts falling due within one year:			
Trade payables		1,931	836
VAT		7,495	5,282
Other taxation and social security		4,650	4,520
Accruals		26,829	30,921
Dividend payable		8,500	6,500
Deferred income		18,053	17,278
Government grants	13	26,728	8,203
Total amount falling due within one year		94,186	73,540
Amounts falling due after more than one year:			
Government grants	13	12,806	20,369
Total non-current trade and other payables		12,806	20,369
Total trade and other payables		106,685	93,909

13 Government grants

Government Grants at 1 April		28,572	38,213
Deferred funding reclassified as grants		37,100	-
Grants recognised through the Statement of Comprehensive Income	4	(26,138)	(9,641)
Amounts falling due within one year		26,728	8,203
Amounts falling due after more than one year		12,806	20,369
The following balances are included in Government grants:			
BEIS - Future supercomputer		18,927	-
BEIS - Current supercomputer		18,029	25,430
BEIS - Polar Satellite Transfer		617	876
Environment Agency Weather Radar Network Renewal (WRNR)		1,961	2,103
Department for Transport Volcanic Ash Lidar Network		-	163
UKRI (NERC) - MONSOON 2 network upgrade		-	-
		39,534	28,572

14 Borrowings

Loans from the Department for Business, Energy and Industrial Strategy repayable by instalments and bearing interest between 1.04% and 2.81% per annum.

	31 March 2022	31 March 2021
	£ '000	£ '000
Loans due:		
Within one year	28,150	18,745
Between one and five years	112,600	74,980
Over five years	89,635	58,459
Total	230,385	152,184

15 Derivative financial instruments

The following table details the forward purchase currency contracts outstanding at the year end.

	Assets	Liabilities	Total
	£ '000	£ '000	£ '000
As at 31 March 2021	870	1,087	(217)
Movement on fair value	(682)	(896)	214
As at 31 March 2022	188	191	(2)
Analysed between:			
Current	122	191	
Non-current	67	-	
	189	191	

The following table details the forward purchase currency contracts outstanding at the year end:

Contract maturity date	Commitment hedged	Foreign currency	Foreign currency value	Contract value	Forecast spot rate on maturity	Fair value	Assets	Liabilities
			'000	£ '000	Currency/£	£ '000	£ '000	£ '000
3 May 2022	EUMETSAT	EURO	20,000	17,119	1.1750	(97)		(97)
3 May 2022	EUMETSAT	EURO	3,500	3,005	1.1750	(27)		(27)
1 September 2022	EUMETSAT	EURO	15,000	12,877	1.1680	(35)		(35)
1 September 2022	EUMETSAT	EURO	3,000	4,313	1.1680	(32)		(32)
4 January 2023	WMO	CHF	2,800	2,244	1.1936	102	102	
18 January 2023	EUMETSAT	EURO	16,000	13,793	1.1584	20	20	
3 May 2023	EUMETSAT	EURO	16,000	13,857	1.1519	32	32	
30 August 2023	EUMETSAT	EUMETSAT	14,000	12,186	1.1456	35	35	
				79,394		(2)	189	(191)

Forecast spot rates are provided by the Debt Management Office of HM Treasury.

All cash flow hedges are in respect of forecast transactions. In line with IFRS 9, gains or losses on effective cash flow hedges are held in equity; material gains or losses relating to the ineffective portion of the hedge will be recognised in the Income Statement when the forecast transaction occurs.

16 Provisions for liabilities and charges

	Early retirement and exits	Dilapidations	Leaseholds	EU FP7 reclaim	Other	Total
	£ '000	£ '000	£ '000	£ '000	£ '000	£ '000
Balance at 1 April 2020	20	249	137	3,805	-	4,211
Provided in the year	-	38	-	-	-	38
Revaluation at year end	-	-	-	-	-	-
Written back in the year	-	(24)	-	(3,801)	-	(3,825)
Utilised in year	(2)	-	(55)	-	-	(57)
Balance at 31 March 2021	18	263	82	4	-	367
Adjustment on adoption of IFRS 16	-	781	-	-	-	781
Provided in the year	-	143	-	-	3,750	3,893
Revaluation at year end	-	184	-	-	-	184
Written back in the year	-	(3)	-	(4)	-	(7)
Utilised in year	(1)	-	(55)	-	-	(56)
Balance at 31 March 2022	17	1,368	27	-	3,750	5,162

The Early Retirement and Exit Provision represents the outstanding liability for pension and severance costs as at 31 March 2021. For staff offered early retirement, the provision represents the full cost of meeting each individual's pension payments to normal retirement age.

The Dilapidations Provision relates to contractual future costs of making good leasehold properties when they are vacated. There is no uncertainty as to the timing of amounts but the final amounts may change during final negotiations with the relevant landlord at the end of the lease.

The Leaseholds Provision is principally in respect of future cost of leasehold properties, which became surplus to requirements on relocation to Exeter.

The EU FP7 Recovery provision relates to a recovery process initiated by the European Commission under its FP7 funding framework. This was resolved during 2021/22 and the provision has been released in full.

Included within other provisions is £3.3m for an out of court settlement of legal action brought against the Met Office. The settlement was agreed after the reporting period and further details are contained in note 23. The remaining amount relates to separate ongoing legal issues. No further information is provided to avoid prejudicing the outcomes.

The commitments provided for fall due in the following periods:

	Early retirement and exits	Dilapidations	Leaseholds	Other	Total
	£ '000	£ '000	£ '000	£ '000	£ '000
Amounts payable:					
Within one year	8	1,368	27	3,750	5,153
Between one and five years	9	-	-	-	9
Over five years	-	-	-	-	-
Total	17	1,368	27	3,750	5,162

17 Related parties

The Met Office's parent department is the Department for Business, Energy and Industrial Strategy (BEIS). BEIS is considered to be a related party and during the year, the Met Office had material transactions with BEIS and with other entities for which BEIS is regarded as parent department. In addition, the Met Office had material transactions with a number of other public bodies, Government departments and their agencies, the Department for Environment, Food and Rural Affairs, the Cabinet Office, the Civil Aviation Authority, the Maritime and Coastguard Agency, the Environment Agency and the UKRI. None of the Met Office Board members, key managerial staff or other related parties undertook any material transactions with the Met Office during the year.

The Met Office manages the UK's membership of a number of international organisations: EUMETSAT, ECMWF, WMO, EUMETNET and ECOMET. As part of this, it sits on the relevant governing body of those organisations. The Met Office had material transactions with these entities during the year and these are disclosed in note 3 to the financial statements. There were no material outstanding balances with these organisations as at 31 March 2022 (31 March 2021 - nil).

The Met Office holds a 5% interest in Mercator Ocean. The Met Office participates in the Copernicus Marine programme, which Mercator ocean co-ordinates. During the year the Met Office recognised £1.2m in revenue (2020/21 £1.7m) from Mercator Ocean. A trade receivables balance of £0.2m was outstanding with Mercator Ocean as at 31 March 2022 (2021 - £0.3m).

J Partington acted as an Met Office Non Executive Director during the year and is also an employee of our owning department (BEIS).

18 Notes to the cash flow statement

Reconciliation of cash and cash equivalents to movement in net funds.

	At 1 April 2021	Cash flows	At 31 March 2022
	£ '000	£ '000	£ '000
Cash at bank and in hand	29,834	69,473	99,307
Borrowings due within one year	(18,745)	(9,405)	(28,150)
Borrowings due after one year	(133,439)	(68,796)	(202,235)
Total net funds	(122,350)	(8,728)	(131,078)

19 Lease commitments

Total future minimum lease payments under operating leases are given in the table below for each of the following periods.

	Land and buildings		Other	
	31 March 2022	31 March 2021	31 March 2022	31 March 2021
	£ '000	£ '000	£ '000	£ '000
Leases expiring:				
Within one year	543	-	95	-
Between one and five years	724	-	-	-
Over five years	1,416	-	-	-
Undiscounted future lease obligations	2,683	-	95	-
Interest element	(147)	-	-	-
Discounted future lease obligations	2,536	-	95	-

The amounts above include liabilities where the Met Office expects to exercise an option to extend a lease, or expects not to exercise a lease break.

20 Capital commitments

	31 March 2022	31 March 2021
	£ '000	£ '000
Contracted but not provided for:		
Information technology	175	-
Equipment	254	572
Property works	235	413
Contributions for satellite data	32,529	34,902
Total	33,193	35,887

The commitment for satellite data represents the unpaid portion of the UK approved contribution to EUMETSAT programmes for the current calendar year.

21 Other financial assets and remote contingent liabilities

The Met Office owns a 5% share of Mercator Ocean at a cost of €100,000 (£91,000). Mercator Ocean is the co-ordinating entity for Copernicus marine Services in which the Met Office participates.

The organisation is a “société civile” (a not-for-profit organisation) under French law, meaning it has unlimited liability, and its shareholders are exposed to liability risk in proportion to their shareholding. A remote contingent liability will therefore exist as long as the Met Office retains a shareholding in Mercator Ocean.

The organisation protects its shareholders through contractual mechanisms and through insurance. Also any residual claim would first be met from the assets of the company. Any contingent liability is considered to be extremely remote. In addition any contingent liability will cease to exist should the Met Office dispose of the shares, which it is able to do so at cost at any point within the first three years of ownership, and with six months' notice after this point.

22 Financial instruments and financial risk management

The Met Office's treasury operations are governed by the Met Office Trading Fund Order 1996, under the Government Trading Funds Act 1973 as supplemented by the Met Office's Framework Document. The Met Office's financial instruments comprise cash deposits, receivables, payables, loans and foreign currency forward exchange contracts. The main purpose of these financial instruments is to finance the Met Office's operations. The Met Office has limited powers to borrow or invest surplus funds. The main risks arising from the Met Office's financial instruments are foreign currency, liquidity and interest rate risks. The Met Office's policies for managing these risks are set to achieve compliance with the regulatory framework including the rules contained within Managing Public Money.

Credit risk

The Met Office is subject to some credit risk. The carrying amount of trade receivables, which is net of impairment losses (bad debt provision), represents the Met Office's maximum exposure to credit risk. Trade and other receivables consist of a large number of diverse government and non-government customers spread over a diverse geographical area.

Receivables are impaired where there is sufficient knowledge to indicate that recovery is improbable including the probability that customers will enter bankruptcy or financial reorganisation, that the customer is facing financial difficulties or that economic conditions are likely to lead to non-payment. The following provides details of trade receivables beyond the due date and impairments made:

Trade receivables beyond the due date:	As at 31 March 2022			As at 31 March 2021		
	0-3 months	3-6 months	Over 6 months	0-3 months	3-6 months	Over 6 months
	£ '000	£ '000	£ '000	£ '000	£ '000	£ '000
Receivables beyond the due date - not impaired	838	8	-	3,937	17	-
Receivables beyond the due date - impaired	4	5	20	15	14	18
Total receivables beyond the due date	842	13	20	3,952	31	18

Liquidity risk

The Met Office maintains short-term liquidity throughout the year by management of its cash deposits. The Met Office aims to maintain cash levels to allow it to meet its short-term obligations. The Met Office holds cash deposits within the Government Banking Service. Under the Met Office Trading Fund Order and Framework Document, the sole provider of loan funding is the Met Office's sponsor department, the Department for Business, Energy and Industrial Strategy. Therefore, exposure to liquidity risk is limited to these arrangements. Loan funding requirements are anticipated to increase over forthcoming years to finance the UK contribution to the EUMETSAT satellite programme, and additional supercomputing investment, in line with our current corporate plan.

Foreign currency risk

The Met Office makes significant foreign currency payments for subscriptions and contributions to international meteorological organisations including payments for satellite programmes. These costs are funded by the Public Weather Service. In order to manage foreign exchange risk the Met Office policy is to buy forward foreign currency for payments to international bodies as soon as amounts can be reliably estimated. The forward currency contracts are in hedging relationships under IFRS 9 and the Met Office has elected to adopt IFRS 9 hedge accounting rules.

Details of forward contracts held can be found in note 15.

£15.0 million of expenditure was undertaken in foreign currencies which are not funded through the forward purchase contracts.

Interest rate risk

The Met Office finances its operations through retained profits. Amounts retained in the business but surplus to immediate requirements are held in our Government Banking Service account from where they earn overnight interest through being automatically swept up into the National Loans Fund. A higher rate of interest is earned on the ring-fenced £5 million cash balance (see Note 11) which is usually held on longer term deposit at the National Loans Fund. The Met Office may also be funded by additional monies from its sponsor department to fund specific strategic requirements.

Details of cash on deposit are included in note 11. The fair values of cash and cash equivalents approximate to book value due to their short maturities.


Significant accounting policies

Details of the significant accounting policies and methods adopted, including the criteria for recognition, the basis of measurement and the basis on which income and expenses are recognised, in respect of each class of financial instrument are disclosed in Note 1 to the financial statements.

23 Events after the reporting period

On 10 June 2022 an out of court settlement was agreed between the Department for Business, Energy and Industrial Strategy (BEIS), the Met Office and a third-party claimant. The agreement was in settlement of a legal challenge on the process of awarding a contract for the provision of supercomputing services. Whilst the agreement was reached after the reporting period, it has been classified as an adjusting event as it provides additional evidence of conditions existing at the end of the period. The Met Office has therefore created a provision for £3.3m to reflect the Met Office contribution towards the settlement as agreed with BEIS.

The accounts were authorised for issue on the date the accounts were certified by the Comptroller and Auditor General.



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