Met Office

Annual Report and Accounts

2022/23

HC 1390

Met Office Annual Report and Accounts 2022/23

Presented to Parliament pursuant to section 4(6) of the Government Trading Funds Act 1973 as amended by the Government Trading Act 1990

Ordered by the House of Commons to be printed 19 July 2023

HC 1390

Met Office

This publication is available at: **www.gov.uk/official-documents**

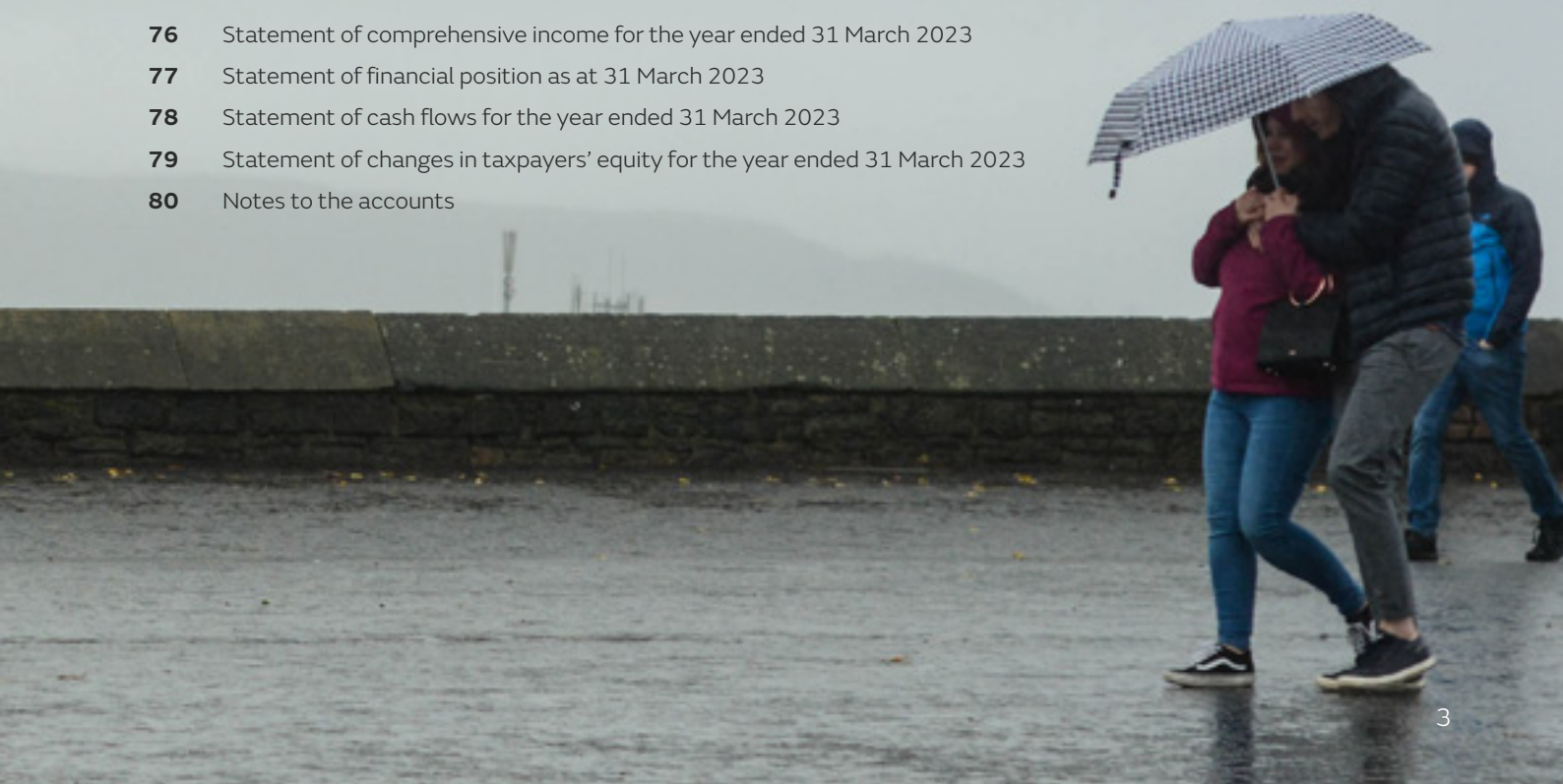
Any enquiries regarding this publication should be sent to us at **enquiries@metoffice.gov.uk** or **+44 (0)370 900 0100**

ISBN: 978-1-5286-4164-7
E02922511

Performance report

Accountability report

Accounts



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. Our focus is on making a difference and delivering greater benefit to you.

We only make an impact when our trusted 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, all built on our pioneering science and technology.

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.

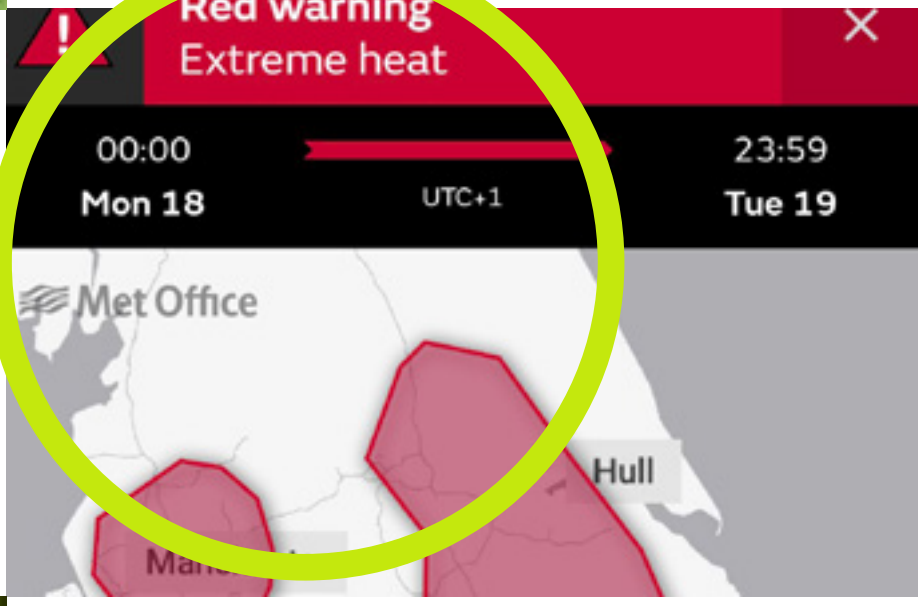
Helping you stay safe

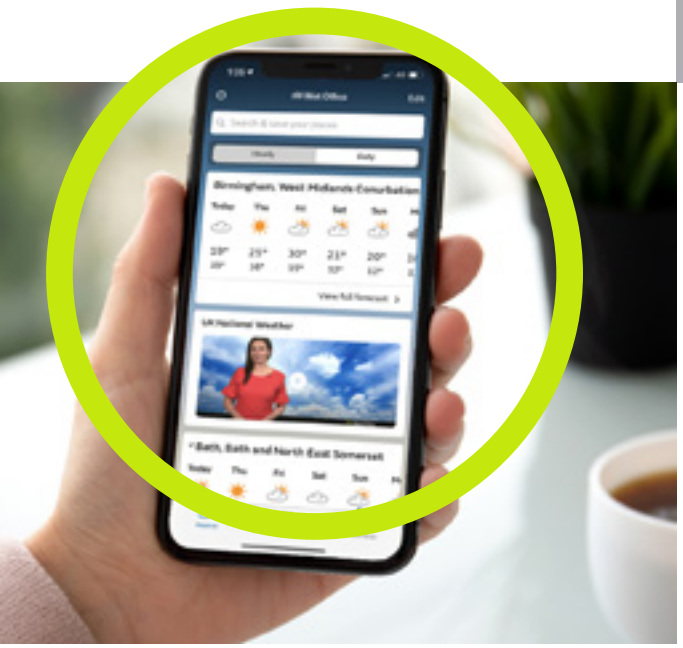
82%

of the UK public **trust** the Met Office to provide weather forecasts when it matters to them, making us the most trusted weather supplier.

First ever **red** National Severe Weather Warning issued for **extreme heat** ahead of the unprecedented July heatwave.

98% of those who saw the warning took action.





~2.4m

users accessed the iOS and Android apps during the July heatwave (between 17-19 July). Website use peaked on the 19 July at around **3.6m** sessions and **1.9m** users.

Met Office is now a **Category 2 Responder**, recognising the crucial weather and climate advice and support we provide when it comes to saving lives, protecting property and the economy during times of extreme weather.

92%

of **emergency responders** have used the NSWWS.

Of those who used the National Severe Weather Warning Service, 97% say our weather warnings are useful and more than 9 out of 10 report that the warnings help them to make decisions and take action.

>20.4m

impressions across our social media channels on the **hottest day** on record for the UK. On 19 July 2022, a teperature of 40.3°C was reached at Coningsby.

Helping you stay safe

844

multiagency **resilience** meetings attended by our Civil Contingency Advisors.

This included 15 Scottish Government Resilience Room meetings, 6 Welsh Government Resilience meetings, and 93 UK government department led meetings, helping to protect the UK from the worst of our weather.

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

The Met Office is a key contributor to the new **UK National Security Risk Assessment** as owner of the risks on heat, storm, snow/ice and space weather and we contribute to around 30 others.

This annual process identifies and quantifies all major hazards and threats of national significance for the UK over the next five years.

Our **beach forecasts** now feature on our App helping ensure the safety of the UK public.

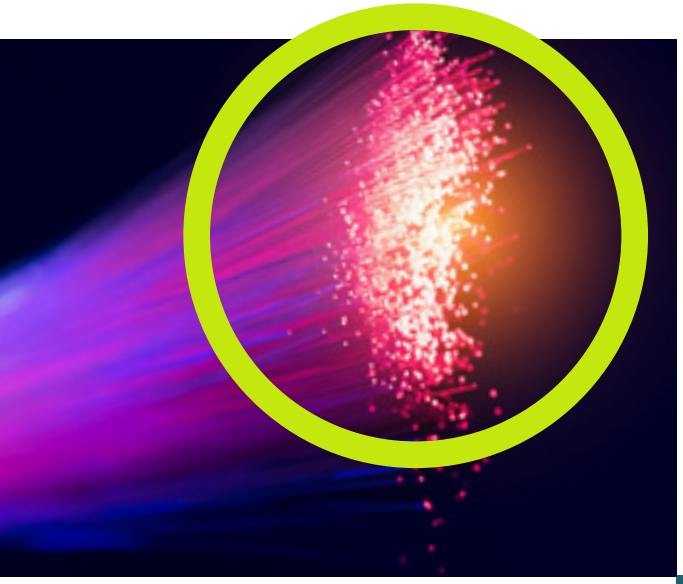
Both website and App forecasts also now include safety tips to improve awareness and understanding of beach safety. We continue to partner with RNLI and HM Coastguard to help people enjoy UK beaches safely.

Our scientists showed that a record-breaking heatwave in north-west India and Pakistan, like that of 2022, has been made over **100 times more likely** because of climate change.

New Scottish Flood Forecast launched.

Developed by the Scottish Environment Protection Agency and the Met Office, to allow communities across Scotland to prepare for and take action against flooding sooner.

Helping you thrive

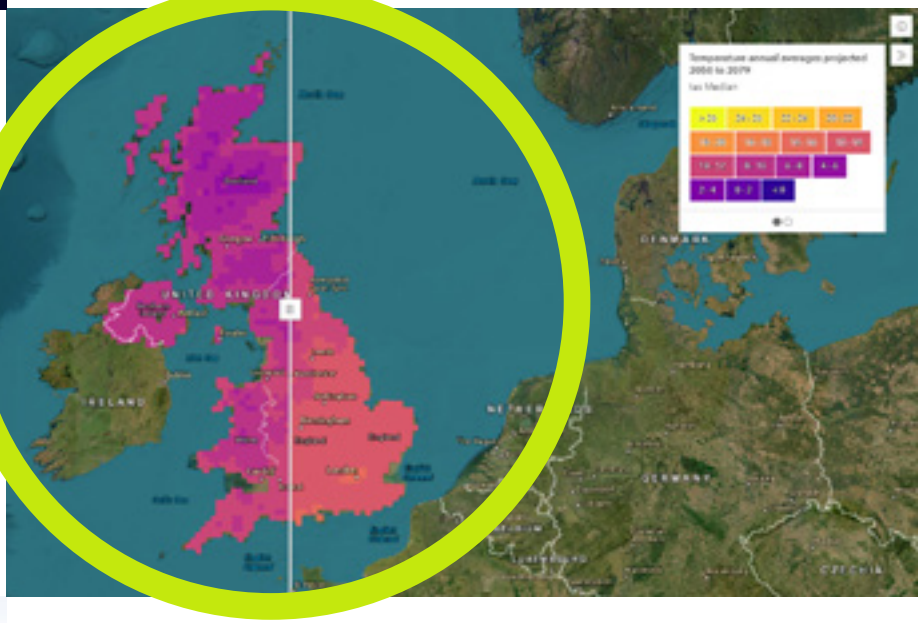


We are currently undertaking the world's biggest ever 'over the wire' data transfer of tape media to **Microsoft's Cloud**.

This is part of the process in implementing our next-generation supercomputing capability, the UK's most powerful which will take weather and climate forecasting to the next level.

Our **new Climate Data Portal** provides a curated selection of our climate data in ready-to-use data formats.

Built using Esri's ArcGIS Hub, the Climate Data Portal makes it easier for organisations to view climate data geospatially and also analyse climate change projections alongside their own data.



We helped to ensure the UK's **energy security** over the winter period providing tailored operational briefings to government, National Grid and OFGEM, in addition to the services we provide them direct.

We also support National Grid ESO in balancing supply and demand with information we provide, helping them to predict usage and renewable supply from solar and wind.

34

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

Of which the final instalment, The Synthesis Report, was published in March 2023. Across working groups one and two: 1,357 Met Office papers and book chapters were cited 4,939 times; 21 Met Office datasets were cited 173 times; and, 36 Met Office models were cited 455 times.

We supported **Network Rail** to understand the **impact of hazards** such as extreme heat and flooding on their infrastructure.

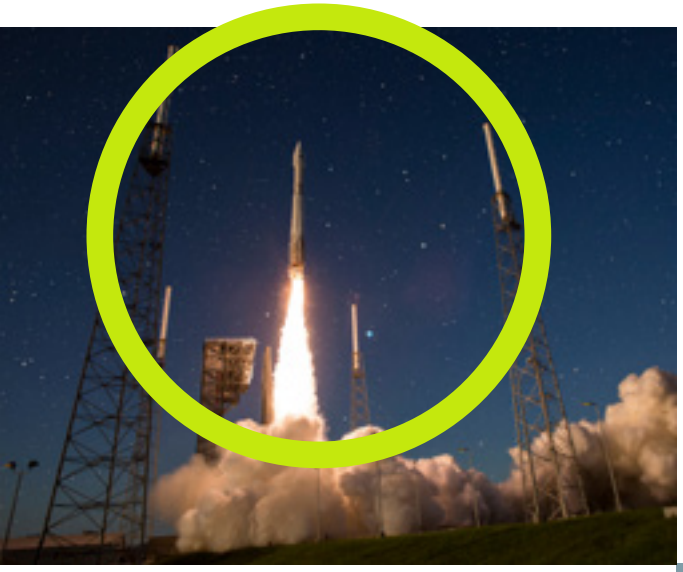
We set up an academy with Network Rail, the industry, Newcastle University and their commercial weather provider MetDesk to protect UK rail passengers.

>2m

followers across our various **social media** platforms.

939k	483k	271k	194k	139k	26k

Helping you thrive



We support the **UK space industry** to help ensure the safety and reliability of space launch activities. This includes services to the SaxaVord UK Space Port.

We have recruited **43 industrial placements**, **23 apprentices** and **9 graduates** to our new graduate training scheme, helping to shape the leaders of tomorrow.

Our **climate communications** during COP27, won the PRCA UK Public Sector Value for Money Award 2022 for 'Increasing perception of climate science expertise'.

Raising awareness of the compelling scientific evidence of climate change plays a critical part in tackling the impacts.

362

scientific publications were authored by the Met Office this year, contributing to the evolution of weather and climate science.

Supporting our aim to achieve **Net Zero emissions by 2030** we are developing a baseline of supplier carbon footprints to ensure sustainable procurement.

Our **STEM Ambassadors** support young people to understand the impact of weather and climate change and help them to grow their aspiration, skills and knowledge.

Statement from the Chair

Rob Woodward

Supporting government in changing times

The purpose of the Met Office remains clear, and I am proud of the way we have continued to help the UK stay safe and thrive, during a period which has seen extensive change. The UK has faced numerous challenges this year, both domestic and international, and we have maintained our focus in supporting government priorities that align with our purpose.

Following the government's departmental reorganisation, the Met Office's ownership has moved to the new Department for Science, Innovation and Technology (DSIT). Responsibility for climate has moved to the new Department for Energy Security and Net Zero. We will continue to work closely with government in delivering the Met Office Hadley Centre Climate Programme. The inclusion of technology with science and innovation will open new opportunities which we welcome.

During the year, the Met Office was assessed under the government's Public Bodies Review Programme. The review, approved by the Secretary of State for Science, Innovation and Technology, found the Met Office to be a well-run and governed organisation, structured in an appropriate way to deliver its purpose and functions on behalf of the UK government and wider public. These ranged from being a key part of the UK's defence and civil contingencies infrastructure to supporting the government's focus on science, innovation and technology at home and abroad, made more pertinent by the increasing focus on net zero and climate science and services.

The review also included an assessment against the Public Sector Research Establishment Value Framework, which was reviewed by the Department for Business, Energy and Industrial Strategy's Chief Scientific Adviser. The assessment concluded the Met Office focused effectively on its objectives and delivered good value for money. We will work with our sponsor team to take forward the recommendations from the Review, in particular that we should explore what further services the Met Office can offer to DSIT and wider government and how to further links with broader climate science organisations through the National Climate Science Partnership.

Our role on the global stage

It has been a busy year for the four intergovernmental organisations that the Met Office is involved with - the World Meteorological Organization (WMO), European Centre for Medium Range Weather Forecasts (ECMWF), European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) and EUMETNET. ECMWF declared its new supercomputer operational, from which outputs will be used by our operational meteorologists to better understand forecast uncertainty. There are further ambitious programmes within EUMETNET and ECMWF to provide greater understanding of our Earth's system, yet in a challenging economy, focus from many members is on ensuring costs are manageable.

WMO efforts for the next four years are focussed on delivering the UN Secretary General's goal - to ensure every person on Earth is protected by early warning systems by the end of 2027 (known as Early Warning for All) and the associated activities such as implementing the Global Basic Observing Network and Unified Data Policy. Early Warning for All was launched on World Meteorological Day 2022 and focusses on the four pillars of effective early warning systems.

The Met Office continues to input and support WMO and other pillar leads with information on lessons we have learned in implementing associated activities both at home and overseas. This ambitious ask will require greater coordination and collaboration between donors and implementers of early warning projects, along with a whole value chain approach to ensure that action can be taken when the early warning is received.

Building our partnerships

Partnerships in science, innovation and technology are going to be increasingly important in delivering our exceptional science, growing our impact and benefit and developing our excellent people. Developing strong relationships across government, industry, academia, our customers and the international meteorological community is an essential part of supporting the business today and fostering new partnerships for the future.

The Board has an important role to play here, supporting the Executive and the stakeholder teams. Whenever possible the Board meets with customers and suppliers. Last year Transport Scotland hosted a Met Office Board meeting at their spectacular South Queensferry control centre, where we also met the Scottish Environmental Protection Agency. We were also welcomed to Microsoft's UK HQ in Paddington when we were joined by some of their leading artificial intelligence (AI) researchers.

A regular contributor at our Board meetings is Vice Admiral Duncan Potts CB, Chair of the Public Weather Service Customer Group. This year, we finalised our Citizen Engagement Strategy, setting out the Met Office's approach to reaching all members of the UK population with trusted weather and climate services to help them make better decisions to stay safe and thrive. Part of our approach is to identify indirect distribution partners and therefore engage with broader demographics and specialist users. I was therefore particularly pleased to see the Met Office UKV high resolution model output is now freely available on Windy.com, allowing users to visualise the most detailed forecast available for the UK.

This year we have welcomed Edinburgh and Birmingham Universities to the Met Office Academic Partnership.

Developing strong relationships across government, industry, academia, our customers and the international meteorological community is an essential part of supporting the business today and fostering new partnerships for the future.

The Partnership brings together research excellence from the Met Office, University College London and universities of Exeter, Leeds, Oxford, Reading, Bristol, Birmingham and Edinburgh, to embrace the challenges set out in our 'Research and Innovation Strategy'. Edinburgh and Birmingham Universities will bring a wealth of knowledge and capabilities that will be invaluable to advancing the partnerships research and innovation efforts.

I'm also delighted that the 'Weather Academy' partnership has been created this year between Newcastle University, the Met Office and Network Rail to improve understanding of the risks of extreme weather for rail travel. This is an important event for the transport sector and is a step change for how we continue to build our collective weather resilience.

As part of our collaboration with Microsoft we have held regular Executive bilateral meetings and several hackathons focused on refining our requirements for the next generation modelling capability to give us early insight into how our future modelling capabilities might be deployed.

In addition, we have worked collaboratively with Microsoft and their partners, on specific areas of transport, exploring co-selling models, and climate value chain. This is all with the aim of benefitting from Microsoft's reach to help even more people make better decisions to stay safe and thrive.

I spoke last year of our focus for science and innovation in the South West of the UK, promoting and nurturing the development of talent in the region. This year, we were delighted to co-host a digital skills event with Microsoft UK and Plymouth Marine Laboratory, inviting local leaders from small and medium businesses to discuss the latest digital skills, in demand skills for green jobs and training pathways to future proof skillsets for work in the region.

A heartfelt thank you

Finally, I would also like to thank Met Office staff for their commitment to ensuring that the organisation remains at the leading edge across the portfolio of services that it provides. The pride and dedication to duty exhibited by our staff remains exemplary.

I would also like to thank all members of the Board who have made strong contribution to the Met Office in supporting its achievements this year and I am particularly grateful for their continued insights as we prepare to meet the future needs of our customers.

Chief Executive's summary

Professor Penelope Endersby

A year of records and extremes

We have seen an extraordinary year for climate extremes and impacts. We saw records shattered worldwide with searing temperatures in Australia, Japan and the European heatwave during the summer. China had its longest heatwave of 64 days since records began. We have seen the impacts of these heatwaves in wildfires, droughts, and some countries declaring heat emergencies. We play a key role in the global climate science community in refining our ability to predict extremes to enable communities to be prepared.

Last year I commented on our services evolving and the introduction of heat warnings in collaboration with Public Health England and the Devolved Administrations. This anticipated the increasing threat from extreme heat to humans and infrastructure, and the need for the UK to be prepared to help us all stay safe and thrive when this happens.

In July 2022 we saw an unprecedented heatwave in the UK. The forecast of breaking the highest recorded temperatures - day and night, with 40°C breached not only for the first time, but widely - was admirably accurate. We gave our earliest ever amber warning of any kind with an extreme heat warning six days out, followed by our first ever red extreme heat warning for large areas of the UK. The communications effort to explain this extraordinary event was vast and I am extremely grateful for our partners and emergency responders for the teamwork involved in delivering the impact, reach and consistency of message.

> *"...the accuracy and professionalism of the Met Office. Its ability to predict the heatwave with some accuracy, both in respect of timing and geographically, has been remarkable. We rely on it for much of our resilience planning. There is no doubt about it: it has some of the best weather forecasters in the world."*
>
> **Kit Malthouse MP, the then Lead Minister for Resilience and Chancellor of the Duchy of Lancaster (July 2022)**

While these temperatures would have been unthinkable when many of our meteorologists started their careers, we were aware that they were now a real possibility. With the science from our brilliant climate attribution team having been completed in advance of the event, it was the first time the Met Office was confidently able to state in real time that an event would have been almost impossible in an undisrupted climate.

Key player in national resilience

The Met Office's role as a key component of our national resilience has been recognised more strongly during the year. In May, the Joint Committee on the National Security Strategy visited our Exeter HQ to learn more about anticipated needs for adaptation to a changing climate as part of their enquiry into Critical National Infrastructure and Climate Adaptation. We contributed to the new National Security Risk Assessment as owners of the risks on heat, storm, snow/ice and space weather, and key contributors to around 30 others. The Met Office was newly recognised as a statutory Category 2 Responder, reflecting our vital contribution to national resilience not just for severe weather, but in support of other responses such as COVID and energy security.

Advances in our technical capabilities

We are well under way with our transition to our exciting new supercomputer capability, with the first part of the machine now installed in Microsoft's data centres. We are currently undertaking the world's

There are few organisations where you can feel that you contribute to saving lives and protecting the planet every day, and that sense of being a real force for good unites and motivates us all.

biggest ever 'over-the-wire' data transfer of tape media to Microsoft's Cloud, as we migrate our weather and climate data archive. We are testing our codes on the development machine in Exeter and preparing our plans to get the best value out of the machine through advances in our modelling and in our ability to make our data available, accurate, useful and consistent.

Alongside this, the first satellite of the Meteosat Third Generation (MTG-I1) launched to orbit on 13 December, named Meteosat 12. This satellite will bring enhanced infra-red imaging capability and has a lightning imager instrument which provides real-time lightning information measuring both cloud-to-cloud and cloud-to-ground lightning. This is the first time we will have access to a geostationary lightning observing capability. It will lead to further improvements in our forecasting and more precise monitoring of our changing atmosphere, land and oceans.

Working in a post-COVID world

We have kept evolving to make the best of the ability to be together again as the COVID risk has reduced, while taking the best from the new ways of working which we have shown are possible. I'm delighted that we now have higher attendance rates than we did when we mandated a percentage of in-office time, as we have found the ways to make the workplace attractive to spend time in and use our time together for growth, teamwork and learning.

We really showed how we could take the best of both worlds in our Awards for Excellence with over a thousand staff and guests attending in person, but keeping the inclusion for our remote and shift workers with watch parties, live social feeds and online gatherings for winners and board members after the event. Highlights from the 2022 ceremony included special guest video from Sir Chris Whitty, new starters sharing their experiences and colleagues from across the UK and the globe revealing our runner up and winners both virtually and in person.

Similarly, our annual Met Office Scientific Advisory Committee and Met Office Hadley Centre Science Review Group reviews of our science and technology benefited from being largely in person after two years of virtual reviews. You could sense the joy of people with common interests being able to share their expertise with our fabulous panel members. But we were still able to accommodate virtual attendance and record sessions so a wide audience could participate and learn.

We have ongoing challenges in our ability to access the skills we need, exacerbated by a one year wait for the approval of our pay remit, and the high cost of living for our staff. At the time of writing we have finally received approval to begin a negotiation on a three-year pay deal with our union. Despite the difficult environment, I am extremely proud that we maintained our high Employee Engagement Score of 70% and moved further into the Civil Service upper quartile. The scores showed how much the staff value their interesting work, supportive teams and the clear organisational direction set by senior leaders.

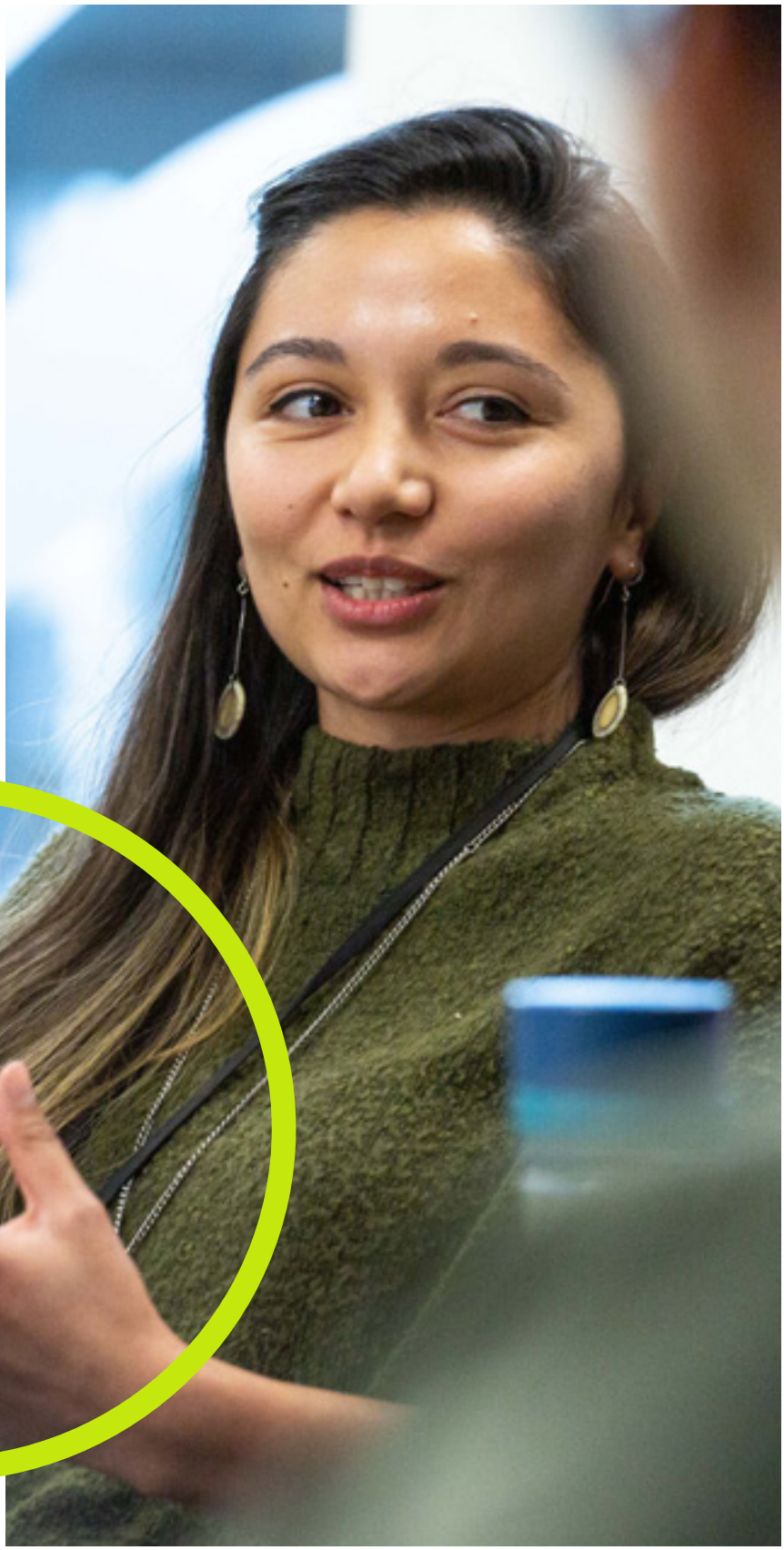
A final word of thanks

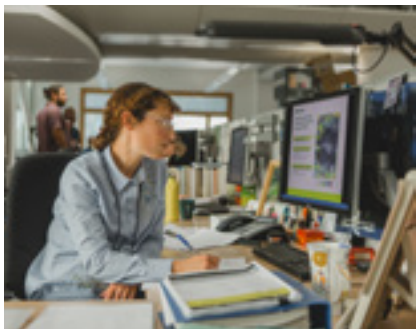
I continue to be both grateful for the dedication and commitment of Met Office staff in delivering a real force for good. There are few organisations where you can feel that you contribute to saving lives and protecting the planet every day, and that sense of being a real force for good unites and motivates us all.

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 atmosphere 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. This includes at the annual Conference of the Parties (COP), and internationally through the Intergovernmental Panel on Climate Change with key scientists as part of its 6th Assessment Report, completed in March this year. 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. Implementing scientific and technological improvements and updates to our models is an ongoing process.

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, governments, 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 not only deliver our forecasts through our platforms and channels, we also use partnerships. This year we have introduced our forecasts on windy.com and continue to work with media partners such as Channel 5, Sky, ITV, BFBS, Gibraltar Broadcasting Corporation and this year Channel 4 have begun to use our public weather media service. This ensures that as wide an audience as possible has access to our accurate forecasts wherever they may access them.

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. As global energy prices rose to record levels, the Met Office has been working closely with the UK government and key parts of the energy network to support preparedness for winter and help minimise and avoid potential shocks. Our experience as a public weather service and world leading modelling centre enables us to support a World Meteorological Organization Expert Team for the United Nation's Early Warning for All Initiative. We share our learnings as an implementer of programmes like WISER (Weather and Climate Information Services), to improve the quality, accessibility and use of weather and climate information services 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 sets 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. Having a clear vision of the future continues to be the focus of our strategic actions. 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.

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.

Our values are:

- We're experts by nature
- We keep evolving
- We live it and breathe it
- We're better together
- We're a force for good

These anchors capture everything we do in achieveing our purpose.

Excellent people and culture

Reflecting on this past year, I recognise that the cornerstone of the Met Office's success is without a shadow of doubt its people. In a challenging global and political environment, which has impacted our everyday lives, our organisation is truly grateful for the dedication shown by its people, 365 days of the year. Despite the backdrop of external events, the results of our annual staff survey the 'People survey' continue to excel. 83% of our people tell us they are proud to tell others they work for the Met Office and 89% understand how their work contributes to our purpose.

We're committed to evidencing and communicating the unique benefits our people receive in return for the skills, capabilities and experience they bring to the Met Office. We have set a benchmark enabling us to understand how we can continue to evolve and develop our employee experience. As well as looking at reward we are placing greater focus on wider benefits such as development, our culture, wellbeing, our working environment and progression and opportunity. The flexibility offered from hybrid working results in 67% of staff surveyed choosing to work from home three days or more each week.

We've also continued to embrace our Met Office values, embedding them through our employee lifecycle. Our new 'values-based recruitment' places focus on attracting and recruiting people who share our passion for what we stand for and, what we want to achieve - those who demonstrate our values. During talent and performance discussions, Managers use examples of our values in action to provide feedback. They focus not only on what is achieved by team members, but how they've achieved it.

"We've continued our commitment to staff wellbeing, renewing our 'Mindful employer charter' and delivering a project empowering our people and helping them understand and improve their own wellbeing. Working with Health Assured, we can offer staff access to a virtual library of wellbeing information, providing support on a range of health and advisory issues, as well as guidance to aid physical and mental health."

We've opened doors to new opportunities for our staff through seeking to align our pay grades to match other Civil Service organisations and developing a suite of job-based competencies meaning that our people can see a clear career pathway and access learning they need, to have rewarding and fulfilling careers at the Met Office.

We've continued our commitment to staff wellbeing, renewing our 'Mindful employer charter' and delivering a project empowering our people and helping them understand and improve their own wellbeing. Working with Health Assured, we can offer staff access to a virtual library of wellbeing information, providing support on a range of health and advisory issues, as well as guidance to aid physical and mental health.

We've celebrated trailblazing communications, with the launch of our new internal communication channel Met Net, and our Communications and Engagement Team winning the Civil Service Team of the Week award for helping keep the public safe during the heatwaves of July 2022. We're also very proud of other accolades gained during the year including winning a Drum Award for social media (Best Public Sector/ Government) and a UK Social Media Award for 'Best Use of Social Media in a Crisis' (during the 2022 storms).

As an organisation we are proud of the springboard we provide to people entering the workplace. Our 'Early careers programme' is linked to the Civil Service apprentice strategy, building on past success, ensuring we remain flexible to future skills requirements and developing 'role ready' people on exit from the programme.

In the last quarter of 2022-23, we prepared ourselves to welcome 43 industrial placements, 23 apprentices and 9 graduates joining our new graduate training scheme. For those still in education, our STEM (science, technology, engineering and mathematics) ambassadors help young people understand the wide-reaching impacts of weather and climate change on themselves, their communities, and on people, places and organisations around the world. Focussing on STEM related careers, we also want to help young people from all backgrounds grow their aspiration, knowledge and skills, enabling them to thrive. Our 'Virtual work experience programme' attracted 530 expressions of interest within a week of registration opening.

Each year we come together for our Awards for Excellence, where I continue to be astounded by the skill, pride and camaraderie displayed. This is where we showcase a wealth of excellence, our people really are experts by nature. Awards are based on our values, and this year's winners included the team who co-hosted the COP26 Science Pavillion with World Meteorological Organization and Intergovernmental Panel on Climate Change; three early career scientists who pioneered a novel, hybrid seminar series, enabling people to practice presenting and share expertise; and, a staff member who had dedicated a career of over 30 years towards building the observation networks on which the Met Office depends.

Tammy Lillie
Chief People Officer

Our strategy in action: our 'People framework'

The success of every organisation depends on the quality and commitment of the people it employs. At the Met Office we are exceptionally proud of the work we do to support our people's development and career pathways and how we enable the different parts of a person's role to come together to drive personal, professional and corporate success.

Our 'People framework' has brought together all the tools and information our people need to succeed in the Met Office, now and in the future. It supports our people in achieving their career goals, by clearly showing how they might move or progress through and around the organisation, visually highlighting what they can expect from the Met Office and what it can expect from our people. Designed to engage and develop our people, its uses also extend to supporting future recruitment and succession planning.

Helping us lead and invest in our excellent people and culture, the 'People framework' makes the Met Office a great place to work and enables our people, as experts by nature, to keep developing. We use the framework to set out how we will recruit, retain, develop and engage colleagues. It shows what personal, professional, corporate and functional capabilities the Met Office require of its people, and recognising one size doesn't fit all, allowing our staff to develop the skills they need to meet their future role aspirations.

Alongside the framework, we have established 'Communities of practice', focussing on encouraging peer-to-peer learning and sharing of good working practices, all of which help facilitate learning and development, performance improvements, external recognition and accreditation and progression through and across Met Office careers.

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.

This year's highlights

83% of our people say they are **proud to work for the Met Office.**

(Source 2022 Civil Service People Survey)

We have a number of 'Staff networks', **celebrating different cultures and diversity** within our people.

Our new 'Values-based recruitment' focuses on attracting **people who share our passion, what we stand for, what we want to achieve.**

We are proud of our people, and are recognised externally as experts by nature, through **winning numerous national awards and nominations.**

Our recent campaign to attract industrial placements to the Met Office attracted a **record number of applicants** and resulted in 43 placements offered.

We have **'Communities of practice'** supporting all areas of our work, providing a community in which to share information and learn from one another.

We **embrace hybrid working**, recognising the benefit of choice to our people's wellbeing, and resulting in a greater diversity of staff from a wider geographical area.

Our **STEM Ambassadors** support young people to understand the impact of weather and climate change and help them to grow their aspiration, skills and knowledge.

Exceptional science, technology and operations

It has been a busy year for weather and climate science and services at the Met Office. I am hugely proud of the work our operational, research and technical staff have delivered this year. For example, our accurate forecast of the record-breaking UK summer heatwave of 2022 was a team effort, and I was glad to do what I could to help communicate the message to stay safe, and to highlight the role of climate change in shifting to a new normal of the weather we experience today.

Making the most of the opportunities that come from tackling climate change has been a big theme this year. In collaboration with University of Leeds, we launched at COP27 a tool for policy makers to identify the co-benefits associated with tackling climate change. A key co-benefit is improved air quality in cities, a theme that was also picked up in our contribution to the Chief Medical Officer's annual report, which focused on air pollution this year. And we were delighted to contribute to former Energy Minister, the Rt Hon Chris Skidmore's Net Zero Review, which detailed the "historic opportunity" offered by the UK targeting net zero.

Delivering our next-generation modelling capability continues to be a strategic action (see the case study on page 28) and has made good progress in the last 12 months. The development of the next-generation data assimilation has been a stand-out success and demonstrates how working with our global partners – in this case the Joint Effort for Data assimilation Integration (JEDI) - can deliver results.

We've seen a pivotal moment in artificial intelligence (AI) this year - large language models like ChatGPT have demonstrated in dramatic style the potential for machine learning and AI to transform how we work. In 2022 we published our data science framework 'Embedding machine learning and artificial intelligence in weather and climate science and services', outlining our plans to integrate data science into the entire Met Office value chain. To accelerate research into data science application in weather and climate we have established a Transatlantic Data Science Academy with our partners in the US.

Another pivotal moment was the publication of a major report – The Intergovernmental Panel on Climate Change's Synthesis Report of the Sixth Assessment Report. As a result of the report, published in March this year, we can now say unequivocally that human activities - principally through emissions of greenhouse gases - have caused global warming.

Over a number of years our scientists have played a major role in compiling the Sixth Assessment Report (AR6). AR6 comprises three Working Group contributions and the Synthesis Report.

Collaboration is key to delivering our 'Research and innovation strategy'. We have added two universities – Edinburgh and Birmingham – to the Met Office Academic Partnership. Both bring new capabilities to our partnership, especially deepening our expertise in high performance computing to get the most from our next supercomputer, and in the impacts of weather and climate.

This year we welcomed four new Principal Fellows into our leadership team. They are focused on the strategic areas of high-resolution modelling, observations, hazard to decision making and cloud technology architecture. Our team of 11 Principal Fellows provide visionary leadership for the 11 themes of the 'Research and innovation strategy' and ensure that we continue to be recognised as global leaders in weather and climate science and services in our changing world.

> *"To accelerate research into data science application in weather and climate we have established a Transatlantic Data Science Academy with our partners in the US."*

Professor Stephen Belcher
Chief of Science and Technology

Our strategy in action: our 'Next generation modelling system'

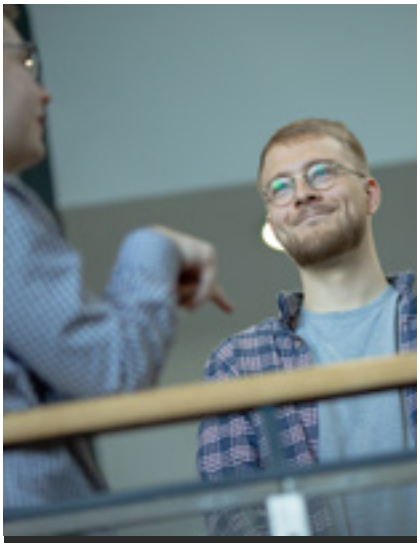
Delivering our next generation modelling capability is now entering its fourth year as a strategic action. Most strategic actions are in place for just one or two years, but the length of focus on this action demonstrates the complexity and scope of the work needed. The Next Generation Modelling Systems (NGMS) is a flagship transformational programme. It is intricately linked with our supercomputing investment and the 'Delivering our next generation supercomputing capability' strategic action.

Throughout delivery of NGMS we keep evolving. We are adapting to the needs of our next generation modelling capability requirements, as well as the fast-moving changes in technical architectures that will be used to run operational weather and climate forecasts in the future. To continue to deliver ever increasing computational power, supercomputer architectures are evolving at a faster rate than ever and in new directions, such as cloud-compute and heterogeneous architectures. To continue to be able to make best use of that computational power, our modelling codes and infrastructure also need to keep evolving.

The activity taking place under NGMS will transform part of our Weather and Climate National Capability. More specifically, it will transform the simulation component which includes observations processing, data assimilation, numerical simulation and verification software. This will ultimately allow us - through exploitation of the supercomputing capability - to continue to improve the accuracy of our forecasts, to advance climate science and to deliver more useful services to our customers. Transforming the whole of this element of our National Capability is a complex business. Many of the steps we take need to be closely orchestrated. This is so that we do things in the right order and that the impacts of each development are closely monitored.

NGMS builds on the longstanding Met Office strategy of seamless modelling, delivering a modelling system that can scale from regional to global resolutions, weather to climate timescales while sharing common science and infrastructure. In March 2021 we ran a prototype Numerical Weather Prediction (NWP) configuration of the NGMS global atmosphere model, followed by a global climate configuration in March 2022. This year, equivalent regional versions of these models have been delivered and we have begun coupling the global models to the new observation processing system and the existing data assimilation system. This is to create our first NGMS-based prototype NWP workflow. This will allow us to start testing the accuracy and robustness of the new systems as a whole, rather than as individual components. This is the next big step on the long journey to operational implementation.

The new observation processing system is also being implemented within our existing modelling system. It is planned to go into operations in 2024. This, along with the new verification system, will be the first NGMS components to go operational. We are then planning a staged implementation of the other components within our NWP system over the next three years. Climate modelling has an even longer timescale and the details of the implementation of NGMS within those systems is now in planning.



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.

This year's highlights

Alignment with **Government's Digital Data and Technology professional structures** (and benefits such as access to training etc).

9 delegates from the Met Office attended **COP27** in person and were involved in organising and contributing to many events over the two weeks.

362 publications authored by Met Office this year. **879 publications** in first quartile (Q1) journals authored by the Met Office over the last 3 years. Q1 journals are the top 25% of journals for a particular subject area.

Undertaking the **world's biggest ever 'over the wire' data transfer** of tape media to Microsoft's Cloud. Part of implementing our next-generation supercomputing capabilities.

Completion of the **cyber security** enhancement programme.

9 scientists in the UK Top 200 highest impact **Environmental Sciences researchers.**

295 land observation sites and 51 ships, from all corners of the UK and overseas moved to SurfaceNet. This marks the completion of the **SurfaceNet project** to replace the ageing Meteorological Monitoring System.

UK Climate Resilience Programme completed – the four year programme commissioned and funded more than 60 projects to understand and quantify climate risk, manage climate risk and develop climate services.

Our global numerical weather prediction ensemble skill has exceeded a target of **1% improvement over 3 years in all 12 areas of skill that we monitor.**

Implementation of **Operational Suite 45**, including the introduction into Numerical Weather Prediction of the first Met Office fully-coupled atmosphere-land-ocean weather model.

Investing in our supercomputing capability

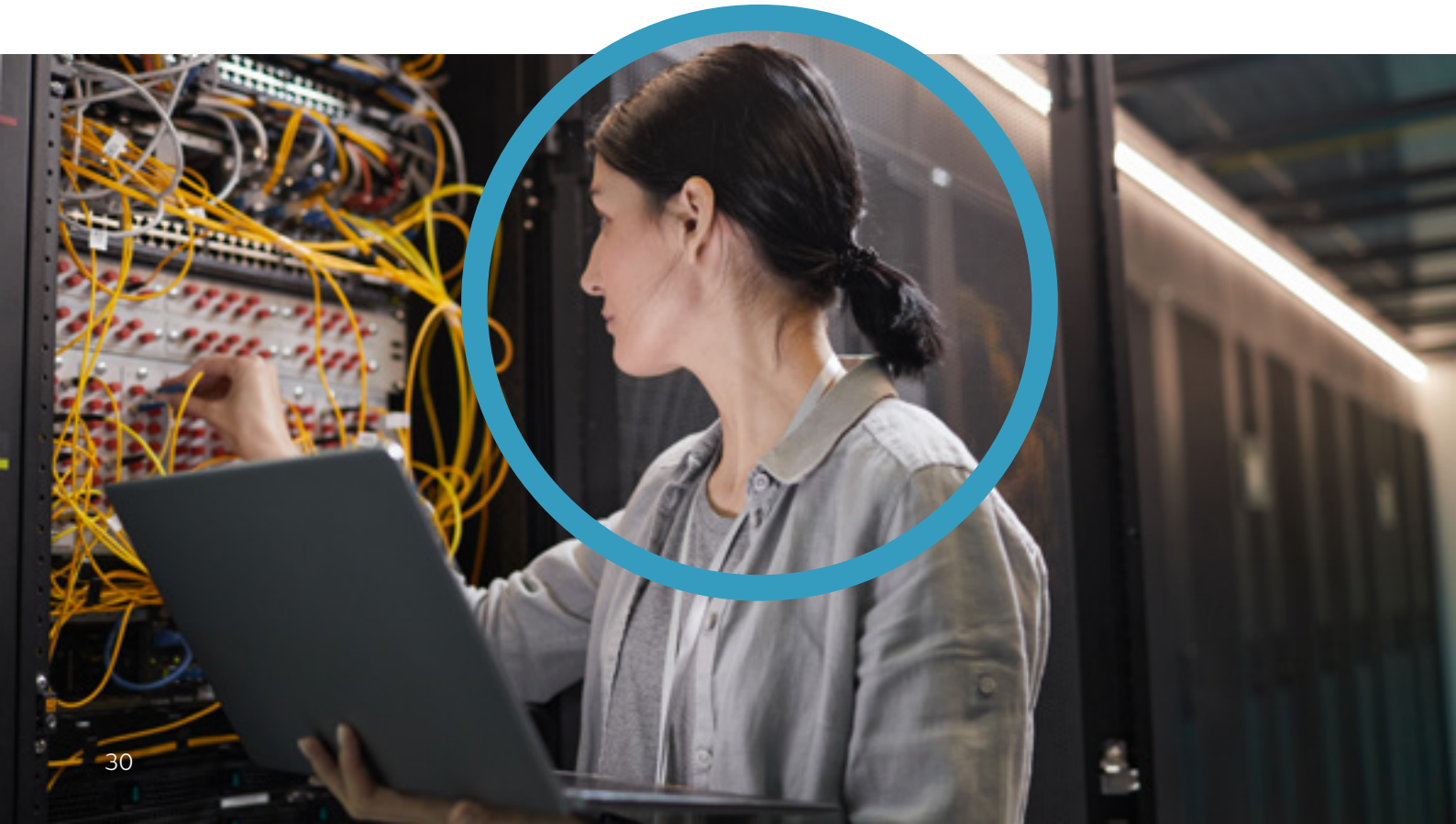
Delivering the future supercomputing capability is one of our strategic priorities. Supercomputing is a critical capability for the Met Office. It underpins both scientific advancement and the simulations that enable forecasts, projections, guidance and advice.

In February 2020, the government confirmed an investment of up to £1.2 billion for a state-of-the-art supercomputer to unleash the full potential of weather and climate data for the UK. In April 2021, a contract to deliver the following 10 years of compute and storage was awarded to Microsoft and together we set out to deliver a new and innovative approach to supercomputing, 'as-a-service'.

The implementation of this new service has faced delays predominantly due to pandemic related global supply chain issues. However, we are now set to deliver the first of two 'generations' commencing Autumn 2023 through to Spring 2024. The new supercomputing service will enable us to advance both scientific understanding and improve forecasts and projections. This leads to enhanced decision making by customers and associated social and economic benefits.

The investment is one of UK government's 'Government Major Projects and Programmes'. As such, the programme is overseen and assured by the Infrastructure Programmes Authority within the Cabinet Office. The programme also funds other activities that enable development and advances across the Met Office. This ensures that the data generated by the new compute and storage services can be exploited by downstream systems, analysis and ultimately, customers.

Whilst focused on delivery of our supercomputer upgrade, early planning for subsequent generation of supercomputing capability is already underway. This ensures that the Met Office is well placed for emerging scientific and technological advances in areas such as machine learning. The outcome of this strategic investment is also critical to enabling a number of our other strategic aims, including delivery of our Next-Generation Modelling Systems.



Replacing and increasing supercomputer capacity to...

Place UK expertise at the forefront of global weather and climate science

Strengthening:

- global leadership
- international partnerships
- our authoritative voice

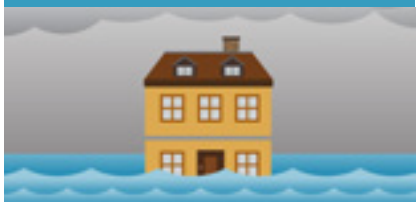
Further inform our understanding and analysis of climate change

Understanding the climate pathways for a resilient net zero world

Enhance UK resilience to severe weather in a changing climate

Helping government, businesses and individuals to stay safe and thrive

Improve our projections and knowledge of the consequences of climate change



Informing the measures needed to increase resilience to changing weather extremesand reduce impacts

Support economic growth and increased productivity

Through:

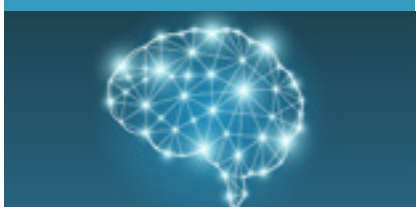
- evolving use of environmental data
- supporting weather sensitive technology

Drive technological innovation by UK business and industry

Especially:

- data science
- clean energy
- digital security

Sustain and grow world-leading science, technology, innovation and skills



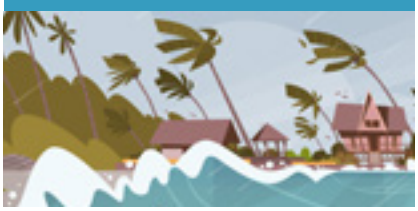
Including:

- data analytics
- artificial intelligence
- machine learning

Boost the socio-economic benefits to the UK economy

Amounting to billions of £s through more efficient and effective decision-making

Advance global resilience and security



Working with overseas partners and vulnerable nations

Extraordinary impact and benefit

This year we have assessed where our pioneering science and trusted services will provide global impact to serve UK government priorities, all of which is focused to help you make better decisions to stay safe and thrive. While we have seen changes to leadership, Prime Minister(s) and First Minister for Scotland, and a machinery of government change, our purpose is clear and our focus has sharpened.

With a new owning department (Department for Science, Innovation and Technology) and services we provide stretching across two other new departments (The Department for Energy Security and Net Zero and the Department for Business and Trade), our role within government as a scientific advisor for weather and climate is likely to deepen. In the last 12 months we have: become a Category 2 responder; issued the first ever red heat warning; provided consultation to support government with the energy situation across the winter including monthly briefings for the Cabinet Office; and, we have begun to establish our position within the National Situation Centre.

Our Public Weather Service Customer Group approved a new citizen engagement plan. This recognises the importance of our own direct services such as our website, app and social media - as the trusted provider when it matters - while acknowledging that people access information through a wide variety of sources. We have increased activity to reach citizens at the right time and place through other weather providers - working with them to embed our trusted data; use our content; and, associate our brand.

We continue to provide guidance to support Defence through the Ukraine conflict, deepening our strong engagement within UK Defence and beyond. We are exploring new opportunities to provide greater benefit to the international Defence community connecting and working with other government agencies and supporting NATO climate change activities. We are also working with the Ministry of Defence to evidence the value we provide to the UK economy – supporting one of our strategic actions.

Our engagement across existing and future transportation is gaining traction across land, air and beyond. We continue to support Network Rail with their weather resilience and climate change adaptation. We have also renewed a five-year contract with aviation showing faith in our UK and global provisioning to support the evolving requirements for weather and climate information for the industry. As a leading air navigation service provider and space weather prediction centre, we are supporting the UK space industry to help ensure the safety and reliability of space launch activities. This includes services to the SaxaVord UK Space Port.

Internationally, we are delivering global impact and supporting the government priority for collaboration on science and technology by representing the UK at international bodies and working with others on research and development activity. We have been recognised in the meteorological community as global leaders in climate services and our professional hand over of COP presidency at COP27. Our experts support other nations through the successful Foreign Commonwealth and Development Office WISER programme. The programme enables developing nations to build their own weather and climate capability.

This financial year we have started working more collaboratively to serve UK society and will continue to do so, distributing weather and climate information as widely and efficiently as possible into the hands of those that need it when they need it.

"In the last 12 months we have: become a Category 2 responder; issued the first ever red heat warning; provided consultation to support government with the energy situation across the winter including monthly briefings for the Cabinet Office; and, we have begun to establish our position within the national Situation Centre."

Ian Cameron
Markets Director

Our strategy in action: helping to ensure the UK's energy security

This winter rising energy prices have been top of mind for many of us. Energy security is a key priority for government, where weather has a direct impact on demand and usage. Against the backdrop of the global energy situation, government called upon us as weather and climate scientific advisors in advance of the peak period winter season.

Paul Davies, Principal Fellow Climate Extremes, and Adam Scaife, Principal Fellow Climate Science, worked with the Security of Supply Steering Committee to understand their needs and develop a tailored impact-based weather and climate outlook using pioneering science and probabilistic modelling to predict the direction of travel for the season ahead.

They continued to support the committee throughout the winter providing tailored operational briefings on the type of weather to expect over rolling two-week, one month and three month periods. This consultation supported cross-government groups, regulators and industry for operational decision making.

The briefings were attended by the Chief Executive of National Grid and OFGEM, providing further support to them over the winter in addition to the services we provide them direct. We support National Grid ESO in balancing supply and demand with information we provide helping them to predict usage and renewable supply from solar and wind.

Our pioneering science and trusted services supported government and industry and helped them to understand what impact the weather could have on supply and demand, which enabled them to make informed decisions for the benefit of UK citizens.

We live and breathe it.

Helping people make better decisions to stay safe and thrive is what we live for. Your needs guide our decisions and our wish to maintain your 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.

This year's highlights

Supported Network Rail to **understand the impact of hazards such as extreme heat and flooding on their infrastructure.** Set up an academy with the Network Rail, the industry, Newcastle University and their commercial weather provider MetDesk to protect UK rail passengers.

Extended our reach through others, enabling existing content to be accessible and usable by others through Dailymotion Videos. **Generating 650k global views in first month of operation, of which 450K are in the UK.**

A timely first ever **red heat warning enabled government, industry and citizens to act**. Action taken for the red warning at 98% and amber warning at 97% - the highest scores since records began in October 2012 beating the red warning (91%) for Storm Eunice in February 2022.

Held a joint **hackathon with Microsoft and ESRI**, covering topics of interest to technology clients. We provided both data and on hand experts to work on these challenges with the industry and technology providers.

Provided consultation to support government with next steps for **drone regulation in the UK.**

Launched **Climate Data Portal** in partnership with ESRI serving 32 data sets, via the ESRI platform to c.3000 GIS users.

Doubled the number of **climate briefings** to UK government thought climate hub.

Embedded **Met Office UKV data (our highest resolution model data) on windy.app** across the UK area with displayed Met Office logo.

KPI summary

KPI 1 - **Excellent people and culture**

EPC 1.1

Investing in a dedicated community of people leaders:

Simplification of roles and jobs - remove all roles and align jobs to People Framework.

EPC 1.2

Delivering our employee value proposition:

External benchmark of being a great place to work for - identify the external benchmark and produce an action plan to achieve.

EPC 1.3

Enhancing equality, diversity and inclusion:

Achieve a suite of stretching targets for increased diversity in Met Office recruitment (applications, interviews and hires) against gender, disability and ethnic origin.

Fully achieved
Not fully achieved

KPI 2 - **Exceptional science, technology and operations**

ESTO 2.1

Delivering our future supercomputer capability:

Ensure the supercomputing implementation does not negatively impact any operational and research availability standards.

ESTO 2.2

Delivering our next generation modelling system capability: (2 out of 3)

a) Delivery of LFRic model interface for the JEDI-based observations processing.

b) Delivery of a global NWP verification system for LFRic based on the new MET system.

c) Delivery of the means to run a cycling weather forecast workflow based on a global LFRic atmosphere, the current data assimilation system, the new JEDI-based observation processing system, and the new MET-based verification system.

ESTO 2.3

Building our next generation data factory:

Ensemble outputs (MOGREPS-UK) and IMPROVER data available for consumption on Service Hub and/or Weather Data Hub.

ESTO 2.4

Maintain our world-leading position in global and UK NWP forecasting and post-processing:

a) Long term trend in improving skill of large-scale circulation in our global ensemble predictions.

b) Long term trend in improving skill of weather metrics in UK ensemble predictions.

c) Report recommending a component of the KPI for 2023/24 that includes quality of post-processed predictions in the delivery chain.

KPI 3 - **Extraordinary impact and benefit**

EIB 3.1

Expert weather services:

a) Deliver timely, useful, and accurate warnings to the public and responder community to the more stretching PWSG PM1.1a target.

b) Increase in timeliness of release of warning baseline measure and target to be developed and signed off during June and used for the rest of the year.

EIB 3.2

Expert climate services:

a) Extend global impact, build on legacy of COP26 with share of climate voice metric within Public Perception Survey increase to 25%.

b) Increase the volume of climate services provided to UK Government to help track and target future growth in this sector.

EIB 3.3

Digital services:

Customers extracting value using Met Office operational data direct and from two external channels, evidenced by use cases demonstrating increased impact for example collaborator/ customer feedback or attribution.

EIB 3.4

Thought leadership:

a) Quality & Impact of Science Publications – Papers in Quality (Q1) journals & sustained improvements in citation impact measure relative to the rest of world.

b) At least six examples of thought leadership from across the ELT where we have exercised leadership at a national or global level to the benefit of the Met Office, which are exclusive of science paper citations (see 3.4a) and include topic of ensemble benefits.

EIB 3.5

Trust and engagement:

Basket of measures on trust, engagement and overall reputation of the Met Office.

KPI 4 - **Finance and environmental, social and governance**

FESG 4.1

Operating profit:

Budget baseline of £11.6m

FESG 4.2

Total revenue:

Budget baseline of £260.1m

FESG 4.3

Environment - net zero:

a) 12% reduction in business travel from FY2019/20 baseline

b) 52.8% reduction in overall carbon emissions from FY2019/20 baseline

FESG 4.4

Social:

a) A suite of Social value measures focusing on outreach

b) Develop and deliver the Force for Good Action Plan

FESG 4.5

Governance:

a) Arms Length Body Review – successful completion of the two stages of review

b) Capability Management - Agreed capability stances and plans for achieving

Equality, diversity and inclusion

We recognise that to achieve our purpose we need to have diversity in our organisation in its widest possible sense as well as an inclusive culture. In 2020, we launched our 'Equality, diversity, and inclusion strategy', which we reviewed in 2022 to ensure that it aligned with the Civil Service Diversity and Inclusion Strategy 2022-25. Our strategy articulates our vision, and our annual 'Equality diversity and inclusion action plan' outlines how we will deliver it.

In 2022 some of our achievements include being recognised as one of the top 50 best student employers by Rate My Placement and being shortlisted for our health and wellbeing work by National Highways.

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

We have increased our staff diversity declaration rates to 94% in March 2023 from 91% in March 2022, some directorates have declaration rates as high as 98%. We have achieved these changes by working with our Trade Union and staff networks both of which have helped us to explain to staff the importance of this information and how it is used.

Gender identity by Civil Service pay grades, 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%	0.2%	0.0%	0.0%	0.0%	0.5%
Grade 6	3.7%	1.9%	0.1%	0.3%	0.2%	6.1%
Grade 7	9.9%	7.6%	0.1%	0.4%	0.9%	18.8%
Senior Executive Officer	14.0%	11.0%	0.2%	1.5%	1.7%	28.4%
Higher Executive Officer	10.9%	8.3%	0.3%	1.0%	1.2%	21.6%
Executive Officer	7.4%	4.0%	0.4%	1.0%	0.6%	13.3%
Administrative Officer	2.3%	3.2%	0.2%	0.6%	0.0%	6.3%
Administrative Assistant	2.7%	1.6%	0.0%	0.6%	0.0%	4.9%

Figures are as per 1 March 2023 and are based on primary roles only. They include the following staff groups: staff, sponsored workers – tier two, apprentices and trainees and placements.
Note: table percentages are to 1 decimal place and the columns may not round to 100 percent overall.

Changes this year

We have seen a decrease in the % of overall headcount choosing 'prefer not to say' by **0.6%**

Similarly, the % of those not declaring by leaving the gender identity section blank have decreased by **1.7%**

The % of those who identify in another way has increased by **0.3%** (from 0.9% last annual report, to 1.2% this year)

Female identifying % has increased by **2.7%** (35% last annual report, now 37.7%)

Male identifying % has fallen by **0.8%**

The % of those in the lowest CS grade - AA - has increased by **3.1%** in the last year

AO has increased by **3.3%** and EO has increased by **4.2%**

The middle grades of SEO and HEO have fallen by **3.5%** and **4.4%** respectively, an overall decrease of **7.9%**

Grade 6 has fallen by **1.7%** and Grade 7 by **1.2%**

Senior Civil Servant has increased by **0.1%**

Our research in the last year identified that there were certain groups and demographics of the public that were less likely to have access to weather forecasts. We are taking actions as a result to ensure that such groups and demographics can be reached by the end of March 2024.

More information on our engagement and our people statistics can be found in our 'Equality diversity and inclusion annual report'.

Advancing equality of opportunity

We identified in 2022 that there was much work to be done for those with long-term health conditions (staff, candidates, and those we engage with). We have:

- Joined the Business Disability Forum so we can access specialist advice for our managers.
- Reviewed our workplace adjustments process and will be introducing workplace adjustments passports to all staff. This is in recognition that we all may require a workplace adjustment at some point in our working life.
- Organised an Empathy Lab to highlight how users with a range of disabilities may interact using assistive technologies, this has led to launching our '10 Steps to digital accessibility' guidance on how to make content accessible for everyone.

Gender pay gap

The gender pay gap shows the difference in the average pay between all men and women in a workforce and is different to equal pay. The Met Office gender pay gap for 2022 is 5.6%, this is a decrease of 0.9% from 6.5% in 2021. Factors affecting this movement include:

- Balance of instant performance recognition awards were proportionally higher to females than males.
- Higher proportion of promotions to female candidates
- Higher proportion of female joiners at higher grades.
- Increase in proportion of females earning allowances for shift working.

Our **Gender Pay Gap Report** provides further information.

Increasing representation of under-represented groups at all levels

In 2022 we created an ambitious multi-year Key Performance Indicator for increased diversity in recruitment. These indicators focus on disability, ethnicity and gender and focus on improvement from attraction to appointment.

We are making progress on this, much of the work in encouraging applicants to work in STEM (Science, Technology, Engineering and Maths) careers comes from our early careers engagement through industrial placements and summer placements. We have also just launched our first virtual work experience programme for 13-18 year-olds, enabling young people to gain an understanding of what we do, develop employability skills and learn more about available career pathways.

We have been shortlisted for the best work experience, internship or placement programme category as part of the 2023 Institute of Student Employers awards. This is based on our submission for our industrial placement programme 2021/22 and our future improvements.

Zero tolerance to bullying, harassment and discrimination

As members of the Exeter Community Safety Partnership, we signed the Safety of Women at Night (SWAN) Charter, to prioritise the safety of women and to take practical steps across our organisation to keep everyone safe.

Our internationals staff network has taken action against hate crime, by undertaking a survey to raise awareness. As a result, we are updating our equality diversity and inclusion hub to include information on how to report a hate crime and signpost to support services.

We used Anti-Bullying Week to highlight the work of our Dignity and Respect at Work Volunteers and to promote our zero-tolerance approach to bullying, harassment and discrimination.

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.

The environment and sustainability

Environmental sustainability

As an organisation, we are only too aware of the consequences of increased carbon or greenhouse gas (GHG) emissions and their impact on climate change. The Met Office is a major contributor to the work of the Intergovernmental Panel on Climate Change (IPCC). They have recently published their AR6 Synthesis Report: Climate Change 2023, based on the three reports that make up their sixth cycle of work looking at the physical science, impacts and adaptation and mitigation of climate change. Our own research and modelling show how challenging it has now become to keep global temperature rise well below 2°C and keep alive the target of 1.5°C.

Like all organisations, we can help address these challenges by reviewing our own activities and investigating how to reduce our own impact on the environment. Three years ago, we took the decision to chart our organisation's pathway to reducing our GHG emissions and map out a potential journey to Net Zero and fully remove our residual emissions.

We completed an initial analysis of our emissions for the financial year 2019/2020 to use as a baseline, so we could then identify the key steps along that pathway and start taking immediate action to reduce our emissions. We set an initial target to become carbon neutral by 2030 which we felt balanced our ambition with practical realities.

We knew that the methodologies to measure emissions and collate data would continue to evolve so we would have to review our estimates and targets as we gained experience. We also recognised that there were some aspects of our indirect (or Scope 3) emissions that we could not measure realistically at that point in time. Therefore, over the last year we have reassessed our overall baseline, or carbon footprint, to fill these gaps.

We have now included the emissions impact of the supply of satellite data, which is crucial to weather and climate forecasting, as well as the impact of the full supercomputing infrastructure that Microsoft are building for us.

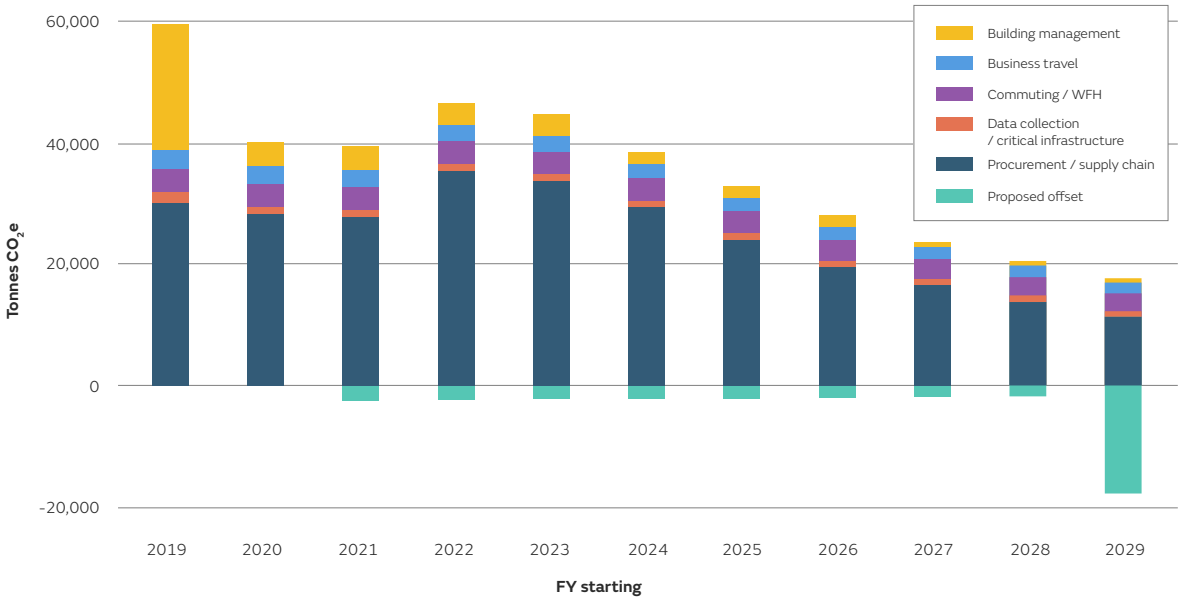
Now that hybrid working patterns have settled down following the pandemic, we have been able to incorporate commuting and working from home emissions for the first time. In addition, our calculations have been refined to include the latest emissions factors updated by the Department for Environment, Food and Rural Affairs (Defra), and some modest changes to our methodology to align more closely with the internationally recognised GHG Protocol standards.

This work was aided by independent consultants who endorsed our overall robust approach and agreed with the changes we have made. The consultants also flagged the ambitious nature of our 2030 target for carbon neutrality. Having reassessed our baseline, we believe that the target remains achievable and will help focus and galvanise action. However, we do recognise that achieving it will also depend on funding availability and the actions of our suppliers and partners, as we do not directly control the great majority of our remaining emissions.

This remains a fast-evolving area and we know that further refinement will be required in the next few years. For now, we have good confidence that we have captured a comprehensive assessment of the sources of our current emissions, and this provides a sound basis to plan our actions and work together, with our suppliers, over the next few years.

We divided the emissions we needed to tackle into the four categories above. It is now three years since we started our journey and we have made significant progress. There are still major challenges to address but our analysis has allowed us to focus on what can be done now and what to prioritise. Our remaining emissions remain harder to remove as there are currently no alternative technologies for some of our business-critical functions.

Met Office Pathway to becoming carbon neutral in 2030



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.

Environmental activity in the last year

As noted above, significant effort over the last year has focused on enhancing and building a robust emissions tracking model so we can monitor our progress and plan more effectively. At the same time, we have set and achieved corporate KPIs which really help focus efforts on our key activities.

Following our switch to zero carbon energy, one of the biggest components of emissions from our Exeter building has been our gas boilers. This year we have completed a full refurbishment of the boilers to make them more efficient. Once we have a full year's data available, we expect the overhaul to show a year-on-year reduction in consumption of gas of around 8%.

In the longer term, once the move of our supercomputing infrastructure off site has been completed, we will review the options to phase out gas entirely. The Met Office was an early adopter of installing electric vehicle (EV) charging points at its sites. It has been pleasing to see usage of these really start to accelerate in the last year. We plan to plan increase the number of chargers to ensure we stay ahead of likely further demand.

Three years ago we set targets for the reduction in business travel related

emissions. Part of our challenge here has been the international remit of our mission and the need to support an essential observation network spread right around the British Isles. Nonetheless, our staff have really embraced the targets we set, increasing the use of train travel (for example on trips to our European partners) and holding more virtual meetings, taking advantage of the increase in hybrid conferencing following the pandemic. The net result is that we remain well on target to reach the significant travel emissions reduction we set for 2030.

The enthusiastic support for our work from our colleagues has been a real positive. We had an excellent response to our commuting and hybrid working employee survey, which allowed us to review changes since an earlier survey taken as we went into the COVID lockdown. This showed us we had a 41% reduction in our commuting emissions, however combined with the increase in working from home emissions, the overall decrease was 18%. We also now had robust enough data to include in our baseline and to allow us to start planning how to reduce these further.

We have published a regular series of articles for staff, on a range of sustainability issues which has really helped engage them, stimulated discussion and generated new ideas that we can incorporate in our future plans. We have a particularly strong contingent of employees who advocate cycling to work. This was a huge factor in helping us win the prestigious Love to Ride Cycle September challenge at both national and global level. Our employee cycling network has also engaged proactively with Exeter City Council, one of the most forward looking in the country, on future traffic and commuting planning.

Like many organisations, we are now in a position where the bulk of our emissions come from our partners in our supply chain. A real focus this year has been to engage with our major suppliers to ensure we understand their plans, and to work with them to see where we can share best practice and refine our estimates of our share of their emissions.

Next year, part of our KPI will be based around the level of engagement and progress we make with these top suppliers. Previous engagement has already led to several meetings with our core European partners such as the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) and the European Centre for Medium Range Weather Forecasts (ECMWF), as well as the World Meteorological Organisation (WMO).

We have been keen to take the lead with these organisations, that serve our counterparts in the wider international meteorological industry, so that we can all benefit from joint action to reduce emissions. Our thought leadership has also involved engagement with a number of major technology suppliers, and we have contributed actively to cross government forums. By encouraging discussion and collaboration, we can share best practice, and all learn from each other.

This year, we have once more offset the emissions of our business travel. 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. Our own analysis from the Met Office Hadley Centre supports this view.

The offsets we have used have been certified to the highest standards by the International Carbon Reduction and Offset Alliance and Verified Carbon Standard. Nonetheless, offsetting remains a complex and evolving area. We would like to investigate the options for nature-based offsetting here in the UK. This could help engage staff, align with wider government objectives for the environment and help stimulate UK growth, but there are currently limited certified options.

We have continued our focus on maintaining a sustainable environment right across our estate. We retained our Wildlife Trusts' Biodiversity Benchmark Award for our Exeter site once again, having celebrated our 10th anniversary last year, and have continued to encourage thriving and diverse habitats despite the limited size of our Exeter property. The long-term commitment to our own environment was rewarded with a record number of animal, bird and plant species being identified on site, which include six-spot burnet moths, kingfishers and bee orchids. Our staff also voted to support sustainability by choosing to support The Wildlife Trusts as our corporate charity for the next three years.

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.

Sustainability report

Overall strategy for sustainability

As outlined above, 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 maximising our contribution to the wider community.

During the year we have continued on our pathway to achieve carbon neutrality by 2030. Our overall approach is outlined above, below 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 and progress is reported centrally in the GGC Annual Report.

Greenhouse gas emissions (GHG) – Exeter and frontline sites		FY19/20	FY20/21	FY21/22	FY22/23
Non-financial indicators (tCO_2e)	Total gross emissions for scopes 1 & 2 (including white fleet)	16,483	14,659	13,375	**12,263**
	Fugitive emissions (refrigerant gas leaks from cooling units/systems)	299	265	55	**0**
	Gross emissions scope 3 - business travel (less white fleet)	2,207	96	280	**1,025**
Related energy consumption (MWh)	Electricity: non-renewable – see Performance Commentary	59,836	56,595	57,745	**58,670**
	Electricity: renewable – see Performance Commentary	-	-	-	**-**
	Electricity: good quality combined heat and power (GQCHP)	-	-	-	**-**
	Self-generated renewable (solar PV installation at HQ site)	253	229	252	**244**
	Natural gas	5,569	5,177	5,196	**4,396**
	Gas oil (diesel)	11	1,924	12	**24**
Financial indicators (£)	Expenditure on energy	7,731,729	7,633,897	7,991,965	**9,695,403**
	Expenditure on accredited offset purchases	N/A	N/A	17,935	**18,750**
	Expenditure on business (administrative) travel	1,894,015	213,037	389,054	**1,396,825**

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.

For the last three years we have used a mix of renewable and zero carbon nuclear tariffs available to us through our Crown Commercial Services supplier EDF. For the FY22/23 this has been the EDF Zero Carbon for Business 100% which is 100% nuclear. For our overall emissions monitoring we use standard industry definitions for monitoring our energy consumption. However, as a Central Government funded body, for the purposes of GGC and this annual report we report our energy usage using standard UK electricity grid emissions factors.

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. In this financial year, there were no losses.

Gas consumption has reduced by 15% due in part to the full refurbishment of our gas boilers to make them more efficient, and also due to stopping

using gas for cooking in our restaurant. Gas is used to heat our building and despite low occupancy due to COVID we did not see a significant reduction. This was 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 this year was for maintenance work. In financial year 2020/21, there was an increase in diesel usage. This was because the standby generators came online to provide power for the supercomputers during a power interruption at our Exeter HQ.

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

Travel

Travel began to increase during this financial year after the reduction due to the COVID restrictions. However, we have put in place measures to reduce air travel and continued to use technology to facilitate virtual meetings.

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.

As well as being one of our Net Zero KPIs, a reduction in staff business travel is a focus of the GGC. 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 offset our expected business travel emissions through ClimateCare's certified scheme facilitated by our travel provider Clarity. This saw us offset 1,500 tonnes in this financial year.

Waste and recycling

Our total waste arising at our Exeter site has increased since last financial year but we have continued to achieve high recycling and recovery rates and have consistently achieved less than 5% of our waste going to landfill in line with the GGC. The landfill waste in this financial year was the disposal of old carpet tiles for which, due to their age, there were no re-use, recycling, or recovery options.

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

Waste		FY19/20	FY20/21	FY21/22	FY22/23
Non-financial indicators (t)	Total waste arising	171.2	53.3	121.1	**166.8**
	Recycled and re-used	117.8	40.1	99.2	**128.4**
	Information communication technology waste recycled and re-used (externally)	19.6	5.2	9.5	**10.8**
	Composted	19.2	11.5	17.5	**12.5**
	Anaerobic digestion	28.0	2.7	3.6	**8.5**
	Incinerated/energy recovery	25.1	10.3	17.0	**18.2**
	Landfill	0.2	0.2	0.9	**3.7**
Financial indicators (£)	**Total disposal cost**	**40,754**	**40,754**	**40,754**	**40,754**

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			FY19/20	FY20/21	FY21/22	FY22/23
Non-financial indicators (m^3)	Water consumption	Imported (potable)	33,693	19,773	17,330	**23,631**
		Abstracted (borehole)	20,534	27,508	28,209	**28,514**
		Grey water (harvested rainwater)	-	-	-	**-**
		Recycled water (discharge from cooling towers)	5,498	3,246	2,279	**1,999**
Financial indicators (£)	**Water supply costs**		**64,897**	**39,936**	**35,480**	**47,479**

ICT and Digital

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 Information Communication Technology (ICT) reporting. We deliver an annual ICT and digital footprint, waste and best practice data.

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 on our estate and, in 2022, we passed the 500 species threshold of flora and fauna in our Exeter grounds.

We continue to hold The Wildlife Trusts' Biodiversity Benchmark award for our Exeter site. We manage our grassland to benefit different butterfly species and to promote botanical diversity. We collect observational data from our regular butterfly transects, bird surveys and reptile refugia checks. We also plant native trees which included planting a native Oak tree at our Exeter headquarters in November 2022 as part of the Queen's Green Canopy project.

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 27% of spend in the last financial year. 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. As part of this work they have mandated the use of Theme 3; Fighting Climate Change, in all over threshold contracts where relevant and proportionate as well as embedding the Social Value Model into commercial processes. A Social Value Toolkit has been developed along with a Social Value charter ensuring that Social Value is embedded throughout the procurement process.

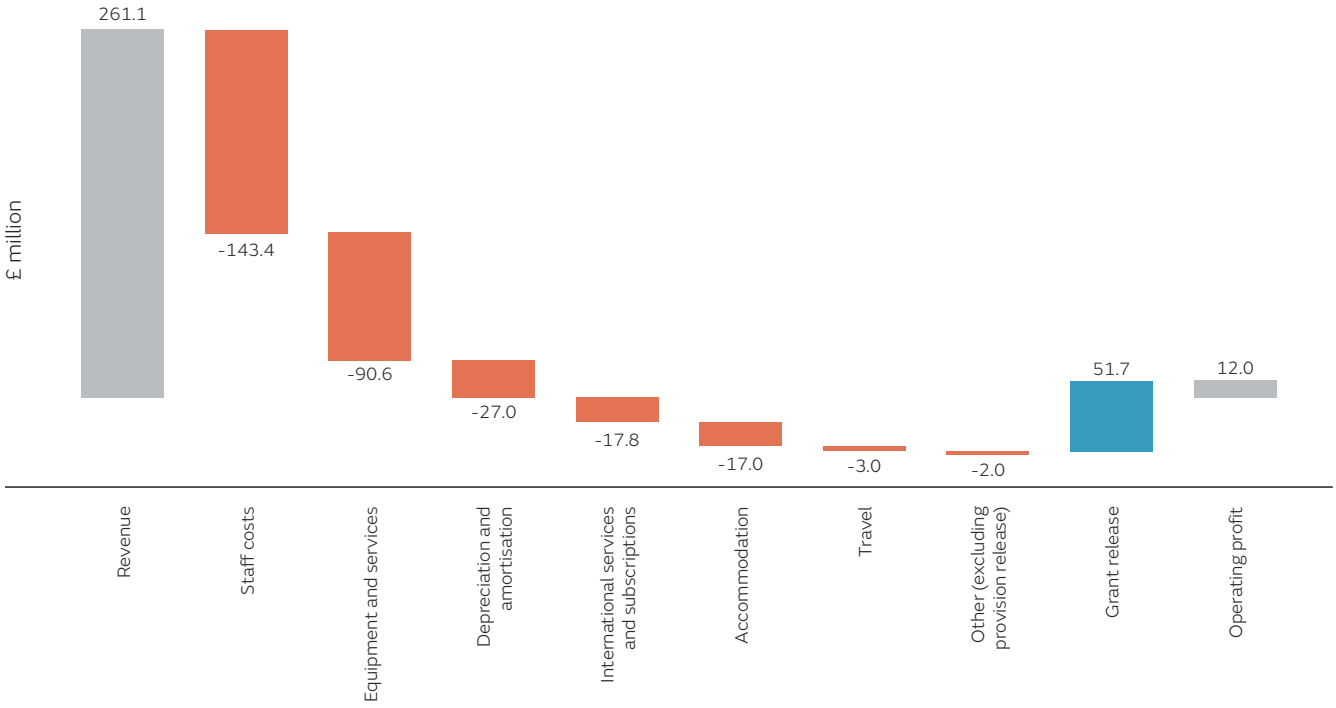
Financial review

Summary

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

Key performance indicators (KPI)	Target (£m)	Achieved (£m)
Total revenue	260.1	261.1
KPI profit	**11.6**	**12.0**

Operating profit



Revenue

Total revenue was £2.6m higher than in 2021/22. The Amazon FACE project (a real-world climate experiment to build understanding of the Amazon rainforest's response to environmental change) recognised an additional £3.4m in revenue as key milestones were delivered. This was offset by a reduction in revenue associated with RIMNET (radioactive incident monitoring network) services, as this service transitions to the Radiological Response and Emergency Management System (RREMS) managed by the Department for Energy Security and Net Zero. An increase in revenue recognised under our core Public Weather Service contract of £4.9m, was offset by a decrease in one off BEIS funding for individual projects received in 2021/22 of £5m.

Operating costs

Total operating costs increased by £2.2m with an increase in underlying costs of £27.8m which is offset by increased use of grant funding of £25.6m (£51.7m in 22/23, £26.1m in 21/22). The increase in grant utilisation of £25.6m reflects progress made in delivery of the future supercomputer.

The cost of services and equipment increased by £18.1m from £72.5m to £90.6m which reflects the progress made on preparing and implementing the future supercomputer. Staff costs increased by £10.7m from £132.7m to £143.4m. £5m of the increase in staff costs was due to increases to pay, £4.2m to increases in the number of staff employed and the remainder to associated increases in social security and pension contributions.

Dividend

Total dividend payable to our owner, DSIT, is £8.5m (2021/22 £8.5m).

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 the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) for the funding of meteorological satellite programmes.

Cash balances held reduced from £99.3m to £56.2m. Operating activities generated a cash surplus of £17.1m. This includes £34.7m of supercomputer grant funding received, of which £18.2m has been carried forward. Payments to acquire assets, particularly payments to EUMETSAT, were £50m. Continued investment in EUMETSAT programmes was partly funded by loan funding received of £33.0m. Repayments and interest on previous loans totalled £32.2m. The agreed 2021/22 dividend of £8.5m was also paid.

Borrowing

Under the Met Office Trading Fund Order and Framework Document, the sole provider of loan funding is the Met Office's sponsor department, DSIT. Therefore, exposure to liquidity risk is limited to these arrangements. As at 31 March 2023, £235.2m in loans were outstanding (31 March 2022, £230.4m). Loan funding requirements are anticipated to continue in future years to finance the UK contribution to the EUMETSAT satellite programmes.

Risk review

We identify and manage risks that could prevent us delivering our strategy and mission to protect our colleagues, customers and the communities that we serve, while ensuring we are able to deliver our strategy.

Effective risk managment is part of a robust corporate governance framework which provides assurance to stakeholders that their investments are in safe hands and is a necessary ingredient for the improvement of business performance and organisational success.

A fuller explanation of how our risk management processes operate is included in the Governance Statement.

The following table outlines the risks from our 'Corporate risk register' that have been the recent focus of our risk management. These risks usually extend beyond the financial year, and they are tracked and subject to regular reporting to ensure the long-term success of our strategy.

Corporate Risk	Risk commentary
Red risks: HIGH PROBABILITY AND/OR IMPACT	
Supercomputing Generation 1 delivery and Benefits Realisation, and Next Generation Modelling Systems	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.
Capacity and capability	Ensuring the skills, knowledge and competence of the workforce match our needs to deliver our strategic objectives, during a period of challenging recruitment of staff with specialist skill sets.
Amber risks: MEDIUM PROBABILITY AND/OR IMPACT	
Cyber security and resilience	We are entirely dependent on IT to complete our mission. Cyber security threats (both internal and external), leaves infrastructure at risk of disruption and potentially unable to deliver our life critical services.
Health and safety	Ensuring our organisational 'Health and safety strategy', governance and accountabilities are effective to ensure the safety of Met Office employees or other key stakeholders.
Arm's Length Body Review	If the Met Office had a different organisational structure, we could lose flexibility in what we were able to do, which would undermine our ability to deliver our strategy objectives. We could suffer cost cuts or efficiency changes that would compromise our ability to deliver the supercomputer transformation and support ongoing service to our customers and the public.
Change readiness	If we do not have the collective ability and culture to keep pace and embrace changes at the rate required then we may not be able to achieve our goals, potentially resulting in a lower return on our investments and an inability to realise our corporate vision through and with our people.

Professor Penelope Endersby
Chief Executive
14 July 2023

Corporate governance report

Directors' report

The following items, required as part of the Directors' report, are included in the Governance Statement on page 52:

- 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 2022/23 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 2023 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 our owning government department 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

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.

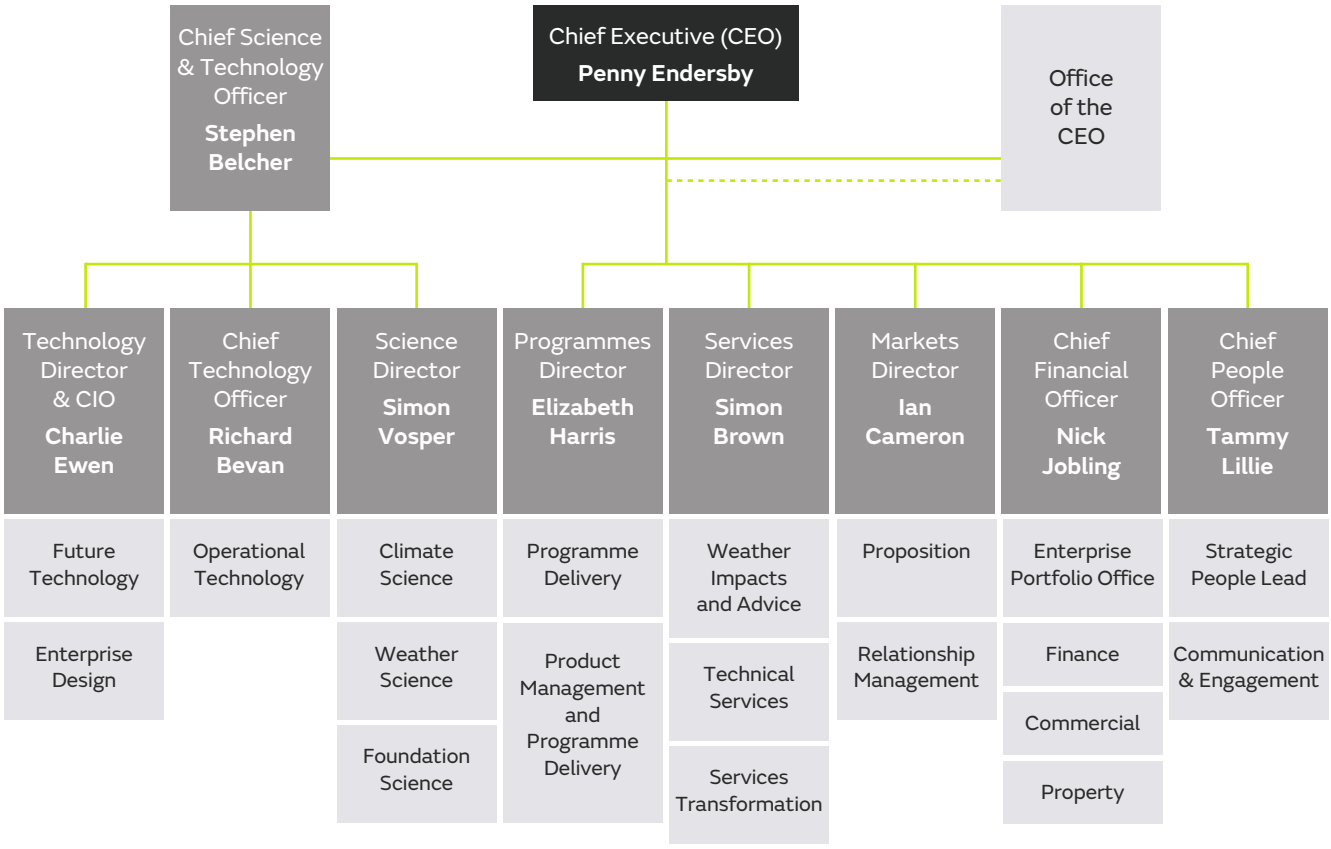
Our governance structure - Executive management

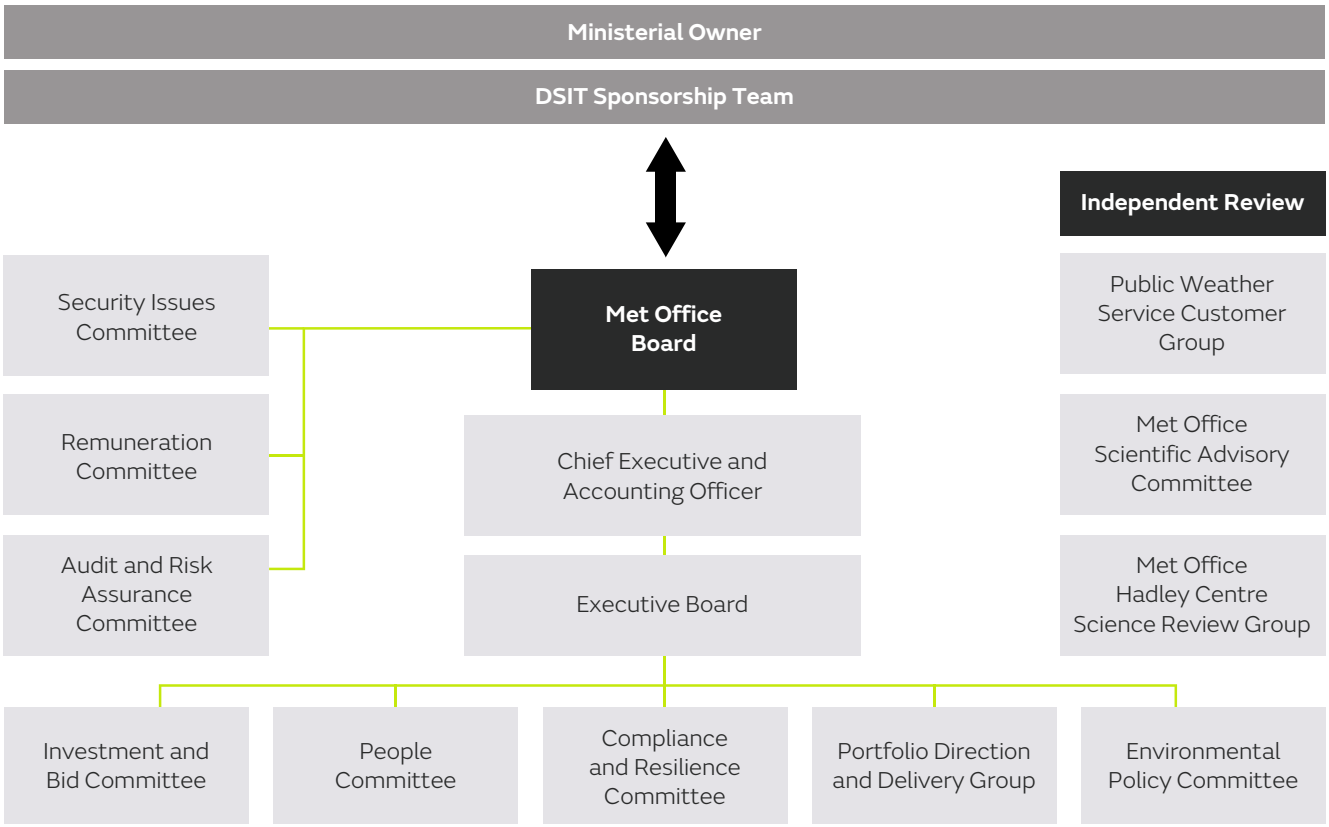
My colleagues and I, as members of the Executive Board, remain accountable to and open to challenge, advice and scrutiny from the Met Office Board. In turn, both the Executive Board and the Met Office Board are accountable to and act under delegated authority from our Ministerial Owner at the Department for Science, Innovation & Technology (DSIT).

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.

The Executive Board and I are responsible for formulating, developing and agreeing the Met Office's strategy with the Met Office Board and our Ministerial Owner at DSIT. The Executive Board and I have ensured there is a clear allocation of roles and responsibilities within operational Directorates to facilitate the implementation of the 'Corporate plan' and Key Performance Indicators which are used to measure delivery of our strategic objectives. The Directorate structure is designed to ensure the outputs of our science 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 users and customers.

The Executive Board brings together the activities of the Directorates, co-ordinating the oversight and delivery of our business operations. Five Executive Committees (Investment and Bids, People, Compliance and Resilience, Portfolio Delivery and Direction and Environmental Policy) have supported the Executive Board in its management and implementation of its responsibilities, facilitating communication and decision-taking for issues that cut across Directorates.





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.

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 incorporate a diverse and appropriate range of leadership experience, business backgrounds, technical skills and viewpoints to help guide the Met Office's strategy. Board members' specialisms include meteorology, science and data, customer and commercial management, as well as experience of financial reporting, organisational controls and people management. 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 sponsor department representative sits alongside the independent NEDs, and, in addition, a Trade Union representative has right of attendance at Board meetings.

There have been no new appointments of independent directors to the Board. However, our sponsor department representative, James Partington, stepped down after a number of years on the Board at the end of 2022 and was succeeded by David Sandford. David Sandford was subsequently replaced by Adam Jackson following the change of the Met Office's owning department to DSIT.

Work of the Met Office Board and Committees

Met Office Board activities in 2022/23

During 2022/23, the Met Office Board held six regular Board meetings. A summary of each Board meeting is published on the Met Office website. In addition, the Board holds a strategy day, allowing Directors dedicated time to debate the development of the Met Office's strategy.

The relaxation of COVID-19 restrictions made it easier to hold Board meetings in person this year. Two meetings and the strategy day were held in Exeter, allowing Non-Executive Directors to meet a wider range of Met Office staff. The Board has always been keen to engage with key stakeholders, to understand their business models and requirements as well as to promote the Met Office's capabilities. This year Transport Scotland kindly hosted a Board meeting at their control centre overlooking the Firth of Forth and Microsoft welcomed us to their UK Headquarters at Paddington in November. As noted last year though, we have agreed to hold some virtual and hybrid meetings to reduce carbon emissions and the associated transport costs as well as saving travelling time. Two Board meetings were held on this basis, as well as a number of Committee meetings.

As noted above, a key role of the Board is to work with the Executive to develop and refine the Met Office's strategy. The focus of this year's strategy day was to look at the implications of the Supercomputer Exploitation Programme and the organisational transformation required to adapt to new ways of working – from the people and skills required to the capabilities needed to exploit new technology and ever-increasing volumes of data that will be required to deliver new weather and climate services to customers in the future. This session was also supplemented by ongoing strategic discussions during regular Board meetings. These covered the development of the Impact and Benefit Strategy, one of our three strategic 'anchors', as well as the potential to develop strategic partnerships with major US meteorology organisations and leading technology companies. The Board have also worked closely with their Executive colleagues to structure the Key Performance Indicators to ensure they reflect and measure the Met Office's strategic intent effectively.

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 the largest investment programme the Met Office has ever undertaken, the Board has received regular reports on the implementation of the first generation of the new supercomputer in partnership with Microsoft. Delays have been encountered, predominantly as a result of COVID-related issues in global supply chains; Board reports outlined actions taken to replan the delivery schedule to optimise socio-economic benefits over the 10-year span of the programme. Reports on the 'Supercomputer exploitation programme' were submitted in parallel. A number of options are still being considered

for the most effective technology infrastructure to help exploit and deliver data services and support for our customers in the future and to stimulate economic growth. The Board have also considered what longer-term opportunities the new supercomputing infrastructure could enable in partnership with Microsoft and other international partners.

- **The Met Office's 'People strategy'** - The Board receives regular 6-monthly reports from the People Directorate. These outlined the progress being made in a number of areas such as developing management and professional skills and improving diversity and the gender pay gap. The reports also highlighted the challenges the Met Office has faced in recruiting and retaining key staff, which have been exacerbated as inflationary pressures and pay rises in other parts of the economy have constrained the competitiveness of Met Office remuneration. The Board has continued to focus on the wellbeing of staff as the restrictions of the COVID-19 pandemic have eased. At the same time staff have adapted well to hybrid working. The organisation has shown good flexibility and teams have agreed charters for their ways of working which balance the needs of individuals, the team dynamic and their particular work requirements. The Board reviewed the results of the annual Civil Service People Survey, which confirmed very positive overall engagement levels from staff despite some wellbeing challenges and concerns over remuneration. The Board also considered the skills and capabilities that will be required as the Met Office evolves, both in terms of new ways of working and as a result of changes the new supercomputer programme will introduce.
- **The Met Office's 'Research and innovation strategy'** - The Board keeps the Met Office's pioneering science and technology developments under regular review. The annual Met Office Scientific Advisory Committee and the Met Office Hadley Centre Science Review Group meeting reports provide robust assurance that the Met Office is delivering to the strategy; the Chairs of both fora attended the Board to report back. The Board also received a briefing on the Met Office Academic Partnership prior to a visit to one of the participating universities later in the year. The challenges of transforming the Met Office's technology infrastructure were well aired with sessions focused on the cloud computing landscape, developments in machine learning and the Met Office's programme to retire its legacy technology as the new supercomputing infrastructure comes into operation.
- **The Met Office's 'Impact and benefit strategy'** - The Board has introduced regular seasonal reviews of the accuracy and effectiveness of its forecasts. Particular attention was paid to the forecasting and impact of the record-breaking heatwave in the summer. Later in the year the Board discussed the Met Office's important role supporting civil contingencies, reflected in the Met Office's formal recognition as a Category 2 Responder. The Met Office is also identified as 'owner' of four risks on the refreshed National Risk Register and contributes to managing and mitigating many others. Vice Admiral Duncan Potts, Chair of the Public Weather Service Customer Group, joined the November Board meeting to discuss the effectiveness of the Met Office's reach and engagement across different sections of the public; this meeting also benefited from a presentation on the strides that have been taken in the arena of social media and digital communications. The Board also looked ahead at the increasing demand for and potential to expand climate services. The Board is always keen to meet customers to understand how they perceive the impact and benefit of Met Office services. Two customers who attended Board meetings this year were Transport Scotland and the Scottish Environmental Protection Agency.
- **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. It approved an updated five-year Corporate Plan, which outlines key steps and objectives in delivering the Met Office strategy. 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. As well as a dashboard which covers progress on financial, strategic and KPI delivery, there are regular detailed reports on all aspects of people management, and health, safety and wellbeing. The people report in particular has improved enormously over the last few years with a rich representation of all aspects of the Met Office's workforce.

As I noted last year, the Met Office was subject to a legal challenge relating to the procurement of the new supercomputer. The Board were kept closely abreast of progress until the case was resolved in June, with no admission of liability by either party. Following the conclusion of the challenge, BEIS commissioned an independent review of the procurement and legal process across all parts of government. This confirmed that procurement rules had been

followed and that robust governance was in place. The review identifies a number of lessons which could be drawn from the process and the Board has asked that such of these as are relevant to the Met Office are applied to future procurements where appropriate. To support the Met Office a Commercial Senior Civil Servant is now providing advice as a critical friend for the Supercomputer programme.

The Board's oversight, supported by the Audit and Risk Assurance Committee (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, such as health and safety. Cyber security is an area where there remains significant external and geopolitical risks; this was considered following in-depth reviews at ARAC meetings. The Board also takes a keen interest in the Met Office's equality, diversity and inclusion work, and benefitted from illuminating sessions with members of staff networks. A report was presented on the Met Office's work to improve sustainability and reduce its emissions on its own journey to Net Zero. The Met Office's social value work, aligning with its 'force for good' value, was exemplified by a session highlighting the success of its educational outreach programme.

Audit and Risk Assurance Committee

The Audit and Risk Assurance Committee (ARAC) supports the Board and Accounting Officer 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 audit, which was delivered by the National Audit Office through an outsourced arrangement with KPMG, and that of internal audit. It 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. In addition, the committee received specific reports on fraud investigations in respect of the actions of third parties against suppliers, and a lessons learned report following the legal challenge to the supercomputer procurement.

In addition, the Committee received compliance reports on counter fraud, data protection and health and safety.

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 2021/22 and to set objectives for 2022/23.

Security Issues Committee

The Security Issues Committee met in September 2022 and March 2023. It has oversight of those Met Office operations that operate at higher levels of security and help support a number of government agencies. With a heightened level of geopolitical tension in the last year, those areas of the Met Office the Committee oversees made a particularly significant contribution to wider government work during the year.

Owning Department and Sponsorship Team

For a number of years, the Met Office has been an Arm's Length Body of the Department for Business, Energy and Industrial Strategy (BEIS). Towards the end of the financial year, the Prime Minister announced changes to the 'Machinery of Government', involving the creation of four new government Departments. As part of these changes, the Met Office transferred to the new Department for Science, Innovation & Technology (DSIT).

We will also maintain strong links with the new Department for Energy Security and Net Zero (DESNZ), where the parts of BEIS that oversaw the Met Office Hadley Centre Climate Programme and space weather services have transferred.

An owning department's Sponsorship Team is central to ensuring an Arm's Length Body's focus and activities are aligned with government objectives. The Sponsorship Team also advises Ministers on the management of the Government's interest in the Met Office. In recent years the Met Office had developed strong relationships with its Sponsorship Team who have now moved to the Department of Science, Innovation and Technology (DSIT). Transferring Sponsorship Team members will provide continuity in the relationship with Met Office's owning Department. A DSIT representative sits on the Board and its Committees, as was the case when the Met Office was part of BEIS.

Arm's Length Body Review

As part of the Public Bodies Review Programme, central government asks sponsoring departments to conduct reviews of their Arm's Length Bodies (ALBs) on a periodic basis. These aim to provide assurance that ALBs continue to provide a valuable service to the British public ensuring:

- they continue to fulfil a role with a clear purpose and have an appropriate structure,
- are effective, efficient and aligned to Government's priorities, and
- well governed and properly accountable for what they do.

The Met Office was selected for review in 2022/23. I am pleased to report that the review concluded that:

- The Met Office's role remained both useful and necessary with a clear purpose, as demonstrated by the range of services the Met Office provides, its contribution to critical government work and the provision of essential forecasts to the public and civil contingency infrastructure.
- The Met Office structure as an Executive Agency and Trading Fund remained an appropriate and effective mechanism for funding its technological and scientific research as well as delivering services to a wide range of public and private sector UK and international customers.
- The Met Office's governance remained robust and fit for purpose.

These conclusions were supported by an assessment of the Met Office against the Public Sector Research Establishment (PSRE) Value Framework. This was reviewed and endorsed at the time by BEIS's Chief Scientific Advisor.

The review identified some minor improvements that we will implement in the next year. In addition, it identified there was potential to increase awareness and extend the use of the Met Office's research and services across DSIT, wider government and broader climate science organisations. It recommended that we explore these opportunities to extend the reach of our work, particularly in the arena of climate science.

Additional review bodies

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

- **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 Executive. The PWSCG is chaired by Vice Admiral Duncan Potts and its Annual Report is available through the Met Office website.
- **Met Office Scientific Advisory Committee (MOSAC)** – provides an independent assessment of the quality and relevance of the Met Office's 'Research and innovation strategy' which underpins our weather, climate and oceanographic services. The Committee comprises external independent experts in the field of climate science, meteorology, oceanography, numerical weather prediction, data sciences and technology 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 DESNZ 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.

Board and Committee attendance for the period 1 April 2022 to 31 March 2023

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		6	4	2	2
Non-Executive Directors					
Rob Woodward Chair		6/6	4/4	2/2	2/2
Adam Jackson DSIT Appointed Director	From 1 March 2023	1/1	1/1	-	1/1
Professor Alan Thorpe		6/6	4/4	-	-
James Partington BEIS Appointed Director	Until 30 Sept 2022	1/3	1/2	1/2	-
Hunada Nouss Chair of ARAC		6/6	4/4	1/2	1/2
Catherine Quinn Chair of Remuneration Committee		6/6	4/4	2/2	2/2
Professor Jordan Giddings Chair of SIC		6/6	-	2/2	2/2
Anusha Shah		5/6	-	2/2	-
Christine Ourmières-Widener		5/6	1/4	1/2	-
Executive Directors					
Professor Penelope Endersby Chief Executive		6/6	4/4	2/2	2/2
Nick Jobling Chief Financial Officer		6/6	4/4	-	-
Professor Stephen Belcher Chief of Science and Technology		6/6	-	-	-
Tammy Lillie People Director		5/6	-	2/2	-
Charlie Ewen Technology Director, Chief Information Officer		5/6	-	-	-
Simon Brown Services Director		6/6	-	-	-

NOTES:

1. The Met Office Board held six regular Board meetings during the year.
2. A Board strategy day was held on 14 June 2022. In addition, this was preceded by a short additional board meeting.
3. James Partington stepped down as BEIS representative after the meeting on 29 September 2022.
4. Jane Lancastle attended four Board Meetings as the Prospect Union Representative.
5. 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.
6. Penny Holt (Chief Financial Officer at the National Physical Laboratory) remained as a co-opted member of ARAC to continue the provision of additional financial expertise and attended all four meetings.
7. Paul Riches attended the Board instead of James Partington in June, David Rawlins attended the Board instead of James Partington in July, Felicity Howe attended in November.
8. David Sandford took over as BEIS appointed Director and attended the Board meeting on 2 February 2023 . As he then transferred to DESNZ he stepped down and was replaced by Adam Jackson as the DSIT appointed Director. There was therefore an owning department representative at all six Board meetings.
9. Paul Riches attended ARAC instead of James Partington in May and Felicity Howe attended in November so there was an owning department representative at all four meetings.
10. David Rawlins attended the Remuneration Committee instead of James Partington in May.
11. The National Audit Office appointed agents are invited to attend ARAC meetings where applicable and have attended all four of the meetings.

Evaluation of Board performance

The performance of the Met Office Board and the Audit and Risk Assurance Committee (ARAC) is evaluated each year. Following an external evaluation the previous year, an internal effectiveness review was conducted this year, based on a questionnaire followed by one-to-one sessions with the Chair. The review indicated continued effective functioning of the Board. We have fostered positive boardroom dynamics, promoting transparency and an environment that facilitates open and constructive, but challenging, debate. We have also established 'buddy' relationships between the Non-Executive and Executive Directors. The relationship between the Chair and the Chief Executive is central to boardroom dynamics; I have greatly valued Rob Woodward's support and guidance and it was pleasing that other Board members perceived this as beneficial to wider Board effectiveness. The main area for development recommended by the review was to build more clarity around our longer-term 'Horizon C' strategy. We will focus on this at our forthcoming strategy day. The review of ARAC was also positive, indicating effective oversight of the organisation's financial position, risk management and assurance framework. The Committee's work was supported by good quality financial information and transparent and timely reporting of developing risks and issues. The actions stemming from these effectiveness reviews are tracked and implemented over the next year.

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 their 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 2022/23 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 2022/23 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 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.

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 November 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.

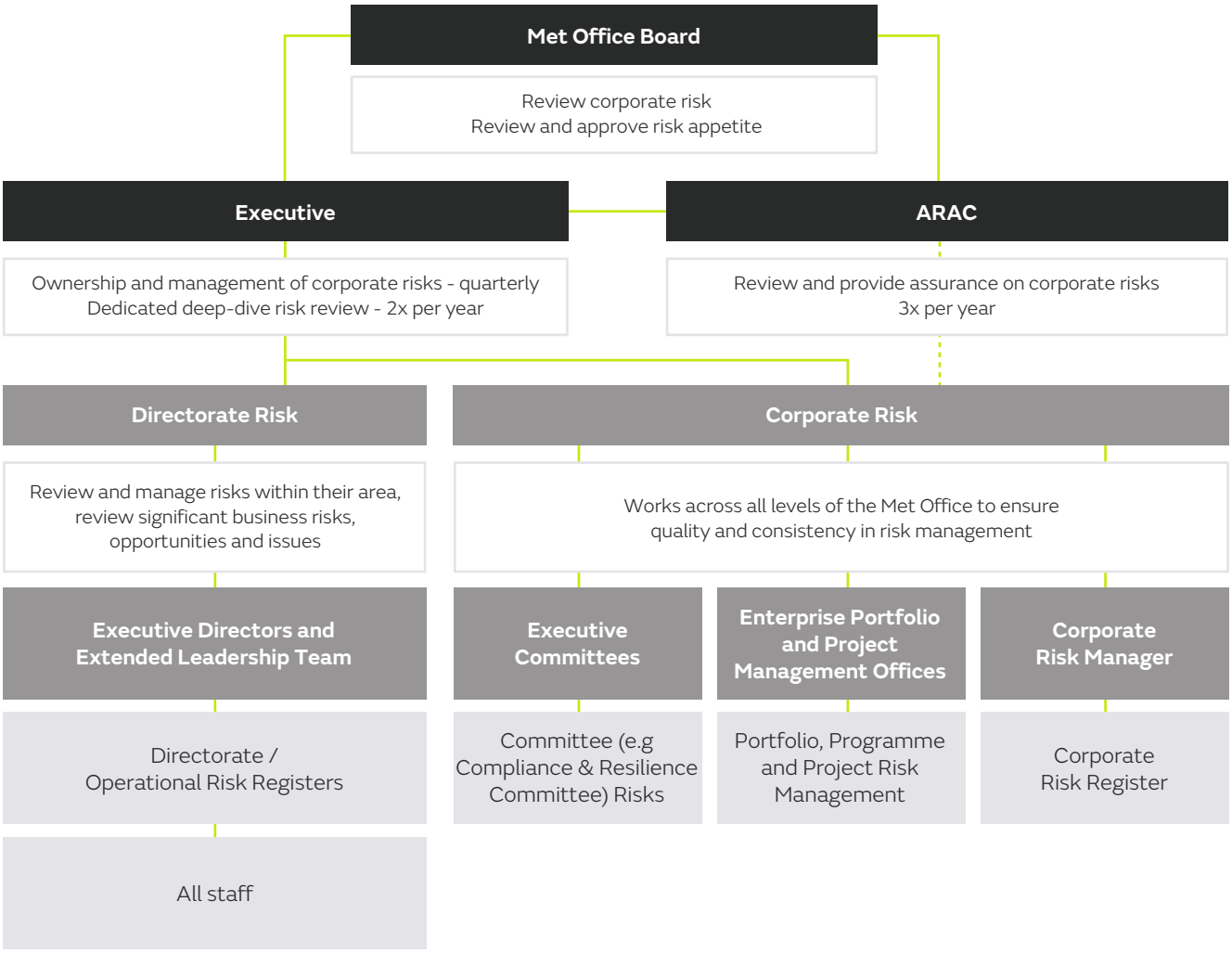
Our risk appetite framework is reviewed annually to reflect any change to the organisation's corporate objectives and the external risk landscape.

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 a wareness 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.

Accountability and responsibility framework for risk management



Risk management information is used throughout the organisation:

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

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, Executive Board, Met Office Board or our owning Department, DSIT, 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

We continue to assess annually our compliance with Government Functional Standards, which set expectations for the governance, roles, accountabilities and practices needed for functional work across government departments and their associated Arm's Length Bodies.

Assessments are made against all of the provisions in the Standards, but with a focus on the mandatory elements in each one. Since the initial assessments were carried out in

2021/22, revised versions for many of the Standards have been issued and to a limited extent this has impacted compliance. However, the overall level of mandatory compliance has increased since last year, reflecting the implementation of plans to address known areas of non-compliance.

In-year assessments reflected full mandatory compliance with eleven of the Standards and partial mandatory compliance with the remaining three. Where areas of mandatory non-compliance exist, plans are either already in place to address issues or consideration is currently being given to how full compliance may be achieved.

Counter fraud

In Autumn 2022, we were required to provide a self-assessment to demonstrate our compliance with the mandatory requirements of Government Counter Fraud Functional Standard GovS 013. Our self-assessment provided evidence of our compliance with all the mandatory requirements within GovS013, but this will be subject to review by DSIT and the Government Internal Audit Agency. A key part of our evidence was an updated Met Office Counter Fraud Strategy.

The external fraud risk landscape is increasingly complex, and fraudsters continually probe the Met Office's defences and those of our suppliers and collaborators. In 2022/23, we undertook fraud investigations relating to two Met Office suppliers which had been targeted by fraudsters. In both cases, the fraudsters used social engineering to exploit suppliers' internal processes and their interactions with the Met Office. This highlights the importance of maintaining good fraud training and awareness across all areas of the organisation. We have a 'Counter fraud action plan' in place as part of our control framework to help us prevent and detect fraud, and delivery of the planned outcomes is ongoing.

During 2022/23 we reviewed our fraud and bribery training, shared corporate awareness communications on how to be a 'Met Office fraud fighter' and held Fraud Risk Assessment workshops. We will be reinforcing these messages through our fraud awareness campaign early in 2023/24.

The Met Office's fraud risk rating during 2022/23 has been at Medium, which is above target (Low). We have conducted a lessons learned exercise on our internal processes following the two instances of fraud relating to suppliers in the year and anticipate that this should lead to a reduction in our exposure rating back to target in 2023/24. The Met Office counter fraud and anti-bribery investigative capability has been further enhanced by the appointment of a Senior Data Analyst within the internal audit team, which will help support our GovS 013 requirements.

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 a full re-certification assessment every three years. A full recertification will take place in 2023/24. LRQA have noted in recent audits the continued maturity of the QMS.

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 preparing to deploy our business-critical workflows onto our new supercomputer. We have a programme of work to reformulate and redesign the Met Office weather and climate prediction systems to allow exploitation of follow-on generations of supercomputer; Next Generation Modelling systems (NGMS). NGMS is planned to be implemented in stages into our business-critical workflows, over a number of years.

Both activities put quality analysis/assurance at the heart of what we do. Throughout all development, the validation of the modelling system outputs ensures our models and codes are effective, efficient and safe to deploy, to preserve operational resilience. Risks to operational resilience are minimized 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. The Parallel Suite approach maintains a secure segregated development process, between development and operational activities.

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 Data and Information Officer (CDIO) who is also Senior Information Risk Owner (SIRO). The CDIO 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 Co-Heads 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.

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 CDIO.

The Data Management Group (DMG) is chaired by the Head of Data 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 provide external data access services with consideration of our strategic drivers and the wider data landscape across the UK (e.g. National Data Strategy) and internationally (e.g. WMO Data Policy). These IAOs manage their identified data assets and maintain a core data catalogue. Business Impact Assessments are conducted to enable continuous review of the assets identified in the Asset Registers.

Governance of corporate information

The Co-Heads of Knowledge and Information Management are responsible for the management, governance and policy making for corporate information assets reflecting adherence to HMG guidance and statutory obligations for information assets. These roles also oversee 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.

Information / cyber security

Russia's invasion of Ukraine has had a significant impact on the cyber security landscape globally. It has further highlighted the importance of resilience. The organisation carried out a dedicated resilience week allowing operational teams to focus on this key area with cross organisational support. Vulnerability management enhancements continue to enable expeditious responses to help protect the organisation. Cyber security training has continued to have a positive impact on culture and awareness. There have been no significant cyber or personal data breaches during the year.

Last year the organisation successfully completed a Cyber Enhancement Programme, implementing a new operating model aligning to the NIST Cybersecurity Framework and providing effective continuous improvement.

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. The Security and Resilience Management Group (SRMG) 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. It reports to the Compliance and Resilience Committee, a Committee of the Executive Board.

The Met Office complies with the Cabinet Office Security Standards by completing the Departmental Security Health Check, which will be replaced by GovAssure.

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 of steady improvement continues building upon the progress made in the last three years.

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 continues to mature. Annual functional standard assessments have been rolled into the usual governance mechanisms for the Met Office and good progress has been made in ensuring compliance.

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 a lessons learned review into the procurement of the supercomputer and subsequent litigation. The review concluded that the Met Office complied with procurement law, governance and oversight processes were followed and there were no significant control failures. Lessons identified have been taken forward.

Annual assurance statements were obtained from Executive Directors describing the extent to which, and how, they have complied with internal rules, regulations and 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 governance structures are maturing, 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

No governance or internal control issues have been identified during the year that are considered to be significant in relation to the Met Office's overall governance framework. Specific opportunities for improvement identified as part of the assurance processes detailed above have been addressed or are included in action plans for the relevant manager.

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
14 July 2023

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)

	2022/23					2021/22				
	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	130-135	-	0-5	-23	**105-110**	125-130	-	5-10	50	**185-190**
Nick Jobling	105-110	5-10	10-15	10	**140-145**	105-110	5-10	10-15	41	**165-170**
Stephen Belcher	140-145	–	10-15	58	**215-220**	140-145	–	10-15	55	**210-215**
Tammy Lillie	95-100	-	10-15	38	**145-150**	95-100	-	10-15	37	**140-145**
Simon Brown	90-95	–	10-15	38	**145-150**	90-95	–	10-15	36	**140-145**
Charlie Ewen	100-105	5-10	10-15	40	**160-165**	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 2022/23 were earned in 2021/22 and paid in 2022/23

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.

	2022/23	2021/22
25th percentile pay ratio	4.5	4.3
50th percentile pay ratio	3.7	3.6
75th percentile pay ratio	3.1	3

	2022/23		2021/22	
	Salary and allowances	Excluding performance related pay	Salary and allowances	Excluding performance related pay
	£'000	**£'000**	**£'000**	**£'000**
Highest paid Director (banded)	155-160	140-145	150-155	140-145
75th centile employee	50	49	51	49
Median employee	42	38	42	40
25th centile employee	35	33	35	33

	Highest paid director (banded)	Average for other employees
2022/23		
Salary and allowances (£'000)	140-145	40
% change	0.00%	1.00%
Performance related pay (£'000)	10-15	3
% change	0.00%	-18.30%
2021/22		
Salary and allowances (£'000)	140-145	40
Performance related pay (£'000)	10-15	4

The pay award for 2022/23 was not agreed in sufficient time to allow inclusion in payroll data.

All fair pay disclosures are therefore based on amounts paid during 2022/23 and no adjustment has been made for unpaid amounts.

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 2022/23 or 2021/22. The lowest staff remuneration in 2022/23 was £13,858 (2021/22: £15,000).

Pension entitlements for each Director (audited)

	Accrued pension at pension age as at 31 March 2023 and related lump sum	Real increase in pension and related lump sum at pension age	CETV at 31 March 2022	CETV at 31 March 2023	Real increase in CETV
	£'000	**£'000**	**£'000**	**£'000**	**£'000**
Penelope Endersby	60-65 plus a lump sum of 120-125	0 plus a lump sum of 0	1100	1016	-38[1]
Stephen Belcher	30-35	2.5-5	481	408	38
Nick Jobling	40-45	0-2.5	712	641	-4[1]
Simon Brown	5-10	0-2.5	54	31	15
Tammy Lillie	5-10	0-2.5	71	42	19
Charlie Ewen	25-30	0-2.5	419	366	26

[1] Taking account of inflation, the CETV funded by the employer has decreased in real terms.

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 in 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 2023 (audited - totals only)

	Full time equivalents			
	Male	**Female**	**31 March 2023**	**31 March 2022**
Directors	7	3	10	10
Other permanent staff	1,331	844	2,175	2,086
Met Office employees total	1,338	847	2,185	2,096
Temporary/agency staff			79	127
Total			**2,264**	**2,223**

Staff costs (audited)

	2022/23	**2021/22**
	£ '000	**£ '000**
Salaries, performance-related pay and allowances	97,590	88,410
Social security	11,003	9,650
Pension contributions	23,096	21,632
Early retirement and exit costs	157	(6)
Temporary/agency labour costs	11,554	13,013
Total staff costs	**143,399**	**132,699**

Sickness and absence data

In 2022/23 the average working days lost per person was 5.1 (2021/22 5.1 days).

Consultancy expenditure

In 2022/32 the Met Office spent £162,000 on consultancy costs (2021/22 - £157,000).

Staff turnover

In 2022/23 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

No of existing engagements as of 31 March 2023, for more than £245 per day and that last for longer than six months.	**73**
Of which...	
Number that have existed for less than one year at time of reporting.	44
Number that have existed for between one and two years at time of reporting.	20
Number that have existed for between two and three years at time of reporting.	9
Number that have existed for between three and four years at time of reporting.	0
Number that have existed for four or more years at time of reporting.	0

All New off-payroll engagements, or those that reached six months in duration, between 1 April 2022 and 31 March 2023, for more than £245 per day and that last for longer than six months.	**116**
Of which...	
Number assessed as in scope of IR35.	116
Number assessed as out of scope of IR35.	0
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

Number of off-payroll engagements of board members, and/or, senior officials with significant financial responsibility, between 1 April 2022 and 31 March 2023.	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.	10

Fees paid to non-executive directors (audited)

	2022/23	2021/22
	£'000	£'000
Rob Woodward	35-40	35-40
Hunada Nouss	15-20	15-20
Catherine Quinn	15-20	15-20
Professor Alan Thorpe	15-20	15-20
Professor Jordan Giddings	15-20	15-20
Christine Ourmières-Widener	15-20	15-20
Anusha Shah	15-20	15-20

DSIT (previously BEIS) are represented by an appointed non-executive Director who attends Board meetings in conjunction with their Departmental duties. They are not entitled to separate remuneration for undertaking Met Office duties. This role was subject to a number of changes during the year. These are set out in the Governance Statement on page 52.

Exit packages (audited)

Exit package cost band	Number of compulsory redundancies		Number of other departures agreed		Total number of exit packages by cost band	
	2022/23	2021/22	2022/23	2021/22	2022/23	2021/22
£0 - £10,000	0	0	0	1	0	1
£10,000 - £25,000	0	0	0	0	0	0
£25,000 - £50,000	0	0	0	3	0	3
£50,000 - £100,000	0	0	2	3	2	3
£100,000 - £150,000	0	0	0	1	0	1
£150,000 - £200,000	0	0	0	0	0	0
Total number of exit packages by type	**0**	**0**	**2**	**8**	**2**	**8**
Total cost £'000	0	0	157,073	532,186	157,073	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 2022/23 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. This settlement was provided for and recognised in the 2021/22 Annual Report and Accounts.

Professor Penelope Endersby
Chief Executive
14 July 2023

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 Met Office for the year ended 31 March 2023 under the Government Trading Funds Act 1973.

The financial statements comprise: the Met Office's

- Statement of Financial Position as at 31 March 2023;
- 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 2023 and its retained profit 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 and Regularity of Public Sector Bodies in the United Kingdom (2022). 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 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 requires entities to adopt the going concern basis of accounting in the preparation of the financial statements where it is 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 and my auditor's certificate and report thereon. 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.

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 HM Treasury directions made 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:

- 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
- I have not received all of the information and explanations I require for my audit; 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 the Met Office and Accounting Officer's Responsibilities, the Accounting Officer is responsible for:

- maintaining proper accounting records;
- providing the C&AG with access to all information of which management is aware that is relevant to the preparation of the financial statements such as records, documentation and other matters;
- providing the C&AG with additional information and explanations needed for his audit;
- providing the C&AG with unrestricted access to persons within the Met Office from whom the auditor determines it necessary to obtain audit evidence;
- ensuring such internal controls are in place as deemed necessary to enable the preparation of financial statements to be free from material misstatement, whether due to fraud or error;
- ensuring that the financial statements give a true and fair view and are prepared in accordance with HM Treasury directions made under the Government Trading Funds Act 1973;
- ensuring that the annual report, which includes the Remuneration and Staff Report, is prepared in accordance with HM Treasury directions made under the Government Trading Funds Act 1973; 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, I:

- considered 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.
- inquired 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 on:
  - identifying, evaluating and complying with laws and regulations;
  - detecting and responding to the risks of 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
- inquired of management, the Met Office's head of internal audit and those charged with governance whether:
  - they were aware of any instances of non-compliance with laws and regulations;
  - they had knowledge of any actual, suspected, or alleged fraud,
- discussed with the engagement team and the 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 required to perform specific procedures to respond to the risk of management override.

I obtained an understanding of the Met Office's framework of authority and other legal and regulatory frameworks in which the Met Office operates. I focused 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 Government Trading Funds Act 1973, Managing Public Money, the Meteorological Office Trading Fund Order 1996, and relevant employment, pensions and tax legislation.

Audit response to identified risk

To respond to the identified risks resulting from the above procedures:

- I reviewed 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;
- I enquired of management, the Audit and Risk Committee and in-house legal counsel concerning actual and potential litigation and claims;
- I reviewed 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, I tested the appropriateness of journal entries and other adjustments; assessed whether the judgements on estimates are indicative of a potential bias; and evaluated the business rationale of any significant transactions that are unusual or outside the normal course of business; and

I also communicated relevant identified laws and regulations and potential risks of fraud 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 expenditure and income 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.

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 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 July 2023

Accounts

Statement of comprehensive income for the year ended 31 March 2023

	Notes	2022/23 £ '000	2021/22 £ '000
Revenue	3	261,135	258,474
Operating costs	4	(249,129)	(246,906)
Operating profit		**12,007**	**11,568**
Finance income	5	973	29
Finance expense	6	(4,234)	(3,107)
Net finance expense		**(3,261)**	**(3,078)**
Profit for the financial year		**8,746**	**8,490**
Dividend payable to Department for Business Energy and Industrial Strategy	12	(8,500)	(8,500)
Retained (loss) / profit for the year		**246**	**(10)**
Other comprehensive income / (expenditure):			
Adjustment on adoption of IFRS 16		-	142
Net gain/(loss) on revaluation of property, plant and equipment		7,215	15,208
Net gain on revaluation of intangible assets		907	1,584
Net gain / (loss) on cash flow hedges	15	746	214
Other comprehensive income / (expenditure)		**8,868**	**17,148**
Total comprehensive income / (expenditure) for the year		**9,114**	**17,138**

The notes on pages 80-100 form part of these accounts.

Statement of financial position as at 31 March 2023

		31 March 2023		31 March 2022	
	Notes	£ '000	£ '000	£ '000	£ '000
Non-current assets					
Property, plant and equipment	7		136,262		140,670
Intangible assets	8		365,900		326,954
Trade and other receivables	10		10,210		-
Derivative financial assets	15		-		67
Other financial assets	21		91		91
Total non-current assets			512,463		467,782
Current assets					
Inventories	9	1,523		1,312	
Trade and other receivables	10	64,947		64,015	
Derivative financial assets	15	860		122	
Cash and cash equivalents	11	56,216		99,307	
Total current assets			123,546		164,756
Total assets			**636,009**		**632,538**
Current liabilities					
Trade and other payables	12	(78,551)		(94,186)	
Borrowings	14	(31,369)		(28,150)	
Lease liabilities	19	(3)		(638)	
Derivative financial liabilities	15	0		(191)	
Provisions for liabilities and charges	16	(805)		(5,153)	
Total current liabilities			**(110,728)**		**(128,319)**
Non-current assets plus net current assets			**525,281**		**504,220**
Non-current liabilities					
Trade and other payables	12	(21,411)		(12,806)	
Borrowings	14	(203,823)		(202,235)	
Lease liabilities	19	(2,170)		(1,993)	
Derivative financial liabilities	15	(116)		-	
Provisions for liabilities and charges	16	(1,471)		(9)	
Total non-current liabilities			**(228,991)**		**(217,043)**
Assets less liabilities			**296,290**		**287,177**
Capital and reserves					
Public dividend capital			58,867		58,867
Revaluation reserve			47,453		46,366
General reserve			189,228		181,946
Hedging reserve			743		(2)
Total Government funds			**296,290**		**287,177**

The notes on pages 80-100 form part of these accounts.

Professor Penelope Endersby
Chief Executive
14 July 2023

Statement of cash flows for the year ended 31 March 2023

	Notes	2022/23 £ '000	2021/22 £ '000
Cash flows from operating activities			
Operating profit		12,007	11,568
Adjustments for non-cash transactions:			
Depreciation charges (net of capital grants)	4, 7	15,073	17,996
Loss / (gain) on property plant and equipment	4	(12)	349
Amortisation	4, 8	11,974	12,191
Impairment of property, plant and equipment		-	-
Deferred grants released		(40,076)	(26,138)
Operating grants received - supercomputer	13	34,700	37,100
Decrease / (increase) in inventories		(211)	336
(Increase) / decrease in trade and other receivables		(11,098)	213
(Decrease) / increase in trade and other payables		(1,964)	21
(Decrease) / increase in provisions for liabilities and charges		(3,330)	3,689
Net cash inflow from operating activities		**17,062**	**57,325**
Cash flows from investing activities			
Payments to acquire satellite data		(50,031)	(52,608)
Payments to acquire property, plant and equipment		(2,768)	(3,576)
Proceeds from sale of property, plant and equipment		22	0
Payments to acquire intangible assets (excluding satellite data)		(26)	(22)
Payments to acquire other financial assets		-	-
Interest received		973	29
Net cash outflow from investing activities		**(51,830)**	**(56,177)**
Cash flows from financing activities			
Dividends paid		(8,500)	(6,500)
Loan advance received		33,000	99,000
Loan repayments		(32,164)	(23,623)
Payments on IFRS 16 leases		(660)	(552)
Net cash (outflow) / inflow from financing activities		**(8,324)**	**68,325**
Net (decrease) / increase in cash and cash equivalents	**11**	**(43,091)**	**69,473**
Cash and cash equivalents at 1 April		**99,307**	**29,834**
Cash and cash equivalents at 31 March	**11**	**56,216**	**99,307**

The notes on pages 80-100 form part of these accounts.

Statement of changes in taxpayers' equity for the year ended 31 March 2023

	Public dividend capital	Revaluation reserve	General reserve	Hedging reserve	Total
	£ '000	£ '000	£ '000	£ '000	£ '000
Balance at 1 April 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 gain 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 as impairment of property, plant and equipment	-	-	-	-	-
Revaluation reserve realised on disposal of property, plant and equipment	-	(80)	80	-	-
Transfers between reserves	-	(6,788)	6,788	-	-
Total other comprehensive expenditure	**-**	**9,924**	**7,010**	**214**	**17,148**
Total comprehensive expenditure for 2022/23	**-**	**9,924**	**7,000**	**214**	**17,138**
Balance at 31 March 2022	**58,867**	**46,366**	**181,946**	**(2)**	**287,177**
Comprehensive income					
Profit for the financial year	-	-	8,746	-	8,746
Dividend	-	-	(8,500)	-	(8,500)
Retained loss for the year	**-**	**-**	**246**	**-**	**246**
Other comprehensive income					
Adjustment on adoption of IFRS 16	-	-	-	-	-
Movement on foreign currency cash flow hedge	-	-	-	746	746
Net loss on revaluation of satellite data	-	907	-	-	907
Net gain on revaluation of property, plant and equipment	-	7,215	-	-	7,215
Revaluation reserve realised on disposal of property, plant and equipment	-			-	-
Transfers between reserves	-	(7,036)	7,036	-	-
Total other comprehensive expenditure	**-**	**1,087**	**7,036**	**746**	**8,868**
Total comprehensive expenditure for 2022/23	**-**	**1,087**	**7,282**	**746**	**9,114**
Balance at 31 March 2023	**58,867**	**47,453**	**189,228**	**743**	**296,290**

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

The notes on pages 80-100 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 2022/23 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.

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.

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 programme or may be repurposed to provide additional data.

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 2022	1.75 years	2.50 years
Remaining life at 31 March 2023	0.75 years	2.25 years
Successor programme	Third Generation (MTG)	Second Generation (EPSSG)
Planned to be operational	December 2023/24	Q2 2025/26

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.

Contract for the provision of supercomputer services

In September 2021 the Met Office signed a ten-year agreement with Microsoft for the provision of Supercomputing services. The contract comprises payments for meeting key development milestones before the commencement of services. These payments are held as prepayments and released over the service period under the contract. Service charges will be charged directly to the Statement of Comprehensive income as they are aligned with the economic benefit derived from the contract. Further information on prepaid amounts can be found in Note 10, and contractual commitments are set out in note 21.

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

The option under IFRS 16 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

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 changes, public dividend capital is held by the Department for Science, Innovation and Technology (DSIT).

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

	2022/23	2021/22
	£'000	£'000
Revenue from contracts with customers		
Citizen and Media	130,712	125,875
Defence	36,122	36,503
Energy and Environment	13,226	17,539
International	23,879	5,718
Transport	23,724	19,289
UK Government	10,571	28,784
Total revenue from contracts with customers	238,233	233,708
Other revenue		
UK Newton Fund	14,252	14,451
Strategic Priorities Fund	7,576	9,109
EU Horizon 2020 and FP7	1,074	1,206
Total revenue	**261,135**	**258,474**

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 DSIT. 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 Europe programme (HE) and its predecessors: Horizon 2020 (H2020) and 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

	2022/23	2021/22
	£'000	£'000
Receivables included in trade receivables	17,479	15,202
Contract assets included in accrued income	18,965	15,988
Contract liabilities included in deferred income	10,419	35,402

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 £35,402,000 (2021/22: £16,524,000) 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 will 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

	Note	2022/23 £ '000	2021/22 £ '000
Staff costs			
Salaries, performance-related pay and allowances		97,590	88,410
Social security		11,003	9,650
Pension contributions		23,096	21,632
Early retirement and exit costs		157	(6)
Temporary/agency labour costs		11,554	13,013
Total staff costs		**143,399**	**132,699**
Equipment and services		78,981	72,525
International services and subscriptions		17,785	16,482
Depreciation		15,073	17,998
Amortisation		11,974	12,191
Accommodation		16,951	14,623
Travel and subsistence		3,110	1,129
Other operating costs		1,931	5,397
Release of Government Grants	13	(40,076)	(26,138)
Total operating costs		**249,129**	**246,906**
Operating costs include the following:			
Audit fees		103	88
Apprenticeship levy		449	426
Operating leases - plant and machinery		-	-
Operating leases - other		-	-
Lease payments on short-term or low value assets		248	199
Foreign currency (gains)/loss		(36)	(10)
Net loss / (gain) on disposal of non-current assets		(12)	349
Supercomputer programme		35,373	18,713
Research and development expenditure		57,723	60,061
International services and subscriptions comprise the following:			
European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT)		4,383	3,763
European Centre for Medium-Range Weather Forecasts (ECMWF)		9,477	8,611
World Meteorological Organisation (WMO)		2,541	2,624
Network of European Meteorological Services (EUMETNET)		950	905
Other international services and subscriptions		435	579
		17,785	16,482

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.

Government grants are analysed as follows:			
DSIT Future Supercomputer		35,373	18,173
DSIT Current Supercomputer		4,275	7,401
DSIT Polar Satellite Transfer		209	259
Environment Agency Weather Radar Network Renewal		121	142
Department for Transport LIDAR project		98	163
		40,076	26,138

05 Finance income

	2022/23	2021/22
	£ '000	£ '000
Interest receivable	973	29
Total finance income	**973**	**29**

06 Interest payable and similar charges

		2022/23	2021/22
	Note	£ '000	£ '000
On Department for Business, Energy and Industrial Strategy loans	14	4,211	3,083
On lease liabilities	19	22	24
Total interest payable and similar charges		**4,234**	**3,107**

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 2022	91,989	4,317	13,820	90,482	206	108,595	2,240	311,649
Additions	-	615	513	1,485	31	817	-	3,460
Transfers	-	-	1,042	957	-	241	(2,240)	-
Disposals	-	(295)	-	(167)	-	(209)	-	(671)
Revaluation	1,893	-	1,238	8,084	-	-	-	11,215
At 31 March 2023	**93,882**	**4,637**	**16,613**	**100,840**	**237**	**109,444**	**-**	**325,653**
Depreciation:								
At 1 April 2022	-	754	9,442	62,368	95	98,320	-	170,979
Charged during year	2,495	763	1,008	3,920	97	6,791	-	15,073
Transfers	-	-	-	-	-	-	-	-
Impairment	-	-	-	-	-	-	-	-
Disposals	-	(295)	-	(167)	-	(198)	-	(661)
Revaluation	(2,420)	-	846	5,573	-	-	-	4,000
At 31 March 2023	**75**	**1,221**	**11,296**	**71,694**	**192**	**104,913**	**-**	**189,391**
Net book value:								
At 1 April 2022	**91,989**	**3,563**	**4,378**	**28,114**	**111**	**10,275**	**2,240**	**140,670**
At 31 March 2023	**93,807**	**3,415**	**5,317**	**29,146**	**45**	**4,531**	**-**	**136,262**

Property, plant and equipment (continued)

	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	82,382	-	12,097	85,199	-	111,250	1,676	292,603
Adjustment 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	**91,989**	**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**

All land and buildings are held as freehold. The net book value of freehold land and buildings includes £18m 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:

	2022/23 £'000	2021/22 £'000
Land and buildings	24,115	23,086
Information technology	-	3,212
Total	**24,115**	**26,298**

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 2022	354,396	3,093	509	314,205	672,203
Additions	6,832	-	26	43,155	50,013
Transfers	-	-	-	-	-
Disposals	-	-	-	-	-
Revaluation	24,808	-	-	-	24,808
At 31 March 2023	**386,036**	**3,093**	**535**	**357,360**	**747,023**
Amortisation:					
At 1 April 2022	341,961	2,812	476	-	345,249
Charged during year	11,860	82	32	-	11,974
Impairment	-	-	-	-	-
Disposals	-	-	-	-	-
Revaluation	23,901	-	-	-	23,901
At 31 March 2023	**377,721**	**2,894**	**508**	**-**	**381,123**
Net book value:					
At 1 April 2022	**12,435**	**281**	**33**	**314,205**	**326,954**
At 31 March 2023	**8,314**	**199**	**27**	**357,360**	**365,900**

	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**

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 it's 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 2023	31 March 2022
	£ '000	£ '000
Meteorological equipment	1,492	1,277
Reserve equipment	10	15
Consumable stores	21	20
Total inventories	**1,523**	**1,312**

10 Trade and other receivables

	31 March 2023	31 March 2022
	£ '000	£ '000
Amounts falling due within one year:		
Trade receivables	17,538	18,775
Less: provision for impairment of receivables	(59)	(61)
	17,479	18,714
Other receivables	49	57
Accrued income	24,171	23,620
Prepayments	23,248	21,624
Total trade and other receivables	**64,947**	**64,015**
Amounts falling due after more than one year:		
Prepayments	10,210	-
Total non-current trade and other payables	10,210	-
Total trade payables and other current liabilities	**75,157**	**64,015**

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

Prepayments includes £11,629,000 (2021/22 - nil) of milestone payments made under the Met Office'c contract with Microsoft.

Accrued income includes £589,000 relating to EU funding (£352,000 at 31 March 2022).

11 Cash and cash equivalents

		31 March 2023	31 March 2022
	Note	**£ '000**	**£ '000**
Balance at 1 April		99,307	29,834
Net change in cash and cash equivalent balances	18	(43,090)	69,473
Balance at 31 March		**56,216**	**99,307**
Cash held at commercial banks and in hand		6,111	1,847
Cash held with Government Banking Service		50,106	97,459
Balance at 31 March		**56,216**	**99,307**

The Met Office holds three Euro bank accounts, in which there were amounts totaling £2,037,000 at 31 March 2023 belonging to third parties (31 March 2022, three accounts totaling £2,139,000).

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 2023	31 March 2022
	Note	**£ '000**	**£ '000**
Amounts falling due within one year:			
Trade payables		1,903	1,931
VAT		7,518	7,495
Other taxation and social security		4,672	4,650
Accruals		31,657	26,829
Dividend payable		8,500	8,500
Deferred income		11,555	18,053
Government grants	13	12,747	26,728
Total amount falling due within one year		**78,551**	**94,186**
Amounts falling due after more than one year:			
Government grants	13	21,411	12,806
Total non-current trade and other payables		**21.411**	**12,806**
Total trade and other payables		**99,962**	**106,992**

13 Government grants

	Note	31 March 2023	31 March 2022
		£ '000	£ '000
Government Grants at 1 April		39,534	28,572
Deferred funding reclassified as grants		34,700	37,100
Grants recognised through the Statement of Comprehensive Income	4	40,076	(26,138)
Government grants at 31 March		**34,158**	**39,534**
Amounts falling due within one year		12,747	26,728
Amounts falling due after more than one year		21,411	12,806
The following balances are included in Government grants:			
DSIT - Future supercomputer		18,254	18,927
DSIT - Current supercomputer		13,754	18,029
DSIT - Polar Satellite Transfer		409	617
Environment Agency Weather Radar Network Renewal (WRNR)		1,741	1,961
		34,158	39,534

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 2023	31 March 2022
	£ '000	£ '000
Loans due:		
Within one year	31,369	28,150
Between one and five years	121,203	112,600
Over five years	82,620	89,635
Total	**235,192**	**230,385**

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 2022	**189**	**191**	**(2)**
Movement on fair value	**671**	**(75)**	**746**
As at 31 March 2023	**860**	**116**	**744**
Analysed between:			
Current	860	(0)	
Non-current	-	116	
	860	116	

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 2023	EUMETSAT	EURO	16,000	13,857	1.1359	229	229	
30 August 2023	EUMETSAT	EURO	14,000	12,186	1.1309	193	193	
18 January 2024	EUMETSAT	EURO	10,000	8,688	1.1252	199	199	
3 May 2023	EUMETSAT	EURO	7,797	6,761	1.1359	103	103	
30 August 2023	EUMETSAT	EURO	6,397	5,579	1.1309	78	78	
18 January 2024	EUMETSAT	EURO	5,000	4,391	1.1252	53	53	
4 January 2024	WMO	CHF	2,800	2,534	1.1028	5	5	
29 April 2024	EUMETSAT	EURO	15,000	13,453	1.1214	(77)		77
29 August 2024	EUMETSAT	EURO	10,000	8,990	1.1172	(39)		39
				76,440		**744**	**860**	**116**

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 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**	**0**	**3,750**	**5,162**
Adjustment on adoption of IFRS 16	-	-	-	-	-	-
Provided in the year	-	444	-	-	-	444
Revaluation at year end	-	-	-	-	-	-
Written back in the year	-	-	(27)	-	-	(27)
Utilised in year	(3)	-	-	-	(3,300)	(3,303)
Balance at 31 March 2023	**14**	**1,812**	**(0)**	**-**	**450**	**2,276**

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 was principally in respect of future cost of leasehold properties, which became surplus to requirements on relocation to Exeter.

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	2	353	-	450	805
Between one and five years	8	321	-	-	329
Over five years	4	1,138	-	-	1,142
Total	**14**	**1,812**	**-**	**450**	**2,276**

17 Related parties

The Met Office's parent department is the Department for Science, Innovation and Technology (DSIT) previously part of the Department for Business, Energy and Industrial Strategy (BEIS). DSIT is considered to be a related party and during the year, the Met Office had material transactions with DSIT and with other entities for which DSIT 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 2023 (31 March 2022 - 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 £1.0m in revenue (2021/22 £1.2m) from Mercator Ocean. No balances were outstanding with Mercator Ocean as at 31 March 2023 (2022 - £0.2m).

Our Owning Department (DSIT, formerly BEIS) also appoint a non-Executive Director to the Met Office Board. This role was filled by J Partington, D Sandford and A Jackson during the year. Further details can be found in the Governance Statement.

18 Notes to the cash flow statement

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

	At 1 April 2022	Cash flows	At 31 March 2023
	£ '000	£ '000	£ '000
Cash at bank and in hand	99,307	(43,090)	56,216
Borrowings due within one year	(28,150)	(3,219)	(31,369)
Borrowings due after one year	(202,235)	(1,588)	(203,823)
Total net funds	**(131,078)**	**(47,897)**	**(178,975)**

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 2023	31 March 2022	31 March 2023	31 March 2022
	£ '000	£ '000	£ '000	£ '000
Leases expiring:				
Within one year	4	543	3	95
Between one and five years	329	724	20	-
Over five years	2,031	1,416	-	-
Undiscounted future lease obligations	**2,364**	**2,683**	**23**	**95**
Interest element	(215)	(147)	-	-
Discounted future lease obligations	**2,149**	**2,536**	**23**	**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 2023	31 March 2022
	£ '000	£ '000
Contracted but not provided for:		
Information technology	178	175
Equipment	2,287	254
Property works	226	235
Contributions for satellite data	38,384	32,529
Total	**41,075**	**33,193**

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 commitments

	In less than 1 year	2 - 5 years	In more than 5 years
	£ '000	£ '000	£ '000
Commitments due:			
Supercomputer contract	121,386	454,379	331,053

In September 2021 the Met Office signed a ten-year agreement with Microsoft for the provision of Supercomputing services.

The maturity of commitments under the contract is dependant on the timing of contractual milestones prior to the delivery of services.

22 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.

23 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:

	As at 31 March 2023			As at 31 March 2022		
Trade receivables beyond the due date:	**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	799	20	-	838	8	-
Receivables beyond the due date - impaired	5	12	20	4	5	20
Total receivables beyond the due date	**804**	**32**	**20**	**842**	**13**	**20**

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 meets 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 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.

24 Events after the reporting period

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

ISBN: 978-1-5286-4164-7
E02922511

www.metoffice.gov.uk

Produced by the Met Office 02216