

UK Biobank Limited

(Limited by Guarantee)

Report and Financial Statements 30 September 2023

Company Registration number 04978912 Registered Charity in England and Wales number 1101332 Registered Charity in Scotland number SC039230



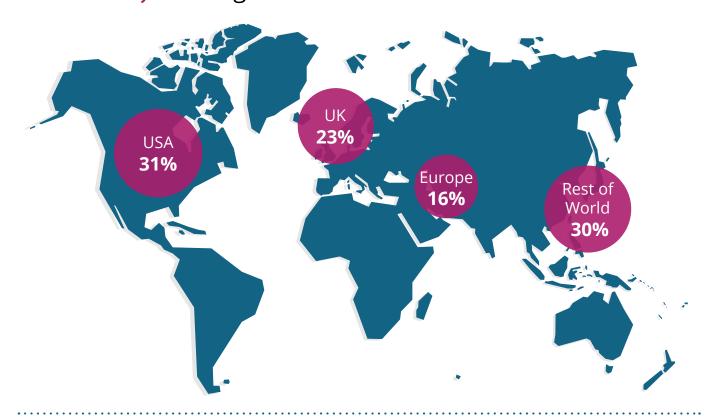
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UK Biobank at a glance

Over 35,000 registered researchers



Over

27.5 petabytes

of whole genome sequencing data (over 100 years watching time in Ultra High Definition movies)

Imaging study

100x larger than any other 10,000

scientific papers published using UK Biobank data so far!

9,000

images of the brain taken per participant in our imaging study 16 million

biological samples stored in the freezer at -80°C

12,000

images taken per participant in our imaging study



Foreword from Professor Sir Rory Collins

Principal Investigator & CEO, UK Biobank



2023 was a remarkable year for UK Biobank.

On 30th November, UK Biobank released the world's largest ever set of whole genome sequencing data to our global scientific community of approved researchers. The release was a pivotal moment for health research and for science: these data are unlike anything else that exists today. This very special occasion was celebrated in the House of Lords. We were delighted to be able to invite a small number of participants to the event. Without the altruism of all our participants, this momentous scientific achievement could not have happened.

The whole genome sequencing data followed closely on the seminal results of the world's largest protein dataset from over 54,000 UK Biobank participants being published in the prestigious journal *Nature*. These data are accelerating discoveries about how diseases develop and will enable better prevention and treatment of diseases for decades to come. They are transforming our understanding of health.

2023 also saw two major funding announcements.

First, we will receive £127.6m from UKRI to build a purpose-built facility for our expanding team. The new building will include a much larger, modernised and automated freezer which will allow for many more measurements to be made and shared with our scientific community.

Secondly, US philanthropists and the UK government are donating over £30 million. This funding will help us to pilot ways to make even greater scientific leaps, just as our landmark study to scan the brains, hearts, and bodies of 100,000 participants is doing. We will be able to characterise subtypes of diseases like dementia and cancer and re-assess every participant to record how lifestyle, wellbeing and physical measures have changed over time.

Because of this funding, we can enrich our existing database with fresh

data. This means that researchers can explore new directions in health research. For example, they might use data on metabolites in the blood or air pollution in our environment to map the development of heart disease, diabetes or cancer - or combine imaging data with wearable technology and AI to precisely characterise illnesses like dementia.

In 2024, we will continue our conversation with GPs to achieve linkage to consented, de-identified primary care data, which is currently under the control of GP practices. In the past 10 years, much has been lost due to our inability to link to this data for research, particularly for diseases that are largely managed in primary care (such as diabetes, dementia and several mental health conditions). Access to GP data will substantially enhance the research that will be achieved using UK Biobank.

Over the next 12 months, UK Biobank will continue to push the boundaries of global health research. The uniqueness of our imaging study, unprecedented in breadth and depth, will grow as we look forward to our participants returning for their repeat imaging visits. Comparing these new data to data collected from initial imaging scans several years ago will augment our understanding of how major organs show disease development over time.

Of course, we couldn't achieve any of this without our participants. I am extremely grateful for their continual efforts which are making UK Biobank the unparalleled health resource that it is today - and will continue to be generations from now.

Rory Collins

Principal Investigator & CEO, UK Biobank

UK Biobank highlights of the year



Advancing health research

2023 saw UK Biobank transform the landscape of health research for generations to come with 500k whole genome sequences, proteomics data & much more.

Not once but twice

In late 2023, our imaging project reached the milestone of whole-body scanning data collected from over 80,000 participants. This project is unparalleled in its scale and depth - for instance, 12,000 images are taken per participant using different imaging techniques such as MRI or X-ray. Up to 60,000 individuals are being invited back for their second scan 2-7 years after their first. The return of BBC Medical Editor Fergus Walsh for his repeat scan received huge media coverage on the BBC in May 2023.

Researchers are now comparing imaging data from initial and repeat scans and using this knowledge alongside existing health and genetic data in UK Biobank to investigate mechanisms of disease development. In the case of dementia, observing how changes to the brain's structure and function over time affect disease risk could achieve pre-symptomatic diagnoses that lead to earlier treatment.

Peering into the proteome

In October, *Nature* unveiled the world's largest study on the effects of genetic variation on circulating proteins in the blood. The research examined nearly 3,000 proteins from over 54,000 UK Biobank participants and revealed more than 14,000 associations between common genetic variants and blood proteins, 80% of which were new. These data may be used to predict disease development before symptoms show, help to classify diseases into distinct biological subtypes, and predict drug efficacy and safety before clinical trials.





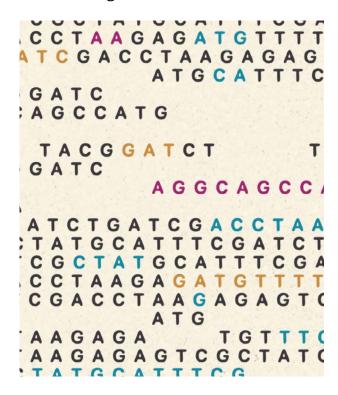


UK Biobank highlights of the year

One of science's greatest achievements: our whole genome sequences

In November 2023, after five-years and substantial investment, we released whole genome sequencing data on all 500,000 participants. The data – the world's most comprehensive genomic dataset – will enable researchers to identify disease-causing variants in both coding and, crucially, non-coding genomic regions, including rarer variants which can play a large role in disease.

These data will illuminate the origins of major diseases (such as Alzheimer's disease, the causes of which are not fully understood) and accelerate identification of disease targets for drug discovery. It will also equip us to understand why people with the same genetic predisposition to disease may experience different side effects for the same treatments. This will drive progress towards precision medicine, in which treatments are tailored to an individual's genetics.





Enhancing UK Biobank as a scientific asset

In 2022, our funders praised our 'exceptional progress' and awarded us a 10/10 for past work & future plans. Government and philanthropic funding in 2023 have laid the foundations for exciting future enhancements to our unique global health resource.

Philanthropic funding

In October, it was announced that a consortium comprising former Google CEO and Chairman Eric Schmidt, and Citadel CEO Ken Griffin, will donate over £16m, matched by the Government, to UK Biobank. The Government will match private and philanthropic donations up to £25m, aiming for a total of £50m. These donations will transform our future research capacity. It will allow us to pilot new projects such as using Al to rapidly analyse vast quantities of data from cancer samples and grow our already-unrivalled wealth of health data, opening up new avenues for research into major diseases.





UK Biobank highlights of the year



New purpose-built facility

We have secured £127.6m in funding from UK Research and Innovation (UKRI) to move to a new larger, faster and more efficient purpose-built facility at Bruntwood SciTech's Manchester Science Park in 2026. This facility will vastly improve our laboratory infrastructure, enabling a greater storage capacity of up to 20 million biological samples in a state-of-the-art robotic freezer with a 4x faster retrieval rate. Improved storage capacity will expand our existing data (allowing more samples to be collected for measuring new disease markers e.g. circulating proteins and other biomarkers). The funding will also enable us to enhance our dataset even further by facilitating linkage to other health-related datasets. Additionally, the move will foster multidisciplinary collaboration between UK Biobank, researchers and industry within Manchester's burgeoning life and data sciences ecosystem.

Nurturing engagement with our participants

Our new Participant and Public Involvement Strategy will set out the role our participants will have in delivering the UK's most valuable scientific asset over the coming years.

Our participants are at the heart of everything we do. We often ask for their views, for example through feedback surveys and focus groups. We are developing UK Biobank's Participant and Public Involvement Strategy, due to be published in Spring 2024. Our internal PPIE Working Group of staff are steering the strategy development process, considering and evaluating the evidence we gather, and co-designing the final strategy document. We have formed a Participant Advisory Group comprising ten participants with a range of experiences and backgrounds. We will also be talking to some of our participants' families, friends and carers about the role they might play in future.





LEGAL AND ADMINISTRATIVE INFORMATION

REGISTRATIONS

Registered Charity in England and Wales number 1101332 Registered Charity in Scotland number SC039230 Registered Company number 04978912

REGISTERED OFFICE

1-2 Spectrum Way, Adswood, Stockport, Cheshire SK3 OSA

DIRECTORS AND TRUSTEES

Rt. Hon. Professor Lord Kakkar - Chair

Professor Martin Bobrow - Vice Chair (resigned 7 December 2023)

Dominic Dodd

Professor Sir Michael Ferguson

Professor Ruth Gilbert (resigned 17 March 2023)

Doug Gurr

Tarig Khokhar

Professor Anneke Lucassen

Professor Sir Alex Markham

Dr Joe McNamara (resigned 26 March 2024)

Nicola Perrin

Dame Nancy Rothwell

Bernard Taylor (appointed 1 January 2024)

Professor Dame Clare Gerada (appointed 1 January 2024)

EXECUTIVE MANAGEMENT TEAM

Professor Sir Rory Collins - Chief Executive and Principal Investigator

Professor Naomi Allen - Chief Scientist

John Busby - Chief Operating Officer

Dr Mark Effingham - Deputy Chief Executive Officer

Gareth Gregory - Chief Finance Officer

Mahesh Pancholi - Chief Information Officer

Jonathan Sellors - General Counsel and Company Secretary

Dr Simon Sheard - Operations Director

Dr Alan Young - Systems Architect

Dr Edward Sykes - Director of Communications

Caroline Munday - Interim Director of People and Organisational Development (to 8 January 2024)

BANKERS

HSBC Bank plc

4 Hardman Square, 2nd Floor, Spinningfields, Manchester, M3 3EB

Barclays Bank plc

38 Market Street, Crewe, CW1 2ET

Lloyds Bank plc

8th Floor, 40 Spring Gardens, Manchester, M2 1EN

INDEPENDENT AUDITOR

BDO LLP

Central Square, 29 Wellington Street, Leeds, LS1 4DL

SOLICITORS

Eversheds Sutherlands LLP

Two New Bailey, 6 Stanley Street, Salford, M3 5GX

1. INTRODUCTION

The Directors present the Trustees annual report and financial statements, including the Strategic Report and Directors' Report for UK Biobank Limited ('UK Biobank'), for the year ended 30 September 2023, which are prepared to meet requirements of a director's report and financial statements for Companies Act purposes.

The financial statements have been prepared in accordance with the Charities Act 2011; the Companies Act 2006; and the Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland FRS 102 (the "SORP").

2. OBJECTIVES AND ACTIVITIES

About UK Biobank

UK Biobank is a large-scale biomedical database and research resource containing anonymised genetic, lifestyle and health information from half a million UK participants.

UK Biobank's database, which includes blood samples, heart and brain scans and genetic data of the volunteer participants, is globally accessible to approved researchers who are undertaking health-related research that is in the public interest.

UK Biobank recruited 500,000 people aged between 40-69 years in 2006-2010 from across the UK. With their consent, they provided detailed information about their lifestyle, physical measures and had blood, urine and saliva samples collected and stored for future analysis.

UK Biobank's research resource is a major contributor in the advancement of modern medicine and treatment, enabling better understanding of the prevention, diagnosis, and treatment of a wide range of serious and life-threatening illnesses – including cancer, heart diseases and stroke.

UK Biobank is generously supported by its founding funders the UK Medical Research Council ("MRC") and Wellcome, as well as the British Heart Foundation, Cancer Research UK, the National Institute of Health Research ("NIHR") and UK Research and Innovation ("UKRI"). The organisation has over 240 dedicated members of staff, based in multiple locations across the UK.

Charitable Objectives

UK Biobank's main objects, as set out in UK Biobank's Memorandum of Association, are to protect, preserve and advance the health and welfare of human beings and to advance and promote knowledge and education.

Public benefit

UK Biobank's principal objective is to establish and promote a resource for research with the aim of improving the prevention, diagnosis and treatment of illness and promoting health throughout society for public benefit. The Charities Act 2011 requires that all charities meet the legal requirement that its aims are for the public benefit. The Directors have considered the Charity Commission's general guidance on public benefit and have complied with the duty in section 17 of the Charities Act 2011.

Activities

UK Biobank undertakes 'core' activities (met primarily by unrestricted funds) to provide access to existing samples and data for health-related research, and 'enhancement' activities (met by restricted funding) to further enhance the data and samples it holds.

Core activities to provide access to UK Biobank data and samples

'Core' activities have enabled the recruitment of participants, the secure management of the consented data relating to these participants, the linkage of the resource to participant healthcare records and the opening of the resource to the research community for the purposes of health research.



- 2006-2010 Initial recruitment of 500,000 participants and development of an ethical framework.
- **2010-2017** Further enhance the resource, make it available to the medical research community, and undertake repeat assessments on 20,000 participants.
- **2017-2022** Expand the linkages to health-related records for all participants and to create 'research-ready' health outcomes to support longitudinal research.
- 2022-2029 Continuous research, administrative and operational costs to run UK Biobank during this period.

Access to UK Biobank data and samples

UK Biobank is a large-scale biomedical database and research resource, containing in-depth genetic and health information from half a million UK participants. The resource was opened for research use in April 2012. Over 35,000 researchers from 90+ countries have been approved to use UK Biobank and more than 10,000 peer-reviewed papers that used the resource have now been published.

The database is regularly augmented with additional data and is globally accessible to approved researchers undertaking vital research into the most common and life-threatening diseases. It is a major contributor to the advancement of modern medicine and treatment and has enabled several scientific discoveries that improve human health.

UK Biobank's access protocols are designed to ensure that data are released only to *bona fide* researchers for health-related research in the public interest. All participant data released to approved researchers are provided on a deidentified basis and, in addition, researchers are contractually prohibited under UK Biobank's Material Transfer Agreement (MTA) from attempting to re-identify participants. In addition, a Sample Access Policy is in place which governs the provision of participant samples to researchers and is available on our website.

UK Biobank's Material Transfer Agreement (MTA) has underlying arrangements, namely that researchers are obliged to publish their findings and return their results to UK Biobank.

Projects to enhance UK Biobank data

UK Biobank undertakes a number of enhancement projects funded by restricted funding. This enables additional high value assays and assessments to be undertaken, which provide further data on UK Biobank's participants for health-related research.

Project	Description	Status	
Genetic	Genetic analysis on samples from all 500,000	Completed in 2017.	
Analysis	participants.	Data available in the resource.	
Biomarker	Biomarker Analysis on samples from all 500,000	Completed during 2018.	
Analysis	participants.	Data available in the resource.	
Imaging	Pilot study of the feasibility of performing a large-scale imaging study at Stockport facility.	Pilot completed successfully in 2015.	
	Establish two further imaging centres in Newcastle and Reading to extend study to 100,000 participants and undertake repeat assessments and biological samples.	Following conclusion of the COVID repeat imaging study in late 2021, and the expiry of the lease of the Bristol site to the NHS in March 2022, all four sites are now open	
	Accelerating the imaging study by opening a fourth assessment centre in Bristol.	and scanning participants.	
	Repeat imaging of up to 10,000 of the participants.	In October 2022, the 60,000 th participant was scanned.	



Project	Description	Status
	Repeat imaging of 60,000 of the participants	This study commenced in January 2023 at the Newcastle centre, with other centres following as they complete baseline imaging.
	Eye measures and additional sample	This study will run alongside the Repeat imaging of 60,000 of the participants
Whole Genome Sequencing	Vanguard Whole Genome Sequencing study of 50,000 participant samples.	Completed during 2020. Data available in the resource.
	The remainder of the cohort is undergoing Whole Genome Sequencing as a sample access application, as set out in section 2 below.	
	Vanguard Informatics for the processing and storage of the data generated from the vanguard Whole Genome Sequencing study.	Completed during 2020.
Research	Establish a Research Analysis Platform (RAP) with	The Research Analysis Platform (RAP)
Analysis Platform (RAP)	storage capacity and analytical capacity for Whole Genome Sequence Data, and all of the other UK Biobank data, for all 500,000 participants	became available to all researchers from September 2021.
Seroprevalence	Assess the extent of past infection with SARS-CoV-2 (coronavirus) infection and measure antibody persistence over time, in a study of 20,000 UK Biobank	Completed during 2020 with an additional sample collected in late 2021.
	participants and their adult children and grandchildren (aged over 18).	Data available in the resource.
Ethics Advisory	Development of a new ethics advisory service for UK Biobank.	Commenced in November 2020 and expected to run for four years.
COVID-19 Assay	Sample collections and assay in support of the UK Biobank COVID-19 Repeat Imaging Study.	Completed in 2021

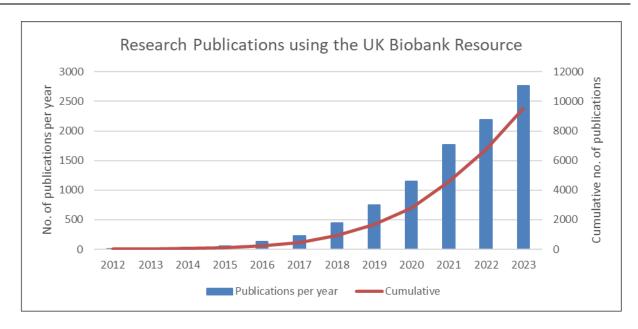
3. STRATEGIC REPORT

3.1. ACHIEVEMENTS AND PERFORMANCE

3.1.1. Contribution to research

Impact of UK Biobank on research

The combination of the breadth and depth of data held on the 500,000 participants within UK Biobank is unparalleled and presents one of the most powerful medical research resources in the world. As a result of access to UK Biobank data, 9,528 research papers have been published on-line as of 30 September 2023 (2022: 6,168). A list of publications is available on UK Biobank's website https://www.ukbiobank.ac.uk/enable-your-research/publications.



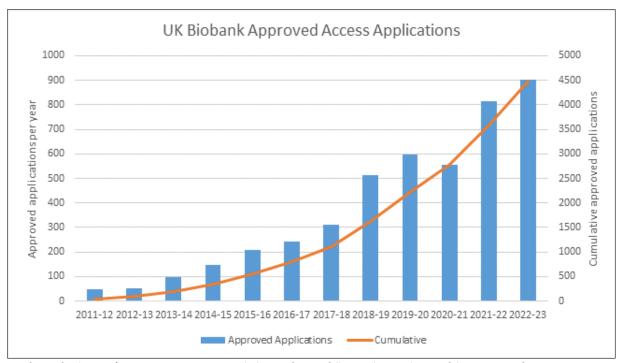
The resource has also supported 935 patent filings from academic and commercial research users for novel methods, imaging, and therapeutics globally. UK Biobank's impact continues to grow exponentially, and these figures provide quantitative evidence of the research it enables, much of which would not otherwise be possible.

Research Data Access applications

UK Biobank's primary objective is to create a resource that furthers medical research opportunities and, in so doing, leads to improvements in population health. The number of requests by researchers to access the resource is an indicator of how much it is used. In the future, as the resource matures and researchers publish an increasingly large number of papers of increasing importance, the numbers of citations to published research is likely to provide a better indicator of UK Biobank's contributions to improving the health of the public.

The large majority of research applications are for data held within the UK Biobank data resource. Since UK Biobank opened its resource for researchers in April 2012, the number of applications for data has increased, particularly with the release of the genotyping data (2017), whole exome and genome sequencing data (2019-2023) and proteomic data (2023). During this financial year, these numbers had increased to 4,395 approved research applications. UK Biobank now has over 36,000 approved registered researchers, of which 77% are international researchers based in over 90 countries.





Note figures for the 2020/21 year incorporate a 2-month closure of Access following the introduction of the new Access fee structure.

Due to changes in the Access Management System relating to new access fees, data access applications were closed for two months from April 2021, leading to a small reduction in the number of approved research applications received during 2020-21.

Research Sample Access applications

The criteria for accessing UK Biobank's samples are more stringent, because of their depletable nature. UK Biobank has a sample release policy, which sets out an explicit set of requirements that any proposed sample assay needs to meet, which are outlined on UK Biobank's website.

As of 30 September 2023, 16 sample access applications have been completed or are underway (10 from academia; 6 from industry). These applications seek to access samples (blood, saliva, urine, DNA, etc.) held by the resource with the purpose of performing research assays. Data created by these research assays are returned to UK Biobank for provision to the wider research community via UK Biobank's research data access procedures.

During the financial year, the following significant research sample access projects were ongoing:

Project	Description	Progress made during the year
Metabolomics	Nightingale Health is performing an NMR-metabolomics assay (of ~220 lipids and other circulating metabolites) for all 500,000 participant samples in the UK Biobank cohort.	Sample analysis for phase 1, which included 120,000 samples, was completed in April 2020. In March 2021, these data were made available in the resource.
		Sample supply for phase 2 of the project (an additional 180,000 samples) commenced in December 2019, with downstream processing being completed during 2022. The extended timeframe of this phase being due to a temporary pause in sample supply for the project during the COVID-19 pandemic.
		Linkage of phase 2 was provided to Nightingale Health in September 2022, with these data made available to the wider research community in July 2023.
		Sample supply for phase 3 of the project, which will see the remaining 200,000 participants analysed, commenced in August 2022 and was completed in September 2023. Downstream analysis is expected to be completed by close of 2023 with linkage expected in January 2024 and general release of these data in quarter 4 of 2024.
Whole Genome Sequencing	Whole Genome Sequencing of the remaining 450,000 participant samples over the course of three years is being conducted by the Wellcome Sanger Institute and deCODE genetics on behalf of a Consortium of industry parties comprising of Amgen Inc, AstraZeneca, GlaxoSmithKline, and Johnson & Johnson.	Sample supply of the project was completed by close of 2021 with over 441,000 samples having been supplied by UK Biobank under the main phase of the project (in addition to the 50,000 samples sequenced under the Vanguard programme which were publically released in November 2021).
		Data on an initial 200,000 participants was

Data on an initial 200,000 participants was available to researchers during the financial year via the UK Biobank Research Analysis Platform (RAP), with data on the remainder of the cohort released in November 2023.

Project	Description	Progress made during the year		
Proteomics	Multiplex proteomic profiling will be undertaken on a cohort of 62,000 UK Biobank participants. Initially 1,500 markers will be captured before expanding the panel to 3,000 markers during 2022. The assay is being performed by Olink Proteomics on behalf of a consortium of industry parties comprising of Amgen Inc, AstraZeneca, Biogen, Bristol Myers Squibb, Calico, Genentech, GlaxoSmithKline, Janssen, Novo Nordisk, Pfizer, Regeneron, and Takeda.	Sample supply and downstream proteomic analysis of all 62,000 participant samples is now complete. Olink Explore assay data which provides normalised expression measures for 1,500 proteins was made available to the wider research community in March 2023 with data for the expansion panel to 3,000 markers released in October 2023.		
Single-Cell RNA (scRNA) Sequencing	This project seeks to characterise gene expression phenotypes using single-cell RNA profiling of peripheral blood mononuclear cells ("PBMC") within participants attending UK Biobank imaging centres.	Sample supply activities for the project were completed in February 2023, with 5,098 participant samples supplied for downstream single-cell RNA profiling and haematology analysis.		
	The project is being undertaken by researchers from the Wellcome Sanger Institute with 5,000 participants being sequenced during this initial pilot phase.	Sample analysis work is now complete for the project.		
Brain Injury after COVID-19 infection Biomarker study	This project seeks to measure plasma biomarkers of brain inflammation and neurodegeneration in participants attending the UK Biobank SARS-CoV-2 Repeat Imaging study in order to investigate the association of SARS-CoV-2 infection with subsequent neurological damage.	All 2,500 participant samples were supplied during 2022 for downstream biomarker analysis. Data from the study was made available to the wider research community in October 2023.		

All the data resulting from the above sample access projects will be returned to UK Biobank for distribution to medical researchers under UK Biobank's access protocols after an agreed exclusivity period for research on the assay data combined with other UK Biobank data. The UK Biobank Access Sub-Committee has determined that a standard period of nine months will apply for all research sample access and enhancement applications that request an exclusivity period. These data will constitute significant enhancements to the UK Biobank data resource.

3.1.2. Linkages to healthcare records

Hospital, cancer, and death records

UK Biobank now has complete participant coverage in respect of hospital admission data, death, and cancer records. These linked records provide data on health conditions and operations/procedures of the participants, both retrospectively (i.e. before recruitment) and prospectively (i.e. after recruitment). These data are updated on an approximately annual basis and made available (on a de-identified basis) to researchers as part of the UK Biobank data resource.

During 2023, the upload of new datasets was paused owing to the need to change existing processing pipelines that incorporate these datasets into the resource. The exception to this was a dataset that included information on COVID-19 vaccinations (for England), that is now available for research use. The emergency legislation that enabled UK Biobank to make primary care data available for COVID-19 research purposes expired in June 2022 and is no longer accessible for new research projects.



More than 200 peer-reviewed papers have now been published that have used the linked healthcare records data, including the primary care data, for COVID-19 research.

Whilst the processing pipelines are being updated, UK Biobank is pursuing the necessary regulatory approvals to obtain linkage to new datasets (e.g., cancer treatment data, clinical audits, and prescription data).

Primary healthcare records for general research

Research access to primary care health records for participants living in England remains a challenging process. On the advice of the Royal College of General Practitioners ("RCGP"), UK Biobank sent out another letter (co-signed by the RCGP and NHS England) in September 2023 to all 6,500 GP practices in England to ask them to approve the release of the data. As of February 2024, the available data suggests opting-in rates are low (approximately 10%). UK Biobank is therefore, in parallel, actively pursuing alternative approaches, including whether a Data Provision Notice ("DPN") could be issued for UK Biobank to receive these data for all consented participants.

Participant withdrawal

UK Biobank's success relies upon the continued support of its participants. Were large numbers to withdraw, there would be a significant impact on the breadth of UK Biobank data resource, and therefore its likely impact on medical research opportunities.

During the year, 51 participants chose to withdraw from the project (2022: 37 withdrawals) bringing the total to date to 1,215 (2022: 1,164), only 0.2% of the participants. UK Biobank remains incredibly grateful for the continued altruistic support provided by its dedicated participants.

3.1.3. Enhancement projects

Research Analysis Platform ("RAP")

Wellcome awarded UK Biobank a grant of £20.0m for a managed informatics platform that will allow researchers to access, store and analyse UK Biobank data in-situ, without the need to download these data to their own environments. The RAP is critical to maximise utilisation of the data held within UK Biobank's resource, by helping UK Biobank manage the increasing complexity and scale of data being generated (largely by sample access projects), and to democratise access to those researchers who do not have access to large local computing services (e.g., researchers from low and middle-income countries).

The platform went live to all researchers in September 2021. It is being delivered using cloud infrastructure provided by Amazon Web Services (AWS), using the London AWS node, who are also contributing up to \$500,000 of research credits each year for use by early career researchers and those from low and middle-income countries. With ~500,000 whole exome and ~200,000 whole genome sequences exclusively released on the RAP for in situ analysis, to date ~700 Access Projects are utilising the RAP with over 2,000 Users. Training via workshops and webinars continue to educate and grow the user base, and additional tools and functionality have been added to the RAP to increase its usability. These steps have helped grow the number of users by two thirds during the year (from c.3,000 in October 2022 to over 5,000 by 30 September 2023).



Imaging

In the past year imaging throughput has returned to full capacity, with the gradual withdrawal of infection control measures introduced following the pandemic, and a successful recruitment programme. 16,802 participants attended an appointment in the last year and Quarter 3 of 2023 saw the most initial imaging participants since the programme began nearly 10 years ago, with almost 5,500 participants seen in that period.

The full cohort repeat imaging study, which aims to image 60,000 participants for a second time, began in Newcastle this year and our Stockport site will start early in 2024.

As at 30 September 2023, the Imaging Enhancement study as a whole has seen 75,842 initial participants and 1,654 full cohort repeat participants, in addition to the 3,209 Dementia Platform UK repeat imaging participants and the 2,096 SARS-CoV-2 repeat imaging study participants.

COVID-19 projects

During 2020, UK Biobank performed a study to assess the extent of SARS-CoV-2 infection across the UK and to determine the persistence of antibodies over a six-month period among 20,000 individuals (comprising UK Biobank participants and their adult children and grandchildren). This study was extended to be able to assess the persistence of antibodies over an 18-month period. The data was made available to researchers in 2022, and UK Biobank has analysed data on antibody persistence (submitted for publication) and investigated social determinants of ethnic disparities in SARS-CoV-2 infection (https://jech.bmj.com/content/early/2023/09/11/jech-2023-220353.long).

Ethics Advisory

Wellcome and UKRI-MRC awarded funding to UK Biobank of £0.4m for "Developing a new ethics advisory service for UK Biobank". This work commenced in November 2020, and is conducted through the Ethics Advisory Committee and a research fellow based at University of Oxford who works under the supervision of Professor Anneke Lucassen (the Chair of the Ethics Advisory Committee).

3.1.4. Infrastructure project

After nearly 20 years of use, UK Biobank's automated low temperature sample archive has reached the end of its life and requires replacement. In May 2023, UKRI announced its intention to provide £127.6m of funding to UK Biobank to replace the sample archive, enable UK Biobank to relocate from its current coordinating centre in Stockport to a new purpose-built facility on the Manchester Science Park, and further enhance its data asset. Public procurement of the new sample archive commenced in September 2023, and the full business case for the funding received final approval by the Department of Science, Innovation and Technology in December 2023.

During the year, UK Biobank progressed a range of preparatory work, funded by an initial tranche of £7.5m of funding, to enable procurement and design activity to progress in parallel to securing final approvals. The project will progress between 2023 and 2033, with a target to complete the initial infrastructure phase by 2026.



3.2. FINANCE REVIEW

On 1 October 2022, UK Biobank transferred substantially all of its shares in UK Biocentre Limited to its Directors, at which point UK Biocentre Limited ceased to be a subsidiary. The decision was taken in the prior financial year and the transaction concluded for £nil proceeds, and UK Biobank impaired its investment in UK Biocentre Limited at 30 September 2022. No group accounts or consolidation have been prepared. These financial statements and their accompanying notes reflect activities for UK Biobank Limited only.

The Statement of Financial Activities ("SOFA") and Balance Sheet, together with notes to the Accounts set out on pages 38-65, show the overall financial performance of the Charity, and provide an analysis of the income and how it has been applied to the Charity's objectives.

Income:

The SORP contains approaches and principles on the recognition of grant income that charities can find complex and subjective, and which consequently, can lead to varying practices within the sector. As detailed in Note 23, during the year, UK Biobank carried out an assessment of the portfolio of grant funding agreements it holds to determine the extent to which these include performance-related conditions, or other terms relevant to the way the grant should be recognised in accordance with the SORP. This highlighted that there was a number of grants with embedded conditions which means income should instead be recognised in line with the performance at the end of a reporting period. The recognition of income has now been corrected to reflect the terms and conditions of the underlying agreements. Income from grants that contain conditions relating to performance or payments by results is now recognised as performance occurs, with all funding received in advance or in arrears of performance, deferred or accrued accordingly.

Accounting standards require the correction in income recognition to be applied retrospectively from 2021 and also reflected in the 2022 comparatives shown in the accounts.

Total income for the year was £34.5m, an uplift of 53%, compared with the prior year of £22.5m (as restated), due to an increase in the level of core funding received from funders, increased income from data access applications, an increase in the grant income recognised from enhancement projects (due to higher levels of activity on these projects), and receipt of an initial tranche of funding for the infrastructure project.

Core unrestricted funding from grants recognised during the year ended 30 September 2023 was £7.9m (2022: £6.9m as restated). Restricted core grants funding of £1.3m (2022: £0.4m) was recognised during the year ended 30 September 2023 to support increased energy and maintenance costs; plus £0.3m (2022: £nil) to support work on core award conditions.

Enhancement (restricted grant) funding recognised during the year ended 30 September 2023 was £18.2m (2022: £11.6m as restated) comprising of the following:

	2023	2022
	£m	£m
Imaging	7.5	7.1
Repeat imaging eye measures and additional sample	1.1	0.2
Research Analysis Platform (RAP)	5.3	4.2
Ethics Advisory	0.1	0.1
Infrastructure Project	4.2	-
Total	18.2	11.6

In addition, funding of £1.7m (2022: £0.6m as restated) was recognised in restricted funds to fund capital expenditure for the financial year.



In addition to our grant funding, UK Biobank received income from fees to access our data and samples. Total income earned from Access fees was £4.7m (2022: £2.0m), comprising of Sample Access Fees of £0.9m (2022: £1.0m) and Data Access Fees £3.8m (2022: £1.0m). Data Access fee income is recognised over the period of access.

There were no goods and services donated during the year (2022: £0.9m).

Expenditure:

As detailed in Note 23, the financial statements have been restated to reflect a dilapidation provision for leased properties which had been omitted in error (on the assumption it was not material, which further analysis has now indicated is no longer the case). The correction is therefore applied retrospectively from 2021 and also reflected in the 2022 comparatives shown in the accounts.

Total expenditure for the year was £32.1m (2022: £24.6m). Expenditure has increased as the charity's enhancement project activities have increased (including the return to full throughput in the imaging centres following the lifting of restrictions post COVID-19), and initial expenditure on the infrastructure project. To support this wider set of activity, UK Biobank's headcount grew during the year, leading to an increase in the costs of wages and salaries.

Controls over expenditure are paramount to UK Biobank, due to the restrictions on available funds. There is very significant potential to develop UK Biobank's resource further and so carefully managing expenditure and prioritising appropriately the activities undertaken are critical to maximising the value of the resource.

Reserves:

As a result of activities captured above in income and expenditure, total Charity funds increased to £2.9m (2022: £0.5m as restated).

Total unrestricted reserves increased in the year to £0.2m (2022: £2.3m deficit) due to an increase in core funding and higher access fee income. Unrestricted funds comprise a deficit free reserves balance of £1.1m (2022: £3.1m deficit) and a designated capital replacement fund of £1.4m (2022: £0.8m). The deficit free reserves level is largely caused by the requirement for UK Biobank to provide for its commitments to support the recovery of the deficit on the USS Pension Scheme, with £6.1m of the £7.1m provision charged to the unrestricted fund. A deficit on the scheme is settled by pension contributions paid in future periods (and met by income to be recognised in those future periods). In addition, as outlined in Note 22, subsequent to the balance sheet date, the USS Pension Scheme completed their most recent valuation, confirming the scheme had now returned to a surplus position (and hence we expect the provision to be released in 2023-24). Excluding the impact of the provision, the balance on the unrestricted fund would otherwise be a surplus of £6.4m. Further information on UK Biobank's reserves policy is noted below.

Restricted reserves decreased marginally to £2.6m (2022: £2.8m). These funds are tied to particular purposes, as specified by the grant awarder (see Note 17 for more details).

Going concern

The financial statements have been prepared on a going concern basis, which the Directors consider to be appropriate for the following reasons.

UK Biobank was awarded core funding totalling £52.0m from 1 July 2022 through to 30 June 2029. UK Biobank has committed funding in place to cover its core operations until 30 June 2024. The continuation of a proportion of UK Biobank's core funding (equating to £3.2m per annum) beyond 30 June 2024 is subject to UK Biobank satisfying a number of award conditions, and the provision of funding beyond 30 June 2027 is subject to a quinquennial review. UK Biobank recognised £7.9m of core funding in 2022-23.

UK Biobank has been making timely progress on the conditions applying to the continuation of core funding beyond 30 June 2024, and has satisfied all conditions falling due on or before 30 September 2023. Plans are in place to successfully achieve the remaining conditions due prior to 30 June 2024. The Directors therefore anticipate that UK Biobank's core funding will continue at current levels for the foreseeable future.



Nonetheless, as part of preparations for these accounts, UK Biobank has undertaken an assessment (on a reasonable worst case scenario basis) of its cashflow and the impact should funders decide not to continue UK Biobank's core funding at current levels. This analysis shows that under a reasonable worst-case scenario, UK Biobank will nonetheless have sufficient funds to continue to operate for a period not less than 12 months from the date these accounts were signed.

Beyond core funding, UK Biobank also benefits from Access income, with income in this financial year as set out below:

- Sample Access Fees of £0.9m were earned during the year (£1.0m in 2021-22). Projects are priced on a cost recovery basis and the pricing methodology ensures the costs of undertaking these projects continue to be recovered.
- UK Biobank recognised £3.8m in Data Access Fees this year (£1.0m in 2021-22). Data Access fee income is recognised over the period of access. During the year, £7.9m (2022: £7.7m) of fee income was invoiced for approved applications, with a total of £9.1m (2022: £6.3m) included as deferred income (within Notes 14 and 15) pending recognition over the period of access in future periods.

Additionally, in October 2023, UK Biobank announced the award of £32.0m in new funding from a new philanthropic consortium of former CEO and Chairman of Google Eric Schmidt and Citadel CEO Ken Griffin. Government will match fund the consortium's private and philanthropic contributions up to £25.0m, with the aim of achieving at least £50.0m in the coming year. These funds have been provided to enable UK Biobank to fulfil its potential and can be applied flexibly to its priorities over the next five years.

The Directors have a reasonable expectation that sufficient funding will be available to enable UK Biobank to continue to operate for the foreseeable future, and therefore, the financial statements are prepared under the going concern basis.

Reserves policy

To date, UK Biobank's policy has been not to maintain any free reserves, as the Directors have historically considered that there are sufficient arrangements for the provision of committed funding for the Charity to continue to operate for the foreseeable future. UK Biobank's principal funding source is from committed grants, drawn down from its funders as required, in line with budgets reviewed both by the Board of Directors and by the Members. This has to date provided a stable funding basis, and also precluded the ability to hold significant reserves.

As UK Biobank grows, the Directors are considering an appropriate reserves policy for the Charity going forwards, recognising that a significant proportion of its funding will continue to be from grants for particular purposes.

At 30 September 2023, the Charity's reported unrestricted deficit free reserves of £1.1m, which is below the current policy. The Charity has focussed on steps during the year to maintain and enhance its financial stability, including:

- Seeking additional funders (including the philanthropic consortium announced in October 2023), to provide funding with differing expiry dates to the main core funding award.
- Growing Data Access fee income, to expand and diversify the funding mix.
- Progressing a business case to secure from government £127.6m of infrastructure funding over the next 10 years, with this funding announced by UKRI during the year, and final approvals received in December 2023.

As noted above, and as set out in Note 22, following the return of the USS Pension Scheme to a surplus position, we expect to release the provision for the deficit liability (Note 16) during the 2023-24 financial year, leading to an increase in free reserves.



Pensions

UK Biobank is a member of the Universities Superannuation Scheme ("USS"). The USS is a large defined benefit pension scheme, which provides a pre-determined level of benefit to members of the scheme based on prescribed contributions made by both the employee and the employer. An actuarial valuation of the USS scheme was completed in September 2021 (the "2020 Valuation") which identified a deficit of £14.1bn to £18.4bn in the scheme as at March 2020. Following the conclusion of the 2020 Valuation and in order to address the deficit, contribution rates rose from 30.7% of pay to 31.2%. A consultation was concluded which led to a series of changes to the benefits within the scheme, and to a temporary increase in contributions to 31.4% from 1 April 2022 to 31 March 2024.

UK Biobank, by being a member of the scheme, is exposed to the deficit within the scheme in the same way that all other member institutions of the USS are exposed. UK Biobank provides for the present value of future contributions it must make under the terms of a recovery plan agreed by the scheme's trustees on 30 September 2023. The provision at 30 September 2023 is £7.1m (2022: £5.8m) (see Note 16 of the financial statements). The USS completed its most recent valuation of the scheme in December 2023. The outcome reveals that the scheme is in a surplus position as at 31 March 2023. Consequently, all participating employers including UK Biobank are no longer obligated to make deficit recovery contributions with employer contributions consequently reducing from 21.6% to 14.5% of pay from January 2024. The provision for the deficit liability of £7,099,146 as at 30 September 2023 (see Note 16) will no longer be necessary and is expected to be released in the 2023-24 financial year.

4. PLANS FOR THE FUTURE

The next financial year will see the following activities undertaken:

Project	Future plans
Initial Imaging	Continue to image first time participants until all participants have received an invitation and reminder and response rates begin to dwindle. It is anticipated that Newcastle and Stockport will have fully completed initial imaging during the forthcoming financial year.
Full Cohort Repeat Imaging	Continue the full cohort repeat imaging programme at the Newcastle site and begin the programme in Stockport in early 2024.
Research Analysis Platform (RAP)	Data including Proteomic data continues to be released via the Platform with the public release of 500,000 Whole Genome Sequencing data scheduled for release in late November 2023; feedback from researcher uses continues to be used to inform improvement and roadmap development to the Platform
Data linkages	Make further releases of linked health care data, including death, cancer, hospital admissions data, and for COVID-19 research, primary care data and diagnostic test data, available to researchers who have approval to use the resource.
	Continue to explore solutions to secure access to linked primary care data for the purposes of general research, following expiry of the provisions of the COPI notices in June 2022.
Funding	Seek to expand the philanthropic consortium to secure additional funding.
Infrastructure project	Obtain final approval of a business case to UKRI for investment in new infrastructure to include replacement of UK Biobank's end of life automated sample archive.
	Conclude preliminary activities and contracting for infrastructure to enable the project to commence.

5. PRINCIPAL RISKS AND UNCERTAINTIES

The principal concern of UK Biobank is to maintain its resource in a way that is secure, protects the confidentiality of the participants and maintains the data and samples in a form that is most useful to the scientific community.

The key risks for UK Biobank are outlined below, along with their mitigations. Risks and the actions taken to manage them are reviewed at each meeting of UK Biobank's Audit and Risk Committee.

Risk	Mitigation of risks
Samples are not stored appropriately and processed accurately	 Storage of samples in multiple locations, with use of back-up supplies and on-site power generation capabilities to protect against loss of electric or nitrogen supply.
processed accuratery	 Standard operating procedures are documented, and employees trained to ensure that protocols are followed.
	 UK Biobank seeks to renew and replace key storage infrastructure when it approaches the end of its life.
Data is not stored securely or in compliance	Protocols to back up and secure data.
with data protection	• Independent audits and 'penetration' tests to assess data security risks.
regulations	 UK Biobank is certified with (and operates to) the ISO 27001:2013 information security standard.
Identification of Participants	 Data are made available to researchers in reverse-anonymised form (but only UK Biobank holds the technical means to be able to reverse the anonymisation).
Participant retention	• Effective communications with participants to remind them of the value of their contribution to UK Biobank and the impact it has.
	 Risk management processes to manage wider reputational risks and minimise the numbers of participants withdrawing.
The value of the UK	Non-preferential access is provided to samples and data.
Biobank resource is not maximised	 UK Biobank works closely with its current and potential funders to secure support for projects that enhance the value of the resource.
	 Continuing to work with the NHS and wider stakeholders to secure long-term ongoing access to primary care data at scale.
Funding or income is not sufficient to cover costs	Budgets are agreed each financial year and are approved by each organisation's Board.
sumetent to cover costs	 Income and expenditure are reviewed against budget and reforecast each quarter, with variances investigated to enable cost pressures to be mitigated where necessary.
	 UK Biobank works with funders and industry to identify new/additional funding to meet the increasing costs of running the resource or the costs of delivering enhancements.
The rising cost of energy materially increases the running costs of UK Biobank	 UK Biobank seeks to benefit from government support where available. UK Biobank uses fixed price contracts and risk-managed purchasing arrangements to minimise energy price volatility and secure economies of scale.



Risk	Mitigation of risks				
UK Biobank's pension scheme deficit and contributions are not	A deficit recovery plan is in place within the USS with increased contribution rates These rates are reflected within our financial forecasts.				
affordable	Regular valuations are undertaken and inform future contribution rates.				
	The benefits of the pension scheme are amended where necessary to enable contribution rates to remain at affordable levels.				
Compliance with Human Tissue Act and Health and Safety regulations	 UK Biobank are licensed by the Human Tissue Authority ("HTA") and are required to follow strict protocols to ensure that all biological samples are managed appropriately. 				
Safety regulations	 Development of standard operating procedures and training of staff to ensure compliance with HTA licencing and other regulatory requirements. 				
	UK Biobank has a Health and Safety policy and has in-house expertise, designed to minimise, and mitigate Health and Safety risks and ensure compliance.				
UK Biobank are not able to recruit or retain the	Training programmes are in place to encourage skill development and improve retention.				
people and skills needed to achieve our objectives	Remuneration is regularly benchmarked to ensure it remains competitive.				
	Development of an effective human resources function that can recruit effectively and support retention.				
Reputational risk	 Regular communications with UK Biobank participants, researchers, and wide stakeholders. 				
	Application of the highest possible ethical standards to all activities.				

6. STRUCTURE, GOVERNANCE AND MANAGEMENT

6.1. Status

UK Biobank is a charity constituted as a company limited by guarantee. It was incorporated in England and Wales on 28 November 2003 and registered as a charity in England and Wales on 30 December 2003 and in Scotland on 5 February 2008.

UK Biobank is established under a Memorandum of Association setting out its objects and powers and is governed under its Memorandum and Articles of Association. The two Members of the Charity are the Medical Research Council and the Wellcome Trust Limited (as Trustee of The Wellcome Trust) ("Wellcome").

The Directors of UK Biobank Limited are its Trustees for the purpose of charity law. The Directors who served during the year are listed in the Legal and Administrative information on page 9.

Members of the company have guaranteed the liabilities of the company up to £1 each.

6.2. Organisational structure

The Directors are responsible for the overall management and operation of UK Biobank with the day-to-day running being delegated to the Executive Management Team, who are led by Professor Sir Rory Collins, the Chief Executive and Principal Investigator, and who contain the appropriate range of skills to ensure the competent management of UK Biobank. The Directors meet at least four times a year.

UK Biobank has three Board Committees that meet on a regular basis:



- The Audit and Risk Committee was chaired during the year by Mr Dominic Dodd. The committee is responsible for advising the Board on financial and accounting issues, the relationship with external auditors and the management of risk.
- The Access Sub-Committee, which was chaired during the year by Professor Martin Bobrow, is responsible for advising the Board on resource access applications received from the research community.
- The Ethics Advisory Committee, which was chaired during the year by Professor Anneke Lucassen. This committee advises the Board on ethical considerations in respect of UK Biobank.

UK Biobank also has Remuneration and Nominations Committees, and a Business Planning Committee which meet as and when required.

The Directors are included within a Directors and Officers liability insurance policy purchased by UK Biobank at an annual premium of £12,288 (2022: £16,031).

6.3. Relationships with other organisations

UK Biobank has arrangements with employees of the following institutions who constitute the membership of UK Biobank's Strategic Oversight Committee. No remuneration is paid in respect of this membership:

- European Bioinformatics Institute
- Health Data Research UK
- Imperial College London
- London School of Hygiene and Tropical Medicine
- University of Bristol
- University of Cambridge
- University of Glasgow
- University of Manchester
- University of Oxford
- University of Swansea
- Wellcome Sanger Institute

In addition, the University of Oxford provides epidemiological expertise, IT services, data management, storage, and enhancements support. These services are provided under agreements with UK Biobank. Directors or senior management who are involved with the University of Oxford are as follows:

- Professor Sir Rory Collins, the Chief Executive and Principal Investigator, who is an employee of the University of Oxford and Head of the Nuffield Department of Population Health and BHF Professor of Medicine and Epidemiology.
- Professor Naomi Allen, the Chief Scientist, is an employee of the University of Oxford at the Nuffield Department of Population Health as Professor in Epidemiology.
- Dr Alan Young, who is Systems Architect, and is an employee of the University of Oxford at the Nuffield Department of Population Health as Director of Information Science.



- Jonathan Sellors, who is a Senior Fellow at the Nuffield Department of Population Health at the University of Oxford.
- Professor Anneke Lucassen is a Director of the Centre for Personalised Medicine at the University of Oxford.

Full details of Related Party Transactions are included at Note 20 of the financial statements.

6.4. Recruitment of Directors

Under UK Biobank's Articles, Directors may be appointed either by the Members or by the Board (with agreement from the Members). Under the terms of a contract entered into by UK Biobank, the Members are each entitled to appoint one Director Representative.

6.5. Engagement with Directors

UK Biobank uses an online portal to distribute Board papers to Directors in a secure and timely manner. The portal also contains a number of key resources for Directors such as the constitutional documents, previous year's annual report and accounts, the current business plan, and the scientific protocol for the creation of the UK Biobank resource. These key resources are made available (together with previous Board packs and minutes) to new Directors as part of their induction.

In addition, all new Directors receive a briefing on their legal obligations under charity and company law and, if necessary, on the background and aims of UK Biobank, as well as meeting with the Chair, other Directors, the Chief Executive, and the General Counsel. Training is available to all Directors.

6.6. Director and executive remuneration

None of UK Biobank's Directors are remunerated or receive any benefits. At the end of the financial year UK Biobank's Board of Directors included eight male Directors and three female Directors.

For UK Biobank to achieve its objectives, it must attract and retain high-performing senior leadership. The Remuneration Committee sets the remuneration of the Executive Management Team following benchmarking of each position by external advisors. Details of their salaries are disclosed in the financial statements at Note 9: Key Management Personnel.

6.7. People and Reward

UK Biobank continues to deploy established policies for recruitment, training, and development of its personnel. It remains committed to achieving excellence in the areas of health, safety, welfare and protection of employees and their working environment and has introduced, over the last few years, improvements in employee benefits, pay and new temporary office accommodation (pending the proposed relocation to Manchester Science Park).

UK Biobank seeks to ensure equal opportunities are available for all existing and potential staff and have procedures in place to support disabled staff or staff who require adjustments in order to enable them to perform their roles successfully. In addition, the organisation regularly reviews remuneration and benefits offered to employees to ensure that these remain competitive and in line with market trends. Further enhancements to benefits and training support have been introduced this year.

On average over the course of the financial year, the UK Biobank employed 228 (2022: 191) staff. Of these, 128 were employed as part of the Core project, with a further 100 employed on the Imaging project. As in the previous year, UK Biobank continues to employ more female employees relative to male employees, with this distribution weighted towards the lower graded roles.

Over the last 12 months UK Biobank have introduced positive changes for all employees to support them in their careers, help the organisation to retain skills and expertise and enhance reward and benefits to help support people through increases in the cost of living. The annual pay award was brought forward from January 2023 to October 2022 to support employees during the peak period of energy costs and increases in food prices. At the same time, the organisation completed its three yearly reward review through a comprehensive benchmarking exercise and adjustments made to pay to retain market position where appropriate.



On 1 January 2023 the organisation introduced new benefits for all colleagues; birthday leave, personal development allowance to invest in training, a holiday purchase scheme and extended a scheme to subsidise workplace lunches.

6.8. Equality, Diversity, and Inclusion

UK Biobank has policies and procedures in place to promote equity, diversity, and inclusion ("EDI"). Over the last 12 months UK Biobank has embarked on a significant programme of work to build a progressive EDI strategy and programme across the whole people life cycle, aiming to build an inclusive culture for all employees. Through this programme UK Biobank will better understand the diverse make-up of the organisation, refresh the data held about its employees and build inclusion activities with members of the newly established equity, diversity, and inclusion forum.

In January 2023 a new recruitment applicant tracking system was launched through which candidate CVs are anonymised and information standardised to reduce any unconscious bias in shortlisting processes. Interview processes continue to use skills-based assessment tasks and pre-determined interview questions alongside a pre-determined scoring system. This new system has brought efficiencies in the recruitment process, reducing workload for hiring managers, reducing the time to hire and fill roles and improving candidate experience.

The tables below provide further information on the gender and ethnicity of UK Biobank's workforce as at 30 September 2023.

	Male	Female	Other
Headcount	102	155	1
%	39.53%	60.08%	0.39%

	White Asian		Black	Other / Not Given
Headcount	174	31	9	44
%	67.44%	11.64%	3.5%	17.42%

At Board level, 27% of members are female, with gender diversity in individual committees varying depending on the distribution of Board members across those committees. Within the International Scientific Advisory Board, the aim is for a broader global representation, to reflect the ambitions to democratise access and increase applications from low and middle-income countries.

6.9. Leadership and Culture

As the organisation grows, UK Biobank recognises the increasing responsibility on its Leaders to shape the culture to be inclusive, supportive, and progressive. Over the last three months, time has been spent with the leadership population understanding their development needs, building a comprehensive training needs analysis that will inform the design of leadership programmes at all levels over the next 12 months.

The annual engagement surveys will continue to be run along with the periodic pulse surveys to ensure UK Biobank is acting on the issues that matter most to its colleagues. There is a regular programme of communications including monthly colleague bulletins and a quarterly all staff meeting. The active social committee continues to plan and deliver engaging social events at all locations that build a sense of community and help sustain high levels of employee engagement.

6.10. Wellbeing

UK Biobank continues to prioritise the wellbeing of all colleagues, ensuring there are good support services (such as an employee assistance programme) in place and accessible when colleagues need them most. Regular health education programmes such as stress and mental health awareness are run and there is a network of mental health first aiders in place to support colleagues. Earlier this year UK Biobank launched its first menopause policy and delivered training to help raise awareness of the ways in which colleagues can be supported.



6.11. Developing an effective People Function

During the last 12 months UK Biobank completed a comprehensive review of its strategic people priorities and People function. As a result of this review, there is a broadening of capabilities to enable a greater focus on attracting and hiring talented colleagues and increasing opportunities for learning and development.

7. ENVIRONMENTAL MATTERS

UK Biobank recognises that it has a responsibility to manage the impact that its operations have on the environment both now and in the future. UK Biobank is working with our principal funders and will take account of UKRI's environmental principles and commitments (which includes the ambition of reaching 'net zero' carbon emissions by 2040).

During the financial year, UK Biobank has focussed on developing plans and designs for new infrastructure that will help to reduce our future carbon footprint.

8. APPRECIATIONS

The Directors acknowledge the role of UK Biobank's main funders, the Medical Research Council and Wellcome (as Trustee of the Wellcome Trust) and also the Department of Health and Social Care, British Heart Foundation, Cancer Research UK, and the National Institute for Health Research for their ongoing (and generous) funding of the resource and the various enhancements described. The scale of their long-term commitment is directly reflected in these financial statements. In addition, UK Biobank remains indebted to the extensive network of advisors in the academic community, both within the UK and internationally, who give their time and expertise freely. The Directors also acknowledge the important role of staff at the University of Oxford who supplied vital support during the year. Most importantly, UK Biobank wishes to acknowledge the altruism of the participants and to thank them for their ongoing contributions to this unique resource.

9. AUDIT INFORMATION

The Directors who were in office at the date of approval of these financial statements have confirmed that, as far as they can reasonably ensure, all relevant audit information has been provided to the auditors; and the Directors have taken all the steps that they ought to have taken as Directors in order to make themselves aware of any relevant audit information and to establish that the auditors are aware of that information.

10. AUDITORS

During the year KPMG LLP resigned and following a formal tender process and Director Approval BDO LLP were appointed as auditors.

The trustees' report incorporating the strategic and directors report was approved by the Board of Directors on 26 March 2024 and signed on its behalf by:

Rt. Hon. Professor Lord Kakkar

Chair

1-2 Spectrum Way, Adswood Stockport Cheshire SK3 0SA

20 June **2024**



STATEMENT OF DIRECTORS' RESPONSIBILITIES

The trustees, who are also directors of UK Biobank Limited for the purpose of company law, are responsible for preparing the Trustees' Report (including the Strategic Report) and the financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare financial statements for each financial year in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards and applicable law). Under company law the directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the charity and of the incoming resources and application of resources, including the income and expenditure of the charity for that period.

In preparing these financial statements, the directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and accounting estimates that are reasonable and prudent;
- state whether applicable UK Accounting Standards have been followed, subject to any material departures disclosed and explained in the financial statements;
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the charity will continue in business.

The directors are responsible for keeping adequate accounting records that are sufficient to show and explain the charity's transactions and disclose with reasonable accuracy at any time the financial position of the charity and enable them to ensure that the financial statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the charity and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Financial statements are published on the charity's website in accordance with legislation in the United Kingdom governing the preparation and dissemination of financial statements, which may vary from legislation in other jurisdictions. The maintenance and integrity of the charity's website is the responsibility of the directors. The directors' responsibility also extends to the ongoing integrity of the financial statements contained therein.

Rt. Hon. Professor Lord Kakkar

Chair

20 June 2024

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Opinion on the financial statements

In our opinion, the financial statements:

- give a true and fair view of the state of the Charitable Company's affairs as at 30 September 2023 and of its incoming resources and application of resources for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Companies Act 2006, Charities and Trustee Investment (Scotland) Act 2005 and regulation 8 of the Charities Accounts (Scotland) Regulations 2006, as amended.

We have audited the financial statements of UK Biobank Limited ("the Charitable Company") for the year ended 30 September 2023 which comprise the statement of financial activities, the balance sheet, the cash flow statement and notes to the financial statements, including a summary of significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including Financial Reporting Standard 102 The Financial Reporting Standard applicable in the UK and Republic of Ireland (United Kingdom Generally Accepted Accounting Practice).

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We remain independent of the Charitable Company in accordance with the ethical requirements relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

Conclusions related to going concern

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

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the Charitable Company's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

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

Other information

The Directors are responsible for the other information. The other information comprises the information included in the Report and Financial Statements, other than the financial statements and our auditor's report thereon. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon. Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements themselves. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.



We have nothing to report in this regard.

Other Companies Act 2006 reporting

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

- the information given in the Trustees' Report, which includes the Directors' Report and the Strategic report prepared for the purposes of Company Law, for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the Strategic report and the Directors' Report have been prepared in accordance with applicable legal requirements.

In the light of the knowledge and understanding of the Charitable Company and its environment obtained in the course of the audit, we have not identified material misstatement in the Strategic report or the Directors' report.

We have nothing to report in respect of the following matters in relation to which the Companies Act 2006 and the Charities Accounts (Scotland) Regulations 2006 requires us to report to you if, in our opinion;

- proper and adequate accounting records have not been kept, or returns adequate for our audit have not been received from branches not visited by us; or
- the financial statements are not in agreement with the accounting records and returns; or
- certain disclosures of Directors' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit.

Responsibilities of Directors

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

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

Auditor's responsibilities for the audit of the financial statements

We have been appointed as auditor under section 44(1)(c) of the Charities and Trustee Investment (Scotland) Act 2005 and under the Companies Act 2006 and report in accordance with the Acts and relevant regulations made or having effect thereunder.

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

Extent to which the audit was capable of detecting irregularities, including fraud



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

Non-compliance with laws and regulations

Based on:

- Our understanding of the Charitable Company and the sector in which it operates;
- Discussion with management and those charged with governance;
- Obtaining and understanding of the Charitable Company's policies and procedures regarding compliance with laws and regulations.

We considered the significant laws and regulations to be the applicable accounting framework, being UK GAAP, the Companies Act, Charities Act, Charity Commission for England and Wales (Charity Commission) regulations, Charities Accounts (Scotland) Regulations, and UK tax legislation.

The Charitable Company is also subject to laws and regulations where the consequence of non-compliance could have a material effect on the amount or disclosures in the financial statements, for example through the imposition of fines or litigations. We identified such laws and regulations to be the Human Tissues Act and Health and Safety regulations.

Our procedures in respect of the above included:

- Review of minutes of meeting of those charged with governance for any instances of non-compliance with laws and regulations;
- Review of correspondence with regulatory and tax authorities for any instances of non-compliance with laws and regulations;
- · Review of financial statement disclosures and agreeing to supporting documentation; and
- Review of legal expenditure accounts to understand the nature of expenditure incurred.

Fraud

We assessed the susceptibility of the financial statements to material misstatement, including fraud. Our risk assessment procedures included:

- Enquiry with management and those charged with governance regarding any known or suspected instances of fraud;
- Obtaining an understanding of the Charitable Company's policies and procedures relating to:
 - o Detecting and responding to the risks of fraud; and
 - Internal controls established to mitigate risks related to fraud.
- Review of minutes of meeting of those charged with governance for any known or suspected instances of fraud;
- Discussion amongst the engagement team as to how and where fraud might occur in the financial statements; and
- Performing analytical procedures to identify any unusual or unexpected relationships that may indicate risks of material misstatement due to fraud.



Based on our risk assessment, we considered the areas most susceptible to fraud to be management override, grant income recognition and classification, sample access income cut-off, and validity of expenditure.

Our procedures in respect of the above included:

- Testing a sample of journal entries throughout the year, which met a defined risk criteria, by agreeing to supporting documentation;
- Assessing significant estimates made by management for bias; and
- Agreement of income recognised to supporting documentation, including grant agreements, performance obligations and sample access agreements.

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

Our audit procedures were designed to respond to risks of material misstatement in the financial statements, recognising that the risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error, as fraud may involve deliberate concealment by, for example, forgery, misrepresentations or through collusion. There are inherent limitations in the audit procedures performed and the further removed non-compliance with laws and regulations is from the events and transactions reflected in the financial statements, the less likely we are to become aware of it.

A further description of our responsibilities for the audit of the financial statements is located at the Financial Reporting Council's ("FRC's") website at:

https://www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditor's report.



Use of our report

This report is made solely to the Charitable Company's members, as a body, in accordance with Chapter 3 of Part 16 of the Companies Act 2006, and to the Charitable Company's trustees, as a body, in accordance with the Charities and Trustee Investment (Scotland) Act 2005. Our audit work has been undertaken so that we might state to the Charitable Company's members and trustees those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Charitable Company, the Charitable Company's members as a body and the Charitable Company's trustees as a body, for our audit work, for this report, or for the opinions we have formed.



Sarah Anderson (Senior Statutory Auditor) For and on behalf of BDO LLP, statutory auditor Leeds, UK

Date: 21 June 2024

BDO LLP is a limited liability partnership registered in England and Wales (with registered number OC305127).



STATEMENT OF FINANCIAL ACTIVITIES (including Income and Expenditure Account)

For the year ended 30 September 2023

					Restated	Restated	Restated
	Notes	Unrestricted	Restricted	Total	Unrestricted	Restricted	Tota
		Funds	Funds	Funds	Funds	Funds	Funds
		2023	2023	2023	2022	2022	2022
		£	£	£	£	£	£
INCOME							
Donations and grants	2	7,876,435	1,264,419	9,140,854	6,851,042	1,302,475	8,153,517
Charitable activities	3	4,685,570	20,129,329	24,814,899	2,034,401	11,690,369	13,724,770
Investments		444,357		444,357	51,092	-	51,092
Other	4	91,553	43,663	135,216	72,880	501,368	574,248
TOTAL INCOME		13,097,915	21,437,411	34,535,326	9,009,415	13,494,212	22,503,627
EXPENDITURE							
Charitable activities	5	(12,336,047)	(19,801,000)	(32,137,047)	(12,368,331)	(12,200,217)	(24,568,548)
TOTAL EXPENDITURE		(12,336,047)	(19,801,000)	(32,137,047)	(12,368,331)	(12,200,217)	(24,568,548)
NET INCOME / (EXPENDITURE) FOR							
THE FINANCIAL YEAR BEFORE TRANSFERS	7	761,868	1,636,411	2,398,279	(3,358,916)	1,293,995	(2,064,921)
Transfers	17	1,819,985	(1,819,985)	-	36,453	(36,453)	-
NET INCOME / (EXPENDITURE) FOR							
THE FINANCIAL YEAR AFTER TRANSFERS		2,581,853	(183,574)	2,398,279	(3,322,463)	1,257,542	(2,064,921)
RECONCILIATION OF FUNDS				-			-
Total funds brought forward as							
previously reported		(4,025,237)	9,446,627	5,421,390	1,218,866	5,391,247	6,610,113
Prior period adjustment		1,680,938	(6,618,268)	(4,937,330)	(240,702)	(3,820,430)	(4,061,132)
Total funds brought forward as restated	17	(2,344,299)	2,828,359	484,060	978,164	1,570,817	2,548,981
TOTAL FUNDS CARRIED FORWARD	17	237,554	2,644,785	2,882,339	(2,344,299)	2,828,359	484,060

All income and expenditure are derived from continuing activities.

The notes on pages 38 to 65 form part of these financial statements.

BALANCE SHEET

At 30 September 2023

	Notes	2023		Restated 2022	
	notes	£	£	£	£
FIXED ASSETS		-	-	-	_
Tangible fixed assets	11		7,084,270		5,743,364
			7,084,270		5,743,364
CURRENT ASSETS					
Inventories	12	31,257		47,149	
Debtors	13	3,835,301		7,023,119	
Cash at bank and in hand		27,215,102		13,296,437	
		31,081,660		20,366,705	
CREDITORS: amounts falling due within one year	14	(22,786,374)		(15,776,358)	
NET CURRENT ASSETS			8,295,286		4,590,347
TOTAL ASSETS LESS CURRENT LIABILITES			15,379,556		10,333,711
CREDITORS: amounts falling due after more than one year	15		(4,454,302)		(3,197,632)
PROVISION FOR LIABILITES AND CHARGES	16		(8,042,915)		(6,652,019)
NET ASSETS			2,882,339		484,060
Represented by:					
Unrestricted funds	17		237,554		(2,344,299)
Restricted funds	17		2,644,785		2,828,359
TOTAL CHARITY FUNDS			2,882,339		484,060

The notes on pages 38 to 65 form part of these financial statements.

The financial statements on pages 35 to 65 were approved by the Board of Directors on 26 March 2024 and are signed on its behalf by:

Rt. Hon. Professor Lord Kakkar

Chair

20 June 2024

Company registration number 04978912 Registered Charity number in England and Wales 1101332 Registered Charity number in Scotland SC039230



CASH FLOW STATEMENT

For the year ended 30 September 2023

	202	.3	Resta 202	
	£	£	£	£
CASHFLOWS FROM OPERATING ACTIVITIES				
Net movement in funds as per the Statement		2 200 270		(2.054.024)
of Financial Activities		2,398,279		(2,064,921)
Adjustments for:				
Interest received	(444,357)		(51,092)	
Depreciation and impairment charge of	• • •		, ,	
tangible fixed assets for the year	2,118,465		2,665,840	
(Profit) Loss on disposal of tangible fixed				
assets	(10,415)		2,823	
Impairment expense of fixed asset	-		40.000	
investment for the year			10,000	
Decrease in stocks	15,892		59,972	
Decrease /(Increase) in debtors	3,185,819		(4,497,783)	
Increase in creditors	8,989,727		10,888,417	
CASH FROM OPERATIONS		13,855,131		9,078,177
NET CASH INFLOW (OUTFLOW) FROM OPERATING ACTIVITIES		16,253,410		7,013,256
CASH FLOWS FROM INVESTING ACTIVITIES				
Proceeds from sale of fixed asset	10,415			
Interest received	331,686		51,092	
	(2,676,846)		(805,022)	
Payments to acquire tangible fixed assets	(2,070,040)		(803,022)	
Net cash flow (outflow) from investing activities		(2,334,745)		(753,930)
Increase (decrease) in cash and cash				
equivalents		13,918,665		6,259,326
Cash and cash equivalents at beginning of				3,233,323
year		13,296,437		7,037,111
Cash and cash equivalents at end of year		27,215,102		13,296,437



For the year ended 30 September 2023

1 ACCOUNTING POLICIES

Charity Information

UK Biobank Limited is a public benefit entity, registered charity in England and Wales (registration number 1101332) and is constituted as a company limited by guarantee registered in England and Wales (registration number 04978912). UK Biobank is also a registered charity in Scotland (SC03230). The registered office is Units 1-2 Spectrum Way, Adswood, Cheshire SK3 0SA.

Basis of preparation

The Charity's financial statements have been prepared in accordance with UK Generally Accepted Accounting Practice, comprising Financial Reporting Standard 102 - applicable in the United Kingdom and the Republic of Ireland ("FRS 102") and with the Statement of Recommended Practice "Accounting and Reporting by Charities" FRS 102 as revised in 2019 ("the SORP") together with the reporting requirements of the Companies Act 2006, the Charities Act 2011, the Charities and Trustee Investment (Scotland) Act 2015 and the Charities Accounts (Scotland) Regulations 2006. The Charity has adapted the Companies Act formats to reflect the SORP and the nature of the Charity's activities.

The financial statements have been prepared under the historical cost convention and in sterling, which is the functional currency of the Charity, rounded to the nearest £.

Going concern

The directors are satisfied that sufficient funding will be available to enable UK Biobank to continue to operate for the foreseeable future, and therefore, that it remains appropriate to continue to prepare financial statements under the going concern basis. Further details on this assessment can be found in the finance review section of the Trustees Report

Prior period adjustment

Adjustments have been made to prior year figures in relation to grant income recognition, invoiced access fees and the recognition of a dilapidation provision. Accounting standards require these changes to be treated as an 'error', and hence applied retrospectively from 2021 and also reflected in the 2022 comparatives shown in the accounts. Full details are captured in Note 23.

Fund accounting

General reserves are unrestricted funds that are available for use at the Directors' discretion in furtherance of the objects of the charity.

Designated funds are set aside at the discretion of the Directors for specific purposes. Capital Replacement Reserve funds are designated funds, which will be used for the purchase of asset replacements.

Restricted funds are to be used for specific purposes as laid down by the donor. These funds are expended in accordance with the requirements of the donor.



For the year ended 30 September 2023

1 ACCOUNTING POLICIES (CONTINUED)

Income

Income is recognised and included in the statement of financial activities when the Charity has entitlement to the income, it is probable that the income will be received, and the amount can be measured reliably. Income received relating to future accounting periods is deferred and recognised as a creditor within the balance sheet.

Donations and grants

Grant Funding - Income receivable is recognised in line with the SORP requirements when the charity has
entitlement to the funds, any performance conditions attached to the income have been met, it is
probable that the income will be received, and the amount can be measured reliably. Multiyear funding
is recognised in the period for which the funding is due. Income not meeting these criteria is deferred.

Grants which provide core funding, or are of a general nature, are included within 'Donations and grants'.

• Donated services and goods - are recognised as income when the Charity has control over the items, any conditions associated with the donated items have been met, the receipt of the economic benefit from the use by the Charity of the item is probable and the economic benefit can be measured reliably.

On receipt, donated services and goods are recognised in income based on the value of the gift to the Charity, which is the amount that the Charity would have been willing to pay to obtain the goods or services of equivalent economic benefit on the open market; a corresponding amount is also recognised in expenditure in the period of receipt.

Charitable activities

This includes income for the use of the Charity's resource and is recognised as earned. Income is deferred when fees have been received in advance. Data Access fees are recognised on a straight-line basis over the period of access they relate to.

These include grants from governments and other agencies which are not provided as part of core funding.

Investment income

Represents interest receivable on short term cash deposits and is recognised on an accruals basis in the period to which it relates.

Other income

This is recognised in the year in which it is received or receivable.



For the year ended 30 September 2023

1 ACCOUNTING POLICIES (CONTINUED)

Expenditure

Charitable expenditure comprises costs in relation to the Charity's projects, inclusive of both the direct costs and support costs relating to these activities. Expenditure is summarised under functional headings on a direct cost basis.

Expenditure is recognised as soon as there is a legal or constructive obligation committing the Charity to the expenditure, it is probable that settlement will be required, and the amount of the obligation can be measured reliably. All expenditure is accounted for on an accruals basis.

Support costs are defined as those costs incurred by operational teams providing support in the following teams: Corporate, Finance, Human Resources, Data & Technology, Legal, Quality and Projects. These costs are allocated on a percentage basis to each category of activity.

Governance costs comprise the cost of governance arrangements which relate to the trustees' general running of the Charity and their compliance to statutory requirements. These are included within support costs.

Tangible fixed assets and depreciation

Tangible fixed assets are capitalised, including purchase price and any costs of bringing the assets to the working condition for their intended use.

Depreciation is provided in order to write off the cost of tangible fixed assets on a straight-line basis over their estimated useful lives, as follows:

Leasehold improvements over the life of the lease
Computer systems 25% - 33% straight line
Laboratory and clinic equipment 10% - 33% straight line
Fixtures, fittings, and other equipment 20% - 25% straight line

Sample storage and infrastructure 4% - straight line or over the life of the lease, whichever is the

shorter

Motor vehicles 20% - straight line

The carrying values of tangible fixed assets are reviewed for impairment when events or changes in circumstances indicate that the carrying amount may not be recoverable. Any impairment is recognised in the Statement of Financial Activities.

Accumulated costs of assets which are not completed are classed and reported as assets under construction. They are not depreciated until the accounting period in which they are brought into use. Repairs, maintenance, and inspection costs of tangible fixed assets are charged to the Statement of Financial Activities as incurred.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost includes all costs incurred in bringing each product to its present location. Net realisable value is based on the estimated selling price less costs expected to be incurred as part of the sale.



For the year ended 30 September 2023

1 ACCOUNTING POLICIES (CONTINUED)

Financial instruments

The Charity has financial assets and financial liabilities that qualify as basic financial instruments.

Financial instruments are classified and accounted for according to the substance of the contractual arrangement as either financial assets or financial liabilities.

Cash and cash equivalents - Cash and cash equivalents comprise cash balances and short-term highly liquid investments with a short maturity of three months.

Trade and other debtors / creditors - Trade and other debtors are recognised initially at transaction price less attributable transaction costs. Trade and other creditors are recognised initially at transaction price plus attributable transaction costs. Subsequent to initial recognition, they are measured at amortised cost using the effective interest method, less any impairment losses in the case of trade debtors.

Foreign currencies - Transactions in foreign currencies are recorded at the rate ruling on the time of the transaction. Foreign currency balances are translated into sterling at the exchange rate at the balance sheet date. Resulting gains or losses are included in the Statement of Financial Activities.

Leases

Rents payable under operating leases are charged to the Statement of Financial Activities on a straight-line basis over the lease term.

Rent-free periods or other incentives received for entering into a lease are accounted for over the period of the lease so as to spread the benefit received over the lease term.

Research and development

Research and development expenditure is written off to the Statement of Financial Activities as it is incurred.

Pension scheme

The Charity participates in the Universities Superannuation Scheme. With effect from 1 October 2017, the scheme changed from a defined benefit only pension scheme to a hybrid pension scheme, providing defined benefits (for all members), as well as defined contribution benefits. The assets of the scheme are held in a separate trustee-administered fund. Because of the mutual nature of the scheme, the assets are not attributed to individual institutions and a scheme-wide contribution rate is set. The Charity is therefore exposed to actuarial risks associated with other institutions' employees and is unable to identify its share of the underlying assets and liabilities of the scheme on a consistent and reasonable basis. As required by Section 28 of FRS 102 "Employee benefits", the Charity therefore accounts for the scheme as if it were a wholly defined contribution scheme. As a result, the amount charged to the Statement of Financial Activities (including the income and expenditure accounts) represents the contributions payable to the scheme. Since the Charity has entered into an agreement (the Recovery Plan) that determines how each employer within the scheme will fund the overall deficit, the Charity recognises a liability for the contributions payable that arise from the agreement (to the extent that they relate to the deficit) and therefore an expense is recognised.

Taxation

The Charity is a registered charity and therefore it is exempt from income and corporation tax on income and gains falling within chapter 3 Part 11 Corporation Tax Act 2010 or S256 of the Taxation of Chargeable Gains Act 1992 to the extent that these are applied to its charitable objects.



For the year ended 30 September 2023

1 ACCOUNTING POLICIES (CONTINUED)

Critical accounting judgements and estimations

Judgements and estimations are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. In making these estimates, the Charity makes assumptions concerning the future.

The judgements and estimations made that have a significant risk of causing a material adjustment to the carrying amount of assets and liabilities within the next financial year are as follows:

• Pension Scheme – Universities Superannuation Scheme ("USS") - FRS 102 makes the distinction between a Group Plan and a multi-employer scheme. A Group Plan consists of a collection of entities under common control typically with a sponsoring employer. A multi-employer scheme is a scheme for entities not under common control and represents (typically) an industry-wide scheme such as that provided by USS. The accounting for a multi-employer scheme where the employer has entered into an agreement with the scheme that determines how the employer will fund a deficit results in the recognition of a liability for the contributions payable that arise from the agreement (to the extent that they relate to the deficit), and the resulting expense is recognised in profit or loss. The Directors are satisfied that the scheme provided by USS meets the definition of a multi-employer scheme and has therefore recognised the discounted fair value of the contractual contributions under the funding plan in existence at the date of approving the financial statements.

In addition, because the USS scheme was in deficit and a funding plan had been agreed as at 30 September 2023, section 28 of FRS 102 requires individual employers to recognise a liability for the contributions payable that arise from the agreement to fund the scheme (to the extent that they relate to the deficit) and the resulting expense in the Statement of Financial activities. A deficit modeller was utilised to produce the provision estimates, based on an appropriate discount rate, and estimates of staff numbers. Further information is provided on these assumptions in Note 21.

- Useful Economic Life of Fixed Assets The charge in respect of depreciation is derived after determining an estimate of an asset's useful life and expected residual value at the end of its life. The useful lives and residual values of UK Biobank's assets are determined by management at the time the asset is acquired and reviewed annually for appropriateness. The lives are based on historical experience with similar assets.
- Grant income recognition Recognition of grant income where funding agreements contain performance
 related conditions is based on an assessment of the progress in completing the overall programme
 deliverables at the end of each financial reporting period. Management deems that total expenditure incurred
 to deliver the performance conditions at the end of each reporting period is an appropriate basis for this
 assessment.
- Dilapidations arising where property leases oblige UK Biobank to cover the cost of restoring imaging and
 office properties to their original condition when ending its occupation as those leases terminate. Further
 information is provided on these assumptions in Note 16. As part of this obligation, UK Biobank will need
 to remove two MRI scanners from each of its four imaging sites. UK Biobank considers that the anticipated
 residual value of these scanners will be sufficient to cover their removal costs and has therefore excluded
 these costs from its assessment of its dilapidation costs. The dilapidation provisions are discounted using,
 third party advice received on suitable discount rates linked to the lease expiry dates.



For the year ended 30 September 2023

2 DONATIONS AND GRANTS

				Restated	Restated	Restated
	Unrestricted	Restricted	Total	Unrestricted	Restricted	Total
	Funds	Funds	Funds	Funds	Funds	Funds
	2023	2023	2023	2022	2022	2022
	£	£	£	£	£	£
Grant funding	7,876,435	1,264,419	9,140,854	6,851,042	400,000	7,251,042
Total grant income	7,876,435	1,264,419	9,140,854	6,851,042	400,000	7,251,042
Donated services and goods	-	-	-	-	902,475	902,475
	7,876,435	1,264,419	9,140,854	6,851,042	1,302,475	8,153,517

The total donated services and goods of £nil (2022: £902,475) represent gifts in kind.

Included in grant funding above are government grants received as follows:

	Unrestricted Funds	Restricted Funds	Total Funds	Unrestricted Funds	Restricted Funds	Total Funds
	2023	2023	2023	2022	2022	2022
Government grants	£ 3,543,458	£	£ 3,543,458	£ 2,984,981	£ -	£ 2,984,981

3 CHARITABLE ACTIVITIES

				Restated	Restated	Restated
	Unrestricted	Restricted	Total	Unrestricted	Restricted	Total
	Funds	Funds	Funds	Funds	Funds	Funds
	2023	2023	2023	2022	2022	2022
	£	£	£	£	£	£
Grant funding	-	20,129,329	20,129,329	-	11,690,369	11,690,369
Research data access	3,831,034	-	3,831,034	997,834	-	997,834
Research sample access	854,536	-	854,536	1,036,567	-	1,036,567
TOTAL INCOME	4,685,570	20,129,329	24,814,899	2,034,401	11,690,369	13,724,770

During the year, medical researchers have requested and obtained access to the Charity's data and samples with fees relating to this financial year captured in the table above for:

- Research data access researchers can apply for access to the data generated from the Charity's resource who are charged a fee based on a standard pricing policy.
- Research sample access this income relates to bespoke fees for the provision of samples to medical researchers using the Charity's resource.



For the year ended 30 September 2023

3 CHARITABLE ACTIVITIES (CONTINUED)

Included in grant funding above are government grants received as follows:

Government grants	Unrestricted Funds 2023 £	Restricted Funds 2023 £ 9,837,664	Total Funds 2023 £ 9,837,664	Unrestricted Funds 2022 £	Restricted Funds 2022 £ 7,460,655	Total Funds 2022 £ 7,460,655
4 OTHER						
	Unrestricted	Restricted	Total	Unrestricted	Restricted	Total
	Funds	Funds	Funds	Funds	Funds	Funds
	2023	2023	2023	2022	2022	2022
	£	£	£	£	£	£
Other	91,553	43,663	135,216	72,880	501,368	574,248
TOTAL INCOME	91,553	43,663	135,216	72,880	501,368	574,248
				<u> </u>		

Other income comprises recharge of salary and other costs in the current and prior year.

5 EXPENDITURE ON CHARITABLE ACTIVITIES

				Restated		Restated
	Direct Costs	Support Costs	Total	Direct Costs	Support Costs	Total
	2023	2023	2023	2022	2022	2022
	£	£	£	£	£	£
Core Activities	7,733,130	4,602,917	12,336,047	7,286,143	5,082,188	12,368,331
Enhancement Projects	18,732,476	1,068,524	19,801,000	11,700,347	499,870	12,200,217
TOTAL EXPENDITURE	26,465,606	5,671,441	32,137,047	18,986,490	5,582,058	24,568,548

6 ANALYSIS OF SUPPORT COSTS

	Unrestricted	Restricted	Total	Unrestricted	Restricted	Total
	Funds	Funds	Funds	Funds	Funds	Funds
	2023	2023	2023	2022	2022	2022
	£	£	£	£	£	£
Corporate	853,042	608,507	1,461,549	1,920,565	159,098	2,079,663
Finance	529,285	48,212	577,497	667,747	41,153	708,900
Human Resources	727,992	81,215	809,207	277,214	48,012	325,226
Data and Technology	1,475,484	49,771	1,525,255	1,189,693	48,795	1,238,488
Legal	523,017	-	523,017	668,211	-	668,211
Projects	184,520	280,819	465,339	126,912	202,812	329,724
Quality	309,577	-	309,577	231,846	-	231,846
TOTAL INCOME	4,602,917	1,068,524	5,671,441	5,082,188	499,870	5,582,058

Included within support costs are governance costs of £60,079 (2022: £48,044).



For the year ended 30 September 2023

7 NET INCOME / (EXPENDITURE) FOR THE FINANCIAL YEAR BEFORE TRANSFERS

Is stated after charging / (crediting):

		Restated
	2023	2022
Auditor's remuneration – Statutory audit services	52,000	38,000
Depreciation and impairment of tangible fixed assets	2,118,466	2,591,570
Impairment of fixed asset investment	-	10,000
Gain/ (Loss) on disposals of tangible fixed assets	10,415	(2,823)
Operating lease rentals:		
Hire of plant and machinery	27,702	24,357
Land and buildings	619,771	667,476

8 STAFF NUMBERS AND COSTS

The average number of persons employed by the Charity, during the year analysed by category and by those full-time and part-time was as follows:

		2023			2022	
	Full-time	Part-time	Total	Full-time	Part-time	Total
	No.	No.	No.	No.	No.	No.
Management	8	-	8	6	-	6
Charity's projects	200	20	220	172	13	185
Total	208	20	228	178	13	191

The aggregate payroll costs of these persons, were as follows:

	2023	2022
	£	£
Wages and salaries	10,169,965	7,721,914
Social security costs	1,020,876	831,077
Pension contributions	1,762,092	1,390,558
Pension deficit provision	995,846	(578,266)
	13,948,779	9,365,283

Wages and salaries include termination payments of £71,283 (2022: £120,247)



For the year ended 30 September 2023

8 STAFF NUMBERS AND COSTS (CONTINUED)

The number of employees whose remuneration, excluding social security costs and employer pension contributions, exceeded £60,000 during the year was as follows:

	2023	2022
	No.	No.
£60,000 to £70,000	13	10
£70,001 to £80,000	4	2
£80,001 to £90,000	3	1
£90,001 to £100,000	2	2
£100,001 to £110,000	-	2
£110,001 to £120,000	1	-
£120,001 to £130,000	-	-
£130,001 to £140,000	-	3
£150,001 to £160,000	2	1
£160,001 to £170,000	2	-
£170,001 to £180,000	1	-
	28	21

All of these employees accrued pension benefits during the year.

Included in "Expenditure" are costs relating to staff who are not employed directly as follows:

	2023	2022
	£	£
Unrestricted Funds	481,125	465,946
Restricted Funds	164,411	249,882
Total	645,536	715,828

Details of these costs are as follows:

- The Charity incurred costs of £645,536 (2022: £715,828) for the use of temporary staff and other seconded staff during the year.
- Professor Sir Rory Collins, who is the Chief Executive and Principal Investigator for the Charity, is an employee
 of the University of Oxford. Professor Collins is seconded to the Charity for a proportion of his time, pursuant
 to agreements entered into between the Charity and the University of Oxford. The cost during the year of
 his secondment from the University of Oxford was £124,247 (2022: £142,052). In addition, the charity
 incurred payroll costs of £28,345 (2022: £nil) which is included in the total staff costs above.
- Professor Naomi Allen, who was Chief Scientist for the Charity during the year, is an employee of the University of Oxford, not an employee of the Charity. Professor Allen is seconded to the Charity for a proportion of her time, pursuant to agreements entered into between the Charity and the University of Oxford. The cost during the year of her secondment from the University of Oxford was £145,986 (2022: £145,730).
- Dr Alan Young, who was the Systems Architect for the Charity during the year, is an employee of the University
 of Oxford, not an employee of the Charity. Dr Young is seconded to the Charity for a proportion of his time,
 pursuant to agreements entered into between the Charity and the University of Oxford. The cost during the
 year of his secondment from the University of Oxford was £115,965 (2022: £99,124).



For the year ended 30 September 2023

9 KEY MANAGEMENT PERSONNEL

Key Management Personnel of the Charity is defined as being a member of the Executive Management Team who are listed under "Legal and administrative information" on page 9. Two new roles were added to the executive team during the year.

The Executive Management Team are employees of the Charity or seconded to the Charity from other organisations. The total employment benefits, including employer social security and employer pension contribution costs, of those members who are employed was £1,423,068 (2022: £1,022,091) and the amount paid for those seconded and agency staff was £386,198 (2022: £421,118).

10 DIRECTORS' REMUNERATION AND EXPENSES

None of the Directors of the Charity are remunerated or received any benefits.

The Charity has met individual travel and subsistence expenses in the year of £497 incurred by 2 Directors (2022: 3 Directors totalling £977) in attending Board, Committee, and other meetings.



For the year ended 30 September 2023

11 TANGIBLE FIXED ASSETS

	Leasehold Improve- ments	Computer systems	Laboratory and clinic equipment	Fixtures, fittings, and other equipment	Sample storage and infra- structure	Motor vehicles	Assets Under Constructi- on	Total
	£	£	£	£	£	£	£	£
Cost At 1 October 2022 - restated	8,135,373	2,960,599	12,059,910	156,036	6,103,780	13,995	-	29,429,693
Additions Disposals Transfer	177,836 - -	490,599 (717,059) -	406,945 (11,374) -	58,328 - - -	(89,692)		1,627,615 - 372,837	3,459,372 (832,120)
At 30 September 2023	8,313,209	2,734,139	12,455,481	214,364	6,295,223	44,077	2,000,452	32,056,945
Depreciation At 1 October 2022 - restated	6,438,062	2,541,118	10,084,633	67,272	4,541,249	13,995	-	23,686,329
Charge for the	645,261	387,419	658,785	47,436	374,423	5,142	-	2,118,466
year Disposals	- 	(717,059)	(11,374)	- 	(89,692)	(13,995)		(832,120)
At 30 September 2023	7,083,323	2,211,478	10,732,044	114,708	4,825,980	5,142	-	24,972,675
Net Book Value At 30 September 2022 - restated	1,697,311	419,481	1,975,277	88,764	1,562,531	-	-	5,743,364
At 30 September 2023	1,229,886	522,661	1,723,437	99,656	1,469,243	38,935	2,000,452	7,084,270
					=======================================			

For the year ended 30 September 2023

11 TANGIBLE FIXED ASSETS (CONTINUED)

	Restated Leasehold Improve- ments	Restated Computer systems	Restated Laboratory and clinic equipment	Restated Fixtures, fittings, and other equipment	Restated Sample storage and infra- structure	Restated Motor vehicles	Restated Total
	£	£	£	£	£	£	£
Cost							
At 1 October 2021	7,560,501	2,771,294	12,893,657	58,215	5,678,080	13,995	28,975,742
Prior period adjustment	514,832	-	-	-	-	-	514,832
Additions	69,865	190,151	386,098	97,821		-	1,169,864
Disposals	(9,825)	(846)	(1,219,845)		(229)		(1,230,745)
At 30 September 2022 - restated	8,135,373	2,960,599	12,059,910	156,036	6,103,780	13,995	29,429,693
Depreciation							
At 1 October 2021 Prior period adjustment	5,277,237 231,308	2,178,467 -	10,309,396	46,313	4,194,494 -	11,196	22,017,103 231,308
Charge for the year	936,544	363,497	920,812	20,959	346,959	2,799	2,591,570
Impairment	-	, -	74,270	, -	-	-	74,270
Disposals	(7,027)	(846)	(1,219,845)	-	(204)	-	(1,227,922)
At 30 September 2022 - restated	6,438,062	2,541,118	10,084,633	67,272	4,541,249	13,995	23,686,329
Net Book Value At 30 September 2021							
as previously reported Prior period adjustment	2,283,264 283,524	592,827 -	2,584,261 -	11,902 -	1,483,586 -	2,799 -	6,958,639 283,524
A. 20 C							
At 30 September 2021 as restated	2,566,788	592,827	2,584,261	11,902	1,483,586	2,799	7,242,163
At 30 September 2022 as restated	1,697,311	419,481	1,975,277	88,764	1,562,531	-	5,743,364

12 INVENTORIES

	2023	2022
	£	£
Raw materials and consumables	31,257	47,149



Income received during the year to be deferred

Deferred income at 30 September as restated

For the year ended 30 September 2023

13		_	D.	$\Gamma \cap$	RS
13	u	Е	О.	ıu	KS.

		Restated
	2023	_
	£	
Trade debtors	2,134,869	
Other taxation and social security costs	129,934	·
Other debtors	296,312	
Prepayments and accrued income	1,274,186	1,027,372
	3,835,301	7,023,119
Total debtors include the following, which are due after more than one year:	2023	3 2022
	£	£
Other debtors	283,751	. 283,751
14 CREDITORS: AMOUNTS FALLING DUE WITHIN ONE YEAR		
		Restated
	2023	2022
	£	£
Trade creditors	981,075	1,829,612
Accruals	2,301,042	1,404,784
Deferred income	19,504,257	12,541,962
	22,786,374	15,776,358
Analysis of deferred income:		
		Restated
	2023	2022
	£	£
Deferred income at 1 October - previously reported	12,541,962	1,690,672
Prior period adjustment	-	6,131,968
Released during the year	(8,803,258)	(3,384,970)



8,104,292

12,541,962

15,765,553

19,504,257

For the year ended 30 September 2023

15 CREDITORS:	AMOUNTS FALLING DUE AFTER MORE	THAN ONE YEAR		
				Restated
			2023	2022
			£	£
Deferred	income		4,454,302	3,197,632
			4,454,302	3,197,632
Analysis (of deferred income			
7 (11d1y515 (or deferred medine			Restated
			2023	2022
			£	£
Deferred	income at 1 October		3,197,632	3,791,119
Prior peri	od adjustment		-	(593,487)
	during the year		(2,181,459)	-
Income re	eceived during the year to be deferred		3,438,129	-
Deferred	income at 30 September restated		4,454,302	3,197,632
16 PROVISION I	FOR LIABILITES AND CHARGES		Dootstad	
		Obligations to fund	Restated Dilapidation	Total
		deficit on USS pension	Dilapidation	iotai
		£	£	£
	ning of year as previously reported	5,760,004	-	5,760,004
Prior peri	od adjustment		892,015	892,015
	ning of year as restated	5,760,004	892,015	6,652,019
=	the year to the Statement of	1 220 442	F4 7F4	
Financial	Activities	1,339,142	51,754	1,390,896
At the en	d of the year	7,099,146	943,769	8,042,915
				

Dilapidations

A liability for UK Biobank arises where property leases oblige UK Biobank to cover the costs of restoring the imaging assessment centres and other office property to their original condition when ending its occupation or as those leases terminate. An amount equal to the provision is recognised as part of the asset.

The provision recognised is based on management's assessment and understanding of commercial leased properties and third-party surveyor report commissioned for specific properties in order to best estimate the future outflow of funds, and requires the exercise of judgement applied to existing facts and circumstances, which can be subject to change. The estimates used by management in the calculation of the provision take into consideration the location and size of the properties. The dilapidations provisions have been discounted using third party advice received on suitable discount rates linked to the lease expiry dates.

Previously, UK Biobank has not provided for these obligations (on the assumption they were immaterial), however, further analysis has indicated this is no longer the case, and accounting standards require this to be treated as an 'error', and hence applied retrospectively from 2021 and also reflected in the 2022 comparatives shown in the accounts. Further disclosure on this prior period adjustment is provided in Note 23.

For the year ended 30 September 2023

16 PROVISION FOR LIABILITIES AND CHARGES (CONTINUED)

Pension deficit

The liability to fund the deficit on the Universities Superannuation Scheme ("USS") arises from the contractual obligations with the USS to fund deficit payments in accordance with the deficit recovery plan. This provision takes into account estimated future staff levels within the USS scheme for the duration of the contractual obligation and salary inflation. For further information, see Note 21.

17 ANALYSIS OF FUNDS

Restated Balance 1 October 2022	Income	Expenditure	Transfer	Balance 30 September 2023
£	£	£	£	£
(3,097,901)	13,097,915	(12,336,047)	1,191,882	(1,144,151)
753,602	-	-	628,103	1,381,705
(2,344,299)	13,097,915	(12,336,047)	1,819,985	237,554
1 680 684	7 543 838	(8 861 932)	_	362,590
124,376	109,338	(114,400)	-	119,314
-	943,165	(852,174)	-	90,991
181,562	-	-	(181,562)	-
248,250	5,272,884	(5,460,284)	-	60,850
-	113,385	(113,385)	-	-
-		, ,	-	-
•		• • • •	-	2,011,040
220,651		• • •	(1,638,423)	-
-	· ·		-	-
-	1,204,419	(1,204,419)	-	-
2,828,359	21,437,411	(19,801,000)	(1,819,985)	2,644,785
484,060	34,535,326	(32,137,047)	-	2,882,339
	Balance 1 October 2022 £ (3,097,901) 753,602 (2,344,299) 1,680,684 124,376 - 181,562 248,250 - 372,836 220,651 - 2,828,359	Balance 1 October 2022 £ £ £ (3,097,901) 13,097,915 753,602 - (2,344,299) 13,097,915 1,680,684 7,543,838 124,376 109,338 - 943,165 181,562 - 248,250 5,272,884 - 113,385 - 312 372,836 4,174,502 220,651 1,692,736 - 322,832 - 1,264,419 2,828,359 21,437,411	Balance 1 October 2022	Balance 1 October 2022 Income Expenditure Expenditure Transfer 1 October 2022 f <t< td=""></t<>



For the year ended 30 September 2023

17 ANALYSIS OF FUNDS (CONTINUED)

	Restated Balance 1 October 2021	Income	Expenditure	Transfer	Restated Balance 30 September 2022
	£	£	£	£	£
Unrestricted funds					
General	478,164	9,009,415	(12,368,331)	(217,149)	(3,097,901)
Designated funds - Capital replacement reserve	500,000	-	-	253,602	753,602
	978,164	9,009,415	(12,368,331)	36,453	(2,344,299)
Restricted funds Imaging Enhancement Project	884,219	7,052,923	(6,256,458)	-	1,680,684
Eye Measures and Additional Sample	-	185,137	(60,761)	-	124,376
Whole Genome Sequencing Project	329,491	42,925	(190,854)	-	181,562
Seroprevalence Study	50,277	910,868	(924,692)	(36,453)	-
Research Analysis Platform	306,830	4,184,705	(4,243,285)	-	248,250
Ethics Advisory	-	81,605	(81,605)	-	-
Covid-19 Assay	-	6,153	(6,153)	-	-
Infrastructure Project	-	393,159	(20,323)	-	372,836
World Class Labs	-	236,737	(16,086)	-	220,651
Additional funding	-	400,000	(400,000)	-	-
	1,570,817	13,494,212	(12,200,217)	(36,453)	2,828,359
Total	2,548,981	22,503,627	(24,568,548)		484,060

Unrestricted funds

Included within unrestricted funds for the Charity is a Designated fund - the Capital Replacement Reserve, which will be used to purchase replacement assets.

Restricted funds

Details of the restricted funds for the Charity are as follows:

Imaging Enhancement Project

Funding of £53,637,679 has been secured to undertake an imaging study across 100,000 participants as well as a series of repeat assessments on these same participants, including 10,000 repeat imaging assessments. Funding for COVID-19 Support following the pandemic was awarded by UKRI-MRC in February 2022 of £4,186,534.

Eye Measures and Additional Sample

Funding of £5,000,000 was secured in November 2021 to support the Repeat Imaging Project of 60,000 participants, by undertaking additional sample collection and optical coherence tomography as additional imaging technology enhancements.



For the year ended 30 September 2023

17 ANALYSIS OF FUNDS (CONTINUED)

Repeat Imaging Project

Funding of £30,000,000 was secured in February 2022 to carry out the Repeat Imaging Project, re-imaging 60,000 participants.

Whole Genome Sequencing Project

Funding of £30,000,000 was secured in March 2018 to undertake the Whole Genome Sequencing Project of 50,000 samples. In November 2018, further funding of £4,800,000 was awarded for informatics and data storage relating to the sequencing of these 50,000 participant genomes. The project is considered complete, no further funds are required to complete the project. The fund balance at the 30 September 2023 of £181,562, representing the fixed assets acquired and used by the project are now held for general purposes and have been transferred to unrestricted funding at 30 September 2023.

Research Analysis Platform (RAP)

As part of the initiative to complete Whole Genome Sequencing of the whole cohort, the Charity was awarded a grant of £20,000,000 in October 2019 to establish a Research Analysis Platform (RAP) with storage capacity for these data.

Ethics Advisory

In January 2020, the Charity was awarded £400,000 to develop an ethics advisory service for the Charity.

COVID-19 Assay

In February 2021, the Charity commenced a study to collect samples for a COVID-19 Assay, on a cost recovery basis up to a maximum of £40,000. Further assays of these samples are now being undertaken as part of a subsequent enhancement, with further funding of £5,000 to facilitate the data return to UK Biobank.

Infrastructure Project

In September 2022, the Charity was awarded £1,600,000, to cover costs for preparing full formal UKRI infrastructure bid. A further £7,500,000 was awarded in July 2023 to support year 1 costs of the Infrastructure project.

World Class Labs

In December 2021, March 2022 and February 2023 the Charity was awarded £173,100, £716,317, and £1,040,057 respectively for specific capital equipment purchases. As at 30 September 2023 £1,929,474 (2022: £236,737) funds had been received by the Charity. The fund balance at the 30 September 2023 of £1,638,423, represents the net book value of fixed assets acquired which are now held for general purposes and have been transferred to unrestricted funds at 30 September 2023.

Award Conditions

In April 2023, the Charity was awarded £1,000,000 to cover the costs of completing a number of conditions applying to the 2022-2027 core funding award.

Low Middle Income Country Research Fund

In May 2023, the Charity was awarded £16,666 to support research work from Low Middle-Income Countries.

Additional Funding

Funding of £3,400,000 was secured in September 2022 to provide reimbursement of expenses relating to increased energy costs for liquid nitrogen and electricity, costs associated with the maintenance and repair of the sample store, and costs associated with the preparation of the UKRI Infrastructure funding award. This funding is expected to provide support through to 2024. In June 2023, this award was increased by a further £700,000.



For the year ended 30 September 2023

18 ALLOCATION OF NET ASSETS

The net assets are held as follows:

				Restated	Restated	Restated
	Unrestricted	Restricted	Total	Unrestricted	Restricted	Total
	2023	2023	2023	2022	2022	2022
	£	£	£	£	£	£
Fixed assets	3,474,388	3,609,882	7,084,270	2,560,405	3,182,959	5,743,364
Net current assets	7,564,175	731,111	8,295,286	3,884,958	705,388	4,590,346
Deferred income	(4,454,302)	-	(4,454,302)	(3,197,631)	-	(3,197,631)
Provisions for liabilities and						
charges	(6,346,706)	(1,696,209)	(8,042,915)	(5,592,031)	(1,059,988)	(6,652,019)
					·	
	237,555	2,644,784	2,882,339	(2,344,299)	2,828,359	484,060

19 COMMITMENTS

- a) There was capital expenditure of £75,697 (2022: £696,711) contracted for, but not provided for in the financial statements at the end of the financial year.
- b) The total future minimum payments under non-cancellable operating leases are as follows:

Land and Buildings	2023	2022
	£	£
Not later than one year	653,288	587,641
Later than one year and not more than five years	1,216,904	1,400,796
Later than five years	591,120	644,984
	2,461,312	2,633,420
Plant and Machinery	2023	2022
	£	£
Not later than one year	23,647	22,544
Later than one year and not more than five years	-	18,612
Later than five years	-	-
	23,647	41,156
		

The operating lease payments charged to the Statement of Financial Activities during the year in respect of these non-cancellable operating leases was £647,473 (2022: £691,833).



For the year ended 30 September 2023

20 RELATED PARTY TRANSACTIONS

Related party transactions are detailed below. There have been no provisions made against any of the transactions at the year-end and no amounts have been written off in respect of these transactions during the year.

Medical researchers access to the Charity's resource

During the year, medical researchers have requested and obtained access to the Charity's data and samples with fees relating to this financial year captured in Note 3. These transactions are carried out at arm's length on a standard pricing policy value.

Wellcome and the Medical Research Council

Wellcome and the Medical Research Council are both Members of the Charity and entitled to appoint a Director to the Board. During the year, Tariq Khokhar, Head of Data for Science and Health at Wellcome and Dr Joseph McNamara, Head of Cohort Strategy at the Medical Research Council were both Directors and Trustees of the Charity, representing these Members.

Unrestricted funds

The charity was awarded core funding of £31,700,000 to cover the period from 1 July 2017 to 30 June 2022. In September 2022, the Charity's core funding was further extended by seven further years from 1 July 2022 to 30 June 2029 with a total grant award of £52,020,000 to cover this period, subject to the completion of a number of conditions. This funding is provided by Wellcome and the Medical Research Council with contributions from the National Institute of Health Research, the British Heart Foundation and Cancer Research UK.

The objectives of this funding remain consistent with those laid out within the Trustees report.



For the year ended 30 September 2023

20 RELATED PARTY TRANSACTIONS (CONTINUED)

Wellcome and the Medical Research Council (continued)

The cash received during the year was as follows:

The cash received during the year was as follows.		
	2023	2022
	£	£
Wellcome	4,749,005	1,914,476
Medical Research Council	4,749,005	1,914,476
National Institute of Health Research	521,752	196,356
British Heart Foundation	945,116	490,891
Cancer Research UK	745,359	392,713
	11,710,237	4,908,912
Funding received by the Charity during the year for these projects are as follows:	2023	2022
	2023 £	£ £
Imaging Enhancement Project	-	_
Medical Research Council	1,866,218	7,033,391
Wellcome	3,522,156	1,718,271
British Heart Foundation	545,004	253,461
Dementias Platform UK	8,764	17,496
	5,942,142	9,022,619
Repeat Imaging Project		
Medical Research Council	766,667	-
Chan Zuckerberg Initiative	766,667	-
Calico	766,666	-
	2,300,000	-
Research Analysis Platform		
Wellcome	7,075,864	3,277,978
Ethics Advisory		27.707
Wellcome	65,419	27,797
UKRI-MRC	65,419	27,798
	130,838	55,595
Total	15,448,844	12,356,192
Total	15,448,844	12,356,192



For the year ended 30 September 2023

20 RELATED PARTY TRANSACTIONS (CONTINUED)

UKRI-MRC

The amount owing to the Charity by UKRI-MRC at the year-end was £1,700,000 (2022: £2,581,834) for unrestricted and restricted funding with deferred income of £1,706,258 (2022: £1,701,992).

University of Oxford

Professor Sir Rory Collins, who is the Chief Executive and Principal Investigator of the Charity, is an employee of University of Oxford where he holds the positions of Head of the Nuffield Department of Population Health and British Heart Foundation Professor of Medicine and Epidemiology.

Professor Anneke Lucassen is a Director and Trustee of the Charity and is Director of the Centre for Personalised Medicine at the University of Oxford. During the year, the University of Oxford supported the Ethics Advisory project to address ethical issues for the Charity (Note 17).

During the year the services provided and the charges to or by the Charity for those services were as follows:

	2023	2022
	£	£
Income		
Research sample access - Cardiac monitoring	436,516	234,790
Recharge of salaries	67,440	67,440
Research data access	105,925	25,579
	609,881	327,809
Expenditure		
Developing, producing, delivering, and maintaining the Charity's data and Access IT Systems and supporting researcher access to the resource	1,660,000	1,350,995
Expert consultants' advice	220,586	118,074
Recharge of salaries	373,272	478,200
Recharge of travel costs and consumables	-	170,200
hechaige of traver costs and consumables	11,455	-
	2,265,313	1,947,269

The amount owing to the University of Oxford at the year-end was £67,199 (2022: £11,250) with accrued costs of £29,419 (2022: £379,052) and prepaid costs of £nil (2022: £nil). The amount owing by the University of Oxford at the year-end was £199,526 (2022: £53,206) and deferred income of £256,530 (2022: £121,171) and cash held for applications in progress £500 (2022: £9,000) had been recognised by UK Biobank.



For the year ended 30 September 2023

20 RELATED PARTY TRANSACTIONS (CONTINUED)

Thrombosis Research Institute

Professor The Lord Ajay Kakkar is the Chair of the Charity and a Trustee, is also a Director of the Thrombosis Research Institute, which has active UK Biobank Data Access applications. The amount included in Access income is £6,333 (2022: £250) with deferred income of £12,417 (2022: £8,750), cash held for applications in progress of £nil (2022: £10,000) and the amount owed to UK Biobank at the year-end of £1,200 (2022: £11).

University of Manchester

Dame Nancy Rothwell is a Director and Trustee of the Charity, is also President and Vice-Chancellor of The University of Manchester. The University of Manchester has several active UK Biobank Data Access applications. The amount included in Access income is £22,144 (2022: £5,259) with deferred income of £38,347 (2022: £24,741) and the amount owed to UK Biobank at the year-end of £5,400 (2022: £4,800).

21 PENSIONS

The contributions paid by the Charity and included in expenditure in the Statement of Financial Activities are £1,762,092 (2022: £1,390,558) as shown in Note 8. Deficit recovery contributions due within one year for the institution are £735,388 (2022: £589,824).

The latest available complete actuarial valuation of the Retirement Income Builder section of the Scheme is at 31 March 2020 (the valuation date), which was carried out using the projected unit method.

Since the institution cannot identify its share of USS Retirement Income Builder (defined benefit) assets and liabilities, the following disclosures reflect those relevant for those assets and liabilities as a whole.

The 2020 valuation was the sixth valuation for the scheme under the scheme-specific funding regime introduced by the Pensions Act 2004, which requires schemes to have sufficient and appropriate assets to cover their technical provisions. At the valuation date, the value of the assets of the scheme was £66.5 billion and the value of the scheme's technical provisions was £80.6 billion indicating a shortfall of £14.1 billion and a funding ratio of 83%.

The key financial assumptions used in the 2020 valuation are described below. More detail is set out in the Statement of Funding Principles (which can be found at https://www.uss.co.uk/about-us/valuation-and-funding/statement-of-funding-principles).

Consumer Prices Index ("CPI") assumption

Term dependent rates in line with the difference between the Fixed Interest and Index Linked yield curves less: 1.1% pa to 2030, reducing linearly by 0.1% pa

to a long-term difference of 0.1% pa from 2040 CPI assumption plus 0.05%

Pension increases (subject to a floor of 0%) Discount rate

Fixed interest gilt yield curve plus:

Pre-retirement: 2.75% p.a.
Post retirement: 1.0%



For the year ended 30 September 2023

21 PENSIONS (CONTINUED)

The main demographic assumption used relates to the mortality assumptions. These assumptions are based on analysis of the scheme's experience carried out as part of the 2020 actuarial valuation. The mortality assumptions used in these figures are as follows:

Mortality base table 101% of S2PMA "light" for males and 95% of S3PFA for females

Future improvements to CMI 2019 with a smoothing parameter of 7.5, an initial addition of 0.5% pa and a

mortality long-term improvement rate of 1.8% p.a. for males and 1.6% p.a. for females

The current life expectancies on retirement at age 65 are:

	2023	2022
Males currently aged 65 (years)	24.0	23.9
Females currently aged 65 (years)	25.6	25.5
Males currently aged 45 (years)	26.0	25.9
Females currently aged 45 (years)	27.4	27.3

A new deficit recovery plan was put in place as part of the 2020 valuation, which requires payment of 6.2% of salaries over the period 1 April 2022 until 31 March 2024, at which point the rate will increase to 6.3%. The 2023 deficit recovery liability reflects this plan. The liability figures have been produced using the following assumptions:

	2023	2022
Discount rate	5.73%	5.96%
Pensionable salary growth		
Year 1 & 2	6.50%	5.00%
Thereafter	2.00%	2.00%

During the current and prior year, the Charity took actuarial advice when setting the discount rate used in the calculation of its pension provision.



For the year ended 30 September 2023

22 POST BALANCE SHEET EVENTS

In October 2023, £32 million of new grant funding over a five-year period was announced at 10 Downing Street, comprising £16 million worth of funds from Former CEO and Chairman of Google Eric Schmidt and Citadel CEO Ken Griffin, matched by the UK's Department of Science, Innovation and Technology. These sums will be recognised in future financial periods in line with UK Biobank's accounting policies.

The Universities Superannuation Scheme ("USS") completed its most recent valuation of the scheme in December 2023. The outcome reveals that the scheme is in a surplus position as at 31 March 2023. Consequently, all participating employers, including UK Biobank, are no longer obligated to make deficit recovery contributions, with employer contributions consequently reducing from 21.6% to 14.5% of pay from January 2024. The provision for the deficit liability of £7,099,146, as at 30 September 2023 (see Note 16) is therefore expected to be released in the 2023/24 financial year.

23 PRIOR YEAR ADJUSTMENT

Adjustments have been made to prior year figures in relation to grant income recognition, invoiced access fees and dilapidation provision.

Grant Income Recognition

The previous treatment of grant income recognition incorrectly considered terms and conditions that must be met before UK Biobank can claim entitlement to the income. UK Biobank raises payment requests once the trigger points under the terms and conditions of the agreements are reached and in previous financial statements typically recognised the income at the point that the payment request was made, and the funds received.

During the year, UK Biobank carried out an assessment of the portfolio of grant funding agreements it holds to consider the way each grant should be recognised in accordance with the SORP. This highlighted there was a number of grants with embedded conditions which means income should instead be recognised in line with the performance at the end of a reporting period.

The recognition of income has now been corrected to reflect the terms and conditions of the underlying agreements. Income from grants that contain conditions relating to performance or payments by results is now recognised as performance occurs, with all funding received in advance or in arrears of performance deferred or accrued accordingly.

Accounting standards require the correction in income recognition to be applied retrospectively from 2021 and also reflected in the 2022 comparatives shown in the accounts. The effect of this change has been a reduction in the value of grant income and an increase in corresponding restricted reserves, general reserves, debtors, and creditors. The adjustment also affects the cash flow statement, the net movement in funds as per the Statement of Financial Activities for the year 2021/22 and creditor/debtor balances. There are no changes to previously reported cash balances.

Invoiced Access Fees

The financial statements have been restated to correct an error where debtors for invoiced access fees without a signed material transfer agreement had been captured with an offsetting deferred income balance. This change does not impact the net result or the opening/closing funds balance as it is a balance sheet only adjustment.



For the year ended 30 September 2023

23 PRIOR YEAR ADJUSTMENT (CONTINUED)

Dilapidation provisions

The financial statements have been restated to reflect a dilapidation provision for leased properties which had been omitted in error.

The correction is therefore applied retrospectively from 2021 and also reflected in the 2022 comparatives shown in the accounts. The effect of this change has been an increase in expenditure, provisions, and a corresponding decrease in reserves. The adjustment also affects the cash flow statement, the net movement in funds as per the Statement of Financial Activities for the year 2021/22 and creditor/debtor balances. There are no changes to previously reported cash balances.

The cumulative effect of these changes is shown in the tables below.

Statement of Financial Activities	Unrestricted	Restricted	Total
	£	£	£
2021			
30 September 2021 - Start of Comparative period			
Funds as previously reported	1,218,866	5,391,247	6,610,113
Restatement - other grants	-	(3,501,555)	(3,501,555)
Restatement - dilapidation provision	(240,702)	(318,875)	(559,577)
Restated reserves at 30 September 2021	978,164	1,570,817	2,548,981
2022			
30 September 2022 - Comparative period			
Total income as previously reported	7,067,285	16,206,930	23,274,215
Restatement - other grants	1,942,130	(3,306,205)	(1,364,075)
Restatement - capital grants		593,487	593,487
Restated income at 30 September 2022	9,009,415	13,494,212	22,503,627
Total expenditure as previously reported	(12,347,841)	(12,115,097)	(24,462,938)
Restatement - capital grants		(16,086)	(16,086)
Restatement - dilapidations	(20,489)	(69,035)	(89,524)
Restated expenditure at 30 September 2022	(12,368,330)	(12,200,218)	(24,568,548)
Net expenditure as previously reported	(5,244,103)	4,055,380	(1,188,723)
Restatement	1,921,640	(2,797,838)	(876,198)
Restated net expenditure at 30 September 2022	(3,322,463)	1,257,542	(2,064,921)
·			
Funds as previously reported	(4,025,237)	9,446,627	5,421,390
Restatement - other grants	1,942,130	(6,823,850)	(4,881,720)
Restatement - capital grants	-	593,488	593,488
Restatement - dilapidations	(261,192)	(387,907)	(649,098)
Funds transfer	_		
Restated reserves at 30 September 2022	(2,344,299)	2,828,358	484,060



For the year ended 30 September 2023

23 PRIOR YEAR ADJUSTMENT (CONTINUED)

Balance sheet

Fixed Asset - 2021	£
Total fixed assets costs as previously reported at 30 September 2021	28,975,742
Restatement - capitalised dilapidation cost	514,832
Restated fixed assets costs at 30 September 2021	29,490,574
Total Depreciation as previously reported at 30 September 2021	22,017,103
Restatement - depreciation of capitalised dilapidation costs	231,308
Restated fixed assets costs at 30 September 2021	22,248,411
Net book value at 30 September 2021	6,958,639
Restatement - net book value of capitalised dilapidation costs.	283,524
Restated net book value at 30 September 2021	7,242,163
Fixed Asset - 2022	£
Total fixed assets costs as previously reported at 30 September 2022	28,914,861
Restatement - capitalised dilapidation cost	514,832
Restated fixed assets costs at 30 September 2022	29,429,693
Total Depreciation as previously reported at 30 September 2022	23,414,413
Restatement - depreciation of capitalised dilapidation costs	271,916
Restated fixed assets costs at 30 September 2022	23,686,329
Net book value at 30 September 2022	5,500,448
Restatement	242,916
	5,743,364
Restated net book value at 30 September 2022	3,743,304



For the year ended 30 September 2023

23 PRIOR YEAR ADJUSTMENT (CONTINUED)

Debtors	Less than 1 year	Greater than 1 year	Total
	£	£	£
Total Debtors as previously reported at 30 September 2021	2,761,136	-	2,761,136
Restatement - other grants Restatement - invoiced access fees	-	-	-
	2,761,136		2,761,136
Restated debtors at 30 September 2021	2,701,130		2,701,130
Total Debtors as previously reported at 30 September 2022	5,772,870	-	5,772,870
Restatement - other grants	2,138,863	-	2,138,863
Restatement - invoiced access fees	(888,614)	-	(888,614)
Restated debtors at 30 September 2022	7,023,119	-	7,023,119
Creditors	Less than 1 year	Greater than 1 year	TOTAL
	£	£	£
Total Creditors as previously reported at 30 September 2021	(4,031,574)	-	(4,031,574)
Restatement - other grants	(3,501,555)	-	(3,501,555)
Restatement - invoiced access fees		-	<u> </u>
Restated creditors at 30 September 2021	(7,533,129)	-	(7,533,129)
Tatal Creditars on acquievalures and at 20 Contamber 2022	(9,644,391)	(3,791,119)	(13,435,510)
Total Creditors as previously reported at 30 September 2022 Restatement - other grants	(7,020,581)	(3,731,113)	(7,020,581)
Restatement - capital grants	(,,020,302)	593,487	593,487
Restatement - invoiced access fees	888,614	,	888,614
Restated creditors at 30 September 2022	(15,776,358)	(3,197,632)	(18,973,990)
Provision for liabilities and charges			£
Provision for liabilities and charges as previously reported at 30 September 2015	mber 2021		(6,232,320)
Restatement - dilapidation			(843,099)
Restated provision for liabilities and charges at 30 September 2021			(7,075,419)
Provision for liabilities and charges as previously reported at 30 September 2015	mber 2022		(5,760,004)
Restatement - dilapidation			(892,015)
Restated provision for liabilities and charges at 30 September 2022			(6,652,019)
•			



For the year ended 30 September 2023

23 PRIOR YEAR ADJUSTMENT (CONTINUED)

	Total
Cash flow from operating activities:	£
Net movement in funds as per the Statement of Financial Activities - as previously reported	(1,188,723)
Restatement - income other grants	(1,364,075)
Restatement - income capital grants	593,488
Restatement - expenses capital grants	(16,086)
Restatement - expense dilapidation costs	(89,525)
Restated net movement in funds as per the Statement of Financial Activities	(2,064,921)
(Increase) in debtors as previously reported	(3,011,734)
Restatement - other grants	(2,138,863)
Restatement - invoiced access fees	652,814
Restated (Increase) in debtors at 30 September 2022	(4,497,783)
Increase in creditors as previously reported	8,180,625
Restatement - income other grants	3,519,025
Restatement - income capital grants	(593,488)
Restatement - invoiced access fees	(652,814)
Restatement - dilapidation	48,915
Restated increase in creditors at 30 September 2022	10,502,264

