

# CIENC

Trustees' Annual Report & Financial Statements 2023/24







#### CONTENTS

4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38

YOUNG LEADERS COURSE, BTO; SEABIRD RINGING, BY MIKE TOMS / BTO; WATER RAIL, BY DAVID TIPLING / BIRDPHOTO.CO.UK

## **Birds Science People**

#### FROM OUR CHAIR: PROFESSOR ZOE DAVIES

I am thrilled to say that it has been another very positive year for BTO. Our 90th anniversary provided the perfect opportunity to reflect on our rich history, celebrate our achievements and acknowledge all the fantastic people who make BTO such a success. It also set the direction for the next important phase of our organisation's work, as we launched the new strategy through to 2030. One particular highlight of the strategy launch was producing a fabulous animated film in collaboration with Will Rose (page 9). The beautifully illustrated format was an instant hit, helping BTO engage with a broader audience, and highlighting how everyone can be part of delivering our charitable and strategic objectives.

Indeed, BTO has really stepped up to the challenge of learning how to involve a greater number of people, and a more diverse section of society, with birds. This is exemplified by the Ripple project in Northern Ireland. This initiative is striving to inspire individuals from all backgrounds to appreciate and monitor the species that can be found in their local area (page 29). Similarly, the BTO Youth Reps continue to lead the way by organising a diverse array of popular events. We have also developed a digital communication tool that is accessible to all. 'Birds on Your Doorstep' is an interactive webpage that allows everyone to explore how bird populations have changed in their local area through time (page 12). Based on BTO monitoring data, it clearly shows the breadth and depth of the scientific evidence collated and curated by our organisation.



#### FROM OUR CEO: PROFESSOR JULIET VICKERY

BTO data are often referred to as our crown jewels and they are remarkable in both their quality and quantity. This is epitomised by the facts and figures highlighted as we celebrated 30 years of the BTO/JNCC/RSPB Breeding Bird Survey: eight million records of 300 species from 176,000 visits (page 10). And that's just one facet of the precious data that generations of skilled observers and staff have worked to collect and analyse.

This year we have continued work to add to the value of these 'crown jewels', particularly through supporting a greater diversity of people to collect, understand and use BTO data, as we collectively seek to conserve birds and foster greater engagement with the natural world. We've invested in projects to help 'new-to-us' communities get involved in observing and recording (page 8). We continue to develop new technologies, such as tracking devices and acoustic monitoring, in ways that will enhance and complement more traditional approaches to data collection (page 10). We've progressed towards making more data open access, and re-packaged information on web-site-based Bird Facts to make it more attractive and easier to interrogate. (page 12).

Ultimately the true value of these data will be measured through the extent to which they make a positive impact for birds. Much of this will be through effective partnerships with those who inform, develop or implement policies. Our trusted relationships with partners, such as the Joint Nature Conservation Committee, Defra and the Country Nature Conservation Bodies, as well as academic and NGO partners such as those within the Cambridge Conservation Initiative, are central to this pathway to impact (page 20). Through these we can be confident that we are addressing the right questions and that BTO science is playing an ever stronger role in delivering positive impacts for both birds and people.





During 2023–24 there were almost 9,000 downloads of BTO data from NBN Atlas, cumulatively totalling over **400 million records**, and used for education, research and commercial purposes.

Volunteers contributed **2,102,943** hours to our work in 2023, an increase of 7% compared with 2022 and the equivalent of 1,292 staff years and £42.6 million, an incredible contribution and powerful resource.

The 2024 Youth Summit, a collaboration between BTO's Youth Advisory Panel, RSPB's Youth Council, and WWF-UK's Youth Ambassadors, empowered and inspired young people and organisations to do more

Thanks to our members, funders and supporters, **£6.2 million** 

was spent during the year carrying out, supporting and communicating our ornithological research & delivering engagement.



"Through Garden Wildlife Health, our long-running partnership with the Institute of Zoology, RSPB and Froglife, we have been able to identify the impacts of disease on populations of familiar garden birds, including Chaffinch" Dr Kate Plummer, Senior Research Ecologist



### During 2023–24, we received just over **£2 million** through gifts in Wills, something for which we are phenomenally

grateful.

Some **8,890 BTO volunteers** have contributed to the BTO/ JNCC/RSPB Breeding Bird Survey, which celebrated 30 years of survey vists in 2024 and now covers nearly 4,000 sites annually.

### **SEEKING SOLUTIONS**

Potential conservation solutions at the population or landscape level usually require some form of policy action, and BTO evidence supports policy development and evaluation at multiple spatial scales and across multiple habitats

Recent and ongoing initiatives include national-scale models informing governments in Wales and England about the consequences of different options for post-Brexit land management schemes, field-scale evaluation of the performance of key arable agri-environment options providing spring and winter resources for birds, analyses of BTO demographic data to inform hedge management policy that safeguards nesting birds, assessment of the drivers of population and distributional change of waders to inform landscape-scale solutions to their recovery, and improvement of the evidence-base used for assessing the impacts of human activities on marine birds.



LINNET, BY LIZ CUTTING / BTO

#### ARABLE MANAGEMENT FOR BIRDS

BTO research into solutions for farmland bird decline has continued, via in-depth evaluations of the performance of both AB14 Low-input Harvested Cereals and AB9 Wild Bird Seed Mix Crops in the Countryside Stewardship scheme, under Natural England funding. Although designed using sound evidence, how well do they work in practice? We have looked at the relevant plant and invertebrate resources that determine value for birds, as well as the birds themselves. Via our partners, the Countryside and Community Research Institute, we have also investigated crop agronomy and farmer attitudes, which have major influences on where and how these scheme options are implemented.

The Wild Bird Seed Mix project will report in 2024. However, the results show that most Low-input Harvested Cereals were on mixed or grass-dominated farms. This reflects crop use primarily for stock-feed, as the weediness that benefits biodiversity makes it uneconomical to harvest and so this option is a poor fit on arable

farms. Biodiversity responses were generally positive, so the option broadly achieves its aims, although effects were most apparent for plants and pollinators, potentially reflecting more direct effects than on birds, which use landscapes at larger spatial scales.

#### MANAGING HEDGES TO PROTECT BIRDS

Hedgerows are an important semi-natural habitat for wildlife and are maintained through regular cutting, with most management activities prohibited from 1 March to 31 August to protect breeding birds. These rules were derived from EU legislation and lapsed in 2023, following Brexit, providing a need for replacement and an opportunity for revision. As part of a wider Defra consultation, we analysed Nest Record Scheme and Ringing Scheme data from England to inform this process, assessing the effectiveness of the current regulations and the potential impact of possible changes in management on breeding birds. Using data from England from 2011 to 2021, BTO researchers estimated the timing of the nesting cycle for 15 hedge-nesting birds. The analyses revealed that 14 species still had active nests in August, with Yellowhammer, Bullfinch and Linnet being the most likely species to be affected by any advance in the timing of hedgerow management. As a result of the consultation, new regulations will be introduced into English legislation when Parliamentary time allows.

#### ASSESSING THREATS TO SEABIRDS

Our seabirds face a multitude of pressures, from disease, climate change and direct anthropogenic threats, such as the development of renewable energy projects, overfishing and habitat loss, which are recognised through the current development of country-level seabird conservations strategies, such as the English Seabird Conservation and Recovery Pathway (ESCaRP). A key challenge in the conservation of seabirds is quantifying the impacts of these multiple pressures, which operate through effects on the birds' breeding success, survival and phenology (the timing of events during the annual cycle).

A recent BTO-led paper considered the well-studied Kittiwake as a case study to highlight knowledge gaps in our understanding. The study identified key monitoring and research requirements for this and other seabirds, revealing those species and regions for which key information is currently lacking. Obtaining accurate data on demographic rates and movement patterns, for example, will help us and others to identify and develop solutions that will support thriving seabird populations. It improves our ability to predict the impacts of climate change or fisheries management on seabirds, and informs the placement of Marine Protected Areas and marine development.

#### **CASE STUDY:** BREEDING WADERS

BTO research is enabling the delivery of effective management solutions for breeding waders, many of whose populations are in decline.

As with seabirds, our waterbird populations may also be impacted by pressures throughout their annual cycles. The Curlew has been described as the UK's highest bird conservation priority and previous analysis of Ringing Scheme data, published in *Biological Conservation*, highlighted that the species' survival rates were high, and that current population declines are, therefore, likely to be driven by low breeding productivity. Current work, being undertaken in collaboration with the Curlew Recovery Partnership as part of the Natural England/BTO Research Memorandum of Agreement established in 2023, explores the effectiveness of management interventions aimed at increasing Curlew breeding productivity within its rapidly declining populations in central and southern England.

This builds on established regional studies in varying landscapes, including a recent PhD study in the East Anglian Brecks, supported through BTO's Curlew Appeal. In this grassland- and arabledominated region, the majority of nest failures (86%) were caused by (primarily nocturnal) predation. Fencing to exclude mammalian nest predators can increase wader nest success, but too few Curlews currently nest within fenced areas in Breckland to produce an observable benefit. Fencing sites containing high densities of nesting Curlews could potentially double the number of chicks hatched each year within the Breckland study area, something that would help to maintain these populations. However, landscape-scale actions to reduce predator impacts on nests and chicks will be needed to maintain breeding numbers within the wider countryside.

### EMBRACING EVERYONE

As evident in our strategy animation, launched during the year, we are working to inspire, engage and empower a greater diversity of people to discover and value nature through active engagement with our work.

#### **BECOMING (MORE) INCLUSIVE**

Over the past year we have continued to work on projects that support and enable our strategic commitment to become a more inclusive organisation. These projects seek to reach a greater number and diversity of people, from across different geographical locations and with different experiences, with a range of opportunities that are developed with inclusion principles and practices in mind.

It is our ambition to equip and empower individuals across BTO staff and our wider community, enabling them to recognise opportunities for greater inclusion within their areas of work or involvement with BTO. We are doing this through our *Becoming (more) Inclusive* framework and its accompanying action plan, which has been co-developed over the past year with a broad group of collaborators.



BTO BIRD RACE 2023

Through our work with Dr Anjana Khatwa, and through codeveloping our framework for inclusion with Helen Bown, we recognise that there are core elements that will better enable us to deliver against this action area. In particular we need to:

- increase understanding and confidence about what inclusion and being inclusive means;
- distil evidence and develop examples (including stories) that show why inclusion matters, and how being inclusive benefits birds and people;
- focus on understanding and addressing barriers to inclusion.

Focusing on our internal approach to inclusion is foundational, and we have been developing a rolling programme of initiatives and activities to increase equity, diversity and inclusion for our workforce, seeking input via staff forums, staff meetings and staff surveys. Importantly, we recognise that we are on a journey to become more inclusive and that we will need to take existing staff and supporters with us, explaining why the changes we are making are important, and helping them to see why an inclusive BTO will be better placed to deliver more strongly on our charitable and strategic objectives.

This action area is prioritising projects that have the greatest likelihood of delivering genuinely inclusive outcomes and sustainable change; for example, projects that do not make assumptions about what people and communities currently under-served in BTO and our sector want, but instead seek to engage those communities and ask them. This approach has been particularly valuable in our *Together through nature* project in Thetford, where we are working with Civil Society Consulting and local partners to provide opportunities for local residents who do not normally engage with birds, nature or science.

#### A FOCUS ON SOUND

We have gained valuable experience over the past year of working with blind and partially sighted people. Our Ripple Northern Ireland project delivered an Auditory Birdsong Training day for people with visual impairments, run in partnership with RNIB Northern Ireland. Our Training team ran a similar event for Vision Norfolk as part of the Brecks Fen Edge and Rivers project. A group of individuals with visual impairments, along with their guides and dogs, joined Nick Moran and Jenny Donelan for a guided walk around RSPB Lakenheath Fen, with a focus on bird songs and calls. We are keen to offer more auditory-focused activities in the future.

#### INTERGENERATIONAL ACTIVITIES

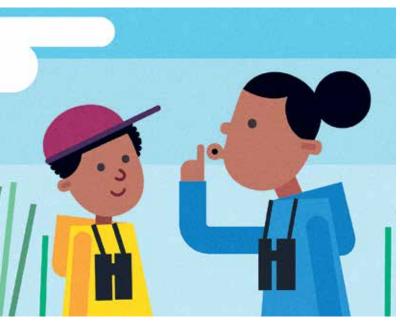
Over 100 people from across the UK came together to share their excitement about birds and celebrate BTO's 90th anniversary in the Big Bird Race 2023. The event, which was organised by BTO Youth Representatives saw 117 people, ranging from total beginners to experienced birdwatchers, going on birdwatching races in a range of habitats to identify as many species as possible in four hours, using only green means of travel. BTO Youth's aim was to make everyone feel like birdwatching and nature can be for them. By bringing together a whole host of experience levels and ages, everyone will have learned something new, made some great memories and, hopefully, grown a greater appreciation for birds.

#### **CASE STUDY:** EQUIPMENT DONATION SCHEME

One of the barriers to participation faced by young people is access to the optical equipment – binoculars and telescopes – that is so central to the birdwatching hobby. We have addressed this through a new scheme.

The BTO Equipment Donation Scheme (EDS) supports young people across the UK who cannot afford birdwatching equipment and guides, by donating binoculars, telescopes and bird books to individuals, schools, and university groups. It is managed by BTO Youth, and aims to pass on the passion for birdwatching to the next generation.

Thanks to the generosity of hundreds of donors, EDS has now benefited over 2,300 young people across the UK. Applications to receive donated equipment are reviewed by a panel of staff and Youth Advisory Panel members so that we can prioritise the young people who will benefit most. The scheme has been kindly supported by Opticron, a family-owned business with over 50 years of experience in consumer optics. The company has helped repair some of the used equipment donated to the scheme and has also supported the purchase of new equipment for onward donation. We are incredibly grateful for this support, and for the generosity of BTO supporters whose donations of pre-loved equipment are enabling a new generation of birdwatchers to take up the hobby.



BTO STRATEGY ANIMATION, BY WILL ROSE / BTO; EQUIPMENT DONATION SCHEME RECIPIENT, BY CLAIRE FAULKNER.



### CHARTING CHANGE

We are tracking changes in bird populations to understand their health and that of the wider natural world. During the year we celebrated three decades of the Breeding Bird Survey and trialled new methods to enhance our core monitoring.

#### **GOOSE AND SWAN COUNTS**

The latest results of the Goose and Swan Monitoring Programme were presented in the Waterbirds in the UK 2022/23 report published this spring. The scheme is organised by BTO in partnership with JNCC and NatureScot, with BTO taking over the lead in summer 2022. There are two key areas of results presented: goose and swan age assessments and censuses of migratory geese. Age assessments comprise information on the proportion of young and the mean brood size for Whooper and Bewick's Swan, plus six populations of geese. Counts of Pink-footed Geese and Greylag Geese are made in the autumn and are collated from across the range to form the Icelandic-breeding Goose Census. Counts of Taiga Bean Goose, Greenland White-fronted Goose, Svalbard Barnacle Goose and Greenland Barnacle Goose are made in the winter by volunteers and organised 'goose groups'. Britain and Ireland host important numbers of wintering geese. The global population of Greenland White-fronted Goose in spring 2023 was 18,027 birds, made up of 7,792 in Ireland and 10,235 in Britain.

#### HAPPY 30TH BIRTHDAY BBS!

2023 marked the 30th year of fieldwork for the BTO/JNCC/RSPB Breeding Bird Survey (BBS). Nearly 9,000 skilled and dedicated volunteers have submitted some eight million records of 300 species of bird from 176,000 visits, amounting to over 300,000 hours of volunteer effort – a staggering acheivement. The survey remains central to UK bird monitoring and reporting, contributing to a broad range of publications, papers and metrics.

Although designed as a UK monitoring scheme, thanks to the level of volunteer support, trends are delivered at a country and regional level for varying numbers of species, contribute to the Pan-European Common Bird Monitoring Scheme and are increasingly used in local initiatives. BBS provides the infrastructure for the Tracking the Impact project in the Chilterns, which is an exciting landscape-scale wildlife surveying programme running across the central Chilterns as part of the Chalk, Cherries and Chairs Landscape Partnership scheme. To empower and contribute to regional initiatives of this kind underlines the value of the BBS, and the power of BTO-led citizen science to deliver information across a broad range of spatial scales.

#### DEVELOPING MONITORING METHODS

Passive acoustic monitoring (PAM) provides a means of collecting data on birds, as well as other wildlife, in areas with few expert bird surveyors, often for species poorly monitored through diurnal surveys. It also has the potential to be deployed for long time periods, hence increasing species detection and capturing data over the full daily and annual cycles. BTO is currently undertaking a suite of projects designed to explore the potential of this emerging technology. These include: (i) supporting BBS volunteers to deploy acoustic devices alongside normal BBS surveys in Scotland, (ii) comparing traditional survey methods with acoustic devices for use by farmers and landowners in Dorset, as part of a broader European project, (iii) deploying acoustic devices on BBS squares to measure and compare soundscapes in different landscapes, and (iv) trialling the use of acoustic recorders to detect a potentially invasive non-native bird species.

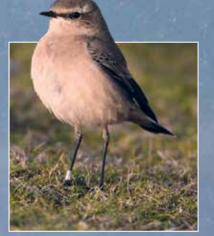
An overarching aim across these projects is to assess the pros and cons of this technology, given that AI-based PAM will miss individuals or species that are not vocalising and may deliver false positives, the latter due to imperfect classification. Moreover, although very useful for detecting presence, PAM cannot yet be easily used to measure relative abundance as effectively as human observers. Solving these issues and delivering improvements in the use of Passive Acoustic Monitoring will make this technology a valuable tool in our arsenal for monitoring birds, as well as bats, other mammals, amphibians and insects in the future.

#### AVIAN DEMOGRAPHIC SCHEME (ADS)

Over the past year we have continued to focus on the development of Demography Online (DemOn), a system that greatly improves the quality of ringing and nest record data submitted to BTO, and makes these data more accessible to volunteers, while simultaneously reducing data processing and reporting costs. The first phase build was completed in March 2024, and the remaining 30% of scheme participants using the previous electronic system will be migrated to DemOn by March 2025.

Reduced future expenditure on database development has allowed the ADS Team to expand in other areas, with an ADS Engagement Manager employed for the first time in November 2023. That recruitment has significantly increased capacity to progress the revision and publication of the online guidance that replaces the Ringers' Manual, a process underpinned by extensive discussions with the Country Nature Conservation Body licensing teams over the past few years; production of additional, seabirdspecific material has also been delivered through funding from the Seabird Appeal. During the year, work was also completed on a review of the programs used to analyse Nest Record Scheme data, enabling geographic and habitat variation to be accounted for when producing outputs, and delivering even better outputs for end users.







BBS SURVEYING, BY DAWN BALMER / BTO; RINGED WHEATEAR, BY LIZ CUTTING / BTO; UPLAND BBS SURVEYING, BY TRACY MUNRO / BTO

### **DELIVERING DATA**

We want to increase the availability, synthesis, use and impact of BTO data. Our goal is for BTO data to be used in environmental policy and practice through active and effective partnerships, and widely drawn-upon by a diverse range of end users.

In a typical year, BTO receives around 15 million bird observations through our ongoing monitoring and demographic surveys and schemes. Our tracking projects produce around a million positional fixes each year, and we are collating in excess of 50 million records through acoustic projects annually. Collating and managing these large and growing datasets efficiently is an important job and we are investing in improved facilities to secure these data for posterity. Most of these datasets are collected with a particular purpose in mind, such as producing the population trends presented in the annual *Breeding Bird Survey Report* and the *Wetland Bird Survey and Goose & Swan Monitoring Programme Report*. The main goal of the Delivering Data Action Area is to ensure that these data have value and impact beyond their primary use.

#### SHARING RECORDS MORE WIDELY

One of the key ways we can do this is to share records with the wider world for reuse. Currently around 120 million records from 1950 onwards are shared on the National Biodiversity Network (NBN) Atlas. During 2023–24 there were almost 9,000 downloads of BTO data from NBN Atlas, cumulatively totalling over 400 million records, with the majority used for education, research and commercial purposes.

We also operate a Data Request Service and in 2023–24 received 358 requests and delivered around 14 million records to a range of end users. Not all uses are best served by large extracts of raw records and for the last three years we have been producing BTO Data Reports, a commercial product aimed squarely at the environmental impact assessment industry: in 2023–24 we produced 74 Data Reports, generating a modest surplus to reinvest in the monitoring schemes that underpin the Reports.

#### MODERNISING OUR DATA SERVICES

In November 2023, we created a new Biological Data Manager role to help modernise our data services. One goal is to remove barriers to the reuse of BTO data. Where appropriate, we intend to make more of our data self-service and open access. We have already published an open access dataset covering the bird atlases (Gillings *et al.* 2019) and soon hope to release an equivalent dataset containing 25 years of BBS data. Open access is not without its challenges, including the sensitive treatment of rare breeding birds, the protection of intellectual property and loss of revenue from data sales. Some of these issues can be alleviated by releasing products that share aggregated or derived information rather than the raw data themselves.

#### **EMPOWERING KNOWLEDGE**

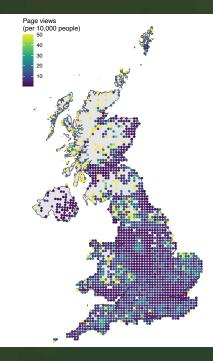
We have carried out a major overhaul of our BirdFacts web pages to provide a more comprehensive data-based encyclopaedia for UK birds. Existing information on population trends, demography and biometrics is now complemented by Bird Atlas maps, BirdTrack phenology graphs, identification information and commentaries about causes of change, conservation actions and relevant publications for many species. Already these pages have been viewed 40 times more often than their predecessors .



WIND TURBINES, BY DAVID TIPLING / BIRDPHOTO.CO.UK

BirdFacts provides information by species and already provides a self-service option for many users interested in species information. Another common request is for information about places. In May 2023, we produced a new tool called Birds on your Doorstep that aimed to highlight how bird populations have changed where people live. Users enter their postcode to see a summary of changes from Bird Atlases and current information from BirdTrack The tool has been used almost 30,000 times to see changes in all populated parts of the UK (see map). We plan to build on this with more place-based information in the coming year.

As we review our current data policies and practices we will identify more ways to increase the value and impact of data collected by BTO volunteers and staff. We hope having greater access to the right kinds of data will empower more people to take positive action for birds and people.



### **SUSTAINING SUPPORTERS**

We want to ensure that everyone who works with us feels valued, and knows that they are playing an important role in tackling the biodiversity and climate crises. Over the past year we have continued to invest in our supporters in many different ways.

#### SUPPORTERS MATTER

BTO's thousands of supporters help us in a range of ways. Their 2,102,943 hours of dedication during the last year provided data that have improved our understanding of changing bird populations, the drivers of those changes, and the effectiveness of conservation interventions. People participating in our work have also benefited directly, through their learning, and from the well-being advantages of time spent outdoors. By kindly supporting us with memberships, donations and legacies, our supporters also enable us to do much more, including important self-directed research to answer the most pressing questions.



COUNTING OYTSERCATCHERS, BY DAVID TIPLING / BIRDPHOTO.CO.UK

#### IN WITH THE OLD, IN WITH THE NEW

To underpin Charting Change and other strategy action areas we need to increase the number of BTO volunteers throughout the UK. It's also essential that we recognise the needs and values of our existing supporters to ensure that we retain them, so we can build on that solid foundation. Accordingly, our work within Sustaining Supporters encompasses both recruitment and retention. Over the past year, for example, we have continued to invest in the tools, such as Demography Online and BirdTrack, used by our volunteers to enter and manage their survey data. It is essential that these tools are easy to use and that they provide the functionality that our volunteers want, enabling them, for example, to report back to the landowners who so kindly grant access to survey sites.

#### SUPPORTING THE REGIONAL NETWORK

Our network of ~350 Regional Representatives, Survey Organisers and Ambassadors is critical, providing local points of contact for survey organisation and engagement. Thanks to the generosity of the Gillian Wills Development Fund we have been able to establish a new full-time post to support the Regional Network. We have been improving communications, organising local get-togethers, and building towards a recruitment drive to fill vacancies. We hope that many more people will experience the benefits of an engaged and active Regional Network team in their area as this work bears fruit.

It is essential that our Regional Network volunteers have opportunities to share their knowledge and experience with each other, as well as with BTO staff. To this end, we have continued to host meetings that enable face-to-face discussion, something that has proved popular with those attending.

"Just to say how much I enjoyed the meeting on Saturday. I came away energised and full of good intentions. The format was great, and the value of having a face-to-face meeting was obvious. In my view these kinds of meetings should be held regularly in the future."

Stephen Metcalfe — Regional Rep for Lothian, following a gathering of the Scottish Regional Network

#### **INVESTING IN TRAINING**

By investing in training we have welcomed more people into BTO, supported their development and, in so doing, we have laid foundations for growth in our volunteer schemes and surveys.

During the last year we had 4,393 registrations across 33 different training events (involving 75 online sessions and 34 in person ones). 3,133 unique individuals accessed our training, with an average age of 54 – our youngest participant was 11 and our oldest 92. People joined online or in person sessions from 1,109 10-km squares around the UK, 37% of the total.

We also delivered face-to-face training in bird ID and survey skills in some of the higher priority areas for volunteer development.

"These courses are consistently excellent. The trainers are so knowledgeable, clear, enthusiastic and friendly – and they really do know how to teach. The composition of the sessions maintains interest and moves logically from one topic to the next"

#### FOUR NATIONS ENGAGED

There are some areas of the UK in which it is considerably more challenging for BTO to achieve good levels of survey coverage due to lower human population densities, more challenging physical geography or a range of other factors. In response to these challenges, we've increased our engagement capacity throughout the UK so we're now better able to deliver locally relevant communications, training, conferences, talks and support for the Regional Network. We aim to deliver strategic growth in our volunteer capacity in the areas where it is most needed, in line with the priorities identified by the Charting Change Action Area.

"Thanks again for a great training session. It has given me the confidence to go ahead with the survey now that I know how to carry it out and that I have the ability to do it. It was a pleasure to meet you all. Your team is so friendly, approachable and knowledgeable."

Susan Banister – BBS survey skills training participant



### FRAMING FUTURES

BTO's expertise and extensive monitoring and surveillance datasets enable us to carry out large-scale analyses to address important questions about the factors that are driving change in bird populations and their distribution, both now and into the future.

#### **RESPONDING TO EMERGING DISEASES**

BTO has continued to play a central role in the response to the emergence of highly pathogenic avian influenza (HPAI) in our waterbird, seabird, and bird of prey populations - the latter covered on page 31, where data from the Scottish Raptor Monitoring Scheme have proved particularly valuable.

During 2023 we saw HPAI devastate Black-headed Gull and Common Tern colonies, many of which were located inland and away from the coastal seabird colonies hit the previous year. We continued to work with partners in Government and other NGOs to understand the impacts of this disease outbreak and to identify ways in which we might tackle the challenges posed by HPAI.



COMMON TERN CHICKS, BY MOSS TAYLOR / BTO

We have been able to use the data collected by our volunteers to assess the impact of HPAI on bird populations. We have also carried out vulnerability assessments, identifying the species and populations at greatest risk from the outbreak, which in consultation with others we have used to inform changes to our ringing guidance. This information is being used to direct conservation responses and the prioritisation of resources. BTO has also been developing tools to inform future decision making, including the development of predictive models that can highlight likely spread in poultry based on wild bird abundance and movements across Europe, something of great importance to the poultry industry.

During the year, we also recognised the need to bring together the knowledge and data being generated as researchers from across the world responded to HPAI outbreaks in wild birds. We launched a call for papers for a special issue of our journal *Bird Study*, which attracted significant interest and which will appear in late 2024. By bringing this information together in one place we will also deliver an opportunity to raise awareness of the work being done as we respond to this disease.

HPAI is not the only disease with which BTO has been involved over the past year. In November 2023, we celebrated 10 years of the Garden Wildlife Health project, operated by BTO in partnership with the Zoological Society of London, RSPB, and Froglife. The project monitors the health of, British wildlife, identifying disease threats and bringing together both opportunistic and systematic monitoring, the latter delivered by participants in BTO Garden BirdWatch. An event at London Zoo brought together a host of researchers and discuss the most pressing disease threats, one of which is Usutu virus in Blackbirds – the subject of a project that was initiated in summer 2023.

#### DELIVERING LANDSCAPE RESTORATION

Thanks to the Cambridge Conservation Initiative's Endangered Landscapes and Seascapes Programme and the generosity of Arcadia – a charitable fund of Lisbet Rausing and Peter Baldwin – BTO has continued its partnership working to restore and protect ecologically important landscape within Polesia. Polesia, which is located in Eastern Europe and contains some of Europe's last pristine peatlands and lowland forests, has suffered from devastating large-scale fires.

By using satellite data, the team was able to explore the prevalence of large fires – some of which extended over more than 100 km<sup>2</sup> – and the factors causing them. A key question was whether work to restore some of the landscape's damaged wetlands could reduce the risk of large and damaging fires, which have been increasing because of climate change.

Frequent spring and summer fires were found to have predominantly started in agricultural areas, where farmers burn the land to clear it after harvest or before planting. The fires then spread into neighbouring peatlands and floodplain meadows, which hold globally threatened species such as Greater Spotted Eagle and Aquatic Warbler. The largest fires, however, burned in the native deciduous forests, threatening protected old-growth oak and beech forests. Overall, more than a fifth of protected land burned during the period studied, highlighting the conservation impacts of the fires.

The results of the study indicate that restoration of Polesia's wetlands would help to limit the spread and intensity of these large and damaging fires. One of the challenges has been the years of land drainage for agriculture and forestry, which has left this important landscape drier and more susceptible to fire. Restoring these landscapes would deliver significant benefits for people and for wildlife.

#### FRAMING FUTURES

#### **CASE STUDY:** CLIMATE CHANGE

As well as identifying the impacts of climate change on biodiversity, we are increasing understanding of how climate change interacts with other drivers, including land-use change.



#### PUTTING MIGRANTS ON A GLOBAL STAGE

Climate change is already having catastrophic impacts on many migratory species, including birds, and BTO has been leveraging its datasets and expertise to both help identify these effects and the potential for climate change adaptation or mitigation. In December 2023, for example, a landmark report was launched at the United Nations Framework Convention on Climate Change CoP in Dubai. The report was commissioned by JNCCt, funded by Defra, and delivered by BTO scientific staff.

This report presented strong evidence that global increases in temperature are already affecting most migratory species groups, impacting the distribution of species, the timing of migration, and disrupting the food webs on which migrants rely. In some species there is a risk that global temperature increases will cause a mis-match between the timing of breeding and the time when prey species are most abundant. There is also strong evidence that migratory seabirds and marine mammals will be impacted by changes in oceanic currents, which are also likely to alter the nature and functioning of many ecological systems. The report reviewed potential conservation actions, and highlighted the importance of conserving migrants because of the benefits they provide for ecosystem function and nature-based solutions.

Being able to present this robust evidence at such an important conference provided a global platform for BTO work and, more importantly, saw this evidence feed through into the key Convention of the Conservation of Migratory Species CoP14 in Uzbekistan in February 2024, where it influenzed global policy-making. The report reinforces the need for immediate and concerted global action to tackle climate change and its impacts on migratory species.

#### LITTLE ROOM FOR MANOEUVRE

BTO data reveal that the average spring arrival dates of many summer migrants have advanced over recent decades, but the Cuckoo is one of a handful of species in which this has not happened. The long-term decline in UK Cuckoo populations,

CUCKOO AND MEADOW PIPIT, BY EDMUND FELLOWES, / BTO

together with the link between a changing climate and changing spring arrival dates more generally, raises the question as to why there has been such a limited shift in Cuckoo arrival times. This is something that has been addressed through a piece of BTO research, published during the year.

The team used 11 years of tracking data from 87 male Cuckoos, tagged as part of the BTO Cuckoo Tracking Project, to explore the timing of Cuckoo migration. The analyses revealed that the major determinant of the timing of spring arrival in the UK was departure from West African stopover sites. Individuals that left West Africa earliest arrived back on the breeding grounds earliest. The high level of synchrony evident in Cuckoo departures from West Africa suggests a relatively narrow optimal window for departure from these sites, and limited flexibility with which to adjust the timing of this event. It is likely that environmental conditions in West Africa constrain the timing of Cuckoo departure; worryingly, it looks as if the birds are doing all they can already to advance their UK arrival, and may already be suffering increased mortality at some stages of their annual cycle as a consequence. This new knowledge allows for better prediction of future responses to a changing climate, and reveals how conservation measures might mitigate the consequences of timing sresses at different points of the Cuckoo's annual cycle.



SHARING CUCKOO TAGGING WITH THE ONE SHOW, BY JON CARTER / BTO

### **OUR VOLUNTEERS**

BTO is fortunate to have amazing volunteers, working across the organisation to deliver our charitable objectives. From the volunteers who make up BTO's Board, through those who coordinate participation and enagement opportunities, to those who collect and submit data that form the evidence base to our work, a huge thank you to you all.

#### GOVERNANCE

The BTO Board governs the charity and directs and drives our work, and we are incredibly lucky to have such a dedicated, knowledgeable and passionate group of individuals working in this vital role. Our Board members bring a diversity of experience, something that ensures that our governance is robust and that the different facets of our work are represented.

Recognising the growing work of BTO Youth, for example, we appointed our first Young Trustee, Emma Thornton, in 2023. Emma has been part of BTO's Youth Advisory Panel since its formation in 2020, and was inspired to set up and lead the Oxford Ornithological Student Society. Emma is passionate about creating opportunities for young people to connect with nature and science, particularly around improving mental health.

"By presenting this opportunity, BTO has demonstrated its commitment to embedding young people into the organisation and I hope that my fresh perspective will contribute to ensuring BTO has its feet firmly on the escalator of our fasting moving world."

Emma Thornton – BTO Young Trustee

Governance is central to the running of BTO, as it is to any charity, and the Trustees work closely with BTO staff to review and evaluate performance against our goals and objectives. Together with staff, they help us to respond to a changing economic, political and technological landscape. In the past year, for example, the Trustees worked with BTO Communications staff on a new policy for social media, prompted by a Charity Commission consultation. The resulting framework ensures that we can maintain and protect BTO's reputation, and the beneficiaries of our charitable objectives, within what has become a polarised and challenging communications channel.

Sub-committees of BTO Board help to ensure the effective delivery of particular aspects of our work; for example our Regional Network and Ringing committees. These bring in other volunteers and the necessary experience to help inform and shape our work in these important areas. Our Regional Network, through which we coordinate and deliver much of our monitoring and engagement work, remains a central component of our volunteer networks. Over the past year we have been able to strengthen the staffing resource for this network, which will help us to provide greater support to our regional volunteers, and to all of our members, survey volunteers and supporters (see page 14).



BTO BOARD MEMBERS AND SENIOR LEADERS ON A VISIT TO BTO SCOTLAND / BTO

#### INCREDIBLE CONTRIBUTIONS

During 2023, BTO volunteers contributed an incredible 2,102,943 hours of work in support of delivering our charitable objectives, an increase of 7% compared with the previous year. This significant level of volunteer contribution represents the equivalent of 1,292 staff years, and has an estimated monetary value of £42.6 million.

At a time when public sector spending on biodiversity in the UK has been falling as a proportion of GDP, the increasing contribution of volunteers to biodiversity monitoring is hugely important. Thanks to the incredible efforts of our volunteers, we are well placed to ensure that our robust evidence base is used to deliver for both birds and people, whether that is through informing planning policy, testing the effectiveness of nature-based approaches to land management, or improving human health and well-being.

While recognising the collective contributions of our volunteers underlines the difference that we are making as a charity, it is also vital that we acknowledge and celebrate each volunteer's unique contributions. We continue to do this through survey and project reporting, for example in the form of the 'Year in review' emails that we send to participants in BirdTrack and Garden BirdWatch, but there is more that we want to do around reporting across the totality of the projects with which an individual is involved. This is an area of work for the coming period.

Trustees' Annual Report & Financial Statements 2023/24 | 19

### **OUR PARTNERSHIPS**

We are collaborative, working in partnership with individuals and organisations to achieve our collective goals. During the past year this approach has enabled us to contribute and share our expertise across a number of important projects.

#### **INFORMING RENEWABLES**

The key role of renewables in efforts to mitigate climate change impacts brings with it a need to understand the possible effects of renewable infrastructure on birds and other wildlife. BTO's work in this area has benefited from long-running partnerships, including with other NGOs, academics, industry, and statutory bodies. The diversity of the partnerships with which we are involved underlines the trusted role that BTO plays in delivering robust evidence and advice, and the convening power that comes from this.

Collision risk is an important consenting issue for offshore wind farms. However, we still have limited understanding of the factors influencing collision risk, especially in relation to seabird avoidance behaviour and how this varies through the year. By using tracking devices, and by working in partnership, BTO has been able to provide much-needed knowledge. Working on behalf of the UK Government's Department for Business, Energy and Industrial Strategy, for example, BTO has delivered a series of projects evaluating the potential interaction of gulls and skuas with offshore wind farms.



GRIFFON VULTURE, BY DAVID TIPLING / BIRDPHOTO.CO.UK

Importantly, we are seeing the results of this work feeding through into policy and management decisions, both here in the UK and more widely across the globe. A BTO-led global review of the collision risk associated with wind farms for birds and bats (Thaxter *et al.* 2017), used traits to identify the most vulnerable species to collision mortality – particularly large soaring birds such as vultures, buzzards and kites. For many parts of the world, these estimates of vulnerability are the only estimates available. They have been used by BirdLife International as the basis for estimating species sensitivity to wind farms in the Avistep project (*avistep.birdlife.org*), that so far provides guidance for renewable energy placement in India, Vietnam, Nepal and Thailand.

#### JOINT RESPONSE TO A KNOWLEDGE GAP

Information on the non-breeding season numbers and distribution of gulls has not been updated for nearly 20 years. The lack of up-to-date information has implications for the designation of protected sites and the development of countrylevel seabird conservation strategies. It is also needed to help us respond to the recent outbreak of highly pathogenic avian influenza in wild bird populations.

We have been able to address this important knowledge gap because of our well-established partnerships with Defra and the Country Nature Conservation Bodies, who – together with BTO – have been able to direct financial and other resources to a new national Winter Gull Survey (WinGS), the fieldwork for which began during the 2023/24 winter.

The survey will provide updated population estimates for Black-headed Gull, Common Gull, Lesser Black-backed Gull, Herring Gull and Great Black-backed Gull wintering in the UK, its constituent countries and the Crown Dependencies of the Channel Islands and the Isle of Man. It will also deliver additional information on the populations of other, less common, gull species wintering here. From this, we will be able to update the thresholds used to identify sites of national importance for these species, supporting the designation of protected sites and the conservation of these birds.

Promotion of this volunteer-based survey has also been supported by long-running partnerships, in this instance those that we have with local and national media. These have delivered high profile pieces on BBC News and in the papers. Not only is it important to secure sufficient volunteers to carry out the fieldwork, but it is also important to highlight the value of this work to the wider public.

#### GREATER THAN THE SUM OF OUR PARTS

BTO is part of a unique collaborative partnership between the University of Cambridge and leading biodiversity conservation organisations. Based in the David Attenborough Building in Cambridge, the Cambridge Conservation Initiative (CCI) is the largest cluster of conservation organisations in the world. Its strong convening power enables BTO to directly engage with a wide global audience, from leaders in government, business, academia and NGO communities, to the general public.

Through the CCI partnership, we have come together with other organisations to tackle complex and challenging issues with innovative approaches, using a multi-disciplinary approach that cannot be achieved by any one organisation alone.

### ENGLAND

Many policy decisions have a strong country- or regional-focus, and BTO's work reflects this. We continue to deliver projects from our Country Offices, often working with country-level partners and other stakeholders.

#### ACHIEVEMENTS AND PERFORMANCE

#### INFORMING HOW LAND IS MANAGED

Post-Brexit, there has been considerable government interest in scoping what different policy decisions would mean for how land is used, and the wider environmental effects of this. A key approach to predicting the possible impacts of different policies is Defra's Ecosystem Value Assessment Scenario Tool (EVAST). It has the ability to simulate the effects of policies focussing on biodiversity, climate, water quality, and air quality.

BTO has provided bird models, based on the BTO/JNCC/RSPB Breeding Bird Survey data, to EVAST, to compare future scenarios with the current baseline. These models help us to understand how bird communities are likely to change and how such changes may, or may not, help meet important environmental targets.

EVAST builds on the Integrated Modelling Platform developed within the Environment and Rural Affairs Monitoring and Modelling Programme (ERAMP), an ongoing project in which BTO is conducting analogous modelling for the Welsh Government. Like EVAST, this work has been led by the UK Centre for Ecology and Hydrology, a core BTO partner. It is providing information on the likely consequences of different policy scenarios, and informing plans for the developing Sustainable Farming Scheme in Wales.

#### **IDENTIFYING IMPORTANT HABITATS**

Intertidal habitats are often well-used by waders outside the breeding season, but some species also make use of other adjacent habitats during this period, including agricultural fields. Understanding the importance of these non-tidal habitats for waders is crucial, especially as such land is rarely included within the protected areas designated for these species.

A study published in 2023 investigated the use of non-tidal habitats bordering The Wash, an estuary in eastern England, by Curlew and Bar-tailed Godwit. Information on the winter-feeding distribution of the two species was collated from resightings of individually colour-marked birds, initially caught and ringed at sites around The Wash by the Wash Wader Research Group.

The resightings revealed that Bar-tailed Godwits were only seen on intertidal habitats. In contrast, colour-marked Curlews were regularly observed feeding on agricultural fields, the colourmarks revealing that the majority of individuals were feeding on both fields and mud flats. Importantly, those Curlews seen feeding in fields were significantly more likely to be male and those on the estuary more likely to be female. Although there is a small degree of overlap, female Curlews have longer bills than males. The difference in habitat use evident in the resighting data probably reflects the fact that the longer-billed females can access more intertidal worms and are more efficient feeders when probing.

That inland fields are used by increasing numbers of Curlews, particularly males, through the winter months has implications for existing conservation approaches. The Wash is protected by various national and international designations, but these relate primarily to the intertidal habitats; the inland fields are not protected and are subject to pressure on land for development. Should these inland feeding sites be lost this is likely to affect males (particularly those with the shortest bills) disproportionately, which may have implications for the wider Curlew population. The study's findings suggest that consideration should be given to extending the area around The Wash receiving protection.



LARGE SKIPPER, BY MIKE TOMS / BTO

#### TRACKING ENGLAND'S BUTTERFLIES

England's butterflies can be categorised as either habitat specialists or species of the wider countryside. The changing fortunes of the latter are monitored through the Wider Countryside Butterfly Survey, operated by BTO and its partners in the UK Butterfly Monitoring Scheme. English data from the Wider Countryside Butterfly Survey are used by Defra in their annual Official Statistics, reporting separately on abundance trends for the butterflies using farmland and woodland habitats.

Large fluctuations in numbers between years are characteristic of butterfly populations as they respond to weather conditions. Having a robust long-term monitoring protocol provides a muchneeded measure of the underlying and longer-term changes, and BTO is able to contribute to this through its existing schemes.

Roughly 700 survey squares are covered annually in England, and about a third of these involve BTO volunteers making butterfly counts on their BTO/JNCC/RSPB Breeding Bird Survey squares. The additional visits that BBS participants make to carry out butterfly recording underlines the willingness of our volunteers to contribute to wider biological monitoring.

### WALES

During 2023 staff at BTO Cymru were actively involved in using BTO and partnership data to inform and support policy-makers, underpinning policy decisions that have implications for Welsh birds.

#### SUPPORTING POLICY DECISIONS

An enduring theme of BTO Cymru activities in the past several years has been providing scientific support to policy and decisionmakers, particularly Natural Resources Wales. Major changes to bird species' conservation status may be identified though our volunteer monitoring programmes.

In 2022 the decline in Welsh Rook populations highlighted by BTO/ JNCC/RSPB Breeding Bird Survey data resulted in the species' status changing directly from Green to Red as part of the Birds of Conservation Concern Wales review. National Resources Wales responded by removing the species from the General License, and the Welsh Ornithological society (with advice and support from BTO scientists and from BTO's Welsh Regional Network) organised and delivered a national Rook survey, completed in 2023. BTO was then asked to analyse the survey data, comparing Rook populations between 1994 and 2022–23, and considering spatial and ecological changes over that time period. Colonial species are particularly challenging to survey, and a single-species dataset provides a useful comparison with the Breeding Bird Survey trend. Both show strong decline in the Rook population, and the survey also highlighted different rates of change in different parts of Wales, with a parallel decline in rookery size and changes in nesting tree species over time.



RED KITE, BY SARAH KELMAN / BTO

#### **RED KITES AND WIND FARMS**

A second application of population and spatial modelling was brought to the Cymru team by a consortium of renewables developers, concerned about improving understanding of the potential impacts of onshore wind development on Red Kites. Their focus was at national and population scales, given the importance of renewable energy generation and the number and spatial distribution of wind farms being proposed. BTO staff led the analysis, using data from *Bird Atlas 2007–11* and the Breeding Bird Survey to build a spatial model of Red Kite density across Wales. This model, applied to the developers' future portfolios was used to predict and estimate local, regional and national population impacts from turbine-related mortality. The national Welsh Red Kite population, still recovering strongly from near-extinction and now widely distributed enough to be monitored through the Breeding Bird Survey, is resilient enough to tolerate the small amount of additional mortality risk from onshore wind developments. However, the analysis predicted detectable local impacts, particularly where planned sites were closest to the buffer zones surrounding the two Special Protection Areas designated for breeding Red Kites in Wales. The next stage of this reassuring, though cautionary, work is to ensure it reaches the audiences best-placed to make use of the results. BTO reported to the consortium of developers and communicated the main results to Natural Resources Wales (as the licensing authority for renewables developments in Wales). Wider publication in 2024 will be in the Welsh Ornithological Society journal (Milvus) and also in an industry-specific publication. It has also attracted wider media interest, underlining how broader audiences value these birds.

#### INFORMING CONSERVATION ACTION

Tracking a shy or cryptic species sheds light on more facets of the bird's ecology than their habitat choices. Tracking data, for example, can deliver a much more detailed understanding of breeding decisions, which in turn can inform conservation management and help site managers. Curlew chicks are nearimpossible to count because they are cryptic and highly mobile. Around 50% of chicks are lost between hatching and fledging, and the standard measure of productivity (reactive male birds) cannot distinguish between birds guarding a single or multiple chicks. Since productivity is the metric most-needed to monitor conservation delivery, we urgently need to link productivity thresholds to data that can be measured in the field.

Support for Welsh Curlew work from a private donor allowed BTO Cymru staff to build on previous behavioural analysis with a new model of the Curlew breeding season. This model is detailed enough to describe how nest success rates change through the season, as some birds respond to early nest loss by making second or even third attempts. Tracking data from birds tagged before nest establishment provide a sample of breeding trajectories, including for individuals making no attempt to breed at all, those making one or more failed attempts, and the small number (of males) succeeding in rearing at least one chick to fledging. We calibrated the model against the productivity required to stabilise the Curlew population (which is approximately two fledged chicks in three years per pair), and calculated site-level minimum hatching rates for nests established in different periods through the season, the latter a metric measurable by local Curlew conservation projects.

Additional funding under the Environment Agency contract in England supported an exciting additional application of this model, in understanding how effective conservation interventions are in improving productivity. Habitat management, nest-fencing and predator management impact different parts of the Curlew breeding cycle in measurable or predictable ways. If we model them alone or in combination, we can estimate the level of national effort required to stabilise Curlew populations using these interventions.

### SCOTLAND

During 2023 science staff at BTO Scotland harnessed the power of some of our longterm citizen science datasets to help evaluate the monitoring potential of acoustic surveys and to look for evidence of HPAI impacts on raptors. The engagement team continued to invest in the future with a programme of training and outreach aimed particularly at young people and at upskilling and encouraging new volunteers.

#### ACOUSTIC PERFORMANCE

As noted on page 14, wildlife sound recording could make a significant contribution to monitoring, particularly in situations where participation in surveys like the BTO/JNCC/RSPB Breeding Bird Survey (BBS) is limited by the local availability of skilled bird surveyors, including substantial tracts of the Scottish uplands. However, before we can really get acoustic monitoring off the ground, we need to know how to process and interpret acoustic datasets, and understand how these compare with more traditional monitoring data.

In 2023, generous funding from Mark Constantine and Ken and Linda Smith enabled us to do this. We asked BBS volunteers in Scotland to help by deploying acoustic recorders on their BBS squares during the early season visit and collecting them on the late season visit. We got a fantastic response and arranged for surveyors to collect recordings in 28 BBS squares, across a wide variety of habitats. Over 2,000 hours of recordings were processed using an automated classifier called BirdNET, yielding over three quarters of a million identifications of birds.

We manually checked a subset of these, confirming that, for most species, confidence scores assigned by BirdNET can allow us to filter out most incorrect classifications, leaving us with a reliable set of detections. Comparison of this acoustic dataset with BBS data collected from the same sites will allow us to evaluate the performance of acoustic and traditional surveys, informing decisions about how we use and develop this tool to improve our monitoring. As BTO strives to increase bird survey coverage in Scotland, and to make this more representative, the use of acoustic devices could form an important part of our monitoring tool kit.

#### IMPACTS OF AVIAN FLU ON RAPTORS

In 2022, an outbreak of highly pathogenic avian influenza (HPAI) resulted in high mortality of many seabird and wildfowl populations in Scotland and across the wider UK. During this outbreak, HPAI was also detected in a wide range of terrestrial species, but its prevalence and effects on these is poorly understood. Investigating the effects of HPAI in these other groups could help us to predict how it spreads in the future, as well as to understand the full cost of this anthropogenic disease for wild bird populations.

In 2023, researchers at BTO Scotland used Scottish Raptor Monitoring Scheme (SRMS) data to look for evidence of apparent impacts of the HPAI outbreak on the numbers and breeding productivity of a range of raptors. Breeding success of Golden Eagles and White-tailed Eagles was much lower in 2022 than in previous years and was lowest in areas close to coastal and marine habitats. This suggests the possibility of HPAI transmission through scavenging and predation on infected seabirds or wildfowl. The analysis will be repeated with data from the 2024 breeding season to assess whether Scottish eagles appear to be recovering from HPAI, and to check for any evidence of impacts in other raptor populations. Having a core monitoring scheme in place for Scotland's raptors, in the form of SRMS, enables this kind of important work to be carried out, and it is a model we are looking to deploy elsewhere.

#### **VOLUNTEER ENGAGEMENT & TRAINING**

We continue to invest in engaging new people, and supporting their development towards participation in BTO's schemes and surveys. We adopted a hybrid approach this year, providing online training, coupled with face-to-face opportunities to fine-tune bird ID and practise survey skills. These face-to-face sessions were delivered in areas of Scotland where we particularly need more volunteers.

Youth engagement work was also a significant focus, delivered in partnership with our friends at the Scottish Ornithologists' Club. We delivered a programme of monthly online sessions throughout autumn, winter and early spring to bring young people from throughout Scotland together to learn and be inspired. In June the partnership also delivered the second Scottish Bird Camp, giving 14 young people a fantastic opportunity to get to know one another and experience bird ringing, nest monitoring and a boat trip to Bass Rock, among other things. Towards the end of the financial year the partnership delivered the spring Scottish Birdwatchers' Conference in Troon, Ayrshire. Attendance numbers were up near pre-Covid-19 levels, and the field outings on Sunday were also popular.



SCOTTISH BIRD CAMP, BY STEVE WILLIS / BTO

#### SCOTLAND'S BREEDING WADERS

The machair habitats of North Uist, Benbecula and South Uist are important for breeding waders, including Dunlin, Ringed Plover, Oystercatcher and Redshank. Periodic surveys by BTO staff have charted the fortunes of these populations since 1983. The latest survey, carried out in 2022 and for which the results were published in 2023, reveals a 25% decline in the total number of breeding waders recorded. Dunlin and Ringed Plover showed the most marked declines, while Oystercatcher and Redshank both increased. Changes in breeding numbers up to 2014, the date of the previous survey, tended to be more negative in South Uist and Benbecula, where introduced Hedgehogs are important predators of wader eggs. However, the changes recorded between 2014 and 2022 were less clearly defined, and included some marked declines in North Uist and Berneray, where Hedgehogs are absent. At a time when populations of breeding waders are declining across much of Britain, the assemblage remains exceptionally important and there is a need to better understand the different drivers of change.

### **NORTHERN IRELAND**

During the year BTO Northern Ireland provided much-needed scientific data on the key conservation issues facing Northern Ireland, most notably the threats to waterbird populations on Lough Neagh and breeding seabirds across the province. Engagement work continues to go from strength to strength through delivery of an innovative events programme for the general public and Ripple NI, our pilot community-based nature project.

#### WETLANDS UNDER THREAT

Lough Neagh hit the headlines during the year as multiple factors led to record blooms of blue-green algae. All of this led to questions about how the largest freshwater lake in the UK should be managed. Lough Neagh is designated as a Special Protection Area and under the Ramsar Convention for its importance to wetland biodiversity. The Lough is internationally important for wintering waterbirds and during the breeding season it supports internationally important numbers of Black-headed Gull and the largest concentration of breeding Great Crested Grebes on the island of Ireland.

BTO staff, led by Hala Haddad, have improved our understanding of how waterbirds use Lough Neagh through an analysis of BTO/ RSPB/JNCC Wetland Bird Survey data. The work, published as a BTO Research Report, provides details of waterfowl population changes around the Lough and assists in identifying potential research questions to be pursued.

Working in partnership with the Northern Ireland Environment Agency and Lough Neagh Partnership, staff from BTO in Northern Ireland have started a stakeholder engagement and co-production project with local wildfowling clubs; this will assess factors influencing breeding productivity of waterbirds on the Lough.



BLACK-HEADED GULL AND CHICK, BY EDMUND FELLOWES / BTO

#### TRIALLING NEW TECHNOLOGY

Northern Ireland is internationally important for a number of breeding seabirds. Whilst much work is focused on annual counts through the BTO-led Seabird Monitoring Programme, there is relatively little work done on the monitoring of breeding seabird productivity within Northern Ireland. BTO staff have been trialling new technologies to address this and other data gaps relating to Northern Ireland's breeding seabirds.

During the 2023 breeding season, time-lapse trail cameras were deployed on Rathlin Island and the Copeland Islands to monitor predation of Black Guillemots. BTO staff, led by Daniel Johnston, installed time-lapse cameras early in 2024 on Bird Island, located on Strangford Lough, to monitor breeding Cormorants as a trial project. BTO staff have also been working in partnership with an RSPB team on a trial acoustic monitoring project on Rathlin Island. Static passive acoustic monitoring devices were deployed to explore the possibility of using acoustics to detect the presence of Brown Rats on the Island. Brown Rat has been a problem on Rathlin, because of its impact on breeding seabird populations. The monitoring devices, which were deployed as part of a wider RSPB-led eradication project, confirmed the presence of three small mammal species, including Brown Rat, and four bat species. The results were published as a BTO Research Report in 2023.



DETECTOR ON RATHLIN ISLAND, BY KATHERINE BOOTH JONES / BTO

#### ENGAGING THE PUBLIC

BTO's engagement work with the public went from strength to strength, led by Jemma Davies. The events programme included our second Bird Camp, attended by 15 young people, the 'Wild Weekend' attended by 50 participants, and the annual Northern Ireland Birdwatchers' Conference, which attracted over 120 attendees. Opportunities to engage with those who aren't familiar with BTO have included Ballynature Day, a World Wetlands Day walk and a partnership event with Translink that saw approximately 50 people join us on a train platform for some informal birdwatching.

Ripple NI is BTO's pilot community-based nature engagement project in Northern Ireland, aiming to reach out to new people and led by Sorrel Lyall. The project delivered 26 introductorylevel nature events during 2023/24, involving 915 participants. The second half of the project will focus on establishing more Wildlife Wander events (currently running in east Belfast). These are monthly relaxed walks in an accessible green space focusing on building connections with local nature and like-minded people. They are run by a team of local volunteer leaders, supported by the BTO Project Officer, with the intention of becoming selfsustaining. Upcoming locations are Cookstown, Comber, Lisburn, with future targets of Derry/Londonderry and Enniskillen.

### **BEING FIT FOR THE FUTURE**

We continue to face complex challenges, resulting from climate change and pressures on our environment to meet growing demands on the planet's resources. Ensuring that society can respond effectively depends on organisations like BTO playing a strong role and making our voice heard; our Action Area priorities will enable us to do this.

#### DELIVERING SUSTAINABLY

BTO's strategy is intrinsically linked to making a net-positive impact on the environment and people, and sustainability underpins how we work. All new staff receive a sustainability induction, and we collate and report on a suite of measures through our annual sustainability report. During 2023/24, our electricity use (which is entirely from renewables) was down 59% on baseline, and 8.5% of that used at our headquarters was generated by on-site solar panels.

Our new travel and offsetting policy is supporting reductions in journeys made by car and plane, down 13% and 6% respectively, and greater use of rail and ferries, up 16% and 631%. Any staff seeking to travel by plane for work must take a case to the senior leadership team; in the small number of instances where aviation is used for business travel, carbon offsetting is used to reduce its impacts. From April 2024, staff will be able to book up to two days of additional leave for time spent travelling for holidays when choosing low carbon transport options instead of flights.

We can expect jobs throughout the entire workforce, as well as individuals' lives, to be impacted by climate change in the coming years. This is why it is vital to empower our staff through education and access to information. We share updates on BTO's sustainability journey, as well as information and ideas around making sustainable choices in the workplace and at home, through regular newsletters and staff meeting updates. Our sustainability work is proactive, seeking to support behaviour change. We now offer staff 19p per mile cycled for business travel, have a Cycle to Work scheme, and BTO Scotland has now achieved Cycle Friendly Employer accreditation.

#### **FUTURE PROJECTS**

Our strategic Action Areas set out priorities for future work, identifying initiatives that will deliver the greatest returns for birds and people. These priorities are as follows, grouped by Action Area:

#### **Seeking Solutions**

- Secure an evidence base for the possible effects of shortrotation willow coppice and *Miscanthus* grass on birds, two novel crops that are now taking up more and more land.
- Increase our understanding of the distributions of our seabirds during winter and on migration, so we can inform policy decisions around renewables and fisheries.
- Better understand the effects of land use and habitat on the important breeding wader populations on the Uists, in order to inform future management.

#### Framing Futures

- To better communicate the impacts that climate change has on UK birds by developing annual metrics for changes in distribution, phenology, and demography using BTO's longterm datasets.
- Inform conservation responses to climate change and develop approaches to monitor and evaluate their success.
- Using BTO's long-term datasets, we will evaluate the impact the recent outbreak of HPAI has had on the UK's wild birds.

#### **Sustaining Supporters**

- Improve support for and management of the BTO Regional Network, so members and volunteers are better served.
- Increasingly tailor communications to supporters, recognising contributions, needs and interests.
- Continue our programme of online and face-to-face training initiatives, developing volunteers for the future.

#### **Charting Change**

- Carry out a gap analysis to identify the most pressing gaps in our knowledge of UK bird populations, so that we can address these.
- Further invest in key internal systems to increase their security and robustness, while ensuring that they are efficient.
- Initiate work to map the distributions of British and Irish birds, including measures of relative abundance and change, which will form BirdAtlas 2027–31).

#### **Embracing Everyone**

- Share our framework for BTO becoming more inclusive with existing and new members, volunteers, funders and partners.
- Align and integrate with the Sustaining Supporters Action Area so that we engage and involve our long-term members and supporters in being part of the change we are aiming for.
- Develop a clear vision for the future of our youth engagement programme and sustainable funding to achieve this.

#### **Delivering Data**

- Release more open access datasets, so that our data will be used by more people.
- Produce a county-based version of BirdFacts, so that individuals can quickly see what has happened to bird populations locally to them.
- Make it easier for people to access BTO datasets.

0

### THANK YOU FOR YOUR SUPPORT

Each year we need to raise thousands of pounds to fund our work so that we can deliver the charitable outcomes that are so important to our supporters. We are grateful to receive wonderful support from members, funders, trusts, corporate partners and many others, all of which help to make our work possible.

#### THE CENTRAL ROLE OF YOUNG PEOPLE

In May 2023, BTO communicated the important role that young people are playing in our work to address the threats faced by the UK's wild birds. We did this through both the BTO Strategy and the Youth Strategy, the latter developed by BTO's amazing Youth Advisory Panel (YAP). As our Chief Executive, Professor Juliet Vickery, notes, "*BTO Youth is part of our present and our future and we will strive to ensure that Youth Volunteers build skills, experience and friendships through working with us. I have already seen, firsthand, the knowledge, passion and sense of fun of BTO Youth in action and this gives me absolute confidence in their ability."* 

Between 2021 and 2022, BTO Youth Representatives reached over 2,300 young people at 75 events across four UK countries, with a focus on providing opportunities to give young people the skills, knowledge, confidence, and access to contribute to BTO science now and in the future.

Recognising the central role that young people will play as we work to secure a better future for birds and for people, we launched a Youth Appeal in June 2023, the aim of which was to fund projects that grow the number of young people who engage with and benefit from BTO Youth.

Living the values and behaviours communicated in the Youth Strategy, the appeal was developed in collaboration with Emma Thornton, YAP member and BTO Trustee. Using our collaborative approach to developing fundraising communications, Emma explained to supporters the positive effects of being out in nature and participating in citizen science with BTO, outlining how these have helped her, fellow YAP members and many other young people. She also highlighted the activities that BTO Youth facilitate more broadly, including the Equipment Donation Scheme and UK Bird Camps. Supporters generously donated over £54,000 to the BTO Youth Appeal, which is funding ongoing work programmes to support, encourage and involve young people from across society.

#### **GIFTS IN WILLS**

BTO received just over two million pounds from Gifts in Wills in 2023/24. We are humbled by this phenomenal support we receive, in addition to the valuable time, expertise and financial support that BTO members and volunteers give so generously.

Long-term BTO Member, Harold Smith, passed away aged 99 years in January 2023. He had a long association with BTO, joining as a member in May 1947, and was a regular at the BTO members' conference in the days when everyone gathered annually at Swanwick Conference Centre on a cold December weekend. Harold was one of the familiar faces who attended year-on-year, with a passion for all that BTO stands for, robust science and long-term monitoring.

Harold's name is synonymous with natural history recording in Sheffield. As quoted in his eulogy, printed in the Sorby Natural History Society's March Newsletter, he left an incredible legacy: 420,000 local bird records, over two dozen published papers on birds and the Limb Valley, over 160 monthly bird reports, and he also pioneered the use of computers for biological recording. He was a visionary and encouraged so many others to collect and submit ornithological and natural history data because he was acutely aware of its value.

Harold headed up the Limb Valley Study Group, which began in 1977, and started his BTO Common Birds Census (CBC) site in the valley back in 1979. He continued monitoring this site annually up until 2000. The area was woodland with good numbers of Wren (peak 34 territories), Robin (30), Chaffinch (21) and Blue Tit (29). The plot regularly had four pairs of Wood Warbler, peaking at six in 1999. Also a few pairs each year of Redstart and Pied Flycatcher. (The CBC was eventually superseded by the BTO/JNCC/RSPB Breeding Bird Survey.)

Harold achieved so much during his life and we feel honoured that he remained a committed BTO member for over 70 years. During his life Harold was kind enough to let us know that he had included a gift to BTO in his Will, so we were able to personally say thank you to him at that time. Harold's wonderful gift is very much valued and appreciated, and it's comforting to know that we were able to express our gratitude to him. We would like to acknowledge his unfailing support and vote of confidence in our work.

As always, we would like to express our heartfelt thanks to all those supporters, like Harold, whose life-long love of birds and nature led them to include a bequest to BTO in their Wills.

#### CONTRIBUTING TO OUR WORK

One of BTO's greatest strengths is the incredible support we receive from our dedicated community. This comes in many forms, including the sharing of knowledge and experience, the countless hours of volunteering, and the generous financial contributions.

In 2019, we introduced the Witherby Custodians, a group of supporters named after Harry Forbes Witherby, a visionary ornithologist and one of BTO's founders. In 1933, Harry donated

£1,400 (equivalent to about £125,000 today) from the sale of his bird skins to the Natural History Museum, which helped establish the UK bird ringing scheme and the BTO.

In 2023, we highlighted the Witherby Custodians in *BTO News* and on our website, attracting 14 new supporters to the group. These Custodians play a crucial role by funding our work and sharing their expertise, advice, and support, helping us sustain and grow BTO. They are invited to contribute to our plans and strategy through meetings with BTO board and staff.

Special trips are organised for the Witherby Custodians to deepen their connection with the organisation and its charitable activities. Last year, they visited our headquarters in Thetford, met with scientists and board members, and went on birding trips to spot some of the rarer species in Breckland, such as Stone-curlew, Woodlark, and Nightjar.

Another highlight was a visit to our company, Porzana, in East Sussex, where we manufacture bird rings for ringing organisations worldwide. The group witnessed bird ringing and even helped release some ringed birds, including a Water Rail, which is rarely seen up close.

A particularly special event was an event at the Natural History Museum in London, where Custodians met with Juliet Vickery, CEO, and James Pearce-Higgins, Director of Science. They also heard from Dawn Balmer, Head of Surveys, and attended our awards ceremony at the Mall Galleries.

Learn more about the Witherby Custodians at **bto.org/witherby** or email **david.agombar@bto.org** for more information.

#### CORPORATE SUPPORT

Over the year we reviewed and enhanced our Corporate Membership Scheme offer, resulting in growth in the number of Corporate Members. This is not the only way in which businesses support our work, with a mix of new and long-established partnerships with the corporate sector helping us to deliver on our charitable objectives.

We were delighted to launch a corporate partnership with bird care company Vine House Farm in 2023. Vine House Farm sells a wide range of high quality bird feeders and bird food, much produced on their own conservation-award-winning farm. The partnership with Vine House Farm is helping to raise our profile with their large customer base, in addition to making valuable financial contributions to support our work.

### If you would like to know more about any of the projects or how you might support our work, please contact: fundraising@bto.org

### **OUR SUPPORTERS**

We are very grateful for the generous support that we have received, both in time and money, in the past year. In addition to members and other fieldworkers, there are many other individuals and companies who support the work of the BTO with financial contributions. The Trust is particularly pleased to acknowledge the following corporate and other supporters.

#### **CORPORATE SUPPORTERS 2023/24**

BiOME Consulting Ltd, Boston Seeds, Brinvale Bird Foods, Eddowes Aviation Safety Limited, Garden Silhouettes Limited, Harvest Pet Products Ltd, Northumbrian Water, Nurture Landscapes Group, Opticron, Outdoor Alternative Ltd, P & R Seeds, Samuel McCausland Ltd t/a The Grass People, Swallowtail Print, Swarovski UK Limited, The Garden and Home Trading Company Limited, Vine House Farm.

#### CHARITABLE TRUSTS 2023/24

GivingForce Foundation, John Swire 1989 Charitable Trust, Keith Ewart Charitable Trust, Marsh Charitable Trust, Peter Smith Charitable Trust for Nature, Temple Tree Foundation, The Compton Charitable Trust, The Dovehouse Trust, The Emily Weircroft Charitable Trust, The Gilander Foundation, The Jarratt Trust, The Lizandy Charitable Trust, The Penchant Foundation, The Saxham Trust, Woodpeckers Trust, Woolhope Dome Environmental Trust.

#### **LEGACIES 2023/24**

Elizabeth Adams, Mrs J Andrews, David Bateman, Gwen Bishop, Rosemary Bloxam, Pauline Brooking, Kathleen Brownlie, Gary Caine, Ernest Edward Chapman, Steve Chastell, John Arthur Cook, Eva Falconer, Willliam Farley-Hills, Ronald Gash, Beatrice Gillam, Anne Goodall, Nigel Gower, Margaret Granger, Roger Gregory, Kenneth Hall, Margery Hannigan, Jennifer Harris, Charles Maurice Heighway, Edward Julian Holdroyd, Joyce Hughes-Laing, Doris Maud James, Viola Mary Matthews, John Macfarlane, Wendy Mason, Anthony May, Robert McKittrick, Enid Marion Mercer, Clive Mills-Hicks, Irene Negus, Dave Okill, Peter Oliver, Jane Parkinson, Faith Parker, George Parsons, Jill Pearson, Dorothy Percival, Ruth Pryce, John Ewart Rednall, Enid Riches, Pamela Rhodes, Douglas Scorey, Prof Neville Skinner, Dr A H V Smith, Bronwen Mary Smith, Hilary South, Michael Standing, Chris Stroud, James Denis Summers-Smith, Dr Charles Thomas, Peggy Thorne, Lesley Trodd, Charles Walmsley, Joan Edith Wilcox.

#### **IN MEMORIAM 2023/24**

Jake Allsop, William John Bartley, Mike Boddy, Fran Bowman, David 'Ian' Brotherton, Peter Coates, Ron Chorlton, Mike Ewart, Eva Falconer, Paul Fawcett, Peter Firth, Mike Beresford Fitch, Lynette Gammage, Beryl George, Jacqueline Linda George, Mike Gibbons, Jean Doris Goodchild, Laura Haddock, Alison Hall, Michael Harrison, Brian Charles Holton, Robert James Howells MBE, David Hughes, William (Bill) Jennings, Ron Jones, Richard Mackie, Timothy Edwin Manville, Glynn Middleton, David Mills, Brian Neath, Brenda Palmer, Pamela Joy Pasotti, David Hewitt Sadler, David Saunders MBE,Penelope Snape, Mark Stanley, Clarice Stubbs, Roger Taylor, Mr E M Turner, Terrence Sidney Watson, Geraldine Wickson, Wendy Jean Wiseman, Derek Wright.

#### FUNDERS OF BTO WORK 2023/24

Anguilla National Trust, Animal Plant Health Agency, Bangor University, Bat Conservation Trust, BBSRC, Bernwood Ecology, BSG Ecology Ltd., Bureau Waardenburg by, Butterfly Conservation, Cairngorm National Park, Cambridge Conservation Initiative, Carbon Trust, Chilterns Conservation Board, Mark Constantine, Derek Coleman, Simon Cooke, Curlew Recovery South Lakes, DAERA, Department of the Environment, Food and Rural Affairs, Department for Business, The Department for Communities Northern Ireland, Energy and Industrial Strategy, Devon Wildlife Trust, Duchy of Cornwall, EURING, European Commission, European Food Safety Authority, FERA, Forestry England, Forestry & Land Scotland, Frankfurt Zoological Society, Game & Wildlife Conservation Trust, Hampshire Ornithological Society, Hartley Anderson Ltd., Heather Trust, Hi-Def Aerial Surveying Ltd., David Hodgson, Horizon Europe, Innovate UK, Institute of Avian Research, Interreg, Joint Nature Conservation Committee (on behalf of the statutory nature conservation agencies: Natural England, Natural Resources Wales, NatureScot and the Department of the Environment Northern Ireland), Jenny Kingsland, Helen Lumley, John McCaig, Muséum National d'Histoire Naturelle, National Trust, Natural England, Natural Resources Wales, Natural Environment Research Council, NatureScot, John Neighbour, North York Moors National Park Authority, Northern Ireland Environment Agency, ORSTED, Jon Pavey, Pell Frishmann Consultants Ltd., Alex Rafinski, Renewable UK, Royal Society for the Protection of Birds, Sanger, Scottish Government, Scottish Raptor Study Group, Scottish Ornithologists' Club, SOVON, States of Guernsey, Suffolk Wildlife Trust, Swedish University of Agricultural Sciences, UK Centre for Ecology & Hydrology, UK Health Security Agency (UKHSA), University College Dublin, University of Bristol, University of Cambridge, University of East Anglia, University of Edinburgh, University of Exeter, University of Stirling, University of Torino, Vattenfall, Vine House Farm, Franziska Vogel, Nicholas Watts, Welsh Government, Wildfowl & Wetlands Trust, Gillian & Justin Wills, Woodland Trust, WSP UK Ltd., Yorkshire Dales National Park Authority, Zoological Society of London.



Peer-review is an important process, establishing the validity of research through review by other expert researchers in the field. It also provides valuable feedback, enabling researchers to improve their papers before publication. BTO reports annually across a number of indicators relating to its scientific work; three of these relate to scientific publications, reflecting the quality of the publications being produced, their impact, and the degree to which the work has been delivered through collaboration.

During 2023, our staff produced 57 peer-reviewed papers, of which 51 were in ISI-listed journals and 24 were published in high impact publications (with an impact factor of 3.5 or greater). Twenty-one of the publications were BTO-led, and 51 were collaborative in nature, underlining the strong partnership approach to our work.

Azhar, B., Oon, A., Lechner, A.M., Ashton-Butt, A., Yahya, M.S. & Lindenmayer, D.B., 2023. Large-scale industrial plantations are more likely than smallholdings to threaten biodiversity from oil palm replanting spatial disturbances. *Global Ecology & Conservation* **45**: e02513. https://doi.org/10.1016/j.gecco.2023.e02513

#### Barnes, A.E., Robinson, R.A. & Pearce-Higgins,

J.W. 2023. Collation of a century of soil invertebrate abundance data suggests long-term declines in earthworms but not tipulids. *PLoS ONE* **18**: e0282069. https://doi.org/10.1371/journal.pone.0282069

#### Barton M.G., Henderson, I., Border, J.A. & Siriwardena,

**G.** 2023. A review of the impacts of air pollution on terrestrial birds. *Science of the Total Environment* **873**: 162136. https://doi.org/10.1016/j.scitotenv.2023.162136

**Boersch-Supan, P.H.**, Lee, A.T.K & Oschadleus, H.D. 2023. A demonstration of the value of recapture data for informing moult phenology models for avian species with imperfect moult data. *Ostrich* **94**: 315–323. https://doi.org/10.2989/00306525.2023.2248396

Branston, C.J., Whittingham, M.J., Phillimore, A.B., Leech, E. & Willis, S.G. 2024. The phenology and clutch size of UK Blue Tits does not differ with woodland composition. *Ibis* 116: 487–503. https://doi.org/10.1111/ibi.13248

Bristow, T.G., McHugh, N.M., Heward, C.J., Jenkins, D.L., Newson, S.E. & Snaddon, J.L. 2023. Vocal individuality measures reveal spatial and temporal variation in roding behaviour in Woodcock (*Scolopax rusticola*). *Ibis* **165**: 959–973.

Buchan, C., Gilroy, J.J., Catry, I., Hewson, C.M., **Atkinson**, **P.W.** & Franco, A.M. 2023. Combining remote sensing and tracking data to quantify species' cumulative exposure to anthropogenic change. *Global Change Biology* **29**: 6,679–6,692 https://doi.org/10.1111/gcb.16974.

Calladine, J., Fuller, R., Hodkinson, D., Franks, S. & Boyle, J. 2023. Changes in breeding wader populations of the Uist machair and adjacent habitats between 1983 and 2022. Scottish Birds 43: 132–140.

Clark, J.A., Gillings, S., Clark, N.A., Cole, K.B., Breese, G., Woods, J.L., Bellman, H.A. & Robinson, R.A. 2023. How important is it to standardise the measured mass of shorebirds weighed at varying intervals after capture? *Wader Study* **130**: 64–73.

Clark, B.L., Carneiro, A.P.B., Pearmain, E.J. ... **Booth Jones,** K.A., et al. 2023. Global assessment of marine plastic exposure risk for oceanic birds. *Nature Communications* 14: e3665

Cleasby, I.R., Owen, E., Butler, A., Baer, J., Blackburn, J., Bogdanova, M.I., Coledale, T., Daunt, F., Dodd, S., Evans, J.C. & Green, J.A. 2024. Assessing the importance of individual- and colony-level variation when using seabird foraging ranges as impact assessment and conservation tools. *Ibis* **166**: 871–895. https://doi.org/10.1111/ibi.13284

#### Clewley, G.D., Thaxter, C.B., Scragg, E.S., Masden, E.A., Barber, L.J., Conway, G.J., Clark, N.A. & Burton, N.H. 2023. Daily, seasonal, and annual variation in area use of Lesser Black-backed Gulls *Larus fuscus* related to

offshore renewable developments. *Bird Study* **70**: 13–24. https://doi.org/10.1080/00063657.2023.2190080 Cook, P., Alder, D., Hordley, L., **Newson, S.E.** & Pengelly, D. 2023. Seeing the wood for the trees, irregular silviculture supports hat populations in conier plantations. *Forest* 

2023. Seeing the wood for the trees, irregular silviculture supports bat populations in conifer plantations. *Forest Ecology & Management* **85**: 127951. https://doi.org/10.1016/j.ufug.2023.127951

**Cooper, J.E.J.**, Garcia-del-Rey, E. & Lachlan, R.F. 2023. Evolution of female song and duetting in the chaffinch *(Fringilla)* species complex. *Journal of Avian Biology* 2023: e03069 https://doi.org/10.1111/jav.03069

Davies, J.G., Humphreys, E.M., Evans, T., Howells, R., O'Hara-Murray, R. & Pearce-Higgins, J.W. 2023. Seabird abundances projected to decline in response to climate change in Britain and Ireland. *MEPS* **725**: 121–140.

Davies, J.G., Kirkland, M., Miller, M.G.R., Pearce-Higgins, J.W., Atkinson, P.W. & Hewson, C.M. 2023. Spring arrival of the Common Cuckoo at breeding grounds is strongly determined by environmental conditions in tropical Africa. *Proc. Roy. Soc. B* **290**: 20230580.

Donnez, M., Schwemmer, P., Fort, J., Garthe, S., Boschert, M., Düttmann, H., Elts, J., Fartmann, T., Fiedler, W., **Franks, S.** & Jiguet, F. 2023. Small space but high diversity: spatial and temporal habitat use by endangered Eurasian Curlew at wintering sites throughout Europe. *Wetlands* **43**: 80. https://doi.org/10.1007/s13157-023-01728-w

Eaton, M. Stroud, D. Francis, I, Norman, D, Baker, H., Holling, M. King, A., Stanbury, A. & **Balmer, D.** 2023. Monitoring five decades of change in the UK's rarest breeding birds through citizen science: the Rare Breeding Birds Panel. *British Wildlife* 35: 335–345.

Evans, L.C., Melero, Y., Schmucki, S., **Boersch-Supan**, P.H., Brotons, L., Fontaine, C., Jiguet, F., Kuussaari, M., **Massimino, D., Robinson, R.A.**, Roy, D.B., Schweiger, O., Settele, J., Stefanescu, C., van Turnhout, C.A.M. & Oliver, T.H. 2023. Mechanisms underpinning community stability along a latitudinal gradient: insights from a niche-based approach. *Global Change Biology* **29**: 3,271–3,284. https://doi.org/10.1111/gcb.16684

Ewing, H., Franks, S., Smart, J., Burton, N. & Gill, J.A. 2023. Nest survival of threatened Eurasian Curlew (*Numenius arquata*) breeding at low densities across a human-modified landscape. *Ibis* **165**: 753–766. https://doi.org/10.1111/ibi.13180

Fattorini, N., Costanzo, A., Romano, A., Rubolini, D., Baillie, S., Bairlein, F., Spina, F., & Ambrosini, R. 2023. Eco-evolutionary drivers of avian migratory connectivity *Ecology Letters* **26**: 1,095–1,107. https://doi.org/10.1111/ele.14223 Finch, T., Bradbury, R.B., Bradfer-Lawrence, T., Buchanan, G.M., Copping, J.P., Massimino, D., Smith, P., Peach, W.J. & Field, R.H. 2023. Spatially targeted nature-based solutions can mitigate climate change and nature loss but require a systems approach. *One Earth* **6**: 1,360–1,374. https://doi.org/10.1016/j.oneear.2023.09.005

Green, R.E., Taggart, M.A., Pain, D.J., **Clark, N.A.**, Clewley, L., Cromie, R., **Green, R.M.W.**, Guiu, M., Huntley, B., Huntley, J., Leslie, R., Porter, R., Roberts, J., Robinson, J.A., **Robinson, R.A.**, Sheldon, R., Smith, K.W., Smith, L., Spencer, J. & Stroud, D. 2023. Limited effectiveness of actions intended to achieve a voluntary transition from the use of lead to non-lead shotgun ammunition for hunting in Britain. *Conservation Evidence* **20**: 1–7.

Gregory, R.D., Eaton, M.A., Burfield, I.J., Grice, P.V., Howard, C., Klvaňová, A., **Noble, D.**, Šilarová, E., Staneva, A., Stephens, P.A., Willis, S.G., **Woodward, I.D.** & Burns, F. 2023. Drivers of the changing abundance of European birds at two spatial scales. *Phil Trans R. Soc* **378**: 20220198. http://doi.org/10.1098/rstb.2022.0198

Harrison, P.A., Beauchamp, K., Cooper, J., Dickie, I., Fitch, A., Gooday, R., Hollaway, M., Holman, I.P., Hunt, M., Jones, L. & Mondain-Monval, T. 2023. An adaptable integrated modelling platform to support rapidly evolving agricultural and environmental policy. *Environmental Modelling & Software* **169**: 105821. https://doi.org/10.1016/j.envsoft.2023.105821

Havinga, I., Marcos, D., Bogaart, P., Massimino, D., Hein, L. and Tuia, D 2023. Social media and deep learning reveal specific cultural preferences for biodiversity. *People & Nature* 5: 981–998. https://doi.org/10.1002/pan3.10466

Howard, C., Mason, T.H., **Baillie, S.R., Border, J., Hewson,** C.M., Houston, A.I., **Pearce-Higgins, J.W.**, Bauer, S., Willis, S.G. & Stephens, P.A. 2024. Explaining and predicting animal migration under global change. *Diversity & Distributions* **30**: e13797. https://doi.org/10.1111/ddi.13797

Howard, C., Marjakangas, E.-M., Morán-Ordóñez, A., Milanesi, P., Abuladze, A., Aghababyan, K., Ajder, V., Arkumarev, V., Balmer, D.E., Bauer, H.-G., Beale, C.M., Bino, T., Ali Boyla, K., Burfield, I.J., Burke, B., Caffrey, B., Chodkiewicz, T., Del Moral, J.C., Dumbovic Mazal, V., Fernández, N., Fornasari, L., Gerlach, B., Godinho, C., Herrando, S., Ieronymidou, C., Johnston, A., Jovicevic, M., Kalyakin, M., Keller, V., Knaus, P., Kotrošan, D., Kuzmenko, T., Leitão, D., Lindström, Å., Maxhuni, Q., Mihelič, T., Mikuska, T., Molina, B., Nagy, K., Noble, D., Jostein Øien, I., Paquet, J.-Y., Pladevall, C., Portolou, D., Radišić, D., Rajkov, S., Rajković, D.Z., Raudonikis, L., Sattler, T., Saveljić, D., Shimmings, P., Sjenicic, J., Šťastný, K., Stoychev, K., Strus, I., Sudfeldt, C., Sultanov, E., Szép, T., Teufelbauer, N., Uzunova, D., van Turnhout, C.A.M., Velevski, M., Vikstrøm, T., Vintchevski, A., Voltzit, O., Voříšek, P., Wilk, T., Zurell, D., Brotons, L., Lehikoinen, A. & Willis, S.G. 2023, Local colonisations and extinctions of European birds are poorly explained by changes in climate suitability. Nature Communications 14: 4,304.

https://doi.org/10.1038/s41467-023-39093-1

Johnston, D.T., Thaxter, C.B., Boersch-Supan, P.H., Davies, J.G., Clewley, G.D., Green, R.M.W., Shamoun-Baranes, J., Cook, A.S.C.P., Burton, N.H.K.

& Humphreys, E.M. 2023. Flight heights obtained from GPS versus altimeters influence estimates of collision risk with offshore wind turbines in Lesser Black-backed Gulls *Larus fuscus*. *Movement Ecology* **11**: 66. https://doi.org/10.1186/s40462-023-00431-z Kenobi, K., Read, W., **Bowgen, K., Macgregor, C., Taylor, R.**, Cámaro García, W., Crona Hodges, C. & Dennis, P. 2023. Lasso penalisation identifies consistent trends over time in landscape and climate factors influencing the wintering distribution of the Eurasian Curlew (*Numenius arquata*). *Ecological Informatics* **77**: 102244 https://doi.org/10.1016/j.ecoinf.2023.102244

Kirkland, M., Atkinson, P.W., Pearce-Higgins, J.W.,

De Jong, M., Dowling, T.P.F., Grummoe, D., Critchley, M. & Ashton-Butt, A. 2023. Landscape fires disproportionally affect high conservation value temperate peatlands, meadows, and deciduous forests, but only under low moisture conditions. *Science of the Total Environment* **884**: 163849. https://doi.org/10.1016/j. scitotenv.2023.163849

Lopez, S.L., Clewley, G.D., Johnston, D.T., Daunt, F., Wildon, J.M., O'Hanlon, N.J. & Masden, E. 2024. Reduced breeding success in Great Black-backed Gulls (*Larus marinus*) due to harness-mounted GPS device. *Ibis* **116**: 69–81. https://doi.org/10.1111/ibi.13247

Lopez, S.L., Daunt, F., Wilson, J., O'Hanlon, N.J., Searle, K.R., Bennett, S., Newell, M.A., Harris, M.P. & Masden, E. 2023. Quantifying the impacts of predation by Great Black-backed Gulls *Larus marinus* on an Atlantic Puffin *Fratercula arctica* population: Implications for conservation management and impact assessments. *Marine Environmental Research* **188**: 105994. https://doi.org/10.1016/j.marenvres.2023.105994

Lathouwers, M., Dendoncker, N., Artois, T., Beenaerts, N., Conway, G., Henderson, I., Shewring, M., Cross, T., Ulenaers, E. & Evens, R. 2023. Multi-scale habitat selection throughout the annual cycle of a long-distance avian migrant. *Ecologcal Indicators* **156**: 111099. https://doi.org/10.1016/j.ecolind.2023.111099

Marjakangas, E.-L., Bosco, L., Versluijs, M., Xu, Y., Santangeli, A., Holopainen, S., Mäkeläinen, S., Herrando, S., Keller, V., Voříšek, P., Brotons, L., Johnston, A., Princé, K., Willis, S.G., Aghababyan, K., Ajder, V., **Balmer, D.E.**, Bino, T., Boyla, K.A., Chodkiewicz, T., del Moral, J.C., Mazal, V.D., Ferrarini, A., Godinho, C., Gustin, M., Kalyakin, M., Knaus, P., Kuzmenko, T., Lindström, Å., Maxhuni, Q., Molina, B., Nagy, K., Radišić, D., Rajkov, S., Rajković, D.Z., Raudoniki, L., Sjeničić, J., Stoychev, S., Szép, T., Teufelbauer, N., Ursul, S., van Turnhout, C.M., Velevski, M., Vikstrøm, T., Wilk, T., Voltzit, O., Øien, I.J., Sudfeldt, C., Gerlach, B. & Lehikoinen, A. 2023. Ecological barriers mediate spatiotemporal shifts of bird communities at a continental scale. *PNAS* **120**: e2213330120 https://doi.org/10.1073/pnas.2213330120

Martay, B., Leech, E., Shortall, C.R., Bell, J.R., Thackeray, S.J., Hemming, D.L. & Pearce-Higgins, J.W. 2023. Aerial insect biomass, but not phenological mismatch, is associated with chick survival of an insectivorous bird *Ibis* 165: 790–807. https://doi.org/10.1111/ibi.13190

Maskell, L., Alison, J., Forbes, N., Jarvis, S., Robinson, D., Siriwardena, G., Wood, C. & Smart, S. 2023. Inconsistent relationships between area, heterogeneity and plant species richness in temperate farmed landscapes. *Oikos* 2023: e09720 https://doi.org/10.1111/oik.09720

Maziarz, M., Broughton, R.K., Beck, K.B., **Robinson, R.A.** & Sheldon, B.C. 2023. Temporal avoidance as a means of reducing competition between sympatric species. *R. Soc. Open Sci.* 10230521. http://doi.org/10.1098/rsos.230521

Norton, B.A., Mears, M., Warren, P.H., **Siriwardena**, G.M., Plummer, K.E., Turner, T., Hancock, S., Grafius, D.R. & Evans, K.L. 2023. Biodiversity and environmental stressors along urban walking routes. *Urban Foresty & Urban Greening* **85**: 127951.

https://doi.org/10.1016/j.ufug.2023.127951

#### O'Hanlon, N.J., Johnston, D.T., Cook, A.S.C.P.,

Robinson, R.A. & Humphreys, E.M. 2023. A crowded ocean: the need for demographic and movement data in seabird conservation. *Ocean & Coastal Management* **244**: 106833. https://doi.org/10.1016/j.ocecoaman.2023.106833

**O'Hanlon, N.J.,** Bond, A.L., Masden, E.A.,Boertmann, D., Bregnbelle, T., Danielsen, J., Descamps, S., Petersen, A., Strøm, H, Systad, G. & James, N.A. 2023. Using foraging range and colony size to assess the vulnerability of breeding seabirds to oil across regions lacking at-sea distribution data. *Ornithological Applications* **125**.

Oschadleus, H.D. & **Boersch-Supan**, P.H. 2023. Sunning in Yellow Bishops *Euplectes capensis*. Ostrich **94**: 70–72.

Pearce-Higgins, J.W. & Morris, K.A. (2023) Declines in invertebrates and birds – could they be linked by cliamte change? *Bird Study* **69**: 59–71.

Pell, R.J., Clark, J.A. & Robinson, R.A. 2023. Contrasting habitat use between and within Bar-tailed Godwit and Curlew wintering on the Wash, England. *Wader Study* **130**: 225–323.

Plummer, K.E., Dadam, D., Bretreton, T., Dennis, E.B., Massimino, D., Risely, K., Siriwardena, G.M. & Toms, M.P. 2023. Trends in butterfly populations in UK gardens – new evidence from citizen science monitoring. *Insect Conservation & Diversity* **17**: 345–357. https://doi.org/10.1111/icad.12645

Rigala, S., Dakos, V., Alonso, H., Auniŋš, A., Benkőe, Z., Brotons, L., Chodkiewicz, T., Chylareck, P., de Carlil, E., del Moral, J.C., Domşa, C., Escandell, V., Fontaine, B., Foppen, R., Gregory, R., **Harris, S.**, Herrando, S., Husby, M., Leronymidou C., Jiguet, J., Kennedy, J., Klvaňová, A., Kmecl, P., Kuczyński, L., Kurlavičius, P., Kålås J.A., Lehikoinen, A., Lindström, Å, Lorrillière, R., Moshø, C., Nellis, R., **Noble, D.**, Eskildsen, D.P., Paquet, J-Y., Pelissié, M., Pladevall, C., Portolou, D., Reif, J., Schmid, H., Seaman, B., Szabo, Z.D., Szép, T., Florenzano, G.T., Teufelbauer, N., Trautmann, S., van Turnhout, C., Vermouzek, Z., Vikstrøm, T., Vöříšek, P., Weiserbs, A. & Devictor, V. 2023. Farmland practices are driving bird population decline across Europe. *PNAS* **120**: e2216573120.

Schwemmer, P., Mercker, M., Haecker, K., Kruckenberg, H., Kämpfer, S., Bocher, P., Fort, J., Jiguet, F., **Franks, S.**, Elts, J., Marja, R., Piha, M., Rousseau, P., Pederson, R., Düttmann, H., Fartmann, T. & Garthe, S. 2023. Behavioral responses to offshore windfarms during migration of a declining shorebird species revealed by GPS-telemetry. *Journal of Environmental Management* **342**: 118131. https://doi.org/10.1016/j.jenvman.2023.118131

Searle, K.R., O'Brien, S.H., Jones, E.L., **Cook, A.S.C.P.**, Trinder, M.N., McGregor, R.M., Donovan, C., McCluskie, A., Daunt, F. & Butler, A. 2023. A framework for improving treatment of uncertainty in offshore wind assessments for protected marine birds. *ICES Journal of Marine Science*: fsad025 https://doi.org/10.1093/icesjms/fsad025

Sharps, E., Hawkes, R., Bladon, A., Buckingham, D., Border, J., Morris, A., Grice, P. & Peach, W. 2023. Reversing declines in farmland birds: how much agri-environment provision is needed at farm and landscape scales? *Journal of Applied Ecology* **60**: 565–580. https://doi.org/10.1111/1365-2664.14338

Suggitt, A.J., Wheatley, C.J., Aucott, P., Beale, C.M., Fox, R., Hill, J.K., Isaac, N.J.B., Martay, B., Southall, H., Thomas, C.D., Walker, K.J. & Auffret, A.G. 2023. Linking climate warming and land conversion to species' range changes across Great Britain. *Nature Communications* **14**: e6759. https://doi.org/10.1038/s41467-023-42475-0 Stanbury, A.J., **Balmer, D.E.**, Eaton, M.A., Grice, P.V., Khan, N.Z., Orchard, J.M. & Wotton, S.R. 2023. The status of the UK breeding European Turtle Dove *Streptopelia turtur* population in 2021. *Bird Study* **70**: 183–194. https://doi.org/10.1080/00063657.2023.2256511

Stroud, D.A., Eaton, M.A., Francis, I.S, Baker, H., Holling, M., King, A., Norman, D., Stanbury, A.J. & Balmer, D.E. 2023. The Rare Breeding Birds Panel: five decades of monitoring the UK's rare breeding birds. *British Birds* **116**: 191–209.

Tucker, A.M., McGowan, C.P., Nuse, B.L., Lyons, J.E., Moore, C.T., Smith, D.R., Sweka, J.A., Anstead, K.A., DeRose-Wilson, A. & **Clark, N.A.** 2023. Estimating recruitment rate and population dynamics at a migratory stopover site using an integrated population model. *Ecosphere* **14**: e4439. https://doi.org/10.1002/ecs2.4439

van Bemmelen, R.A., Leemans, J.J., Collier, M.P., Green, R.M.W., Middelveld, R.P., Thaxter, C.B. & Fijn, R.C. 2024. Avoidance of offshore wind farms by Sandwich Terns increases with turbine density. *Ornithological Applications* **126**: duad055. https://doi.org/10.1093/ornithapp/duad055

Vickery, J.A., Mallord, J.W., Adams, W.M., Beresford, A.E., Both, C., Cresswell, W., Diop, N., Gregory, R.D., Morrison, C.A., Sanderson, F.J., Thorup, K., van Wijk, R.E. & Hewson, C.M. 2023. The conservation of Afro-Palaearctic migrants: what we are learning and what we need to know? *Ibis* 165: 717–738. https://doi.org/10.1111/ibi.13171

Wade, D., Ashton-Butt, A., Scott, G., Reid, S., Coward, V., Hansen, R.D.E., Banyard, A.C. & Ward, A. 2023. High pathogenicity avian influenza: targeted active surveillance of wild birds to enable early detection of emerging disease threats. *Epidemiology & Infection* **151**: e15. https://doi.org/10.1017/S0950268822001856

Walker, R.H., Robinson, R.A., Barimore, C.J., Blackburn, J.R., Barber, L.J., Bugg, N.R., McCambridge, H.E., Grantham, M.J., Griffin, B.M., Leighton, K. & Schäfer, S. 2023. Bird ringing and nest recording in Britain and Ireland in 2021. *Ringing & Migration* **38**: 44–88.

# FINANCIAL OVERVIEW

This was a record year for legacies, which together with strong demand for contract work led to an extraordinary surplus of £1,498k. Membership subscription income was flat, with new recruitment just balancing drop out, but an increase in major donations led to a significant increase in Other fundraising. Voluntary income formed 44% of total group income for the year (2023 43%). We aim to raise this to over 50% in the longer term. A total of £6,215k (2023 £5,608k) was spent during the year on carrying out, supporting and communicating ornithological research.

Further increases in bond yields led to another reduction in the present value of the defined benefit pension obligation, taking the deficit to a comfortably manageable level.

The Board has a free reserves target range of three to four months' running costs. These reserves are held against any unexpected falls in income or other unforeseen circumstances. Free reserves are total General funds less Tangible fixed assets less Designated funds. At 31 March 2024 these stood at £3,150k (2023: £2,165k), equivalent to 6.0 months' running costs (2023: 4.6 months'). The Board have earmarked the surplus funds for the 2024 pension deficit recovery payment, IT infrastructure and initiatives arising in response to the new strategy.

# **TRUSTEES' STATEMENT**

These are summarised accounts. To gain a full understanding of the financial affairs of the Trust please refer to the Annual Report and Accounts published on the BTO website or request a printed copy from the Director of Finance & Services, BTO, The Nunnery, Thetford, Norfolk IP24 2PU.

The Annual Report and Accounts were approved by the Board on 20 August 2024 and will be submitted to the Registrar of Companies, the Charity Commission and the Office of the Scottish Charity Regulator. The auditor's report by Helen Rumsey (FCA), Senior Statutory Auditor, Ensors Accountants LLP, was unqualified.

# SUMMARISED ACCOUNTS: 2023/24

	£'000	£'000
INCOME	2023/24	2022/23
Donations and legacies	4,138	3,038
Charitable activities	3,967	3,102
Other trading activities	1,266	977
Investments	92	16
Total income & endowments	9,463	7,133
EXPENDITURE	2023/24	2022/23
Raising funds	1,772	1,317
Charitable activities	6,215	5,608
Other -defined benefit pension scheme	50	110
Total expenditure	8,037	7,035
Net income / (expenditure)	1,426	98
Net gains on investments	72	(15)
Actuarial gain/(loss) on defined benefit pension sch	eme 393	2,639
Net movement in funds	1,891	2,722
Total funds brought forward	4,812	2,090
Total funds carried forward	6,703	4,812
REPRESENTED BY	2023/24	2022/23
Fixed assets	2,946	2,880
Net current assets	4,444	3,133
Creditors due after one year	(100	) (91)
Defined benefit pension liability	(587	) (1,110)
	6,703	4,812

Trustees' Annual Report & Financial Statements 2023/24 | 39

# BOARD OF TRUSTEES AND MANAGEMENT

# The British Trust for Ornithology Board of Trustees and Management 2024

Patron

HRH The Prince of Wales

President

F R Gardner OBE TD VR FRGS

# **Board of Trustees**

Chair	Prof Z G Davies	2023-26
Honorary Treasurer	J E Miller FCCA	2023-26
Chair of Finance & Risk Committee	l Coucher	2022-25
Chair of Governance, Safeguarding & Inclusion	Dr P Fitzpatrick	2023-26
Committee		
Chair of Regional Network Committee	S J Marquis	2020-27
Chair of Ringing Committee	Dr L Wright	2022-25
Ordinary Board Members	D Buscall	2024-27
	E Dresser	2023-26
	R du Feu	2022-25
	E Thornton	2023-26
	Prof S Willis	2024-27
	J M Ziff	2023-26
Vice Presidents	Dr F Barclay	2022-30
	Prof S Bearhop	2019-26
	D C Jardine	2020-27

# Finance & Risk Committee

Chair I Coucher; J E Miller; J M Ziff.

# Governance, Safeguarding & Inclusion Committee

*Chair* Dr P Fitzpatrick; E Dresser, E Thornton.

# **Regional Network Committee**

Chair S J Marquis; H Crabtree; Dr P Fitzpatrick; A Jarratt-Knock; S Metcalfe; S Taylor; E Tigwell.

# **Ringing Committee**

Chair Dr L Wright; L Clewley; R du Feu; P Kirmond; J Lennon; S Vickers; R Walsh; Representatives: H Land; A Phillips.

# Senior Leadership Team

*Chief Executive Officer* Prof J Vickery;

Director of Science Prof J W Pearce-Higgins; Director of Engagement Dr D I P Evans; Director of Finance & Services, Company Secretary A T Scott ACIS; Director of Information Services G N Hatt; Director Country Offices Dr C V Wernham; Director Head of People and Organisational Development S Knott.

# **Past Presidents and Chairs**

Presidents		Chairs	
1958-60	R C Homes	1933-39	The Right Hon. Lord Scone MP, 7th Earl of Mansfield and Mansfield
1961-64	C A Norris	1940-41	The Right Hon. Malcolm MacDonald MP
1965-68	R C Homes	1942-47	Dr A Landsborough Thomson CB OBE DSc
1969-72	I J Ferguson-Lees	1948	Dr E M Nicholson CB CVO
1973-76	R A O Hickling	1949	A W Boyd MC
1977-80	J M McMeeking MBE	1950	Sir Norman Kinnear
1981-84	S M Taylor	1951-56	Major-General H P W Houston
1985-89	J A Hancock OBE	1957	R C Homes
1990-93	R P Howard	1958-87	No Chair
1994-96	Sir William Wilkinson	1988-91	G H Green
1997-2001	Sir Frederick Holliday	1992-96	I C Castle
2002-05	Lord Blakenham	1996-2000	Dr H P Sitters
2006-13	Baroness Young of Old Scone	2001-04	A J Martin
2014-18	C G Packham	2005-08	Dr S Hunter
2019-	F R Gardner OBE TD VR FRGS	2009-13	Prof I Newton FRS OBE
		2014-16	Prof A D Fox
		2016-22	Prof J A Gill
		2023-	Prof Z G Davies

# The British Trust for Ornithology Staff List As at 31 March 2024

# CHIEF EXECUTIVE OFFICER

**Prof Juliet Vickerv** PA: Nicki Read

#### SCIENCE

**Director: Prof James Pearce-Higgins** PA / Senior Secretary: Nicki Read Senior Secretary: Jane Chase Secretary: Maria Knight

#### **Terrestrial Ecology**

Head & Principal Ecologist Senior Research Ecologist **Research Ecologist Research Ecologist Research Ecologist Research Ecologist Research Ecologist Research Ecologist Research Ecologist** Senior Research Officer Survey Officer

#### MONITORING

**Ringing & Nest Recording** Head **Ringing Licensing and Sales** Licensing Officer Licensing and Sales Manager **Ringing Sales Officer Ringing Data Management Ringing & Nest Recording Engagement Manager Ringing & Nest Recording Process** Manager **Ringing Officer Ringing Officer** Demographic Monitoring Projects Demographic Surveys Officer Ringing & Nest Record Database Officer Carl Barimore **Ringing & Nest Record Comms Officer** Scheme Administrator

#### Surveys

Head of Surveys BirdTrack Organiser **Breeding Bird Survey** National Organiser Seabird Monitoring Programme Organiser **Engagement Officer** Wetland Bird Survey WeBS Manager Waterbirds Survey Officer WeBS Counter Network Organiser

Dr Gavin Siriwardena Dr Ian Henderson Dr Greg Conway Dr Kate Plummer Dr Joseph Cooper Dr Hugh Hanmer Dr Charlotte Ward Maddie Barton vacant David Norfolk Jessica Stokes

Dr Dave Leech

Mark Grantham Nicola Bugg Anne Trewhitt

Joe Morris

Bridget Griffen Louise Bacon Kevin Leighton

Lee Barber Ruth Walker Hazel McCambridge

Dawn Balmer Vacant

James Heywood

Sarah Harris David White

Dr Teresa Frost Neil Calbrade **Gillian Birtles** 

Associate Director – Research Principal Ecologist Senior Ecological Statistician Research Ecologist Ecological Statistician Secretary

#### **Dispersed Threats**

Head & Principal Ecologist Senior Research Ecologist Senior Research Ecologist Senior Research Ecologist PhD student **Research Scientist** Spatial Ecologist

Wetland & Marine Research

Head & Principal Ecologist

Dr Niall Burton

Dr Rob Robinson

Dr Philipp Boersch-Supan

David Noble

Dr Jez Smith

James Clarke

Dr Phil Atkinson

Dr Chris Hewson

Dr Blaise Martav

Jen MacIsaac

Máire Kirkland

Dr Jenni Border

Dr Adham Ashton-Butt

Jane Chase

Senior Research Ecologist Principal Ecologist / Vacant Senior Research Ecologist Dr Sam Franks Senior Research Ecologist Dr Chris Thaxter **Research Ecologist** Ros Green **Research Ecologist** Harry Ewing Senior Research Officer Ian Woodward Principal Ecologist-Sea Birds Dr Liz Humphrevs Senior Research Ecologist Dr Nina O'Hanlon **Research Ecologist** Dr Jacob Davies Senior Research Ecologist **Dr** Daniel Johnston Senior Research Ecologist Sophie Bennett Research Ecologist Emma Caulfield **Offshore Renewable Energy** Alastair Feather Research Ecologist **Research Ecologist** Samuel Langlois

#### **Data Science and Bioacoustics**

Head & Principal Ecologist Senior Research Ecologist Senior Data Scientist Research Ecologist **Research Ecologist** Biological Data Manager

**Dr Simon Gillings** Dr Stuart Newson Dr Dario Massimino Dr Jez Smith **Caroline Brighton** Elizabeth Tatham

# The British Trust for Ornithology Staff List As at 31 March 2024

COUNTRY OFFICES		ENGAGEMENT	
Director: Dr Chris Wernham		Director: Dr leuan Evans	
BTO Scotland		Fundraising	
Senior Secretary	Rebecca Cranston	Head of Income Generation	Michael Naidu
Senior Research Ecologist	John Calladine	Trust & Foundation Fundraising Mngr	Kate Burton
Data and Admin. Officer	Katja O'Donnell	0 0	Sam Rider
Head of Development and Engagement	Katja O Donnen	Legacy Manager	
	Dr Bon Donvill	Fundraising Administrator	Melissa Caals
(BTO County Operations)	Dr Ben Darvill	Supporter Relations Manager	David Agombar
Development and Engagement		Individual Giving Manager	Vincent Moran
Coordinator	Steve Willis	Engagement	
Principal Ecologist - Sea Birds	Dr Liz Humphreys	Development and Engagement	
Senior Research Ecologist	Dr Blaise Martay	Coordinator	Drew Lyness
Head of Science Scotland	Dr Mark Wilson	Supporter team	
Senior Research Ecologist	Vacant	Head of Income Generation	Michael Naidu
Senior Research Ecologist	Dr Daniel Johnston	Snr. Supporter Administrator	Sam Graham
Research Ecologist	Björn Beckmann		
Fieldwork Coordinator (BTO Scotland)		Supporter Development Officer	Caroline Foot
· · · ·	Anthony Wetherhill	Supporter Administrator	Samantha Culverhouse
Research Ecologist	Dr Jacob Davies	Supporter Administrator	Amanda Gee
Senior Research Ecologist	Dr Nina O'Hanlon	Communications	
Senior Research Ecologist	Sophie Bennett	Head of Communications	Mike Toms
Research Ecologist	Alastair Feather	Media Manager	Jon Carter
Research Ecologist	Samuel Langlois	Science Communications Manager	Dr Viola Ross-Smith
Product Owner/Project Manager	Dr Amy Challis	Social Media Officer	Alice Johnson
, , 0			
Wader Project Officer	Paul Noyes	BTO Archivist	Lesley Hindley
		GBW Manager	Vacant
BTO Wales		GBW Supporter Development Officer	Robert Jaques
Senior Ecologist	Dr Rachel Taylor	Training	
Research Ecologist	Dr Katharine Bowgen	Training Manager	Nick Moran
Senior Research Ecologist	Dr Callum Macgregor	Training Officer	Vacant
5			
Research Ecologist	Hannah Hereward	Training Officer	Jenny Donelan
		Youth Engagement	
BTO Northern Ireland		Youth Engagement Manager	Vacant
Scientific Officer	Vacant	Youth Engagement Officer	Rachael Griffiths
Ripple Project Officer	Sorrel Lyall	Youth Engagement Coordinator	Chris Marais
Research Ecologist	Hala Haddad	Seasonal Youth Engagement Officer	Samuel Levy
-			
Engagement Coordinator	Jemma Davies		
Conver Decearch Officer	Androw II		
Senior Research Officer	Andrew Upton		
	Andrew Upton	FINANCE & SERVICES	
INFORMATION SYSTEMS	Andrew Upton	FINANCE & SERVICES	
INFORMATION SYSTEMS Director: Graham Hatt		FINANCE & SERVICES Director: Andrew Scott	
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary	Jane Chase	Director: Andrew Scott	
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect	Jane Chase Dr Andrew Joys	Director: Andrew Scott Accounts & Facilities	
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect	Jane Chase	Director: Andrew Scott	Mary Gray
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer	Jane Chase Dr Andrew Joys	Director: Andrew Scott Accounts & Facilities	Mary Gray
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager	Mary Gray Samantha Allen
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker Vacant	Director: Andrew Scott Accounts & Facilities Financial Accountant /	Samantha Allen
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Database Developer Database Developer	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant	Samantha Allen Irene Bowles (part-time)
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Database Developer Website Manager	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant	Samantha Allen Irene Bowles (part-time) Emma Raggett
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Database Developer Website Manager Senior Website Developer	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer /	Samantha Allen Irene Bowles (part-time)
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Developer	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant	Samantha Allen Irene Bowles (part-time) Emma Raggett
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Developer	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer /	Samantha Allen Irene Bowles (part-time) Emma Raggett
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Developer Website Editor	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Developer Website Editor Senior Software Developer	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins Miriam Lord Mark Hammond	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant Admin. Assistant Maintenance Operative	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder <i>Vacant</i> Pat Sparkes
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Editor Senior Software Developer Senior Software Developer	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins Miriam Lord Mark Hammond <i>Vacant</i>	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant Admin. Assistant Maintenance Operative Receptionist	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder Vacant
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Editor Senior Software Developer Senior Software Developer Software Developer	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins Miriam Lord Mark Hammond <i>Vacant</i> Oliver Barrett	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant Admin. Assistant Maintenance Operative Receptionist People and Organisation Development	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder <i>Vacant</i> Pat Sparkes
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Editor Senior Software Developer Senior Software Developer Software Developer Junior Software Developer	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins Miriam Lord Mark Hammond <i>Vacant</i> Oliver Barrett Ewan Stacey	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant Admin. Assistant Maintenance Operative Receptionist People and Organisation Development Director: Sian Knott	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder <i>Vacant</i> Pat Sparkes Ronnie Hatt
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Editor Senior Software Developer Senior Software Developer Software Developer Junior Software Developer Software Developer	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins Miriam Lord Mark Hammond <i>Vacant</i> Oliver Barrett Ewan Stacey Hayden Woods	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant Admin. Assistant Maintenance Operative Receptionist People and Organisation Development Director: Sian Knott People and Projects Officer	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder <i>Vacant</i> Pat Sparkes
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Editor Senior Software Developer Senior Software Developer Software Developer Junior Software Developer Software Developer	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins Miriam Lord Mark Hammond <i>Vacant</i> Oliver Barrett Ewan Stacey	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant Admin. Assistant Maintenance Operative Receptionist People and Organisation Development Director: Sian Knott	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder <i>Vacant</i> Pat Sparkes Ronnie Hatt
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Editor Senior Software Developer Senior Software Developer Software Developer Junior Software Developer Software Developer Software Developer Software Developer Software Developer Software Developer Software Developer Software Developer Software Developer	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins Miriam Lord Mark Hammond <i>Vacant</i> Oliver Barrett Ewan Stacey Hayden Woods	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant Admin. Assistant Maintenance Operative Receptionist People and Organisation Development Director: Sian Knott People and Projects Officer	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder <i>Vacant</i> Pat Sparkes Ronnie Hatt
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Editor Senior Software Developer Senior Software Developer Software Developer Junior Software Developer Software Developer Software Developer Software Developer Software Developer Software Developer Software Developer Software Developer Software Developer Software Developer Senior Systems Manager Computing Support Officer	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins Miriam Lord Mark Hammond <i>Vacant</i> Oliver Barrett Ewan Stacey Hayden Woods Matthew Nicholls Dom Render	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant Admin. Assistant Maintenance Operative Receptionist People and Organisation Development Director: Sian Knott People and Projects Officer Senior People, Health and Safety Officer	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder <i>Vacant</i> Pat Sparkes Ronnie Hatt Holly Stevenitt Cheryl Wilson
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Editor Senior Software Developer Senior Software Developer Software Developer Junior Software Developer Software Developer Software Developer Software Developer Software Developer Software Developer Software Developer Software Developer Senior Systems Manager Computing Support Officer Business Analyst	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins Miriam Lord Mark Hammond <i>Vacant</i> Oliver Barrett Ewan Stacey Hayden Woods Matthew Nicholls Dom Render <i>vacant</i>	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant Admin. Assistant Maintenance Operative Receptionist People and Organisation Development Director: Sian Knott People and Projects Officer Senior People, Health and Safety Officer People and EDI Officer	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder <i>Vacant</i> Pat Sparkes Ronnie Hatt Holly Stevenitt
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Editor Senior Software Developer Senior Software Developer Software Developer Junior Software Developer Software Developer Senior Systems Manager Computing Support Officer Business Analyst	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins Miriam Lord Mark Hammond <i>Vacant</i> Oliver Barrett Ewan Stacey Hayden Woods Matthew Nicholls Dom Render	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant Admin. Assistant Maintenance Operative Receptionist People and Organisation Development Director: Sian Knott People and Projects Officer Senior People, Health and Safety Officer People and EDI Officer Research Support	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder <i>Vacant</i> Pat Sparkes Ronnie Hatt Holly Stevenitt Cheryl Wilson Anna Dupont-Crabtree
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Editor Senior Software Developer Senior Software Developer Software Developer Junior Software Developer Software Developer Senior Systems Manager Computing Support Officer Business Analyst	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins Miriam Lord Mark Hammond <i>Vacant</i> Oliver Barrett Ewan Stacey Hayden Woods Matthew Nicholls Dom Render <i>vacant</i>	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant Admin. Assistant Maintenance Operative Receptionist People and Organisation Development Director: Sian Knott People and Projects Officer Senior People, Health and Safety Officer People and EDI Officer Research Support Resource Support Manager	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder <i>Vacant</i> Pat Sparkes Ronnie Hatt Holly Stevenitt Cheryl Wilson Anna Dupont-Crabtree Virginia Cates
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Editor Senior Software Developer Senior Software Developer Software Developer Junior Software Developer Software Developer Senior Systems Manager Computing Support Officer Business Analyst Product Owner/Project Manager	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins Miriam Lord Mark Hammond <i>Vacant</i> Oliver Barrett Ewan Stacey Hayden Woods Matthew Nicholls Dom Render <i>vacant</i>	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant Admin. Assistant Maintenance Operative Receptionist People and Organisation Development Director: Sian Knott People and Projects Officer Senior People, Health and Safety Officer People and EDI Officer Research Support Resource Support Manager Research Support Administrator	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder <i>Vacant</i> Pat Sparkes Ronnie Hatt Holly Stevenitt Cheryl Wilson Anna Dupont-Crabtree Virginia Cates Sandra Sparkes
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Editor Senior Software Developer Senior Software Developer Software Developer Junior Software Developer Software Developer Software Developer Software Developer Software Developer Software Developer Software Developer Software Developer Software Developer Software Developer Senior Systems Manager Computing Support Officer Business Analyst Product Owner/Project Manager	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins Miriam Lord Mark Hammond <i>Vacant</i> Oliver Barrett Ewan Stacey Hayden Woods Matthew Nicholls Dom Render <i>vacant</i> Dr Amy Challis	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant Admin. Assistant Maintenance Operative Receptionist People and Organisation Development Director: Sian Knott People and Projects Officer Senior People, Health and Safety Officer People and EDI Officer Research Support Resource Support Manager	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder <i>Vacant</i> Pat Sparkes Ronnie Hatt Holly Stevenitt Cheryl Wilson Anna Dupont-Crabtree Virginia Cates
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Editor Senior Software Developer Senior Software Developer Software Developer Junior Software Developer Software Develope	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins Miriam Lord Mark Hammond <i>Vacant</i> Oliver Barrett Ewan Stacey Hayden Woods Matthew Nicholls Dom Render <i>vacant</i> Dr Amy Challis	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant Admin. Assistant Maintenance Operative Receptionist People and Organisation Development Director: Sian Knott People and Projects Officer Senior People, Health and Safety Officer People and EDI Officer Research Support Resource Support Manager Research Support Administrator Research Support Officer	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder <i>Vacant</i> Pat Sparkes Ronnie Hatt Holly Stevenitt Cheryl Wilson Anna Dupont-Crabtree Virginia Cates Sandra Sparkes
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Editor Senior Software Developer Software Developer Junior Software Developer Software Developer Sonior Systems Manager Computing Support Officer Business Analyst Product Owner/Project Manager <b>PORZANA</b> Business Director Business Manager	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins Miriam Lord Mark Hammond <i>Vacant</i> Oliver Barrett Ewan Stacey Hayden Woods Matthew Nicholls Dom Render <i>vacant</i> Dr Amy Challis David Agombar Shane Muggridge	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant Admin. Assistant Maintenance Operative Receptionist People and Organisation Development Director: Sian Knott People and Projects Officer Senior People, Health and Safety Officer People and EDI Officer Research Support Resource Support Manager Research Support Officer Research Support Officer	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder Vacant Pat Sparkes Ronnie Hatt Holly Stevenitt Cheryl Wilson Anna Dupont-Crabtree Virginia Cates Sandra Sparkes Penny Mitchell Heidi Mellan
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Editor Senior Software Developer Software Developer Junior Software Developer Software Developer Softw	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins Miriam Lord Mark Hammond <i>Vacant</i> Oliver Barrett Ewan Stacey Hayden Woods Matthew Nicholls Dom Render <i>vacant</i> Dr Amy Challis David Agombar Shane Muggridge Harvey Cornell	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant Admin. Assistant Maintenance Operative Receptionist People and Organisation Development Director: Sian Knott People and Projects Officer Senior People, Health and Safety Officer People and EDI Officer Research Support Resource Support Manager Research Support Officer	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder Vacant Pat Sparkes Ronnie Hatt Holly Stevenitt Cheryl Wilson Anna Dupont-Crabtree Virginia Cates Sandra Sparkes Penny Mitchell Heidi Mellan Dean McFarlane
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Editor Senior Software Developer Software Developer Junior Software Developer Software Developer Softw	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins Miriam Lord Mark Hammond <i>Vacant</i> Oliver Barrett Ewan Stacey Hayden Woods Matthew Nicholls Dom Render <i>vacant</i> Dr Amy Challis David Agombar Shane Muggridge	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant Admin. Assistant Maintenance Operative Receptionist People and Organisation Development Director: Sian Knott People and Projects Officer Senior People, Health and Safety Officer People and EDI Officer Research Support Resource Support Manager Research Support Officer Research Support Officer	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder Vacant Pat Sparkes Ronnie Hatt Holly Stevenitt Cheryl Wilson Anna Dupont-Crabtree Virginia Cates Sandra Sparkes Penny Mitchell Heidi Mellan
Senior Database Developer Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Editor Senior Software Developer Senior Software Developer Software Developer Junior Software Developer Software Developer Software Developer Software Developer Software Developer Software Developer Senior Systems Manager Computing Support Officer Business Analyst Product Owner/Project Manager <b>PORZANA</b> Business Director Business Manager Production Assistant	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins Miriam Lord Mark Hammond <i>Vacant</i> Oliver Barrett Ewan Stacey Hayden Woods Matthew Nicholls Dom Render <i>vacant</i> Dr Amy Challis David Agombar Shane Muggridge Harvey Cornell	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant Admin. Assistant Maintenance Operative Receptionist People and Organisation Development Director: Sian Knott People and Projects Officer Senior People, Health and Safety Officer People and EDI Officer Research Support Resource Support Manager Research Support Officer	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder Vacant Pat Sparkes Ronnie Hatt Holly Stevenitt Cheryl Wilson Anna Dupont-Crabtree Virginia Cates Sandra Sparkes Penny Mitchell Heidi Mellan Dean McFarlane
INFORMATION SYSTEMS Director: Graham Hatt Senior Secretary Lead Database Architect Senior Database Developer Database Developer Database Developer Database Developer Website Manager Senior Website Developer Website Developer Website Editor Senior Software Developer Software Developer Junior Software Developer Software Developer Softwa	Jane Chase Dr Andrew Joys Steve Pritchard Justin Walker <i>Vacant</i> Steven Harrop Lee Carnihan Tom Sage Daniel Higgins Miriam Lord Mark Hammond <i>Vacant</i> Oliver Barrett Ewan Stacey Hayden Woods Matthew Nicholls Dom Render <i>vacant</i> Dr Amy Challis David Agombar Shane Muggridge Harvey Cornell Trupti Cornell	Director: Andrew Scott Accounts & Facilities Financial Accountant / Facilities Manager Management Accountant Finance Assistant General Sales Officer / Admin. & Finance Assistant Admin. Assistant Maintenance Operative Receptionist People and Organisation Development Director: Sian Knott People and Projects Officer Senior People, Health and Safety Officer People and EDI Officer Research Support Resource Support Manager Research Support Officer	Samantha Allen Irene Bowles (part-time) Emma Raggett Sonya Calder Vacant Pat Sparkes Ronnie Hatt Holly Stevenitt Cheryl Wilson Anna Dupont-Crabtree Virginia Cates Sandra Sparkes Penny Mitchell Heidi Mellan Dean McFarlane

# The British Trust for Ornithology Trustees' Annual Report (incorporating the Strategic Report) For the Year Ended 31 March 2024

For the purposes of Section 162 of the Charities Act 2011 and the Directors' Report for the purposes of Section 415 of the Companies Act 2006.

# **Objectives and Activities**

# **Charitable Objects**

The objects of the Trust, as set out in its Memorandum of Association are, for the benefit of the nation:

- (i) To promote, organise, carry on and encourage study and research and particularly field work for the advancement of knowledge in all branches of the Science of Ornithology.
- (ii) Permanently to preserve and protect lands and objects which by their natural features are suitable for the preservation and study of bird life and of fauna and flora generally.

# **Public Benefit**

The trustees have complied with the duty in Section 17 of the Charities Act 2011 to have due regard to public benefit guidance published by the Charity Commission. The following paragraphs set out in detail the aims, activities and performance of the Trust, and the way in which they provide public benefit.

# **Objectives and Activities**

The BTO's purpose and public benefit is to deliver objective information and advice, through undertaking impartial research and analysis about birds, other wildlife and habitats, to advance the understanding of nature. We inform policies and evidence-based decisions that impact on the environment such that future generations can benefit from a healthy and wildlife-rich environment. The BTO does this by:

- Sustaining long-term extensive programmes and smaller scale intensive research to study the population trends, movements, breeding, survival, ecology and behaviour of wild birds;
- Encouraging, enthusing, training and supporting volunteers to take part in scientific studies;
- Bringing together professional scientists and volunteer birdwatchers in surveys of wildlife (particularly, but not exclusively, birds); and
- Analysing the data gathered through these studies, making information available to Government and other bodies, and publishing the results in the primary scientific literature and via the internet, the birdwatching and conservation press and the media more generally.

# **Strategic Report**

The Strategic Report (Achievements and Performance, Plans for Future Periods) is contained in Part A of this document.

# **Principal Risks and Uncertainties**

The trustees consider that the principal risks and uncertainties which could affect BTO's ability to deliver its objectives in the short term are public expenditure reductions leading to reduced contract, grant and partnership funding, and in the medium to long term, inflation and the final salary pension scheme deficit. These are able to be mitigated through the continued growth strategy and careful cash management.

# **Financial Review**

The Directors' Report, the consolidated financial statements and the accompanying notes thereto comprise Part B of this document.

This was a record year for legacies, which together with strong demand for contract work led to an extraordinary net income surplus of £1,498k. Membership subscription income was flat, with new recruitment just balancing drop out, but an increase in major donations led to a significant increase in Other fundraising. Voluntary income formed 44% of total group income for the year (2023 43%). We aim to raise this to over 50% in the longer term. A total of £6,215k (2023 £5,608k) was spent during the year on carrying out, supporting and communicating ornithological research.

# The British Trust for Ornithology Trustees' Annual Report (incorporating the Strategic Report) - Continued For the Year Ended 31 March 2024

#### Financial Review Cont'd

Further increases in bond yields led to another reduction in the present value of the defined benefit pension obligation, taking the deficit to a comfortably manageable level.

#### Reserves

The Board has a free reserves target range of 3 to 4 months' running costs. These reserves are held against any unexpected falls in income or other unforeseen circumstances. Free reserves are total General funds less Tangible fixed assets less Designated funds. At 31 March 2024 these stood at £3,150k (2023: £2,165k), equivalent to 6.0 months' running costs (2023: 4.6 months'). The Board have earmarked the surplus funds for the 2024 pension deficit recovery payment, IT infrastructure and initiatives arising in response to the new Strategy.

#### **Going Concern**

The Board has reviewed the financial position and forecasts and the systems of financial control and risk management. The Board believes that BTO is well placed to manage operational and financial risks successfully. The Board therefore continues to support the going basis in preparing the financial statements.

# Structure, Governance and Management

Company number: Charity number:	00357284 (England and Wales) 216652 (England and Wales) SC039193 (Scotland)
Registered Office: Principal Advisers:	The Nunnery, Thetford, Norfolk IP24 2PU
Auditors	Ensors Accountants LLP, Connexions, 159 Princes Street, Ipswich IP1 1QJ
Principal Bankers	National Westminster Bank plc, 7 Cornhill, Bury St Edmunds, Suffolk IP33 1BQ
	The Royal Bank of Scotland plc, 2 Blenheim Place, Edinburgh EH7 5JH
Solicitors	Browne Jacobson LLP, Castle Meadow Road, Nottingham NG2 1BJ
Pensions Advisers	The Progeny Group Ltd, 1 The Triangle, ng2 Business Park, Nottingham NG2 1AE
Investment Advisers	The Progeny Group Ltd, 1 The Triangle, ng2 Business Park, Nottingham NG2 1AE
Insurance Brokers	Uttings Insurance Brokers, 16 The Fairland, Hingham, Norwich, Norfolk NR9 4HN

#### **Governing Document**

The British Trust for Ornithology (known generally as the BTO) is a company limited by guarantee governed by its Memorandum and Articles of Association. It is registered as a charity with the Charity Commission and the Office of the Scottish Charity Regulator. Membership is open to any person whose application is approved by the Board upon payment of the requisite subscription. Members undertake to contribute up to £1 each in the event of an insolvent winding up, which represents the limit of their guarantee.

#### Trustees

The members of the Board are the directors of the charitable company under company law and the trustees for the purpose of charity law. Those serving during the year were as follows:

Prof Z G Davies
D Buscall (appointed 1 January 2024)
I Coucher
E Dresser
R du Feu
Dr P Fitzpatrick
S J Marquis

J E Miller Dr D J Reynolds (retired 31 December 2023) E Thornton Prof S Willis (appointed 1 January 2024) Dr L Wright J M Ziff

Trustees are nominated by the Board, on the recommendation of the Governance and Nominations Committee, following open advertisement, or by members and elected by the members at the Annual General Meeting each year, to serve from

# The British Trust for Ornithology Trustees' Annual Report (incorporating the Strategic Report) - Continued For the Year Ended 31 March 2024

#### **Trustees Cont'd**

the following 1 January. The normal term of office is four years, with a limit of two consecutive terms. New trustees receive a comprehensive information pack and undergo induction to brief them on the BTO and their role as company directors and trustees.

#### **Organisation and Key Management Remuneration**

The Board of Trustees is the governing body of the BTO. It meets at least four times a year. The Board is supported by the Finance & Risk Committee, Governance, Safeguarding & Inclusion Committee, Regional Network Committee and Ringing Committee. The day-to-day operational management of the BTO is delegated to the Senior Leadership Team, led by the Chief Executive Officer (CEO).

The salary of the CEO is determined on the basis of comparability to relevant benchmarks. The remuneration of all other staff is set according to a bespoke job evaluation scheme, benchmarked as appropriate. All salaries are subject to annual cost of living review. There is no bonus scheme.

#### **Related Parties**

The BTO's wholly owned subsidiary, BTO Services Ltd, was established to undertake commercial activities to support the work of the BTO, and gifts its profits to the Trust. On 30 August 2017 BTO Services Ltd acquired the ring manufacturer Porzana Ltd. The net assets and activities of Porzana Ltd were subsequently hived up to BTO Services Ltd and it then became dormant. On 15 November 2019 BTO Services Ltd incorporated BTO Consulting Ltd which company is dormant. 'Porzana' and 'BTO Consulting' are trading names of BTO Services Ltd.

The BTO co-operates with many other charities, with government agencies and other bodies in pursuit of its objectives, as illustrated in Parts A and B of this document.

#### Volunteers

The Trust depends on the contributions of many thousands of volunteers who participate in BTO surveys and other activities. We are greatly indebted to them, and especially to the Regional Representatives and other regional volunteers who organise so much BTO activity at a local level. BTO volunteers contributed the equivalent of approximately 284,181 days of work in calendar year 2023 (2022: 265,053 days).

#### **Risk Management**

A risk register is maintained which identifies the significant risks faced by the BTO and the measures in place to manage and mitigate those risks. These are monitored by the Senior Leadership Team and regularly reviewed and amended as appropriate by the Finance & Risk Committee and the Board.

# **Fundraising Standards**

BTO is registered with the Fundraising Regulator and follows the Fundraising Regulator's Code of Fundraising Practice. All fundraising from individual giving is undertaken by BTO staff, and during the year we used the services of a specialist consultancy to help us research and approach charitable trusts and foundations. We have not received any complaints regarding our fundraising practices. We take all reasonable steps to treat supporters fairly and transparently, especially if we believe they may be in a vulnerable position.

# The British Trust for Ornithology Trustees' Annual Report (incorporating the Strategic Report) - Continued For the Year Ended 31 March 2024

#### Investments

The Memorandum of Association permits the Trust to invest monies not immediately required for its purposes as the trustees see fit. The trustees' investment policy is to maximise long term total return by investing in a combination of 40% high quality short-dated bonds and 60% globally diversified equities. The equities part of the portfolio is invested in a sustainable fund (see Note 10). Investment performance against benchmark was as follows:

	Portfolio	Benchmark
Year ended 31 March 2024	+13.33%	+13.39%
Since inception (28 August 2014)	+87.77%	+63.77%

# **Statement of Board Members' Responsibilities**

The Board members are responsible, as Directors of the Company, for preparing the Annual Report (including the Strategic Report) and the financial statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

Company law requires the Board members to prepare financial statements for each financial year, which give a true and fair view of the state of affairs of the charitable company and the group at the year end and of the incoming resources and application of resources, including the income and expenditure, of the charitable company and the group for the year. In preparing these financial statements, Board members are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in SORP (FRS 102);
- make judgements and 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; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the charitable company and the group will continue in operation.

Board members are responsible for keeping adequate accounting records that disclose with reasonable accuracy at any time the financial position of the charitable company and the group and enable them to ensure that the financial statements comply with the Companies Act 2006, the Charities and Trustee Investment (Scotland) Act 2005 and the Charitable company (Scotland) Regulations 2006 (as amended). They are also responsible for safeguarding the assets of the charitable company and the group and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Board members are responsible for the maintenance and integrity of the corporate and financial information included on the Trust's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

In so far as Board members are aware:

- there is no relevant audit information of which the Trust's auditors are unaware; and
- Board members have taken all steps that they ought to have taken to make themselves aware of any relevant audit information and to establish that the auditors are aware of that information.

#### Auditors

A resolution to appoint the auditors will be proposed at the Annual General Meeting under section 485 of the Companies Act 2006.

The Trustees' Report (incorporating the Strategic Report) was approved by the Board as Directors and Trustees and authorised for issue on 20 August 2024.

Prof Z G Davies Chair J E Miller FCCA Honorary Treasurer

# INDEPENDENT AUDITORS' REPORT TO THE MEMBERS OF THE BRITISH TRUST FOR ORNITHOLOGY

# Independent Auditors' Report to the Members of The British Trust for Ornithology

#### Opinion

We have audited the group financial statements of The British Trust for Ornithology (the 'parent charitable company') and its subsidiaries (the 'group') for the year ended 31 March 2024 which comprise the Consolidated Statement of Financial Activities, the Charity Statement of Financial Activities, the Consolidated Group and Charity Balance Sheets, the Consolidated Group and Charity Statement of Cash Flows, 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 (United Kingdom Generally Accepted Accounting Practice) including FRS 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland" (United Kingdom Generally Accepted Accounting Practice).

In our opinion the financial statements:

- give a true and fair view of the state of the group's and the parent charitable company's affairs as at 31 March 2024
- and of the groups and the parent charitable company's incoming resources and application of resources, including its income and expenditure 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, the Charities and Trustee Investment (Scotland) Act 2005 and regulations 6 and 8 of the Charities Accounts (Scotland) Regulations 2006 (as amended).

#### **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 Auditors' responsibilities for the audit of the financial statements section of our report. We are independent of the group and parent charitable company in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

#### Conclusions relating to going concern

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

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the group or parent 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 other information comprises the information included in the annual report other than the group financial statements and our auditors' report thereon. The trustees are responsible for the other information. Our opinion on the group 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. In connection with our audit of the group financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the course of the audit, or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. 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.

#### Opinion on other matters prescribed by the Companies Act 2006

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

- the information given in the Trustees' Annual Report, which includes the Directors' Report and the Strategic Report prepared for the purposes of company law, for the financial year for which the group financial statements are prepared is consistent with the group financial statements; and
- the Strategic Report and the Directors' Report included within the Trustees' Annual Report has been prepared in accordance with applicable legal requirements.

# INDEPENDENT AUDITORS' REPORT TO THE MEMBERS OF THE BRITISH TRUST OF ORNITHOLOGY

# Independent Auditors' Report to the Members of The British Trust for Ornithology - Continued

#### Matters on which we are required to report by exception

In the light of our knowledge and understanding of the group and the parent charitable company and their environment obtained in the course of the audit, we have not identified material misstatements in the Strategic Report or the Directors' Report included within the Trustees' Annual 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 (as amended) require us to report to you if, in our opinion:

- adequate and proper accounting records have not been kept by the parent charitable company, or returns
  adequate for our audit have not been received from branches not visited by us; or
- the parent charitable company's financial statements are not in agreement with the accounting records or returns; or
- certain disclosure of trustees' remuneration specified by law are not made; or
- we have not received all the information and explanations we require for our audit; or
- the trustees were not entitled to prepare the financial statements in accordance with the small companies
  regime and take advantage of the small companies' exemptions in preparing the trustees' report and from the
  requirement to prepare a strategic report.

#### **Responsibilities of Board Members**

As explained more fully in the Statement of Board Members' Responsibilities set out on page B9, the trustees (who are also the directors of the British Trust for Ornithology for the purposes of company law) are responsible for the preparation of the group financial statements and for being satisfied that they give a true and fair view, and for such internal control as the trustees determine is necessary to enable the preparation of group financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the group financial statements, the trustees are responsible for assessing the group's and parent 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 group or the parent charitable company or to cease operations, or have no realistic alternative but to do so.

#### Auditors' 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 group financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' 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.

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.

Our audit was designed, after obtaining sufficient and appropriate knowledge and understanding of the group and parent charitable company, its charitable nature, its income streams and the industry it operates within. We undertook an assessment of the control environment and the systems and procedures put in place by the senior management team, combined with our detailed audit testing and supportive analytical work, to obtain reasonable assurance about whether the group financial statements as a whole are free from material misstatement due to fraud. Our work has included considering areas of higher risk of fraud, including transactions with related parties, revenue recognition and areas where there is a risk of management override of systems and controls.

To address the risk of fraud we performed the following audit procedures:

- Assessment of key accounting estimates within the group financial statements in order to assess their reasonableness and determine whether there is any bias in management's estimates.
- All team members were informed of the relevant laws and regulations and potential fraud risks at the planning stage and reminded to remain alert to any indications of fraud or non-compliance.

# INDEPENDENT AUDITORS' REPORT TO THE MEMBERS OF THE BRITISH TRUST FOR ORNITHOLOGY

# Independent Auditors' Report to the Members of The British Trust for Ornithology - Continued

- Enquiring of management whether there have been any alleged, suspected or actual instances of fraud during the year.
- Enquiring of management and those charged with governance whether there have been any actual or potential litigation or claims.
- Reviewing correspondence with relevant legal authorities.
- Reviewing legal expense accounts for any indicators of litigation or claims.

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

# Use of our report

This report is made solely to the parent 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 regulation 10 of the Charities Accounts (Scotland) Regulations 2006 (as amended). Our audit work has been undertaken so that we might state to the parent charitable company's members and trustees those matters we are required to state to them in an auditors' 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 parent charitable company, the parent charitable company's members as a body and its trustees as a body, for our audit work, for this report, or for the opinions we have formed.

Helen Rumsey, Senior Statutory Auditor For and on behalf of Ensors Accountants LLP Connexions 159 Princes Street Ipswich IP1 1QJ

# The British Trust for Ornithology Consolidated Statement of Financial Activities (Including Income and Expenditure Account) for the Year Ended 31 March 2024

Income and endowments from:	Note	Unrestricted Funds £'000	Restricted Funds £'000	<b>Total</b> <b>2024</b> £'000	<b>Total</b> <b>2023</b> £'000
Donations and legacies	3	3,508	630	4,138	3,038
Charitable activities	3	3,929	38	3,967	3,102
Other trading activities	3	1,266	-	1,266	977
Investments	3	81	11	92	17
Total income and endowments		8,784	679	9,463	7,134
Expenditure on:					
Raising funds	4	1,772	-	1,772	1,317
Charitable activities	4	5,488	727	6,215	5,608
Other – Amounts recognised as expenditure on defined benefit pension scheme	22	50	-	50	110
Total expenditure		7,310	727	8,037	7,035
Net income/(expenditure) before net gain/(loss) on investments		1,474	(48)	1,426	99
Net gain/(loss) on investments	10	72	-	72	(16)
Net income/ (expenditure)		1,546	(48)	1,498	83
Transfers between funds	16,17	(483)	483	-	-
Other recognised gains/(losses):					
Actuarial gain/(loss) on defined benefit pension scheme	22	393	-	393	2,639
Net movement in funds		1,456	435	1,891	2,722
Reconciliation of funds					
Total funds brought forward		4,035	777	4,812	2,090
Total funds carried forward	16,17	5,491	1,212	6,703	4,812

The Statement of Financial Activities includes all gains and losses recognised during the year. All income and expenditure derives from continuing activities.

# FINANCIAL STATEMENTS

# The British Trust for Ornithology Charity Statement of Financial Activities (Including Income and Expenditure Account) for the Year Ended 31 March 2024

Income and endowments from:	Note	Unrestricted Funds £'000	Restricted Funds £'000	<b>Total</b> <b>2024</b> £'000	<b>Total</b> <b>2023</b> £'000
Donations and legacies	3	3,727	630	4,357	3,280
Charitable activities	3	3,929	38	3,967	3,102
Other trading activities	3	741	-	741	535
Investments	3	81	11	92	17
Total income and endowments		8,478	679	9,157	6,934
Expenditure on:					
Raising funds	4	1,451	-	1,451	1,117
Charitable activities	4	5,503	727	6,230	5,608
Other – Amounts recognised as expenditure on defined benefit pension scheme	22	50	-	50	110
Total expenditure		7,004	727	7,731	6,835
Net income/(expenditure) before net gain/(loss) on investments		1,474	(48)	1,426	99
Net gain/(loss) on investments	10	72	-	72	(16)
Net income/ (expenditure)		1,546	(48)	1,498	83
Transfers between funds		(483)	483	-	-
Other recognised gains/(losses):					
Actuarial gain/(loss) on defined benefit pension scheme	22	393	-	393	2,639
Net movement in funds		1,456	435	1,891	2,722
Reconciliation of funds					
Total funds brought forward		4,035	777	4,812	2,090
Total funds carried forward	16,17	5,491	1,212	6,703	4,812

The Statement of Financial Activities includes all gains and losses recognised during the year. All income and expenditure derives from continuing activities.

# The British Trust for Ornithology Consolidated Group and Charity Balance Sheets as at 31 March 2024

	Note	Group 2024 £'000	Group 2023 £'000	<b>Charity</b> <b>2024</b> £'000	<b>Charity</b> <b>2023</b> £'000
Fixed assets					
Tangible assets	9	2,427	2,433	2,427	2,433
Investments	10	519	447	519	447
		2,946	2,880	2,946	2,880
Current assets					
Stocks	11	282	294	-	-
Debtors	12	2,270	1,680	2,549	1,926
Cash at bank and in hand		4,132	3,538	4,024	3,453
		6,684	5,512	6,573	5,379
Creditors:					
Amounts falling due within one	13				
year		(2,240)	(2,379)	(2,129)	(2,246)
Net current assets		4,444	3,133	4,444	3,133
Total assets less current liabilities		7,390	6,013	7,390	6,013
<b>Creditors:</b> Amounts falling due after one	14				
year		(100)	(91)	(100)	(91)
Net assets excluding defined benefit pension liability		7,290	5,922	7,290	5,922
Defined benefit pension liability	22	(587)	(1,110)	(587)	(1,110)
Net assets/(liabilities) including					
defined benefit pension liability	18	6,703	4,812	6,703	4,812
Represented by:					
Restricted funds	16	1,212	777	1,212	777
Unrestricted funds excluding Pension reserve	17	6,078	5,145	6,078	5,145
Pension reserve	17	(587)	(1,110)	(587)	(1,110)
Total funds	18	6,703	4,812	6,703	4,812

Approved by the Board and authorised for issue on 20 August 2024 and signed on its behalf by:

Chair	Prof Z G Davies
Honorary Treasurer	J E Miller FCCA

Company registration number 00357284

# The British Trust for Ornithology Consolidated Group and Charity Statement of Cash Flows For the Year Ended 31 March 2024

		Group 2024 £'000	Group 2023 £'000	<b>Charity</b> <b>2024</b> £'000	<b>Charity</b> <b>2023</b> £'000
	Note				
Net cash inflow / (outflow) from operating activities	20	514	(274)	491	(231)
Cash flow from investing activities					
Payments to acquire tangible fixed assets	9	(12)	(11)	(12)	(11)
Proceeds from the sale of tangible fixed assets		-	7	-	7
Investment income received		92	17	92	17
Net cash flow from investing activities	-	80	13	80	13
Net increase/(decrease) in cash for the year		594	(261)	571	(218)
Cash at bank and in hand at 1 April		3,538	3,799	3,453	3,671
Cash at bank and in hand at 31 March	-	4,132	3,538	4,024	3,453
Analysis of Cash at Bank and in Hand		2024	2023	2024	2023
This comprises:		£'000	£'000	£'000	£'000
Bank current accounts and cash in hand		327	227	219	142
Bank deposits	_	3,805	3,311	3,805	3,311
Cash at bank and in hand at 31 March	_	4,132	3,538	4,024	3,453

Bank deposits carry variable rates of interest.

# 1. ACCOUNTING POLICIES

#### a) Accounting Convention

The charity constitutes a public benefit entity as defined by FRS 102. The financial statements have been prepared in accordance with Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable in the UK and Republic of Ireland (FRS 102) (SORP (FRS102)) effective 1 January 2019, the Charities Act 2011, the Companies Act 2006 and UK Generally Accepted Practice as it applies from 1 January 2015. They also comply with the reporting requirements of the Charities and Trustee Investment (Scotland) Act 2005 and the Charities Accounts (Scotland) Regulations 2006 (as amended).

The financial statements are prepared in pounds sterling (rounded to the nearest thousand) which is the functional currency of the charitable company and the group.

The charity operates on a weekly basis and the Financial Statements have been made up to 31 March 2024, being the last Sunday in March.

# b) Going Concern

The trustees have prepared the financial statements on a going concern basis under the historical cost convention, modified to include certain items at fair value. In their opinion the pension scheme deficit does not give rise to material uncertainties that could cast doubt upon the appropriateness of this policy.

#### c) Group Financial Statements

These financial statements consolidate the results of the charity and its wholly owned trading subsidiary BTO Services Limited on a line-by-line basis.

#### d) Income

Income from donations, gifts and legacies is recognised immediately when received in cash and as receivable where there is entitlement, the amount can be measured reliably, and it is probable that the income will be received.

Income from charitable activities includes income receivable under contracts which is recognised as earned as the related work is performed. Income from grant funding supporting charitable activities is recognised where there is entitlement, probability of receipt, and the amount can be measured with sufficient reliability.

Income is deferred when it is received in advance of the services it relates to. Life membership income is released to the Statement of Financial Activities in equal instalments over ten years.

Income from commercial activities of the trading subsidiary is recognised as earned as the related goods and services are provided.

Investment income, sponsorship and royalty income and membership subscription income are recognised on a receivable basis.

#### e) Expenditure

Expenditure is recognised when a liability is incurred. Costs are allocated directly to activity cost categories. The cost of holiday pay not taken at the year end is accrued.

Costs of raising funds are those incurred in attracting voluntary income, including membership subscriptions, in carrying out trading activities, and in receiving royalties and sponsorship income.

Costs of charitable activities include those incurred on scientific research contracts, and on allocated and restricted fund research work. They also include volunteer surveyor support and science communication costs.

Governance costs include those incurred in the governance of the charity and the safeguarding of its assets, and are primarily associated with constitutional and statutory requirements.

Support costs include central functions and have been allocated to activity cost categories on a staff cost basis.

VAT is reclaimed on allowable expenses under the Business/Non-Business and the partial exemption rules. Where not reclaimable it is included within expenses.

# f) Tangible Fixed Assets

Individual assets costing £1k or more are initially capitalised at cost. Tangible fixed assets (except freehold property and land) are depreciated on a straight line basis over their estimated useful lives as follows:

Asset Category	Annual Rate
Furniture and Equipment	25%
Computer Equipment	25%
Motor Vehicles	25%

The freehold property is stated at fair value under the revaluation model using sufficiently regular revaluations to ensure that the carrying amount does not differ materially from the fair value at the reporting date. Revaluations are performed every five years, or as the trustees consider necessary, by qualified external valuers. The increase or decrease on revaluation is credited or charged to the fund holding the asset. The property is not depreciated as it is considered to have an indefinite remaining useful life.

At each reporting end date, the trustees review the carrying amounts of the tangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any).

# g) Investments

Investments are recognised initially at fair value which is normally the transaction price excluding transaction costs. Subsequently, they are measured at fair value with changes recognised in 'Net gain/(loss) on investments' in the Statement of Financial Activities if the shares are publicly traded or their fair value can otherwise be measured reliably. Other investments are measured at cost less impairment.

# h) Stock

Stock is valued at the lower of cost and net realisable value. Net realisable value is based on estimated selling price less further costs to completion and sale. Cost is calculated on a first in first out basis.

# i) Debtors and creditors falling due within one year

Debtors and creditors with no stated interest rate and falling due within one year are recorded at transaction price. Any losses arising from impairment are recognised in expenditure.

# j) Financial instruments

The group only has financial assets and liabilities that qualify as basic financial instruments, such as debtors and creditors with no stated interest rate and payable within one year, which are recorded at transaction price. Any losses arising from impairment are recognised as expenditure in the Statement of Financial Activities.

#### k) Foreign Currency Translation

Monetary assets and liabilities denominated in foreign currencies are translated into pounds sterling at the rates of exchange ruling at the balance sheet dates. Transactions in foreign currencies are recorded at the rate ruling at the transaction date. All exchange differences are taken to the Statement of Financial Activities.

#### I) Funds Structure

The Trust has a number of restricted funds to account for situations where funds have been raised for a specific purpose. All other funds are unrestricted funds. Where the trustees intend to use part of the unrestricted funds to provide longer-term funding for BTO projects and core activities, designated funds are set up to reflect this. A Pension reserve fund has been created so that movements and balances relating to the defined benefit pension scheme valuations can be separately identified. The funds in each of these categories are disclosed in Notes 16 and 17.

#### m) Retirement Benefits

The defined benefit pension scheme provides benefits for staff based on final pensionable salary. The scheme was closed to future accrual with effect from 1 April 2013. The assets of the scheme are held separately from those of the Trust, being invested with independent fund managers and are measured at fair value with changes recognised in the Statement of Financial Activities as set out in Note 22. Defined benefit pension liabilities are measured using the projected unit cost method and discounted at the current rate of return on a high quality corporate bond of equivalent term and currency to the liability. Under FRS 102, any net liability arising based on these valuations is the best estimate of the present value of the actual amounts to be paid out of the scheme, less the fair value of the scheme assets. The net of the interests on the scheme assets and liabilities is charged to the Statement of Financial Activities. Actuarial gains and losses are recognised in the Statement of Financial Activities. Actuarial gains and losses are recognised in the Statement of Financial Activities.

The Trust as employer also makes payments in respect of employees' own defined contribution schemes, through a group self-invested personal pension arrangement. For these schemes, the amount charged to the Statement of Financial Activities in respect of pension costs is the contributions payable in the year. Differences between contributions payable in the year and contributions actually paid are included as either accruals or prepayments in the Balance Sheet.

#### n) Judgements and Key Sources of Estimation Uncertainty

In the application of the group and parent charitable company's accounting policies, the trustees are required to make judgements, estimates and assumptions about the carrying amount of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the year in which the estimate is revised where the revision affects only that year, or in the year of the revision and future years where the revision affects both the current and future years.

#### Key sources of estimation uncertainty

The estimates and assumptions which have a significant risk of causing a material adjustment to the carrying amount of assets and liabilities are as follows:

#### Percentage completion on contracts

The degree of completion on the contracts is an estimate by the relevant project manager. This estimate relies on their professional opinion on the level of work completed in the whole contract, which impacts the level of income recognised, accrued and deferred. These estimates are reviewed by the Senior Leadership Team on a regular basis.

# n) Judgements and Key Sources of Estimation Uncertainty Cont'd

# Defined benefit pension scheme

The group has a defined benefit pension scheme which is closed to future accrual. The valuation of the defined benefit pension obligation necessarily involves a calculation which depends on the expected future outflow of economic benefits that the group expects to make to satisfy this obligation. The calculation depends on a number of factors such as the methodology, discount rate and mortality assumptions used. The group use a qualified independent actuary to assist in preparing the necessary calculation in accordance with the requirements of FRS102.

# **Property valuation**

The Nunnery is valued at fair value by the directors with reference to recent property transactions and their knowledge of the site. The directors obtain third party valuations at regular intervals to ensure that the fair value of the property is kept up to date.

# o) Leases

Rentals payable under operating leases, including any lease incentives received, are charged to profit or loss on a straight line basis over the term of the relevant lease except where another more systematic basis is more representative of the time pattern in which economic benefits from the leased asset are consumed.

# p) Employee benefits

The costs of short-term employee benefits are recognised as a liability and an expense unless those costs are required to be recognised as part of the cost of stock or fixed assets. The cost of any unused holiday entitlement is recognised in the year in which the employee's services are received. Termination benefits are recognised immediately as an expense when the charity is demonstrably committed to terminate the employment of an employee or to provide termination benefits.

# q) Cash at bank and in hand

Cash at bank and in hand are basic financial assets and includes cash in hand, deposits with banks, other short-term liquid investments with original maturities of three months or less, and bank overdrafts.

# r) Legacies

Legacy receipts are recognised when there has been grant of probate, the executors have established that there are sufficient assets in the estate, after settling any liabilities, to pay the legacy, any conditions attached to the legacy are either within the control of the Trust or have been met, and the amount receivable is determined.

# 2. MEMBERS' LIABILITY

Under the Memorandum of Association of the Trust, members are required to undertake to contribute to the assets of the Trust in the event of its being wound up while they are members, and within one year after they cease to be members, for payment of the debts and liabilities of the Trust contracted whilst they were still members, and of the costs, charges and expenses of winding up, such amount as may be required but not exceeding £1 each. This represents the limit of their guarantee to the company.

# 3. ANALYSIS OF INCOME

	Group 2024 £'000	Group 2023 £'000	<b>Charity</b> <b>2024</b> £'000	<b>Charity</b> <b>2023</b> £'000
Donations and legacies				
Membership subscriptions & donations	1,030	1,020	1,030	1,020
Individual donations	668	504	668	504
Corporate & trust donations & grants	429	362	648	604
Legacies	2,011	1,152	2,011	1,152
	4,138	3,038	4,357	3,280
Charitable activities				
Core surveys - JNCC Partnership	1,358	1,158	1,358	1,158
Core surveys - Other	37	39	37	39
Other surveys & research - Voluntary funded	-	3	-	3
Other surveys & research - Contract funded	2,376	1,674	2,376	1,674
Research communication	77	87	77	87
General volunteer survey support	96	116	96	116
Nunnery Lakes Reserve	23	25	23	25
	3,967	3,102	3,967	3,102
Other trading activities				
Ringing & tagging sales	491	448	-	-
Publications & general sales	30	71	-	-
Corporate sponsorship & royalties	26	53	-	-
Consultancy	558	202	-	-
Data-related sales	156	167	-	-
Other	5	36	5	10
Income from charges to subsidiary	-	-	736	525
	1,266	977	741	535
Investment income				
Bank interest receivable	92	17	92	17

Analysis by fund type	<b>Group</b> <b>2024</b> £'000	<b>Group</b> <b>2023</b> £'000	<b>Charity</b> <b>2024</b> £'000	<b>Charity</b> <b>2023</b> £'000
Donations and legacies				
Unrestricted	3,508	2,662	3,727	2,904
Restricted	630	376	630	376
	4,138	3,038	4,357	3,280
Charitable activities				
Unrestricted	3,929	3,096	3,929	3,096
Restricted	38	6	38	6
	3,967	3,102	3,967	3,102
Other trading activities				
Unrestricted	1,266	977	741	535
Restricted				
	1,266	977	741	535
Investment income				
Unrestricted	81	17	81	17
Restricted	11		11	
	92	17	92	17

# 4. ANALYSIS OF EXPENDITURE

	Group 2024 £'000	Group 2023 £'000	<b>Charity</b> <b>2024</b> £'000	<b>Charity</b> <b>2023</b> £'000
Raising funds				
Donations and legacies				
Membership subscriptions & donations	306	265	306	265
Individual donations	262	195	262	195
Corporate & trust donations & grants	52	37	52	37
Legacies	96	76	96	76
C .	716	573	716	573
Other trading activities				
Ringing & tagging costs	463	443	-	-
Publications & general costs	25	63	-	-
Corporate sponsorship & royalties	1	-	-	-
Consultancy	453	159	-	-
Data-related costs	113	79	-	-
Other	1	-	-	-
Costs recharged to subsidiary			735	544
	1,056	744	735	544
	1,772	1,317	1,451	1,117
Charitable activities				
Core surveys - JNCC Partnership	1,816	1,679	1,817	1,679
Core surveys - Other	313	328	313	328
Other surveys & research - Voluntary funded	791	844	791	844
Other surveys & research - Contract funded	2,258	1,897	2,272	1,897
Research communication	777	650	777	650
General volunteer survey support	215	167	215	167
Nunnery Lakes Reserve	45	43	45	43
	6,215	5,608	6,230	5,608

Analysis by fund type	Group	Group	Charity	Charity
	2024	2023	2024	2023
	£'000	£'000	£'000	£'000
Raising funds				
Unrestricted	1,772	1,300	1,451	1,100
Restricted		17	-	17
	1,772	1,317	1,451	1,117
Charitable activities				
Unrestricted	5,488	4,967	5,503	4,967
Restricted	727	641	727	641
	6,215	5,608	6,230	5,608

5. NET INCOME / (EXPENDITURE)	<b>2024</b> £'000	<b>2023</b> £'000
Net income for the year is stated after (crediting)/charging:		
Auditors' remuneration:		
Audit of the charity's annual accounts	21	19
Audit of the trading subsidiary's annual accounts	8	10
Audit of the charity's defined benefit pension scheme	3	3
Depreciation (Note 9)	18	23
(Profit)/loss on disposals of fixed assets	-	(7)

6. STAFF COSTS	Group and Charity 2024 £'000	Group and Charity 2023 £'000
Wages and salaries	4,595	4,101
Social security costs	412	373
Defined contribution pension plan costs (Note 22)	480	422
Expenditure recognised on defined benefit pension scheme (Note 22)	50	110
The number of employees whose emoluments exceeded £60,000 fell within the following bands:	<u>5,537</u> <b>2024</b>	<u>5,006</u> 2023
£70,001 - £80,000	1	1
£60,001 - £70,000	4	3

The emoluments of the CEO for the year were £80k (2023 £78k), with the same pension and other benefits as were applicable to all other staff. The total remuneration including social security costs and pension contributions of the Senior Leadership Team was £529k (2023: £508k). Trustees receive no remuneration. Trustees made donations totalling less than £1k during the year (2023 less than £1k). There were no other related party transactions requiring disclosure. Other expenses were reimbursed to trustees as follows:

	2024	2023
	£'000	£'000
Travel and subsistence	1	3

Average numbers of staff and full time equivalents (FTE)

	2	2024		2023
	No	FTE	No	FTE
Permanent posts	148	133.6	141	126.5
Seasonal fieldworkers	7	1.6	10	2.3
	155	135.2	151	128.8

# 7. TOTAL EXPENDITURE

	Direct costs £'000	Support costs £'000	<b>2024</b> Total £′000	<b>2023</b> <b>Total</b> £'000
Raising funds Charitable activities Other – Amounts recognised as expenditure on	1,567 5,496	205 720	1,772 6,215	1,317 5,608
defined benefit pension scheme	50 7,113	925	50 8,037	110 7,035

# 8. SUPPORT COSTS

	Premises	IT & Office Services	People & OrgDev	Manage- ment & Finance	Govern- ance	2024 Total	2023 Total
	£'000	£'000	£'000	£'000	£'000	£'000	£'000
Raising funds	3	8	78	99	17	205	147
Charitable activities	9	28	275	350	58	720	625
	12	36	353	449	75	925	772

All support costs are apportioned on a staff cost basis.

Governance costs include auditors' remuneration, the meeting expenses of the Board and its committees, and the staff cost of servicing those meetings.

# 9. TANGIBLE FIXED ASSETS - GROUP

	Freehold Property and Land	Furniture and Equipment	Computer Equipment	Motor Vehicles	Total
	£'000	£'000	£'000	£'000	£'000
Cost or valuation at 1 April 2023	2,400	204	442	92	3,138
Additions Disposals	-	6 (19)	6 -	-	12 (19)
At 31 March 2024	2,400	191	448	92	3,131
Depreciation at 1 April 2023	-	204	413	88	705
Depreciation charge Disposals	-	1 (19)	14	3	18 (19)
At 31 March 2024		186	427	91	704
Net book value at 31 March 2024	2,400	5	21	1	2,427
Net book value at 1 April 2023	2,400		29	4	2,433

# 9. TANGIBLE FIXED ASSETS - CHARITY

	Freehold Property and Land	Furniture and Equipment	Computer Equipment	Motor Vehicles	Total
	£'000	£'000	£'000	£'000	£'000
Cost or valuation at 1 April 2023	2,400	200	442	92	3,134
Additions	-	6	6	-	12
Disposals	-	(19)	-	-	(19)
At 31 March 2024	2,400	187	448	92	3,127
Depreciation at 1 April 2023	-	200	413	88	701
Depreciation charge	-	1	14	3	18
Disposals	-	(19)	-	-	(19)
At 31 March 2024		182	427	91	700
Net book value at 31 March 2024	2,400	5	21	1	2,427
Net book value at 1 April 2023	2,400		29	4	2,433

The Nunnery and Nunnery Lakes Reserve, the freehold property and land owned and occupied by The British Trust for Ornithology, were valued by qualified external valuers, Fenn Wright Chartered Surveyors, on 31 March 2022 on the basis of fair value, at £2,400k, giving a gain on revaluation of £550k for the year ended 31 March 2022. The trustees have considered the condition and value of the freehold property at the year end and believe there to have been no material change since the last external valuation in March 2022.

On an historical cost basis, the freehold property and land would have been included at a cost and net book value of £2,284k (2023: £2,284k).

# 10. INVESTMENTS

#### The Group

#### Listed Investment Funds

	Market value 1 April 2023	Disposals	Additions	Gain/(loss)	Market value 31 March 2024
	£'000	£'000	£'000	£'000	£'000
Birds in Trust Fund					
Dimensional Global	75	-	-	1	76
Short Dated Bond					
Dimensional Global	122	-	-	30	152
Sustainability Core Equity					
Wrap Cash	3	-	-	1	4
	200	-	-	32	232
General Funds					
Dimensional Global Short Dated Bond	92	-	-	1	93
Dimensional Global Sustainability Core Equity	151	-	-	37	188
Wrap Cash	4	-	-	2	6
	247			40	287
			·		
	447			72	519

On an historical cost basis, the investments would have been included at £298k (2023: £298k).

#### **The Charity**

	<b>2024</b> £'000	<b>2023</b> £'000
Listed Investment Funds as above Fixed asset unlisted investments - BTO Services Ltd	519	447
The asset anisted investments - bro services Eta	519	447

The Trust wholly owns its subsidiary undertaking, BTO Services Ltd, which is incorporated in England & Wales, company registration number 02907282. This company operates to promote the work of The British Trust for Ornithology by undertaking commercial activities to support such work. The aggregate value of the share capital and reserves at 31 March 2024 was £100 (2023: £100) and the company reported a £nil result after profit distributions made under a Deed of Covenant for the year (2023: £nil). £218k (2023: £242k) was paid to the Charity under a Deed of Covenant. The value of the investment in the subsidiary undertaking is £100 (2023: £100) under the equity method of valuation.

The following is a summarised statement of income for the subsidiary for the financial year:

	2024	2023
	£'000	£'000
Turnover	1,261	966
Cost of sales	(974)	(664)
Gross profit	287	302
Net administrative expenses	(69)	(60)
Net profit before payment under Deed of Covenant	218	242

Turnover of the subsidiary includes sales to overseas markets of £192k (2023: £261k).

# 10. INVESTMENTS (Continued)

BTO Services Ltd has two dormant wholly owned subsidiaries, both registered in England and Wales, and with Registered Office at The Nunnery, Thetford, Norfolk IP24 2PU, Porzana Ltd Company No.04175071 and BTO Consulting Ltd Company No.12317596.

11.	STOCKS	2024	2023
The Gro	bup	£'000	£'000
Finishe	d goods, goods for resale and materials	282	294
The Cha	arity		
The cha	arity holds no trading stock.		
12.	DEBTORS	<b>2024</b> £'000	<b>2023</b> £'000
The Gro	oup	1 000	1 000
	nd contract debtors	1,503	1,085
	ecoverable	22	36
Prepayı		123	127
Accrue	d income	622	432
		2,270	1,680
		2024	2023
		£'000	£'000
The Cha	arity		
Trade a	nd contract debtors	1,257	1,011
Amoun	ts due from Group undertakings	560	380
	ecoverable	22	36
Prepayı		121	111
Accrue	d income	589	388
		2,549	1,926

# 13. CREDITORS – AMOUNTS FALLING DUE WITHIN ONE YEAR

	2024	2023
	£'000	£'000
The Group		
Trade creditors	309	363
Taxes and Social security costs	288	198
Other creditors	63	119
Accruals	190	117
Deferred income	1,390	1,582
	2,240	2,379
	2024	2023
	£'000	£'000
The Charity		
Trade creditors	265	319
Taxes and Social security costs	288	202
Other creditors	61	116
Accruals	177	102
Deferred income	1,338	1,507
	2,129	2,246

#### 14. CREDITORS – AMOUNTS FALLING DUE AFTER ONE YEAR

IT. CREDITORS	AMOUNTSTALLING DUE AFTER ONE TEAR		
		2024	2023
		£'000	£'000
The Group			
-		100	91
		2024	2023
		£'000	£'000
The Charity			
Deferred income		100	91
The Group Deferred income The Charity Deferred income		<b>2024</b> £'000	<b>202</b> £'000

# 15. DEFERRED INCOME RECONCILIATION

	2024	2023
	£'000	£'000
The Group		
Opening balance at 1 April	1,673	1,508
Amount released to income	(2,271)	(2,064)
Amount deferred in year	2,088	2,229
Closing balance at 31 March	1,490	1,673
	2024	2023
	£'000	£'000
The Charity		
Opening balance at 1 April	1,598	1,379
Amount released to income	(2,206)	(1,901)
Amount deferred in year	2,046	2,120
Closing balance at 31 March	1,438	1,598

# 16. RESTRICTED FUNDS

#### The Group and the Charity

The funds of the group and the charity include restricted funds comprising the following balances of donations and appeal monies given for specific purposes. The opening and closing fund balances for the group and the charity are identical.

# As at 31 March 2024

	Balance at 1 Apr 2023	Income	Expenditure	Transfers	Balance at 31 Mar 2024
	£'000	£'000	£'000	£'000	£'000
Atlas Beyond Maps Appeal	12	4	-	92	108
Northern Ireland Fund	17	49	(52)	-	14
Dilys Breese Fund	36	3	(11)	8	36
Boddy & Sparrow Fund	2	-	-	(2)	-
Migration Fund	47	17	(34)	-	30
Nightingale Appeal	22	3	(14)	-	11
Swallow Appeal	8	-	-	-	8
Young Scientists' Fund	19	11	(10)	-	20
Garden Research Fund	77	8	(13)	-	72
Out of Africa Fund	85	64	(84)	(33)	32
Thrush Fund	1	-	-	-	1
Farmland Bird Appeal	-	-	(2)	2	-
Curlew Appeal	13	6	(5)	-	14
Arctic Skua Fund	1	35	(23)	-	13
BTO Wales Fund	20	1	(6)	-	15
Bird Track	-	1	(1)	-	-
Sound Approach Fund	60	1	(35)	28	54
Tasso Leventis Fund	25	20	(62)	17	-
Spotted Flycatcher Appeal	20	-	-	-	20
Chaffinch	40	-	(6)	-	34
Seabird Appeal	81	15	(47)	-	49
Urban Appeal	20	7	(27)	250	250
Rhodes Training Fund	33	-	-	-	33
Migrant Swallows &	2				2
Insect Feeding Paper	2	-	-	-	2
Postcode Lottery Grant	3	-	-	-	3
Cuckoos & Nightingales	19	-	(8)	-	11
Bats Fund	5	28	(11)	2	24
Youth Engagement	6	65	(196)	127	2
Short Eared Owl	13	2	(27)	12	-
Wader Project Officer	28	4	(5)	-	27
Insect Decline	10	10	(2)		18
Eddowes PhD	-	27	(27)	-	-
Thetford Engagement Fund	-	29	-	-	29
Kestrels	-	14	(5)	19	28
Gillian Wills Trust	-	36	(7)	-	29
Derek Coleman Fund	-	51	-	-	51
David Hodgson Fund	-	127	-	(6)	121
Ringers' Bursary Fund	1	5	(1)	-	5
Small Specific Donations	51	36	(6)	(33)	48
	777	679	(727)	483	1,212

# 16. **RESTRICTED FUNDS (Continued)**

The purposes of the funds are as follows:

The Atlas Beyond the Maps Appeal continues to support research into Atlas data. £92k was transferred from Birds in Trust in accordance with the wishes of a legator.

The Northern Ireland Fund has been set up to support the BTO in Northern Ireland.

The Dilys Breese Fund is for projects relating to nesting birds. £9k was transferred from Birds in Trust to fund awards costs. The Boddy & Sparrow Fund is for awards to the best amateur contribution(s) to either or both of the Bird Study and

Ringing & Migration publications.

The Migration Fund is for research into migrating birds.

The Nightingale Appeal is to fund work on Nightingales and woodland birds.

The Swallow Appeal is to fund work on Swallows and migration.

The Young Scientists' Fund is to support the career development of young scientists. £2k was transferred back to Birds in Trust on completion of a student's project.

The Garden Research Fund is to support young scientists work on garden birds.

The Out of Africa Fund is to fund work on African migrants. A £33k donation received last financial year was moved to the Birds in Trust (unrestricted) Fund at the donor's request.

The Thrush Fund is to fund work on Thrushes.

The Curlew Appeal is to fund projects on Curlews.

The Arctic Skua Fund is to support Arctic Skua work.

The BTO Wales Fund is to support the BTO in Wales.

The Sound Approach Fund is to support a number of specific projects. £9k was transferred to the Short Eared Owl Fund with the agreement of the donor.

The Tasso Leventis Fund is to support a number of specific projects. £17k was transferred from Birds in Trust to support these projects.

The Spotted Flycatcher Appeal is to support work on Spotted Flycatcher.

The Chaffinch Appeal is to fund work on Chaffinches.

The Seabird Appeal has been raising funds for work on seabirds.

The Urban Appeal is to support studies of birds in towns and cities. £250k was transferred from Birds in Trust in accordance with the expression of wish of a legator.

The Rhodes Training Fund is to support survey training courses.

The Migrant Swallows & Insect Feeding Paper donation is to fund a paper on Swallows.

The Postcode Lottery Grant is for the Nunnery Lakes Reserve.

The Cuckoos & Nightingales Fund is for research on Cuckoos and Nightingales.

The Bats Fund was set up from specific donations to support work on Bats and the development of the BTO acoustic work. The Youth Engagement Fund has been set up to support our work with young people. £112k was transferred from General funds to support this work. £6k was allocated from the David Hodgson Fund to support Youth Staff and Projects. The Short Eared Owl Fund is for work on Short Eared Owls in Scotland. £3k was transferred from General Funds and £9k

from the Bats Fund to support this work.

The Wader Project Officer Appeal Fund is for work on waders.

The Insect Decline Fund is to support work on the decline in insects.

The Eddowes PhD fund was established to support a specific PhD project.

The Thetford Engagement Fund is for working with local communities to enhance BTOs engagement with them.

The Kestrels Fund is to support work on Kestrels.

The Gillian Wills Trust is to support the recruitment and employment of a Development and Engagement Coordinator. The Derek Coleman Fund is to support Upland Monitoring.

The David Hodgson Fund provides support for our Youth Engagement Officer, Youth Birdcamp and Youth Engagement projects. £6k was transferred to Youth Engagement in accordance with the donor's wishes.

The Ringers' Bursary Fund is to support ringing.

Small Specific Donations are small individual donations for specific purposes.

# 16. RESTRICTED FUNDS (Continued)

# As at 31 March 2023

	Balance at 1 Apr 2022	Income	Expenditure	Transfers	Balance at 31 Mar 2023
	£'000	£'000	£'000	£'000	£'000
Atlas Beyond Maps Appeal	10	2	-	-	12
Northern Ireland Fund	1	48	(32)	-	17
Dilys Breese Fund	44	-	(8)	-	36
Boddy & Sparrow Fund	2	-	-	-	2
Migration Fund	47	29	(29)	-	47
Nightingale Appeal	30	1	(9)	-	22
Swallow Appeal	8	-	-	-	8
Young Scientists' Fund	22	8	(11)	-	19
Garden Research Fund	79	9	(11)	-	77
Out of Africa Fund	60	78	(49)	(4)	85
Thrush Fund	1	-	-	-	1
Curlew Appeal	14	9	(10)	-	13
Arctic Skua Fund	21	-	(20)	-	1
BTO Wales Fund	25	1	(6)	-	20
Sound Approach Fund	82	-	(22)	-	60
Tasso Leventis Fund	43	20	(38)	-	25
Spotted Flycatcher Appeal	29	-	(9)	-	20
Chaffinch	56	1	(17)	-	40
Seabird Appeal	95	16	(34)	4	81
Urban Appeal	-	54	(34)		20
Rhodes Training Fund	33	-	-	-	33
Migrant Swallows &	2	_	_	_	2
Insect Feeding Paper	2	_	_	_	2
Postcode Lottery Grant	3	-	-	-	3
Cuckoos & Nightingales	22	-	(3)	-	19
Bats Fund	15	2	(12)	-	5
Short Eared Owl	45	-	(32)	-	13
Wader Project Officer	59	12	(43)	-	28
Dulverton Trust	2	-	(2)	-	-
Insect Decline	4	16	(12)	2	10
Eddowes PhD	-	1	(1)	-	-
Ringers' Bursary Fund	1	1	(1)	-	1
Youth Engagement	59	61	(200)	86	6
Small Specific Donations	51	13	(13)		51
	965	382	(658)	88	777

# 17. UNRESTRICTED FUNDS

# The Group and the Charity

The funds of the group and the charity include unrestricted funds comprising the following balances. The opening and closing fund balances for the group and the charity are identical.

# As of 31 March 2024

	Balance at 1 Apr 2023	Income	Expend- iture	Other Gains/ (Losses)	Fund transfers	Balance at 31 Mar 2024
	£'000	£'000	£'000	£'000	£'000	£'000
General funds:						
Birds in Trust fund	3,129	2,080	(290)	32	(767)	4,184
General fund	1,469	6,697	(6,916)	40	104	1,394
	4,598	8,777	(7,206)	72	(663)	5,578
Designated funds:						
Welch fund	547	8	(54)	-	-	501
Unrestricted funds						
excluding Pension reserve	5,145	8,784	(7,260)	72	(663)	6,078
Pension reserve	(1,110)	-	(50)	393	180	(587)
	4,035	8,784	(7,310)	465	(483)	5,491

The Birds in Trust fund is intended primarily to provide long-term funding for BTO projects. Income from legacies is credited to this fund unless the wills provide otherwise. £398k was released to the General fund in support of JNCC Partnership projects. £250k was transferred to the Urban Appeal fund, and £92k to the Atlas fund in accordance with donor expressions of wish. Other transfers totalling £62k were made in support of projects in the Youth Engagement, Tasso Leventis, Dilys Breese and Farmland Bird funds. Unused allocations totalling £35k were returned from the Out of Africa and General funds. In the General fund, £87k was released in support of Youth Engagement, and a further £27k to support projects in the Sound Approach and Short-Eared Owl funds. £398k was received from Birds in Trust in support of JNCC Partnership projects. £180k was transferred to the Pension Reserve fund in respect of the pension deficit repair contribution.

The Welch fund is for migration research.

The Pension Reserve fund reflects the defined benefit pension scheme deficit. £180k was transferred from the General fund in respect of the pension deficit repair contribution. Other pension reserve movements are disclosed in Note 22.

# As of 31 March 2023

	Balance at 1 Apr 2022	Income	Expend- iture	Other Gains/ (Losses)	Fund transfers	Balance at 31 Mar 2023
	£'000	£'000	£'000	£'000	£'000	£'000
General funds:						
Birds in Trust fund	2,668	1,168	(317)	(7)	(383)	3,129
General fund	1,626	5,583	(5,889)	(8)	157	1,469
	4,294	6,751	(6,206)	(15)	(226)	4,598
Designated funds:						
Welch fund	608		(61)	-		547
Unrestricted funds						
excluding Pension reserve	4,902	6,751	(6,267)	(15)	(226)	5,145
Pension reserve	(3,777)		(110)	2,639	138	(1,110)
	1,125	6,751	(6,377)	2,624	(88)	4,035

# 18. ANALYSIS OF GROUP AND CHARITY FUNDS ACROSS NET ASSETS

# As of 31 March 2024

	Fixed Assets	Investments	Current Assets less Total Liabilities	Defined Benefit Pension Liability	Total Net Assets
	£'000	£'000	£'000	£'000	£'000
Unrestricted Funds					
General funds:					
Birds in Trust fund	-	232	3,952	-	4,184
General fund	2,427	287	(734)	(587)	1,393
	2,427	519	3,218	(587)	5,577
Designated funds:					
Welch fund		-	501	-	501
Unrestricted funds excluding					
Pension reserve	2,427	519	3,719	(587)	6,078
Pension reserve		-	(587)	-	(587)
	2,427	519	3,132	(587)	5,491
Restricted Funds			1,212		1,212
Total	2,427	519	4,344	(587)	6,703

# As at 31 March 2023

	Fixed Assets	Investments	Current Assets less Total Liabilities	Defined Benefit Pension Liability	Total Net Assets
	£'000	£'000	£'000	£'000	£'000
Unrestricted Funds					
General funds:					
Birds in Trust fund	-	200	2,929	-	3,129
General fund	2,433	247	(101)	(1,110)	1,469
	2,433	447	2,828	(1,110)	4,598
Designated funds:					
Welch fund			547		547
Unrestricted funds excluding					
Pension reserve	2,433	447	3,375	(1,110)	5,145
Pension reserve			(1,110)		(1,110)
	2,433	447	2,265	(1,110)	4,035
Restricted Funds			777		777
Total	2,433	447	3,042	(1,110)	4,812

# **19. OPERATING LEASE COMMITMENTS**

	<b>2024</b> £'000	<b>2023</b> £'000
At the year end the group had outstanding lease commitments for future minimum		
lease payments under non-cancellable leases, as follows :		
Due within one year	47	17
Due within two to five years	110	11
	157	28

# 20. RECONCILIATION OF NET INCOME/(EXPENDITURE) TO NET CASHFLOW FROM OPERATING ACTIVITIES

	Group 2024 £'000	Group 2023 £'000	<b>Charity</b> <b>2024</b> £'000	<b>Charity</b> <b>2023</b> £'000
Net income				
per Statement of Financial Activities	1,498	83	1,498	83
Adjustments for:				
Items representing cash movements				
(Increase)/decrease in stocks	12	(1)	-	-
(Increase)/decrease in debtors	(590)	(334)	(623)	(344)
Increase/(decrease) in creditors	(130)	(9)	(108)	43
Investment income	(92)	(17)	(92)	(17)
Proceeds of sale of fixed assets	-	(7)	-	(7)
Items not representing cash movements				
Depreciation	18	23	18	23
(Gains)/losses on investments	(72)	16	(72)	16
Expenditure on defined benefit pension plan liability	50	110	50	110
	694	(136)	671	(93)
Cash movements not appearing in				
the Statement of Financial Activities				
Pension deficit repair contribution	(180)	(138)	(180)	(138)
Net cash inflow/(outflow) from operating activities	514	(274)	491	(231)

# 21. FINANCIAL INSTRUMENTS

The carrying amounts of the group's and the charity's financial instruments are as follows:

	Group 2024 £'000	Group 2023 £'000	<b>Charity</b> <b>2024</b> £'000	<b>Charity</b> <b>2023</b> £'000
Financial assets Measured at fair value through net income/expenditure: Fixed asset listed investments (Note 10)	519	447	519	447
Equity instruments measured at cost less impairments: Fixed asset unlisted investments (Note 10)				

#### 22. PENSIONS

#### The Group and the Charity

# Defined contribution pension plan

The Trust operates a Group Self-invested Personal Pension Scheme run by Aegon. Staff contribute to this defined contribution scheme at a minimum rate of 5% of salary, and the BTO contributes at a flat rate of 11%. The Trust made contributions of £480k during the year (2023: £422k).

#### Defined benefit pension scheme

The Trust's defined benefit pension scheme, a 'final salary' scheme, is closed. The last triennial actuarial valuation of the scheme was carried out as at 1 April 2021. At that date the assets were valued at £11,722k and the liabilities at £18,104k, giving a net deficit of £6,382k and a funding level of 65%. A deficit recovery plan was subsequently agreed between the Board and the pension fund trustees, by which the shortfall would be made good by annual lump sum deficit repair payments spread over the years to 2044.

For the purposes of the group financial statements a separate valuation is carried out at the balance sheet date by a qualified independent actuary in accordance with Financial Reporting Standard 102 (FRS 102). The amounts recognised in the statements of financial activities for the year and the balance sheets were as follows:

Recognised in the statements of financial activities:	<b>2024</b> £'000	<b>2023</b> £'000
Expenditure:	1 000	L 000
Interest income	517	352
Interest cost on liabilities	(567)	(462)
Net interest on net defined benefit liability	(50)	(110)
		· · ·
Other recognised gains/(losses):		
Actual return on scheme assets (excluding interest income)	149	(1,454)
Actuarial gain/(loss) on liabilities	244	4,093
	393	2,639
Recognised in the balance sheets:		
	2024	2023
	£'000	£'000
Fair value of scheme assets	11,103	10,672
Present value of defined benefit obligations	(11,690)	(11,782)
Defined benefit pension scheme liability at 31 March	(587)	(1,110)
Reconciliation of funded status:		
	2024	2023
	£'000	£'000
(Deficit) at 1 April	(1,110)	(3,777)
Employer pension deficit repair payment	180	138
Net interest on net defined benefit liability	(50)	(110)
Remeasurement gain	393	2,639
(Deficit) at 31 March	(587)	(1,110)

# 22. PENSIONS (Continued)

Changes in the fair value of the pension scheme assets were as follows:

	2024	2023
	£'000	£'000
Fair value of scheme assets at 1 April	10,672	12,108
Interest income	517	352
Actual return on scheme assets (excluding interest income)	149	(1,454)
Employer pension deficit repair payment	180	138
Benefits paid to members	(415)	(472)
Fair value of scheme assets at 31 March	11,103	10,672
Changes in the defined benefit obligations were as follows:		
	2024	2023
	£'000	£'000
Present value of defined benefit obligations at 1 April	(11,782)	(15,885)
Interest cost on liabilities	(567)	(462)
Benefits paid	415	472
Actuarial gain/(loss)	244	4,093
Present value of defined benefit obligations at 31 March	(11,690)	(11,782)

The amount of each major class of pension scheme assets within the total fair value of the scheme assets was as follows:

	2024	2023
	£'000	£'000
Equities	6,012	6,304
Bonds	4,379	4,101
Annuities	135	163
Cash	577	104
	11,103	10,672

The total return on scheme assets was as follows:

	2024	2023
	£'000	£'000
Interest income	517	352
Actual return on scheme assets (excluding interest income)	149	(1,454)
Total return on scheme assets	666	(1,102)

The principal actuarial assumptions used were as follows:

	2024	2023
Discount rate	4.95%	4.90%
Inflation assumption (RPI)	3.25%	3.50%
Inflation assumption (CPI)	2.70%	2.95%
Rate of increase for non-GMP pensions in deferment	2.70%	2.95%
Rate of increase for pensions in payment (RPI, min 3% max 5%)	3.65%	3.75%
Expected future lifetime from age 65:	2024	2023
	No of years	No of years
Male – currently aged 65	21.6	22.2
Female – currently aged 65	23.8	24.2
Male – currently aged 45	23.2	23.8

24.9

25.3

Female – currently aged 45

# SIF -



British Trust for Ornithology The Nunnery, Thetford, Norfolk IP24 2PU Tel: +44 (0)1842 750050 Web: www.bto.org Email: info@bto.org X (Twitter): @\_BTO Registered Charity Number 216652 (England & Wales), SC039193 (Scotland)