

Rothamsted Research Limited

ANNUAL REPORT AND FINANCIAL STATEMENTS

for the year ended

31 March 2022

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Rothamsted Research Limited

LEGAL & ADMINISTRATIVE INFORMATION

DIRECTORS

Professor Sir John Beddington FRS (Chair)	
Professor Andrew Balmford FRS	Appointed 8 September 2021
Professor Sir David Baulcombe ⁺ FRS	Retired 10 February 2022
Dr Oliver Doubleday (Deputy Chair)	
Professor Bridget Emmett ⁺	Appointed 8 September 2021
Professor Sir Charles Godfray	Retired 31 August 2021
Professor Julie Gray ⁺	Appointed 10 February 2022
Mr John Haywood	
Mr Jan Holthuis ^{*^}	Appointed 11 May 2021
Dr Stuart Jarvis [*]	
Professor Louise Manning	
Professor Sandra Mary Thomas	Appointed 6 September 2022
Professor Michael Winter ⁺	

* - Member of Finance and Audit Committee

⁺ - Member of the Science Advisory Group of the Board

[^] - Member of the Intellectual Property and Exploitation Panel

CHARITY NUMBER: 802038

COMPANY NUMBER: 2393175, a company registered in England and Wales

REGISTERED OFFICE

Rothamsted Research Limited
Harpenden
Hertfordshire AL5 2JQ

AUDITOR

Buzzacott LLP
130 Wood Street
London
EC2V 6DL

PRINCIPAL BANKERS

Barclays Bank
22-24 Upper Marlborough Road
St Albans
Hertfordshire AL1 3AL

PRINCIPAL SOLICITORS

Mills and Reeve LLP
Botanic House
100 Hills Road
Cambridge
CB2 1PH

Rothamsted Research Limited

TRUSTEES' REPORT (INCORPORATING THE STRATEGIC REPORT)

The Directors submit their Annual Report together with the audited Financial Statements for the year ended 31 March 2022. This contains a Directors' report as required by company law. Further information can be found at <http://www.rothamsted.ac.uk/>

STRUCTURE, GOVERNANCE AND MANAGEMENT

Directors and Officer

The Directors, who are also the Trustees, the Institute Director and Officer of the Company, who served throughout the year, were as follows:

Directors

Professor Sir John Beddington FRS (Chairman)	
Professor Sir David Baulcombe	Retired 10 February 2022
Professor Andrew Balmford FRS	Appointed 8 September 2021
Professor Bridget Emmett	Appointed 8 September 2021
Dr Oliver Doubleday	
Professor Sir Charles Godfray	Retired 31 August 2021
Professor Julie Gray	Appointed 10 February 2022
Mr John Haywood	
Mr Jan Holthuis	Appointed 11 May 2021
Dr Stuart Jarvis	
Professor Louise Manning	
Professor Michael Winter	

Institute Director

Professor Angela Karp

Officer

Company Secretary: Louise Warren

Constitution

Rothamsted Research Limited (the Institute or the Company, Rothamsted Research or RRes) is a charitable company which is limited by the guarantees of its members to a maximum of £1 each and which is regulated by the terms of its Articles of Association. The company Registration Number is 2393175. The Company is also a registered charity, number 802038 and, as such, is not usually liable to taxation on income arising from and expended on its charitable activities.

Appointment of Trustees

An executive search agency is used for the identification of potential Trustee-Directors. These are then considered by an appointments panel nominated by the Board and composed of two or three Trustees considering overall balance of skills and experience, vacancies and future needs or pressures on the Board. Potential appointees are invited to visit Rothamsted campus to meet the Institute Director and others as appropriate.

Trustee Induction and Training

New Trustee-Directors are offered training opportunities with good quality national providers identified by mutual agreement. This ensures that the Board are all fully aware of the latest position on relevant Company and Charity law, regulations and good practice especially in the context of Rothamsted Research Limited and the current decisions that it faces. Induction and training for new Trustee-Directors will be carefully tailored to the needs of the individuals concerned with special consideration of the issues that the group faces in the coming months.

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Third Party Claims

The group holds Directors and Officers insurance which will indemnify the Directors against claims from third parties.

Organisation

The Board of Directors is responsible for the overall governance and strategic direction of the Company in accordance with the Company's Articles of Association. Day-to-day management is delegated to the Chief Executive Officer and Institute Director, who the Board is expected to support in the development of strategic direction and policies, objectives and goals. There may be between 9 and 15 Trustee-Directors sitting on the Board of Directors, with Lawes Agricultural Trust ("LAT") and Biotechnology and Biological Sciences Research Council ("BBSRC"), part of UK Research & Innovation, each providing an Observer at Board meetings and each nominating one Director. The Chair of the Board is jointly nominated by LAT and the BBSRC. All directors are appointed to serve on an *ad hominem* and non-executive basis and, except for the Chair, do not receive any remuneration; consistent with this position the Board of Directors advises on the development of strategy and policy. The Institute Director reports to the Chair and Trustee-Directors of Rothamsted Research Limited. There is an appointments panel that is set up as required. The Board considers and is guided by the guidance issued from time to time by the Charity Commission.

The relationship of the Company with its major funding body, the UKRI Biotechnology and Biological Sciences Research Council, is defined by the terms and conditions of an Institute Grant Agreement. The Members of the Company are LAT and UKRI-BBSRC plus the Chair of RRes being a single natural Member and they have signed a Members' Agreement. The role of these members is defined through a Members' Agreement that describes how this tripartite arrangement recognises the contribution in land (LAT) and funding (UKRI-BBSRC) respectively to the well-being of Rothamsted Research Limited; this is achieved through an arm's length stance that does not seek to unduly influence the strategic direction of the Institute. To date, the Board has established three sub-committees for specific purposes, namely the Finance and Audit Committee, the Science Advisory Group of the Board, and the Remuneration Committee; the latter setting remuneration for key senior staff based on performance.

Until 2017 there was an agreement in place by which UKRI-BBSRC employees (who were public sector employees and subject to those controls) were deployed to work at Rothamsted Research with the latter bearing all relevant costs. With effect from 1 April 2017 all UKRI-BBSRC employees were transferred to Rothamsted Research Limited employment under TUPE regulations. Pension arrangements protected by TUPE remain the same and are administered by the Research Councils' Pension Scheme. All new members of staff appointed are employees of the Company under terms and conditions defined by the Company. They pay into a defined contribution Pension Scheme (started on 1 April 2012) provided and administered by Aviva PLC.

Employee Consultation

The Company recognises all appropriate Trade Unions representing staff employed. The Institute Negotiating Consultative Committee meets at least twice a year. It provides an avenue for provision of information, consultation and discussion of a wide range of matters affecting staff. At a national level, there is a Joint Negotiating Consultative Committee representing all staff within the institutions supported by the UKRI-BBSRC. Information is also provided at a national and local level through the Annual Report, the Strategic Plan and other publications. The Employee Forum gives an employee voice within Rothamsted and represents all staff across the whole of the organisation. It provides the opportunity for representatives and senior management to share key information, have discussions about the issues, interests and ideas that are important to all, and provides a platform to ensure participation in constructive discussions on how best to grow and develop the Institute. The Forum complements and is additional to existing methods of internal communication. It proactively seeks views and feedback and acts as a communication and consultative body in areas such as: Institute strategy & performance, the political environment and its impact on RRes, organisational development and changes, employment terms and arrangements, employee engagement,

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TRUSTEES' REPORT (INCORPORATING THE STRATEGIC REPORT)

health, safety and well-being, training & people development as well as work life balance and equality and diversity. The Institute Director attends the Institute Negotiating Consultative Committee and receives regular reports from the Employee Forum, which is attended by a member of HR, reporting back to the Board.

Disabled Persons

The Company complies with all relevant legislation relating to disabled persons and continually strives to follow best practice in these matters for an employee with a disability to remain in employment or to successfully employ a disabled preferred candidate within a safe working environment.

Our staff code requires that we will not reject a disabled job applicant for a reason which relates to his/her disability; person specifications will always be used and selection criteria monitored to ensure that discrimination does not unwittingly occur; recruitment and selection procedures will be adapted where possible to ensure that they do not disadvantage disabled job applicants.

We will take steps to try to enable an employee who becomes disabled to remain in employment. In consultation with the employee, adjustments to facilitate their retention will be considered. Employees with disabilities will be provided with opportunities to develop full and rewarding careers on an equivalent basis to other employees with similar skills and abilities and, as described above, we will support any such applicants for vacancies across the Institute.

Athena SWAN Charter

The Athena SWAN Charter recognises advancement of gender equality: representation, progression and success for all, and Rothamsted Research Limited is committed to achieving this. Rothamsted Research Limited gained the Athena SWAN Bronze award in 2014, and our accreditation remains valid with renewal expected in 2023. Originally established to encourage and recognise commitment to advancing the careers of women in science, technology, engineering, maths and medicine (STEMM), the charter now recognises work undertaken to address gender equality more broadly, and not just barriers to progression that affect women.

Connected Charity and Companies

The freehold interest in the land and buildings at the Company's main operating site, (Rothamsted, Harpenden, Hertfordshire) is held by Lawes Agricultural Trust (LAT), a charity with similar objects to Rothamsted Research. There is no written agreement for the occupation of this site and no rent is charged to the Company by LAT. Land and buildings at North Wyke, Devon are owned by the UKRI-Biotechnology and Biological Sciences Research Council ("BBSRC") and occupied by the Company under a formal lease and a peppercorn rent.

Rothamsted Enterprises Limited (REL) is a joint venture of Rothamsted Research, LAT and UKRI-BBSRC. REL operates and provides catering, conferencing and managing agent services for the Conference Centre, Lawes Open Innovation Hub and, on behalf of LAT, The Daniel Hall Building and Russell Building. REL is a unique hub focused on promoting collaboration and innovation by partnering with commercial agricultural technology businesses and opening the research process. With access to Rothamsted's world class facilities and researchers, REL offers flexible laboratory space, offices and informal meeting hubs, as well as an extended Conference Centre. No other material subsidiary undertakings conducted any trading activities during the year.

The Charity has a 15.87% shareholding in VSN International Limited, the principal activity of which is research into, and development and distribution of, data analysis software, mainly targeted at the international life science sector. The company continues to consolidate through steady growth. The 2021/22 operating profit of £248k (20/21:£412k) was achieved across all territories of the globe.

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Fund Raising

The Company does not actively fund raise, and no professional fund-raisers are engaged. Therefore no complaints were received in connection with fundraising.

STRATEGIC REPORT OBJECTIVES AND ACTIVITIES

The objects of RRes are:

- For the benefit of the public to advance the science of agriculture by the initiation, protection, development and continuance of investigations and experiments;
- To ensure that research undertaken is complementary to related studies elsewhere whilst providing for regional diversity in the environment and in agricultural practice, and to collaborate in joint programmes where appropriate;
- To promote the dissemination and extension of research findings alone or in association with other charitable organisations having objects similar to the objects of the Company and to actively facilitate the uptake of research results by industry;
- To extend these activities through external funding to provide support to developing countries.

RRes remains dedicated to providing scientific research that contributes to the sustainability of agricultural land management systems both in the UK and throughout the world. This includes improving yield and quality of crops produced for a variety of purposes and enhancing the sustainability of agricultural systems worldwide. RRes is also using its scientific expertise to understand climate change and taking this further by demonstrating how plants and appropriately managed agriculture can help to mitigate anthropogenic effects on climate change.

Agriculture provides one of the most spectacular illustrations of how the benefits from good science can provide improved well-being for mankind; from the precarious food security that was found throughout the globe only a few generations ago to a sufficient, predictable supply of good quality food that much of the world enjoys today. However, that situation is not true for a large number of people, nor is it assured without constant scientific development and global food security is a significant political issue for all countries. This situation is not likely to change in the medium term and the unique combination of skills and experience across RRes is increasingly relevant for that and the growing bioeconomy.

The mission of RRes is to perform world-class research to deliver knowledge, innovation and new practices to increase crop and animal productivity and to develop environmentally sustainable solutions for food and energy production. RRes's purpose is to bring together global science, fresh thinking and innovation for lasting benefits worldwide. The unique value proposition for which RRes is held in high regard globally, is the novelty and integrity of its knowledge on agricultural systems. RRes' research underpins key sectors of UK biosciences such as sustainable food production, bioenergy and biotechnology.

The launch of RRes' 2017-2022 research and innovation strategy coincided with the commencement of new Institute Strategic Programmes (ISPs) 2017-2022, extended to March 2023 as a result of the COVID pandemic. The strategy was formed after extensive stakeholder discussions, in which period the ISPs were also shaped. The RRes strategy identified three overarching Themes ("Science Portfolios") that address major challenges for future agriculture: **Superior Crops**: Increasing sustainable yield and quality of food crops and designing crops with novel nutritional or industrial value; **Securing Productivity**: Increasing resilience of crop productivity by reducing losses caused by biotic and abiotic stresses; **Future Agri-Food Systems**: High-performing crop and livestock production systems with lower environmental impact.

Five **Institute Strategic Programmes (ISPs)**, and three **National Capabilities (NCs)** act as central pillars of these Science Portfolios:

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Portfolio	ISP	NC
Superior Crops	<ul style="list-style-type: none"> • Designing Future Wheat (DFW) • Tailoring Plant Metabolism (TPM) 	
Securing Productivity	<ul style="list-style-type: none"> • Smart Crop Protection (SCP) 	<ul style="list-style-type: none"> • Rothamsted Insect Survey (RIS)
Future Agri-Food Systems	<ul style="list-style-type: none"> • Soil to Nutrition (S2N) • Achieving Sustainable Agricultural Systems (ASSIST) 	<ul style="list-style-type: none"> • North Wyke Farm Platform (NWFP) • Long-Term Experiments (LTE)

Briefly, the five inter-connected ISPs and numerous other grants linked to them have the following major aims:

- **ISP 1: Designing Future Wheat** a UK wheat research programme to improve resource, resilience and value of wheat through genetic improvement
- **ISP 2: Tailoring Plant Metabolism** a programme aimed at delivering novel traits in bespoke crops for the bioeconomy, including oilseed crops and willows
- **ISP3: Smart Crop Protection** a programme on novel, systems-based solutions for managing insect pests, crop disease and weeds in crop production
- **ISP4: Soil to Nutrition** a programme that applies a mechanistic approach to optimising nutrient use efficiency across crop and livestock food production systems
- **ISP 5: Achieving Sustainable Agricultural Systems** a programme to evaluate and understand the performance of sustainable intensification options at farming scale

The three National Capabilities, the Long-Term Experiments, the Rothamsted Insect Survey and the North Wyke Farm Platform continue to serve as a key resource for our strategic research as well as research conducted by national and international partners. They are supported by BBSRC and open to scientists everywhere.

The Company's main objectives for the year April 1st 2021 – March 31st 2022 were to:

- fully on-board and integrate new professorial-level science Leaders, and project-leader level recruitments and provide relevant training to ensure that our leaders are aware of their obligations to EDI;
- develop and implement the plans needed to realise the outputs and outcomes of our current strategic programmes (following limitations and delays incurred due to Covid-19);
- restructure the institute, including new research groups and teams and a new Executive, building on the capability analysis conducted in 2020/21 and incorporating the new joiners
- modify and complete the new HR strategy focused around key themes following consultation with staff as well as to align with the three principles of the BBSRC Institute Strategy (published July 2021) with the new structure
- complete initial digitalisation projects and build capability through new recruitments and digital activities;
- finalise and submit applications for new strategic programmes (start date April 2023).

Four New Institute Strategic Programmes were developed during 2022. These formed a key part of the total submission to BBSRC which comprised:

1. Director's Statement
2. Institute Strategic Programme Grant (ISPGs)
 - Delivering Sustainable Wheat (DSW)
 - Green Engineering (GreEn)
 - Growing Health (GH)
 - Resilient Framing Futures (RFF)

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3. Institute Development Grant (IDG)
4. Core Capability Grant (CCG), including 3 National Bioscience Research Infrastructures (NBRIs):
 - Rothamsted Insect Survey (RIS)
 - North Wyke Farm Platform (NWFP)
 - Rothamsted Long Term Experiments (RLTE)
5. Small Value Capital Grant (SVCG)
6. Institute Research Culture Statement

The full submission was delivered in time for the deadlines and presented to an external panel for review on October 4th. Decisions for funding will become known in early 2023.

As part of the Transformation Programme being undertaken by the Institute 7 Senior level Science Leaders have been recruited, highly recognised in their fields with excellent track records, to inspire and provide new leadership under science portfolios. Following an extensive capability mapping exercise the new, flatter, organisational structure is complete. The new structure aligns well with the BBSRC Institute Strategy recommendations for Culture and a new HR strategy is under development to support it.

The Knowledge Exchange and Commercialisation (KEC), has been reconfigured with the KE team incorporated within the Research and Innovation Grants Office (RIGO) and the C part of a separate Innovation and Commercialisation Office (ICO). The ICO has a new Director and an Intellectual Property and Exploitation Panel, including Board membership, has been established.

In readiness for the new strategic programme due to start in April 2023, RRes centralised teams were combined into two interconnected Offices: (1) RRes Engagement and Communications Office (RECO) which combines Knowledge Exchange, Public Engagement & Communications and (2) RRes Impact and Grants Office (RIGO), which combines the grants office and commercialisation teams. This change recognises that the expertise and skills required for grant funding and commercialisation differs from that needed for communications and KE. Together, RECO and RIGO lead, coordinate, manage and support Institute-wide activities, including engagement with high profile government representatives, corporates and KE partners, showcasing multiple programmes at events (e.g. Cereals) intelligence gathering and networking. They will be responsible for record keeping, monitoring and reporting, and assessment of best practices between peers through participation at professional events and exchange programmes with practitioners. They will run annual training activities to develop the next generation of scientists and generate institutional confidence across all modes of impact delivery. RECO and RIGO both report to the CEO, endorsing the importance RRes gives to delivering impact. In addition, to improve the delivery of impact from individual ISPGs, NBRIs and leveraged projects, RRes will “embed” KE Managers (from RECO) and designated Impact Managers (from RIGO) within specific programmes, such that each co-locates with the science teams to provide dedicated support for at least half a day each week.

The Digital Transformation strategy at Rothamsted has been realised as a series of incremental and iterative changes across seven key pillars of the institute's data ecosystem:

- (i) Infrastructure - hardware, software, storage capacity, computing power (HPC)
- (ii) Information Architecture - organisation of resources and content for efficiency and sustainability
- (iii) Processes - formalisation of data governance rules, procedures for stakeholders when handling data, running analyses, and using tools
- (iv) Upskilling / Fresh hires with new data stewardship expertise
- (v) Technology rollout and adoption – stakeholder engagement
- (vi) Communication - consensus building, fusion roadmaps / trajectories
- (vii) Culture - recognising the ongoing value of data and rewarding its creators

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The digital agenda has been guided by stakeholders from across the operational and research units in the institute, meeting regularly as the Digital Infrastructure Group (DIG). Outcomes from these consultations include the revision of a series of digital governance policies, which have resulted in the publishing of strategy documents and a communications portal serving best practices reports, questionnaires and registries of essential data and information assets.

Further to the roll out of policies a series of initiatives have been launched and are progressing well.

The Institute Research Grants Office has worked hard with Departmental Heads to identify and support grants submissions. Notable successful wins in 2022 (award received) included the following grants of over £500k:

- BBSRC/NERC, ISPG Green Ag
- BBSRC, Nigel Halford
- BBSRC, Kostya Kanyuka
- NERC, Adrian Collins
- BBSRC, Sam Cook
- BBSRC, Steve McGrath
- BBSRC, Ian Shield

Along with grants of over £250k:

- European Commission, Keywan Hassani-Pak

In addition to multiple successes with the funders mentioned above, notable achievements include the securing of c£2.3M from BEIS for a willow biomass project as well as multiple Defra and InnovateUK projects. The Institute has achieved great success with Equipment and Capital bids, totalling more than £7.7m.

The SHAKE Climate Change Entrepreneur support programme has successfully completed a third run. Three new ventures were successful in their applications, each receiving a convertible loan of £140K which are shown on the balance sheet as social investments. Two Rothamsted spinout companies, Pherosyn and SugarOx were among the successful ventures in cohort one and continue to develop. Following the launch of Pherosyn, this team successfully bid for a £308K BBSRC grant (Industrial Biotechnology for Improving production of Higher Value Chemicals) and a £270K Innovate UK grant under the SMART initiative for scale up. SugarOx have secured £180k of non-diluted funding from the Defra Farming Innovation Programme for a collaborative R&D project with Rothamsted, and are closing a £150k Seed Enterprise Investment Scheme having reached full subscription.

Financial modelling exercises have been undertaken to ensure the Institute remains ahead of any issues over financial sustainability. The impact of Covid-19 resulted in a request for additional funding support from BBSRC, which was provided through UKRI. This additional support has helped the Institute, but the years ahead remain challenging.

To help achieve financial sustainability the Company has a highly skilled workforce of scientists of international quality who have access to state-of-the-art facilities alongside unrivalled time-series of data and sample archives, including those derived from the world-renowned and unique “classical” field experiments started over 175 years ago. The major areas of activity are scientific research, postgraduate education, policy support and public engagement. Rothamsted is committed to ensuring that all its research is published in widely available media of various types appropriate for the target audience.

Science: All RRes strategic programmes achieved substantive progress throughout the year, although the ongoing effective and safe management of Covid 19 risks necessitated continued monitoring. In particular,

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our research made substantive progress in addressing reduced throughput of sample collection, preparation and analysis (DFW;TPM;S2N) and restricted travel for planned field work off-site (S2N; DFW; TPM) associated with lockdowns in previous years. In-person engagement and visits and hands-on training restarted to ensure outreach. Notable achievements in the reporting year were reported by all ISPGs: TPM research in lipid and phenolic glycoside pathways have extended from discovery science to delivery of products in crops, plus field trials, functional testing, protection of IP and significant progress in the path to commercialisation. S2N has generated important strategically-relevant data on the impacts of extreme weather events on nutrient losses across scale. This has illustrated very clearly to Defra policy teams the resilience challenge facing UK agriculture and the need to improve resistance to weather extremes to avoid substantive environmental damage costs. DFW had delivered a major step-change in gene functional characterisation resources in wheat including contribution to the international sequencing and assembly of 15 genomes of hexaploid wheat, as well as low coverage sequencing of 242 Ae. tauschii accessions (D-genome progenitor).

Innovation: During the year, the ICO team continued to develop the foundations required to deliver an improvement in the proportion of commercial outcomes from Institute science. This included the implementation of a new IP Policy, the establishment of the IP Exploitation Panel (“IPEP”), reviewing the effectiveness of all existing IPR and licence arrangements, as well as managing the day-to-day project, documentation and IP risk-based work flows required to successfully enter collaborations and win grants for translative science. The IPEP, which now consists of six members of the executive and non-executive team, met 11 times during the year and made 19 decisions to approve significant commercialisation events including the progression of Rothamsted spin-outs, joint ventures, licences, patent prosecution, renewal, abandonment and infringement decisions. In addition, the ICO team has been closely involved in the ongoing delivery of the SHAKE Climate Change programme, the formation of a follow-on SHAKE Programme for 2023, as well as the thought leadership, development and co-ordination of a UK National Agri-Tech Innovation Pathway, an early-stage cross-institution initiative where all UK institutions involved in Agri-Tech collective list their commercial innovation activities in one place to be actively marketed to the world. Including the SHAKE portfolio, Rothamsted now has separate shareholdings or loan investments in 13 venture companies (with a further 3 approved for investment from SHAKE cohort 4), managed by ICO for Rothamsted as the named investor. Since the year-end, the ICO team and certain elements of the Grants office were merged under the leadership of the ICO Director recognising that success in winning translative science funding requires close alignment of both collaboration building and competitive grant activities. A key objective this year will be to successfully implement a Post-Award process to detail the ‘on target status’ of all science projects, thereby facilitating early interaction and the creation of a high quality pipeline of well-designed collaborative research projects for competitive grant funding awards.

Partnerships: AgRIA (Agri-Tech Research Innovation Accelerator) was a 3-year circa £1.7M funding for collaborative innovation projects in Hertfordshire region between leading academics and small and medium-sized enterprises (SMEs) to boost economic growth. AgRIA received funding from the European Regional Development Fund (ERDF) and was led by Rothamsted Research (RRes) in partnership with the University of Hertfordshire (UH), University College London (UCL), and Cranfield University. All AgRIA projects were short and intensive proof-of-concept projects (6-9 months in duration). In total, AgRIA has supported 20 projects between businesses and academics.

In this period, SHAKE Climate Change successfully moved through its third year of operation. SHAKE was created with a vision to champion innovation across the agri-food industry and have a clear positive impact on Climate Change, and within three years of starting, SHAKE is already seeing success from our investments, despite operating for almost half of that time under a global pandemic.

The call for application for Cohort 3 opened early 2021 and 36 applications were received and screened. From these applications, 17 ventures were invited to attend a weeklong specialist workshop in May 2021. After an initial pitch, 8 ventures were selected for detailed business mentoring and specialist science

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meetings over a three-month period. At the final pitch to the Investment Panel in October, 3 ventures were recommended for investment. Of these, one was unable to complete Due Diligence, one successfully completed due diligence, being: Tumblebug, Circular solutions for organic waste; and one is working through its IP agreement before being able to receive the loan, being: Good Pulse Foods, who produces plant based proteins for everything from dairy-free milks to dressings and sauces, up to alternative meats such as sausages, mince and burgers.

As such, by the end of 2021 SHAKE CC has committed to invest a total of £1,260,000 in 9 ventures, including Economad, Glaia, HE Feed and PheroSyn from Cohort 1, and SugaROx, Entio and Climate Edge from Cohort 2.

Three of the ventures have closed (or are close to closing) their first fundraising round. Others in the portfolio have successfully attracted additional funding to continue developing their business and products. In total, SHAKE has enabled an additional £3.3 million in grant and equity funding. The ventures have created 36 highly skilled jobs and created potential climate change impact equivalent to removal of the emission of 655,649 passenger cars in the medium term.

Agreements were made to use undrawn and unspent grant commitments to develop a Cohort 4 investment round in 2022. The call for applications for Cohort 4 was issued in February of 2022 and the programme is currently ongoing, with 3 ventures in due diligence. Additional work is also currently underway to secure new funding to enable the SHAKE Programme to add a fifth consecutive cohort in 2023.

Farmer & industry engagement: We strengthened links with UK farmers and farmer networks through direct research involvement in programmes such as ASSIST, BGRI, ERDF Agri-tech projects, the Soil to Nutrition ISP and collaboration with the UNESCO North Devon Biosphere. Our Science & Innovation Advisory Board (SIAB) and Institute Strategic programme (ISP) Advisory Groups provide healthy early sounding beds for ideas, whilst our partnerships with key bodies such as AHDB, AgriTech East and the National Farmers Union enable us to connect to regional and national farmer networks. Our Harpenden site has now joined our North Wyke campus as a LEAF Innovation Centre, linking us to other leading farmer-facing research organisations and LEAF's national network of LEAF Marque and Demonstration Farms. Scientists also engaged with the agricultural industry at external events; Cereals 2020, Groundswell, NFU meetings, and the Oxford Real Farming Conferences. Many KE activities have opened back up after the COVID pandemic allowing for new farmer networks to be established including those associated with our new ongoing work with the UNESCO North Devon Biosphere and the Trewithin Estate in Cornwall. The latter exemplar has permitted the collection of valuable farm land use and management data to support the planned development of a new field scale ecosystem services tool to support farmers in their decision-making.

Government and Policy: RRes has continued to play an influencing role, providing thought leadership and evidence for policy development. The internal Policy Matters Group has continued to grow and shares opportunities for contributing to relevant policy development and updates for staff.

In January Professor Adie Collins represented Rothamsted at the launch by then DEFRA Secretary George Eustice of the UK Agriculture Partnership. The new partnership aims to foster collaborative working on shared agricultural issues. Professor Collins has also been invited to join a new national expert working group for the UK small stream water quality monitoring network as part of the government's 25 Year Environment Plan. We have continued to collaborate with DEFRA on discussions around the regulation of gene-editing and hosted a visit from the then new Secretary of State and his team in September. We also advised Jerome Mayhew MP (Con) and Baroness Maggie Jones (Lab) about the legislation and consulted with Lord Lilley on the passage of the bill through the House of Lords in November.

In July Professor Malcolm Hawkesford gave evidence to the Commons Science and Technology Committee on unlocking the potential of agricultural science and technology.

Public Engagement and Science Communication: A successful programme of communication was implemented, including press releases; media engagement, TV and radio. During 2021/22, 27 press releases

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were issued with widespread pick up across mainstream and specialist media. Our new media monitoring service recorded that RRes was mentioned in over 2,360 articles (online and print) globally. Whilst direct public engagement was largely suspended during the pandemic, RRes still took part in several events both online and in person, including the London Science Museum's Future Explorers week and British Science Week.

RISK MANAGEMENT

The Company has a formal risk management strategy which has been in place throughout the period covered by this report and is reviewed by the Board and the Finance and Audit Committee. The Board has overall responsibility for establishing key procedures designed to achieve systems of internal control and for reviewing and evaluating their effectiveness.

The risk management strategy comprises:

- An annual review of the key risks the Company may face;
- The establishment of systems and procedures to mitigate those risks identified within the risk register;
- The implementation of procedures designed to minimise any potential impact on the Company should those risks materialise;
- Financial processes are carefully controlled and monitored through active and regular review of policies and procedures to ensure segregation of duty, appropriate signing authority is monitored.

A risk register is maintained which sets out the key organisational risks. Risks are considered by reference to the probability of occurrence and impact on the Company.

The principal risks identified, related goals, and management strategies to improve mitigation, are as follows:

Risk Identified	Institute Goal at Risk	Principal Mitigations taken
Recruitment and retention of high performing scientists or key staff	Reduced ability to secure new income and damage to reputation and morale.	Open and transparent recruitment and promotion processes. External scientific reviews and identification of new areas for funding and collaboration. Competitive benefits and benchmarking of pay and rewards.
Loss of major income stream	Long-term sustainability & reputation	Strategic reviews as part of the Transformation programme delivered through four working groups; Improved understanding, systems and oversight of competitive grants; Strengthened commercialisation capability and IP policy.
Non-compliance with laws and standards	A robust system of controls exists to protect the Institute's people, assets, and reputation	Health & Safety Strategy Group established and governance structures strengthened; Greater Finance and Audit Committee oversight; Management Committee review of all policies and procedures.

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TRUSTEES' REPORT (INCORPORATING THE STRATEGIC REPORT)

The Institute has a dedicated Audit, Risk and Compliance officer and day to day responsibility for the implementation of risk management procedures and ongoing monitoring of risk and the effectiveness of controls rests with the Institute Executive Team (IET). The IET examines existing and emerging corporate risks, reviews the Institute risk register and explores corporate risks in detail based upon an agreed timetable. It is also overseen by the Finance and Audit Committee, to which significant risks may be escalated for action or monitoring, as well as high level oversight by the Board.

The Finance and Audit Committee is empowered by the Board of Trustee-Directors and has responsibility for advising on the effectiveness of the systems of internal control, including risk management. To fulfil this requirement, the risk profile is reviewed by the Finance and Audit Committee.

In terms of financial risks, the Group has no borrowings and limited exposure to financial instruments, such as trade debtors and trade creditors. Cash is held in deposit accounts and treasury deposits with major UK clearing banks. The Group's exposure to trade debtors and the associated risk of default is limited to only £0.8m at 31 March 2022, 2021 £1.2m. Future strategic funding from April 2023 is due to be ratified by BBSRC council in December 2022 and formally communicated in early 2023 but there is nothing to suggest that RRes does not remain a key strategic institute of UKRI-BBSRC as evidenced by recent financial investment in the capital requirements and transformation of the institute.

PUBLIC BENEFIT

Rothamsted Research Limited traces its primary Object back to that of the LAT – still extant and owner of the land and building assets at Rothamsted and Brooms Barn from which it was created in 1986; this Object can be summarised as the advancement of the science of agriculture. By virtue of the means and routes by which this is carried out, it is clearly aimed at public benefit and so falls within the charitable purpose of “the advancement of the arts, culture, heritage or science”. There are inevitable ancillary benefits from the primary activities as a result of meeting the primary object that would fall into the categories of advancement of education, the advancement of environmental protection or improvement and, perhaps to a more limited extent, the advancement of health. The Charity Commission guidance lists “scientific research” as one of the approved categories and specifically mentions scientific research projects under the heading of the advancement of science. The Trustee-Directors have complied with section 17 of the Charities Act 2011 to have due regard to public benefit guidance published by the Charity Commission.

In the preceding sections of this report we detail how the objectives and achievements of Rothamsted Research have been successfully pursued. We aim to reach the highest level in the quality of our scientific research; we ensure that this is fully and widely distributed to a global audience and so achieve international recognition. This will continue to be via the referred scientific literature, through contributions to research conferences as speakers and poster providers and via popular press articles for farmers and those engaged in land management. For the wider public we both initiate debates on important scientific issues relating to food production and security and proactively engage in discussions and consultations involving these topics.

We are convinced of the necessity to help ensure that our scientific advances can enhance the countryside and environment at both a national and a global level taking as many steps as we can to ensure this is achieved.

The benefits of our work reach and influence, directly or indirectly, all sectors of society: the broad aim of optimising the use of resources, maintaining crop production, while minimising potentially damaging environmental impacts is of benefit to all of humanity. There are some sectors of society who hold views that would limit the introduction of some of the technologies that arise from, or are an inherent part of, our scientific investigations; genetic modification of crop plants might fall into this category. Equally, much of our work is of direct benefit to the practices that are supported by the very same groups; improvement of biological control strategies may be highlighted in this context. Thus, we cover a wide number of sectors and interests and philosophical positions without favouring any one.

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The scientific strategy is highly outcome-focussed. Rothamsted Research Limited is continuing to monitor and understand the benefits that the research work has brought to a broad cross section of the community and more details can be seen on our web site at <http://www.rothamsted.ac.uk/our-science>. This covers a range of scientific disciplines but examples include improvement of fertiliser recommendations to reduce waste and pollution, improved monitoring of aphids, tracking and controlling potato diseases, enhancing disease resistance in oilseeds used in the Indian sub-continent and controlling insect vectors of human/animal disease for use in both the developed and developing world. Also, Rothamsted data has informed regulations for heavy metal levels in grains, glucosinolate levels in rape seed oil and opportunities for monitoring and improving soil health.

Indirect benefit may arise from a commercial company identifying new opportunities within our research findings or during a collaboration; this is incidental to our work so in our dealings with commercial companies we do not accept any blanket inhibition on freedom to publish. We do accept that, in some examples, the best way that scientific discoveries may be introduced and achieve the most widespread use is through protection of our intellectual property and therefore fully accept that such an approach can be a legitimate form of comprehensive dissemination and actively pursue this where appropriate. Any financial benefit captured by RRes in this or any other way will be used to further pursue its Objects.

FINANCIAL REVIEW

Income

Total group income was £36.3m (2021: £35.5m). This included capital grants of £7.7m (2021: £4.8m). When comparing income year on year, if capital funding is removed, income has reduced by 7%. The principal reasons for this reduction are a decrease in funding from European schemes and a one off grant from UKRI received in the prior year for specific financial support pertaining to Covid-19 and the resultant lockdowns. Rothamsted's principal funder is the UK Biotechnology and Biological Sciences Research Council (UKRI) which contributed 72% of total income (2021: 73%).

Expenditure

Total group expenditure for the year amounted to £32.3m (2021 £31.2m). Recurrent expenditure (excluding depreciation and redundancy costs) increased from £26.9m to £28.5m. The increase in recurrent expenditure was £1.6m, resulting from increased activity as lockdown conditions eased. Depreciation and amortisation charges have increased by £0.4m in the year with the additional capital funding received.

Net movement in reserves and reserves position

The net movement in reserves for the year was an increase of £4.0m. Unrestricted reserves reduced by £2.4m to £15.0m, and restricted reserves increased by £6.4m to £57.7m.

The Institute is very carefully monitoring its cost base and is striving for efficiency savings where possible in order to prevent future deterioration of its unrestricted reserves. The Institute is operating on a tight financial budget for the remainder of the current Institute Strategic Programme funding cycle (to March 2023) and is putting in place the tools to improve the quality and success rates of grant applications and secure additional income streams.

Subsidiaries and joint ventures

A joint venture (Rothamsted Enterprise Limited) made a loss of £225k (2021: Profit of £43k) of which Rothamsted's 40% share was £(90k). Following FRS102 the investment interest recognised in the group

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TRUSTEES' REPORT (INCORPORATING THE STRATEGIC REPORT)

accounts is nil as Rothamsted has not incurred legal or constructive obligations or made payments on behalf of the joint venture.

During 2014/15, Rothamsted Enterprises Ltd completed the construction of the Lawes Open Innovation Hub and the Rothamsted Conference Centre extension on land at West Common, Harpenden, and its principal activities are conferencing, business incubation and shared laboratory facilities to promote collaborative working. REL manages both the Daniel Hall and Russell Buildings for LAT and has relaunched the Manor now appropriate licenses are in place.

Capital expenditure

Capital expenditure for the year was £6.6m. It also includes capital spend which was supported by capital grants from BBSRC.

Cash

Cash at 31 March 2022 was £15.4m (2021: £16.6m). Rothamsted deposits its cash with major UK clearing banks. Income from cash deposits in the year was £39k (2021: £40k).

Investment policy

The Group's investments are held to:

- Provide operational liquidity
- Plan for scientific research and
- Support intellectual property

Investments are held as fixed term deposits with major UK clearing banks. Cash is drawn down in line with a planned expenditure schedule within the budget and in conjunction with the reserves policy and forecasting. Maturities of the deposits match these timelines.

In addition there are a small number of investments held to achieve a longer term return on intellectual property to provide funding for future research programmes and a model for commercialisation of research and innovation in to the market place.

Social investments

As noted on page 8 the Charity has made a number of mixed motive investments under the SHAKE Climate Change Entrepreneur support programme. These are included in the financial statements as concessionary loans within social investments. The charity awards these for entrepreneurs and start-ups who are combatting climate change with science or tech-based ideas in the areas of agriculture or food production. Successful applicants who receive a loan are mentored and supported by leading science, science tech and business experts with regular meetings to monitor performance.

Reserves policy

The Group's reserves are held to support financial solvency, manage uncertainty and fund future activities. The level of reserves required by the group is therefore determined by reference to:

- Future operational and capital expenditure requirements for the ISP funding cycle
- Potential financial risks identified in the risk register
- Potential funding required for strategic investments not included in the operating budget
- Working capital/liquidity requirements

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Unrestricted reserves that have been designated for specific purposes are shown in a separate designated reserve. £0.75m is designated towards the Transformation of Rothamsted project which is expected to be spent in 2022/23.

The Institute has set itself a target level of reserves of £1.7m and defines its current free reserves as £2.9m.

Key performance indicators

During the year a number of key performance indicators (KPI's) have been implemented in order for the executive team and trustee board to monitor financial performance and sustainability of the Institute. Each KPI is Specific, Measurable, Achievable, Realistic and Time-bound (SMART) and is reported on at least once a quarter.

For external reporting the following four KPIs have been chosen.

KPI's 1, 2 and 3 are concerned with the submitting and winning of new grants in order to leverage additional income. A grant will typically span several years.

KPI 4 is concerned with ensuring the staffing split between science and non science staff remains sustainable.

Targets were set for the financial year based on performance in the previous year and the overall performance is highlighted in the table below.

	2020/21	2021/22	Target for 2022/23
KPI 1: Grants awarded (£'000)	9,488	22,924	15,000
KPI 2: Grants awarded (number)	85	200	200
KPI 3: Grant success rate (all funders)	39%	45%	45%
KPI 4: Ratio of science to technical/admin staff (FTE)	2.37	2.53	2.55

The total value and number of grants awarded have increased on the previous year (KPIs 1 and 2). The awarded amount is significantly higher due to two multiyear awards exceeding £4.5m each, hence the reduction in target for 2022/23. Success rates across all funder types (KPI 3) have also improved and the target rate for 2022/23 remains at this higher level as does the targeted number of awards (KPI 2). The ratio of science staff to technical/admin staff based on FTE has improved in the period and this split is targeted to continue for 2022/23.

FUTURE DEVELOPMENTS

Within the overall UK research landscape, Rothamsted's key strength lies in conducting strategic, problem-oriented, integrated agricultural science with wide impact. Embedding a systems approach and working in an excellence- and outcome-driven manner, we develop novel solutions for the sustainable intensification, smart protection and diversification of arable and grassland-livestock systems in the UK and globally. This approach is firmly embedded in the new Science Strategy for 2017-2022, which we have been implementing since April 2017. As a result of the coronavirus pandemic the ISPs have been extended by one year to 2023. This extension period will be used not only to complete the current work under the ISP but to develop and prepare for the next round of ISP submissions.

The submission for RRes strategic programmes presented a framework for how the institute will transition to a National Capability, in alignment with the 2021 BBSRC Institute Strategy. This comprised four Themes:

Theme 1: Excellent science of national strategic relevance to agriculture

Theme 2: Influential leadership and connectivity:

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Theme 3: A supportive and inclusive culture for developing a diversity of skilled people

Theme 4: Delivery of environmental, social and economic impact

Our priorities for 2023/24 are (i) to respond to any feedback on the programme submission and (assuming all programmes are funded) close the current programmes and start the new programmes in April 2023, as presented in the above framework; (ii) establish and implement an institute performance review process to monitor progress in all four Themes, and therefore monitor progress in the transition of the institute to a National Capability (iii) re-fresh the institute committees, working groups and task forces to engage staff throughout the organisation in developing and driving the changes needed; (iv) improve income generation through increased effort and efficiencies in grant funding, cost recovery and commercial funding streams; (v) roll-out an extensive training programme in equality, diversity and inclusivity and conduct a review of pay and performance-related rewards, as part of wider HR strategy (vi) continue improvements in research data management practices and in business operations through digitisation, and (vii) ensure that maximum outputs and outcomes are achieved from our previous strategic programmes and projects, as well as any new research initiated during the year.

Compliance with section 172

The Board of Trustees welcomes the opportunity to demonstrate how they have developed the Institute's business relationships with stakeholders. The Trustees believe that they have acted in a way they consider would be most likely to promote the success of the company for the benefit of its members as a whole (having regard to the stakeholders and matters set out in s172(1)(a-f) of the act) in the decisions taken during the year ended 31 March 2022 and in the approval of the Transformation Programme.

As Trustees, our intention is to behave responsibly and ensure that management operate the business in a responsible manner, operating within high standards of business conduct and good governance. The Trustees intention is to behave responsibly towards our stakeholders and treat them fairly and equally, so they too may benefit from the successful delivery of our plan. When making strategic decisions the Trustees have taken into account the likely consequences of these decisions in the long term.

The Trustees continue to work closely with UKRI-BBSRC, as evidenced through the conception and progress of the Transformation Programme. Employees from across the Insitute have been closely involved in the development and direction of the Transformation Programme, with working groups given the opportunity to attend Board meetings and provide feedback. As reflected in the Strategic Report (Pages 6-10), the Institute has continued to strengthen links with farmers, Government and public engagement. The Institute engages with staff through the employee consultation channels described on Page 4 of the Trustees' Report, and is pleased to confirm continuation of its Athena SWAN Charter.

The Trustees are responsible for the overall governance and strategic direction of Rothamsted Research and have a duty to ensure it provides a service that is a public benefit and meets the needs of its beneficiaries. Their role includes the provision of leadership with a framework of prudent and effective controls, including through the Finance and Audit Committee and Scientific Advisory Group of the Board.

The Trustees have maintained a close relationship with the Institute leadership team and have been reassured by the creation of the Institute Executive Team (IET), comprising senior members of the Institute from both scientific and operational areas. The IET reports to the Board through the Institute Director.

GOING CONCERN

One of the Group's main objectives for the year was to improve the financial sustainability of the Institute and financial modelling exercises have been undertaken throughout the last 12 months to ensure the Institute remains ahead of any issues over financial sustainability and develops a financially sustainable strategic funding bid for the 5 years from 1st April 2023. The BBSRC continues to invest in the Institute

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TRUSTEES' REPORT (INCORPORATING THE STRATEGIC REPORT)

with further capital awards of £7.7m made in the 2021/22 financial year and with the Transformation Programme award (total £6.5m) designed to accelerate the scientific and organisational transformation of the Institute. It is expected that the transformation will shortly begin having a positive impact on grant success rates with a new tranche of senior scientists appointed and with greater resource to open up new opportunities (innovation managers), free up Principal Investigator (PI) time to write grant proposals (technicians) and a science catalyst fund to allow PI's to advance research into a more fundable state. The Institute has confirmed strategic funding in place from the BBSRC until March 2023 and a 5 year strategic application was submitted in the summer of 2022 with the final award confirmation due in early January 2023. All indications are that the funding will be awarded at the level applied and that RRes remains a key strategic Institute of the BBSRC and UKRI as evidenced by the financial investment detailed.

In addition the Institute has been taking steps to generate more trading income from commercialisation of its expertise and consultancy services both to the campus and beyond. A more efficient method for costing and charging for the use of scientific and operational facilities has been developed and has been applied across the Institute. In addition there are several mitigating actions being developed to reduce cost should this become required.

The board has reviewed and approved management's financial forecasts, supporting cash flows and sensitivity analysis to March 2025 based on the financial sustainability modelling which show sufficient funds to cover liabilities as they fall due. These forecasts are considered by the Directors to assume:

- Achievable levels of new competitive funding awards through recruitment of senior scientists
- Achievable levels of trading income
- Reasonable and prudent assumptions for cost levels and the continuing financial impact of COVID-19 and wider macroeconomic environment.

As a result the board concludes that the Institute can continue to operate within its currently available cash and working capital facilities and is therefore considered a going concern. In arriving at this conclusion the board has had regard to relevant factors including the COVID-19 pandemic and wider macroeconomic environment.

The Strategic Report, which concludes above, includes information in respect of financial instruments, future development and research and development activities in accordance with the section 414C(11) of the Companies Act 2006.

Energy and Carbon Reporting

As part of the obligations set out under the Energy and Carbon Report Regulations 2018, the charity is required to disclose the energy and carbon created as an organisation over the last reporting year starting on or after April 2019. To fulfil this we have measured our UK energy and greenhouse gas emissions as classified within scope 1 and 2 (Streamlined Energy and Carbon Reporting (SECR)).

Energy Consumption and Greenhouse Gases

The methodology used for determining energy and carbon emissions within this section of the report come from a number of sources of our greenhouse emissions:

- Natural gas used for heating the buildings we occupy and for hot water.
- Electricity used for lighting, cooling and air conditioning.
- Fuel consumption in vehicles that are used for business including staff vehicles and hire cars.
- Gas and electricity consumption have been taken from invoices and sub-meter readings as appropriate.
- Fuel consumption is measured from mileage incurred by employees travelling to and from locations.

The charity's consumption and associated greenhouse gas emissions for the financial year April 2021 to March 2022 are shown in the table below.

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TRUSTEES' REPORT (INCORPORATING THE STRATEGIC REPORT)

Energy Efficiency Actions

The charity has installed energy efficient air conditioning with lower GWP (Global Warming Potential) and completed further installation of LED lights in glasshouses. Two hybrid cars were purchased for North Wyke

Information Required	Current Reporting Year UK and offshore	Previous Reporting Year
Energy consumption used to calculate emissions: /kWh	Gas – 17,249,751 kWh Propane - 562,874 kWh Transport –158,666 kWh Electricity– 9,636,271 kWh Total – 27,607,562 kWh	Gas – 14,234,460kWh Electricity – 6,031,102 kWh Transport – 107,911 kWh Total – 20,373,473 kWh
Emissions from combustion of gas tCO ₂ e (Scope 1)	3,501 tonnes	2,617.3 tonnes
Emissions from combustion of propane tCO ₂ e (Scope 1)	39.8 tonnes	None reported
Emissions from business travel in company owned vehicles (Scope 1)	130.9 tonnes	27.5 tonnes
Emissions from purchased electricity (Scope 2, location-based)	2,046 tonnes	1,406.1 tonnes

Information Required	Current Reporting Year UK and offshore	Previous Reporting Year
Total gross CO ₂ e based on above	5,718 tonnes	4,050.9 tonnes
Intensity ratio: CO ₂ e gross figure based on mandatory fields above/ e.g. £100,000 revenue (taken from 5 Results)	Metres squared of occupied property. This is because this figure is already used for their BBSRC KPI calculation. The total figure for Rothamsted Research Limited is 63,812.5 m ² . Total emissions were 0.09 tonnes CO ₂ e per meter squared of occupied property.	Metres squared of occupied property. This is because this figure is already used for their BBSRC KPI calculation. The total figure for Rothamsted Research Limited is 59,868.5 m ² . Total emissions were 0.07 tonnes CO ₂ e per meter squared of occupied property.

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TRUSTEES' REPORT (INCORPORATING THE STRATEGIC REPORT)

AUDITOR

Buzzacott LLP has indicated its willingness to continue in office.

STATEMENT AS TO DISCLOSURE OF INFORMATION TO THE AUDITOR

The Directors who were in office at the date of approval of these financial statements have confirmed, as far as they are aware, that there is no relevant audit information of which the auditor is unaware. The Directors have confirmed that they have taken all the steps that they ought to have taken as Directors to make themselves aware of any relevant audit information and to establish that it has been communicated to the auditor.

The Trustees' Report prepared under the Charities Act 2011, which also contains all information required in a Directors' Report by the Companies Act 2006, and the incorporated strategic report prepared under the Companies Act 2006, were approved by the Board and signed

On Behalf of the Board



Professor Sir John Beddington
Trustee
Rothamsted Research Limited
Harpenden
Hertfordshire
AL5 2JQ

Date: 6 December 2022

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STATEMENT OF TRUSTEE RESPONSIBILITIES

The trustees (who are also directors of Rothamsted Research Limited for the purposes of company law) are responsible for preparing the Trustees' Annual 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 trustees 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 and of the incoming resources and application of resources, including the income and expenditure, of the charitable group for that period. In preparing these financial statements, the trustees are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in the Charities SORP;
- make judgments 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 will continue in business.

The trustees are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the charitable company and enable them to ensure that the financial statements comply with the Companies Act 2006. They are also responsible for safeguarding the assets of the charitable company and the group and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

In so far as the trustees are aware:

- there is no relevant audit information of which the charitable company's auditor is unaware; and
- the trustees have taken all steps that they ought to have taken to make themselves aware of any relevant audit information and to establish that the auditor is aware of that information.

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

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INDEPENDENT AUDITORS REPORT

Opinion

We have audited the financial statements of Rothamsted Research Limited (the 'charitable parent company') and its subsidiaries (the 'group') for the year ended 31 March 2022 which comprise the group and charitable parent company statement of financial activities, balance sheets, and statement of cash flows, the principal accounting policies and the notes to the financial statements. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including Financial Reporting Standard 102 'The Financial Reporting Standard applicable in the UK and Republic of Ireland' (United Kingdom Generally Accepted Accounting Practice).

In our opinion, the financial statements:

- give a true and fair view of the state of the group's and of the charitable parent company's affairs as at 31 March 2022 and of the group's 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.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the group 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.

Other matter

As part of our audit of the financial statements for the year ended 31 March 2022, we also audited the adjustments described in Note 17 that were applied to amend the figures for the year ended 31 March 2021, which form the comparatives for the current year. In our opinion, such adjustments are appropriate and have been properly applied. We were not engaged to audit, review, or apply any procedures to the financial statements for the year ended 31 March 2021 other than with respect to the adjustments and, accordingly, we do not express an opinion or any other form of assurance on the results which form the comparatives to these financial statements or the financial statements for the year ended 31 March 2021 taken as a whole.

Conclusions relating to going concern

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

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 and charitable parent 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.

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INDEPENDENT AUDITORS REPORT

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 trustees are responsible for the other information. The other information comprises the information included in the annual report and financial statements, other than the financial statements and our auditor's report thereon. Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

In connection with our audit of the 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 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.

Opinions 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' report, which is also the directors' report for the purposes of company law and includes the strategic report, for the financial year for which the financial statements are prepared is consistent with the financial statements; and
- the trustees' report, which is also the directors' report for the purposes of company law and includes the strategic report, has been prepared in accordance with applicable legal requirements.

Matters on which we are required to report by exception

In the light of the knowledge and understanding of the group and the charitable parent company and its environment obtained in the course of the audit, we have not identified material misstatements in the trustees' report including the strategic report.

We have nothing to report in respect of the following matters in relation to which the Companies Act 2006 requires us to report to you if, in our opinion:

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

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INDEPENDENT AUDITORS REPORT

Responsibilities of trustees

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

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

Auditor's responsibilities for the audit of the financial statements

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

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 approach to identifying and assessing the risks of material misstatement in respect of irregularities, including fraud and non-compliance with laws and regulations, was as follows:

- ◆ The engagement partner ensured that the engagement team collectively had the appropriate competence, capabilities and skills to identify or recognise non-compliance with applicable laws and regulations;
- ◆ We identified the laws and regulations applicable to the group and the charitable company through discussions with management, and from our knowledge and experience of the sector;
- ◆ We focused on specific laws and regulations which we considered may have a direct material effect on the financial statements or the operations of the group and the charitable company, including the Companies Act 2006, Charities Act 2011 and Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with the Financial Reporting Standard applicable to the United Kingdom and Republic of Ireland (FRS 102).
- ◆ We assessed the extent of compliance with the laws and regulations identified above through making enquiries of management and inspecting legal correspondence; and
- ◆ The identified laws and regulations were communicated within the audit team regularly and the team remained alert to instances of non-compliance throughout the audit.

We assessed the susceptibility of the group financial statements to material misstatement, including obtaining an understanding of how fraud might occur, by:

- Making enquiries of management as to where they considered there was susceptibility to fraud, their knowledge of actual, suspected and alleged fraud; and

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INDEPENDENT AUDITORS REPORT

- Considering the internal controls in place to mitigate risks of fraud and non-compliance with laws and regulations.
 - Performed analytical procedures to identify any unusual or unexpected relationships;
 - Tested journal entries to identify unusual transactions;
 - Assessed whether judgements and assumptions made in determining the accounting estimates set out in the accounting policies were indicative of potential bias; and
 - Performed substantive testing of expenditure including authorisation thereof.
- In response to the risk of irregularities and non-compliance with laws and regulations, we designed procedures which included, but were not limited to:
- Agreeing financial statement disclosures to underlying supporting documentation;
 - Reading the minutes of Board meetings; and
 - Enquiring of management as to actual and potential litigation and claims, including inspecting the relevant correspondence from regulators and advisors;

There are inherent limitations in our audit procedures described above. The more removed that laws and regulations are from financial transactions, the less likely it is that we would become aware of non-compliance. Auditing standards also limit the audit procedures required to identify non-compliance with laws and regulations to enquiry of the trustees and other management and the inspection of regulatory and legal correspondence, if any.

Material misstatements that arise due to fraud can be harder to detect than those that arise from error as they may involve deliberate concealment or collusion.

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

Use of our report

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



Catherine Biscoe (Senior Statutory Auditor)

For and on behalf of Buzzacott LLP, Statutory Auditor

130 Wood Street

London

EC2V 6DL

20 December 2022

Rothamsted Research Limited
CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES
for the year ended 31 March 2022

	<i>Notes</i>	Unrestricted funds £'000	Restricted funds £'000	Total funds 2022 £'000	Total funds 2021 £'000
INCOME					
Income from:					
- trading	1	352	-	352	127
- investments	2	39	-	39	40
Net interest in results of joint venture	12	-	-	-	128
Income from charitable activities:					
- scientific research	3	4,246	23,242	27,488	29,748
- capital grants	3	-	7,707	7,707	4,818
- postgraduate education and training	3	202	490	692	607
		4,448	31,439	35,887	35,173
TOTAL INCOME		4,839	31,439	36,278	35,468
EXPENDITURE ON:					
Raising funds	5	11	-	11	116
Charitable activities	6a	7,253	25,068	32,321	31,025
Net interest in results of joint venture	12	20	-	20	-
TOTAL EXPENDITURE		7,284	25,068	32,352	31,141
Net gains on investments	12	18	-	18	202
NET INCOME/(EXPENDITURE) FOR THE YEAR BEFORE TRANSFERS		(2,427)	6,371	3,944	4,529
Transfers between funds	16	-	-	-	-
NET MOVEMENT IN FUNDS IN YEAR		(2,427)	6,371	3,944	4,529
RECONCILIATION OF FUNDS					
Fund balances at 1 April 2021 (Restated)		17,404	51,362	68,766	64,237
Fund balances at 31 March 2022		14,977	57,733	72,710	68,766

All income and expenditure derives from continuing activities

Rothamsted Research Limited
CHARITY STATEMENT OF FINANCIAL ACTIVITIES
for the year ended 31 March 2022

	<i>Notes</i>	Unrestricted funds £'000	Restricted funds £'000	Total funds 2022 £'000	Total funds 2021 £'000
INCOME					
Income from:					
- trading	1	352	-	352	127
- investments	2	39	-	39	40
Income from charitable activities:					
- scientific research	3	4,246	23,242	27,488	29,748
- capital grants	3	-	7,707	7,707	4,818
- postgraduate education and training	3	202	490	692	607
		<u>4,448</u>	<u>31,439</u>	<u>35,887</u>	<u>35,173</u>
TOTAL INCOME		<u>4,839</u>	<u>31,439</u>	<u>36,278</u>	<u>35,340</u>
EXPENDITURE ON:					
Raising funds	5	11	-	11	15
Charitable activities	6a	7,253	25,068	32,321	31,126
		<u>7,264</u>	<u>25,068</u>	<u>32,332</u>	<u>31,141</u>
TOTAL EXPENDITURE		<u>7,264</u>	<u>25,068</u>	<u>32,332</u>	<u>31,141</u>
Net gains on investments		18	-	18	202
NET INCOME/(EXPENDITURE) FOR THE YEAR BEFORE TRANSFERS		<u>(2,407)</u>	<u>6,371</u>	<u>3,964</u>	<u>4,401</u>
Transfer between funds	16	-	-	-	-
NET MOVEMENT IN FUNDS IN YEAR		<u>(2,407)</u>	<u>6,371</u>	<u>3,964</u>	<u>4,401</u>
RECONCILIATION OF FUNDS					
Fund balances at 1 April 2021 (Restated)		<u>17,387</u>	<u>51,362</u>	<u>68,749</u>	<u>64,348</u>
Fund balances at 31 March 2022		<u>14,980</u>	<u>57,733</u>	<u>72,713</u>	<u>68,749</u>

Rothamsted Research Limited

BALANCE SHEETS

31 March 2022

Company Registration Number 2393175

	<i>Notes</i>	Group 2022 £'000	Charity 2022 £'000	Restated Group 2021 £'000	Restated Charity 2021 £'000
FIXED ASSETS					
Tangible assets	10	53,949	53,949	50,873	50,873
Intangible assets	11	695	695	956	956
Investments	12	374	374	356	356
Social Investments	12	1,120	1,120	840	840
Joint venture	12	-	-	20	-
		56,138	56,138	53,045	53,025
CURRENT ASSETS					
Stock		887	887	748	748
Debtors	13	6,256	6,256	6,062	6,062
Cash at bank and in hand		15,372	15,372	16,616	16,616
		22,515	22,515	23,426	23,426
CREDITORS: Amounts falling due within one year	14	(5,943)	(5,940)	(7,705)	(7,702)
NET CURRENT ASSETS		16,572	16,575	15,721	15,724
TOTAL ASSETS LESS CURRENT LIABILITIES		72,710	72,713	68,766	68,749
NET ASSETS		72,710	71,713	68,766	68,749
FUNDS					
Restricted funds	16	57,733	57,733	51,362	51,362
Unrestricted funds:					
General funds		14,227	14,230	15,064	15,047
Designated funds		750	750	2,340	2,340
	16	14,977	14,980	17,404	17,387
TOTAL FUNDS		72,710	72,713	68,766	68,749

The financial statements set out on pages 26 to 59 were approved by the Board and authorised for issue on 6 December 2022 and signed on its behalf by:

Stuart Jarvis

Stuart Jarvis
Director

Rothamsted Research Limited
CONSOLIDATED CASH FLOW STATEMENT
for the year ended 31 March 2022

	<i>Notes</i>	2022 £'000	2021 £'000
Cash generated from / (used in) operations	18	(2,062)	4,814
 Cash flows from Investing activities			
Dividends, interest and rent from investments		39	40
Purchase of property, plant and equipment		(6,630)	(4,419)
Capital grants received		7,707	4,818
Concessionary loans granted		(280)	(840)
(Increase)/Decrease in money market deposits greater than 90 days		4	(7,504)
Net gain on Investments		(18)	(202)
		<hr/>	<hr/>
Net cash (used in) / generated from investing activities		822	(8,107)
		<hr/>	<hr/>
Change in cash and cash equivalents in reporting period		(1,240)	(3,293)
Cash and cash equivalents at beginning of reporting period		9,112	12,405
Cash and cash equivalents at the end of the reporting period	18	<u>7,872</u>	<u>9,112</u>

Rothamsted Research Limited

CHARITY CASH FLOW STATEMENT

for the year ended 31 March 2022

	<i>Notes</i>	2022 £'000	2021 £'000
Cash generated from / (used in) operations	19	(2,062)	4,874
 Cash flows from Investing activities			
Dividends, interest and rent from investments		39	40
Purchase of property, plant and equipment		(6,630)	(4,419)
Capital grants received		7,707	4,818
Concessionary loans granted		(280)	(840)
(Increase)/decrease in money market deposits greater than 90 days		4	(7,504)
Net gain on investments		<u>(18)</u>	<u>(202)</u>
 Net cash (used in) / generated from investing activities		<u>822</u>	<u>(8,107)</u>
 Change in cash and cash equivalents in reporting period		(1,240)	(3,233)
Cash and cash equivalents at beginning of reporting period		9,112	12,345
Cash and cash equivalents at the end of the reporting period	19	<u><u>7,872</u></u>	<u><u>9,112</u></u>

Rothamsted Research Limited

ACCOUNTING POLICIES

These financial statements have been prepared in accordance with FRS102 (The Financial Reporting Standard applicable in the UK and the Republic of Ireland (FRS102)). The financial statements have been prepared under the historical cost convention as modified by carrying investments at fair value. The financial statements meet the requirements of the Companies Act 2006, the Statement of Recommended Practice - Accounting and Reporting by Charities (Charities SORP (FRS102)) and applicable accounting standards so far as these requirements are appropriate. Rothamsted Research Limited is a private company limited by guarantee and a registered charity. It is registered, domiciled and incorporated in England. The registered company and charity numbers are on page 2. The charity is a public benefit entity as defined by FRS102 and part of a public benefit group. Monetary amounts in these financial statements are rounded to the nearest whole £1,000, except where otherwise indicated. Sterling is the Group's functional and presentational currency.

In accordance with FRS 102, the charity has taken advantage of the exemption from the following disclosure requirement in its individual financial statements: Section 33 'Related Party Disclosures' – Compensation for key management personnel.

RESTATEMENT OF COMPARATIVE BALANCES

The figures for the comparative period have been restated to reflect the creation of a new restricted fund for scientific research project awards and to correct the classification of historic depreciation charges.

Scientific research project awards and associated expenditure had been previously classified as unrestricted but have now been reclassified as restricted. Income, expenditure and total movement for the prior year remain the same but the distribution between unrestricted and restricted and therefore the opening balances for funds brought forward into the year ended 31 March 2022 and 31 March 2021 have been adjusted to reflect this revised treatment.

Following a historic review of the restricted capital fund and the expected useful life of the underlying assets it became apparent that there had been a mismatch between the restricted fund the incoming capital receipt was booked to and the unrestricted fund to which depreciation was charged for on some assets. Income, expenditure and total movement for the prior year remain the same but the distribution between unrestricted and restricted and therefore the opening balances for funds brought forward into the year ended 31 March 2022 and 31 March 2021 have been adjusted to correct this past mistreatment.

Details for both these restatements are provided in Note 17.

GOING CONCERN

One of the Group's main objectives for the year was to improve the financial sustainability of the Institute and financial modelling exercises have been undertaken throughout the last 12 months to ensure the Institute remains ahead of any issues over financial sustainability and develops a financially sustainable strategic funding bid for the 5 years from 1st April 2023. The BBSRC continues to invest in the Institute with further capital awards of £7.7m made in the 2021/22 financial year and with the Transformation Programme award (total £6.5m) designed to accelerate the scientific and organisational transformation of the Institute. It is expected that the transformation will shortly begin having a positive impact on grant success rates with a new tranche of senior scientists appointed and with greater resource to open up new opportunities (innovation managers), free up Principal Investigator (PI) time to write grant proposals (technicians) and a science catalyst fund to allow PI's to advance research into a more fundable state. The Institute has confirmed strategic funding in place from the BBSRC until March 2023 and a 5 year strategic application was submitted in the summer of 2022 with the final award confirmation due in early January 2023. All indications are that the funding will be awarded at the level applied and that RRes remains a key strategic Institute of the BBSRC and UKRI as evidenced by the financial investment detailed.

In addition the Institute has been taking steps to generate more trading income from commercialisation of its expertise and consultancy services both to the campus and beyond. A more efficient method for costing and charging the use of scientific and operational facilities has been developed and has been applied across the Institute. In addition there are several mitigating actions being developed to reduce cost should this become required.

Rothamsted Research Limited

ACCOUNTING POLICIES

The board has reviewed and approved management's financial forecasts, supporting cash flows and sensitivity analysis to March 2025 based on the financial sustainability modelling which show sufficient funds to cover liabilities as they fall due. These forecasts are considered by the Directors to assume:

- Achievable levels of new competitive funding awards through recruitment of senior scientists
- Achievable levels of trading income
- Reasonable and prudent assumptions for cost levels and the continuing financial impact of COVID-19 and wider macroeconomic environment.

As a result the board concludes that the Institute can continue to operate within its currently available cash and working capital facilities and is therefore considered a going concern. In arriving at this conclusion the board has had regard to relevant factors including the COVID-19 pandemic and wider macroeconomic environment.

BASIS OF CONSOLIDATION

Rothamsted Manor Limited is the only UK subsidiary undertaking that has traded during the year (see Note 12). Other subsidiaries have not been consolidated on grounds of immateriality.

JOINT VENTURES

Undertakings in which the group has a long-term interest and which are under joint control are defined as joint ventures. Joint ventures are accounted for using the equity method.

TANGIBLE FIXED ASSETS

Tangible fixed assets are depreciated to their estimated residual values over their expected useful lives on a straight-line basis. Items over £3,000 are capitalised.

Buildings	25 - 50 years
Plant & Machinery	5 - 10 years
Fixtures, Fittings and Vehicles	3 - 10 years

Assets in the course of construction are included at cost, and will be depreciated to their estimated residual values over their expected useful lives on a straight-line basis once the asset is available for use. Freehold land is included at cost and not depreciated. An assessment is made at each reporting date of whether there are any indications that a fixed asset may be impaired or that an impairment loss previously recognised has fully or partially reversed. If such indications exist, the recoverable amount of the asset is estimated. Shortfalls between the carrying value of fixed assets and their recoverable amounts are recognised as impairments in the Statement of Financial Activities.

INTANGIBLE FIXED ASSETS

Intangible fixed assets are amortised to their estimated residual values over their expected useful lives on a straight-line basis. Items over £3,000 are capitalised.

Computer Software	3 - 5 years
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Assets in the course of construction are included at cost, and will be amortised to their estimated residual values over their expected useful lives on a straight-line basis once the asset is available for use. An assessment is made at each reporting date of whether there are any indications that a fixed asset may be impaired or that an impairment loss previously recognised has fully or partially reversed. If such indications exist, the recoverable amount of the asset is estimated. Shortfalls between the carrying value of fixed assets and their recoverable amounts are recognised as impairments in the Statement of Financial Activities.

STOCKS

Inventory takes the form of both materials to be consumed in the rendering of services and assets held for sale in the ordinary course of business (farm livestock). Materials consumed in the rendering of services is measured at the lower of cost and estimated selling price less costs to complete and sell. Farm livestock is measured at fair value.

Rothamsted Research Limited

ACCOUNTING POLICIES

The classes of farm livestock are cattle and sheep and the fair value is determined by an independent valuer following inspection.

	Fair value as at 01/04/21 £'000	Sales £'000	Purchases £'000	Gain/Loss on revaluation £'000	Fair value as at 31/03/22 £'000
Cattle	353	(248)	19	184	307
Sheep	72	(81)	26	58	76
	425	(329)	45	242	383

Gains or losses on revaluation of livestock are taken to the statement of financial activities and recorded against expenditure.

INVESTMENTS

Unlisted investments are carried at directors' estimate of fair value as at the Balance Sheet date, and any gains or losses taken to the Statement of Financial Activities. The estimate of fair value is based on the latest available financial information.

SOCIAL INVESTMENTS

Mixed motive social investments in the form of concessionary loans are measured at the amount paid, including interest accrued and after impairment, where applicable.

INVESTMENTS IN GROUP UNDERTAKINGS

Investments in group undertakings are stated at cost less impairment, where relevant, as these represent shareholdings in unlisted companies.

FUND ACCOUNTING

General funds are unrestricted funds which are available for use at the discretion of the Trustee-Directors in furtherance of the general objectives of the Charity and which have not been designated for other purposes.

Designated funds comprise unrestricted funds that have been set aside by the Trustee-Directors for particular purposes. The aim and use of each designated fund are set out in the notes to the financial statements.

Restricted funds are funds which are to be used in accordance with specific restrictions imposed by donors or which have been raised by the Charity for particular purposes. The cost of raising and administering such funds is charged against the specific fund. The aim and use of the restricted funds are set out in the notes to the financial statements.

INCOME

All income except grants is included in the Statement of Financial Activities when the Group or Charity is legally entitled to the income and the amount can be quantified with reasonable accuracy. Income from grants, including capital grants, is included within income when these are receivable, except as follows:

- When donors specify that grants given to the Charity must be used in future accounting periods, the income is deferred until those periods.
- When donors impose conditions, which must be fulfilled before the Charity becomes entitled to use such income, and those conditions are outside the control of the Charity, the income is deferred and not included in income until pre-conditions for use have been met.

When donors specify that grants, including capital grants, are for restricted purposes, which do not amount to pre-conditions regarding entitlement, this income is included in restricted funds when receivable.

Rothamsted Research Limited

ACCOUNTING POLICIES

EXPENDITURE

Liabilities are recognised as expenditure as soon as there is a legal or constructive obligation committing the Group or Charity to the expenditure. All expenditure is included in the Statement of Financial Activities on an accruals basis, inclusive of any VAT which cannot be recovered, and have been classified under headings that aggregate all costs related to the category.

- Costs of raising funds are those costs incurred in trading activities which raise funds.
- Charitable activities include expenditure associated with scientific research and postgraduate education and training and include both the direct costs and support costs relating to these activities.
- Governance costs include those incurred in the governance of the Charity and 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 basis consistent with the use of resources.

Expenditure by the Charity, which is financed by grants from third parties and applied to buildings not owned by the Group, is capitalised and included within Restricted Funds. The rent-free provision to the Charity of the buildings, on which such expenditure has been applied, is not treated as a donation as it is not possible to place an appropriate value on such arrangements.

OPERATING LEASES

Rentals under operating leases are written off on a straight-line basis over the term of the lease.

PENSION COSTS

Employees who remain on BBSRC contracts are members of the Research Councils' Pension Schemes. These are defined benefit schemes, the finances of which are administered by the BBSRC, and for which separate accounts are published (see Note 9). The pension schemes are administered by the Research Councils' Joint Superannuation Services and the schemes' finances are administered by the BBSRC. Under the definitions set out in FRS 102, the scheme is a multi-employer pension scheme. The Charity is unable to identify its share of the underlying assets and liabilities of the scheme. Accordingly, the Charity has accounted for its contributions to the scheme as if it were a defined contribution scheme. The pension costs represent contributions payable by the Group to the schemes.

Employees with Rothamsted contracts are members of a defined contribution scheme. The amount charged as expenditure represents the contributions payable by the Group in the year and is split between restricted and unrestricted funds based on how the individual is funded.

REDUNDANCY COSTS

A liability is recognised for redundancy where the charity is demonstrably committed to terminating the employment of an employee or to provide termination benefits. A redundancy payment is charged to the Statement of Financial Activities immediately on recognition at the best estimate of the cost at the reporting date. Where the responsibility for funding the redundancy payment lies with a third party in full or in part the associated income is immediately recognised in the Statement of Financial Activities.

Redundancy payments for employees who remain on BBSRC contracts are linked to severance arrangements under the exit terms outlined in the Civil Service Compensation Scheme Terms (CSCS). These terms cover all agreed exits under Voluntary Redundancy, Compulsory Redundancy and Voluntary Exit. Payments are made following a process approved by Joint Superannuation Services (JSS) who administer the CSCS on the charity's behalf. Severance estimates are provided as part of the agreed redundancy process with funding being agreed at 100% with BBSRC until 31 March 2020, tapering off to 50% from 1st April 2020, 25% from 1st April 2021 and 0% from 1st April 2022.

Redundancy payments for staff employed by the charity under Rothamsted contracts are not funded and are calculated in accordance with statutory provisions.

Rothamsted Research Limited

ACCOUNTING POLICIES

RELATED PARTY TRANSACTIONS

BBSRC and LAT are related parties of the Institute.

RESEARCH AND DEVELOPMENT

All research and development costs are written off as incurred.

CHARITABLE STATUS

Rothamsted Research Limited is a registered charity, registration number 802038, and in consequence is exempt from taxation on income arising from and expended on its charitable activities.

FOREIGN CURRENCIES

Transactions in foreign currencies are recorded using the rate of exchange ruling at the date of that transaction. Monetary assets and liabilities denominated in foreign currencies are translated using the rate of exchange ruling at the balance sheet date and unrealised and realised gains and losses on translation are included in the Statement of Financial Activities.

FINANCIAL INSTRUMENTS

The Group applies the provisions of Section 11 'Basic Financial Instruments' and Section 12 'Other Financial Instruments Issues' of FRS 102, in full, to all its financial instruments.

Financial assets and financial liabilities are recognised when the Group becomes a party to the contractual provisions of the instrument, and are offset only when the Group currently has a legally enforceable right to set off the recognised amounts and intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

Financial Assets

Debtors

Debtors which are receivable within one year and which do not constitute a financing transaction are initially measured at the transaction price. Such debtors are subsequently measured at amortised cost, being the transaction price less any amounts settled and any impairment losses.

A provision for impairment of debtors is established when there is objective evidence that the amounts due will not be collected per the original terms of the contract. Impairment losses are recognised as expenditure in the Statement of Financial Activities for the excess of the carrying value of the debtor over the present value of the future cash flows discounted using the original effective interest rate. Subsequent reversals of an impairment loss that objectively relate to an event occurring after the impairment loss was recognised, are recognised immediately in the Statement of Financial Activities.

Concessionary loans are measured at the amount paid, including interest accrued and after impairment, where applicable.

Financial Liabilities

Creditors

Creditors payable within one year that do not constitute a financing transaction are initially measured at the transaction price and subsequently measured at amortised cost, being the transaction price less any amounts settled.

SIGNIFICANT JUDGEMENTS AND ESTIMATES

The Group makes estimates and assumptions concerning the future. The resulting accounting estimates and assumptions will, by definition, seldom equal the related actual results. The estimates and assumptions that have a

Rothamsted Research Limited

ACCOUNTING POLICIES

significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

Key sources of estimation uncertainty include:

The prior year restatement to correct historical depreciation charges of £1,161k includes an assumption that based on £919k of historical errors in classification identified it can be estimated that a further £242k of the same classification error occurred historically. This total adjustment of £1,161k matches the difference which was present between the restricted capital fund and the underlying restricted fixed assets. This estimate does not impact the overall level of income or expenditure but impacts the classification of funds between unrestricted and restricted.

Income from grants for scientific research is recognised using one of three methods depending on the specific conditions of the individual research grant award. These three methods are milestone, expenditure led or straight line.

For milestone grants specific milestones are used to determine entitlement to income and should an invoice have not been raised this will be included as a debtor (accrued income).

For straight line grants, there are implicit time conditions within the grant agreement which, in the absence of specific milestones are used to determine entitlement. In these instances, the duration elapsed is deemed a reliable estimate for entitlement to receive payment for work/service/delivery performed. Should actual income received exceed this amount the excess is included as a creditor (deferred income) and should actual income received be less than the entitlement amount this is included as a debtor (accrued income).

For expenditure led grants, in the absence of specific milestones or implicit time conditions to determine entitlement, income is recognised to the extent that resources have been committed to the specific project, as this is deemed to be a reliable estimate of the right to receive payment for the work performed. In this case, cash received in excess of expenditure is included as a creditor (deferred income) and expenditure in excess of cash included as a debtor (accrued income).

The methodology applied to each grant will impact the income recognised in the Statement of Financial Activities and therefore is an important estimate in the context of these financial statements.

Grants received for capital expenditure are included in the Statement of Financial Activities when the Group is entitled to receipt, whereas the depreciation on those grant-funded capital assets is reflected in the Statement of Financial Activities over the useful economic lives of those assets as stated on page 31. The depreciation cost (included in note 10) is significant to the result as shown in the financial statements and, accordingly, the expected useful lives are an important estimate in the context of these financial statements

Under the terms of the bare licence, the Charity has unencumbered usage of certain buildings reported as fixed assets in note 10 in these financial statements. The trustee-directors are confident that the Institute will retain a legal right to occupy the land and buildings for the foreseeable future. The land is owned by The Lawes Agricultural Trust.

Unlisted investments are carried at directors' estimate of fair value as at the Balance Sheet date, and any gains or losses taken to the Statement of Financial Activities. The estimate of fair value is based on the holding as a proportion of the net asset value as per the most recently available information .

Rothamsted Research Limited

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 March 2022

1	TRADING INCOME GROUP	Unrestricted 2022 £'000	Unrestricted 2021 £'000	Restricted 2022 £'000	Restricted 2021 £'000	Total 2022 £'000	Total 2021 £'000
	Consultancy	42	-	-	-	42	-
	Royalties	101	-	-	-	101	-
	Rental Income	39	29	-	-	39	29
	Back Office	164	94	-	-	164	94
	Other	6	4	-	-	6	4
		<u>352</u>	<u>127</u>	<u>-</u>	<u>-</u>	<u>352</u>	<u>127</u>
	CHARITY	Unrestricted 2022 £'000	Unrestricted 2021 £'000	Restricted 2022 £'000	Restricted 2021 £'000	Total 2022 £'000	Total 2021 £'000
	Consultancy	42	-	-	-	42	-
	Royalties	101	-	-	-	101	-
	Rental Income	39	29	-	-	39	29
	Back Office	164	94	-	-	164	94
	Other	6	4	-	-	6	4
		<u>352</u>	<u>127</u>	<u>-</u>	<u>-</u>	<u>352</u>	<u>127</u>
2	INVESTMENT INCOME	Unrestricted 2022 £'000	Unrestricted 2021 £'000	Restricted 2022 £'000	Restricted 2021 £'000	Total 2022 £'000	Total 2021 £'000
	GROUP AND CHARITY						
	Dividend income	28	25	-	-	28	25
	Interest receivable	11	15	-	-	11	15
		<u>39</u>	<u>40</u>	<u>-</u>	<u>-</u>	<u>39</u>	<u>40</u>

Rothamsted Research Limited

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 March 2022

3 CHARITABLE ACTIVITIES

Total income from charitable activities is analysed as follows:

GROUP AND CHARITY	Unrestricted 2022 £'000	Restated Unrestricted 2021 £'000	Restricted 2022 £'000	Restated Restricted 2021 £'000	Total 2022 £'000	Total 2021 £'000
Strategic Funding	-	-	10,087	10,087	10,087	10,087
Competitive Project Grant	5	4	4,371	2,987	4,376	2,991
Open Access Funding	-	-	85	85	85	85
Strategic Hires	-	-	200	200	200	200
Institute Development grant	-	-	201	-	201	-
Capital Equipment	-	-	5,480	3,583	5,480	3,583
Capital maintenance	-	-	2,227	1,235	2,227	1,235
Redundancy Funding	-	-	-	845	-	845
Resource Grant Funding	1,870	5,190	1,730	1,600	3,600	6,790
TOTAL BBSRC	1,875	5,194	24,381	20,622	26,256	25,816
DEFRA	-	10	1,113	317	1,113	327
Other Government Departments / Public Sector (see below)	58	28	2,178	2,052	2,236	2,080
European Union	-	-	346	797	346	797
Industry	166	139	1,516	1,375	1,682	1,514
Trusts, Foundations, Charities	465	729	250	9	715	738
SHAKE Climate	-	-	919	1,181	919	1,181
Income from Farm Operations	689	707	-	-	689	707
ERDF	-	-	204	590	204	590
Postgraduate Education and Training Union	202	35	490	572	692	607
Open Access Funding (RCUK)	-	-	40	60	40	60
Income from H&CE	307	134	-	-	307	134
VAT Recovery	253	324	-	-	253	324
Recharges to Related Parties	358	285	-	-	358	285
Miscellaneous income	75	13	2	-	77	13
TOTAL INCOME	4,448	7,598	31,439	27,575	35,887	35,173
Other Government Departments / Public Sector: Other Research Councils	14	-	1,874	1,947	1,888	1,947
Other	44	28	304	105	348	133
	58	28	2,178	2,052	2,236	2,080

Rothamsted Research Limited
NOTES TO THE FINANCIAL STATEMENTS
for the year ended 31 March 2022

4 INCOME

GROUP	Unrestricted	Restated Unrestricted	Restricted	Restated Restricted	Total	Total
Analysis of income by geographical region:	2022 £'000	2021 £'000	2022 £'000	2021 £'000	2022 £'000	2021 £'000
Domestic Customers (UK)	4,604	7,893	30,819	26,630	35,423	34,523
EU Customers	120	-	528	931	648	931
Non - EU Customers	115	-	92	14	207	14
	<u>4,839</u>	<u>7,893</u>	<u>31,439</u>	<u>27,575</u>	<u>36,278</u>	<u>35,468</u>

CHARITY	Unrestricted	Restated Unrestricted	Restricted	Restated Restricted	Total	Total
Analysis of income by geographical region:	2022 £'000	2021 £'000	2022 £'000	2021 £'000	2022 £'000	2021 £'000
Domestic Customers (UK)	4,604	7,765	30,819	26,630	35,423	34,395
EU Customers	120	-	528	931	648	931
Non – EU Customers	115	-	92	14	207	14
	<u>4,839</u>	<u>7,765</u>	<u>31,439</u>	<u>27,575</u>	<u>36,278</u>	<u>35,340</u>

5 COST OF RAISING FUNDS

GROUP	Unrestricted	Unrestricted	Restricted	Restricted	Total	Total
	2022 £'000	2021 £'000	2022 £'000	2021 £'000	2022 £'000	2021 £'000
Consultancy	11	15	-	-	11	15
Cost of goods sold	-	101	-	-	-	101
	<u>11</u>	<u>116</u>	<u>-</u>	<u>-</u>	<u>11</u>	<u>116</u>
CHARITY	Unrestricted	Unrestricted	Restricted	Restricted	Total	Total
	2022	2021	2022	2021	2022	2021
	£'000	£'000	£'000	£'000	£'000	£'000
Consultancy	11	15	-	-	11	15

Rothamsted Research Limited

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 March 2022

6a EXPENDITURE ON CHARITABLE ACTIVITIES

	Group 2022	Group 2021	Charity 2022	Charity 2021
	£'000	£'000	£'000	£'000
<u>Scientific research</u>				
Direct	20,252	19,437	20,252	19,538
Other	5,114	4,675	5,114	4,675
Support	6,139	5,954	6,139	5,954
	31,505	30,066	31,505	30,167
<u>Post graduate education & training</u>				
Direct	631	744	631	744
Other	0	0	0	0
Support	185	215	185	215
	816	959	816	959
<u>Total</u>				
Direct	20,883	20,181	20,883	20,282
Other	5,114	4,675	5,114	4,675
Support	6,324	6,169	6,324	6,169
	32,321	31,025	32,321	31,126
<u>Unrestricted</u>				
Direct	770	491	770	592
Other	159	443	159	443
Support	6,324	6,169	6,324	6,169
	7,253	7,103	7,253	7,204
<u>Restricted</u>				
Direct	20,113	19,690	20,113	19,690
Other	4,955	4,232	4,955	4,232
Support	0	0	0	0
	25,068	23,922	25,068	23,922
<u>Total</u>				
Direct	20,883	20,181	20,883	20,282
Other	5,114	4,675	5,114	4,675
Support	6,324	6,169	6,324	6,169
	32,321	31,025	32,321	31,126

Rothamsted Research Limited

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 March 2022

Direct costs £20,884k (2021: £20,181k) for the Group and £20,884k (2021: £20,282k) for the Charity are those associated with providing the activity, such as laboratory supplies. Other costs of £5,114k (2021: £4,675k) include indirect costs relating to premises and equipment. Support costs are detailed in Note 6b.

6b) SUPPORT COSTS

The Group and Charity allocate support costs as shown in the table below. Support costs are allocated on a basis consistent with the use of expenditure.

GROUP AND CHARITY

	Scientific research £'000	Postgraduate education and training £'000	Total 2022 £'000	Total 2021 £'000
Commercial and Finance	974	28	1,002	879
Human Resources	308	9	317	307
Computing Service	571	18	589	574
Institute Management	1,918	59	1,977	1,714
Other administration	2,279	70	2,349	2,608
Governance	89	1	90	87
	<u>6,139</u>	<u>185</u>	<u>6,324</u>	<u>6,169</u>

An analysis of the comparative 2020/21 support costs are as follows:

GROUP AND CHARITY

	Scientific research £'000	Postgraduate education and training £'000	Total 2021 £'000
Commercial and Finance	848	31	879
Human Resources	296	11	307
Computing Service	554	20	574
Institute Management	1,654	60	1,714
Other administration	2,516	92	2,608
Governance	86	1	87
	<u>5,954</u>	<u>215</u>	<u>6,169</u>

Rothamsted Research Limited

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 March 2022

7	GOVERNANCE COSTS	Unrestricted 2022 £'000	Unrestricted 2021 £'000	Restricted 2022 £'000	Restricted 2021 £'000	Total 2022 £'000	Total 2021 £'000
	GROUP AND CHARITY						
	Audit fee	38	38	-	-	38	38
	Technical support	52	49	-	-	52	49
		<u>90</u>	<u>87</u>	<u>-</u>	<u>-</u>	<u>90</u>	<u>87</u>

No Directors (2021:None) claimed or were reimbursed travel expenses as board meetings were held virtually.

Under the amended Articles of Association approved by Special Resolution on 10 December 2013, the Charity is authorised to remunerate its Chairman, and in the year ended 31 March 2022 paid an honorarium of £10,932 (2021: £10,932). Other trustees received £Nil (2021: £Nil).

8	NET INCOME/(EXPENDITURE) IS STATED AFTER CHARGING/(CREDITING) THE FOLLOWING:	Group 2022 £'000	Charity 2022 £'000	Group 2021 £'000	Charity 2021 £'000
	Interest receivable	(11)	(11)	(15)	(15)
	Auditor's remuneration – audit services – parent	38	38	38	38
	Auditor's remuneration – audit services – subsidiary	-	-	-	-
	Auditor's remuneration – taxation advisory	-	-	12	12
	Auditor's remuneration – taxation compliance	2	2	2	2
	Depreciation	3,554	3,554	3,170	3,170
	Amortisation	261	261	261	261

Rothamsted Research Limited
NOTES TO THE FINANCIAL STATEMENTS
for the year ended 31 March 2022

9 STAFF COSTS AND NUMBERS	Unrestricted 2022 £'000	Unrestricted 2021 £'000	Restricted 2022 £'000	Restricted 2021 £'000	Total 2022 £'000	Total 2021 £'000
GROUP						
Salaries and wages	5,542	5,650	8,197	7,537	13,739	13,187
Social security costs	552	497	830	755	1,382	1,252
Other pension costs	824	906	1,308	1,427	2,132	2,333
Redundancy costs	10	17	12	845	22	862
	<u>6,928</u>	<u>7,070</u>	<u>10,347</u>	<u>10,564</u>	<u>17,275</u>	<u>17,634</u>
CHARITY						
	Unrestricted 2022 £'000	Restated Unrestricted 2021 £'000	Restricted 2022 £'000	Restated Restricted 2021 £'000	Total 2022 £'000	Total 2021 £'000
Salaries and wages	5,542	5,650	8,197	7,537	13,739	13,187
Social security costs	552	497	830	755	1,382	1,252
Other pension costs	824	906	1,308	1,427	2,132	2,333
Redundancy costs	10	17	12	845	22	862
	<u>6,928</u>	<u>7,070</u>	<u>10,347</u>	<u>10,564</u>	<u>17,275</u>	<u>17,634</u>

The average number of persons employed by category was:

	Group Total 2022 No.	Charity Total 2022 No.	Group Total 2021 No.	Charity Total 2021 No.
Science staff	277	277	269	269
Technical and administrative staff	106	106	105	105
	<u>383</u>	<u>383</u>	<u>374</u>	<u>374</u>

The average number of persons (full time equivalent) employed by category was:

	256	256	239	239
Science staff	256	256	239	239
Technical and administrative staff	101	101	101	101
	<u>357</u>	<u>357</u>	<u>340</u>	<u>340</u>

Rothamsted Research Limited

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 March 2022

9 STAFF COSTS AND NUMBERS (continued)

The number of staff with emoluments greater than £60,000, all of whom were accruing pension benefits, was:

	Group Total 2022	Charity Total 2022	Group Total 2021	Charity Total 2021
£60,000 - £69,999	10	10	12	12
£70,000 - £79,999	8	8	4	4
£80,000 - £89,999	2	2	2	2
£90,000 - £99,999	1	1	2	2
£100,000 - £109,999	1	1	1	1
£110,000 - £119,999	2	2	-	-
£150,000 - £159,999	1	1	1	1
	<u>25</u>	<u>25</u>	<u>22</u>	<u>22</u>

Remuneration for key management personnel (Trustees and executive team), was £1,097k, including employer's national insurance and pension contributions (2021: £1,059k, 10 employees).

Charity staff employed prior to the change in governance are BBSRC employees who are subject to BBSRC terms and conditions of service and are appointed by the Charity under delegated powers. Although the legal liability for employment rested with the BBSRC through to 31 March 2021, the Charity is expected to meet all staff costs arising from normal activities.

Ex BBSRC staff employed by Rothamsted Research Ltd are members of the Research Councils' Pension Schemes (RCPS), which are funded on a pay-as-you-go basis principally through employer and employee contributions and annual Grant-in-Aid. The pension schemes are by analogy to the Principal Civil Service Pension Scheme (PCSPS), except that the schemes, which are defined benefit schemes and provide retirement and related benefits on final emoluments, redundancy and injury benefits are administered and funded by the Research Councils. The pension schemes are administered by the Research Councils' Joint Superannuation Services and the schemes' finances are administered by the BBSRC. Under the definitions set out in Financial Reporting Standard 102 the schemes are a multi-employer pension scheme. The Charity is unable to identify its share of the underlying assets and liabilities of the scheme. Accordingly, the Charity has taken advantage of the exemption of FRS 102 and has accounted for its contributions to the scheme as if it were a defined contribution scheme. For 2021/22, the Group paid £1,008k (2021: £1,031k) in employer's contributions into the scheme. A separate Research Councils' Pensions Schemes Account was published for the year ended 31 March 2022 and contains the further disclosure of information under the relevant accounting standard. The total net liability as at 31 March 2022 was £6.658m (2021: £6.658m). The Group expects to pay £1,127k in respect of RCPS and £1,763k in respect of the defined contribution scheme in employer's contributions in 2022/23.

Staff employed since 1 April 2012 are members of a defined contribution scheme, as noted on page 4. Group contributions made in 2021/22 amounted to £1,539k (2021: £1,171k), and accrued contributions at 31 March 2022: £150k (2021: £Nil). In the year, the Charity paid £7k in premiums for Professional Indemnity Insurance (2021: £7k).

Rothamsted Research Limited
NOTES TO THE FINANCIAL STATEMENTS
for the year ended 31 March 2022

10	TANGIBLE FIXED ASSETS	Land & Buildings £'000	Plant and machinery £'000	Fixtures, fittings and vehicles £'000	Total £'000
	GROUP				
	Cost:				
	As at 1 April 2021	70,805	31,620	6,500	108,925
	Additions	1,428	4,482	720	6,630
	As at 31 March 2022	72,233	36,102	7,220	115,555
	Accumulated depreciation:				
	As at 1 April 2021	30,931	22,975	4,146	58,052
	Charge for the year	1,512	1,229	813	3,554
	As at 31 March 2022	32,443	24,204	4,959	61,606
	Net book value:				
	As at 31 March 2022	39,790	11,898	2,261	53,949
	As at 31 March 2021	39,874	8,645	2,354	50,873
	CHARITY	Land & Buildings £'000	Plant and machinery £'000	Fixtures, fittings and vehicles £'000	Total £'000
	Cost:				
	As at 1 April 2021	70,805	31,620	6,500	108,925
	Additions	1,428	4,482	720	6,630
	As at 31 March 2022	72,233	36,102	7,220	115,555
	Accumulated depreciation:				
	As at 1 April 2021	30,931	22,975	4,146	58,052
	Charge for the year	1,512	1,229	813	3,554
	As at 31 March 2022	32,443	24,204	4,959	61,606
	Net book value:				
	As at 31 March 2022	39,790	11,898	2,261	53,949
	As at 31 March 2021	39,874	8,645	2,354	50,873

Rothamsted Research Limited

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 March 2022

10 TANGIBLE FIXED ASSETS (Continued)

Under the terms of the bare licence, the Charity has unencumbered usage of the buildings reported as fixed assets above. The trustee-directors are confident that the Institute will retain a legal right to occupy the land and buildings for the foreseeable future. The land is owned by The Lawes Agricultural Trust, a related party as disclosed in note 19.

11 INTANGIBLE FIXED ASSETS

GROUP AND CHARITY	Software £'000	Total £'000
Cost:		
As at 1 April 2021	1,304	1,304
Accumulated amortisation:		
As at 1 April 2021	348	348
Charge for the year	261	261
As at 31 March 2022	609	609
Net book value:		
As at 31 March 2022	695	695
As at 31 March 2021	956	956

12 INVESTMENTS

GROUP	Unlisted investments 2022 £'000	Unlisted investments 2021 £'000
Valuation:		
As at 1 April and 31 March	374	356

The unlisted investments relate to the following holdings:

The Company owns 2,833 £0.01 ordinary shares in VSN International Limited, a 15.87% shareholding (2021: 2,833 £0.01 ordinary shares, a 15.87% shareholding)

The Company also owns 103,675 £0.001 ordinary shares, a 0.9% shareholding in Insense Limited (2021: 103,675 £0.001 ordinary shares, a 0.9% shareholding).

Investments are held at the Directors' estimate of fair value. The valuation was undertaken by management based on publicly available financial information.

Rothamsted Research Limited

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 March 2022

CHARITY	Unlisted investments £'000	Shares in group undertakings £'000	Total £'000
Valuation/cost			
As at 1 April 2021	356	-	356
Unrealised gain	18	-	18
As at 31 March 2022	<u>374</u>	<u>-</u>	<u>374</u>
Impairment as at 31 March 2022	-	-	-
Net Book Value:			
As at 31 March 2022	<u>374</u>	<u>-</u>	<u>374</u>
As at 31 March 2021	<u>356</u>	<u>-</u>	<u>356</u>

Shares in subsidiary undertakings

The Charity held the following shares in subsidiary undertakings at 31 March 2022:

	Shares held Class	%	Capital and Reserves £	Country of Incorporation
Rothamsted Research Holdings Limited (dormant)	Ordinary	100	-	England & Wales
Rothamsted International Consulting Limited (dormant)	Ordinary	100	2	England & Wales
Genetic Technologies Limited (dormant)*	Ordinary	100	2	England & Wales
Rothamsted Experimental Station Limited (dormant)*	Ordinary	100	1	England & Wales
AfSIS Ltd (dormant)	Ordinary	100	8,000	Tanzania

* held indirectly via Rothamsted Research Holdings Limited.

The registered office of these undertakings is Rothamsted Research Limited, Harpenden, Hertfordshire AL5 2JQ except AfSIS Limited. The registered office of this entity is P.O. Box 2704, Dodoma Road, Arusha, Tanzania.

Rothamsted Research Limited

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 March 2022

Rothamsted Enterprises Limited as shown below, is a joint venture between Rothamsted Research Limited (40%), the Lawes Agricultural Trust (40%), and the Biotechnology and Biological Sciences Research Council (20%). The Charity owns 40% of the 5 ordinary shares issued. The group's share of the results of the entity for the year ended 31 March 2022 are summarised below. As at 31 March 2022, the group's interest in this entity was valued at £nil (2021: £20,000) as Rothamsted does not have a legal or constructive obligation to cover the net liabilities of the joint venture.

	2022 £'000	2021 £'000
Turnover	711	654
Administrative expenses	(801)	(637)
Retained profit/(loss) for the year	(90)	17
Recognition of additional prior year profit	-	111
Net (liabilities) at 1 April	20	(108)
Net assets / (liabilities) at 31 March	(70)	20
	2022 £'000	2021 £'000
Being:		
Fixed assets	3,832	4,039
Net current assets	127	272
	3,959	4,311
Liabilities greater than one year	(4,029)	(4,291)
Net assets / (liabilities) at 31 March	(70)	20

SOCIAL INVESTMENTS

Concessionary loans are granted for an initial term of 12 months with interest of 5% per annum. Each loan automatically converts into shares in the event of default or if the purpose of the loan can no longer be effectively furthered. Otherwise the loans are convertible at the Charity's option any time after the initial 12 month term. As at 31 March 2022 6 loans totalling £840k are beyond their initial 12 month term but the option to convert has not been taken nor have any triggering events occurred.

GROUP AND CHARITY	Social Investments £'000	Total £'000
Cost / valuation:		
As at 1 April 2021	840	840
Additions	280	280
Unrealised gain	-	-
As at 31 March 2022	1,120	1,120

Rothamsted Research Limited

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 March 2022

	Impairment as at 31 March 2022	-	-		
	Net Book Value:				
	As at 31 March 2022	1,120	1,120		
	As at 31 March 2021	<u>840</u>	<u>840</u>		
		<u></u>	<u></u>		
13	DEBTORS	Group	Charity	Group	Charity
		2022	2022	2021	2021
		£'000	£'000	£'000	£'000
	Due within one year				
	Trade debtors	755	755	1,210	1,210
	Other debtors	409	409	1,306	1,306
	Prepayments and accrued income	4,496	4,496	3,000	3,000
	VAT recoverable	155	155	80	80
	Due from joint venture – due in one year	60	60	-	-
		<u>5,875</u>	<u>5,875</u>	<u>5,596</u>	<u>5,596</u>
	Other debtors due after one year				
	Due from joint venture	381	381	466	466
		<u>6,256</u>	<u>6,256</u>	<u>6,062</u>	<u>6,062</u>
		<u></u>	<u></u>	<u></u>	<u></u>
14	CREDITORS: Amounts falling due within one year	Group	Charity	Group	Charity
		2022	2022	2021	2021
		£'000	£'000	£'000	£'000
	Trade creditors	2,919	2,919	3,231	3,231
	Payroll creditor	255	255	-	-
	Other taxes and social security	377	377	-	-
	Other creditors	7	4	6	3
	Accruals	1,592	1,592	2,168	2,168
	Deferred income (see note 15)	793	793	2,300	2,300
		<u>5,943</u>	<u>5,940</u>	<u>7,705</u>	<u>7,702</u>
		<u></u>	<u></u>	<u></u>	<u></u>

Rothamsted Research Limited

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 March 2022

15	DEFERRED INCOME represents grant income received in advance of expenditure. The movement can be analysed as follows:	Group 2022 £'000	Charity 2022 £'000	Group 2021 £'000	Charity 2021 £'000
	Opening balance	2,300	2,300	1,922	1,922
	Amounts deferred during the year	793	793	2,300	2,300
	Release of amounts previously deferred	(2,300)	(2,300)	(1,922)	(1,922)
		<u>793</u>	<u>793</u>	<u>2,300</u>	<u>2,300</u>

16	FUNDS	Unrestricted 2022 £'000	Restated Unrestricted 2021 £'000	Restricted 2022 £'000	Restated Restricted 2021 £'000	Total 2022 £'000	Total 2021 £'000
	GROUP						
	Funds as at 31 March	14,977	17,404	57,733	51,362	72,710	68,766
	Funds balances are represented by:						
	Fixed assets	11,651	11,846	44,487	41,199	56,138	53,045
	Current assets	5,788	13,263	16,727	10,163	22,515	23,426
	Current liabilities	(2,462)	(7,705)	(3,481)	-	(5,943)	(7,705)
		<u>14,977</u>	<u>17,404</u>	<u>57,733</u>	<u>51,362</u>	<u>72,710</u>	<u>68,766</u>

	CHARITY	Unrestricted 2022 £'000	Restated Unrestricted 2021 £'000	Restricted 2022 £'000	Restated Restricted 2021 £'000	Total 2022 £'000	Total 2021 £'000
	Funds as at 31 March	14,980	17,387	57,733	51,362	72,713	68,749
	Funds balances are represented by:						
	Fixed assets	11,651	11,826	44,487	41,199	56,138	53,025
	Current assets	5,788	13,263	16,727	10,163	22,515	23,426
	Current liabilities	(2,459)	(7,702)	(3,481)	-	(5,940)	(7,702)
		<u>14,980</u>	<u>17,387</u>	<u>57,733</u>	<u>51,362</u>	<u>72,713</u>	<u>68,749</u>

Rothamsted Research Limited

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 March 2022

	2022	Restated 2021
	£'000	£'000
GROUP – GENERAL FUNDS		
Balance brought forward	15,064	15,399
Net (expenditure)/income	(2,427)	876
Designated in year	-	(3,600)
Released from designated funds	1,590	2,010
Transfer from restricted funds	-	379
	<hr/>	<hr/>
Balance carried forward	14,227	15,064
	<hr/>	<hr/>

	2022	Restated 2021
	£'000	£'000
CHARITY – GENERAL FUNDS		
Balance brought forward	15,047	15,510
Net (expenditure)/income	(2,407)	748
Designated in year	-	(3,600)
Released from designated funds	1,590	2,010
Transfer from restricted funds	-	379
	<hr/>	<hr/>
Balance carried forward	14,230	15,047
	<hr/>	<hr/>

	2022	2021
	£'000	£'000
DESIGNATED ESTATE REBUILD FUND		
GROUP AND CHARITY		
Balance brought forward	2,340	750
Designated in the year	-	3,600
Released in the year	(1,590)	(2,010)
	<hr/>	<hr/>
Balance carried forward	750	2,340
	<hr/>	<hr/>

£750k of the designated fund relates to funds set aside by the trustee-directors for the transformation of Rothamsted.

Rothamsted Research Limited

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 March 2022

GROUP AND CHARITY RESTRICTED	Restated				31 March 2022 £'000
	1 April 2021 £'000	Income £'000	Expenditure £'000	Transfers £'000	
Capital fund	40,359	7,707	(3,088)	-	44,978
Estate Rebuild fund	2,000	-	-	-	2,000
Open Access fund(RCUK)	5	40	(26)	-	19
Shake Climate Change	1,285	919	(164)	-	2,040
BBSRC Resource Grant	671	10,172	(10,609)	(26)	208
RI fellows	136	-	(56)	-	80
Strategic Hires	-	200	(200)	-	-
IDG	-	201	(5)	-	196
Transformation award	4,483	1,730	(1,174)	-	5,039
Restricted Projects	2,423	10,470	(9,721)	(735)	2,437
Capital funded from Competitive Restricted Funding	-	-	(25)	735	710
Capital funded from Strategic Restricted Funding	-	-	-	26	26
	<u>51,362</u>	<u>31,439</u>	<u>(25,068)</u>	<u>-</u>	<u>57,733</u>

The Capital fund principally represents funding received, largely from the BBSRC, for the acquisition of tangible fixed assets. These assets are built on land that is not owned by the Institute. It represents the net book value of such fixed assets. The Estate Rebuild fund represents funding received from the BBSRC in respect of ensuring the long-term sustainability of the Institute's estate facilities. The Open Access fund represents funding received from the UKRI, in respect of the RCUK requirement for publications to be openly available on a publisher's site. SHAKE climate change is a programme which helps entrepreneurs and start ups who are combating climate change. Of the fund closing balance of £2,040k; £1,120k has been provided as social investment loans and is accounted for within the balance sheet. In accordance with the Institute Standard Conditions of Grant it has become required to place all grant award payments from the BBSRC in relation to ISP's in a restricted reserve called BBSRC resource grant. RI fellows funds are used to make awards to scientists from developing and emerging countries worldwide to conduct research into agriculture in developing countries. The transformation award is monies received towards the overall Transformation Project.

Three new restricted funds have been created in the year ended 31st March 2022, with prior year numbers being restated to create an opening balance on the fund. Restricted Projects against which all competitive award activity is charged, and two funds for capital items purchased from restricted competitive awards and restricted strategic awards.

Rothamsted Research Limited

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 March 2022

An analysis of the comparative 2020/21 restricted fund movements follows:

GROUP AND CHARITY RESTRICTED	Restated 1 April 2020 £'000	Income £'000	Expenditure £'000	Transfers £'000	Restated 31 March 2021 £'000
Capital fund	38,169	4,818	(2,628)	-	40,359
Estate Rebuild fund	2,379	-	-	(379)	2,000
Open Access fund(RCUK)	-	60	(55)	-	5
Shake Climate Change Gates Foundation(ISDA)	727	1,181	(623)	-	1,285
BBSRC Resource Grant	-	-	-	-	-
RI fellows	873	10,372	(10,574)	-	671
Redundancy (2019-20)	147	-	(11)	-	136
Transformation award	-	845	(845)	-	-
Restricted Projects	3,145	1,600	(262)	-	4,483
	2,648	8,699	(8,924)	-	2,423
	<u>48,088</u>	<u>27,575</u>	<u>(23,922)</u>	<u>(379)</u>	<u>51,362</u>

17 PRIOR PERIOD ADJUSTMENT

The figures for the year ended 31st March 2021 have been restated to reflect the creation of a new restricted fund for scientific research project awards and to correct the classification of historic depreciation charges. Scientific research project awards and associated expenditure had been previously classified as unrestricted but have now been reclassified as restricted. Income, expenditure and total movement for the prior year remain the same but the distribution between unrestricted and restricted and therefore the opening balances for funds brought forward into the year ended 31st March 2022 have been adjusted to reflect this revised treatment. Following a historic review of the restricted capital fund and the expected useful life of the underlying assets it became apparent that there had been a mismatch between the restricted fund the incoming capital receipt was booked to and the unrestricted fund to which depreciation was charged for some assets. Income, expenditure and total movement for the prior year remain the same but the distribution between unrestricted and restricted and therefore the opening balances for funds brought forward into the year ended 31 March 2022 and 31 March 2021 have been adjusted to correct this past mistreatment.

GROUP	Unrestricted 2021 £'000	Unrestricted 2020 £'000	Restricted 2021 £'000	Restricted 2020 £'000	Total 2021 £'000	Total 2020 £'000
Funds as previously stated	18,666	17,636	50,100	46,601	68,766	64,237
Reclassifications:						
Scientific project awards	(2,423)	(2,648)	2,423	2,648	-	-
Depreciation correction	1,161	1,161	(1,161)	(1,161)	-	-
Total funds as restated	17,404	16,149	51,362	48,088	68,766	64,237
CHARITY	Unrestricted 2021 £'000	Unrestricted 2020 £'000	Restricted 2021 £'000	Restricted 2020 £'000	Total 2021 £'000	Total 2020 £'000
Funds as previously stated	18,649	17,747	50,100	46,601	68,749	64,348
Reclassifications						
Scientific project awards	(2,423)	(2,648)	2,423	2,648	-	-
Depreciation correction	1,161	1,161	(1,161)	(1,161)	-	-
Total funds as restated	17,387	16,260	51,362	48,088	68,749	64,348

Rothamsted Research Limited

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 March 2022

Reclassifications in relation to income and expenditure for the year ended 31 March 2021 were as follows:

GROUP	Unrestricted income £'000	Restricted income £'000	Unrestricted expenditure £'000	Restricted expenditure £'000
As previously stated	16,592	18,876	16,143	14,998
Reclassifications	(8,699)	8,699	(8,924)	8,924
Total funds as restated	7,893	27,575	7,219	23,922

There is no difference between the reclassification adjustments made at group and charity level.

Rothamsted Research Limited
NOTES TO THE FINANCIAL STATEMENTS
for the year ended 31 March 2022

18	RECONCILIATION OF GROUP NET		
	INCOME/(EXPENDITURE) FOR THE YEAR TO NET	2022	2021
	CASH GENERATED FROM/ (USED IN) OPERATIONS	£'000	£'000
	Net income/ (expenditure) for the year	3,944	4,529
	Adjustments for:		
	Depreciation of tangible fixed assets	3,554	3,170
	Amortisation of intangible fixed assets	261	261
	Dividends, interest and rents from investments	(39)	(40)
	Share of joint venture loss / (gain)	20	(128)
	Capital Grants	(7,707)	(4,818)
	Operating cash flows before movements in working capital	33	2,974
	Decrease/(Increase) in stocks	(139)	4
	Decrease/(increase) in debtors	(194)	(1,160)
	Increase/(decrease) in creditors	(1,762)	2,996
		(2,095)	1,840
	Cash generated from / (used in) operations	(2,062)	4,814
	ANALYSIS OF CASH AT BANK AND IN HAND		
	Cash and cash equivalents represent:	2022	2021
	Bank balances	£'000	£'000
	Short term deposits 90 days or less	7,872	8,112
		-	1,000
	Cash and cash equivalents	7,872	9,112
	Short term deposits more than 90 days	7,500	7,504
	Cash at bank and in hand as per balance sheet	15,372	16,616

Rothamsted Research Limited

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 March 2022

19 RECONCILIATION OF CHARITY NET INCOME/ (EXPENDITURE) FOR THE YEAR TO NET CASH GENERATED FROM / (USED IN) BY OPERATIONS	2022 £'000	2021 £'000
Net income / (expenditure) for the year	3,964	4,401
Adjustments for:		
Depreciation of tangible fixed assets	3,554	3,170
Amortisation of intangible fixed assets	261	261
Dividends, interest and rents from investments	(39)	(40)
Gain on disposal of tangible fixed assets	-	-
Capital grants	(7,707)	(4,818)
Operating cash flows before movements in working capital	33	2,974
Decrease/(Increase) in stocks	(139)	4
Decrease/(Increase) in debtors	(194)	(1,189)
(Decrease)/Increase in creditors	(1,762)	3,085
	(2,095)	1,900
Cash generated in / (used in) operations	(2,062)	4,874
ANALYSIS OF CASH AT BANK AND IN HAND		
Cash and cash equivalents represent:	2022 £'000	2021 £'000
Bank balances	7,872	8,112
Short term deposits 90 days or less	-	1,000
Cash and cash equivalents	7,872	9,112
Short term deposits more than 90 days	7,500	7,504
Cash at bank and in hand as per balance sheet	15,372	16,616

Rothamsted Research Limited

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 March 2022

20 RELATED PARTY TRANSACTIONS

As explained in the Trustees' Report (incorporating the Strategic Report), LAT and BBSRC are members of the charitable company and, accordingly, are considered related parties. BBSRC funds scientific research and equipment purchases for the Institute. Note 9 of the financial statements explains the staffing arrangements between BBSRC and the Charity. Land and buildings at North Wyke, Devon are owned by the Biotechnology and Biological Sciences Research Council and occupied by the Charity under a formal lease and at a peppercorn rent. LAT also funds scientific research through grants to the Institute. LAT provides student accommodation to RRes. Details of the agreements regarding the Charity's use of buildings owned by LAT are set out in Note 10, which are currently rent free.

Rothamsted Research is a member of AgriMetrics Ltd and performed administrative and scientific services for the company. The balance of monies owed to RRes outstanding at the year-end was £Nil (2021: £Nil). The Charity made a total sale of £Nil (2021: £3.5k) to AgriMetrics during the year. RRes provides back office support, site support and scientific services to REL

Transactions with related parties

During the year the company entered into the following transactions with related parties which are reported on an as invoiced basis.

	2022 £'000	2021 £'000
Rothamsted Enterprises:		
Sales transactions	221	575
Purchase transactions	142	160
Lawes Agricultural Trust:		
Sales transactions	873	710
Purchase transactions	11	37
UKRI-BBSRC:		
Sales transactions	26,048	25,816
Purchases transactions	125	-
SugaRox:		
Sales transactions	53	-

Amounts due to related parties

	2022 £'000	2021 £'000
Rothamsted Enterprises	4	-
	4	-

Amounts due from related parties

	2022 £'000	2021 £'000
Rothamsted Enterprises	441	467
Lawes Agricultural Trust	174	228
UKRI-BBSRC	228	1,072
SugaRox	142	-
	985	1,767

Rothamsted Research Limited

NOTES TO THE FINANCIAL STATEMENTS

for the year ended 31 March 2022

21 CONTINGENT LIABILITIES

Under the terms of the contract between the Charity and the Biotechnology and Biological Sciences Research Council, should certain fixed assets be sold, a proportion of the proceeds might become payable by the Charity to the Research Council. No such liability exists at 31 March 2022 (2021: £Nil).

22 FINANCIAL INSTRUMENTS

	Group	Charity	Group	Charity
	2022	2022	2021	2021
	£'000	£'000	£'000	£'000
Financial assets held at fair value	<u>374</u>	<u>374</u>	<u>356</u>	<u>356</u>

Rothamsted Research Limited
INCOME AND EXPENDITURE ACCOUNTS
for the year ended 31 March 2022

	Group 2022 £'000	Charity 2022 £'000	Group 2021 £'000	Charity 2021 £'000
Gross income of continuing operations	28,571	28,571	30,650	30,522
Total expenditure of continuing operations	(29,264)	(29,244)	(28,740)	(28,740)
Net income / (expenditure) for the year	<u>(693)</u>	<u>(673)</u>	<u>1,910</u>	<u>1,782</u>
Net (expenditure)/ income for the year	(693)	(673)	1,910	1,782
Net gain on Investments	18	18	202	202
Capital grants received	7,707	7,707	4,818	4,818
Depreciation	<u>(3,088)</u>	<u>(3,088)</u>	<u>(2,401)</u>	<u>(2,401)</u>
Net income / (expenditure) for the year per SOFA	<u>3,944</u>	<u>3,964</u>	<u>4,529</u>	<u>4,401</u>