



Annual Report and Accounts 2008–2009

Forest Research Annual Report and Accounts 2008–2009

Together with the Comptroller and Auditor General's Report on the Accounts

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Cover image: Wind turbines in a coniferous woodland at Whitelee, East Renfrewshire. Forest Research has developed models, in collaboration with the University of Aberdeen, to calculate the impact of construction, soil disturbance, forest cover and turbine efficiency on the overall carbon balance of wind farms sited in forests.

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Chief Executive's Introduction

I was appointed as Forest Research's Chief Executive in June 2008 and am very pleased to be introducing the Agency's Annual Report for the first time. This report focuses on activities in 2008–09, presents delivery against our key performance indicators (KPIs) and details our accounts for the year ending 31 March 2009. It also takes the opportunity to consider the future.

Firstly, I would like to thank my predecessor Professor Peter Freer-Smith, our Research Director, for his hard work in leading the Agency during his tenure as Acting Chief Executive and for helping to lay some of the foundations for the current changes to the organisation. Secondly, I would like to highlight the context in which Forest Research (FR) works. FR is the Forestry Commission's research agency. The Forestry Commission's mission is to protect and expand Britain's forests and woodlands and increase their value to society and the environment. The Forestry Commission is our main customer and FR supports the achievement of its objectives by providing the high-quality research and development needed to underpin delivery.

In the pages that follow, each of FR's five research divisions presents an overview of its achievements over the past year, highlighting just some of the wide-ranging work that FR staff are involved in – from understanding forest and soil carbon balances to providing scientific support for the bioenergy and onshore wind industries. A vital part of this work is our strong emphasis on publishing our research for



a range of audiences – the publications chapter (page 20) gives more details of our peer-reviewed papers and publications. The majority of our work is produced in partnership with others and this is reflected in the number and diversity of FR's research programmes and contracts (see page 28).

On behalf of all FR staff, I would like to express our gratitude for the ongoing support and co-operation of our partners and collaborators both in the UK and further afield. These include the Forestry Commission, central government, the devolved administrations in Wales, Scotland and Northern Ireland, the wider public sector, universities, research institutes, the private sector and the Commission of the European Communities. We greatly value the support and positive interactions that we have with all of our stakeholders and look forward to continuing to work with them in the future.

In particular, I would like to express our sincere thanks to the members of our **Advisory Committee on Forestry Research** and the external Visiting Groups it appoints to

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provide independent assessment of the quality, balance and direction of FR's research programmes. I would also like to thank the members of **FR's Audit and Risk Committee** for their work in advising on financial management, risk control and governance in FR, and the members of our **IP Committee** for their support and sage advice on protecting and commercialising our knowledge.

Of FR's eight KPIs for 2008–09, seven have been fully met and one, relating to external funding, has been partially met. Full details of our progress against the KPIs are shown in the table on page 7. FR's 2008–09 target for non-FR income was not met. This is a reflection of many factors – an increasingly competitive and busy research marketplace; a trend towards shorter-term commissioned projects compared with longer-term research and, towards the end of the year, the effects of the global recession that reduced the research budgets of many customers. However, we fully appreciate that FR's ability to secure external funding and attract successful partnerships is essential for its continued survival and we will therefore continue to focus on attracting external funds and developing relationships that facilitate this.

During the year we have reflected upon and refined our vision for the future, which is for FR **to be a robust, market-relevant and flexible organisation with a reputation for innovative applied science.**

To help achieve this vision, FR has undergone a series of changes. Hugh Evans, an internationally recognised expert on biosecurity issues and former Head of FR's Plant Health Division, has transferred to Aberystwyth with a remit to **expand FR's presence and operations in Wales.** Two further appointments have subsequently supplemented Hugh's presence. This is designed to increase the prominence and presence of forestry research in Wales in order to underpin the Welsh Government's ambitions for the sector.

Given the disappointing financial outturn in 2007–08, we carried out an organisation-wide **efficiency and delivery review** in 2008–09. This highlighted a number of areas in which FR could make some cost savings and improvements in efficiency, including the need to restructure and reprofile its scientific expertise to reflect changing market demands.

Based on the recommendations from this review, FR secured support to offer a voluntary severance scheme to staff in order to enable this change. With the help of FR's trade unions we successfully ran a voluntary early severance scheme and agreed terms with 16 applicants at a total cost of £1.2 million. While this reduction in staff numbers will result in considerable annual salary savings, more importantly it will allow us to recruit new staff in areas where there is growing demand, for example in climate change, renewable energy, urban greening and social science.

Another aspect of improving our future business efficiency has been the implementation during the year of an agency-wide electronic time recording system. As with most software developments, this implementation has not been without teething troubles, but we are now confident that it will serve our needs for the future. The information from this new system will also underpin our shift towards a more collaborative and inter-disciplinary approach.

While reviewing our business efficiency, we also **reassessed FR's structure** to determine whether it was fit for purpose and 'future proof'. In particular, we looked at whether our existing operational structure was relevant to the UK Government's increasing interest in researching the need to adapt to and mitigate climate change. As a result we decided to disband our five science divisions to create three interlinking centres:

- **The Centre for Forestry and Climate Change**
- **The Centre for Forest Resources and Management**
- **The Centre for Human and Ecological Sciences**

At the same time, we have created an **Operations Unit** to improve our corporate and administrative functions such as HR, finance, communications and business development.

This new structure was officially launched on 2 April 2009, with all staff transferred to one of these three centres or the Operations Unit. As well as addressing market needs, this transformation into three centres is designed to remove internal barriers to co-operation and to encourage staff to work in multi-disciplinary teams to meet the rapidly changing and challenging research requirements of their clients from the public and private-sectors.

Clearly, this has been a year of significant change for Forest Research and one involving considerable consultation with and input from our staff. While all change is unsettling, FR staff have shown themselves to be both constructive and positive in moving forward and I would like to offer them my personal thanks for their continued support and engagement with this process. The rationale for these changes is clear: Forest Research is – and seeks to enhance its national and international standing as – a robust, market-relevant and flexible organisation with a reputation for innovative applied science.

As this report shows, these are exciting times at Forest Research and I look forward to a very busy and productive year ahead.



Dr James Pendlebury
Chief Executive



Chief Executive's Introduction

FR Corporate Plan Key Performance Indicators – Progress Report

Key Performance Indicator (KPI)	Commentary
1. During 2008–09 FR will increase its presence in Wales by locating staff in Aberystwyth. By June 2008 we will have appointed a Head of the FR Research Unit, Wales.	Hugh Evans started his new role in Wales on 5 January 2009 and is currently working out of the FC Wales Head Office in Aberystwyth. He has received much support and help from FC Wales and is preparing a business strategy and plan for our future operations in Wales.
2. In 2008–09, FR will increase its non-FC income to £2.4 million.	FR's non-FC income for 2008–09 was £1.9 million.
3. FR will establish a Climate Change Research Hub and an Urban Regeneration Greenspace Centre.	<p>On 16 September FR announced its intention to disband its current divisional structure and its associated internal market and create instead three linked centres: the Centre for Forestry and Climate Change, the Centre for Forest Resources and Management and the Centre for Human and Ecological Sciences. The centres were launched on 2 April 2009 with all staff having been transferred to a centre or the newly created Operations Unit.</p> <p>FR has now established an Urban Regeneration and Greenspace Partnership, which was launched at the ParkCity Conference in London on 25 March 2009.</p>
4. The work of Ecology Division will be reviewed by an external Visiting Group, which will report to the Advisory Committee on Forestry Research in November 2008.	The Visiting Group to Ecology Division visited Alice Holt and the Northern Research Station (NRS) in September 2008. The group was chaired by Keith Kirby (Natural England), with Gary Fry (Head of Research, Department of Landscape Architecture and Spatial Planning, Norwegian University of Life Sciences) and Des Thompson (SNH) as members. The Visiting Group issued its largely supportive report to the Advisory Committee on Forestry Research on 12 November 2008.
5. To improve customer satisfaction we will extend FR's Quality Assurance (QA) scheme to cover customer care, advisory services and the delivery of final outputs.	FR has completed a Customer Satisfaction Evaluation Report for 2008 and has prepared a draft QA system for customer care.
6. Building on last year's skills audit, staff training will be provided in business skills and management of IP, GIS and Equality and Diversity during 2008–09.	FR trained 36 staff in PRINCE 2 project management. Innovation and IP management training events and 'Who We Are' workshops have been held at Alice Holt and NRS. Level 3 Diversity Training has been completed. FR has nominated staff to participate in the Management Development Programme Tactical (MDP) Level 2.
7. To improve transparency and efficiency, FR will implement the recommendations of the 2007 Review of Finance and Project Management during 2008–09.	A new time-recording system and associated reporting has been introduced and is now up and running. It is hoped that this system will suit our needs for the next financial year and the transition to a matrix management structure. Closer monitoring of non-FC income and the ongoing cash position are also being introduced. These measures will improve transparency and efficiency.
8. FR will participate fully in the FC GreenerWays Programme.	FR is actively involved in the FC-wide GreenerWays programme and has committees at Alice Holt and NRS that have been proactive in developing recycling initiatives, raising energy awareness and recording baseline data.

About Forest Research

Forest Research is an agency of the Forestry Commission and is the leading UK organisation engaged in forestry and tree related research.

Aims and objectives

The aims and objectives of Forest Research (FR) are to assist the Forestry Commission (FC) in achieving its high-level objective: to lead the development and promotion of sustainable forest management and to support its achievement internationally.

FR's Vision

To be a robust, market-relevant and flexible research organisation with a reputation for innovative applied science.

FR's Aim

To support and enhance the role of trees, woodlands and forests in sustainable development, by providing high-quality research, development and knowledge transfer.

FR's Objectives

- To inform and support forestry's contribution to the development and delivery of the policies of the UK government and the devolved administrations.
- To provide research, development and monitoring services relevant to UK forestry interests.
- To transfer knowledge actively and appropriately.

Research funding

Much of FR's work is funded by the FC with Corporate and Forestry Support acting as purchaser of research and other services in support of the forestry policies of the UK government and the devolved administrations of Scotland, Wales and Northern Ireland. In addition, FC England, Scotland and Wales purchase research, development and

surveys specifically related to their respective forest estates. In recent years FR has successfully applied for external (non-FC) funding from government departments, the European Union, UK research councils, commercial organisations, private individuals and charities. Collaborative bids with other research providers and consortium funding have become increasingly important, placing emphasis on effective partnership working.

Activities

Research and development are essential components in delivery of the benefits of sustainable forestry in a multifunctional landscape. FR's research, surveys and related scientific services address the social, economic and environmental components of sustainability. There is a focus on providing new knowledge and practical solutions based on high-quality science. Our projects provide understanding, policy advice and guidelines on implementation of best practice (e.g. on forest hydrology, continuous cover forestry, timber quality, land reclamation to woodland, and restoration of native woodlands). Much of the research is directed at increasing the biodiversity, landscape and recreational benefits of woodlands. Protection of GB woodlands from pests and diseases, and predicting the impacts of environmental change are also overarching themes. FR works closely with the FC, the Commission of the European Communities and other international organisations to ensure compliance with international agreements on the sustainable management of forests and the consideration of social and economic issues. The Agency also carries out work on genetic conservation, tree improvement, seed testing, method studies, product evaluation, crop inventory, surveys and monitoring.

Resources

FR currently employs 260 (full-time equivalent) staff at Alice Holt Lodge in Hampshire, the Northern Research Station near Edinburgh, the FC Wales National Office in Aberystwyth and at field stations across England, Scotland and Wales. Contact information is given on the back cover. FR has published a Corporate Plan for the period 2009–2012 and copies are available to download from www.forestresearch.gov.uk/corporateplans

Advisory Committee on Forestry Research

Chairman

PROFESSOR SIR DAVID J. READ, FRS

Professor of Plant Sciences, University of Sheffield and formerly Biological Secretary and Vice-President Royal Society

Secretary

PROFESSOR P. H. FREER-SMITH

Research Director
Forest Research

Members

PROFESSOR C. WARD-THOMPSON

Director, OPENSpace Research Centre and Research Professor of Landscape Architecture
Edinburgh College of Art/
Heriot-Watt University

PROFESSOR R. CLIFT, CBE

Professor of Environmental Technology,
Centre for Environmental Strategy
University of Surrey

MR J. DEWAR

Forestry Commission
Corporate and Forestry Support

PROFESSOR D. EVANS

Consultant in the field of novel crop management solutions
Farnham, Surrey

PROFESSOR P. JARVIS, FRS

Emeritus Professor of Forestry and Natural Resources
Institute of Atmospheric and Environmental Sciences
School of GeoSciences
University of Edinburgh

DR K. J. KIRBY

Forestry and Woodland Officer
Natural England
Peterborough

DR J. PENDLEBURY

Chief Executive, Forest Research
(from June 2008)

MRS W. HARPER

Forestry Commission
Secretary to The Forestry Commissioners and Head of Corporate and Forestry Support

PROFESSOR C. A. GILLIGAN

Professor of Mathematical Biology and Fellow
King's College
Department of Plant Sciences
University of Cambridge

DR C. CAHALAN

School of Agricultural and Forest Sciences
University of Wales Bangor

The Advisory Committee provides guidance for the Agency and the Forestry Commission on the quality and strategic placement of FR's research. The Committee also supports FR staff, by alerting us to new opportunities and networking to raise FR's profile. The Advisory Committee met in May 2008 at Silvan House in Edinburgh, before undertaking a tour to look at some of FR's research work in South Scotland. Meetings allow Committee members to keep up-to-date with FR's work; focus is usually on those research programmes to which Visiting Groups have been appointed in the year.

At its second meeting of the year, in November 2008, the Committee received a report from an external Visiting Group to Ecology Division (chaired by Dr Keith Kirby with Professor Gary Fry and Professor Des Thompson as members). The Visiting Group rated the research programmes of the Division on a four-point scale (A down to D) on the basis of science quality and overall relevance, delivery and progress. The Visiting Group was impressed by the range and quality of work being undertaken by Ecology Division. Its programmes were considered to be delivering well and achieving customer satisfaction. The Group made five overall recommendations focusing

on the creation of larger units to increase synergy and flexibility, accounting for the time spent on advisory work, the approach to external contracts, the need for a more strategic basis for research and on staff development. The report and its recommendations have been given close consideration in the recent restructuring of FR into three centres, and the Group's detailed comments will continue to influence the relevant research programmes.

Over the year the Committee considered FR's strategy for winning external grants and awards, as well as FR's recent reorganisation. They also received an update on the implementation of the 2007 Visiting Group Report on Tree Health Division. A paper on research using genetically modified organisms was presented to the Steering Group for the UK Woodland Assurance Scheme and a horizon scanning exercise was undertaken for FR. Members of the Advisory Committee on Forestry Research have been closely involved in FR's development over the year, through the provision of expertise on review groups, committees and appointment boards. The FC and FR are very grateful for these inputs and also to the three members who are contributing to the ongoing independent UK review of forestry and climate change.