



Forestry and
Land Scotland
Coilltearachd agus
Fearann Alba

Annual Sustainability Report

Financial Year 2020-2021

Overview

Scotland's world-leading climate change legislation sets a target date for net-zero emissions of all greenhouse gases by 2045. Our environment and economy are intrinsically linked, and Scotland's transition to a more prosperous, net-zero emissions economy is already well underway. By managing the national forests and land, FLS has a key role to play in helping to meet this target and mitigate and adapt to the impacts of the Climate Emergency. We have a unique opportunity to act on a large scale to make a real difference. We are putting protecting biodiversity and development nature-based solutions at the heart of our forward thinking approach to building a sustainable business. Our aim is to adapt how we manage our land, reduce our emissions and capture more carbon, leading the way for the land-based sector.

Forestry and Land Scotland manages the national forests and land on behalf of Scottish Ministers. Managing this land - some 9% of Scotland - involves a range of land management types including forestry, conservation, agriculture and development, and a range of practical on-the-ground activities including tree planting, deer management, civil engineering, harvesting, invasive species clearance, visitor facility management, etc. We also grant permissions to developers, minerals companies, farmers and others to undertake activities such as installing renewable energy schemes, quarrying and grazing on the estate.

Our staff support this work through a range of functions, ranging from direct land management activity or supervision of contractors, through to the administration, procurement, finance, HR, digital and other teams that are necessary to enable this work and to run a public body.

Our work involves both:

- 'positive' emissions - from all the sources that any public body would have (such as offices and transport), but also from land-based activities that release carbon such as soil disturbance, peatland degradation, quarrying etc; and
- negative emissions (carbon capture) from planting trees, restoring peatland, generating renewable energy.

Like any other public body we need to adapt our activities to climate change. However, as a land-based body, we recognise that climate change is already having significant impacts on land management. Therefore, alongside our work to prepare our business for the changing climate, we have a strong focus on adapting the way we manage the land to make it more resilient in the face of a changing climate.

UN Sustainable Development Goals supported by Forestry and Land Scotland



Introduction

On 1st April 2019 the Forestry and Land Management (Scotland) Act 2018 came into effect, devolving full responsibility for forestry matters in Scotland to Scottish Ministers.

Two new Scottish Government agencies were also established to carry out Scottish Ministers' functions under the new Act: Forestry and Land Scotland (FLS) took on the roles and responsibilities formerly held by Forest Enterprise Scotland, while Scottish Forestry assumed the role of Forestry Commission Scotland.

FLS is part of that group of public bodies that are considered by the Scottish Government to have specific climate change duties under PART 4 OF THE CLIMATE CHANGE (SCOTLAND) ACT 2009.

These 'Major Players' generally have large estates and/or staff numbers, have a high impact and influence, and are therefore required to contribute to climate change mitigation and to climate change adaptation, and to act sustainably.

FLS published its Climate Change Plan at the end of 2021. In addition, FLS will now report on its Climate Change emissions using the prescribed reporting template as issued by the Scottish Government.

This report has been created using the data reported to the Scottish Government for the reporting year 2020-2021.

Evaluation, Performance Monitoring and Reporting

We monitor and report our annual operational carbon footprint to help us understand how our emissions of greenhouse gases are accounted for, by the different processes and activities within the business.

Knowing our carbon footprint allows us to efficiently manage these emissions and to benchmark ourselves against the UK water industry as a whole.

Our operational carbon footprint for 2019/20 was 254,000 tonnes of carbon dioxide equivalent (tCO₂e). Since we began monitoring and reporting our carbon footprint in 2006/07, our annual emissions have fallen by 45%.

As part of our ongoing effort to improve the accuracy and recording of vital environmental data, our staff regularly gather data on travel, waste, energy, water use and recycling.

We monitor and report this data to help us to understand how the different processes and activities within the business impact and account for our greenhouse gas emissions, also known as our operational carbon footprint.

This information is then applied to the way we manage business sustainability in ways that comply with the relevant environmental legislation. Details of baseline performance can be found in Appendix 1.

However, the continuing COVID-19 regulations and guidance has in some cases prevented us from accessing the meters to gather the collected data so we have had to use some estimated end-of-year readings.

We are working hard to reduce our indirect emissions. Significant effort is required to establish a baseline for emissions generated by our supply chains, and to agree targets for reducing these in future years. Work will be prioritised over a number of years, identifying and targeting high-risk categories first.

Actions taken during 2020-21 to improve sustainability

Energy Efficiency and carbon reduction

During 2020-21, FLS purchased renewable electricity for use in our buildings. During that period, our supplier, EDF supplied Forestry and Land Scotland with 2,804 Megawatt Hours (MWh) of electricity backed by the Renewable Energy Guarantees of Origin (REGO) scheme. EDF confirmed that they have ring-fenced renewable electricity for Forestry and Land Scotland and they will not be allocated or counted against any other claim other than EDF's overall Fuel Mix Disclosure.

There are a wide range of projects being undertaken which will reduce emissions and/or capture carbon, but we are not at the stage of being able to quantify the associated emissions reductions. Examples include:

- minimising the intensity of ground preparation at tree planting;
- are minimising the length of essential new forest roads through good planning
- are restoring land-based carbon stores such as peatlands gathering harvesting residues for use in biomass markets instead of leaving them on the ground; and
- investing in additional capacity in our nurseries to grow trees.

In addition to the projects listed above, we have undertaken some additional practical improvements to our vehicle fleet and buildings during the year. These include:

- We purchased a further 9 electric vehicles bring the FLS fleet total up to 18 out of a fleet size of 336 administration vehicles.
- 5 charging points were installed at Fort Augustus, Creebridge workshop in Newton Stewart, Smithton, Henderson Rd, Balnacoul, Huntly and a further point added at Glentress Peel
- New Office at Durris, Aberdeenshire has been built to modern building eco standards and is well insulated, contains low energy lighting and air source heating
- A Starter Farm Farmhouse retrofit took place and includes the installation of a wall air barrier and thermal insulation as part of the improvements.
- LED lighting and thermal insulation upgrades at Culbokie and Achmore Outstations
- Modernisation of electric heating system at our Straiton outstation (Radiwarm units)
- LED lighting upgrades at Glentool, Straiton and Dalbeattie Deer Larders
- Replacement of R404a refrigerant with R449a, which has a lower Global Warming Potential (GWP), at our Dalmally, Mull and Straiton Deer Larders.
- New Waste Treatment Plant installed at Ardgartan Toilet Block & Visitor Centre to help protect the River Croe.

Looking at energy generated from wind power, FLS has a renewables programme, working collaboratively with energy development partners in a landlord capacity to facilitate renewable infrastructure on Scottish Ministers land. The figure of 2,637,387,216 KWH represents the total installed capacity multiplied by the average national capacity factor to arrive at an annual KWh export figure. $(1115.08\text{MWi} * 8760 * 27\% * 1000)$

In terms of renewables from generated from hydro, FLS has a renewables programme, working collaboratively with energy development partners in a landlord capacity to facilitate renewable infrastructure on Scottish Ministers land. The figure of 183,371,985KWH represents the total installed capacity multiplied by the average national capacity factor to arrive at an annual KWh export figure. $(55.821\text{MWi} * 8760 * 37.5\% * 1000)$.

More schemes are currently under construction and will help us achieve our aim of 2 gigawatt of installed capacity.

As an organisation, we aim to achieve zero 'direct' (Scope 1) emissions from the sources we own or control by 2045. The following are some of the actions we will take to help us make strides in our Net Zero journey:

- We will move to using the public cloud for the storage of our electronic data and records by 2023 and explore options for further digitization of our paper records.
- We will identify a minimum 25% reduction in our building portfolio by 2024 as part of a rationalisation programme.
- We will improve the energy efficiency of our residential properties to minimum EPC Ratings by 2025.
- We will eliminate emissions from the use of combustible fuel in heating by 2030.
- We are planning for a national charging infrastructure to support the replacement of our fossil-fuelled light vehicle fleet with electric vehicles. Our objective is to phase out the need for all new petrol and diesel vehicles by 2030.
- An energy efficiency survey is planned for all buildings to ensure that heating and ventilation of all buildings can be powered by renewable energy sources by 2030.
- Few viable carbon alternatives options currently exist for our 'operational' fleet (e.g. harvesters, front loaders etc.). We will work closely with the forestry sector and machinery suppliers to encourage alternatives, and source them when we can.
- We are implementing 'smarter working' in all our offices and using 'blended working' to support a reduction in emissions. We will continue to explore options to use technology more effectively to communicate, limit the need for staff to travel and reduce our resource consumption and waste footprint.

We are working hard to reduce our indirect emissions – both from purchased electricity (known as Scope 2 emissions) and all other sources – such as business travel, procurement, supply chains, waste and water (Scope 3 emissions). We are working with our suppliers and contractors to reduce the emissions from supplied goods, services and works. Work will be prioritised over a number of years, identifying and targeting high-risk categories first such as harvesting, civil engineering, ground preparation and haulage.

Ways of working are changing for everyone and in the aftermath of the COVID-19 pandemic, we will also need to more closely manage our available resources.

Adapting our organisation to maximise our contribution towards achieving zero emissions will be an essential but challenging task in the years ahead. We will continue to identify opportunities internally, and through collaboration with our suppliers to meet our emission reduction goals.

Ultralow Emission Vehicles

We currently have an admin fleet of 336 cars and light commercial vans, most of which are diesel fuelled.

It is our intention - over time and where-ever possible - to transition to the use of ultra-low emission vehicles (ULEVs). So far, we have 19 ULEV's in our fleet. However, before we can fully focus on fleet transition, we are laying down the necessary network of charging points, both at our own sites and at locations – such as shared office sites - where there might be partnership opportunities with other organisations. As listed in the previous section of this report, we have installed charging points at some additional locations across Scotland and will look to expand on this as resources allow.

It will not happen overnight but we aim to increase the proportion of electric vehicles in the admin fleet to 50% by 2025. We are committed to making this transition and anticipate that by 2030, all of our admin vehicle replacements will be ULEVs. We also hope that ULEV alternative large vehicles such as harvesters will be available to allow us to review our operational fleet as well.

Capture Carbon

We use nature-based solutions to capture carbon. This helps us provide a huge range of 'ecosystem services' for Scotland while we capture carbon, such as flood prevention, slope stabilisation, shelter or soil improvement – and in doing so, they help us to reverse the decline of biodiversity. These projects are also creating quality jobs, often in rural areas, in the expanding 'green economy', and creating the kind of landscape scale change that the biodiversity and climate emergencies require.

Creating new woodland will continue to be a major focus of our carbon capture efforts. We aim to establish another 650 hectares in 2021/22 alone, using tree species that will thrive in the climate of the future. This will ensure we can continue to grow sustainable timber supplies, create habitats and provide places for people to visit.

Our peatland programme is increasing in scale, as well. In 2020/21 we restored 900 hectares, putting Scotland's peatland back on track to move from a net source of carbon to becoming a net 'sink'. By 2025 we expect to be restoring some 3,000 hectares annually, creating valuable habitats for threatened peatland wildlife in the process.

We harvest three million tonnes of timber each year, much of it used in construction where it will continue to lock up carbon long-term. We will use our timber marketing hierarchy to optimise the carbon value of our timber, reduce our global environmental footprint, and supply the emerging bio-economy of the future. We replant around 23 million trees each year to replace those that we fell, as part of a sustainable cycle.

Sustainable Procurement

Sustainability is a fundamental principle of Scottish Government climate policy. One of the key organisational areas which can enable this is through procurement by building responsible supply chains and promoting a collaborative approach to tackling the Climate Emergency.

Our FLS Procurement Strategy 2019-22 highlights that the legal framework underpinning the delivery of public procurement in Scotland sets out the need for organisational procurement strategies with sustainability at their core. This framework has also expanded to other areas of government policy, particularly with regard to building responsible supply chains and more recently to an emerging collaborative approach to tackling the Climate Emergency. Our Strategy was informed by a wide range of procurement data, staff consultation and stakeholder feedback.

Our Regulated Tender strategies must include an assessment using the Scottish Government's Sustainability Test to identify and address how we can optimise economic, social and environmental outcomes of procurement activity. In this context, UIGs undertake life cycle impact mapping and the Sustainable Procurement Guidance to build appropriate measures into each Regulated tender.

Our forests and land are audited by the UK Woodland Assurance Standard (UKWAS). The independent certification standard and audit protocol for verifying sustainable woodland management in Scotland and the rest of the UK.

UKWAS combines the government requirements set out in the UK Forestry Standard with those of the Forest Stewardship Council (FSC) and Programme for the Endorsement of Forest Certification (PEFC), the two independent internationally recognised voluntary certification schemes operating in the UK.

FLS do not routinely conduct procurement involving the direct provision of food however we do supply food products, primarily venison, as a product of our deer control activities. All venison entering the food chain is supplied and managed to the Scotland Quality Wild Venison (SQWV) standard.

Our procurement activities follow these strategies and policies:

Our procurement Strategy 2019-2022 is available from:

<https://forestryandland.gov.scot/images/researchandresources/procurement/Procurement-Strategy-2019-2022.pdf>

Below are some examples of best practice:

1) We are working cross functionally to implement the new Scottish Government Procurement Policy Note SPPN1/21 relating to climate and the circular economy, and Procurement are the Business Lead for FLS' "Tackling the Climate Emergency through Contracts and Sustainable Supply" workstream.

FLS represent Central Government in the cross-sectoral Procurement Climate Forum. One of our Category Managers sits on the Operational Work Stream of this forum. The aim of this work stream

is to help public contracting authorities to plan for net zero emissions by providing the tools to help them create a “From now to 2030 (FNT2303) climate impact plan”. This will include scoping and planning of activities for reduction in climate impacts across all relevant Spend Areas.

The group has been responsible for the development and creation of a FNT2030 Category Action Plan Template and Primary Impact Area for Climate Change Guides which we will be implementing internally as category strategies are developed.

2) As part of our commitments to tackling climate change, FLS has an aim to increase the proportion of electric vehicles to 10% of the fleet by 2021 and up to 50% by 2025. Our ambition is for all vehicle replacements being electric or Ultra Low Emission Vehicles (ULEV) by 2030, in advance of Scottish Government’s ambition to phase out the need for new petrol and diesel cars and vans by 2032.

In 2020/21 we purchased 11 electric or ULEV vehicles with funding assistance from Transport Scotland, bringing our fleet to 12 electric vehicles. We have also installed additional electric vehicle charging points as part of another contract.

3) To support bidders with the contract implementation for both our Drill and Blast and Supply of Plants Frameworks, events were held with each of the successful suppliers accessed online via a web conferencing tool.

The benefits of using online tools for improving accessibility for suppliers, reducing travel time and costs for suppliers and staff and reducing carbon emissions through travel are tremendous. FLS is committed to increasing our market engagement for each Category and Regulated tender, the use of technology to reach and engage with suppliers will be essential to achieve this.

Further reading about our sustainable procurement activity is available in our Annual Procurement Report which is found here: <https://forestryandland.gov.scot/publications/540-annual-procurement-report-2020-21/download>

Moving forward we will continue to increase sustainability in our future procurements, engaging cross-functionally and externally to identify opportunities for action on climate change through our contracts and relationships with our suppliers.

Climate Change Adaptation

Climate science is telling us to expect warmer and wetter winters, hotter and drier summers, and more unpredictable and extreme weather events. We are already seeing these changes happen now and as they intensify they will have an increasing impact on the national forests and land and the biodiversity associated with it.

Future climate related risks have been considered in general terms and it has been recognised that many of these risks relate to the management of the national forests and lands. A full strategic climate change risk assessment for FLS has not been carried out. We are putting in place resources to enable us to do climate risk assessments.

Our qualified and highly experienced forest planners who are designing the future forests are informally assessing climate risk and building in adaptation measures at the forest-block level, and have been for many years (e.g. increasing tree species diversity). Many of these formal plans have been, or are being implemented. We use a range of tools to help us make decisions e.g. on species choice or windthrow hazard and these take account of climate change. However, at this stage we do not know how fast and how far we need to go in building in adequate controls.

In 20-21 we prepared a Climate Change Adaptation Strategy (published in summer 2021) and this will guide us in future. During 20-21 we undertook a considerable amount of preparatory work to enable us, in 21-22, to put in place such policies, strategies and action plans.

During the year, we have taken the following actions to adapt to climate change:

- Set up a Climate Change Adaptation programme board.
- Since April 2019 an Adaptation Programme Manager has been in post, supported by an Adaptation Programme Support Officer;
- Continued to ensure that all of our long term planning (known as Land Management Planning) is considered in the light of climate change e.g.
 1. Planning tree species that will perform well in future climates.
 2. Planning the activity on the land to contribute to Flood Risk Management Planning and River Basin Management Planning and other outputs.
 3. Planning activity to avoid negative effect on the wider economy e.g. landslides/windblown trees;
- Taking action in light of climate change e.g. building resilience into the A82 trunk road including slope stabilisation
- Taking care when working near private or public water supplies, considering the long term impact; and
- Undertaking a considerable amount of preparatory work to enable us, in 21-22, to increase awareness of the need to adapt to climate change and to build the capacity of staff to assess and manage risks in a consistent way and at the necessary pace and scale.

After review, we have identified our top five climate change adaptation priorities for the year ahead:

1. Undertake climate change risk assessments for the different parts of our land-based activities (e.g. growing trees for timber, deer management, biodiversity, water quality and quantity, soil protection etc.) and different operational activities that have a long term effect (e.g. harvesting, planting, civil engineering, deer management etc.) and start to adapt practices where necessary;
2. Provide more visible leadership on climate change adaptation across FLS, including highlighting the scale of the task and the urgency of the response - and support staff to follow this leadership;

3. Support Forest Planners and Forest Management staff to understand the consequences of a predicted 2 degree centigrade global temperature rise by 2100; to adapt their work to take account of these changes; and to recognise the interactions and synergies with climate change mitigation and biodiversity conservation, so that we can be confident that our staff are planning and managing 'Future Ready Places';
4. Ensure that resources for adaptation actions are made available through our Business Plan process; and
5. Improve our internal and external communications on adaptation.

Measuring, Monitoring and Management Information

In using the systems previously operated by Forestry Commission Scotland, which had looked to improve the accuracy and availability of key environmental management data to cost centres, we continue to measure and monitor travel emissions, energy, waste and water consumption.

Appendix 1: Summary of Performance

Area	2020-21 Performance	2019-20 Performance	Variance 20-21 vs 19-20
Green House Gas emissions (Scope 1, 2 & 3 Emissions)	3,238 tonnes Co2e [2,165t Co2e transport/travel + 1,073t Co2e energy/waste]	3,495 tonnes Co2e [2,517t Co2e transport/travel +978t Co2e energy/waste]	7% decrease
Total transport and travel emissions	2,165 tonnes Co2e	2,517 tonnes CO2e	14% decrease
Total travel expenditure	£5,447k	£6,144k	11% decrease
Total energy consumption	3,510 Kwh	3,801 Kwh	8% decrease
Total energy expenditure	£479k	£484k	1% decrease
Total waste tonnage	548.7 tonnes	645.4 tonnes	15% decrease
Office waste recycling	86.4% recycling rate	67% recycling rate	29% increase in recycling
Total waste expenditure	Estimated at £77k	Estimated at £87k	11% decrease
Water consumption	Total estimated at 39,451 m³	Total estimated at 20,352 m ³ *	94% increase in reported consumption
Water expenditure	Estimated at £38k	Estimated at £38k *	No change

* Data missing from 2019-20 estimate.

Appendix 2: Core Sustainability Information 2020-21

Greenhouse Gas Emissions & Energy		2020-21	2019-20	Variance
Non-Financial Indicators (tonnes Co2)	Total Gross Emissions	3,238	3,495	-7%
	Total Net Emissions	3,238	3,495	-7%
	Gross Emissions Scope 1	2,231	2,519	-11%
	Gross Emissions Scope 2 & 3 (indirect impacts)	1,007	976	+3%
Related energy consumption (kWh)	Electricity non-renewable	n/a	n/a	-
	Electricity Renewable	2,467k	2,548k	-3%
	Gas	320k	351k	-9%
	LPG	76k	55k	+38%
	Other (Gas Oil, Kerosene, Woodchip/Pellet)	646k	847k	-24%
Financial indicators (£k)	Expenditure on Energy	£479	£484	-1%
	Expenditure on business travel – official travel & fleet costs	£5,447	£6,144	-11%

Waste			2020-21	2019-20	Variance
Non Financial Indicators (tonnes)	Total volume of waste		548.7	645.4	-15%
	Hazardous/ Special waste	Total	9.05	54.62	-83%
	Non-Hazardous waste	Landfill	70.32	160.45	-56%
		Re-used / recycled	474.26	431.86	+10%
		Incinerated/ energy from waste	4.09	53.04	-92%
Financial indicators (£k)	Total waste disposal cost		£77.2	£86.8	-11%
	Hazardous/special waste disposal cost		£3.8	£11.59	-67%
	Non-Hazardous Waste – total disposal cost	Landfill	£25.8	£29.66	-13%
		Re-used / recycled	£49.4	£49.94	-1%
		Incinerated/ energy from waste	£2.0	£7.21	-72%

Water		2020-21	2019-20	Variance
Non Financial Indicators (m³)	Supplied	39,451	20,352 ***	+94%
	Disposed	**	**	**
Financial indicators (£k)	Water supply costs	£38	£38	-

**

Unknown

Data missing from 2019-20 estimate.