Forestry Commission Scotland
Coimisean na Coilltearachd Alba

Annual Sustainability Report

Financial Year 2013/14

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Overview

2013-14 has seen further improvement in Forestry Commission Scotland's (FCS) Environmental Management System (EMS) and drive to minimise the impact of our activities. In line with FCS's Public Bodies Duties annual targets continue to be applied in key areas such as reducing emissions resulting from travel and energy use, and minimising the organisations water consumption and waste generation.

The purpose of this report is to summarise FCS's environmental performance during 2013/14 in line with Scottish Government guidance[1].

Our Environmental Management System (EMS) & Governance

A key development over the past year has been the strengthening of our internal EMS audit team involving the induction and training of 10 new auditors with the aim of spreading environmental expertise and knowledge more widely throughout the organisation.

A programme support visits and audits were again carried out during 2013-14 to help staff identify areas for improvement and ensure that the requirements of our ISO14001 certification continue to be fully met. This involved auditing and support visits by audit team members to our offices at West Argyll Forest District, Moray & Aberdeenshire Forest District, North Highland Forest District, Grampian Conservancy; and the Forest Enterprise Scotland Head Office in Inverness.

Observations during the visits highlighted that the increasing availability and reliability of environmental performance data, particularly for travel, energy and waste, is enabling managers to monitor progress more effectively. As a consequence, it's also allowing the impact of environmental initiatives to be better understood thereby helping engender a genuine commitment to improvement. Nevertheless minor issues remain as areas for improvement eg. around ensuring the accurate recording of waste documentation, and the timely completion of monitoring reports & data bases.

[1]Public Sector Sustainability Reporting – Guidance on the Preparation of Annual Sustainability Reports 2011-12. (Scottish Government, January 2012).

ISO14001 Certification

The independent certification of our EMS by Lloyds Register Quality Assurance (LRQA) is a key part of our environmental policy and, alongside the certification of the national forest estate under the UK Woodland Assurance Scheme, means FCS is able to demonstrate that all its business operations are run on a sustainable footing.

LRQA maintained their own ongoing audit and assessment programme throughout the year to ensure all our activities continue to meet the benchmark ISO14001 international environmental management standard. Also, following a review, LRQA were re-appointed for a further 3 years to undertake FCS's independent certification.

Environmental Performance Monitoring & Reporting

As a result of ongoing environmental systems development work undertaken since 2010, FCS has much improved the accuracy and availability of key environmental management data. Alongside monitoring travel emissions and energy use, new reporting and metering systems for waste and water management are enabling more reliable information to be reported on waste generation and water consumption. As in 2012-13, the focus continues to be on further enhancing the coverage and consistency of waste and water recording, especially at our more remote sites.

During the past year new Automatic Meter Readers (AMR's) have been installed to monitor electricity usage at a number of sites including the new visitor centre at Kirroughtree. As the coverage of conventional AMR's has been extended (now over 100 installed) to increasingly remote sites, communications issues have arisen due to poor mobile phone coverage preventing the transmission of data. The use of broadband-linked AMR systems is now being investigated and trialled as a means of overcoming these problems and this work will continue in 2014/15.

Improvements continue to be made to the network of water metering across the organisation with new meters being installed at a number of locations, eg. at our West Argyll Forest District which now has a comprehensive metering system in place at all it's business premises.

During 2013/14 we have also improved the methods by which office waste streams are recorded at all FES and FCS offices. New recycling bins have been purchased for every office to ensure all measurements and recycling practices are consistent.

Further details of our performance are given in tables 1 & appendix 1 below.

Table 1: Summary of Our Performance

Area	Performance in 2013/14	Status
Energy	Emissions from energy use have been reduced by an average of 4.8%/yr compared with 2010/11	
Waste	2013-14 will act as the baseline year for future reporting due to improved methods for recording being introduced.	
Transport & Travel	Emissions from travel have been reduced by an average of 3%/yr compared with 2010/11	
Water	We are continuing to improve our network of water metering to establish an accurate baseline for reporting usage.	

Target Met

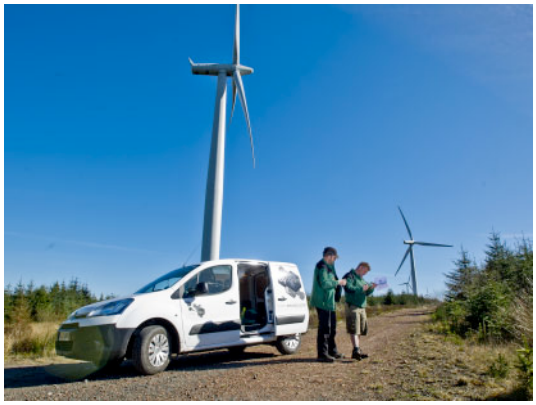
2013-14 to act as baseline

Target Not Met

Actions Taken During 2013/14 to Improve Sustainability

Fleet Management & Introduction of Fuel Efficient Vehicles

FCS managers make the CO2 and other emissions a key part of the decision making process when deciding on replacement vehicles. Part of this is looking at the vehicle manufactures new products and considering them for our applications. This year we have had trials of a full electric van from Citroen (photo), low fuel consumption petrol cars from Ford along with some alternative small vans from Peugeot and Fiat.



The aim of these trials is to ensure that we know how these new products perform in our environment and we can consider the claims and reality of any practical benefits and savings.

We have been discussing the options for better use of the vehicles we operate at Business planning meeting discussions and trying to move to a position in which we can operate the minimum number of vehicles and still deliver the business requirements.

This year improvements in all to the performance indicators for our business use fleet have been made. We have improved the average MPG per vehicle (1.5%), reduced the average CO2 per Km (2.7%), reduced vehicles numbers in the fleet (2.5%), reduced the total miles travelled in the year (1.3%) and increased the utilisation of remaining fleet (3.7%).

Although our operational requirements predominantly make the use of the most fuel efficient diesel version of available vehicles the best options it is not always the case. We operate a full electric car based at and two hybrids petrol/electric vehicles and have identified a likely location for an additional full electric vehicle and we will make this a priority when funding allows.

Improvements to the Energy Efficiency of Our Offices & Business Premises

A number of major projects have been undertaken during the year which will deliver significant benefits in terms of energy efficiency:

- Our Cowal & Trossachs Forest Dstrict office at Aberfoyle has been totally refurbished involving the upgrading of insulation levels and the installation of an RHI approved biomass heating system.

- At Lochaber Forest District, a major extension has been added to the Torlundy office to accommodate co-occupancy with Scottish Natural Heritage staff. As part of the work the existing biomass heating system has also been extended to serve both organisations.

- As part of a pilot, we also installed a borehole water supply at one of our public toilet facilities at Foss in Tay Forest Park.

Environmentally Sustainable Construction

The major new Visitor Centre development at Kirroughtree, part of a >£4M investment programme in Galloway Forest Park which began in 2012, has now been completed. The new centre, which has been built with a focus on sustainability, incorporates a ground source heat pump complemented by wood stove heating.

A new polycarbonate plant house is also being constructed at Forest Research's Northern Research Station at Roslin near Edinburgh as part of a Defra funded research to study into the effects of climate change on trees.

Water Drainage & Discharge

All our major office premises now have detailed drainage plans in place allowing easier identification and maintenance of both surface water and sewerage systems. As part of our ongoing programme of improvements, the drainage installations at Lairg and Cairnbaan workshops have also been upgraded and, where they are required, discharge consents have been registered for sites involving water outflow to a soakaway or watercourse. During 2014/15 we will be tendering a new Scotland wide contract to service and empty our septic tanks for the next 4 years.

Appendix 1: Summary of Performance

Area	Actual Performance 2013-14	Target
GHG emissions (Scope1,2&3 Emissions)	**3847 tonnes Co2[4]** [2204 tCo2 from travel + 1643 tCo2 from energy use]	--
CRC related expenditure	**£19,714**	--
Total travel emissions	**2,204 tonnes Co2** [11.8% reduction on 2010/11]	**Avge 2% per year reduction from 2010 Target Met √**
Total travel expenditure	**£3,532k**	--
Total energy consumption	**4.89 MkWh** [avge 4.8%/yr reduction in Co2 from 2010/11]	**Avge 3% per year reduction from 2010 Target Met √**
Total energy expenditure	**£385k**	--
Total waste tonnage	**Estimated[1] at 325 tonnes** [Due to significant changes to improve waste recording 2013/14 will act as the baseline year for future reporting]	**Avge 2.5% per year reduction**
Office waste recycling	**71% recycling rate[1]**	--
Total waste expenditure	**Estimated at £73.4k**	--
Water consumption	**Total estimated[3] at 90k m[3]** [We aim to report per person from 2014-15]	**5.5m[3] per person per yr in our key office buildings by 2020.**
Water expenditure	**Estimated[3] at £51k** [key supplies only]	--

Notes: [1] *2013-14 will now act as the baseline year as a result of the introduction of new metering and reporting systems during the year.* [3]*Estimated due to continuing meter installation programme*

[4] Co2 estimates based upon revised energy use KwH/co2 conversion factors published by DEFRA for use from 2013-14.

Appendix 2: Core Sustainability Information 2013/14

Greenhouse Gas Emissions & Energy		2010/11	2011/12	2012/13	2013/14
Non Financial Indicators (tonnes Co2e)	Total Gross Emissions	4386	4184	4066	3847
	Total Net Emissions	4386	4184	4066	3847
	Gross Emissions Scope 1	2041	1929	1766	1934
	Gross Emissions Scope 2 & 3. (indirect impacts)	1885 +460	1840 +415	1882 +418	1451 462
Related energy consumption (kWh)	Electricity non-renewable	3,435k	2,948k	2,916k	-
	Electricity Renewable	382k[1]	328k[1]	324k[1]	3,279k[2]
	Gas	502k	362k	477k	491k
	LPG	176k	11k	-	132k
	Other (Gas Oil)	1,030k	1,170k	1,118k	1,098k
Financial indicators (£k)	Expenditure on Energy	340	395	498	385
	CRC license Expenditure	-	-	-	-
	Expenditure on business travel – official travel & fleet costs	4,081	3,966	3,809	3,532

[1] *based on the average % of renewable electricity supplied*

[2] *based on 100 % Green Energy from EDF Energy supplier under Scottish Gov't supply contract.*

Waste			2010/11	2011/12	2012/13	2013/14
Non Financial Indicators (tonnes)	Total volume of waste (not incl. construction)		-	1298[1]	1735[2]	325
	Hazardous /special waste	Total	-	29[1]	44[2]	5.5
	Non-Hazardous waste	Landfill	-	560[1]	747[2]	260
		Re-used /Recycled	-	686[1]	914[2]	144
		Incinerated /energy from waste	-	23[1]	30[2]	4
Financial indicators (£k)	Total waste disposal cost		-	88[1]	172[2]	73.4
	Hazardous/special waste disposal cost		-	*	20[2]	3.5
	Non-Hazardous Waste – total disposal cost	Landfill	-	*	92[2]	45.5
		Reused /recycled	-	*	52[2]	25
		Incinerated /energy From waste		*	8[2]	1

[1]*Estimated in 2011-12 due to the introduction of new metering and reporting systems during the year.*

[2]*Estimated due to continuing development of waste monitoring systems.*

* *absorbed in total waste figure. Disaggregation of costs for individual waste streams to be reported from 2012-13.*

Water		2010/11	2011/12	2012/13	2013/14
Non Financial Indicators (m^3)	Supplied	-	105,000[1]	90,000[3]	90,000[3]
	Disposed	-	*	*	*
Financial indicators (£k)	Water supply costs	-	59[2]	88[2]	51[2]

[1]*Estimated in 2011-12 due to the introduction of new metering and reporting systems during the year.*

[2]*Cost of supplies to key buildings only.* [3]*Estimated due to continuing water meter installation programme.*

* *unknown.*