Scottish Funding Council

Carbon Management Plan (CMP)

Date: *July 2015*
                 Updated November 2017 (for period up to 31 March 2018)

Version number: *1.2*

Owner: *Environmental Champions Group*

Contents

Foreword from John Kemp, Interim Chief Executive

Universities and colleges are making significant contributions to Scotland's transition to a low carbon future, and it is important that the Scottish Funding Council plays its part in this too. Our Strategic Plan includes a commitment to developing sustainable business practices and environmental sustainability.

The imperative for sustainable development comes from the simple fact that the resources of the Earth are not infinite. It is also important to make best use of the funding for further and higher education. In both cases, the challenge is making the best use of the resources we have.

SFC is a relatively small organisation; however, we want to do as much as we can to reduce our impact on the environment and look for every opportunity to reduce our use of energy and other sources of emissions. We can learn much from organisations in similar situations and we look forward to working with institutions, students and other public bodies on identifying and sharing solutions.

John Kemp
Interim Chief Executive, SFC

Management Summary

SFC began measuring its carbon footprint in 2007-08. We introduced a range of energy-saving measures at that time, alongside recycling and staff participation in community clean-ups. In 2010 we refurbished our office accommodation and consolidated on a single two-floor site. This gave us a new baseline. By 2014 we had met and exceeded our original target (-40%), with emissions down 54% since 2008. Our carbon target for the next 3 years is a further -30% on our 2014 position of 151 tCO2 (to 106 tCO2 by 2017).

We will achieve this target through the following actions:

1. Accommodation Project: The organisational move to one floor in November 2017 and the introduction of an agile working environment will enable the organisation to deliver further significant savings on carbon emissions. This new space will also provide staff with the opportunity to fully participate in sustainable initiatives with a focus on energy, waste and recycling. From this, the organisation hopes to moves to a reporting approach that is more integrated, meaningful and reflects this internal change.

2. Information Technology: we will introduce various ICT solutions to save power, and increase our use of virtualised services. These will contribute about 80% to our target.

3. Behaviour and culture: we will drive staff awareness campaigns, especially on recycling and saving energy. This should help to contribute 10% towards our target.

4. Travel: we will increase the use of video and audio conferencing for meetings and reduce staff travel by air and taxi. This will contribute about 10% towards our target.

No new investments will be required to support these activities. We will achieve our carbon reduction objectives using budgets already committed. The plan will be co-ordinated by SFC's Research and Innovation Directorate. IT projects are led by the Information Systems Unit (ISU), Travel is managed by our Finance Directorate, Office projects are led by the Corporate Services Directorate and the Environmental Champions projects will be overseen by our Environmental Champions Group. Reports on progress will go to the Senior Management Team (SMT).

Introduction

This is a summary of the Scottish Funding Council's current and planned actions to reduce carbon emissions. It relates to the period April 2015 – March 2018.

The Scottish Further and Higher Education Funding Council (SFC) is a non-departmental body of the Scottish Government, distributing funding for teaching and learning, research and other activities in Scotland's colleges and universities. Our office is situated in Apex 2, 97 Haymarket Terrace in Edinburgh. From November 2017, the organisation will move from two floors to one floor and share meeting space with Scottish Enterprise in Apex 1, 99 Haymarket Terrace, Edinburgh. We employ about 110 staff (@Nov17).

The principal activities are office-based with teams under four directorates: Access, Skills and Outcome Agreements, Research and Innovation, Finance, and Corporate Services. SFC has had environmental policies in place since August 2005.

The Climate Change Act placed a duty on public bodies to contribute to the achievement of the targets on carbon emissions and to support related strategies on energy efficiency, in respect of SFC's own operations and in the universities and colleges we fund. In 2014 we established a Climate Change and Capital Funding team to develop our funding policies for university and college estates, and to support Scotland's transition to a low carbon economy. SFC agreed funding for the Environmental Association for Universities and Colleges (EAUC Scotland) in 2017 for a further 3 years. EAUC will also support this transition through promoting education for sustainable development and transforming culture through leadership.

This current plan covers the period 2015 – 2018. Our target is to reduce our emissions by 30% by 2018 compared to our 2014 baseline.

Context and drivers for Carbon Management

The Climate Change Act (Scotland) 2009 recognised the challenge of human-generated greenhouse gas emissions. The Scottish Funding Council is defined as a 'major player' in the legislation, due to the impact we can have on universities and colleges through our funding and policies. By 2011, all of the institutions we fund had signed the Universities and Colleges' Climate Commitment for Scotland, which obliges them to develop action plans to reduce emissions in line with the CCA targets.

SFC is a small organisation with most of our carbon emissions coming from our office operations. At a time of rising energy costs and financial constraint across the public sector, it is important to seek efficiencies and demonstrate value for money. It is also

important that we show leadership on climate change and show evidence of the commitment to sustainability, which is increasingly a feature of Scottish further and higher education.

Our low carbon vision

We will adopt best practice in reducing the impact of our own operations, reducing carbon each year, so that by 2021 we will have met or exceeded the targets set out in the Climate Change Act (Scotland) 2009. Our target is to reduce our emissions by 30% by 2018 compared to our 2014-15 baseline.

Strategic themes

Most of our emissions relate to our office operations. Our building was first refurbished in late 2010. We have introduced smart lighting in meeting rooms and low power lighting in the main office areas. New video and audio conferencing equipment has also been deployed, to encourage staff to travel less. The building exterior has been re-cladded (to improve insulation) and internal glazing has been installed on the ground and first floors to reduce heat loss via the atrium.

Since 2014 it has become possible to measure electricity use by individual floors for the first time. (Previously organisations in the building were billed on the basis of floor space occupied.) This gives us a much clearer picture of our energy use.

In 2017, our physical office space has reduced from 17,000 sqf to 10,000 sqf by moving to an agile working environment and our office operations have moved onto one floor from two floors. This fundamental change to working practices and reduced space has expedited our ability to achieve sustainable working practices and meet our targets on carbon emissions. The sustainable impact of this move will be reported on in November 2018.

1. Information and Communications Technology

ICT is a significant source of office energy use. Our Information Systems Unit lead on various actions to save energy, including the introduction of server virtualisation and power management software, cloud-based LAN extension for Disaster Recovery and backup, and reducing power consumption by SFC desktop PCs.

2. Behaviour and culture

We have had policies on saving energy since 2005. In 2015 we signed up to the NUS Green Impact accreditation scheme, which provides a framework for sustainability and climate change activities, particularly saving energy and reducing waste. Our Environmental Champions coordinate create and lead campaigns to draw attention to

particular recycling and waste issues, as well as external activities to improve the local environment.

3. Travel

Travel is our second main source of emissions. Finance staff take the lead here. We plan to reduce our travel overall (especially air travel, use of taxis and private transport), encourage more use of public transport, and increase our use of video and audio conferencing. Our travel policy was revised in 2014.

Targets and objectives

SFC's vision is:

"To be an exemplar low carbon organisation"

In order to deliver this vision SFC's key carbon reduction objectives will be to:

- Use energy more efficiently and reduce any unnecessary consumption.
- Reduce the need to travel and adopt more sustainable modes of travel.
- Cut the amount of waste we generate overall.
- Reduce the proportion of waste that goes to landfill.
- Encourage positive behaviour change by promoting sustainable practices.
- Demonstrate efficient use of resources to staff and Scottish Government.

SFC's 2007-08 carbon footprint was 343 tCO2 per annum (for 110 staff this equated to approximately 2.63 tonnes per person). By 2016 this had reduced to 119.36 tCO2, or 1.08 tonnes per person.

Emissions Baseline and Projections

Scope

The carbon footprint for SFC involves identifying the sources and quantities of CO2 emissions for floors 1 & 2, 97 Haymarket Terrace. The 'operational boundary' for the inventory includes emissions in the two broad categories of 'direct' and 'indirect', generated by the following:

Direct
- Energy used in heating from the combustion of fuel in the boiler.

Indirect
- Use of electricity (generated at a power station).

- Business travel in non-SFC-owned vehicles (trains, buses, planes, hire cars etc).
- Incineration of office waste or decomposition in a landfill.

The footprint does not include the embodied carbon and distribution miles for SFC's purchases nor the CO_2 emissions that relate to SFC as a "corporate citizen" (e.g. services provided by the local authority).

Baseline

The baseline year for our Carbon Management Programme is April 2007 – March 2008. The tables below show the composition of our carbon footprint for 2007-08, with an updated table to show how this has changed up to the most recent full financial year, 2016-17.

The bulk of our carbon emissions are produced through our electricity usage, which made up 82% of our carbon footprint in 2007-08, with a reduction in percentage terms to 80% in 2016-17. The relative contributions of transport and waste to our carbon footprint have also changed, with a significant increase in travel from 2007-08 (mileage is noted in the table) meaning that as of 2016-17 it now contributes 17% of our footprint, compared to 14% in our baseline year. Waste has decreased in recent years to 3% in 2016-17 and is now a much smaller contributor to our footprint than transport.

The 2007-08 carbon footprint

Item	Units (per annum)	Proportion of total miles travelled (%)	CO2 (Tonnes per annum)	CO2 (Kg per mile travelled)	Proportion of total carbon footprint (%)	Cost (£)
Electricity	654,262 kWh	-	281.33	-	82.03	55,208
Bus	196 miles	0	0.03	0.17	0.01	94
Coach	246 miles	0	0.02	0.08	0.01	840
Car	35,690 miles	10	10.71	0.30	3.12	14,276
Train	197,632 miles	58	12.72	0.06	3.71	58,116
Air - Short Haul	98,313 miles	29	23.73	0.24	6.92	24,196
Air - Long Haul	8,132 miles	2	1.44	0.18	0.42	6,830
Transport Total	340,209 miles		48.65	-	14.19	104,352
Waste	3,016 bags	-	12.97	-	3.78	-
Total		-	342.95	-		159,560

The 2016-17 carbon footprint

Item	Units (per annum)		Proportion of total miles travelled (%)	CO2 tonnes per annum	CO2 (Kg per mile travelled)	Proportion of total carbon footprint (%)	Cost (£)
Electricity	173,406	KWh	-	94.80	0	79.40	19867
Bus	412	miles	0.31	0.07	0.17	0.06	290.80
Coach	0	miles	0.00	0	0.17	0	0
Car	21,014	miles	15.84	6.93	0.33	5.79	8,406
Train	95,369	miles	71.91	9.38	0.1	7.84	32,957
Air - Short Haul	15,836	miles	11.94	4.20	0.03	3.51	6,753
Air - Long Haul	-	miles	-	-	0.18	-	-
Transport Total	132631	miles	-	20.58	-	17.21	48,407
Waste	930	bags		4.24		3.54	-
TOTAL	-		-	120	-		71,185

Projections and Value at Stake

Using 2007-08 as our baseline, we have tracked our actual emissions compared with what they might have been if we had done nothing ('Business As Usual'). This is shown in the table below and shows a significant decrease up to and including 2016-17.
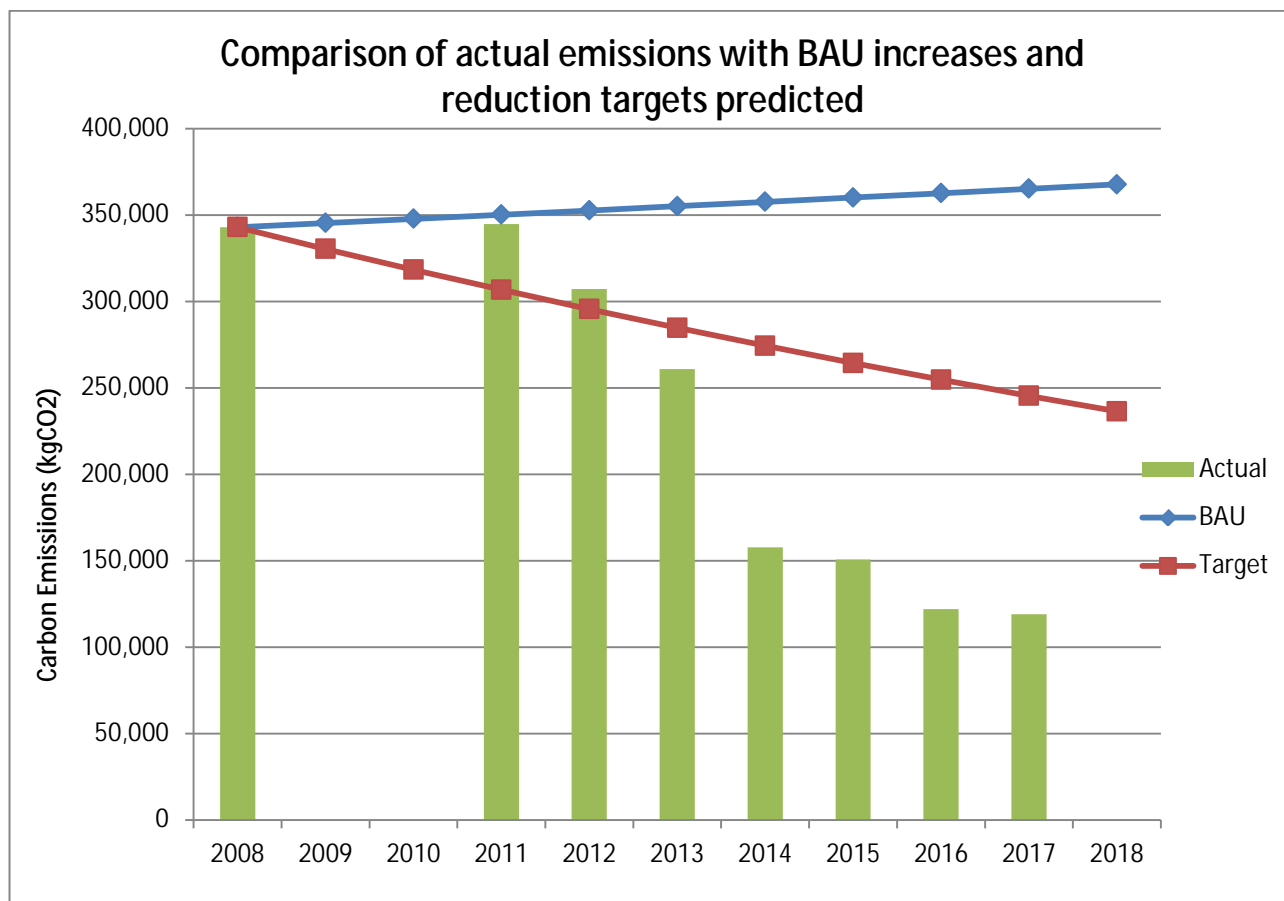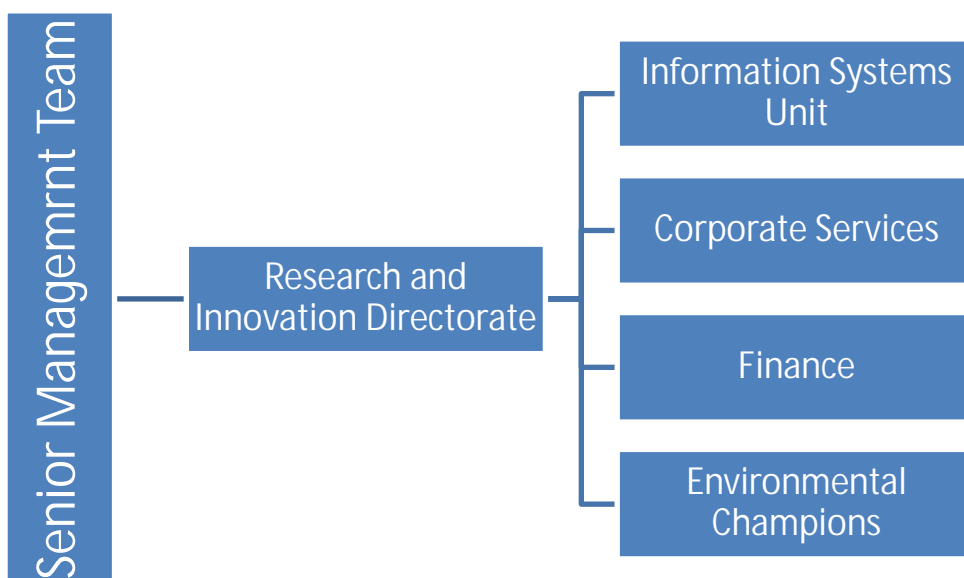
Figure 4

Financing

- Assumption 1: we estimate that the costs of gas and electricity will continue to rise at an average of 10% each year.
- Assumption 2: we estimate that the budget available for our running costs will decline slightly over the next few years, in line with overall public spending reductions.
- Assumption 3: the carbon conversion factor will remain as now
- Assumption 4: the costs of travel fares will increase at an average of 5% each year.

Financial costs and sources of funding

Our carbon management activities mostly involve existing budgets, or depend on staff behaviours in terms of travel choices, use of printing and other facilities. The main new investments are part of our already planned ICT programme.

Governance for Implementation

The SFC Carbon Management Plan is overseen by SFC's Research and Innovation Directorate. Finance and Corporate Services lead on travel and office management activities respectively. IT projects are led by the Information Systems Unit (ISU). Reports on the SFC Carbon Management plan are made to the Senior Management Team (SMT).

```
Senior Managemrnt Team ── Research and          ┌── Information Systems
                          Innovation Directorate │    Unit
                                                 │
                                                 ├── Corporate Services
                                                 │
                                                 ├── Finance
                                                 │
                                                 └── Environmental
                                                     Champions
```

Embedding Carbon Management

SFC's travel policy was revised in 2014. The revised policy increases the emphasis on staff travelling less, reducing in particular use of air travel and taxis, and increasing our use of public transport and conferencing.

Staff behaviour will be key to realising the opportunities for carbon reduction within our office accommodation. The main vehicle for raising staff awareness will be our network of Environmental Champions, which includes members from across the Council's teams. We also use internal communications to raise awareness, including our online staff newsletter and intranet.

In terms of SFC's external influence, we will continue working with universities and colleges to help reduce sector emissions.

Data Management – measuring the difference, measuring the benefit

Waste: our recycling company provides reports on the total volume of secure shredded paper waste; a separate waste-handling service reports on the amount of non-secure paper waste, cans and plastics. We monitor these data to see if our staff

awareness and behaviour campaigns are having the desired effects. In June 2017, total waste was 16.5 tonnes of which 12.5 tonnes was recycled at source.

Power: From 2016 we have been able to monitor power consumption by each floor of the building for the first time. We will supplement this by monitoring power consumption of specific areas of our ICT infrastructure (e.g. server rooms).

Travel: The Finance team collate data on travel mode, cost and mileage from our travel agent Redfern, and other travel providers Scotrail and Comcabs. We will monitor these data to see if our revised travel policies are having the desired effects.

Travel emissions for 2016-17 were 20.58 tCO2, a significant reduction when compared to the previous year 2015-16 when we reported 31.153 tCO2. We will continue to reduce travel emissions by promoting sustainable travel practices and encouraging the use of our conference facilities.

Resource commitment

Implementing the Initiatives

The Finance and Corporate Services teams collate the data mentioned above, working with project leaders as required. All staff have opportunities to discuss ideas and progress through their Green Impact champions.

Key stakeholder groups or individuals

Research and Innovation: Stuart Fancey, Director of Research and Innovation
Finance, Kevin Nicholls, Payment & Procurement Officer
Information Systems: Laurence McDonald, Head of Information Systems
Corporate Services: Angela Seymour, Assistant Facilities Officer
Climate Change and Capital Funding: David Beards
SFC Environmental Champions Group: Jenny Jamieson (Research & Innovation)

Maintaining quality over time

The SFC Carbon Management plan will be refreshed in 2018 to cover a new 3 year period, reviewing the progress made and setting further targets. The Council's annual report includes a section on sustainability and carbon management.

Appendix: Project Definitions

SFC-003 completed and removed from Version 1.2

Project: Reference:	*Measuring and reducing IT power consumption* *SFC-001*
Owner (person)	*Laurence McDonald*
Department	*Information Systems*
Description	*Reduce energy use and subsequent carbon emissions by replacing desktops with laptops in Apex 2 as part of SFC's move to agile working.*
Benefits	Predicted financial savings in terms of energy costs: *£10,335 per annum from November 2017.* Predicted CO_2 emissions reduction from November 2017: *Figures for 2016-17 43.15 CO2 per annum* *Predicted CO2 reduction for 2017-18 (from November 2017 in part)* *8.13 CO2 tonnes).* *Predicted annual savings: 35.02 CO2 tonnes reduction* *This project will annually contribute 84.7% to our CO2 target*
Funding	Project cost: *£55,224.18* Source of funding: *Operational running costs.*
Resources	*Project will be implemented using SFC staff and kit.*
Ensuring Success	There are no risks.
Measuring Success	How reduction will be measured / evaluated: *On an ongoing basis.* How success will be communicated: *Through developing an integrated reporting approach*
Timing	*Milestones / key dates e.g.* · *start date: 07/11/2017* · *completion date (when it will deliver initial savings): 31/03/2018*
Notes	

Project: Reference:	*Optimise virtual/external server infrastructure* *SFC-002*
Owner (person)	*Laurence McDonald*
Department	*Information Systems*
Description	*Optimise the configuration of external server infrastructure at Saughton House so it only powers up what is needed for SFC operations.*
Benefits	Financial savings: *£903.60 (based on shutting down 2 hosts overnight at Saughton using VMware power saving)* Payback period: 27 *years* CO_2 Emissions reduction: 1.7 *tonnes of CO2 per annum (3145kWh x 0.546)* This project will annually contribute 4.11% to our CO2 target
Funding	Project cost: (within *£25k total virtualisation costs inc hardware and licensing for Saughton. Implementation began 2010.)* Annual costs: *£12.5k (Rack, hardware and software maintenance)* Source of funding: *Operational running costs.*
Resources	*Project will be implemented using SFC staff and kit.*
Ensuring Success	Key success factors, or things that will need to happen for this project to succeed: Principal risks:
Measuring Success	Metrics for displaying performance or achievement: *Infrastructure power monitoring tools* When success will be measured / evaluated: *On an ongoing basis as part of infrastructure and service monitoring.*
Timing	*Milestones / key dates e.g.* · *start date: 01/11/2015* · *completion date (when it will deliver savings): 30/11/2016* · *adjustment to completion 31/03/2018*
Notes	*Delayed due to accommodation review and revised requirements following pilots.*

Project: Reference:	*Revised travel policy* *SFC-003*
Owner (person)	*Kevin Nicholls*
Department	*Finance*
Description	*We will continue to promote our revised travel policy which encourage staff to travel less overall, to fly less, to make more use of public transport for journeys, and make more use of our conferencing facilities.(Cycling to work is promoted through our bike loan scheme.)*
Benefits	Financial savings: £579 per year (1% of our current travel budget) Payback period: N/A CO_2 Emissions reduction: 1.64 tCO2 per year This will annually contribute 3.963% to our CO2 target
Funding	New conferencing equipment has recently been deployed. No other investments are required.
Resources	The travel policy was revised in 2014. Finance will review current forms and business processes to ensure they support the new policy. This project will be delivered within current resources.
Ensuring Success	The travel policy will be backed up by internal communications, and we will build staff engagement with the policy through our Green Impact Champions.
Measuring Success	By reducing the number of short haul flights we estimate that the policy will reduce our total annual travel by about 5% in terms of CO2. The travel budget is monitored by Finance
Timing	*Milestones / key dates* · *start date: 01/06/15* · *completion date: ongoing – savings should be reflected in quarterly financial reports*
Notes	

Project: Reference:	*Green Impact Staff campaigns* *SFC-004*
Owner (person)	*Environmental Champions Group*
Department	*Research & Innovation*
Description	*We will campaign to raise staff awareness of our policies on responsible use of resources, personal wellbeing and SFC's environmental impact. This will include increasing recycling, reducing use of energy, well being, local environmental work and opportunities for staff to engage in environmental initiatives in the new agile office environment.*
Benefits	Financial savings: £0 Payback period: N/A CO_2 Emissions reduction: 1.5 tCO2 This will contribute annually about 3.63% to our CO2 target.
Funding	The work will draw on existing staff resources. No additional funding is required.
Resources	Staff volunteers will need to set aside a small amount of time to contribute towards environmental champion meetings, and to participate in campaigns/activities.
Ensuring Success	Key to success will be securing volunteers to become Environmental Champions, and enlisting corporate communications to encourage and engage all staff with our carbon management activities.
Measuring Success	Energy use will be monitored quarterly, and compared to use in previous years. We will review our overall progress at the end of each (financial) year.
Timing	*Milestones / key dates:* · *start date: 1/04/2015* · *completion date (ongoing)* · *interim deliverable: monitor energy use quarterly*
Notes	

Project: Reference:	*Facilities* *SFC-005*
Owner (person)	*Angela Seymour*
Department	*Corporate Services*
Description	*We will reduce the cost of our purchasing operation by reducing the volume of paper we use as an organisation. This will be supported by Black Bin Bag Day during December and an 'agile working/paperless office' campaign.*
Benefits	Financial savings: £500 pa Payback period: N/A CO_2 Emissions reduction: 1.5 tCO2 This will contribute annually about 3.63% to our CO2 target.
Funding	The work will draw on existing staff resources. No additional funding is required.
Resources	Facilities staff and the co-operation of all staff
Ensuring Success	Continued monitoring and campaigns to reinforce culture change
Measuring Success	Monitoring of waste and consumption of paper .
Timing	*Milestones / key dates:* · *start date: 31/03/2018* · *completion date (ongoing)*
Notes	The reduction of paper will have a positive impact on the levels of usage of other materials and services. For example, toner, recycling costs,