Local Authority Carbon Management Programme

South Ayrshire Council Strategy and Implementation Plan (SIP)

Date: 15/4/08

Version number: v5

Owner: A Marnie

Approval: K Gibb

Contents

Foreword

Our vision is to establish South Ayrshire as the most dynamic, inclusive and sustainable community in Scotland. Within our vision we are aware of the challenges that a changing climate will have on us. This strategy and implementation plan will put in place the governance system and projects that will make us more aware of the consequences of our decisions with regard to transport, waste and energy use and allow us to reduce our impact on the problem significantly. It is our duty to set a good example and to involve and encourage the wider community to take action too. Everyone can do a little bit to cut carbon emissions at work and at home that cumulatively can make a big difference.

Hugh Hunter
Leader of the Council

Management summary

We have set ourselves a target of reducing our carbon emissions by 20% by 2013 from 2005/06. This document sets out 24 projects for the next 5 years which aim to achieve this goal. We anticipate an investment requirement of £12.8 million that is expected to save 11,500 tonnes of carbon dioxide and up to £6 million savings per annum by 2013. Councillor Hugh Hunter, Leader of the Council, will lead this programme of work with Graham Peterkin, Depute Chief Executive and Director of Development, Safety and Regulation and supported by Andrew Marnie, Energy and Resources Group Leader on a day to day basis. At the time of writing we have secured resources to cover 17% of carbon savings with the remainder of the projects the subject of current bids for funding, future bids or requiring funding to be allocated from within existing budgets.

Progress towards our stated objectives will be reviewed quarterly by a new Carbon Management Working Group, the Asset Management Group and the Corporate Management Team. We believe that this programme of activities will not only deliver carbon reductions in line with our vision for the future[1] and significant cost savings for South Ayrshire Council, but will also position ourselves for impending new regulatory requirements such as the Carbon Reduction Commitment and the Scottish Climate Change Bill. It is intended that the strategic goals and vision for the council will cascade down to the individual service plans that form the basis of the Council's performance management system. It is vital that all services engage with the strategic vision to motivate staff to do their bit to achieve their fair share of the target savings.

[1] Securing the Future for South Ayrshire (February 2008) can be viewed online at www.south-ayrshire.gov.uk/news/2008/publications/VisionDocument%2008%20R.pdf

1 Introduction

Throughout 2007/08 the Council has been working with the assistance of the Carbon Trust to develop this Strategy and Implementation plan for future carbon management. A core group was set up drawing representatives from across all the Council services to assist with the development of the plan.

This action plan has been prepared to deliver our commitment to the aims of the Scottish Climate Change Declaration that the Council signed up to in January 2007. The action plan will support and augment a number of existing commitments and initiatives, as well as seeking to develop new ones.

The main areas of carbon emissions covered by this plan are:
buildings
street lighting
vehicle fleet
staff travel on business
staff commuting
waste management

The implementation phase of this plan initially covers the 5 year period up to 2012/13. The target is to reduce the Council's carbon dioxide emissions by 20% by this time.

2 Carbon Management strategy

2.1 Context and drivers

Scottish Climate Change Bill

The Scottish Government has recently published its consultation document on a Climate Change Bill (January 2008) that is proposing a national target to reduce carbon emissions by 80% by 2050. It is expected that the targets will be mandatory and that Ministers will be accountable to the parliament to take remedial action if targets are not being met and potentially fined. It is recognised that the public sector will have a key role to play in reducing emissions in Scotland due to its size (23.4% of the Scottish workforce). It is intended that planned Single Outcome Agreements with local authoritites will include their contribution to all the government's strategic objectives including carbon emission reduction targets. Initially the public sector will be encouraged to reduce emissions on a voluntary basis, through the Scottish Climate Change declaration, for example but it is recognised that once the easy hits have been carried out and further reductions become harder then the Bill, through inclusion of enabling powers, could serve as a vehicle to introduce later measures. This could include imposing duties on local authorities (like the duty of Best value) to, for example, determine emissions, reduce corporate emissions, meet specific targets, make an equitable contribution to national climate change targets, consider climate change in policies and decisions or take account of emissions in procurement contracts. There may also be a requirement for Councils to report on actions to reduce emissions. The current Best Value guidance on sustainable development may also be amended to take specific account of climate change mitigation and adaptation.

Scotland's Climate Change Declaration

South Ayrshire Council's commitment to support Scotland's Climate Change Declaration (SCCD) was made at the Community Safety Committee of 30th November 2006, and formally signed on behalf of the Council on 15th January 2007. As a result an action plan requires to be prepared, to deliver our commitment to the aims of the SCCD. The action plan will support and augment a number of existing commitments and initiatives, as well as seeking to develop new ones with this Carbon Management Strategy and Implementation plan making up the mitigation aspects of the plan.

Carbon Reduction Commitment

The Carbon Reduction Commitment (CRC) is expected to come into force in 2010 and will involve many multi-site organisations, such as local authorities, in carbon trading for the first time. If South Ayrshire Council is to be included in the scheme (this will be determined at the end of 2008) then there will be a cost to the council in purchasing carbon allowances. This is expected to be between £185,000 and £275,000 per annum initially for South Ayrshire Council. Although it would be expected to have most if not all or slightly more of this returned two financial years later there is a clear signal that the government will include more emissions within a carbon trading regime so that emissions reductions are achieved in the most cost effective manner. It is expected that as the CRC develops there will be an increasing cost to buying carbon allowances. The monitoring and reporting systems proposed in this document and the emissions reductions plans will assist the council in offsetting the impact of this future regulation.

South Ayrshire Council's Vision

The Council has just published (February 2008) an update vision of the future[2] that sets out the strategic goals and values that will cascade down to individual service plans that form the basis of the council's perfomance management system. The Council's vision is 'to establish South Ayrshire as the most dynamic, inclusive and sustainable community in Scotland.' One of the priorities identified is to adapt to the impacts of climate change and become more sustainable with managing the council's own energy consumption and encouraging people to reduce waste specifically highlighted.

Council Programmes

[2] Securing the Future for South Ayrshire (February 2008) can be viewed online at www.south-ayrshire.gov.uk/news/2008/publications/VisionDocument%2008%20R.pdf

The Council is addressing elements of Climate Change in a number of current programmes around Best Value, the Community Plan, The Ayrshire Structure Plan, the Local Plan, Home Energy Conservation Act, Local Transport Strategy, Area Waste Plan, South Ayrshire Energy Policy, and the South Ayrshire Environment Strategy . A number of these are currently under review for a variety of reasons, and it is envisaged that the Climate Change Action Plan will assist in this process.

2.2 Vision

South Ayrshire Council's vision is to minimise the impacts of climate change and become more sustainable.

2.3 Objectives and targets

The objective is to reduce our emissions by 20% by 2012/13 from a 2005/06 baseline measured against the business as usual case. This is equivalent to not producing 11,500 tonnes of carbon dioxide per annum.

One objective is that the Council strategic goal of reducing carbon emissions will become part of a cultural shift in the organisation where services take ownership and responsibility for the emissions arising from their operations. A key part of their service plans will be to meet their share of the required reductions and this will be monitored by the Corporate Management Team and elected members so that action can be taken if there is a danger of the targets not being met.

The Council is also taking a long term view to contribute its fair share of emission reductions of the Scottish Government's target of 80% reduction of CO2 by 2050 from a 1990 baseline.
The Scottish CO2 emissions have been reported as having reduced by 12.5% between 1990 and 2005[3] (compared with an overall UK fall of 6.4%). To achieve the 2050 target a further reduction of 77% is required on the 2005 emissions. If savings were to be achieved in a linear fashion this is equivalent to a 3.4% saving year on year. Any interim 'point' targets or setting of carbon budgeting periods of a number of years for the Council will be considered along with the outcome of the Scottish Climate Change Bill proposals.

2.4 Strategy

The objectives are to:

- Establish an appropriate baseline for the Council's carbon emissions
- Set an achievable target to reduce CO_2 emissions from buildings by 2013;
- Set a target to reduce the energy costs of South Ayrshire Council by 2013;
- encourage workforce involvement in the identification of opportunities and the implementation of action;
- lead by example and encourage our partners and the community to make changes to reduce carbon emissions;
- raise the environmental profile of the Council locally;
- bring together existing and future Carbon Management projects into a consistently managed and coherent programme, with management oversight from the Corporate Management Team.

[3]Greenhouse Gas Inventories for England, Scotland, Wales and Northern Ireland: 1990-2005 published by DEFRA and the devolved administrations is available from:
http://www.airquality.co.uk/archive/reports/cat07/0709180907_DA_GHGI_report_2005.pdf

The intention is to reduce the Council's emissions from buildings, street lighting, vehicle fleet, staff travel on business, staff commuting and waste management. The emissions from these sources will be monitored and reported on on an annual basis as well as the regular progress reporting for services.

3 Emissions baseline and projections

3.1 Scope

An attempt has been made to estimate overall emissions of carbon dioxide by the Council and its employees in 2005/06 under six headings:

Buildings (including schools);
Street lighting;
Waste;
Use of Council fleet vehicles;
Private car usage on Council business;
Staff commute.

In the case of 'waste', the estimates of CO_2 emissions relate to not just waste generated by the Council itself, but to all waste collected and processed by the Council from businesses and residents in the area.

Limitations to Scope:
One of the areas that are not included within the scope of this project is the emissions from council owned housing. Energy efficiency improvements and carbon emission reductions are currently monitored and reported biannually as a result of the Home Energy Conservation Act. This reporting procedure is about to be reviewed however and so it may be something to be included in future. Similarly council owned property that is leased to non-domestic tenants is not included.
The carbon footprint resulting from procurement is also not included as this is too complex to analyse within the scope of this project. In a future more carbon constrained and therefore aware culture then this information may be more readily available. Currently, however, it is not possible to track the origin of products procured. Even making an assessment of the carbon footprint resulting from the immediate suppliers of goods and services would be too difficult a task to undertake due the large volume of transactions made throughout a year.
A major local contribution to carbon emissions is the travel to and from schools. These emissions are not to be included at this stage either but it is intended to quantify and address this at a later stage. There is currently a temporary post of school travel coordinator and approximately 50% of schools have a travel plan in place and so there is the potential to build on this if funding for the post continues.

3.2 Baseline

Figure 1 shows a breakdown of the emissions by the six main categories for 2005/06, while Table 1 provides information of the source of the estimates, together with the direct cost to the council connected with these source, which in 2005/06 amounted to nearly £8 million.

From the table it is clear that the two principal sources of CO_2 emissions are connected with buildings and waste, which account for nearly 75% of the total.

Figure 3.1

Breakdown of Council CO_2 Emissions in 2005/06 by Category

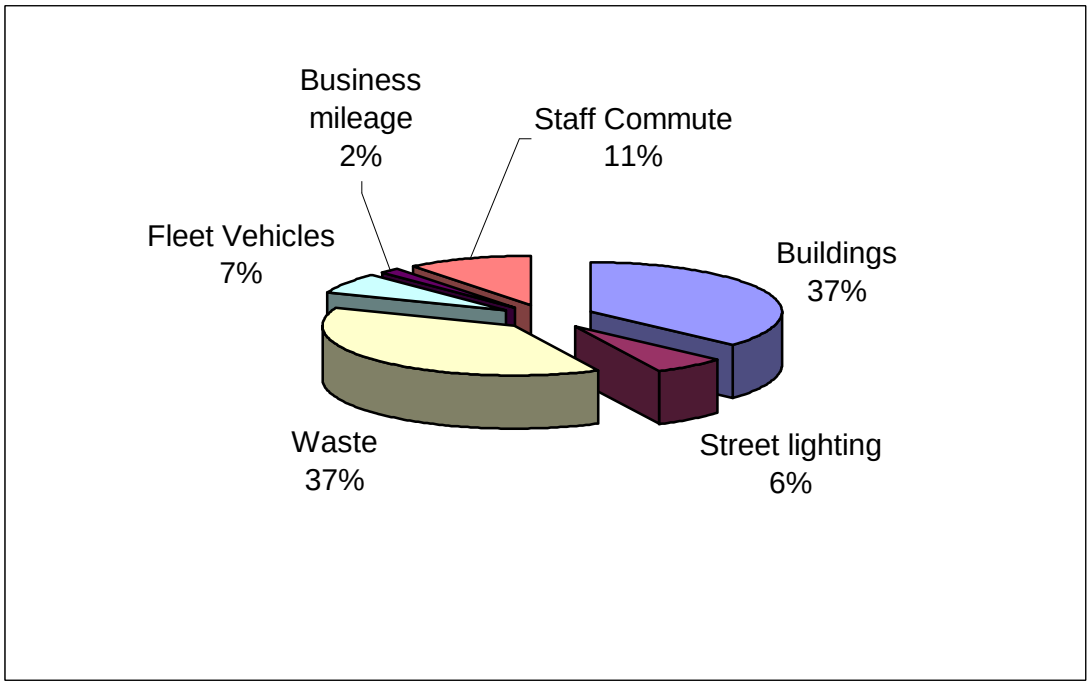


Table 3.1

Source of Emissions	Basis of Estimates	Estimated Emissions, tonnes of CO_2	% of Total CO_2 Emissions	Total Annual Costs, £'000
Buildings	Absolute consumption (not corrected for weather) of electricity, gas, oil and coal consumption (kWh) in the period April 2005-March 2006. Assumed emissions per kWh for electricity, gas, oil and coal were 0.43, 0.185, 0.281 and 0.346 kg CO_2 respectively. (Figures taken from the Carbon Trust). Data from suppliers with some estimated meter readings taken. Data straddling 2 accounting periods is apportioned.	20,453	36.6%	2,444 (Cost of fuel)
Street lighting	Based on estimates of total electricity consumption in kWh for the period April 2005 to March 2006. The inventory is kept up to date continuously and consumption calculated using current best practice standards.	3,464	6.2%	496 (Cost of Electricity)

Waste	Based on reported amounts of waste going to landfill, composting and recycling in South Ayrshire in April 2005 to March 2006. Every tonne going to landfill was assumed to produce 447 kg CO_2. Energy used in composting was presumed to 16kg CO_2 per tonne. No allowance was made for transport, as it was assumed that these emissions were included in Council fleet usage. SPI for Council and data audited externally prior to publication.	21,272	38%	2,650 (Cost of disposal of waste to landfill)
Fleet Vehicles	Based on estimated litres of diesel, gas oil and unleaded petrol consumed by Council fleet in April 2005 to March 2006. (Carbon Trust figures of 2.63kgCO2/litre for diesel fuel and 2.32kgCO2/litre for petrol). Consumption monitored accurately.	3,978	7.1%	1,210 (Cost of fuel only)
Use of Private Cars for Business	Based on number of kilometers of travel claimed for in the period April 2005 to March 2006 (2678342 miles at 1.6098km/m). In the absence of other information the national average of 30% diesel cars and 70% petrol was used (0.21kgCO2/km). Data from finance monitored from expense claims.	895	1.6%	1,072 (Based on mileage allowance of 40p/mile)
Staff Commute	Based on a the results of a sample survey of 1068 employees (19% of workforce) and assuming average working year of 224 days per employee. Average emissions in kgCO2/km: 0.2095 car, 0.0602 train, 0.1067 motorbike, 0.0891 bus. Data estimated from a survey with low confidence in accuracy.	5,875	10.5%	0
Total		55,937	100.0	7,872

3.2.1 CO_2 Emissions from Buildings in 2005/06

To obtain a clear idea of the activities connected with CO_2 emissions from Council buildings, the buildings under Council management were split into eight types of use, namely:

- Community centres, including halls and clubs;
- Depots and equipment stores;
- Libraries, theatres and cemeteries;
- Offices;
- Residential accommodation, including homes for the elderly and the homeless;
- Schools (nursery, primary, special and academies);
- Sports Facilities, including swimming pools and activity centres; and
- Other, including toilets, landlord supply and Christmas lights.

Figure 2 shows the percentage breakdown in 2005/06 and makes clear that over half of the emissions were connected with schools. The next biggest category in terms of emissions was sports facilities (16%), followed by offices (13%).

Figure 3.2

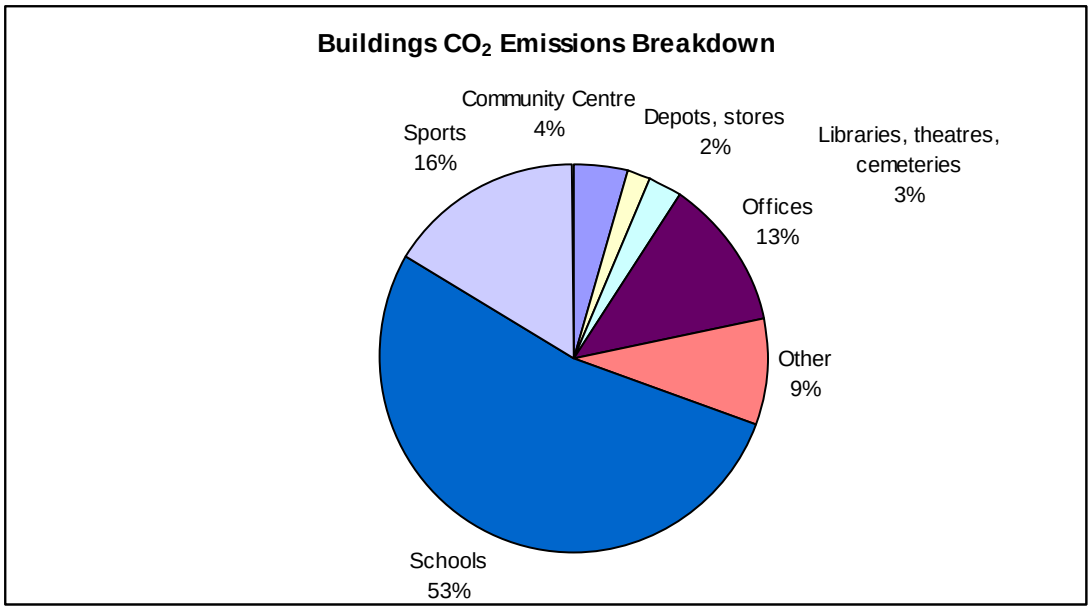


Figure 3.3 Distribution of Schools by CO_2 Emissions per Square Metre

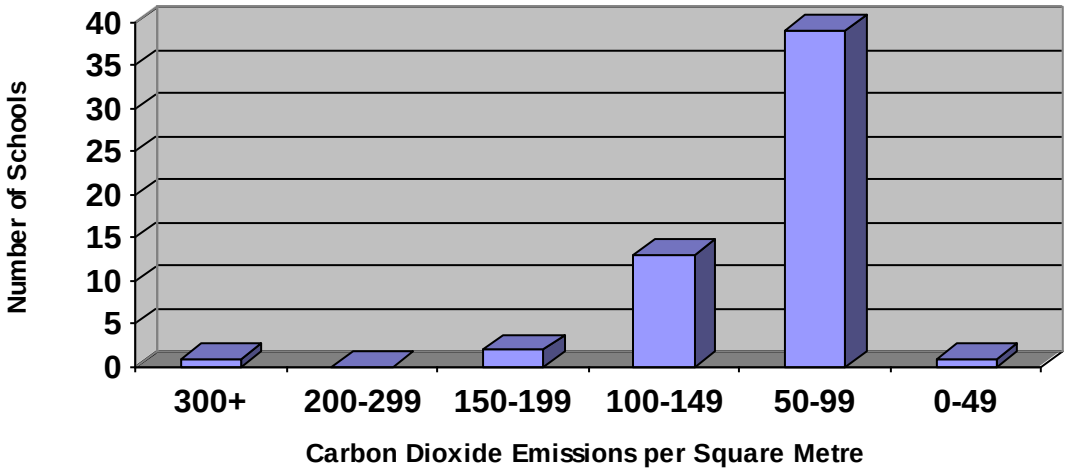


Figure 3.4 Distribution of Offices by CO_2 Emissions per Square Metre

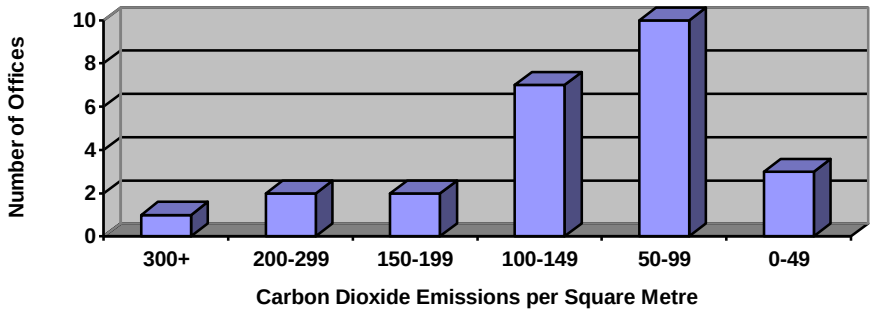
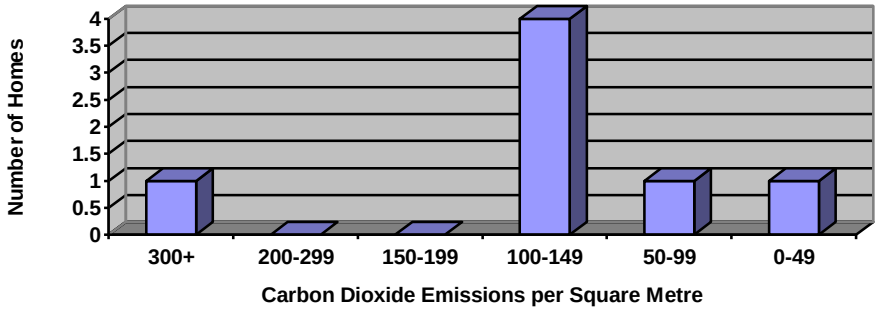


Figure 3.5 Distribution of Residential Homes (excluding sheltered housing complexes) by CO_2 Emissions per Square Metre



Looking at these graphs, it is clear that there is quite a wide range of energy efficiencies, as measured by CO_2 emissions per square metre. Some of this will reflect subtle differences in occupancy and use of the buildings, but some will reflect actual differences in energy efficiency.

3.2.2 CO_2 Emissions from Street Lighting

As Table 2 shows nearly half of the CO_2 emissions from street lighting are connected with lighting in Ayr. Together Ayr, Prestwick, Troon, Girvan and Maybole account for just over 85 per cent of the emissions. These estimates are based on the spatial distribution of street lights and the proportion of lights in each area that are either dusk-to-dawn or 24 hour lights.

Table 3.2 Spatial Distribution of CO_2 Emissions Connected with Street Lighting in South Ayrshire

Location of Lights	% of Total CO_2 Emissions
Ayr	48.84
Prestwick and Monkton	14.21
Troon and Loans	12.83
Girvan	5.46
Maybole	3.86
Rest of South Ayrshire (Rural Areas)	14.80

3.2.3 CO_2 Emissions from Waste

The breakdown of how much waste was generated by residents and businesses in South Ayrshire in 2005-06 is shown in Table 3. Altogether waste accounted for as much CO_2 emissions as buildings. Nearly all the emissions are connected with the waste fraction going to landfill. To assess how significant this is, it only has to be remembered that were the proportion of waste composted or recycled to be increased by 1 per cent or 805 tonnes, then annual CO_2 emissions would fall by 230 tonnes, equivalent to about 30 per cent of the emissions connected with the use of private cars for business purposes by Council employees.

TABLE 3.3 Breakdown of Waste Disposal in South Ayrshire in 2005/06

Waste Disposal Method	Tonnes per Year
Landfill	47,215
Composting	10,174
Recycling	19,100
All	76,489

3.2.4 CO_2 Emissions from Council Fleet

Using estimates of the departmental spend on diesel and gas oil recorded for a two-week period (1April to 14 April 2006), it is possible to breakdown the fleet usage by function. The results are shown in Table 4. By comparing the total Council spend over the two-week period with the actual spend for a year, it would appear that the two-week period is fairly representative of the year as a whole.

TABLE 3.4 Breakdown of Estimated CO_2 Emissions by Department During the Period 1 to 14 April 2006

Section	Service	% of Total
Administration		0.16
Building & Works	Property and Design	15.22
Catering & Retail Trading	Educational resources	0.36
Cemeteries (incl. Crematorium)	Enterprise and Property	0.24
Cleansing Services	Neighbourhood Services	48.74
Cleaning & Janitorial Services	Educational Resources	0.52
Community Education	Lifelong Learning	0.45
Grounds Maintenance	Neighbourhood Services	6.86
Environmental Health	Legal and Protective	0.45
Libraries	Lifelong Learning	0.51
Recreation & Sport	Lifelong Learning	0.38
Roads & Lighting	Neighbourhood Services	14.23
Waste Management	Neighbourhood Services	4.25
Housing	Housing	0.21
Social Work	Social Work	5.18
Miscellaneous		2.24
Total		100.00

From Table 3.4, it can be seen that nearly half the CO_2 emissions connected with fleet usage are generated by Cleansing Services (49%). The other two key producers of emissions are Building & Works (15%) and Roads & Lighting (14%).

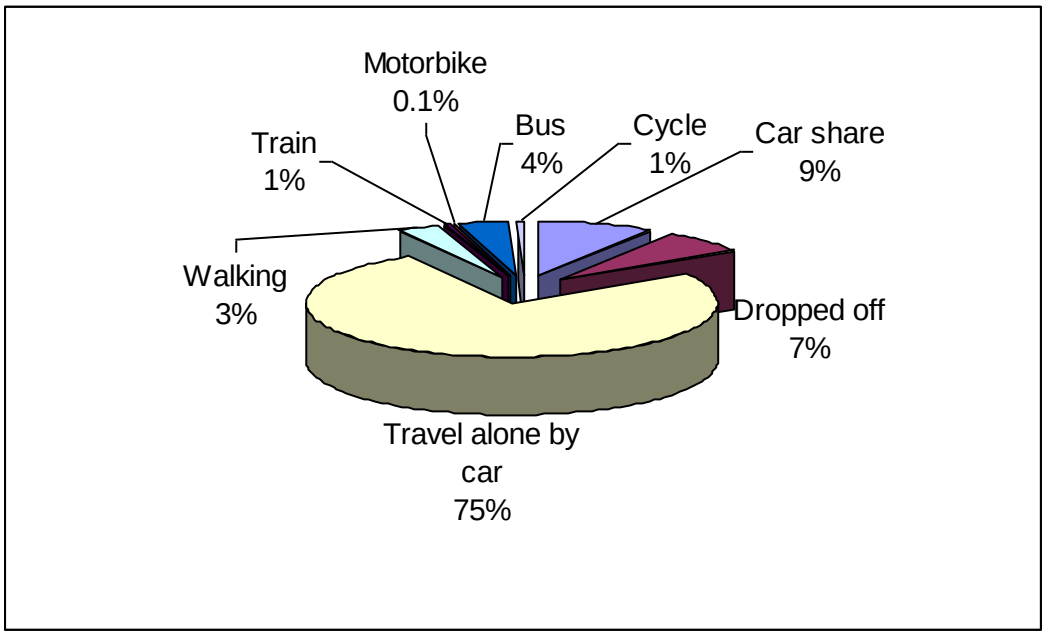
3.2.5 CO_2 Emissions From Use of Private Cars for Business

No breakdown of this category is possible.

3.2.6 CO_2 Emissions From Commuting

A staff survey was carried out to assess the different modes of transport used by people coming to work and the carbon emissions arising from that.

Figure 3.6 – Mode of travel to work



From figure 3.6 it can be seen that the dominant form of transport is the car with 92% of all journeys made by this mode. Three-quarters of all journeys are made by individuals in their cars.

3.3 Projections

Figure 3.7. Energy costs projections for business as usual scenario

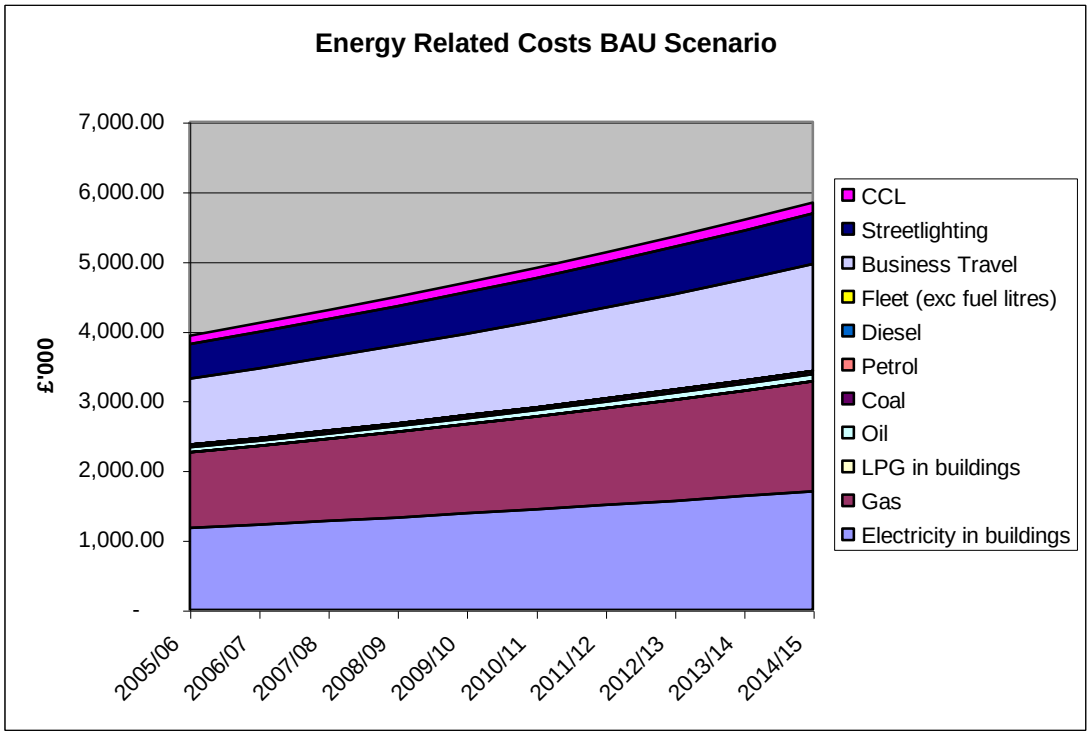
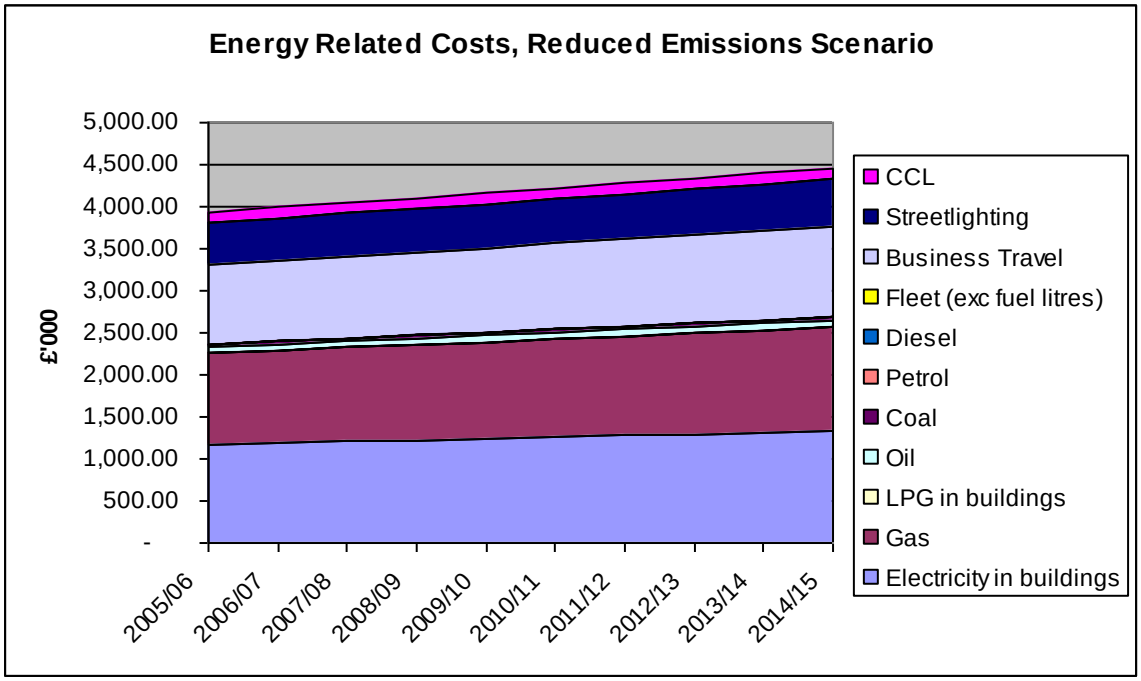


Figure 3.8: Energy Cost projections for reduced emissions scenario



The value of the energy related cost projections is shown in table 3.5 below. Over the period of the target the cumulative savings from meeting the target are almost £6 million. This is based on the assumption that energy costs will increase at an average of 3.5% per annum. To put this in context energy costs to the council over 5 years have risen by an average of 13% per annum. If prices continue to increase at this rate then the value at stake by 2012/13 increases to almost £9 million and £2.75 million for that year alone. This assumes a proportionate saving across all fuel types. Table 3.6 shows that the annual reduction in CO2 emissions is 5,700 tonnes.

If the amount of waste going to landfill continues with an expected 2% per annum increase then the council will be subject to fines for not meeting its statutory targets as well as incurring significant increases in landfill tax costs. The cost to the council for waste disposal by 2012/13 would increase by a further £4 million.

Table 3.5. **Energy related costs (£'000) and carbon (tCO2): Value-at-Stake costs**

	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Total BAU	5,371	5,632	5,899	6,178	6,471	6,778	7,101	7,438
Total RES	5,371	5,448	5,525	5,605	5,685	5,766	5,849	5,933
VAS per year	0	184	373	574	786	1,012	1,252	1,506
VAS aggregated savings			558	1,131	1,917	2,930	4,181	5,687

Table 3.6. Energy related carbon (tC02): Value-at-Stake

	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
Total BAU	28,790	29,090	29,348	29,609	29,873	30,139	30,409	30,681
Total RES	28,739	28,165	27,601	27,049	26,508	25,978	25,459	24,949
VAS per year	50	925	1,747	2,560	3,365	4,161	4,950	5,732
VAS aggregated savings			2,672	5,232	8,596	12,757	17,708	23,440

Figure 3.9: Value of energy at stake

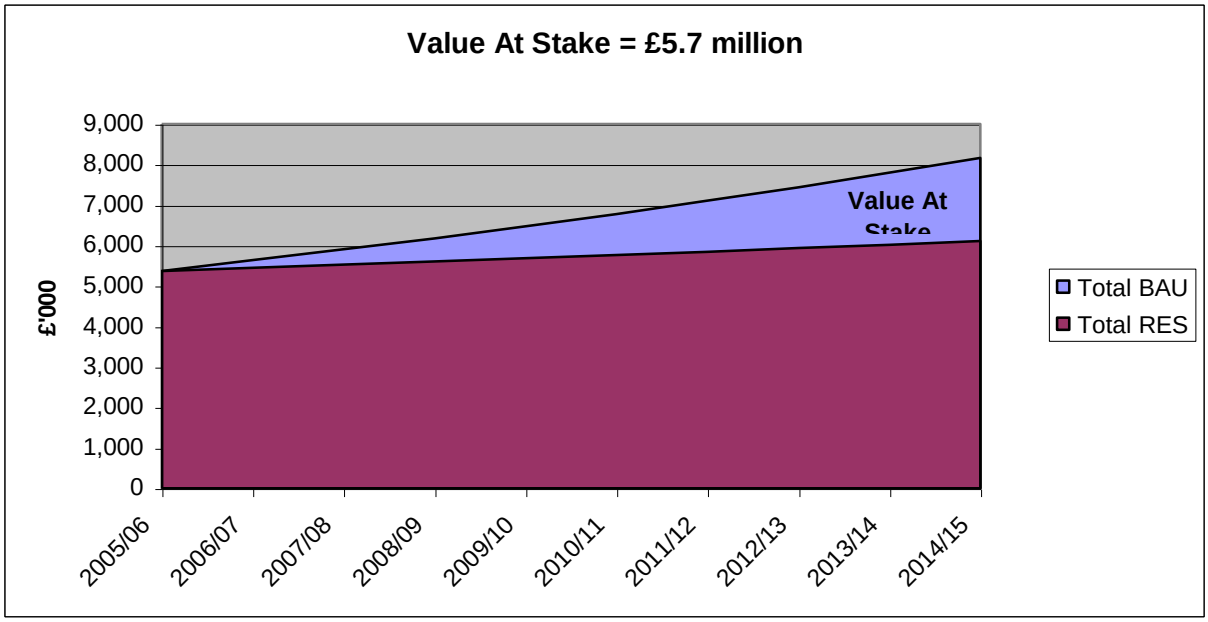
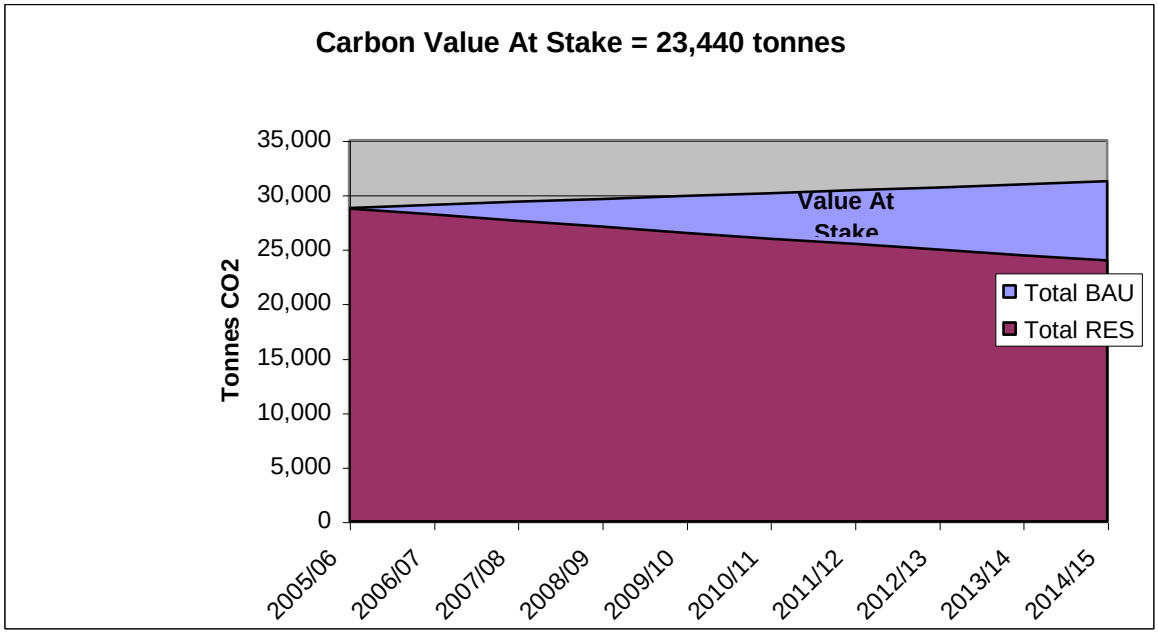


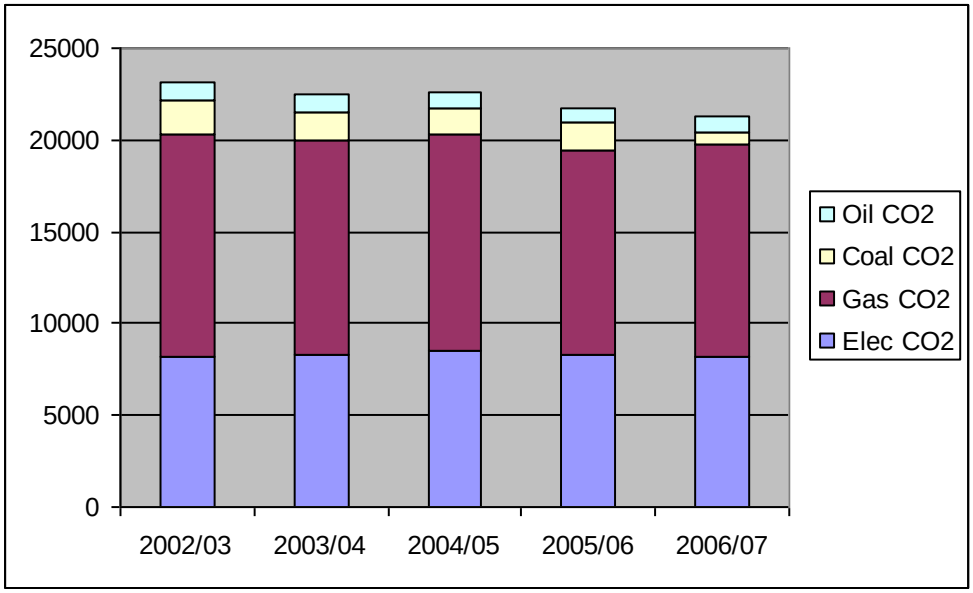
Figure 3.10: Value of carbon from energy at stake



3.4 Past actions and achievements

3.4.1 Energy Management in Buildings

Figure 3.11 – Historical CO2 emissions from energy use in buildings



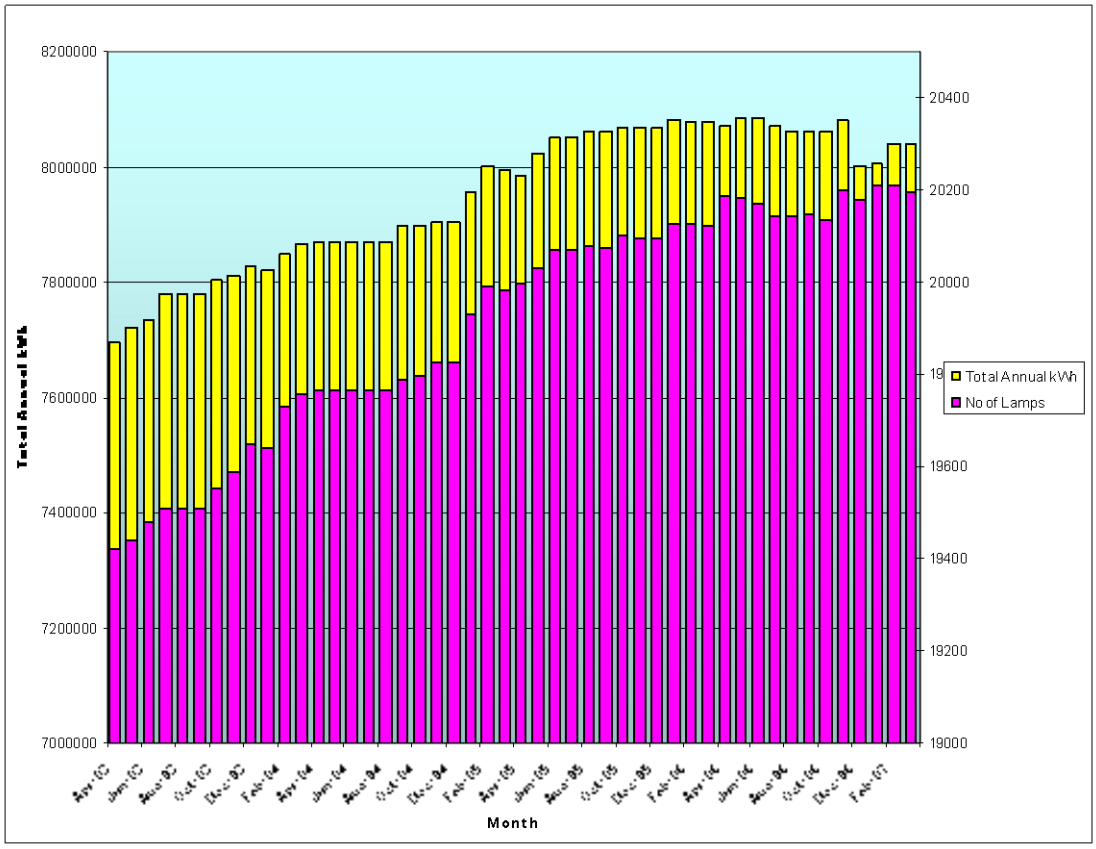
The graph above shows that CO2 emissions from energy use have been reducing in the last 5 years. There has been an ongoing conversion from coal use to either gas or oil, both of which have lower emissions but are more expensive fuels.

Electricity consumption has reduced by around 4% over this period compared with a 17% reduction for the heating fuels of gas, oil and coal combined. Reductions in electricity consumption are partially offset by increases in the number of computers and servers going into buildings over this period.

3.4.2 Streetlighting

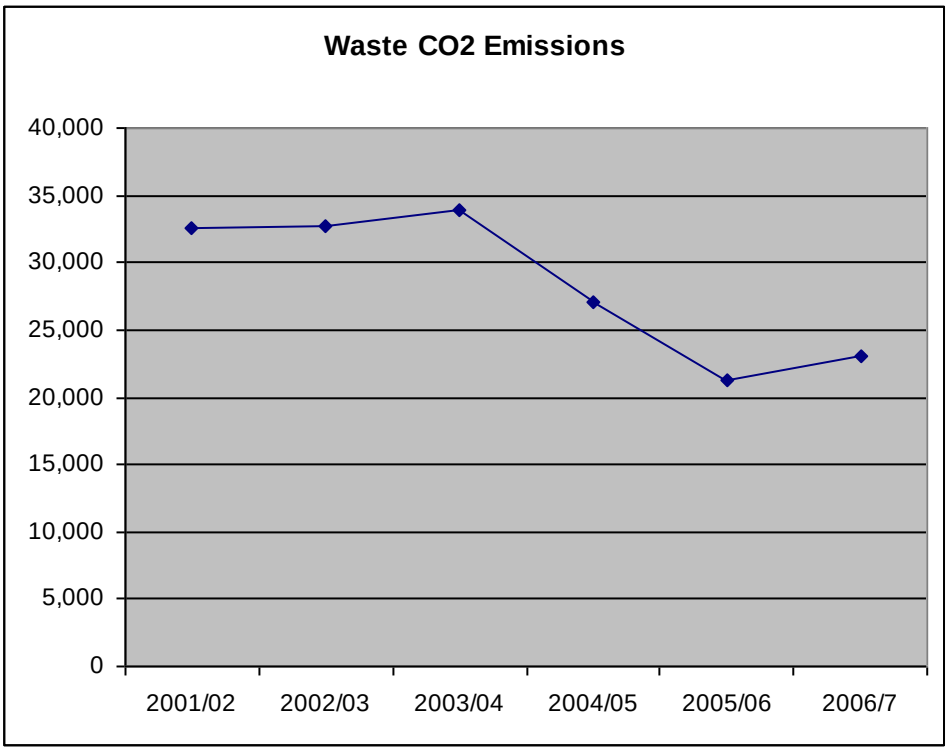
The carbon emissions from streetlighting have increased by 5% in the previous 3 years. This is due to increasing numbers of lights and improving light levels whilst improving the efficiency of the lamps installed. This can be seen in the graph below where the rate of increase in the annual energy consumption is not as steep as the rate of increase in the number of lamps.

Figure 3.12 – Streetlighting energy use and no. lamps.



3.4.3 Waste Management

Figure 3.13 – Historical CO2 emissions from waste

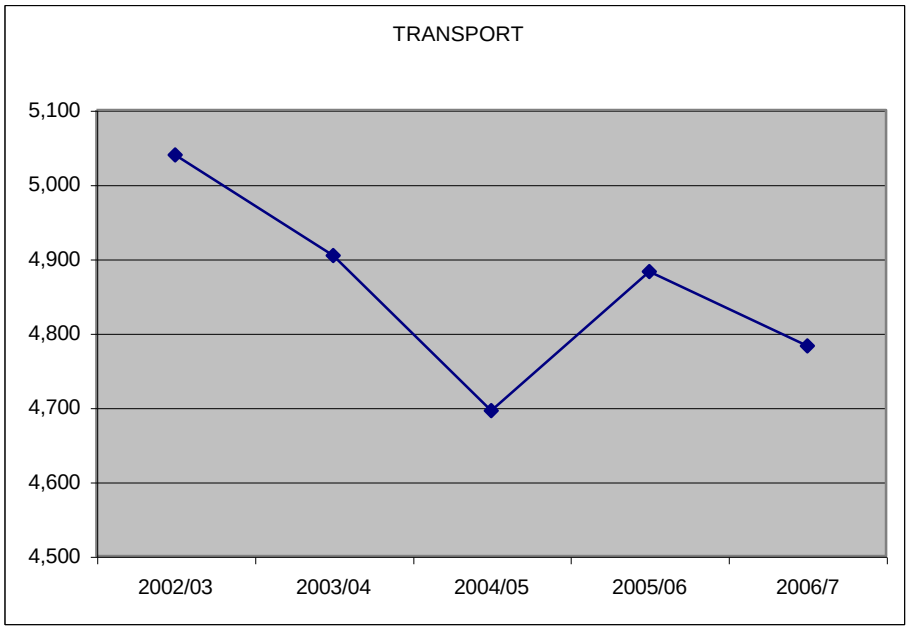


Waste emissions have decreased by one third since the increase in the amount of waste being recycled by introducing the 3 bin system. Emissions have since increased in 2006/07 by 8%.

3.4.4 Transport

The historical CO2 emissions from the fleet consumption and private cars on business is shown below. There has been an overall reduction but with significant fluctuations.

Figure 3.14: Transport CO2 emissions



4 Carbon Management Implementation Plan

There have been a total of 3 workshops with staff from across all services in the development of this Carbon Management strategy and implementation plan as well as a series of smaller meetings. These included identifying (brainstorming) opportunities for carbon saving. This long list of opportunities was then prioritised by assessing the ease of implementation and the effectiveness of the action. More detail on the individual shortlisted projects itemised below can be seen in Appendix A.

4.1 Shortlisted actions and emission reduction opportunities

Table 4.1 Buildings

No.	Project Description	Responsible Officer	Saving Tonnes	Funding Required	Investment £/Tonne CO2 saved
1	Central Energy Efficiency Fund (CEEF). Investment in energy efficiency measures in buildings with less than 5 year payback.	Energy and Resources Group Leader	348	250,000	719
2	Replace solid fuel heating systems with gas/oil	Property and Design Manager	779	0	0
3	Crematorium emissions reduction programme	Bereavement Manager	38	822,000	21,632
4	Heating controls settings checks	Energy and Resources Group Leader	102	24,000	235
5	PPP Sustainability Action Plan	Head of Project PPP	175	0	0
6	Sustainable in-house design guidelines	Energy and Resources Group Leader	1	0	0
7	Asset management plan	Corporate Property Office	384	0	0
8	Replace inefficient heating systems	Property and Design Manager	123	500,000	4,065
9	Development of Supplementary Planning Guidance for Sustainable Design	Energy and Resources Group Leader	1	0	0
10	Install woodfuel heating systems	Property and Design Manager	267	278,000	1,041
11	Replace oil heating with gas	Property and Design Manager	35	100,000	2,857
12	Programme energy efficient lighting provision	Property and Design Manager	13	500,000	11,628
13	Heating controls upgrades	Property and Design Manager	40	100,000	2,500
14	Set carbon targets for services	Chief Executive	1,963	50,000	25
15	Implementation of the “Thin Client” project	ICT Manager	48	0	0
16	Printer networking rationalisation with double sided printing	ICT Manager	148	0	0
17	Virtual servers	ICT Manager	47	50,000	1,064

	TOTAL		4,512	£2,674,000	Ave £593

Table 4.2: Streetlighting

No.	Project Description	Responsible Officer	Tonnes CO2	Funding Required	Investment £/Tonne CO2 saved
18	Increase efficiency of exterior (street, footpath, ornamental) lighting	Supervisory Engineer - Lighting	34.6	420,000	1,105
19	Install reflective signs and remove lamps	Supervisory Engineer - Lighting	1.38	10,000	7,217
20	Street Lighting & Amenity Lighting Reduced Hours of Operation	Supervisory Engineer - Lighting	79.7	3,000	38
	TOTAL		164.2	433,000	Ave £2,637

Table 4.3 Waste Management

No.	Project Description	Responsible Officer	Tonnes CO2	Funding Required	Investment £/Tonne CO2 saved
21	Reduction of waste to landfill	Waste Management Group Leader	5460	9,171,000	£1,680

Table 4.4: Fleet

No.	Project Description	Responsible Officer	Tonnes CO2	Funding Required	Investment £/Tonne CO2 saved
22	Green fleet review and vehicle specification review	Fleet Manager	398	440,000	1,106

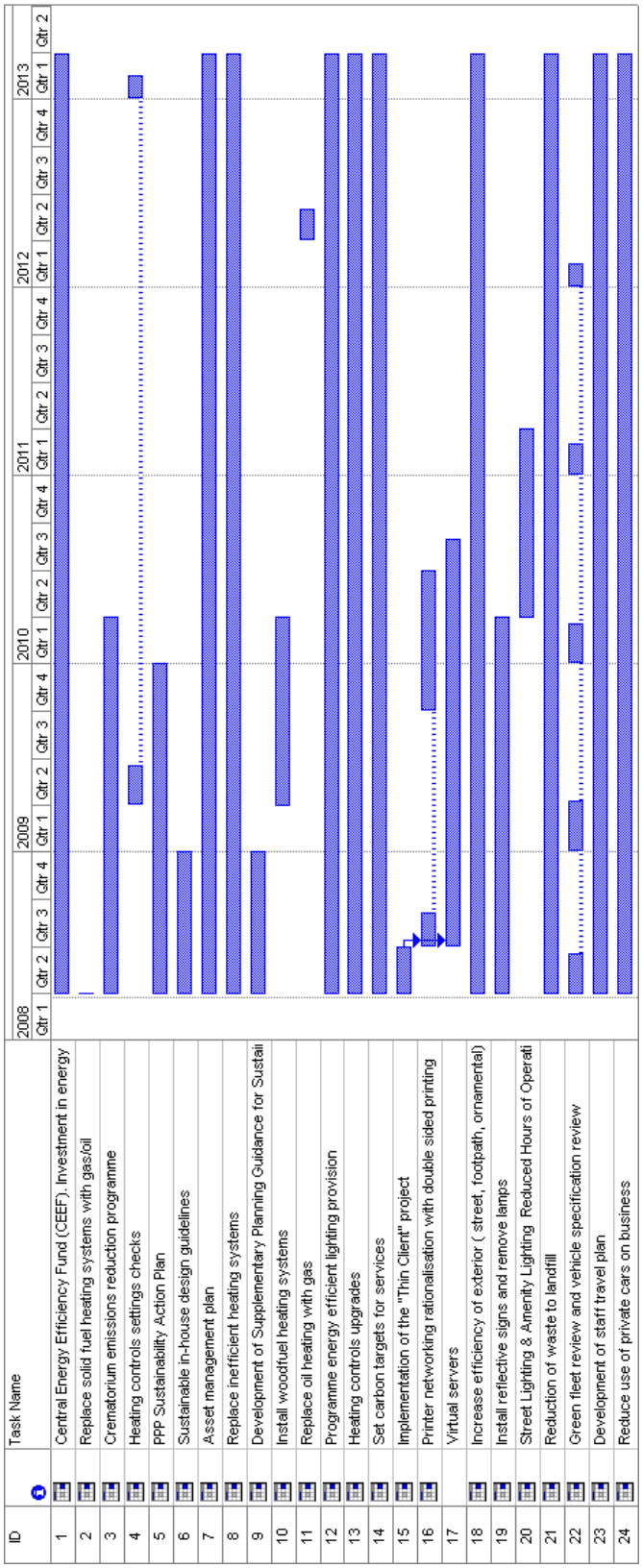
Table 4.5: Travel

No.	Project Description	Responsible Officer	Tonnes CO2	Funding Required	Investment £/Tonne CO2 saved
23	Development of staff travel plan	Environment Performance Officer	585	50,000	85
24	Reduce use of private cars on business	HR Strategist	90	0	0

4.2 Implementation plan summary

In total 24 projects have been shortlisted for taking forward. Approximately half the projects will be ongoing throughout the life of the implementation plan and beyond. The timescale for implementing these projects is shown in the Gantt chart below.

Figure 4.1: Project implementation plan



5 Implementation Plan financing

The value of the avoided cost to the council that could be generated by meeting the targets will be approximately £1.4 million per annum at 2005/06 prices. The avoided costs are expected to rise to between £5 million and £6 million in 2012/13. The lower estimate is based on a 2% inflation rate for energy prices and the increased costs of landfill. The higher estimate is based on energy prices increasing at the same rate they have done so for the previous 5 years (13% pa) as well as the increased landfill tax charges and fines for not meeting our statutory targets for reduction of waste to landfill.

Table 5.1: Direct costs to the Council and potential savings

Sector	Estimated Saving by 2013	Saving over 05/06 emissions	Investment Required	05/06 costs	05/06 value of savings	2012/13 value of savings at 2% energy inflation	2012/13 value of savings at 13% energy inflation
	T CO2	%	£000's	£000's	£000's	£000's	£000's
Buildings	4,543	22.2%	2,674	2,444	458	526	1,077
Street lighting	428	12.4%	433	496	80	92	187
Waste	5,460	25.7%	9,171	2,650	680	4,100	4,100
Fleet Vehicles	398	10.0%	440	1,210	121	139	284
Business mileage	90	10.1%	0	1,072	108	124	254
Staff Commute	585	10.0%	50				
TOTAL	11,504	20.6%	12,768	7,872	1,447	4,982	5,902

The total funding required is £12.8 million the vast majority of which (£9.2 million) is required to meet our targets for reduction of waste to landfill.

The tables in section 4 itemise the funding required and the cost per tonne of carbon saved for each project. The average cost per tonne of CO2 saved is £1,100 for all 24 projects. This amount varies considerably between zero and over £20,000 per tonne for individual projects because the primary aim of some projects is not carbon saving and would not necessarily go ahead if carbon reduction was the sole consideration. For example this applies to the new cremators, new boiler plant and new, high efficiency internal lighting projects.

It can be seen from table 5.2 below that the majority of the potential savings do not have a budget allocated. Projects that should realise 17% of the overall target have resources currently allocated with a further 2% with capital allocations for the first year of the programme. The capital programme for 2008/09 has been agreed in general with some specifics still to be detailed but future years have not been agreed at this point. Projects totalling 79% of the target do not have resources allocated to them at this stage which suggests there is a high risk of the implementation plan not succeeding. The two biggest ones (comprising 12.5% of the target) being waste reduction and the good housekeeping savings from setting carbon targets for managers.

Table 5.2: Status of financial commitment

Budget Status	Tonnes CO2	% of target
Capital budget approved for 2008/09	204	2
Capital budget required and external funding required	267	2
New budget allocation required	9,092	79
No additional funding required	224	2
Project Complete	779	7
Reduced revenue costs - potentially no capital outlay	148	1
Within existing resources	823	7
Grand Total	11,537	100

6 Stakeholder management and communications

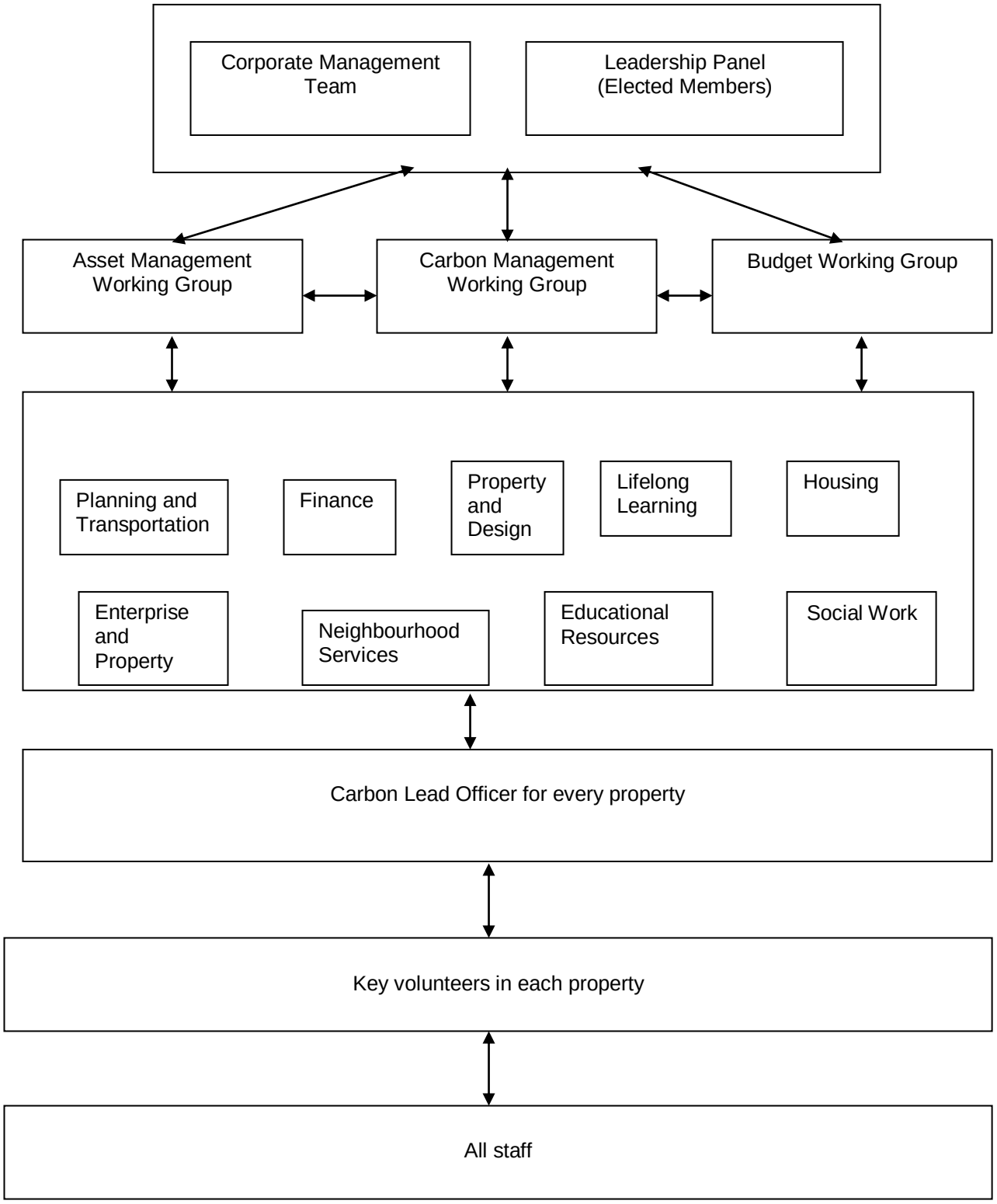
6.1 Stakeholder management

The proposed carbon management working group will be key to identifying and communicating with the staff of the council. The composition of the group is of all the services that operate buildings and fleet vehicles as well as key officers with a cross-service remit e.g. finance, ICT, property investment and maintenance, estates management, fleet management and energy management.

The carbon management working group will review the composition of the group periodically to ensure key personnel and services continue to be engaged with the process.

The interaction with other working groups, management teams, elected members and all staff is represented in figure 6.1 below with an organisational structure. The Council has stated a priority of managing its carbon emissions as part of the vision for the future and the management of the stakeholders will be vital to ensure that this is embedded in the culture of the organisation.

Figure 6.1 – Organisational structure



6.2 Communications Plan

The challenge will be to shift the staff of the council from concentrating on short term operational issues to have a longer term view with the strategic priorities of the council underpinning their actions.
Some of the channels of communication to be used will be:
Induction training for all staff
Responsibilities in job descriptions
E-mail bulletins
Press releases
Progress reports to services
Reports to CMT/Leadership Panel
Reports to working groups
Posters and labels
Pay slip messages
Intranet and internet reports

There is now a high level of public awareness of climate change and carbon footprinting. The two key themes for communications will be:

1. to reduce the council's carbon footprint with the benefit of the reducing environmental impact and the impact on future generations and;
2. cutting (or avoiding additional) costs to the council with the benefits of being able to put more resource into front line services and/or avoid job cuts.

The success of the communications will be monitored through the impact on carbon emissions from behavioural changes that may be measurable in properties where there has been no other variable changed, such as a change in operation or equipment. Staff will also be encouraged to give feedback either formally or informally through their management teams and to the Carbon Management working group.

7 SIP governance, ownership and management

7.1 Main roles and responsibilities

It has been agreed that a Carbon Management Group of Officers is established to consider ongoing operational and strategic carbon management issues including actions and new opportunities with a view to achieving the target carbon reductions set. This group will report progress and take strategic issues for discussion to the recently formed Asset Management Working Group with senior officers and members. This group will not be making decisions but will be a forum for exploring options before final decisions are recommended to the relevant Council Panel.

The Energy and Resources Group Leader will be the designated Carbon Manager for the Council and this will be written into the job description after the proposed review of the Energy and Resources Group remit. Carbon emissions data will be collated and reported by the Energy and Resources Group to the working groups and the CMT. This will allow senior management to take action if targets are not being met.

The Carbon Management Group will have representation from the Services that operate properties and fleet or are involved in investment in and maintenance of properties.

Table 7.1: Carbon Management Working Group Representatives

Designation	Role	Service Represented	Share of Carbon Emissions from Buildings	Share of Carbon Emissions from Fleet
Ian McLarty, Head of Planning and Transportation	Chair	Planning and Transportation	<0.1%	
Ken Gibb, Sustainable Development Manager	Project Sponsor			
Andrew Marnie, Energy & Resources Group Leader	Carbon Manager - Collating data and reporting			
Bryce Donaldson, Energy Engineer	Assisting with collating data and producing the quarterly reports			
Bobby Howe, Fleet Manager				
Bill Gray, Property and Design Manager	Capital programme implementation and maintenance	Property and Design	1.3%	15.2%
Audrey Greenwood, Estates Manager	Corporate Property Officer	Enterprise and Property Common Good	9.7% 7.5%	0.2%
Tim Baulk, Principal Accountant	Finance	Finance	0.3%	
Lorraine Boyd, HR	HR			
Nominee		Educational Resources	51%	1.4%
Nominee		Lifelong Learning	17%	1.0%
Nominee		Housing Services	4%	0.2%
Nominee		Neighbourhood Services	1.7%	74.1%
Nominee		Social Work Services	7%	5.2%

This Group will report progress and strategy/policy issues for consideration to the Asset Management Group and CMT. Energy management has been identified as an integral element of asset management. Carbon management will include, for example, procurement, street lighting, waste management and travel planning. Other individuals may be invited to specific meetings as deemed necessary, or to become involved in specific short-life project groups.

The Carbon Management Group will identify a lead responsible officer for each property. In most properties this will be the most senior member of staff. e.g. headteachers for schools. For properties with multiple occupiers, more than one senior officer at equal level or no suitably senior officer then a recommendation will require to be made by the CMG as to who will be the nominated officer.

The identification and remit of the these lead officers may require to be considered in association with the Council's Asset Management Working Group as in addition to an energy management function it may be appropriate for them to formally have responsibilities for health and safety, maintenance, allocating key holders, security, emergency procedures etc.

It will be necessary to ensure effective support and monitoring processes are in place to support nominated officers and their delegated support staff. This is likely to include ensuring time is available to undertake some aspects of the duties.

The carbon reduction targets set will be incorporated into the performance monitoring systems used for the relevant services/responsible officers.

7.2 Risks and issues management

Progress against the targets set for each service will be monitored through the Council's performance management system. Indicators are monitored and reported on with a traffic light system to indicate whether targets are on track, at risk or not likely to be met.

The working groups and the CMT will monitor quarterly progress reports. If there is a risk of targets not being met this will be highlighted so that remedial action can be taken. Issues will be raised at the working group meetings and escalated to the senior officer/members' fora when considered appropriate.

The main risk will be that funding has not been identified or made available for the majority of the projects within the plan. This is a key issue that will be feature on the agenda for all the working group meetings and will form a section in the quarterly progress reports produced.

A second risk is that if the quality of the monitoring reports is poor then they will lose credibility with managers. This is dependent on a number of officers providing the data and also on the provision of quality data from the energy suppliers that is not always available within a tight timescale. A good energy management reporting tool is required and the current system run by the council is about to become obsolete and will not be supported. Processes will be put in place to ensure the quality of the energy data received and a smart metering pilot will assist with the provision of actual meter readings rather than estimates. It is proposed to procure a new software tool for energy monitoring and targeting.

Another risk is the capacity within the existing Energy and Resources Group with 3 full time staff to provide the corporate Carbon Management function in addition to its other activities. It is proposed to re-prioritise some of the activities, particularly with regard to domestic energy efficiency, in the short term and review the remit of the section over the next year.

7.3 Benefits management

The reductions in carbon emissions and associated cost savings (if applicable) will be monitored and reported on within an annual carbon management report. The Energy and Resources Group Leader

will convert the measured data into carbon dioxide equivalent figures and collate the information provided including costs of implementation. The Officers responsible for providing data are listed in table 7.2 in the following section.

If other potential projects are identified during the implementation phase that have a lower cost per tonne of carbon saved then the opportunities of funding these in preference to one or more of the existing projects will be considered by the Carbon Management Working group in the first instance. Services will be encouraged to identify projects as well as the ongoing survey and audit work that is being carried out on the stock.

7.4 Reporting and evaluation

As well as the quarterly reporting exercise to the working groups and CMT an annual report will be produced which will summarise the monitored changes in emissions and quantify the costs and benefits. An annual carbon management report is already produced for the Council by the Energy and Resources Group Leader which is usually produced by November for the preceding financial year. This annual report may be or become part of the annual return that will be required as one of the commitments made when signing up to the Scottish Climate Change Declaration.

Table 7.2: Responsibility for monitoring and providing data

Area	Responsible Officer	Frequency
Energy use in buildings	Andrew Marnie, Energy and Resources Group Leader	Quarterly and annual
Capital projects	Bill Gray, Property and Design Manager	Quarterly and annual
Fleet consumption broken down by service area	Bobby Howe, Fleet Manager	Quarterly and annual
Waste to landfill, composted and recycled	Stratton MacDonald, Waste Management Group Leader	Quarterly and annual
Streetlighting consumption, costs of projects and estimated emission reductions from projects	Bobby Borland, Supervisory Engineer - Lighting	Quarterly and annual
Business travel	Angela Wilson, HR Strategist	Quarterly and annual
Staff Commuting	Annabel Beattie, Environment Performance Officer	Annual
Assisting with collating data and producing quarterly reports for working groups	Bryce Donaldson, Energy Engineer	Quarterly and annual
Lead officers' reporting on progress of implementation and costs	Various (see appendix A for lead officers)	Quarterly and annual

The proposed projects and targets will be updated on an annual basis once the capital programme for the year ahead has been agreed.

Appendix A: Individual actions

Project 1: Central Energy Efficiency Fund (CEEF).	
Description and notes	The continuation of an existing project to invest in measures that have a payback of less than 5 years. Typical measures include small controls, insulation and lighting retrofit.
Quantified costs and benefits	• £50,000 p.a. cost for 5 years • 348 tonnes CO_2 • £50,000 pa savings after year 5
Resources	Existing revolving fund of £325,000. This is continuously topped up by the savings achieved repaying the initial cost.
Ownership and accountability	Lead: Energy and Resources Group Leader Sign Off: Owning Head of Service Consult: Property and Design Manager Inform: Responsible Officer on Site Asset Management Working Group
Ensuring success	Identifying suitable projects that fall within the <5year payback.
Performance / success measure	Monitor against annual target of 70 tonnes CO2.
Timing	Ongoing programme
Sources of information and guidance	CEEF website, Carbon Trust, Scottish Energy Officers' Network. Energy monitoring and targeting system

Project 2: Replace solid fuel boilers with gas or oil	
Description and notes	The remaining sites with solid fuel boilers will be converted to gas or oil. Gas and oil have lower carbon emissions for every unit of energy and the new systems will be more efficient than the old systems they are replacing.
Quantified costs and benefits	779 tonnes of CO2 £500,000
Resources	Funding committed through capital programme
Ownership and accountability	Lead: Property and Design Manager Sign Off: Leadership Panel Consult: Budget Working Group Inform:
Ensuring success	Funding already committed for this.
Performance / success measure	Monitor performance of new systems compared with historical data
Timing	Will be complete by the end of March 2008
Sources of information and guidance	Energy monitoring and targeting system

Project 3: Crematorium Emissions Reduction Project	
Description and notes	New cremators with more efficient combustion system and heat recovery. This project is in response to the legislative requirement to improve mercury abatement.
Quantified costs and benefits	779 tonnes CO2
Resources	£800,000 over 2 years for completion 2010. The main driver for this project is to comply with legislation for mercury abatement.
Ownership and accountability	Lead: Registration and Bereavement Manager Sign Off: Leadership Panel Consult: Asset Management Working Group Budget Working Group Inform:
Ensuring success	Support for the option that reduces carbon emissions the most
Performance / success measure	Monitored reductions
Timing	Completion 2010
Sources of information and guidance	Consultant report on options appraisal Energy monitoring and targeting system

Project 4: Heating Controls Settings Checks	
Description and notes	A project to visit each site to check and adjust time and temperature controls, programme holidays and check operation.
Quantified costs and benefits	102 tonnes CO2
Resources	£12,000 required 2009/10 and 2012/13
Ownership and accountability	Lead: Energy and Resources Group Leader Sign Off: Leadership Panel Consult: Property and Design Manager Inform:
Ensuring success	Identify budget for this work
Performance / success measure	Record of adjustments made and issues/faults identified.
Timing	One round of surveys in 2009 with a follow up 3 years later.
Sources of information and guidance	Energy monitoring and targeting system

Project 5: PPP Sustainability Action Plan	
Description and notes	Reduce the carbon emissions from the new schools being built to replace existing under the PPP initiative.
Quantified costs and benefits	175 tonnes CO2 £76M programme
Resources	Funded through PPP contract
Ownership and accountability	Lead: Head of Project PPP Sign Off: Council Consult: Educational Services Inform:
Ensuring success	Monthly meetings held with consortium and PPP project team
Performance / success measure	Monitored consumption
Timing	Project ongoing and due for completion 2009
Sources of information and guidance	Energy monitoring and targeting system

Project 6: Sustainable Construction guidance - Internal	
Description and notes	Develop guidance for Council capital programme work to be followed by in house design teams and external consultants.
Quantified costs and benefits	1 tonne CO2
Resources	
Ownership and accountability	Lead: Energy and Resources Group Leader Sign Off: Property and Design Manager Consult: Property and Design Staff Inform: Approved Consultant List
Ensuring success	Including Property and Design staff in the design and content of the guidance so they have some ownership of it to ensure that they are aware of it and use it.
Performance / success measure	Sign off of guidance. Evidence of guidance being followed.
Timing	Aim for completion December 2008
Sources of information and guidance	Examples of design guidance from other Local Authorities. Energy monitoring and targeting system

Project 7: Asset Management Plan	
Description and notes	Rationalise property assets and dispose of surplus property. This may include Holmston House, Templeton House, South Lodge and Macadam house.
Quantified costs and benefits	384 tonnes CO2
Resources	
Ownership and accountability	Lead: Corporate Property Officer Sign Off: Leadership Panel Consult: Asset Management Working Group Owning Services Inform: Staff
Ensuring success	New Asset Management Working Group established to take a strategic view of property requirements.
Performance / success measure	Rationalisation plans. Disposal of properties.
Timing	Ongoing
Sources of information and guidance	Asset register. Energy monitoring and targeting system

Project 8: Replace Inefficient Heating Systems	
Description and notes	Replacement of old, inefficient heating systems that are beyond their useful working life.
Quantified costs and benefits	123 tonnes £100,000 pa costs
Resources	
Ownership and accountability	Lead: Property and Design Manager Sign Off: Leadership Panel Consult: Asset Management Working Group Inform: Owning Services
Ensuring success	Complete condition surveys of heating systems for the stock identifying priorities for replacement. The main driver for this project is to maintain business continuity.
Performance / success measure	No. systems replaced Monitor performance of new systems compared with historical data
Timing	Ongoing
Sources of information and guidance	Condition surveys and energy surveys. Energy monitoring and targeting system

Project 9: Development of Supplementary Planning Guidance for Sustainable Design	
Description and notes	Supplementary Planning Guidance for developers including the requirement for a percentage of energy demand to be met from low or zero carbon (LZC) technologies. Although principally aimed at external developers this will also apply to Council developments.
Quantified costs and benefits	1 tonne CO2
Resources	Internal resources to draft and deal with consultation.
Ownership and accountability	Lead: Energy and Resources Group Leader Sign Off: Leadership Panel Consult: Planning Services, internal and external stakeholders, general public consultation. Inform: Widespread notification and publication and specifically all planning applicants.
Ensuring success	Widespread consultation
Performance / success measure	Implementation of SPP6
Timing	Aim to draft and consult during 2008.
Sources of information and guidance	Many examples of SPG from other local authorities including Highland Council and Edinburgh City Council in Scotland.

Project 10: Install Woodfuel Heating Systems	
Description and notes	Implement the Council's policy to install biomass heating when heating systems are being renewed if feasible.
Quantified costs and benefits	267 tonnes CO2 £320,000 cost to council with 40% grant
Resources	Economic feasibility depends on part grant funding
Ownership and accountability	Lead: Property and Design Manager Sign Off: Leadership Panel Consult: Asset Management Working Group Inform: Owning Services
Ensuring success	Local potential fuel supply chain is in place. The Council has a policy to install woodfuel heating if feasible whenever any new heating plant is considered. Resolution of issues related to PM2.5 and PM10 particles and air quality. Depends on availability of external funding.
Performance / success measure	No. installations Monitor performance of new systems compared with historical data
Timing	Resume in 2009/10
Sources of information and guidance	Ayrshire woodfuel forum, Scottish Government, Forestry Commission Energy monitoring and targeting system

Project 11: Replace oil heating with gas	
Description and notes	Convert Riverside house and Links road properties from oil to gas fired heating systems
Quantified costs and benefits	35 tones CO2
Resources	
Ownership and accountability	Lead: Property and Design Manager Sign Off: Leadership Panel Consult: Asset Management Working Group Inform: Owning Services
Ensuring success	
Performance / success measure	Monitor performance of new systems compared with historical data
Timing	Links Road completed. Riverside House to be programmed
Sources of information and guidance	DMP condition survey of plant Energy monitoring and targeting system

Project 12: Energy Efficient Lighting	
Description and notes	Install high efficiency fluorescent lighting systems within buildings. This will be part of a wider building re-wiring and refurbishment project.
Quantified costs and benefits	Average of 2 properties per year saving 8.6 Tonnes CO_2 pa total 43 tonnes after 5 years.
Resources	£100,000 per year Could be up to 50% funded through CEEF.
Ownership and accountability	Lead: Property and Design Manager Sign Off: Leadership Panel Consult: Asset Management Working Group Inform: Owning Services
Ensuring success	Priority sites identified through condition survey of mechanical and electrical services.
Performance / success measure	No. properties refurbished.
Timing	Annual programme starting 2008/09
Sources of information and guidance	Building Services condition survey reports by DMP consultants. Energy monitoring and targeting system

Project 13: Heating controls upgrades	
Description and notes	Upgrade the heating controls within buildings to intelligent systems
Quantified costs and benefits	40 tonnes CO2 £20,000 pa budget
Resources	Could be part funded through CEEF
Ownership and accountability	Lead: Property and Design Manager Sign Off: Leadership Panel Consult: Asset Management Working Group Inform: Owning Services
Ensuring success	
Performance / success measure	No. systems upgraded
Timing	Annual programme starting 2008/09
Sources of information and guidance	Building Services condition survey reports by DMP consultants Energy monitoring and targeting system

Project 14: Set Carbon Targets for Buildings	
Description and notes	Establish targets for buildings based on 2% saving per annum for 5 years over and above savings from technical improvements
Quantified costs and benefits	1,963 tonnes CO2
Resources	A review and restructure of the activities of the Energy Management team will be required to be able to provide adequate management data on a quarterly basis. The capacity of the team to be able to provide this and other service requirements will need reviewing after a pilot period. An upgrade of the existing M&T software system will also be required cost approx £10K plus £10K per annum bureau service.
Ownership and accountability	Lead: Head of Planning and Transportation Sign Off: Leadership Panel Consult: CMT Inform: Heads of Service
Ensuring success	Creation of Carbon Management working group to monitor progress and decide on actions to achieve this. Report to Asset Management Working Group and Corporate Management Team.
Performance / success measure	Monitored reductions in carbon emissions Demand for training sessions and support materials
Timing	April 2008 ongoing
Sources of information and guidance	Energy monitoring and targeting system

Project 15: Implementation of Thin Client system	
Description and notes	Migration from PC's to thin client devices throughout the Council network
Quantified costs and benefits	48 tonnes CO2
Resources	Already committed
Ownership and accountability	Lead: ICT Manager Sign Off: Assistant Chief Exec Consult: Managers Inform: All ICT users
Ensuring success	There is full commitment to this project from the council and resources have been allocated.
Performance / success measure	No. of thin client devices installed. No. PCs removed and disposed of.
Timing	Ongoing - due for completion by June 2008.
Sources of information and guidance	

Project 16: Printer Rationalisation Project	
Description and notes	A printer survey of the 2 main council offices identified 1 printer for every 2.7 staff. The aim is to instigate a document output device strategy.
Quantified costs and benefits	148 tonnes CO2, £36,000 electricity costs. £248,000 estimated savings for consumables, maintenance, paper and energy.
Resources	This could be a spend to save project with no up-front investment from the Council required. The ICT user group will consider the most appropriate way of financing this project.
Ownership and accountability	Lead: ICT Manager Sign Off: Assistant Chief Executive Consult: All services Inform: All staff
Ensuring success	An ICT user group as well as the Carbon Management working group will be used to communicate the intentions to all staff. Posters will be prepared to assist with this.
Performance / success measure	Financial savings from reduced consumables and maintenance. Reduction in paper consumed by better use of double sided printing and avoiding printing.
Timing	Start after thin client migration project is complete around July 2008.
Sources of information and guidance	Case studies from other LAs that have implemented this. Lancashire Council, Stirling Council, Fife Council.

Project 17: Virtual Servers	
Description and notes	Reduce the number of servers through virtualisation. Currently around 150 to 200 servers in use to be halved in 3 years time.
Quantified costs and benefits	47 tonnes CO2
Resources	
Ownership and accountability	Lead: ICT Manager Sign Off: Assistant Chief Executive Consult: All departments Inform:
Ensuring success	Some training of ICT staff required. Consult with users through ICT working group to ensure there are no applications that cannot be moved to a virtual server.
Performance / success measure	No. of servers removed
Timing	Over first 2 years
Sources of information and guidance	

Streetlighting

Project 18: Increase efficiency of exterior (street, footpath, ornamental) lighting	
Description and notes	Increase efficiency of exterior (street, footpath, ornamental) lighting. Replacing 250W SON with 150W SON plus electronic control gear. There is scope to reduce the lighting levels within the current standards.
Quantified costs and benefits	380 tonnes CO2
Resources	£420,000 cost to convert 1745 fittings
Ownership and accountability	Lead: Streetlighting Engineer Sign Off: Leadership Panel Consult: Budget working group Inform:
Ensuring success	
Performance / success measure	No. of lamps replaced
Timing	4 year programme starting year 2. 2009/10 to 2013/14.
Sources of information and guidance	Lighting standards

Project 19: Install reflective signs and remove lamps	
Description and notes	Install reflective road signs and remove lamps from existing signs
Quantified costs and benefits	35 tonnes CO2
Resources	Cost of £10,000 to decommission lighting.
Ownership and accountability	Lead: Streetlighting Engineer Sign Off: Leadership Panel Consult: Roads dept and police Inform:
Ensuring success	
Performance / success measure	No. lamps removed.
Timing	Year 3 to allow for revision of current standards.
Sources of information and guidance	Pending the publication of CSS report which is expected to recommend this. This must then be translated into the codes of practice.

Project 20: Street Lighting & Amenity Lighting Reduced Hours of Operation	
Description and notes	Switch off amenity lights on the promenades at Troon, Prestwick and Girvan, in Belleisle and Rozelle Parks and ornamental flood lighting of historical buildings and memorials between midnight and 6am.
Quantified costs and benefits	13 tonnes CO2
Resources	£3,000 for timing controls for 193 lights.
Ownership and accountability	Lead: Streetlighting Engineer Sign Off: Leadership Panel Consult: Neighbours, police and users of areas Inform:
Ensuring success	Review public use of these areas between midnight and 06.00
Performance / success measure	Programme of time switch controls installed.
Timing	Year 2.
Sources of information and guidance	Consultation exercise Other LA's with similar projects

Waste

Project 21: Reduction of Waste to Landfill	
Description and notes	The Council has a target to reduce its waste to landfill to 35,000 tonnes (currently approximately 50,000 tonnes) by 2013.
Quantified costs and benefits	5,460 tonnes CO2 Cost estimated at £2.174 million per annum plus £475,000 capital.
Resources	More waste collection vehicles, equipment and employees required.
Ownership and accountability	Lead: Waste Strategy Group Leader Sign Off: Leadership Panel Consult: Waste Management Working group Inform:
Ensuring success	A new Waste management Working group of elected members has been set up to look at the issues. Significantly increased recycling and composting rates required to meet recycling and landfill targets. Diversion of waste from landfill to waste treatment facilities.
Performance / success measure	LATS (Landfill Allowance Trading Scheme) monitors each Council's performance in diverting waste from landfill.
Timing	Progressive increase in recycling rate required
Sources of information and guidance	SEPA Waste Data Flow. LATS. Scottish Government, Strategic Waste Fund, Scottish Waste Awareness Group, WRAP, Re-Made.

Fleet

Project 22: Green fleet review and vehicle specification review	
Description and notes	Review specification of vehicles to reduce emissions through more efficient engines, speed limiters, driver training and operational changes to fleet use (e.g. use of waste transfer station)
Quantified costs and benefits	378 tonnes CO2
Resources	Estimated £110,000 pa starting in year 2 for training and upgraded vehicle specification.
Ownership and accountability	Lead: Fleet Manager Sign Off: Leadership Panel Consult: Carbon Management Working Group Inform:
Ensuring success	Depends on results of review and the recommendations
Performance / success measure	Reduction in total consumption of fuels from depots and external garages.
Timing	Start year 2 then ongoing
Sources of information and guidance	Awaiting the results of a 'green fleet' review. Fuel monitoring system.

Staff Travel

Project 23: Development of a staff travel plan	
Description and notes	Plan outlining objectives and targets for reducing carbon emissions generated by staff commute to work. Initiatives will include encouraging walking and cycling, use of public transport and car sharing.
Quantified costs and benefits	Financial investment, operational costs – requires significant budget of between £10,000 and £20,000 pa in the short term Emissions reduction – 378 tonnes CO2 (10% reduction target) Increase cycling to 5.8% (from 3.9%) Increase walking to 15% (from 13%) Increase use of public transport to 14.5% (from 6%) Increase car sharing by 3%
Resources	Funding – potential from proposed car purchase salary sacrifice scheme. Match funding received from SPT, with potential for more. Match funding potential from Paths for all and Healthy Working Lives. Management – there will be some management input however the bulk of the legwork will be done by staff, as the main target is staff and business commute

Ownership and accountability	Lead: Environment Performance Officer Sign Off: Leadership Panel Inform: All staff
Ensuring success	Success factors – uptake of cycling facilities, CTW scheme, number of queries, positive feedback, marketing campaign ensuring information availability Risks – incumbent in post to continue driving the initiative; resources available to implement, co-operation from employees Mitigation – make resources available
Performance / success measure	Uptake of alternatives to the car. Monitored through annual staff survey.
Timing	April 2008 ongoing
Sources of information and guidance	SPT, other local authorities, DETR, Energy Saving Trust, South Ayrshire Council Transportation Section Annual staff survey

Project 24: Reduce use of private cars on business	
Description and notes	Encourage use of other modes of transport (as per travel plan);better management of staff travel by car; encourage uptake of alternatives to business travel (telephone conferencing)
Quantified costs and benefits	90 tonnes CO2
Resources	Funding – potential from proposed car purchase salary sacrifice scheme. Match funding received from SPT, with potential for more. Match funding potential from Paths for all and Healthy Working Lives. Management – there will be some management input however the bulk of the legwork will be done by staff, as the main target is staff and business commute
Ownership and accountability	Lead: HR Strategist Sign Off: Leadership Panel Inform: All staff
Ensuring success	Visit all aspects of business travel: ease of booking of travel tickets, booking out and availability of pool vehicles; business travel policy; business travel hierarchy of mode choice
Performance / success measure	Before and after comparison of pool vehicle usage Year on year comparison of % business travel by non-car mode (to be determined once self-service comes into being)
Timing	In conjunction with commencement of sustainable travel plan campaign, currently starting March 08
Sources of information and guidance	SPT, other local authorities, DETR, Energy Savings Trust; SEPA policy

Appendix B Financial status of each project

Table B1: Projects with capital approved for 2008/09 (future years have not been agreed yet)

No.	Project Description	Funding 2008/09	Funding 2009/10	Funding 2010/11	Funding 2011/12	Funding 2012/13	Notes on budget
3	Crematorium emissions reduction programme (mercury abatement primarily)	411,000	411,000				Capital budget approved for 2008/09
8	Replace inefficient heating systems	100,000	100,000	100,000	100,000	100,000	Capital budget approved for 2008/09
12	Programme energy efficient lighting provision	100,000	100,000	100,000	100,000	100,000	Capital budget approved for 2008/09

Table B2: Projects without funding allocated (subject to consideration by Carbon Management Working Group)

No.	Project Description	Funding 2008/09	Funding 2009/10	Funding 2010/11	Funding 2011/12	Funding 2012/13	Notes on budget
4	Heating controls settings checks		12,000			12,000	New budget allocation required
10	Install woodfuel heating systems		132,000	73,000	73,000		Capital budget required and external funding required
11	Replace oil heating with gas		100,000				New budget allocation required
13	Heating controls upgrades	20,000	20,000	20,000	20,000	20,000	New budget allocation required
14	Set carbon targets for services	10,000	10,000	10,000	10,000	10,000	New budget allocation required
17	Virtual servers		25,000	25,000			New budget allocation required
18	Increase efficiency of exterior (street, footpath, ornamental) lighting		105,000	105,000	105,000	105,000	Capital budget requested
19	Install reflective signs and remove lamps			10,000			Capital budget requested
20	Street Lighting & Amenity Lighting Reduced Hours of Operation		3,000				New budget allocation required
21	Reduction of waste to landfill		2.6 million	2.2 million	2.2 million	2.2 million	New budget allocation required
22	Green fleet review and vehicle specification review		110,000	110,000	110,000	110,000	New budget allocation required
23	Development of staff travel plan		20000	10000	10000	10000	New budget allocation required

Table B3: Projects not requiring new resources

No.	Project Description	Funding 2008/09	Funding 2009/10	Funding 2010/11	Funding 2011/12	Funding 2012/13	Notes on budget
1	Central Energy Efficiency Fund (CEEF). Investment in energy efficiency measures in buildings with less than 5 year payback.	50,000	50,000	50,000	50,000	50,000	Within existing resources
2	Replace solid fuel heating systems with gas/oil						Project Complete
5	PPP Sustainability Action Plan						No additional funding required
6	Sustainable in-house design guidelines						No additional funding required
7	Asset management plan						Within existing resources
9	Development of Supplementary Planning Guidance for Sustainable Design						Within existing resources
15	Implementation of the “Thin Client” project						No additional funding required
16	Printer networking rationalisation with double sided printing						Reduced revenue costs - potentially no capital outlay
24	Reduce use of private cars on business						Within existing resources