

REPORT TO: POLICY AND RESOURCES COMMITTEE - 27TH APRIL 2009
REPORT ON: CARBON MANAGEMENT PLAN - 2009 TO 2013
REPORT BY: ASSISTANT CHIEF EXECUTIVE (COMMUNITY PLANNING)
REPORT NO: 241-2009

1.0 PURPOSE OF REPORT

1.1 This report details Dundee City Council Carbon Management Plan and requests a decision to implement thereof.

2.0 RECOMMENDATIONS

2.1 Approval is recommended of the acceptance of the contents of this report.

3.0 FINANCIAL IMPLICATIONS

3.1 The Carbon Management Plan details the initial financial implications of implementing the proposals, which will be contained within existing revenue and capital budgets.

4.0 MAIN TEXT

4.1 The Council was selected in 2008, amidst strong competition, to take part in the Public Sector Carbon Management programme. This is an ambitious programme designed in response to the UK government identifying the public sector as key to delivering carbon reduction across the UK inline with its Kyoto commitments. The Council partnered with the Carbon Trust on this programme in order to identify potential carbon and cost savings. The Carbon Management Plan commits the organisation to a target of reducing CO₂ by 10% by 2013 and underpins potential financial savings to the organisation of around £5.25 million.

4.2 The Carbon Management Plan will support Dundee's well-established commitment to carbon management and its plans to play a significant part in achieving the national objective of developing a low-carbon economy. It shall provide a clearer understanding of the Council's contribution to greenhouse gas emissions and assist with the provision of an integrated approach to significantly reducing these greenhouse gas emissions from its own operations. The Carbon Management Plan will integrate into Best Value reviews and continual pursuit of improved quality of services, while implementing efficiency savings. The Carbon Management Plan is designed to ensure all carbon emissions reduction proposals increase operational efficiency.

5.0 POLICY IMPLICATIONS

5.1 This report has been screened for any policy implications in respect of Sustainability, Strategic Environmental Assessment, Anti-Poverty, Equality Impact Assessment and Risk Management.

5.2 There was no requirement to complete a Strategic Environmental Assessment and any other issues are detailed within the Carbon Management Plan.

6.0 CONSULTATIONS

6.1 The Council Management Team have been consulted regarding the Carbon Management Plan.

7.0 BACKGROUND PAPERS

7.1 Unless stated otherwise in the Carbon Management Plan, there are no background papers.

CHRIS WARD
ASSISTANT CHIEF EXECUTIVE (COMMUNITY PLANNING)

DATE: 16TH APRIL 2009

Dundee City Council Carbon Management Programme

Carbon Management Plan (CMP)

Date: 30th March 2009

Version number: Sixth Draft

Owner: Alex. Gibson

Approval route: Project Sponsor – Project Board – Management Team – Committee
(ie Housing, Dundee Contracts & Environment Service)

Approval status: Final Draft

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Foreword from Dundee City Council's Chief Executive

Dundee is a city that is changing for the future and the City Council is committed to working hard to overcome the numerous challenges this brings. Dundee is blessed with a unique city environment, with its location and position on the south-facing bank of the River Tay making it a great asset to this and subsequent generations. The quality of Dundee's local environment is a vital ingredient in the quality of life for the people living and working in the city. The impact of climate change challenges our duty to protect and enhance the environment for this and succeeding generations.

This Carbon Management Plan will support Dundee's well-established commitment to carbon management and its plans to play a significant part in achieving the national objective of developing a low-carbon economy. It shall provide a clearer understanding of the Council's contribution to greenhouse gas emissions and assist with the provision of an integrated approach to significantly reducing these greenhouse gas emissions from our own operations. The Carbon Management Plan will integrate into our Best Value reviews and our continual pursuit of improved quality of our services, while implementing efficiency savings. Our Carbon Management Plan is design to ensure all carbon emissions reduction proposals increase operational efficiency.

Alex. Stephen

Foreword from the Carbon Trust

Cutting carbon emissions as part of the fight against climate change should be a key priority for local authorities - it's all about getting your own house in order and leading by example. The UK government has identified the public sector as key to delivering carbon reduction across the UK inline with its Kyoto commitments and the Public Sector Carbon Management programme is designed in response to this. It assists organisations in saving money on energy and putting it to good use in other areas, whilst making a positive contribution to the environment by lowering their carbon emissions.

Dundee City Council was selected in 2008, amidst strong competition, to take part in this ambitious programme. Dundee City Council partnered with the Carbon Trust on this programme in order to realise vast carbon and cost savings. This Carbon Management Plan commits the organisation to a target of reducing CO₂ by 10% by 2013 and underpins potential financial savings to the organisation of around £5.25 million.

There are those that can and those that do. Public sector organisations can contribute significantly to reducing CO₂ emissions. The Carbon Trust is very proud to support Dundee City Council in their ongoing implementation of carbon management.



Richard Rugg
Head of Public Sector, Carbon Trust



**CARBON
TRUST**

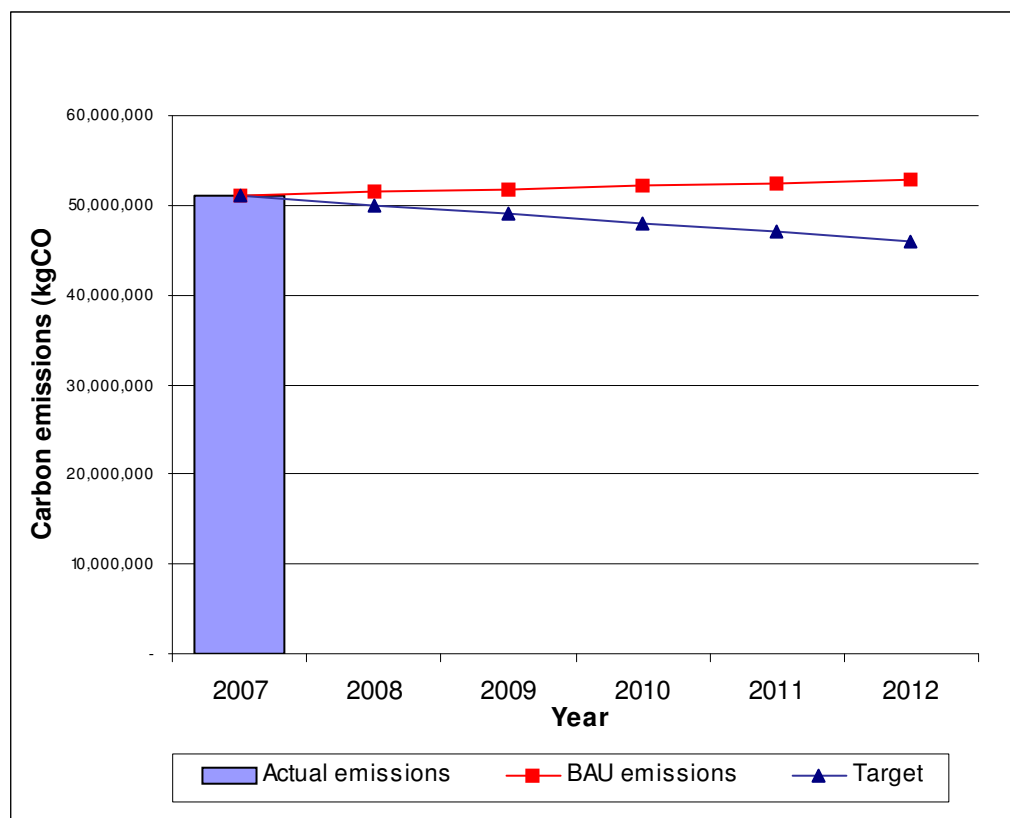
Management Summary

Climate change science advises us that the rate of climate change is accelerating faster than anticipated, thus we can also assume its consequences will be felt sooner than previously predicted. The consequences of inaction and poor preparation are serious for Dundee, serious for our vulnerable and wealthier communities and for our economy and our ecosystems. Dundee City Council acknowledges this and recognises the threats and opportunities that climate change poses to the Council, its operations and to the communities it serves.

This Carbon Management Plan provides detailed information on the policy drivers and targets that require action and establishes that the City Council's carbon emissions baseline for 2007/8 was over 51,000 tonnes. It shows that if we continue on our current energy consumption path, our emissions will rise to over 52,800 tonnes within 4 years. This Carbon Management Plan will cover the period to 31st March 2013 and shall be reviewed, amended and improved upon throughout this period.³

In addition the City Council is keen to be a leading example of good governance by addressing the valid concerns of the community in respect of climate change and contributing to national and international targets to reduce greenhouse gases. It is recognised that the successful implementation of the Plan is dependent upon senior level commitment and leadership.

Comparison of “Business As Usual” increases and reduction targets – Carbon Emissions



	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
BAU scenario total	51,081	51,439	51,799	52,161	52,526	52,894
Reduced Emission Scenario		50,016	48,973	47,952	46,952	45,973
Reduction Since year 1		2%	4%	6%	8%	10%

1. Introduction

Dundee City Council already has a number of policies, plans and strategies complimented by a wide range of ongoing projects and initiatives, which aim to achieve our sustainable development and climate change commitments. To ensure these commitments are achieved within a Best Value framework, it is essential that we constantly review our procedures and processes to identified improvements.

Dundee City Council has joined the Carbon Management Programme to review and to build upon its current commitment to carbon management by establishing the baseline carbon footprint, identifying areas where waste may be further reduced, ensuring that the good practice already introduced is being effectively used throughout the council, assessing if proven best practice measures would be suitable for adoption, developing communication routes to ensure awareness and motivation throughout the council and its partners and to ensure the council's commitment to green house gas reduction is incorporated into our new and established strategies.

The Council wishes to derive the following benefits from its Carbon Management Plan:

1. A clearer understanding of the Council's contribution to green house gas emissions.
2. An integrated approach to the significant reduction of greenhouse gas emissions from our own operations.
3. Identification of potential cost saving initiatives through reducing the use of fossil fuels and improvement to our carbon management.
4. Better collaboration within our organisation and with other organisations to raise awareness by promoting good practice on climate change mitigation and adaptation.
5. Lead by example and encourage our partners and the community to make changes to reduce carbon emissions.
6. Bring together existing and future Carbon Management projects into a consistently managed and coherent programme by 31st March 2009, with management control from the City Council's Management Team.

Climate change related strategies are already embedded into the City Council Plan, Departmental Service Plans, Sustainability Policy and action plan, Climate Change Declaration, Waste Management strategy, recycling initiatives, Staff Travel Plan, Energy Management Action Plan, Street Lighting initiatives and sustainable construction approach.

The City Council has implemented a number of initiatives to reduce its use of carbon. These contributed to the City Council surpassing its latest Energy Policy's (ie 1st January 2002 to 31st December 2007) main target of reducing energy consumption by 10% over the period of the policy. The overall energy consumption during this period reduced by approximately 11.2%, resulting in a reduction of 4100 tonnes of Carbon Dioxide (CO₂) emissions.

The initiatives employed included the use of £350,000 grant from Scottish Government's Central Energy Efficiency Fund (CEEF) for upfront investment needed to implement energy efficient initiatives in our buildings. This has resulted 9 energy saving equipment projects, with anticipated annual savings of £84,000 and 735 tonnes of CO₂.

We have also been at the forefront of renewal energy initiatives with a number of installations such as ground source heat pumps, Photovoltaic roof panels and Solar Panel Water Heating.

We have engaged with external bodies such as the Carbon Trust for the provision of surveys and audits, SCARF (Save Cash And Reduce Fuel) assisted with staff awareness and motivation workshops and the Energy Saving Trust who are currently carrying out a “Green Fleet Review” for our Dundee Contract Services and Waste Management.

A network of Energy Champions assist with the communication, facilitation and promotion of initiatives designed, in accordance with the City Council’s sustainability policies and best practice, to ensure the efficient consumption of energy in City Council’s properties.

The City Council is fully represented and contributes to a number of local and national environmental consultative bodies such as Tayside Energy Consortium, Scottish Energy Officers Network, Tayside Public Sector Support Services Initiative - Environmental Issues/Energy Management Sub-Group, Scottish Sustainable Construction Forum and Sustainable Scotland Network.

The City Council has also been very proactive in it’s approach to sustainable transport policies. This has delivered many successful projects such as Bringing Confidence to Public Transport, SMARTBUS and Cross City Direct. These projects have been recognised as best practice and have won several Scottish Transport Awards.

Dundee is one of four constituent local authority members of the Tayside and Central Scotland Transport Partnership (TACTRAN) along with Angus, Stirling and Perth and Kinross councils. TACTRAN is responsible for preparing a Regional Transport Strategy (RTS) that will steer all local authority sustainable transport policies and measures.

Dundee City Council is a major employer in Dundee and generates a significant level of traffic to sites all over the city, in particular to the city centre. The City Council’s commitment to the implementation of a travel plan is included in Dundee’s Community Plan objectives and is being monitored through the Sustainability Policy Implementation Group. Dundee City Council’s Travel Plan has the aim of reducing the impact on local traffic levels by introducing more travel choice for all staff commuting to their work and travelling during working hours.

The City Council provides, via its Waste Management Department, a range of frontline environmental services, which affects every community and resident within Dundee. The Council Plan 2007 –2011 sets out the key Waste Management objectives for the next four years:

1. Prevent the generation of waste at source.
2. Increase the amount of municipal waste reused and recycled.
3. Dispose of waste in accordance with the Best Practicable Environmental Option.
4. Provide a reliable, effective and efficient refuse collection service.
5. Improve the local environmental quality.

The Carbon Management Plan is design to cover the period from 1st April 2009 to 31st March 2013, however the programme has been in place since May 2008 and the following charts the timescale from this date until the launch of the Carbon Management Plan.

Step 1	Internal Launch	
Final Project Plan to Carbon Trust		11th August 2008
Emissions baseline projections complete		12th September 2008
Progress report to Project Sponsor		15th September 2008
Step 2	Opportunities Identification	
Final Case for Action and opportunities quantified complete		10th October 2008
Costs & benefits of short listed options assessed		3rd November 2008
Draft option appraisal		10th November 2008
Progress report to Project Sponsor		24th November 2008
Step 3	Draft Carbon Management Plan	
Initial draft Carbon Management Plan prepared & circulate for feed back		1st December 2008
Progress report to Project Sponsor		1st December 2008
Draft Carbon Management Plan to Carbon Trust for feed back / approval		1st December 2008
Step 4	Carbon Management Plan Launch	
Carbon Management Plan to Council Management Team for approval		12th March 2009
Carbon Management Plan finalised & sent to Carbon Trust		28th April 2009
Carbon Management Plan launched		1st May 2009
Periodic reports produced		Every 6 months

2. Carbon Management Strategy

2.1 Context and drivers for Carbon Management

There is now growing evidence that our climate is changing and that emissions of greenhouse gases from human activities play a primary role.

The scientific evidence for human influenced climate change (also known as global warming) is now beyond question and that climate change is a consequence of human activity. The science of climate change reinforces existing messages about the overall direction of climate change and adds yet more to the evidence in favour of urgent action to both mitigate and adapt.

Dundee City Council accepts that climate change is happening and recognises the serious threats presented by our changing climate.

The City Council has introduced a strategic framework for the Council's response to climate change, identifying key areas for action both to mitigate carbon emissions and to adapt to the impacts of climate change. Some relate specifically to the Council's own activities, such as its energy use or fleet management. Other actions will require the co-operation and collaboration of the Council's partners across the city.

There are a number of international and national targets, and legal commitments reflecting the global acceptance of the threats posed by climate change and the need to address it. These targets, which drive action at many levels within the City Council and are outlined overleaf.

United Nations Framework Convention on Climate Change

The Convention has been ratified by 189 countries, including the UK, and came into force on 21st March 1994. It recognised that the climate system is a shared resource whose stability can be affected by emissions of CO₂ and other greenhouse gases, and it established an overarching consensus for inter-governmental efforts to tackle climate change.

Kyoto Protocol

The Protocol shares the Convention's objective, principles and institutions, but significantly strengthens it by committing signatories to legally binding targets to limit or reduce their greenhouse gas emissions.

European Union, United Kingdom and Scottish Climate Change Programmes

There are Climate Change Programmes at the EU, UK and Scottish levels, the latter two developed in 2006 by the UK government and Scottish Executive, which both fully accept and support the need for action on climate change. These programmes have resulted in a number of commitments and initiatives including the Introduction of the Climate Change Levy, UK and then EU Emissions Trading Schemes, Renewable Energy and Combine Heat and Power initiatives, establishment of the Carbon Trust and the UK Climate Impacts Programme.

Changing Our Ways: Scotland's Climate Change Programme (2006) is one of the main delivery programmes for *Choosing Our Future: Scotland's Sustainable Development Strategy (2005)* and details policy priorities and targets for Scotland, including a domestic (UK) goal of a 20% cut in CO₂ emission levels by 2010 and to be on a path to a 80% reduction by around 2050 with real progress by 2020.

By 2050, the aim is for Scotland's people to live in a low-carbon society and by 2010, 18% of electricity generation in Scotland should be from renewable sources, with 40% by 2020. It established the 'Scottish Share' of the UK carbon savings to be 1.7 million tonnes (MtC) annually by 2010 with a further commitment for the 'Scottish Target' to exceed the Scottish Share by 1MtC by 2010 (resulting in an effective savings target of 2.7 MtC by 2010).

Local Government in Scotland Act (2003)

This established the following three key priorities, powers and duties for local authorities to which the Council must adhere:

1. Duty of Best Value – to ensure continuous improvement in the delivery of services.
2. Duty of Community Planning – to ensure long term commitment to effective partnership working with communities and between local authorities and other key bodies and organisations.
3. Power to Advance Wellbeing – to enable local authorities to work in a more innovative and creative way in responding to the needs of their communities.

Scotland's Climate Change Programme

The national relevance of these three local authority priorities in relation to climate change is summarised by Scotland's Climate Change Programme.

This recognises the critical role of local government in tackling climate change both in its influence on the wider community and through its own activities and opportunities linked to greenhouse gas emissions.

In January 2007, the City Council committed to seven broader sets of commitments when it became a signatory to this Scotland's Climate Change Declaration.

The City Council's Climate Change Framework 2008 – 2015 sets out a strategic framework by identifying broad principles and key areas for action to mitigate carbon emissions, enhancing measures for adapting to the impact of climate change, setting targets to reduce greenhouse gas emissions, working to identify the specific likely impacts on Dundee and publishing an annual statement on progress.

Although this Carbon Management Plan is restricted to the City Council's own actions and improvements, there is particular relevance and opportunity to embed carbon management principles through our duty to facilitate the local Community Planning process. The Dundee Partnership for the Environment – Dundee Environmental Strategy identifies eight themes for collective action with key measures against which performance can be measured over time ie Climate Change, Energy, Transportation, Waste, Pollution, Natural Environment, Built Environment and Education and Environmental Responsibility.

Single Outcome Agreement

The concordat between the Scottish Government and COSLA included the creation of a Single Outcome Agreement between each Council and the Scottish Government, based on 15 key national outcomes agreed in the concordat. The national outcomes are based on the Scottish Government's National Performance Framework and the established Community Planning commitments across Scotland's councils and community planning partnerships.

The National Outcome 14 states, "We reduce the local and global environmental impact of our consumption and production". The corresponding Dundee City Council's Outcome for is "To develop Dundee in a way that safeguards the future of the environment of the city" with the following indicators:

Increase the level of recycling of waste (Council Plan) with a national target of rising from the baseline of 31% to 40% by 2010.

Reduce the energy consumption in council property (Council Plan) with a local target of 2% reduction year on year.

Other Imminent and Related Drivers

Climate Change Levy (CCL) – estimated financial impact of 10 to 15 % increase. CCL is a tax on some supplies of energy, which are described as "taxable commodities" e.g. electricity, gas etc.

Renewable Energy Obligation (Scotland) - estimated financial impact 5 to 10% increase by 2010.

Carbon Reduction Commitment (CRC) – impact on public bodies yet to be determined. Cap and trade scheme with performance & league tables to be used to calculate the final cost.

Large Combustion Plant Directive (LCPD) - impact on budgets is yet to be determined.

Procurement Scotland - Impact on public sector yet to be determined.

Energy Performance Directive includes Energy Performance Certificates (EPC) and boiler and air conditioning inspections – Full impact on public sector yet to be determined.

2.2 Our low carbon vision

A city with a smaller carbon footprint, where levels of greenhouse gas emissions have been reduced and measures to adapt and mitigate against climate change are in place.

2.3 Strategic themes

Dundee City Council has prepared this Carbon Management Plan to review and to build upon its current commitment to carbon management by:

1. Establishing the baseline carbon footprint.
2. Identifying areas where waste may be further reduced.
3. Ensuring that the good practice already introduced is being effectively used throughout the council.
4. Assessing if proven best practice measures would be suitable for adoption.
5. Developing communication routes to ensure awareness and motivation throughout the council and its partners.
6. Ensuring the council's commitment to green house gas reduction is incorporated into our new and established strategies.

2.4 Targets and objectives

The City Council's Carbon Management Plan will:

1. Continually quantify and review our annual green house gas emissions from our own operations.
2. Identify priority areas for the reduction of green house gas emissions.
3. Reduce 2007 / 08 CO₂ emissions from properties used for our own operations by 10% by 31st March 2013.
4. Reduce 2007 / 08 CO₂ emissions from employee travel directly related to the provision of our services by 10% by 31st March 2013.
5. Encourage workforce involvement in the identification of opportunities and the implementation of action.

3.0 Emissions Baseline and Projections

3.1 Scope

The primary focus of this Carbon Management Plan will be the reduction of Greenhouse Gas Emissions under the City Council's control, such as on site fuel usage (including electricity), vehicle usage on Council business, waste management and the built environment. The Carbon Management Plan will be used to bring together existing and future Greenhouse Gas Emissions management projects into a consistent and coherent approach, integrated into our current management regime.

The Project Board's function is to build and maintain the commitment across the council, which is essential to the success of the programme. The board will also ensure that the outcomes sought are achievable and consistent with existing policies and initiatives, agree the programme's scope and targets and communicate progress.

The proposals included:

1. Energy Management.
2. Sustainable Development associated with the production of Greenhouse Gas Emissions.
3. Travel on Council Business i.e. Travel Plan, Fleet Management, Non Fleet vehicles.
4. Waste Management.
5. Procurement.
6. Finance.
7. Information Technology.
8. Education – Community Awareness, Staff Awareness and School Liaison (e.g. ECO Schools).

At this stage, it is not the intention to include indirect emissions from products and services, such as dwellings, our supply chain, staff travel to work.

3.2 Baseline

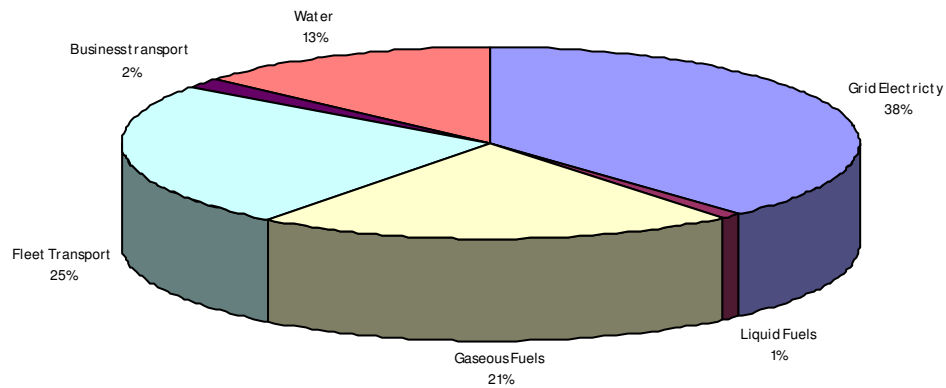
The financial year 2007/08 is used for the baseline data. The energy data is provided by the billing details, the transport data is from employee's expense claims and fuel consumption billing details with the waste management information from a "snap-shot" audit.

Table 3.1 – Summary table for baseline year 2007/08

	Total	Buildings and street lights	Transport	Water
Baseline CO₂ emissions (tonnes)	47,469	41,528	5,796	145
Baseline Cost (£)	£9,494,829	£ 5,716,801	£ 2,521,199	£ 1,256,829

Baseline CO₂ emissions (tonnes) for waste are 3,611 – Baseline Costs for Waste are not available.

Summary of Baseline Costs per Category 2007/08

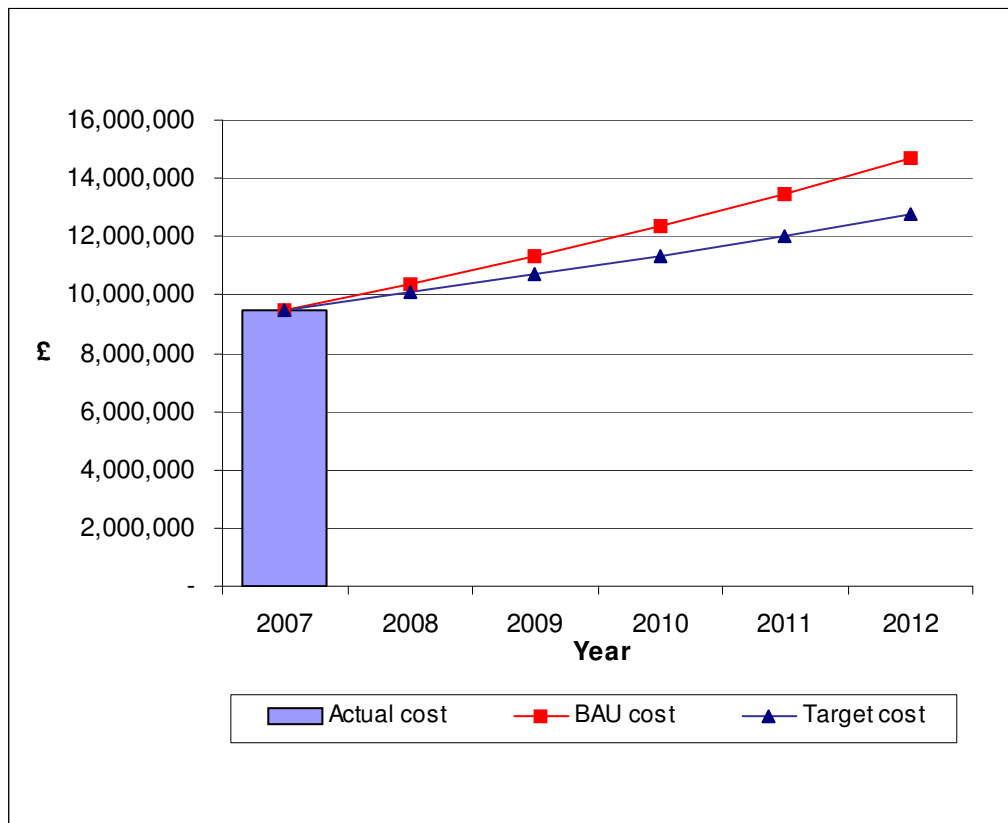


3.3 Projections and Value at Stake

The Business-as-Usual (BaU) projections scenario has been generated from the Carbon Trust provided spreadsheet and software. An 8% estimated cost increase per annum, which includes anticipated effects of inflation and price changes, has been used.

Business as Usual scenarios (ie maintaining current policies and activities without any carbon reduction measures) projected from the existing 2007/8 baseline for the next 5 years, predicts that with the annual emissions for the 2007/8 baseline (ie 51,081 tonnes) shall increase to 52,894 tonnes for the year 2012/13.

Comparison of Business As Usual increases and reduction targets - financial



	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
BAU scenario total	£ 9,494,829	£ 10,364,442	£ 11,313,700	£ 12,349,900	£ 13,481,002	£14,715,700
Reduced Emission Scenario	£ 9,494,829	£ 10,077,782	£ 10,696,526	£ 11,353,258	£ 12,050,312	£12,790,163

Cumulative Value at Stake £5,256,703

4. Carbon Management Projects

4.1 Existing projects

The City Council has implemented a number of initiatives to reduce its use of carbon. The following is a short summary some of the main achievements.

The City Council surpassing its latest Energy Policy's (ie 1st January 2002 to 31st December 2007) main target of reducing energy consumption by 10% over the period of the policy. The overall energy consumption during this period reduced by approximately 11.2 %, resulting in a reduction of 4100 tonnes of Carbon Dioxide (CO₂) emissions.

Following implementation of the findings of a waste audit, the following recycling services are now offered to all departments:

- paper and cardboard
- aluminium cans
- plastic bottles
- garden waste
- toner cartridges
- fluorescent tubes
- IT equipment
- office furniture

Recent initiatives included a mobile phone recycling week where all schools and "Waste Champions" were contacted and asked to participate, resulting in 17 schools and 9 council departments taking part in the scheme. 388 phones were collected and the £1,358 raised was donated to Childrens Hospice Association Scotland (CHAS). Due to the success of this initiative, it is now planned to make Dundee Mobile Phone Recycling Week an annual event, and establish facilities for recycling mobile phones all year round.

Methods of separating and recycling wastes arising from work carried out by Dundee Contact Services have been investigated by "Envirowise", a government funded waste minimisation agency, carrying out a site visit to assist in developing site waste management plans. This work and any staff training arising as a result will be provided free of charge, and could have a significant impact on the amount of waste sent to landfill as a result of DCS activities.

In July 2007, the City Council formally adopted an Office Furniture Reuse Strategy. This strategy encourages all departments to consider reused furniture over new and to donate any excess furniture to local community based organisations.

In preparation for consideration of the Climate Change Framework and Action Plan, presentations based on a summary of the material in the Al Gore film 'An Inconvenient Truth' were given to elected members, the Council's Management Team and the Dundee Partnership for the Environment. It has been agreed that staff will be offered the opportunity to see this film.

Climate Change was the topic for the Dundee Partnership Forum held in September 2008. This concluded with partners from key public sector agencies, the private sector, community and voluntary groups signing up to a Climate Change Declaration similar to the Scottish Government's Climate Change Declaration.

Further networking of photocopies will result in energy savings and therefore subsequent CO₂. The corresponding financial savings are included in the £200,000 saving detailed in 2009/10 Revenue Budget approved at the Policy and Resources Committee on 12th February 2009.

4.2 Planned / funded projects

Ref	Project	Lead	Cost			Annual Saving			Year
			Cap'l	Rev'ue	R e s , c e	Fin	CO ₂ tonnes	Pay back Years	
08/7 /8/9/ 10/ 11	Install 5kw electric to 12kW Gas CHP unit in 5 properties	EEO	£100,000	-	-	£7,955	60	12.6	2008/9
08/ 012	Craigie House RHE Install CHP Unit estimated load 75kW	EEO	£17,000	-	-	£1,405	11	12	2008/9
08/ 014	Turriff House RHE Install CHP Unit estimated load 75kW	EEO	£17,000	-	-	£1,405	11	12	2008/9
08/ 018	Replace existing fluorescent tubes & fittings with a new lighting scheme in 8 properties	EEO	£67,250	-	-	£7,847	105	8.6	2008/9
08/ 019	Install automatic controls to selected areas to switch off lighting when not occupied in 3 properties	EEO	£9,200	-	-	£1,370	8.0	6.8	2008/9
08/ 006	Central Library fit draught stripping	EEO	£500	-	-	£172	0.40	7.17	2008/9
08/ 015	Fit Draught Stripping in 5 properties	EEO	£1,900	-	-	£349	2.00	5.8	2008/9
08/ 016	Install / upgrade insulation to valves & flanges in the boiler house of 10 properties	EEO	£5,000	-	-	£922	5.0	5.4	2008/9
08/ 017	Lochee Swimming Pool and Library Install heat recovery system	EEO	£3,500	-	-	£628	4.0	5.5	2008/9
08/ 001	Replace existing lamps with low energy lamps in 5 properties	EEO	£4,960	-	-	£5,201	37.0	0.9	2008/9
08/ 002	Install automatic lighting controls in 2 properties	EEO	£11,250	-	-	£2,471	18.0	4.6	2008/9
08/ 003	Fit photo electric cell switching internal and external lighting and extract fans in properties	EEO	£2,100	-	-	£621	4.0	3.4	2008/9

08/004	3 Properties Modify control system to utilise free cooling when ambient temperature is below 14 Deg C Switch Off run around coil pumps when the exhaust air temperature is above the ambient Re-commission zone controls ensuring that all are operational Fit time control to cooling units.	EEO	£1,800	-	-	£1,396	8.0	1.3	2008/9
08/005	Insulate valves & flanges in the boiler house of 2 properties	EEO	£800	-	-	£826	2.0	2.45	2008/9

These projects will save 0.77 % of the total CO₂ attributed to our properties.

Ref	Project	Lead	Cost			Annual Saving			Year
			Cap'l	Rev'ue	R e s , c e	Fin	CO ₂ tonnes	Pay back Years	
09/1	Awareness and Motivation Initiative	DoED	0	£10,000		£167k	1,168	0.1	2009/10
09/2	Employ Energy Efficiency Officer	DoED	0	£40,000	-	£167k	1,168	0.26	2009/10
09/3	Produce Dundee City Council Energy Policy and Strategy	TL	-	TBA	-	TBA	TBA	TBA	2009/10
09/4	Fully integrate energy performance into the Asset Management Plan decision process	DoED	-	TBA	-	TBA	TBA	TBA	2009/10
09/5	Introduce automated meter readings to provide analysis in real time energy consumption and improve validation of payments	EEO	-	TBA	-	TBA	TBA	TBA	2009/10
09/6	Improve reporting on energy usage in buildings	EEO	-	TBA	-	TBA	TBA	TBA	2009/10
09/7	Design / procurement process to ensure carbon management is fully considered	TL	-	TBA	-	TBA	TBA	TBA	2009/10

Headings:

Ref: Reference – a unique reference for reporting purposes

Project: Short description of project

Lead: individual lead / owner of the project

Cap'l: total capital or implementation cost

Rev'ue: any annual revenue costs

Res'ce: additional resource costs

Fin: Annual financial savings

CO₂: Annual CO₂ savings

Payback Years: the overall cost divided by the annual saving

Year: the first year the project will begin to deliver CO₂ savings

Abbreviations:

TBA – to be assessed

DoED – Director of Economic Development

TL – Project Team Leader

EEO - Energy Efficiency Officer

4.3 Near term projects

80 energy saving measures have been identified for 21 educational properties with an estimated cost of £500,000 with the resultant annual savings of approximately £52,000 and 442 tonnes of CO₂.

The Project Team's Opportunities Workshop identified a number of opportunities and the following are proposed for investigation in the near term:

Proposal Number	Proposal	Proposed Lead
1	Rationalisation of buildings	DoED
2	Fully implement the Energy Performance of Buildings Directive and consider all recommendations.	DoED
3	Targeted training for waste minimisation	DoED
4	Consider energy saving technologies and renewable energies at the design stage	TL
5	Continue to carry out energy and water audits on all properties	EEO
6	Technical advice/support for hard to heat and light properties	EEO
7	Manage the use of energy for evening occupation of buildings	EEO
8	Continue with "save to invest" policy for energy conservation projects	TL
9	Ensure variable speed drives are utilised for all appropriate new installations	EEO
10	Review and extend, if appropriate IT server virtualisation	IT

4.4 Medium to long term projects

The Project Team's Opportunities Workshop identified a number of opportunities and the following are proposed for investigation in the medium to long term:

Proposal Number	Proposal	Proposed Lead
1	Identify unauthorised electrical devices by obtaining reports from the Portable Appliance Testing Contractor	TL
2	Install night watch software to switch all computers off at a preset time.	EEO
3	Wind Turbines / solar (p.v.) panels to provide lighting in parks / other public spaces.	TL
4	Investigate the use of Hydro power	EEO
6	Pilot project for the installation of voltage optimisation to the City Square complex	EEO
7	Install reflective street lighting furniture	Director of Planning & Transportation
8	Carry out fleet driver training workshops	Director of Dundee Contract Service
9	Implement more controls for staff travel	Director of Planning & Transportation
10	Suitability of staff for certain geographic locations	DoED
11	"Roll out" of fleet management review conclusions	Director of Dundee Contract Service
12	Bulk purchase low emission / electric / hybrid cars for staff use on pool basis	Director of Planning & Transportation
13	Free up space in underground car park for pool cars-electric / hybrid	Director of Planning & Transportation
14	Further encouragement for car sharing including reduced car parking fees	Director of Planning & Transportation
15	Encourage site visits on way to or from work	Director of Planning & Transportation
16	Investigate the re-structure car lease scheme and mileage rates to encourage staff to lease / buy low emission vehicles and improve management of pool / lease cars.	Director of Planning & Transportation
17	Extend recycling network to all suitable properties and provide shower facilities for bike users	Director of Planning & Transportation
18	Encourage use bus travel to meetings within council boundaries	Director of Planning & Transportation
19	Locate re-use shop/facility at recycling centres	Waste Management

5 Carbon Management Plan Financing

A concordat between the Scottish Government and local government sets out the terms of a new relationship, based on mutual respect and partnership. The package has been agreed within a tight financial context and it underpins the funding to be provided to local government over the period 2008-09 to 2010-11. Therefore, the financial planning contained within this document has been restricted to the period of the current concordat.

Two issues will be critical for financing the Carbon Management Plan, firstly a sound business case and the appropriate funds to allow implementation.

The exact criteria will be different for each Project, and timing and alignment will be in accordance with the City Council's Asset Management Plan and with existing development and refurbish programmes. Financing criteria will generally follow various evaluation techniques, for example:

1. Lowest £/tonneCO₂ saved
2. Greatest carbon saving
3. Greatest cost saving
4. Greatest consumption saving
5. Best demonstration of or increase in reputation
6. Simple payback
7. Lowest life cycle cost

The City Council has managed to mitigate the impact of a volatile gas and electricity procurement market by the use of Best Value principals and the procurement of these utilities via the Tayside Energy Consortium. This consortium's principal aim is to manage the risks in the procurement procedures to the benefit of the consortium's members (ie Dundee, Angus and Perth & Kinross Councils plus 6 small public bodies and various charitable organisations). Despite these achievements, the volatility of the markets still exerts considerable pressure on budgets.

5.1 Assumptions

The basis of all calculations is the Baseline spreadsheet tool provided by the Carbon Trust, therefore the conclusions are subject to the suppositions and conversion factors embedded in the tool.

The assumption that is likely to have the maximum effect is the "Business as Usual (BAU)" cost increase per annum factor. This input estimates the increase in the cost per annum including effects of inflation and price changes. A factor of 8.4 % was used.

The cost of fuel was changed to reflect the average tariff rate that the City Council expects to pay for the financial year 2009-2010.

5.2 Additional resources

Apart from the details contained in section 5.3 there shall be no additional resources made available from department's budgets. The two "Invest to Save" funds shall be replenished by re-allocating the project costs from Department's energy budget.

5.3 Financial costs and sources of funding

figures in £ 1000's	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Annual costs:						
Total annual capital cost		250	250			
Total annual revenue cost						
Total costs		250	250			
Committed funding:						
Committed annual capital		250	250			
Committed annual revenue						
Total funded		250	250			

It is intended to continue to make full use of the Scottish Executive Central Energy Efficiency Fund (CEEF), an "Invest to Save" scheme, which consists of a revolving budget used to fund energy conservation projects.

However, the terms and conditions of the CEEF scheme requires that projects must have a payback period no greater than five years and do not permit the financing of feasibility studies and renewable energy projects (currently under review by the Scottish Government). The City Council have introduced a similar fund that will finance energy saving projects with a payback period equal to or less than the expected life of the equipment.

By joint funding from these two budgets, the City Council will benefit from investing in projects that can save money to be re-invested in to other projects.

6 Actions to Embed Carbon Management in Your Organisation

The current assessment of the City Council's position for embedding carbon management throughout your organisation details our aspirations to reach the highest possible level within 4 years. The main challenge areas being in Corporate Strategy, Responsibility and Communication & Training.

A number of proposals detailed below will contribute to the aims of the Carbon Management Plan:

1. Launch awareness campaign.
2. Include energy and waste awareness into "new starts" introduction.
3. Introduce a Council carbon reduction web site for the communication, facilitation and promotion of initiatives and to provide training.
4. Targeted Training for staff to minimise waste and energy usage (e.g. printing paper copies of documents).
5. Equate savings / waste to service delivery.
6. Provide support to the Energy and Waste Champions network.
7. Identify unauthorised electrical devices by obtaining reports from the Portable Appliance Testing Contractor.
8. Quantify home working in terms of carbon reductions.

6.1 Corporate Strategy – embedding CO₂ saving across your organisation

Reference Appendix A: Existing Grid 2 – Target Grid 4

Senior endorsement of the Carbon Management Plan will be obtained by approval of the City Council's Management Team. Each department will be encouraged, when preparing their service plans, to consider their compliance with Single Outcome Agreement "To develop Dundee in a way that safeguards the future of the environment of the city" and their contribution to the indicators:

1. Increase the level of recycling of waste (Council Plan) with a national target of rising from the baseline of 31% to 40% by 2010.
2. Reduce the energy consumption in council property (Council Plan) with a local target of 2% reduction year on year.

6.2 Programme Management – bringing it all together effectively

Reference Appendix A: Existing Grid 2 – Target Grid 4

This factor of embedding Carbon Management is covered in section seven of this Plan, where there is a description of the ownership of this Carbon Management Plan, by the City Council's Management Team.

6.3 Responsibility – being clear that saving CO₂ is everyone's job

Reference Appendix A: Existing Grid 1 – Target Grid 4

It is recognised that every member of staff who uses energy in the course of their job has a responsibility for Carbon Management.

However, it has been established that there are individuals and specific groups of users who can make an immediate impact on reducing our carbon emissions, either by using practical measures or by influencing colleagues. These people will be given an initial / refresher energy awareness and motivation training directed at areas where they could make a difference. The intention is obtain early gains and further embedding Carbon Management into the strategic planning and operational actions.

The current networks of Energy and Waste Champions will receive additional support to help build engagement at the local level. With a higher emphasis on support from the Building Managers, so that the Carbon Management Plan's initiatives are communicated, facilitated and promoted.

6.4 Data Management – measuring the difference, measuring the benefit

Reference Appendix A: Existing Grid 3 – Target Grid 4

The proposal for the introduction of automated meter readings will provide reliable and timely consumption data. It is intended that such readings will eliminate problems associated with estimated bills and the potential consequences of not being able to correctly forecast and manage energy budgets. Profiles of energy consumption on sites will help quickly identify wastage.

In the meantime, the current policy of electronic exchange of information between the electricity supply and the City Council will be extended to include gas and water.

Consideration will be given to the central management of the fleet fuel procurement to ensure "economy of scale" and monitoring & targeting savings are maximised.

6.5 Communication and Training – ensuring everyone is aware

Reference Appendix A: Existing Grid 3 – Target Grid 4

This factor of embedding Carbon Communication and Training is fully covered elsewhere in this Plan.

6.6 Finance and Investment – the money to match the commitment

Reference Appendix A: Existing Grid 2 – Target Grid 4

This factor of embedding Carbon Management is fully covered in section five of this Plan.

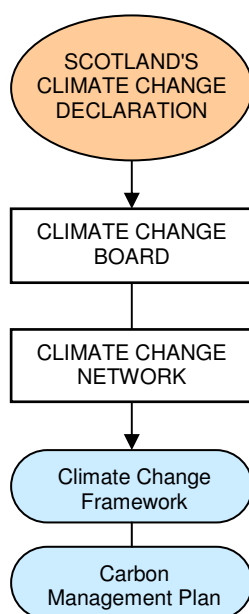
6.7 Policy Alignment – saving CO₂ across your operations

Reference Appendix A: Existing Grid 2 – Target Grid 4

Details of plans for review of key policies, associated timescale and the procedures for the ongoing review of policies (including responsible persons) are fully covered elsewhere in this Plan.

7 Programme Management of the CM Programme

The Carbon Management Plan will be incorporated into the Council's existing Climate Change Framework. Progress will be continually monitored and reviewed with an annual report submitted in accordance with the Council's commitment to Scotland's Climate Change Declaration.



7.1 The Programme Board – strategic ownership and oversight

This Carbon Management Plan shall be owned and driven at a high level, by the provision of the leadership and management activities from the City Council's Management Team. This leadership will be proactive to ensure the programme is relevant and on-track and to ensure suitable response to the changes in climate change science and any revisions to national and international targets and legislation. The governance of carbon management will therefore require a flexible and aware approach that also encourages corporate-wide and consistent approaches by all our departments to carbon management. Climate change mitigation and adaptation measures will become seamlessly integrated and embedded within departments' approach to achieving sustainable development.

7.2 The Carbon Management Team – delivering the projects

ROLE IN PROGRAMME	NAME	POSITION
Council's Sponsor	Jimmy Black	Councillor
Project Sponsor	Chris Ward	Assistant Chief Executive (Community Planning)
Finance	Marjory Stewart	Head of Finance
Project Leader	Alex. Gibson	Economic Development - Property Services Team Leader
Depute Project Leader	Bryan Harris	Waste Management Environmental Strategy Officer
Team members	Ross McNee	Dundee Contract Services –Facilities Services Section Leader
	Heather McQuillan	HECA Officer
	Steve Boyd	IT Projects Manager
	Dave Berry	Social Work –Financial , Contracts and Welfare
	Stuart Brown	Support Services / Architectural Services Principal Quantity Surveyor
	Ron Sturrock	Chief Accountant
	Mike Boyle	Public Relations Officer
	Merrill Smith	Leisure & Communities Head of Business Development & Support
	Lindsay McGregor	Planning & Transportation Team Leader – Street Lighting
	Norrie McGowan	Education Finance & Resource Manager
	Stewart Ball	Waste Management – Waste Policy Manager
	Susan Bruce	Economic Development - Energy
	Angela Brown	Economic Development - Energy

The Management Team will agree the reporting and evaluation procedures, but it is proposed that the Carbon Management Plan Team Leader, through regular contact with the lead for each project, shall produce a summary progress report on implementation of projects on a quarterly basis. This will allow regular consideration of progress, and risk mitigation measures. Additionally, a more detailed Interim Report will be produced (September) and a full Annual Report (March) to the Sustainable Development Review Group. This coincides with other corporate reporting schedules, and should allow findings and resource requirements to be taken into account in annual service and work planning arrangements.

The reports will include comparisons with baseline costs and carbon emissions plus project implementation rates, issues and outcomes.

7.3 Succession planning for key roles

It is recognised that key individuals will leave post before the Carbon Management Plan is completed. However, these circumstances will be dealt with in the normal manner with the contents of this Carbon Management Plan and associated action plans used to ensure continuity.

7.4 Ongoing stakeholder management

Stakeholder Communications Plan

The risks involved depends on the two different types of stakeholders.

1. Those who contribute directly to the City Council's carbon management

This Plan is of particular relevance to staff responsible for determining service planning, resource allocation and management. The objective of reducing carbon emissions requires to be directly embedded into these activities. The "project leads" are individuals with the technical knowledge on the key opportunity areas detailed in the Carbon Management Plan to achieve success. Project leads will be integral to the development of the strategic, tactical and feasibility proposals and the Project Leader must maintained regular contact with each of these individuals.

The Management Team will ensure that a 'consistent carbon-conscious culture' is embedded into the City Council, both in terms of mitigation (carbon reductions), but also for adaptation measures.

As the Plan is implemented, it will be important to raise awareness among, and to involve, all relevant City Council staff and securing best value in the use of resources. Communication is an important aspect of these efforts and a suitable communication plan will be devised, monitored and reviewed.

2. Those who are directly or indirectly affected by it:

These include communities and residents, Community Planning partners and other organisations, including local businesses and possibly elected members. The Plan is of interest to Dundee's citizens and Central Government who provide revenues, which contribute to the City Council's activities including its energy consumption and transport costs. It is therefore important that they are made aware of the efforts (including the reasoning to reduce the City Council's carbon footprint) and hopefully be able to adapt or adopt similar measures to fit their circumstances and reduce their own footprints.

The Dundee Partnership for the Environment will take a direct interest in the Carbon Management Plan, as it shares the City Council's priorities on sustainable development and climate change. A number of partners are actively engaged in improving their own carbon management performance.

Individual or Group	Influence	Impact	Their interest or issues	Their information needs or messages	Means of Communication
Councillors	H	H	Need to build awareness Improved reputation of Council	Capital Investment Spend to save Energy price rises Duty of care to act Demonstration of leadership	Via Project Sponsor
Chief Executive	H	H	Need to ensure initial support is maintained and translated to Council's Management Team (CMT)	Capital Investment Spend to save Energy price rises Duty of care to act Demonstration of leadership	Via Project Sponsor
Council's Management Team (CMT)	H	H	Roll out of success need wide take up Need to get the support of a variety of staff	Strong corporate priority All departments need to make a contribution	Via Project Sponsor
Core Team Members	H	H	Need support to ensure awareness is passed on Resource intensive	Strong corporate priority All departments need to make a contribution Climate Change is a real issue	e-mail regular team meetings web site
All staff	H	M	Need to get the support of a variety of staff Rise awareness that Climate Change is a real issue	Overall success depends on staff "buy-in" Every little action counts	e-mail web site staff bulletins staff meetings and training

Influence: the person or groups level of influence on the successful outcome of the project - High (H), Medium (M) or Low (L)

Impact: the level of impact that the project will have on the person or group - High (H), Medium (M) or Low (L).

7.5 Annual progress review

The progress of the Carbon Management Plan will be formally review annually and will cover the same monitoring criterion as detailed in section 7.2.

Appendix A: Carbon Management Matrix - Embedding

BEST	CORPORATE STRATEGY	PROGRAMME MANAGEMENT	RESPONSIBILITY	DATA MANAGEMENT	COMMUNICATION & TRAINING	FINANCE & INVESTMENT	POLICY ALIGNMENT *
5	<ul style="list-style-type: none"> Top level target allocated across organisation CO₂ reduction targets in Directorate Business Plans 	<ul style="list-style-type: none"> Senior Management Team/Committee/Court review progress against targets on quarterly basis Quarterly diagnostic reports provided to Directorates Progress against target published externally 	<ul style="list-style-type: none"> CM integrated in responsibilities of senior managers CM part of all job descriptions Central CO₂ reduction advice available Green Champions leading local action groups 	<ul style="list-style-type: none"> Quarterly collation of CO₂ emissions for all sources Data externally verified M&T in place for: <ul style="list-style-type: none"> buildings street lighting waste transport 	<ul style="list-style-type: none"> All staff given formalised CO₂ reduction: <ul style="list-style-type: none"> induction and training communications Joint CM communications with key partners Staff awareness tested through surveys 	<ul style="list-style-type: none"> Finance committed for 2+ yrs of Programme External funding being routinely obtained Ring-fenced fund for carbon reduction initiatives 	<ul style="list-style-type: none"> CO₂ friendly operating procedure in place Central team provide advice and review, when requested Barriers to CO₂ reduction routinely considered and removed
4	<ul style="list-style-type: none"> CO₂ reduction commitment in Corporate Strategy Top level targets set for CO₂ reduction Climate Change Strategy reviewed annually 	<ul style="list-style-type: none"> Sponsor reviews progress and removes blockages through regular Programme Boards Progress against targets routinely reported to Senior Mgt Team 	<ul style="list-style-type: none"> CM integrated in to responsibilities of department heads Senior Management Team/Committee/Court regularly updated Staff engaged through Green Champion network 	<ul style="list-style-type: none"> Annual collation of CO₂ emissions for: <ul style="list-style-type: none"> buildings street lighting transport waste Data internally reviewed 	<ul style="list-style-type: none"> All staff given CO₂ reduction: <ul style="list-style-type: none"> induction communications CM matters communicated to external community 	<ul style="list-style-type: none"> Coordinated financing for CO₂ reduction projects via Programme Board Finances committed 1yr ahead Some external financing 	<ul style="list-style-type: none"> Comprehensive review of policies complete Lower level policies reviewed locally Unpopular changes being considered
3	<ul style="list-style-type: none"> CO₂ reduction vision clearly stated and published Climate Change Strategy endorsed by Cabinet and publicised with staff 	<ul style="list-style-type: none"> Core team regularly review CM progress: <ul style="list-style-type: none"> actions profile & targets new opportunities 	<ul style="list-style-type: none"> An individual provides full time focus for CO₂ reduction and coordination across the organisation Senior Sponsor actively engaged 	<ul style="list-style-type: none"> Collation of CO₂ emissions for limited scope i.e. buildings only 	<ul style="list-style-type: none"> Environmental / energy group(s) given ad hoc: <ul style="list-style-type: none"> training communications 	<ul style="list-style-type: none"> A view of the cost of CO₂ reduction is developing, but finance remains ad-hoc Some centralised resource allocated Finance representation on CM Team 	<ul style="list-style-type: none"> All high level and some mid level policies reviewed, irregularly Substantial changes made, showing CO₂ savings
2	<ul style="list-style-type: none"> Draft Climate Change Policy Climate Change references in other strategies 	<ul style="list-style-type: none"> Ad hoc reviews of CM actions progress 	<ul style="list-style-type: none"> CO₂ reduction a part-time responsibility of a few department champions 	<ul style="list-style-type: none"> No CO₂ emissions data compiled Energy data compiled on a regular basis 	<ul style="list-style-type: none"> Regular awareness campaigns Staff given CM information on ad-hoc basis 	<ul style="list-style-type: none"> Ad hoc financing for CO₂ reduction projects 	<ul style="list-style-type: none"> Partial review of key, high level policies Some financial quick wins made
Worst 1	<ul style="list-style-type: none"> No policy No Climate Change reference 	<ul style="list-style-type: none"> No CM monitoring 	<ul style="list-style-type: none"> No recognised CO₂ reduction responsibility 	<ul style="list-style-type: none"> No CO₂ emissions data compiled Estimated billing 	<ul style="list-style-type: none"> No communication or training 	<ul style="list-style-type: none"> No specific funding for CO₂ reduction projects 	<ul style="list-style-type: none"> No alignment of policies for CO₂ reduction

Appendix B: Definition of Projects

Project:	<i>5 Various Properties - Install 5kw electric to 12kW Gas CHP unit</i>
Reference:	<i>DCC – 08 –007/8/9/10/11</i>
Owner (person)	<i>John Kennedy, Team Leader - Property Maintenance</i>
Department	<i>Economic Development Department</i>
Description	<i>Install 5kw electric to 12kW Gas CHP unit in Ardler CC, Central Library, Dundee International Sports Centre, Menzieshill CC + Library and Mitchell Street Resource Centre.</i>
Benefits	<ul style="list-style-type: none"> • <i>Annual Financial savings: £ 7955</i> • <i>Payback period:12.6 years</i> • <i>Annual CO₂ Emissions reduction: 60 tonnes of CO₂</i>
Funding	<ul style="list-style-type: none"> • <i>Project cost £100,000</i> • <i>Annual Operational costs £1,000</i> • <i>Internal payback period to be less than the expected life of the equipment.</i> • <i>Funding has been agreed by Policy and Resource Committee – Renewals & Repairs Fund</i>
Resources	<ul style="list-style-type: none"> • <i>Project to be delivered within current resources.</i>
Ensuring Success	<ul style="list-style-type: none"> • <i>Reduction in emissions to meet or exceed target values.</i> • <i>Principal risks – completing work within agreed timescale.</i>
Measuring Success	<ul style="list-style-type: none"> • <i>Success will be measured / evaluated one year after completion of construction / installation date.</i>
Timing	<ul style="list-style-type: none"> • <i>Programme being prepared – all work to be completed 2009 / 2010.</i>
Notes	

Project:	<i>Craigie House RHE - Install Combine Heat and Power Unit</i>
Reference:	<i>DCC – 08 –012</i>
Owner (person)	<i>John Kennedy, Team Leader - Property Maintenance</i>
Department	<i>Economic Development Department</i>
Description	<i>Install CHP Unit with estimated load 75kW at Craigie House Residual Home for the Elderly</i>
Benefits	<ul style="list-style-type: none"> • <i>Annual Financial savings: £ 1405</i> • <i>Payback period:12 years</i> • <i>Annual CO₂ Emissions reduction: 11 tonnes of CO₂</i>
Funding	<ul style="list-style-type: none"> • <i>Project cost £17,000</i> • <i>Annual Operational costs £170</i> • <i>Internal payback period to be less than the expected life of the equipment.</i> • <i>Funding has been agreed by Policy and Resource Committee – Renewals & Repairs Fund</i>
Resources	<ul style="list-style-type: none"> • <i>Project to be delivered within current resources.</i>
Ensuring Success	<ul style="list-style-type: none"> • <i>Reduction in emissions to meet or exceed target values.</i> • <i>Principal risks – completing work within agreed timescale</i>
Measuring Success	<ul style="list-style-type: none"> • <i>Metrics for displaying performance or achievement</i> • <i>Success will be measured / evaluated one year after completion of construction / installation date.</i>
Timing	<ul style="list-style-type: none"> • <i>Programme being prepared – all work to be completed 2009 / 2010</i>
Notes	

Project:	<i>Turriff House RHE - Install Combine Heat and Power Unit</i>
Reference:	<i>DCC – 08 –012</i>
Owner (person)	<i>John Kennedy, Team Leader - Property Maintenance</i>
Department	<i>Economic Development Department</i>
Description	<i>Install CHP Unit with estimated load 75kW at Turriff House Residential Home for the Elderly</i>
Benefits	<ul style="list-style-type: none"> • <i>Annual Financial savings: £ 1405</i> • <i>Payback period:12 years</i> • <i>Annual CO₂ Emissions reduction: 11 tonnes of CO₂</i>
Funding	<ul style="list-style-type: none"> • <i>Project cost £17,000</i> • <i>Annual Operational costs £170</i> • <i>Internal payback period to be less than the expected life of the equipment.</i> • <i>Funding has been agreed by Policy and Resource Committee – Renewals & Repairs Fund</i>
Resources	<ul style="list-style-type: none"> • <i>Project to be delivered within current resources.</i>
Ensuring Success	<ul style="list-style-type: none"> • <i>Reduction in emissions to meet or exceed target values.</i> • <i>Principal risks – completing work within agreed timescale</i>
Measuring Success	<ul style="list-style-type: none"> • <i>Metrics for displaying performance or achievement</i> • <i>Success will be measured / evaluated one year after completion of construction / installation date.</i>
Timing	<ul style="list-style-type: none"> • <i>Programme being prepared – all work to be completed 2009 / 2010</i>
Notes	

Project:	<i>8 Various Properties - Replace existing fluorescent tubes & fittings with a new lighting scheme</i>
Reference:	<i>DCC – 08 –018</i>
Owner (person)	<i>John Kennedy, Team Leader - Property Maintenance</i>
Department	<i>Economic Development Department</i>
Description	<i>Replace existing fluorescent tubes & fittings with a new lighting scheme in Ardler CC, Central Library, Kirkton CC, Lochee Swimming Pool and Library, Menzieshill CC + Library, Mitchell Street Resource Centre, Craigie House RHE and MacKinnon Centre</i>
Benefits	<ul style="list-style-type: none"> • <i>Annual Financial savings: £ 7,747</i> • <i>Payback period:8.6 years</i> • <i>Annual CO₂ Emissions reduction: 105 tonnes of CO₂</i>
Funding	<ul style="list-style-type: none"> • <i>Project cost £67,250</i> • <i>Annual Operational costs £6,700</i> • <i>Internal payback period to be less than the expected life of the equipment.</i> • <i>Funding has been agreed by Policy and Resource Committee – Renewals & Repairs Fund</i>
Resources	<ul style="list-style-type: none"> • <i>Project to be delivered within current resources.</i>
Ensuring Success	<ul style="list-style-type: none"> • <i>Reduction in emissions to meet or exceed target values.</i> • <i>Principal risks – completing work within agreed timescale</i>
Measuring Success	<ul style="list-style-type: none"> • <i>Metrics for displaying performance or achievement</i> • <i>Success will be measured / evaluated one year after completion of construction / installation date.</i>
Timing	<ul style="list-style-type: none"> • <i>Programme being prepared – all work to be completed 2009 / 2010</i>
Notes	

Project:	<i>3 Various Properties - Install lighting automatic controls</i>
Reference:	<i>DCC – 08 –019</i>
Owner (person)	<i>John Kennedy, Team Leader - Property Maintenance</i>
Department	<i>Economic Development Department</i>
Description	<i>Install automatic controls to selected areas to switch off lighting when not occupied Douglas Sports Centre, Craigie House RHE and Marchbanks Complex</i>
Benefits	<ul style="list-style-type: none"> • <i>Annual Financial savings: £ 1,370</i> • <i>Payback period: 6.8 years</i> • <i>Annual CO₂ Emissions reduction: 8 tonnes of CO₂</i>
Funding	<ul style="list-style-type: none"> • <i>Project cost £9,200</i> • <i>Annual Operational costs £92</i> • <i>Internal payback period to be less than the expected life of the equipment.</i> • <i>Funding has been agreed by Policy and Resource Committee – Renewals & Repairs Fund</i>
Resources	<ul style="list-style-type: none"> • <i>Project to be delivered within current resources.</i>
Ensuring Success	<ul style="list-style-type: none"> • <i>Reduction in emissions to meet or exceed target values.</i> • <i>Principal risks – completing work within agreed timescale</i>
Measuring Success	<ul style="list-style-type: none"> • <i>Metrics for displaying performance or achievement</i> • <i>Success will be measured / evaluated one year after completion of construction / installation date.</i>
Timing	<ul style="list-style-type: none"> • <i>Programme being prepared – all work to be completed 2009 / 2010</i>
Notes	

Project:	<i>Central Library - Install Draught Stripping</i>
Reference:	<i>DCC – 08 –006</i>
Owner (person)	<i>John Kennedy, Team Leader - Property Maintenance</i>
Department	<i>Economic Development Department</i>
Description	<i>Install Draught Stripping in Central Library</i>
Benefits	<ul style="list-style-type: none"> • <i>Annual Financial savings: £ 172</i> • <i>Payback period: 5.8 years</i> • <i>Annual CO₂ Emissions reduction: 1.4 tonnes of CO₂</i>
Funding	<ul style="list-style-type: none"> • <i>Project cost £500</i> • <i>Annual Operational costs £0</i> • <i>Internal payback period to be less than the expected life of the equipment.</i> • <i>Funding has been agreed by Policy and Resource Committee – Renewals & Repairs Fund</i>
Resources	<ul style="list-style-type: none"> • <i>Project to be delivered within current resources.</i>
Ensuring Success	<ul style="list-style-type: none"> • <i>Reduction in emissions to meet or exceed target values.</i> • <i>Principal risks – completing work within agreed timescale</i>
Measuring Success	<ul style="list-style-type: none"> • <i>Metrics for displaying performance or achievement</i> • <i>Success will be measured / evaluated one year after completion of construction / installation date.</i>
Timing	<ul style="list-style-type: none"> • <i>Programme being prepared – all work to be completed 2009 / 2010</i>
Notes	

Project:	<i>5 Various Properties - Install Draught Stripping</i>
Reference:	<i>DCC – 08 –015</i>
Owner (person)	<i>John Kennedy, Team Leader - Property Maintenance</i>
Department	<i>Economic Development Department</i>
Description	<i>Install Draught Stripping in Ardler CC, Douglas Sports Centre, Kirkton CC, MacKinnon Centre and Marchbanks Complex</i>
Benefits	<ul style="list-style-type: none"> • <i>Annual Financial savings: £ 394</i> • <i>Payback period: 4.8 years</i> • <i>Annual CO₂ Emissions reduction: 2 tonnes of CO₂</i>
Funding	<ul style="list-style-type: none"> • <i>Project cost £1,900</i> • <i>Annual Operational costs £0</i> • <i>Internal payback period to be no greater than 5 years</i> • <i>Funding has been agreed by Policy and Resource Committee – Scottish Government's Central Energy Efficiency Fund</i>
Resources	<ul style="list-style-type: none"> • <i>Project to be delivered within current resources.</i>
Ensuring Success	<ul style="list-style-type: none"> • <i>Reduction in emissions to meet or exceed target values.</i> • <i>Principal risks – completing work within agreed timescale</i>
Measuring Success	<ul style="list-style-type: none"> • <i>Metrics for displaying performance or achievement</i> • <i>Success will be measured / evaluated one year after completion of construction / installation date.</i>
Timing	<ul style="list-style-type: none"> • <i>Programme being prepared – all work to be completed 2009 / 2010</i>
Notes	

Project:	<i>10 Various Properties - Install /Upgrade insulation to flanges / valves</i>
Reference:	<i>DCC – 08 –016</i>
Owner (person)	<i>John Kennedy, Team Leader - Property Maintenance</i>
Department	<i>Economic Development Department</i>
Description	<i>Install /Upgrade insulation to flanges / valves in the boilerhouses of Dundee International Sports Centre ,Douglas Sports Centre, Kirkton CC, Lochee Swimming Pool and Library Menzieshill CC + Library Craigie House RHE, Friarfield House, MacKinnon Centre, Turriff House RHE and Marchbanks Complex</i>
Benefits	<ul style="list-style-type: none"> • <i>Annual Financial savings: £ 922</i> • <i>Payback period: 5 years</i> • <i>Annual CO₂ Emissions reduction: 5 tonnes of CO₂</i>
Funding	<ul style="list-style-type: none"> • <i>Project cost £5,000</i> • <i>Annual Operational costs £0</i> • <i>Internal payback period to be no greater than 5 years</i> • <i>Funding has been agreed by Policy and Resource Committee – Scottish Government's Central Energy Efficiency Fund</i>
Resources	<ul style="list-style-type: none"> • <i>Project to be delivered within current resources.</i>
Ensuring Success	<ul style="list-style-type: none"> • <i>Reduction in emissions to meet or exceed target values.</i> • <i>Principal risks – completing work within agreed timescale</i>
Measuring Success	<ul style="list-style-type: none"> • <i>Metrics for displaying performance or achievement</i> • <i>Success will be measured / evaluated one year after completion of construction / installation date.</i>
Timing	<ul style="list-style-type: none"> • <i>Programme being prepared – all work to be completed 2009 / 2010</i>
Notes	

Project:	<i>Lochee Swimming Pool and Library - Install heat recovery system</i>
Reference:	<i>DCC – 08 –017</i>
Owner (person)	<i>John Kennedy, Team Leader - Property Maintenance</i>
Department	<i>Economic Development Department</i>
Description	<i>Installation of a heat recovery system at Lochee Swimming Pool and Library</i>
Benefits	<ul style="list-style-type: none"> • <i>Annual Financial savings: £ 628</i> • <i>Payback period: 5.5 years</i> • <i>Annual CO₂ Emissions reduction: 4 tonnes of CO₂</i>
Funding	<ul style="list-style-type: none"> • <i>Project cost £3,500</i> • <i>Annual Operational costs £350</i> • <i>Internal payback period to be less than the expected life of the equipment.</i> • <i>Funding has been agreed by Policy and Resource Committee – Renewals & Repairs Fund</i>
Resources	<ul style="list-style-type: none"> • <i>Project to be delivered within current resources.</i>
Ensuring Success	<ul style="list-style-type: none"> • <i>Reduction in emissions to meet or exceed target values.</i> • <i>Principal risks – completing work within agreed timescale</i>
Measuring Success	<ul style="list-style-type: none"> • <i>Metrics for displaying performance or achievement</i> • <i>Success will be measured / evaluated one year after completion of construction / installation date.</i>
Timing	<ul style="list-style-type: none"> • <i>Programme being prepared – all work to be completed 2009 / 2010</i>
Notes	

Project:	<i>5 Various Properties - Replace existing lamps with low energy lamps.</i>
Reference:	<i>DCC – 08 –001</i>
Owner (person)	<i>John Kennedy, Team Leader - Property Maintenance</i>
Department	<i>Economic Development Department</i>
Description	<i>Replace existing lamps with low energy lamps at Douglas Sports Centre, Menzieshill CC + Library, Ardler CC, Central Library and Craigie House RHE</i>
Benefits	<ul style="list-style-type: none"> • <i>Annual Financial savings: £ 5,201</i> • <i>Payback period: 1 year</i> • <i>Annual CO₂ Emissions reduction: 37 tonnes of CO₂</i>
Funding	<ul style="list-style-type: none"> • <i>Project cost £4,960</i> • <i>Annual Operational costs £490</i> • <i>Internal payback period to be no greater than 5 years</i> • <i>Funding has been agreed by Policy and Resource Committee – Scottish Government's Central Energy Efficiency Fund</i>
Resources	<ul style="list-style-type: none"> • <i>Project to be delivered within current resources.</i>
Ensuring Success	<ul style="list-style-type: none"> • <i>Reduction in emissions to meet or exceed target values.</i> • <i>Principal risks – completing work within agreed timescale</i>
Measuring Success	<ul style="list-style-type: none"> • <i>Metrics for displaying performance or achievement</i> • <i>Success will be measured / evaluated one year after completion of construction / installation date.</i>
Timing	<ul style="list-style-type: none"> • <i>Programme being prepared – all work to be completed 2009 / 2010</i>
Notes	

Project:	<i>2 Various Properties – Install automatic lighting controls.</i>
Reference:	<i>DCC – 08 –002</i>
Owner (person)	<i>John Kennedy, Team Leader - Property Maintenance</i>
Department	<i>Economic Development Department</i>
Description	<i>Install automatic lighting controls at Douglas Sports Centre and Marchbanks Complex</i>
Benefits	<ul style="list-style-type: none"> • <i>Annual Financial savings: £ 2,471</i> • <i>Payback period: 4.6 years</i> • <i>Annual CO₂ Emissions reduction: 18 tonnes of CO₂</i>
Funding	<ul style="list-style-type: none"> • <i>Project cost £11,250</i> • <i>Annual Operational costs £490</i> • <i>Internal payback period to be no greater than 5 years</i> • <i>Funding has been agreed by Policy and Resource Committee – Scottish Government's Central Energy Efficiency Fund</i>
Resources	<ul style="list-style-type: none"> • <i>Project to be delivered within current resources.</i>
Ensuring Success	<ul style="list-style-type: none"> • <i>Reduction in emissions to meet or exceed target values.</i> • <i>Principal risks – completing work within agreed timescale</i>
Measuring Success	<ul style="list-style-type: none"> • <i>Metrics for displaying performance or achievement</i> • <i>Success will be measured / evaluated one year after completion of construction / installation date.</i>
Timing	<ul style="list-style-type: none"> • <i>Programme being prepared – all work to be completed 2009 / 2010</i>
Notes	

Project:	<i>5 Various Properties - Install photo electric cell switching internal and external lighting and extract fans.</i>
Reference:	<i>DCC – 08 –003</i>
Owner (person)	<i>John Kennedy, Team Leader - Property Maintenance</i>
Department	<i>Economic Development Department</i>
Description	<i>Installation of photo electric cell switching internal and external lighting and extract fan at Douglas Sports Centre, Mitchell Street Resource Centre , Ardler CC, MacKinnon Centre and Craigie House RHE</i>
Benefits	<ul style="list-style-type: none"> • <i>Annual Financial savings: £ 3,100</i> • <i>Payback period: 4.6 years</i> • <i>Annual CO₂ Emissions reduction: 4 tonnes of CO₂</i>
Funding	<ul style="list-style-type: none"> • <i>Project cost £11,250</i> • <i>Annual Operational costs £490</i> • <i>Internal payback period to be no greater than 5 years</i> • <i>Funding has been agreed by Policy and Resource Committee – Scottish Government's Central Energy Efficiency Fund</i>
Resources	<ul style="list-style-type: none"> • <i>Project to be delivered within current resources.</i>
Ensuring Success	<ul style="list-style-type: none"> • <i>Reduction in emissions to meet or exceed target values.</i> • <i>Principal risks – completing work within agreed timescale</i>
Measuring Success	<ul style="list-style-type: none"> • <i>Metrics for displaying performance or achievement</i> • <i>Success will be measured / evaluated one year after completion of construction / installation date.</i>
Timing	<ul style="list-style-type: none"> • <i>Programme being prepared – all work to be completed 2009 / 2010</i>
Notes	

Project:	<i>3 Various Properties – modifications to control regimes.</i>
Reference:	<i>DCC – 08 –004</i>
Owner (person)	<i>John Kennedy, Team Leader - Property Maintenance</i>
Department	<i>Economic Development Department</i>
Description	<i>Where applicable at Dundee International Sports Centre Central Library and Douglas Sports Centre, modify control system to utilise free cooling when ambient temperature is below 14 Deg C / switch off run around coil pumps when the exhaust air temperature is above the ambient/ re-commission zone controls ensuring that all are operational / fit time control to cooling units.</i>
Benefits	<ul style="list-style-type: none"> • <i>Annual Financial savings: £ 1,396</i> • <i>Payback period: 1.3 years</i> • <i>Annual CO₂ Emissions reduction: 8 tonnes of CO₂</i>
Funding	<ul style="list-style-type: none"> • <i>Project cost £1,800</i> • <i>Annual Operational costs £100</i> • <i>Internal payback period to be no greater than 5 years</i> • <i>Funding has been agreed by Policy and Resource Committee – Scottish Government's Central Energy Efficiency Fund</i>
Resources	<ul style="list-style-type: none"> • <i>Project to be delivered within current resources.</i>
Ensuring Success	<ul style="list-style-type: none"> • <i>Reduction in emissions to meet or exceed target values.</i> • <i>Principal risks – completing work within agreed timescale</i>
Measuring Success	<ul style="list-style-type: none"> • <i>Metrics for displaying performance or achievement</i> • <i>Success will be measured / evaluated one year after completion of construction / installation date.</i>
Timing	<ul style="list-style-type: none"> • <i>Programme being prepared – all work to be completed 2009 / 2010</i>
Notes	

Project:	<i>2 Various Properties - Install /Upgrade insulation to flanges / valves.</i>
Reference:	<i>DCC – 08 –005</i>
Owner (person)	<i>John Kennedy, Team Leader - Property Maintenance</i>
Department	<i>Economic Development Department</i>
Description	<i>Install /Upgrade insulation to flanges / valves in the boilerhouses of Mitchell Street and Ardlar CC</i>
Benefits	<ul style="list-style-type: none"> • <i>Annual Financial savings: £ 326</i> • <i>Payback period: 2.45 years</i> • <i>Annual CO₂ Emissions reduction: 2 tonnes of CO₂</i>
Funding	<ul style="list-style-type: none"> • <i>Project cost £800</i> • <i>Annual Operational costs £0</i> • <i>Internal payback period to be no greater than 5 years</i> • <i>Funding has been agreed by Policy and Resource Committee – Scottish Government's Central Energy Efficiency Fund</i>
Resources	<ul style="list-style-type: none"> • <i>Project to be delivered within current resources.</i>
Ensuring Success	<ul style="list-style-type: none"> • <i>Reduction in emissions to meet or exceed target values.</i> • <i>Principal risks – completing work within agreed timescale</i>
Measuring Success	<ul style="list-style-type: none"> • <i>Metrics for displaying performance or achievement</i> • <i>Success will be measured / evaluated one year after completion of construction / installation date.</i>
Timing	<ul style="list-style-type: none"> • <i>Programme being prepared – all work to be completed 2009 / 2010</i>
Notes	