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APPENDIX A

Peterborough City Council
Carbon Management Action Plan

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Contents

Foreword from Gillian Beasley and Cllr Matthew Lee

Peterborough City Council are committed to taking proactive action to make Peterborough more sustainable now and in the future, whilst adapting to the challenges climate change will bring. We acknowledge that:

- There is scientific consensus and evidence that climate change is happening
- Climate change will have significant and far reaching effects upon our residents, businesses and biodiversity
- The future cost of inaction on climate change will be far higher than the cost of taking action to tackle climate change now
- We are responsible for limiting our carbon emissions and preparing to adapt to the unavoidable effects of climate change
- Addressing climate change is critical to the success of achieving our four strategic priorities

We acknowledge the impact of the carbon emissions we generate through provision of our services, and commit to reducing them by 35 per cent of 2008/09 levels by 2014. Our Carbon Management Action Plan sets out how we will achieve this by improving our resource efficiency and by embracing new technologies. Through implementing this plan we commit to working at a local level to contribute to delivery of the government's Climate Change Act. In getting out house in order we will demonstrate leadership to the business and residential community.

Gillian Beasley	Cllr Matthew Lee
Chief Executive of Peterborough City Council	Cabinet Member for Environment Capital and Culture Peterborough City Council

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 local authority sector as key to delivering carbon reduction across the UK inline with its Kyoto commitments and the Local Authority Carbon Management programme is designed in response to this. It assists councils 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.

Peterborough City Council was selected in 2009, amidst strong competition, to take part in this ambitious programme. Peterborough City Council partnered with the Carbon Trust on this programme in order to realise vast carbon and cost savings. This Carbon Management Action Plan commits the council to a target of reducing CO_2 by 35% of 2008/09 levels by 2014 and underpins potential financial savings to the council of around £10 million.

There are those that can and those that do. Local authorities can contribute significantly to reducing CO_2 emissions. The Carbon Trust is very proud to support Peterborough City Council in their ongoing implementation of carbon management.

Richard Rugg
Head of Public Sector, Carbon Trust

Management Summary

This Carbon Management Action Plan (CMAP) is the result of a 10 month programme of work on the Carbon Trust Local Authority Carbon Management scheme. The document details how the city council will manage and reduce CO_2 emissions arising from the authorities operations over the next five years and has synergies with our role as one of four UK Environment Cities and our growing reputation as the UK's Environment Capital.

Target

The city council has set a target for reducing emissions by 35 per cent relative to 2008/9 by 2014. It is part our wider vision of "reducing carbon, improving efficiency – creating the UK's Environment Capital". And will be achieved through actions falling under the following strategic themes:

One: Energy Management
Two: Energy Efficiency
Three: Engaging Schools
Four: Climate Change Culture
Five: Policy Alignment
Six: Procurement

Baseline

The city council emitted 34,000 tonnes of carbon dioxide in 2008/9 through stationary and transport related services resulting in costs of approximately £6m. Schools were the largest contributors making up approximately 53 per cent of the baseline.

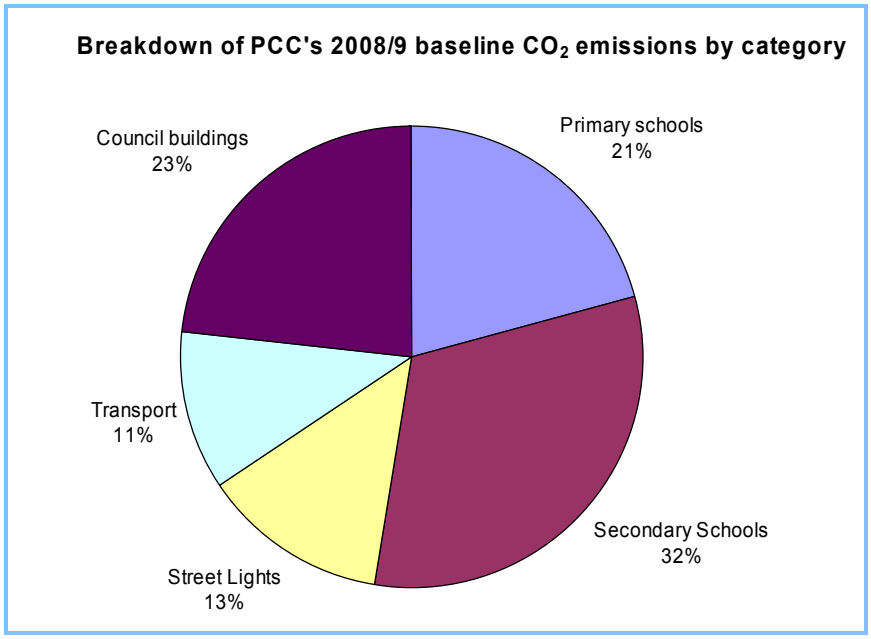

Figure 1.0: Peterborough City Council's carbon emissions baseline

Value at Stake

Failure to achieve the emissions reduction target will have significant impacts for the city council. The value at stake over the five year period to 2014 demonstrates that the city council will have emitted **41,341** tonnes CO_2 more under the business as usual scenario compared to the reduced emissions scenario with a resulting financial value at stake in the region of £10.3 million.

Projects

In order to achieve the reduction target a variety of projects will be required ranging from routine energy efficiencies improvements to ambitious plans using developing technologies. All projects will be implemented only upon successful completion of the city council's project management process which will involve comprehensive feasibility studies demonstrating accurately how individual reductions will be realised from each project. Finance will be determined on a project by project basis, considering the invest to save opportunities and external funding available.

This CMAP will be continually updates, progressively developing the level of information included as and when further projects are identified, ensuring it remains robust and comprehensive. The success of this programme will ultimately depend upon strong governance from the Programme Board who will play an essential role in keeping the projects on track and realising savings.

1 Introduction

The city council is one of the most visible organisations and largest employers in Peterborough; as such we are in a key position to lead on tackling climate change. We will work alongside our strategic partners to undertake both mitigation efforts to reduce our carbon emissions and adaptation efforts to future proof the city from extreme weather events, demonstrating our commitment to transitioning to a low carbon future.

Purpose

This Carbon Management Action Plan (CMAP) details how the city council will reduce carbon dioxide emission from its operations. It is the product of an intensive ten-month partnership with the Carbon Trust on the Local Authority Carbon Management scheme, which began in May 2009. The programme involves setting a target for reducing emissions and developing projects to realise it. We have followed the five steps in the programme to develop our CMAP:

Figure 1.1: The five step carbon management process for local authorities

The CMAP is an inclusive document bringing together energy saving projects from across the city council; it recognises existing projects with secondary benefits that contribute towards the target and scopes out new additional projects to demonstrate how the remaining target will be met. The CMAP will enable us to address carbon management comprehensively across our operations.

Timescale

The CMAP is initially a five year plan covering the period 2009 to 2014. During this period the CMAP will be refreshed and revised on an annual basis as new data becomes available. This will allow the accuracy of the baseline to be improved and/or enables the scope to be expanded. However we will continue with carbon management beyond 2014 to ensure we continue to reduce our emissions inline with the Governments 80 per cent reduction target by 2050 as set out in the 2008 Climate Change Act. The initial CMAP will be redeveloped to take us beyond 2014, outlining how we will continue to progress towards and beyond our target.

Peterborough City Council

Peterborough City Council is a unitary authority located 70 miles north of London, between East Anglia and the East Midlands. It employs nearly 3000 full time staff, not including teachers, and serves a population of more than 160,000 people. We have a long standing commitment to environmental leadership. In 1992 Peterborough became an environment city and already has a growing reputation as the UK's Environment Capital. The city council is recognised for its contribution to Peterborough's achievements as an environment city and its ongoing leadership role.

The city council is a signatory to the Nottingham Declaration, which acknowledges our contribution to climate change. We have already taken steps to reduce our emissions including the replacement of school boilers with more efficient systems, increasing insulation above the statutory minimum in schools, replacing street lights, trialling an electric vehicle, replacing printers with multi functional devices, using Night-watchman software to switch off computers at night, and success as one of three sustainable transport cities through the promotion of alterative transport by the Travelchoice campaign. This CMAP will ensure future efforts will be acknowledged and accounted for in delivering carbon dioxide reductions.

2 Carbon Management Strategy

2.1 Context and drivers for Carbon Management

2.1.1 Climate Change an international issue

Climate change occurs due to an increase in the atmospheric concentration of greenhouse gases that prevent the sun's radiation from escaping from the atmosphere. Humans have been significantly contributing to the levels of these gases (most importantly carbon dioxide and methane) since the industrial revolution in the 18th Century. Scientists expect the increasing concentration of greenhouse gases will lead to a change in the world's weather patterns.

Climate change is a global issue which will impact people regardless of political boundaries. The United Nations Framework Convention on Climate Change (UNFCC), an international environmental treaty, was established in 1992 to address climate change. It drew up the Kyoto Protocol, which requires the voluntary signatories to reduce greenhouse gas emissions collectively by five per cent relative to a 1990 baseline by 2012. The UK signed the Protocol in 1997, committing to a 12.5 per cent emission reduction from 1990 levels.

In December 2009 the annual Conference of the Parties (CoP 15) of the UNFCC convened in Copenhagen to discuss the Kyoto Protocol and the need to revise reduction targets. Although the full potential of the CoP wasn't realised and an agreement on new legally binding targets was not achieved, some countries committed to individual targets for the first time. This CoP marks the beginning of a new chapter in international climate change discussions.

2.1.2 National drivers

The Climate Change Act

In 2008, the UK passed legislation which introduces the world's first long-term legally binding framework to tackle the dangers of climate change. The Climate Change Act commits the UK to a 34 per cent reduction in greenhouse gas emissions by 2020 and an 80 per cent reduction by 2050 as recommended by the Royal Commission on Environmental Pollution to avoid catastrophic climate change. Both these targets include, for the first time, emissions from aviation and shipping and are set against a 1990 baseline. These targets will be achieved through a system of carbon budgets which cap emissions over five-year periods. The first three carbon budgets will run from 2008 to 2012, 2013 to 2017 and 2018 to 2022, and were set in May 2009. The Climate Change Committee was established by the Act to advise the government, which must report to parliament on its policies and proposals to meet the budgets.

The Carbon Reduction Commitment Energy Efficiency Scheme

The Carbon Reduction Commitment (CRC) Energy Efficiency Scheme was announced in the 2007 Energy White Paper to encourage large non-energy intensive businesses (that are exempt from the European Union Emissions Trading System) and public sector organisations to reduce their CO_2 emissions. It is a mandatory cap and trade scheme that requires organisations with at least one half-hourly meter and/or electricity consumption over 6000 MWh per annum to buy allowances to cover their total fossil fuel energy use. The scheme covers more than 5,000 organisations, starts in 2011 and aims to achieve savings in the region of 1.2 million tonnes of CO_2 by 2020.

The CRC is governed by the Climate Change Act but will be administered by the Environment Agency. Money from the purchase of allowance will be recycled within the organisations participating in the scheme, based upon their performance which will be published in a league table. The launch of the CRC is an added incentive to reduce CO_2 emissions, with allowances in the first two years set at £12 per tonne. The Local Government Information Unit estimates that CRC allowances could cost local authorities anywhere between £350,000 to £1.2m per annum.

Energy prices

The likely future costs and volatility of energy markets supports reducing reliance on fossil fuels and the transition to a low carbon economy. The Office of Gas and Electricity Markets (Ofgem) predicts that the UK's energy supply will be particularly vulnerable due to its exposure to the volatile global gas market and because of its ageing power stations. This will be compounded by increased demand for energy due to the increase in technology and IT use.

Energy Performance of Buildings Directive (EPBD) and Display Energy Certificates (DECs)

All buildings which are sold, rented or constructed must have an Energy Performance Certificate (EPC) issued by an independent qualified and accredited assessor. EPCs are valid for ten years and are accompanied by recommendations for improving energy efficiency.

Additionally from October 2008 all public buildings over 1000m^2 are required to display a Display Energy Certificate (DEC) in a place visible to the public. These must be issued by an independent qualified and accredited assessor, renewed annually and show information from the previous two years. A DEC must be accompanied by an advisory report, to be renewed every seven years which contains recommendations for improvements to the energy efficiency of the building.

2.1.3 Local Drivers

National Indicator 185: CO_2 reductions from local authority operations

This government indicator requires local authorities to compile a list of their carbon dioxide emissions created in the delivery of their services. The first reporting year was for 2008/9 financial year which aligns with future reporting periods of the CRC, and was subsequently chosen for the scope of this CMAP to avoid double reporting.

National Indicator 186: per capita reductions in $C0_2$ emissions in Peterborough

This is the carbon footprint for the whole of Peterborough including commercial, industrial, domestic, and transport emissions.

Sustainable Community Strategy

In 1992 Peterborough was made one of four UK Environment Cities, along with Leeds, Leicester and Middlesbrough. Peterborough has worked hard to improve its environmental credentials and now has a growing reputation as the UK's Environment Capital, an aspiration and commitment outlined in Peterborough's Sustainable Community Strategy.

The Sustainable Community Strategy, "Growing the right way for a bigger and better Peterborough" sets out ambitious plans for the future of Peterborough and its communities. The strategy identifies four priority areas for those public bodies and other organisations that make up the Greater Peterborough Partnership. The city council has adopted these four priority areas as our strategic priorities, to ensure that we deliver truly sustainable growth and a cleaner, greener, healthier and more vibrant Peterborough for the future.

Local Area Agreement

The Local Area Agreement (LAA) is the tool for achieving the changes set out in the Sustainable Community Strategy. It is a three-year agreement between the key organisations in Peterborough and our partners in regional and national government, setting out the actions we will take and the targets we aim to meet in pursuit of the longer term vision of the Sustainable Community Strategy.

These can be seen as two parts of the same document, with the Sustainable Community Strategy setting out the vision and priorities for Peterborough over the period 2008 to 2021 and a series of LAAs, negotiated on a rolling three-year basis, outlining the short and medium-term action plans for helping us

realise that vision. The agreement represents the work of all the partners whether public, private, voluntary, community or faith sector. As such it is a genuine partnership document, representing our collective work plan and recognises that no one partner can deliver our ambitious agenda.

Nottingham Declaration

The city council signed the Nottingham Declaration on Climate Change in 2004, acknowledging that current and future council activities will have a detrimental effect on the future environmental and socio-economic prosperity of the UK and Peterborough. By signing this agreement we commit to considering the impact of climate change on all council services and develop a framework for future action.

In 2007 we developed a Climate Change Strategy, providing the framework for action within our operations and demonstrating our leading role on climate change in Peterborough. The Strategy is currently being refreshed to reflect developments in climate change policy, and will outline actions required by both the city council and across Peterborough to address climate change.

The following diagram illustrates the relationship between the various associated drivers:

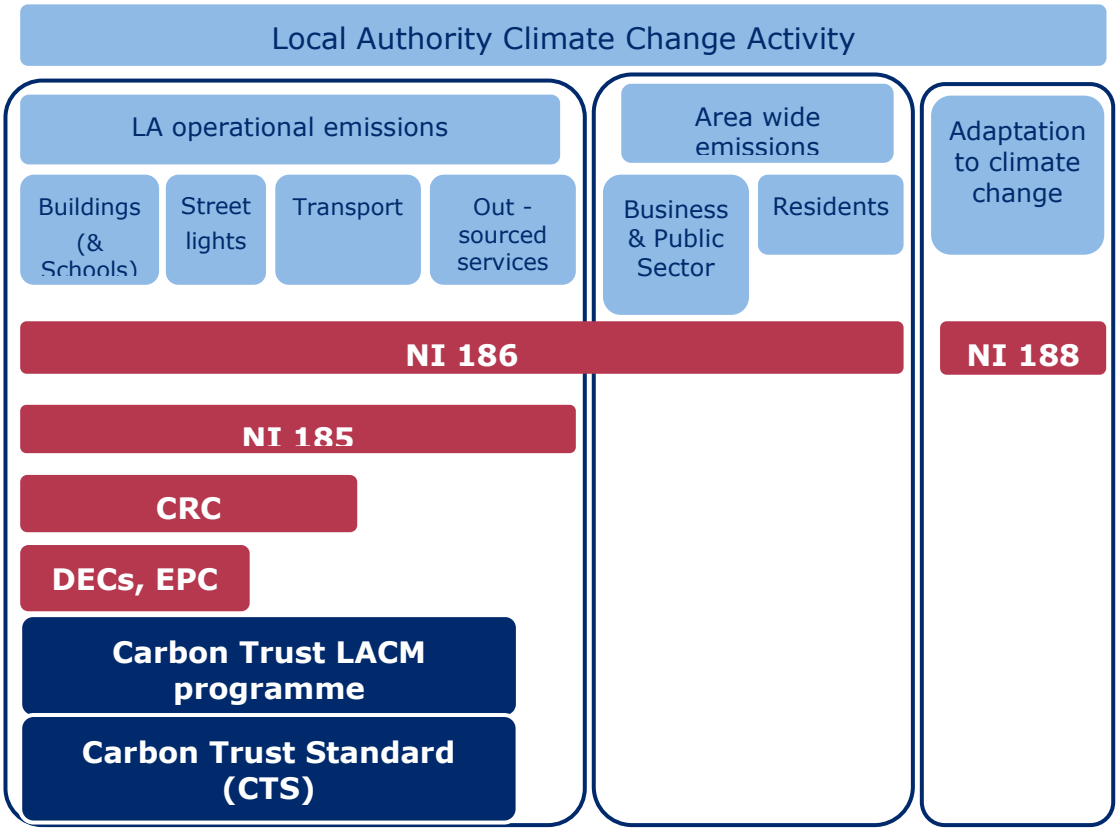

Table 2.1: Local authority climate change activity

2.2 Our low carbon vision

Reducing carbon, improving efficency - creating the UK's Environment Capital

2.3 Strategic themes

The city council has idenitified the following strategic themes which emcompass the actions that will be required to achieve the vision.

One: Energy Management

Developing a consistent and robust approach to monitoring energy which allows the city council to manage and reduce energy consumption.

Two: Energy Efficiency

Improving energy efficiency across the city council's assets, both buildings and vehicles.

Three: Engaging Schools

Develop an integrated approach to carbon management within schools with support to create individual school carbon management action plans and provide environmental awareness education.

Four: Climate Change Culture

Embedding climate change within the city council's culture, both at a strategic and individual officer level.

Five: Policy Alignment

Assessing the environmental impact of new policies and strategies to ensure that environmental considerations are taken into account.

Six: Procurement

Develop the procurement process to ensure environmental impacts and options are considered appropriately.

2.4 Targets and objectives

Peterborough City Council will reduce CO_2 emissions from operations by 35% of 2008/9 levels by April 2014

This target is one of the most ambitious so far on the Carbon Trust Local Authority Carbon Management Programme and will enable us to meet the UK's reduction target of 34 per cent before 2020. The 35 per cent reduction target will be met through a combination of high and low tech solutions as demonstrated in Figure 2.2.

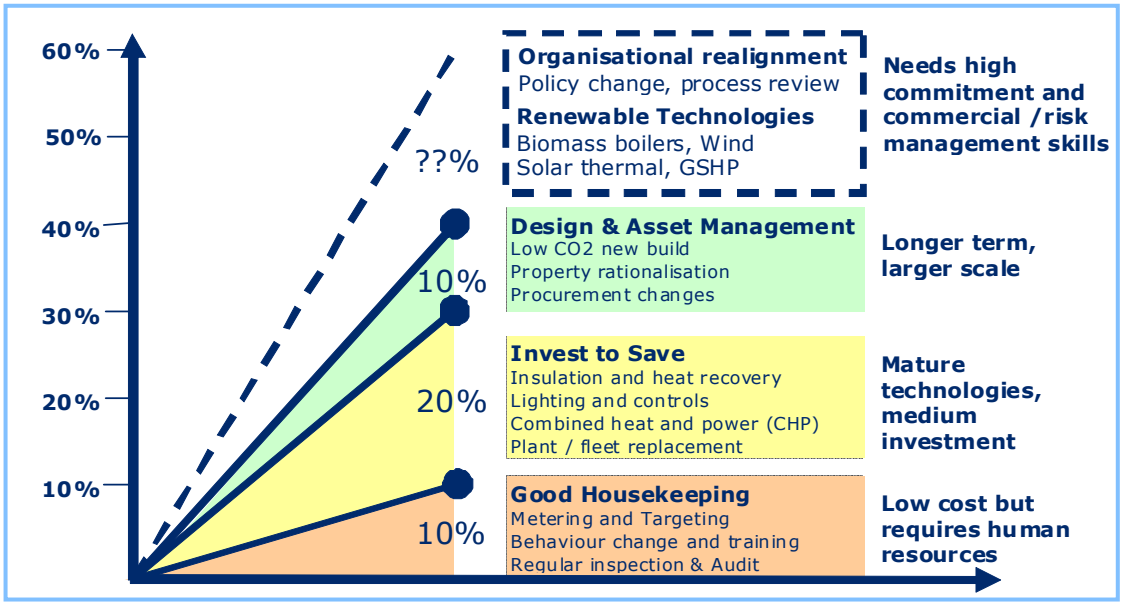

Figure 2.2: Possible percentage energy reductions.

The future aspirational target for the city council is to achieve an 80 per cent reduction in carbon dioxide emissions by 2050, inline with the Government's target.

3 Emissions Baseline and Projections

The starting point for carbon management is to accurately establish the emission baseline. The scope of the baseline is chosen to include the required types and sources of emissions over a defined timescale. The baseline is a fixed point against which a reduction target can be set and future performance monitored.

3.1 Scope

The emission baseline used by the city council is based upon the scope of National Indicator 185. This scope was adopted to maximise the benefits of the existing reporting for NI 185, and to avoid creating unnecessary reporting commitments.

The scope of NI 185 and therefore the baseline used for the Carbon Management Programme is described as follows:

"NI 185 is to include all CO2 emissions from the delivery of local authority functions. […….] "function" covers both the duties and powers of an authority. It covers all an authority's own operations and outsourced services. […….] it should be clear that schools and business travel are included within the definition. However, social housing provided by the authority or a third party is not included within the scope of the indicator. Employee commuting is also not included"

Therefore the scope of the baseline used for the Carbon Management Programme includes:

Stationary sources

- Council offices (the main buildings: Town Hall, Bayard Place, Bridge House and Manor Drive)
- Schools (72 schools included)
- Street lighting including road signs and bollards
- Car park lighting and ticket machines
- Peterborough Museum and Art Gallery
- Leisure facilities (Regional Pool, the Lido, Jack Hunt Swimming Pool, Werrington Sports Centre and Bushfields Sports Centre)
- Libraries
- The Crematorium
- The Household Recycling Centre and Materials Recycling Centre
- Various depots and storage facilities
- Day social care facilities
- Other offices used by council staff such as the Registry Office

Transport emissions

- Fleet vehicles: 172 vehicles including 22 refuse trucks, road sweepers and cars
- Business mileage claimed by staff for the purposes of carrying out their role
- Outsourced school buses for children living over 2 miles from school
- Outsourced taxi journeys provided for children with special educational needs
- Community Link bus services

From these sources, only the CO_2 emissions were considered (other greenhouse gases such as methane were not included within the scope of the baseline due to lack of data and the smaller scale of emissions). CO_2 emissions are produced primarily from the consumption of energy, namely fossil fuels:

oil, gas, diesel, petrol, LPG, burning oil, red diesel etc. In addition, grid electricity was included in the scope because of the emissions related to its generation.

Excluded sources

The baseline was not extended to include other emission sources such as water consumption or waste production. Given the magnitude of energy emission sources, it was decided that the contribution from water consumption would be too small to justify the extra reporting burden at this stage, especially given that there was no existing reporting structure (e.g. the emissions factors provided by Defra give 0.404 $kgCO_2/m^3$ water consumed compared to 0.537 $kgCO_2$/kWh electricity used and given that minimal water is used in offices).

Similarly, emissions from waste sent to landfill have not been included at this stage however, if in future this data is collected then the baseline could be adjusted to include these emission sources.

The emission sources excluded in NI 185 were also excluded in the baseline. These include commuting, retail units, privately operated children's services facilities and community centres, social housing and some rented offices.

Data Collection

The energy data used to calculate the baseline was gathered from invoices received by the city council's asset management service, property services, and children's services as well as directly from energy users in schools. Work continues to ensure that this data is robust and systems are in place to ensure ongoing timely and accurate provision.

Energy Type	Source	Data Quality	Actions to improve data
Electricity	Energy bills from individuals in different buildings, contact with suppliers, DECs (subsequently provided by ESPO in 70% of cases), some estimated by financial spend	Schools: Some based on estimates from financial spend Offices: some based on proportions of rented space	Gain data directly from ESPO for those on the corporate contract. Access online bills to by pass the paper trail and reliance upon individuals to submit bills to a central office. Install Automated Meter Readers (AMR's) across the estate to give immediate access to actual data.
Gas	Energy bills from individuals in different buildings, contact with suppliers, DECs (subsequently provided by ESPO in 70% of cases), some estimated by financial spend	Schools: Some based on estimates from financial spend Offices: some based on proportions of rented space	Gain data directly from ESPO for those on the corporate contract. Ultimately install AMRs.
Oil	Utility bills, contact directly with suppliers	Good	
Petrol	Software, HR	Good	
Diesel	Software, HR	Good	

Table 2.1: Data sources and quality

	2008/9 (pence per unit)	Yearly increase (%)	2009/10 (pence per unit)	2010/11 (pence per unit)	2011/12 (pence per unit)	2012/13 (pence per unit)	2013/14 (pence per unit)
Electricity (grid) (kWh)	9	5.3	9.48	9.98	10.51	11.07	11.65
Natural gas (kWh)	4	5.3	4.21	4.44	4.67	4.92	5.18
Burning oil (kWh)	4	5.3	4.21	4.44	4.67	4.92	5.18
Diesel (litre)	118.1	8.4	128.0	138.8	150.4	163.1	176.8
Petrol (litre)	108.5	8.4	117.6	127.5	138.2	149.8	162.4
Average Diesel Car (km)	5.9	8.4	6.4	6.9	7.5	8.1	8.8
Average Petrol Car (km)	8.1	8.4	8.8	9.5	10.3	11.2	12.1

Table 2.2: Current and future predicted energy prices from BIS (formerly BERR)

3.2 Baseline

The baseline year is the financial year April 2008 to March 2009 which ties in with the reporting requirements for NI 185, utilising the existing data and avoiding extra reporting burdens. After the first qualification period the CRC reporting requirements will also follow this timescale. Utilising the synergies with these other reporting commitments ensures that messages about carbon reduction within the city council are consistent.

The baseline emissions were calculated using a Carbon Trust tool that uses the Defra conversion factors published in 2009. The main conversion factors used were:

Energy Type	Conversion factor
Electricity	0.537 kg CO_2/kWh
Natural Gas	0.185 kg CO_2/kWh
Burning oil	0.245 kg CO_2/kWh
Petrol	2.32 kg CO_2/litre
Diesel	2.63 kg CO_2/litre
Average diesel car	0.20 kg CO_2/km

Table 2.3: Defra conversion factors

The resultant baseline for 2008/9 is **33,995 tonnes of CO_2** (components shown in Table 3). The corresponding cost estimate is more than **£6.7 million** (assuming 8p/kWh for electricity and 4p/kWh for gas - these will be adjusted when actual unit costs of energy are made available).

The city council's 2008/9 carbon dioxide baseline is 33,995 tonnes CO_2.

		Baseline CO2 emissions (tonnes)	Estimated Baseline Cost (£)
Buildings	Council Offices	2,212	£393,989
	Primary schools	7,045	£1,305,576
	Secondary schools	10,764	£1,968,596
	Leisure centres	1,517	£295,066
	Cultural services	1,302	£252,541
	Other buildings	727	£316,665
Street lights	Street lights	4,444	£744,396
Transport	Fleet	3,203	£1,045,348
	Business mileage	649	£282,622
Miscellaneous		2,131	£132,934
Total		33,995	£6,737,734

Table 2.4: Summary table of emissions for baseline year 2008/9

This means that the city council will need to reduce its emissions by 12,000 tonnes of CO_2 to meet its reduction target, not considering any growth.

Schools make up approximately **53 per cent** of the city council's baseline.

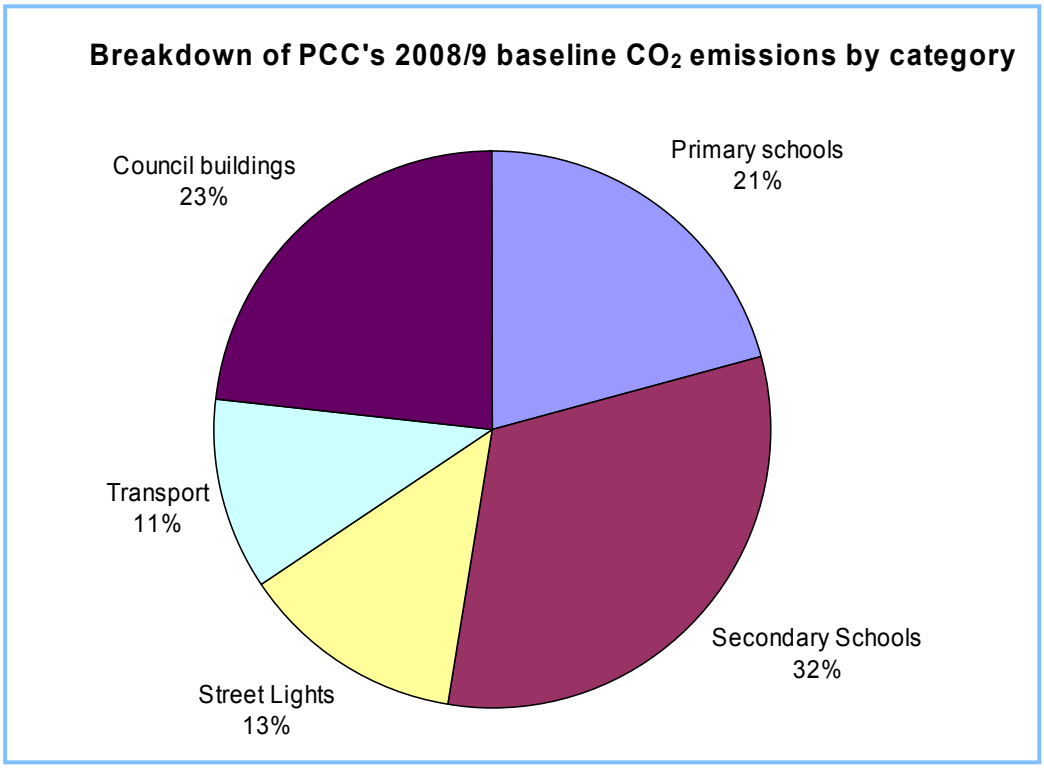

Figure 3.1: Summary of emissions for baseline financial year 2008/9

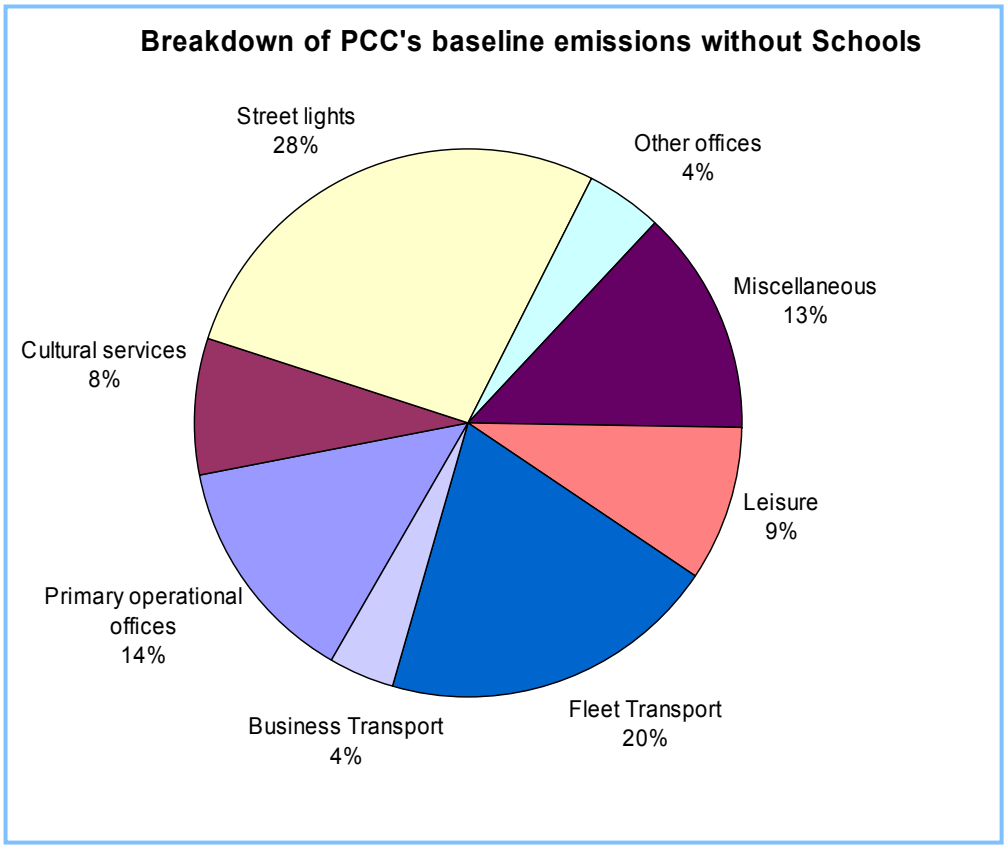

Figure 3.2: Emissions from the city council excluding schools.

The **largest single contributor** is the **crematorium** which emitted approximately **660** tonnes CO_2**.**

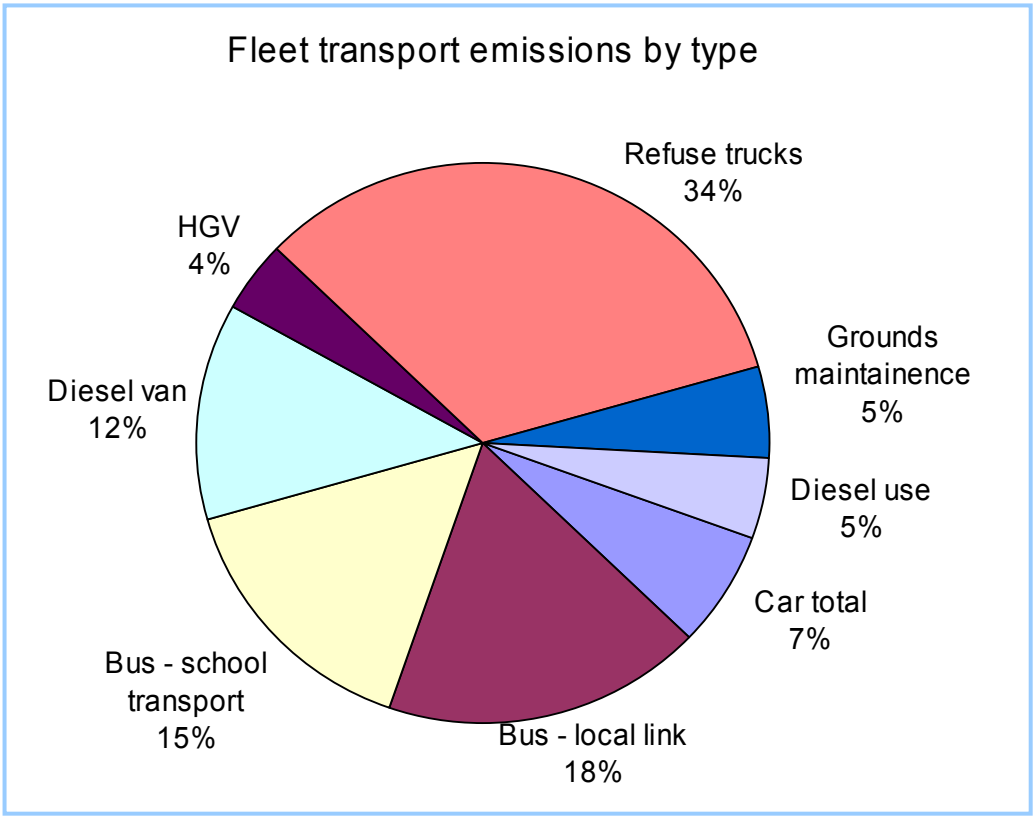

Figure 3.3: Breakdown of the city council's fleet emissions.

3.3 Projections and value at stake

If we don't reduce energy consumption:

By 2014 annual emissions will have increased by 1000 tonnes CO_2 (3 per cent) and annual financial spend will have increased by **£3.5m** (51 per cent).

What this plan can deliver:

By following the reduced emissions scenario, annual emissions will reduce 35 per cent to 22,097 tonnes CO_2 and costs to £5.9m.

There are two alternative energy scenarios for the city council in five years:

- the '**business as usual**' scenario where energy consumption increases unchecked and as normal;
- the **reduced** consumption scenario towards the city council's 35 per cent emissions reduction target by 2014.

Business as usual scenario

The business as usual scenario considers unabated energy consumption and therefore unabated energy emissions. The energy consumption growth was calculated using a year-on-year increase of 0.7 per cent based on BIS (Department for Business Innovation and Skills) projections. This was used for both the stationary sources, including schools, and the transport sources.

This figure may not accurately reflect the increased energy demand that the city council might experience over the next five years. Complicating factors include the planned large scale growth of Peterborough, with services to match. Alongside initiatives such as the Building Schools for the Future Programme; the effect replacing secondary schools may have on energy demand is unknown. In some cases the rebuild will be accompanied with an increase in pupils, but in all cases the buildings will be more modern and compliant with current standards for insulation and energy efficiency. The carbon embedded in the building materials and in the building works will not be included.

The effect of these changes and developments is not reflected in the 'business as usual' increase factor. Therefore the 'business as usual' scenario will not reflect the city council's future energy consumption in detail. Nonetheless it is a valuable tool to indicate the magnitude of future emissions and to visualise the contrast between the starting point and the situation in five years.

The 'business as usual' scenario also estimates the financial requirements in five years time. The calculation is based on the increased energy consumption figures and considers energy price inflation. Price increase factors of 5.3 per cent for stationary sources and 8.4 per cent for transport sources, provided by Camco Advisory Services and based on Department for Business Innovation and Skills (BIS) projections, were used to calculate the 'business as usual' financial scenario.

Total 2008/9 baseline emissions equate to **33,995** tonnes of CO_2; under a business as usual growth scenario emissions in 2014 will have increased to **35,201** tonnes CO_2. This is growth of 3 per cent and an additional 1000 tonnes CO_2 per annum.

Similarly financial spend will have increased from **£6.8m** to **£9.4m** annually (using BIS fuel price estimate and projections), with costs increasing by nearly 51 per cent.

Reduced emissions scenario

Through effective carbon management and commitment to meet the 35 per cent reduction target by 2014, the city council will have reduced its emissions to **22,097** tonnes CO_2. This is a reduction of 13,100 tonnes CO_2 per annum compared to the 'business as usual' scenario.

Similarly costs will have reduced to **£5.9m,** saving the city council approximately £3.5 million in energy costs annually in comparison with 'business as usual' scenario.

Pursuing the reduced energy consumption scenario over five years will produce cumulative saving through **cost avoidance.**

Value at stake

The value at stake demonstrates the **total** carbon emissions avoided and the costs saved by following the reduced emissions scenario over five years. It is calculated over the period of the Carbon Management Programme as the cumulative difference between the 'business as usual' and the reduced emission scenario.

The value at stake shows that over the 5 years to 2014 the city council will have emitted **41,341** tonnes CO_2 more under the business as usual scenario compared to the reduced emissions scenario (Figure 3.4 and 3.5). Similarly the financial value at stake could be as much as **£10.3m** by 2014 through increased energy prices.

The cost of not completing the programme over five years is £10.3m and 41,341 tonnes CO_2

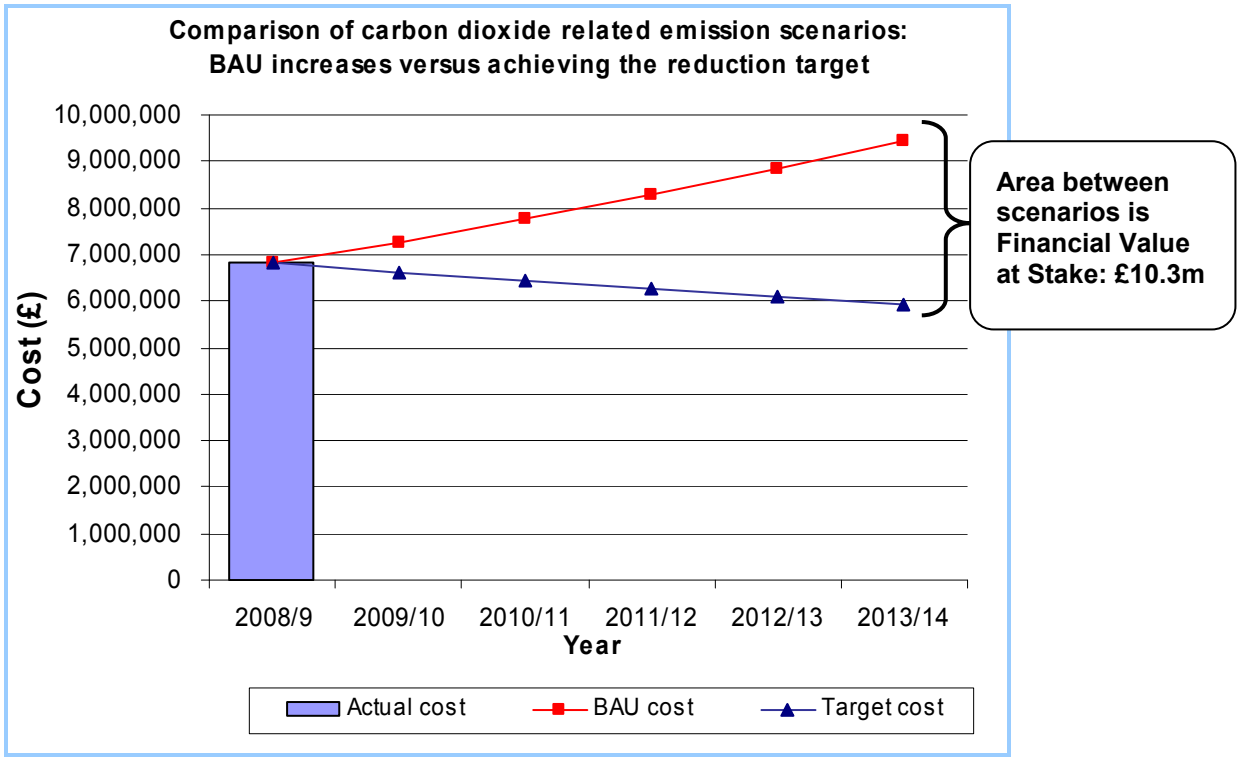

Figure 3.4: Financial Value at Stake from Inaction

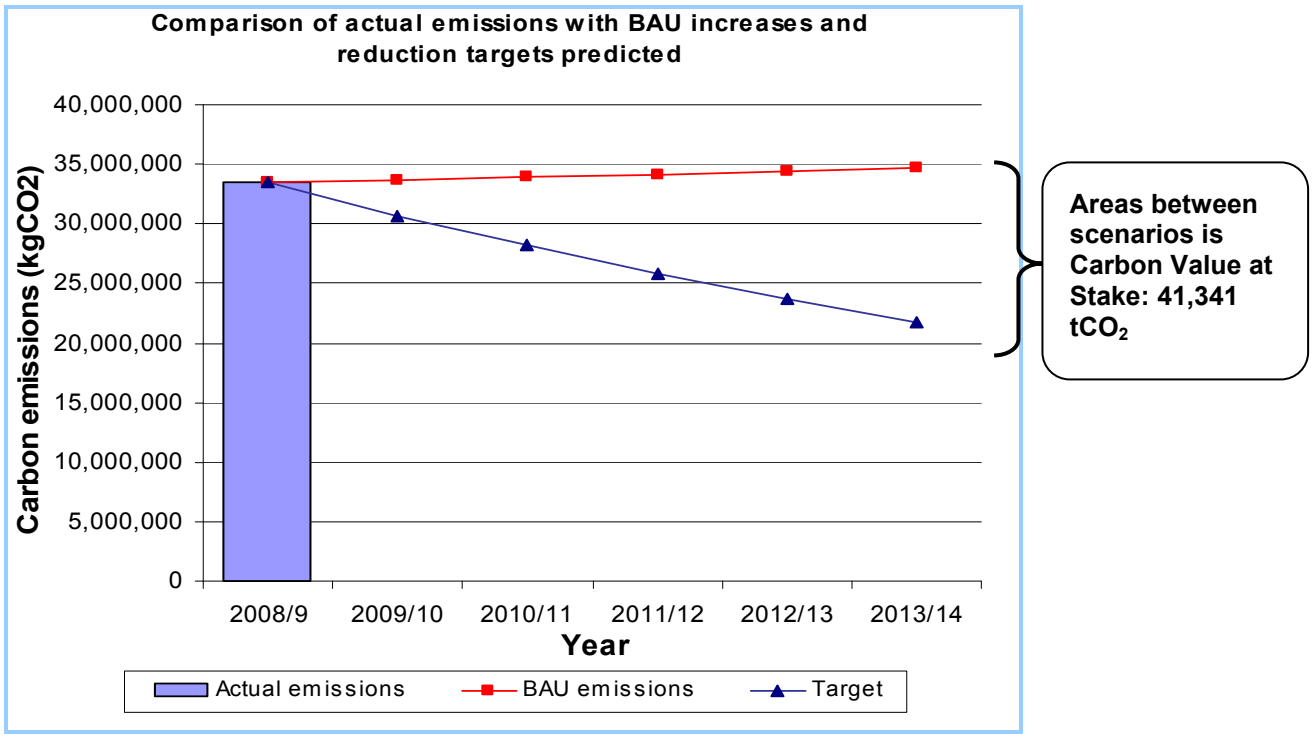

Figure 3.5: Carbon Value at Stake from Inaction

Carbon Reduction Commitment (CRC) Energy Efficiency Scheme

With the introduction of the CRC scheme in 2011, PCC's carbon emissions will give rise to additional costs not covered in the preceding analysis (which is based on energy costs only). Under the scheme PCC will have to purchase allowances to cover its emissions from 2011 onwards at £12 per tonne of carbon dioxide (the fixed price during phase one of the scheme). The money raised through the sale of allowances is recycled to participants based upon their relative performance published in a league table. Good performance, by taking action to reduce emissions, could result in PCC receiving its initial outlay plus bonus payments. Poor performance, through doing little or nothing to reduce emissions, could result in the penalty payments being deducted from the initial outlay, further increasing the financial burden of PCC's energy consumption.

To give an indication of the initial outlay for PCC, using the 2008/9 baseline and omitting the contribution from transport emissions, allowances will cost approximately **£360,000** a year (stationary emissions of 30,142 tCO_2 at £12 a tonne). However the actual cost to PCC will depend on the carbon dioxide emissions in 2011/12, the performance of all participants in the scheme and the variable cost of allowance on the market after the first two years.

Under the reduced emissions scenario detailed above, saving **41,341** tonnes CO_2 **over 5 years** will avoid the requirement for purchasing additional CRC allowances equivalent to **£431,600** (assuming stationary source savings of 35,966 tCO_2 and that the price of carbon stays at £12 per tonne CO_2).

4 Carbon Management Projects

This chapter describes the **overall model** for carbon management within the city council. All individual projects will be **scrutinised, changed and revised to realise actual savings.** The model tentatively includes projects without detailed planning, feasibility studies or quantification of costs and savings at this stage. All projects, an overview of which will be included in the format of appendix B, will follow the city councils full approval process before initiation and where some projects prove unfeasible, new opportunities will be considered.

4.1 Model for Carbon Management

This chapter details a possible model for projects and the table below provides a summary of how the target **could be met**. However these figures are provisional and should not be considered as actual savings. Realisation of these reductions will require developed feasibility studies and corresponding financing.

The projects in this model can be considered in six categories, as shown in the table below:

Model of Carbon Saving Projects	Potential contribution to reduction *			Enabling Action
	Tonnes CO_2	% of target	% of baseline	
4.3 Existing completed projects	208	1.7%	0.6%	n/a
4.4 Planned/funded projects				n/a
4.5 Near term projects	5989	50%	17.5%	Strategic level decisions
4.6 Medium to long term projects	5198	43.3%	15.3%	Further planning
4.7 Additional Ideas				Further planning
Totals	11053	92%	32.4%	

Table 4.1: Model for Carbon Saving Projects across the city council (The reduction figures are estimates aimed to indicate the potential savings and should not be taken as definite until more accurate quantification of the projects is undertaken.)

These project categories are described in more detail in the corresponding sections of this chapter, with the main project details summarised in the tables below.

4.2 Planned/funded Project	Status	Potential contribution to reduction *			Enabling Action
		Tonnes CO_2	% of target	% of baseline	
Crematorium Upgrade – more efficient cremators	Planned & funded	283	2.3%	0.8%	n/a
Museum Refurbishment – boiler and heating systems	Planned & funded	Awaiting details	?	?	Strategic level decisions
Welland Primary School - rebuild	Planned & funded	64	0.31%	0.18%	Further planning
	Totals				

4.3 Near Term Projects	Status	Potential contribution to reduction *			Enabling Action
		Tonnes CO_2	% of target	% of baseline	
Automated Meter Readers (AMR's)	Mandate (Jan 10)	964	8%	3%	Further planning
Behavioural change including awareness raising campaign and Green Champions in main PCC offices	In planning	344	3%	1%	Further planning
Primary school programme plus awareness campaign	Concept	3116	26%	9%	Further planning
Secondary School Programme plus awareness campaign	Concept	1441	12%	4.2%	Further planning
PCC Travel Plan	In consultation	124	1%	0.3%	Further planning
	Totals	5989	50%	17.5%	

4.4 Medium to Long Term Projects	Status	Potential contribution to reduction *			Enabling Action
		Tonnes CO_2	% of target	% of baseline	
Energy Efficiency programme in main PCC offices	Medium term	661	5.5%	2%	Further planning
Green Fleet	Medium term	544	4.5%	1.6%	Strategic level decisions
Building Schools for the Future	Medium term - planned	2272	19%	6.7%	Further planning
Street lights and traffic lights	Medium term - planned	480	4%	1.4%	Further planning
Leisure (wet and dry)	Medium term - planned	421	3.5%	1.2%	Strategic level decisions
Other (awareness in libraries, solar panels on schools)	Medium term	820	6.8%	2.4%	Further planning
	Totals	5198	43.3%	15.3%	

4.2 Past Achievements

The city council has completed several projects in recent years that will have contributed carbon savings and which will have reduced the potential for current savings. These include:

- Night-watchman software - switches off council office computer hard drives at 6pm- saving in the region of 250 tonnes CO_2 per annum
- Server virtualisation
- Replaced individual printers, scanners and copiers with multifunction devices (MDFs) saving in the region of 28 tonnes CO_2 per annum
- Position in top quarter of local authorities surveyed on Green IT by SOCTIM
- Turning off every 3rd light on the parkways
- Ongoing Primary school asset maintenance programme: boilers, lighting, rewiring etc.
- Trial of an electric Mega van for the Grounds Maintenance team
- Recycling rate of 46.6 per cent in 2007/8
- Extension of Orton Wistow Primary School with a Green Roof and ground sourced heat pump
- New boiler in the Town Hall

- LED trail lamp on Bridge Street
- 5 secondary schools recently rebuilt under the BSF programme

4.3 Existing projects

There are a number of existing projects that have been completed within the first year of the Carbon Management Programme. The timescale of projects from initial conception, through planning to implementation means that there is a significant lag before the results of the project are seen. Therefore these existing projects were planned before the Carbon Management Programme was started, as part of the status quo within the city council, but their benefits can be accounted for within the programme.

Project	Lead	Cost		Annual Saving		% of Target	First Year of Savings~
		Capital	Operational*	Financial	tCO_2		
Jack Hunt Swimming Pool – refurbishment including boiler replacement	Robert Griggs/Geoff Badger	£620,000	£4,039	£11,567	156.6	1.32%	**2009 (Yr 1)**
John Clare Primary School – boiler replacement (biomass)	Robert Griggs/Geoff Badger	£246,000	£142	£2,450	22.2	0.19%	**2009**
St Boltophs Primary School – boiler replacement	Robert Griggs/Geoff Badger	£55,000	£560	£123	12.6	0.11%	**2009**
Sacred Heart RC Primary School – boiler and heating system replacement	Robert Griggs/Geoff Badger	£132,000	£504	£601	5.1	0.04%	**2009**
St Boltophs Primary School – partial rewire	Robert Griggs/Geoff Badger	£68,000	£81	£954	6.2	0.05%	**2009**
Heltwate Primary School – partial rewire	Robert Griggs/Geoff Badger	£60,000	£60	£268	2.0	0.02%	**2009**
Leighton Primary School - partial lighting refit	Robert Griggs/Geoff Badger	£22,000	£39	£294	2.0	0.02%	**2009**
Norwood Primary School - partial lighting refit	Robert Griggs/Geoff Badger	£21,000	£39	£294	2.0	0.02%	**2009**
				Total	208	1.75%	

Table 4.5: Carbon savings from existing projects

* operational costs estimated using the predicted consumption figures after project completion and the unit price for the emission source. The actual operational costs will be subject to fluctuating energy prices and differing energy consumption, which will be available at the end of the financial year when reporting for NI 185.

~ these projects were all undertaken in the school summer holidays 2009, and were completed by the new term. Therefore the first savings would be experienced in the autumn 2009 and the figures in this table are predictions.

Combined these projects saved 208 tonnes CO_2 from the 2008/9 baseline which equates to 1.75 per cent of the target (0.6 per cent of the baseline).

4.4 Planned / funded projects

There are some projects that have been developed before the Carbon Management Programme was started and are nearing implementation stage. The city council's new online project register Verto allows projects that have secondary carbon benefits to be identified and captured for the programme.

The Crematorium project to install more efficient cremators in conjunction with a mercury abatement plant alone will save approximately 283 tonnes CO_2 equating to nearly 2.4 per cent of the target.

The Museum boiler replacement is part of a larger refurbishment project including decoration and display improvements. The boiler replacement will replace the existing oil boilers with gas models. The project is still in development at the second round of tendering, with the budget to be confirmed in March 2010 and the work due to start in January 2011.

These projects will not realise CO_2 savings until 2011.

4.5 Near term projects

There are several projects in the planning stage that will take place in the near future, but which don't have detailed business cases or estimated savings. The city council's project register will be used to identify such projects at mandate and business case stage that are being developed across the city council. Whilst these projects are lacking detail, as they are developed the details of carbon savings and costs will be incorporated into this CMAP. The project register is helpful as a communication tool enabling appropriate officers to be contacted, increasing awareness of Carbon Management.

4.5.1 Automated Meter Readers

There are plans for the installation of Automated Meter Readers (AMRs) across the city council's estate to form the basis of future energy and carbon management. Only by having accurate, accessible and real time energy consumption data can the consumption truly be known and addressed proactively.

AMRs provide automatic data remotely via the mobile phone network and are bought with accompanying software to manage the data. The data gathered by AMRs will be viewed via password access to a web portal, and then be uploaded into a centrally-located system within the city council, ensuring data is available for energy management. This will allow better targeted energy management to identify further energy saving projects and secure finance on an invest to save basis.

The Climate Change Team are developing a business case to establish the cost of installing and maintaining both electricity and gas meters in all suitable city council buildings without existing half hourly meters. Installing AMRs could deliver energy savings between 5 and 15 per cent based on Carbon Trust estimates. Assuming 5 per cent savings on the largest 74 gas meters and 59 electricity meters, AMRs could deliver saving of 482 tonnes CO_2.

4.5.2 Behavioural Change

Behavioural change within an organisation can significantly reduce energy consumption and therefore achieve carbon savings. The Carbon Trust indicate that energy saving of around 5 per cent can be made through improving employees knowledge of energy used within their workplace. A further 5 per cent can be achieved with a robust network of Green Champions to raise the profile of such an energy awareness campaign. The scope within the city council is large given the lack of an existing scheme.

Initiating behavioural change within the city council will be tackled by developing an awareness raising campaign and creating a network of Green Champions to promote good environmental behaviour amongst staff. These will need to be developed in the main operational corporate offices, leisure centre, libraries, and all of the schools. The overall aim of the campaign and the Green Champions scheme is to increase understanding of environmental considerations and create an energy conscious culture within the city council. The combined energy awareness campaign and the Green Champion Scheme could realise savings of 344 tonnes of CO_2.

4.5.3 Primary Schools Programme

Schools make up the largest proportion of the baseline and therefore offer significant potential for reduction. Using the Carbon Trust's Rapid Assessment (RAP) tool and a basic estimate of the potential

for improved insulation, lighting, windows etc., a target reduction of approximately 10 per cent of the baseline could be achieved. Therefore it is proposed that a comprehensive primary school programme is developed that encompasses all primary school maintenance works. At this stage the programme is only a conception and how it is actually implemented will require more significant planning. However by setting a target reduction of 3,400 tonnes CO_2 this helps to frame and objectivise the work.

4.5.4 Secondary School Programme

The majority of the secondary school portfolio has been replaced as part of the Building Schools for the Future Programme (BSF, see section 4.6.3 below) with the result that only three of the nine schools are in need of improvement. However, despite this there is scope to make energy savings in schools that have already benefited under BSF. Initially this would be through improvements in the building stock, as some of these buildings were not built with energy efficiency in mind and so could increase their levels of insulation etc. AMRs would also be installed as part of the general roll out across the council's estate to enable better energy management and monitoring.

Secondly where the school has technology and improved design to reduce energy requirements such as passive lighting, then a programme is required to ensure it is maintained and used effectively. Maintenance training and standards should be set with caretakers to ensure equipment is working efficiently and to prolong the lifetime. Staff and pupils would also benefit from training on the technologies available to reduce energy consumption. For example the staff should be advised to open the blinds and maximise the use of natural light rather than using lights. This could form part of an awareness campaign in secondary schools that could achieve further savings. Along with an energy awareness scheme in secondary schools, this programme could save around 1441 tonne CO_2.

4.5.5 PCC Travel Plan

The city council's existing travel plan dates back to 2002, with an annexed Action Plan. This is updated yearly to implement small scale measures such as improving cycle parking and running awareness raising events. This Travel Plan document is outdated, it was written prior to the Travelchoice team being established and does not accurately reflect the current travel behaviour of staff. The travel plan document and action plans are therefore currently being updated.

The Green Fleet Review conducted by the Energy Savings Trust made some recommendations for reducing the emissions from business travel.

The revised 2009-12 travel plan is currently at draft stage. Staff input has been sought via an online survey and a workshop with the city council's Our Space group. The draft paper and proposals for an action plan has been taken to the Joint Consultative Forum (JCF) for approval. A working group including representatives from HR and Trade Unions, has been set up to develop the Travel Plan further. The aim is to approve the travel plan in early 2010.

An estimate of the potential savings from the travel plan and driver training provided via the driver handbook, could be 122 tonnes CO_2 if applied to all business travel.

4.6 Medium to long term projects

The longer term projects are the hardest to influence due to their wide reaching nature.

4.6.1 Energy Efficiency Programme in Primary Operational Offices

A programme of works is proposed for the main operational offices used and owned by the city council to improve their energy efficiency: Town Hall, Bayard Place and Bridge House. Such works could include improving cavity wall, loft, and pipe insulation, draught proofing, installing secondary glazing, introducing zoning, automatic lights and retrofitting with energy efficient lights where appropriate. Using Carbon Trust estimates for the potential energy savings from these different works, applied to these three buildings a saving of 655 tonnes CO_2 could be achieved.

4.6.2 Green Fleet

A Green Fleet Review was conducted by the Energy Savings Trust for the city council in 2008, with the results published in March 2009 (GRF/0809/080). The review focused on the carbon dioxide emissions in the calendar year 2008 for the sub 3.5 tonne commercial fleet and the grey fleet (business transport). The over 3.5 tonne HGV fleet is not included despite it being a more substantial contributor. Therefore the results of the review differ to the transport baseline calculated for carbon management.

Some of the recommendations of the Green Fleet Review are summarised here as being the most specific solutions that currently exist for the city council to reduce its fleet carbon footprint. Such savings might not be realised by the city council fleet based upon its current levels of efficiency, vehicle types and use, and changes to the fleet since the review. Therefore more investigation is needed to determine the potential savings, which could be done through trials of different technologies.

Fuel management

Fuel management has two aspects: routine fuel consumption reporting and monitoring and improved use of fuel through driver training. The former reduces misuse and errors and provides better data for the calculation of the fleet carbon footprint than reported mileages, the latter improves driver performance. The city council does practise fuel management with a programme called Merridale Fuel FX v9.12 which records mileage and fuel consumption. The Green Fleet Review suggests that the Merridale programme is used to set fuel economy benchmarks for each vehicle type, create monthly exception reports for vehicles that exceed their benchmark to highlight poor performance, and for more formal communication to drivers and managers on performance and fuel economy. Therefore there is little scope to make significant improvements in fuel reporting.

The second aspect of fuel management is driver training focusing on fuel efficient driving techniques. This can be focused on consistently poor performing drivers as indicated by the fuel management benchmarks. Therefore it has been assumed that driver training can produce savings of around 5 per cent for the city council, or 160 tonnes CO_2.

Telematics

The adoption of a telematics system in fleet vehicles will help to maximise the fuel savings gained from improved management, saving a further 10 per cent of the fleet carbon footprint. The systems help to rationalise the vehicle routes and therefore reduce mileages. The Green Fleet Review recommends that the city council trials telematic systems in some vehicles, and if rolled out across the fleet it could produce 320 tonnes CO_2 of savings.

Low Carbon Commercial Vehicle Alternatives

The city council has recently introduced an electric Mega van for use in the parks section. This could be developed further to include electric, hybrid and biomethane vehicles which are becoming increasingly viable.

Other

Other recommendations include fitting speed limiters to all new vehicles as standard due to there being no need for most vehicles to drive on motorways. This could produce around 2 per cent savings equating to 64 tonnes CO_2.

Overall fleet transport could contribute savings of around 544 tonnes CO_2.

4.6.3 Building Schools for the Future

There are three remaining secondary schools due for works under BSF within the five year period of this Carbon Management Action Plan. The £80m scheme will see the complete rebuild of Stanground College and Ormiston Bushfield Academy. The third, Orton Longueville School, will be extensively refurbished.

The scope for energy savings within these new schools depends on the environmental standards to which they are built. If they are built to exceed current building regulations, then these schools will be a significant improvement upon their predecessors (NB: the carbon embodied in the building construction and materials will not be included in the carbon footprint).

The experiences of schools already rebuilt with new energy saving technologies highlights the importance of using the building as designed to realise the energy savings. Before the works begin the schools will have Carbon Trust audits to highlight the areas for improvement. The results will help to inform the design process for the new buildings, raise awareness of energy saving amongst staff and pupils and ensure that they will recognise the benefits of their new building. Some of these schools have created pupil groups under the Sorrel Foundation, which will have input into the designs and environmental awareness in the new buildings.

The total potential savings from the BSF programme, assuming the new schools are built to 2010 building regulations which require a 60 per cent reduction in energy consumption, could be in the region of 2272 tonnes CO_2.

4.6.4 Leisure

The largest single energy consumer of the leisure services provided by the city council is the Regional Pool, which is currently managed by DC Leisure.

Regional Pool

Aside from ensuring the proper use of pool covers, dampers and variable speed drives, the project with the biggest effect would be to find an alterative source of heat. Generating electricity produces a lot of heat which is usually wasted. The scope for these works is yet to be determined, but using Carbon Trust estimates for the potential energy savings of 328 tonnes CO_2 could be achieved.

Dry leisure centres

A complete programme of building improvements at Bushfield Sports Centre could include improving cavity wall, loft, and pipe insulation, draught proofing, installing secondary glazing, introducing zoning, automatic lights and retrofitting with energy efficient lights. The scope for these works is yet to be determined, but using Carbon Trust estimates for the potential energy savings could be 93 tonnes CO_2. Further savings could be achieved through similar measures at Werrington Sports Centre.

4.6.5 Street Lighting and Traffic Lights

There are various options for reducing the energy consumption from street lighting including dimming, trimming, low energy photocells, electronic control gear. Some of these are being trialled or are already being implemented when a light is replaced as part of the normal works programme. These include:

- removing electricity supply from road signs and bollards which do not require illumination, and replacing with reflective material.
- trialling LEDs replacements for traditional Belisha Beacons tungsten GLS or halogen lamps.
- converting older thermal photocells to electronic photocells which consume a quarter of the energy in major refurbishment works and for all new lights.

- trimming burning hours for new light installations with electronic operating gear to reduce the settings to 35 lux switch-on and 16 lux switch-off.
- dimming of new lighting schemes to 75 per cent of the normal output levels from 12 midnight to 5 am.
- trialling the Telensa PLANet (Public Lighting Active Network) Central Management System on 155 new lights. This will enable flexible dimming, trimming, as well as remote monitoring and energy metering. This trial can be extended as budget allows.
- feasibility study into converting pedestrian subway lighting from fluorescent lights to LEDs which would be motion activated and dim when not in use.

The majority of Peterborough's street lights are 35W low-pressure sodium, that being the most efficient option at the time. Recent technological developments mean there are three main options for reducing the energy from the street lights:

- Option 1: using high frequency electronic operating gear on the existing lamps, which will reduce the power rating of the lamps to 19W. A few lights already been converted in rural areas. If this was used for all of PCC's 24,000 lamps this could produce savings of 467 tonnes CO_2. This would cost around £2m.
- Option 2: replacing sodium lamps with 18W LED luminaires, which across the whole portfolio could produce savings of 762 tonnes CO_2. This would cost around £5m.
- Option 3: replacing sodium lamps with 36W LED luminaire, which across the whole portfolio could produce savings of 172 tonnes CO_2. This would be a very expensive option, costing around £9m.

These 3 options are additional and so only one would be implemented. Therefore whilst more detailed quantification is needed to determine the actual savings, implementing Option 1 alone could save 467 tonnes CO_2 from street lighting.

Traffic Lights

The Traffic Management Group is developing a project to replace traffic signals around the city. The majority of the traffic signal heads are currently Helios tungsten halogen lamps. Industry developments have seen improvements in the performance of LED lamps and controllers. The options being considered by the city council include:

- retrofit of HI Helios lamps with LEDs
- replacing pedestrian crossings to ELV controllers and LED lamps
- replacing remaining controllers and signals with CLS LEDs

These options could produce savings of 5, 2, and 1 tonnes of CO_2 respectively per junction, and details are awaited on the scale of the project to determine the full savings potential.

4.7 Additional Ideas

The Opportunities and Quantification workshop held with the Carbon Management Team and other city council officers generated some additional project ideas. These could be used to generate further energy and carbon savings, but will need to be adopted by different service areas for development. These projects have been scored using the ease and effect matrix to help prioritise and direct efforts. From this it indicates that some projects are more worthwhile developing than others initially.

The ease and effect matrix rates projects as:

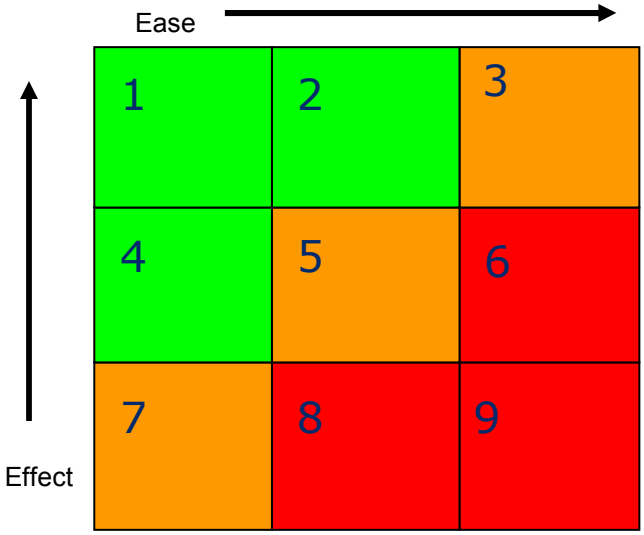

Figure 4.1: Ease and Effect Matrix for prioritising carbon reduction projects.

Project idea	Ease and effect score
Ground sourced heat pump at the Lido and Regional Pool	1
Energy from Waste facility – use the by product of electricity generation to heat the Town Hall, Regional Pool and Lido	3
Capture waste heat from the Crematorium	9
Water coolers – are they really necessary	7
Replace the fleet – all green	1
Council buildings to have green roofs	6
Solar panels on green roofs	5
Dial4 light scheme for rural villages – possibly using GPS	6
Piezoelectric flooring in entrances to corporate buildings where there is high footfall	9
School carbon reduction team to work closely with schools to develop tailored approach.	1
Sensory lighting	4
Building rationalisation	3
Set target for onsite energy generation in schools – e.g. 20% must come from renewable by 2014	5
New developments must be designed with the capacity to generate their own energy – e.g. 3 BSF schools	2

Table 4.6: Additional project ideas created by the Opportunities and Quantification Workshop

4.8 Projected achievement towards target

The projects detailed in this chapter provide an indication of how the city council could progress towards the 35 per cent reduction target, Figure 4.2 demonstrates this based on current estimates and assuming all these projects are completed before 2014. As the projects are developed more accurate information can be used to revise this projection, and once implemented the actual progress can be monitored.

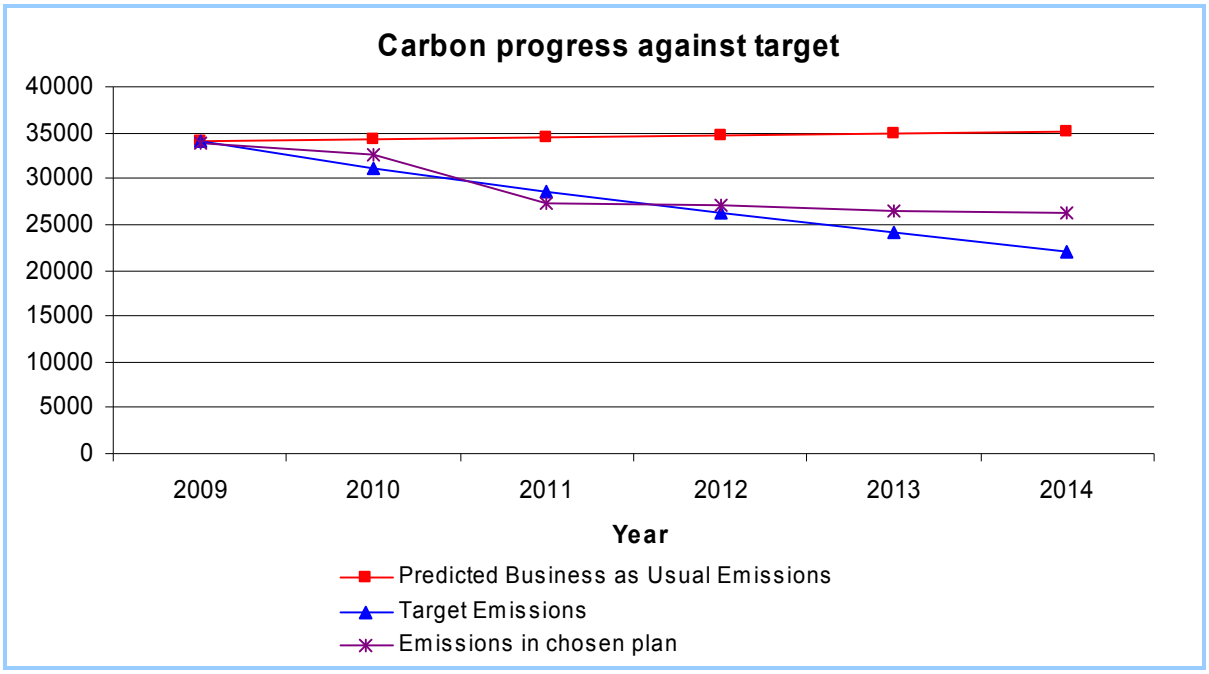

Figure 4.2: The city council's reduction progress to 2014

The precautions required when predicting achievement towards the target include consideration of the lifetime of the savings from projects, or the degradation factor. Some projects with a short lifetime will only realise savings for a short period of time before returning to Business as Usual scenario. For example maintaining carbon reductions from a behavioural change project will require a continuation of momentum.

5 Carbon Management Plan Financing

5.1 Background

This CMAP details the necessity for all projects implemented as part of this scheme to undergo full approval through the city councils approval process, meeting project management controls and receiving expenditure approval in accordance with the city council's budget setting process. It must be noted that these corporate controls are required regardless of eventual funding streams as the city council needs to ensure Value for Money is achieved.

5.2 Expected Cost of Projects

The total cost of this carbon management programme can be estimated using a figure provided by Salix (the social enterprise funded via the Carbon Trust). They estimate that the average cost from energy saving projects is £500 per tonne of CO_2. This indicates that to achieve a 35 per cent reduction amounting to 12,000 tonnes of CO_2, the city council will need to implement projects costing around £6 million. However this figure is only a guide and the true amount will be dependant on more detailed costings of individual projects and the level of funds which are already committed or are available from elsewhere.

5.3 Funding

Existing funding

Some schemes identified in Chapter 4 are existing projects and as such approval and funding of the schemes have already been agreed and are detailed in the city council's Medium Term Financial Plan (MTFP).

The city council has access to several potential funding streams and the choice of most appropriate funding will depend upon achievement of Value for Money. This will be assessed following the completion of relevant business cases for individual projects. External funding will always be considered before the use of internal city council funds, and a dedicated team is available to help facilitate and maximise the funds applicable to the city council.

Some of the ways the city council may decide to fund the projects associated with the CMAP are:

Invest to Save

The city council's Business Transformation team have an allocation of funds that it distributes to projects that require forward investments, with the benefits of investment received at a later date e.g. savings on energy bills. Projects that are funded from this centrally controlled pot are usually self-financing over the medium term. The Business Transformation team have both revenue and capital allocations.

Grants and Loans

Some projects may be applicable for external funding, where the terms of the grant are complementary to the outcomes contained within the CMAP. External funding may be sought from existing grants or other climate change/energy efficiency related funds which are created as a result of the Climate Change Act to help encourage the transition to a low carbon economy. One such source is Salix, an independent social enterprise with public funding from the Carbon Trust (see section 5.3 below).

Match-Funding

Some grant awarding bodies, and other third party funders might attach a condition that a proportion of funding of the total costs of a project comes from the city council.

Internal Resources

This includes borrowing for capital schemes and the possible use of the city council's reserve funds.

5.4 Value for Money

The city council is in the process of considering funding from external bodies and has recently held discussions with Salix, with two funding options available:

A recycling fund, whereby a public sector body is given money to fund a number of projects with the energy savings recycled to fund more projects, always maintaining the value of the fund at a constant level. Money is returned to Salix only when no more suitable projects can be found.
Loans targeted at specific projects, which when completed repay their costs to Salix from the energy savings achieved.

Before such funding is applied for the city council must ensure that Salix's criteria are met. Therefore it is not until the projects have been further defined and specific business cases formed that a full evaluation and view of appropriate funding can be taken.

5.5 Financial Risks

The following will need to be considered with any project:

Failure to deliver

Individual projects fail to deliver the expected level of savings – the city council will take a prudent approach in the estimation of carbon savings for each project. Therefore we might expect actual results to exceed predictions. The Programme will be monitored regularly to ensure that the projects maximise carbon savings. It is expected that new projects will be identified during the course of the Programme, these will add further to the savings.

Lack of funding

Funding shortfall for new projects - support for future projects will be based on the evidence for energy savings, and the prioritisation of projects is expected to occur. This will ensure that the cost and benefits of proceeding with certain projects ahead of others are considered and that the city council is achieving value for money. The mix of projects identified for the programme will be prioritised for funding using their varying payback times and benefits.

6 Actions to Embed Carbon Management in Peterborough City Council

Truly embedding Carbon Management across the organisation is essential if our carbon reduction plans are to be successful. In order to implement this CMAP it is essential to take action in order to adopt a cultural change across the organisation, which will see environmental consideration applied to every decision we make. The extent to which environmental considerations are embedded within the organisation at present have been assessed using the Carbon Trust embedding matrix (appendix one). This matrix allows us to identify our current position alongside our target for the future; the average score was two out of five, with one out of five being achieved in one of the areas. The city council's target for the embedment of carbon management throughout the period of this CMAP is to achieve level five in all of the eight areas.

Achieving the highest level in each of these areas will be challenging, yet achievable for our organisation. The actions detailed within this chapter of the CMAP detail the actions we will take to ensure this target is met.

6.1 Corporate Strategy – embedding CO_2 savings across your organisation

Corporate strategy	1	2	3	4	5
	a) no policy b) no climate change references	a) draft climate change strategy b) climate change references in other strategies	a) CO_2 reduction vision clearly stated and published b) climate change strategy endorsed by cabinet and publicsed with staff	a) CO_2 reduction comitment in corporate strategy b) top level targets set for corporate reduction c) cliamte change strategy reviewd annually	a) top level target allocated acorss orgainsation b) CO_2 reduction targets in directorate business plans c) Actions plans in place to embed strategy d) Progress routinely reviewed
Launch July 2009		2			
(April 2010			3		
Target (2014)					5

Table 6.1: Excerpt from the carbon management embedding matrix showing PPC's starting point, progress and end goal

Actions:

Dissemination of Climate Change targets, the targets associated with this CMAP, from a corporate and service level perspective will be published upon receipt of endoresment from Full Council – **Completion date:** May 2010

Refresh of the Climate Change Strategy, the Climate Change Strategy for Peterborough will be refreshed. The document will contextulise climate change on a local level, detailing predicted local changes and impacts. This document wil be adopted on a city wide basis and act as a driver for continued local action. The Strategy will be endorsed by Full Council, published publically and communicated to emloyees – **Completion date:** Dec 2010

Inclusion of the CMAP and associated actions within our corporate plan – Carbon Management aligns to all of our strategic priorities. Specifically focusing upon achieving the aim of creating the UK's

Environment Capital, action in this area demonstrates our commitment to minimising our own environmental impacts and leading by example - **Completion date:** Ongoing

Inclusion of the CMAP and associated actions within directorate level business plans – All business plans across the orgainsation will include targets for carbon reduction. Plans for delivey will be included on a service plan level- **Completion date:** Introduced by Dec 2010 and ongoing thereafter

6.2 Programme Management – bringing it all together effectively

Programme Management	1	2	3	4	5
	- no CM monitoring	-Ad hoc reviews of CM actions and pogress	-Core team regularly review CM progress, actions, profile and targets and new opportunities	-sponsor reviews progress and removes blockages through regular programme boards -progress against targets routinely reported to Senior Mgt team	-cabinet/CMT review progress against targts on a quartley basis -regular diagnostic reports provided to directorates -progress against targets published externally
Launch July 2009		2			
April 2010			3		
Target (2014)					5

Table 6.2: Excerpt from the carbon management embedding matrix showing the city council's starting point, progress and end goal

In order for this CMAP to be effective it is essential that a strong and robust governance structure is implemented at the outset. As part of Carbon Trust scheme we have set up two teams which will be the focus of governance on an ongoing basis. These teams are:

The Programme Board – chaired by the Executive Director of Operations and attended by relevant Directors and Senior Managers from across the organisation. This group provides the strategic governance for the CMAP.

Carbon Management Team – this is chaired by the Project Leader of the Carbon Trust Scheme and attended by individuals from across the organisation that has a role to play in successful carbon management.

Actions:

Governance - the CMAP will be managed through the city councils corporate project register which will allow all individual projects that are disagregated across the organisation to be pulled together as an overarching programme of work. This will allow the projects to be managed as a single entity with the success devolved acorss the organisation.This process will involve completion of monthly progress reports with a RAG status awarded; those projects achieving red or amber will be scrutinised by the Programme Board and actions required to bring them back online identified and allocated. Governing the CMAP through this process ensures the required actions are included and managed within individual service and directorate business plans which will assist in the embedment of carbon management throughout the organisation - **Completion date:** Ongoing

Project implementation – The Climate Change Team will be a mandatory approver for all new projects being considered across the organisation. This will ensure environmental impacts are considered and understood at the outset of any new project, also ensuring potential increases in carbon do not arise unknowingly - **Completion date:** Ongoing

6.3 Responsibility – being clear that saving CO_2 is everyone's job

Responsibility	1	2	3	4	5
	- No recognised CO_2 reduction responsibility	-CO_2 reduction a part-time responsibility of a few department champions	-An individual provides full time focus for CO_2 reduction -Key individuals have accountability for carbon reduction -Senior sponsor actively engaged	-CM integrated in to responsibilities of department heads -Cabinet / SMT regularly updated -Staff engaged though Green Champion network	-CM integrated in responsibilities of senior managers -CM part of all contracts / Ts & Cs -Central CO_2 reduction advice available -Green Champions leading local action groups
Launch July 2009	1				
April 2010			3		
Target (2014)					5

Table 6.3: Excerpt from the carbon management embedding matrix showing the city council's starting point, progress and end goal

Actions:

Establishing a network of Green Champions to lead local action – an intergrated team of Green Champions across the city council will be developed. This scheme will allow the city council to capture the motivation of existing employees and use this to optimum effect, directly linking to the communciations plan - **Completion date:** Ongoing

Please note a separate scheme will be launched within schools and tailored specifically for their needs them.

Indivdual responsibility for carbon reduction – The Climate Change Team will work alongside HR to introduce mechanisms for individual carbon reduction responsibility. Including the introduction of energy and environmental awareness training at corporate inductions. - **Completion date:** Ongoing

6.4 Data Management – measuring the difference, measuring the benefit

Data Management	1	2	3	4	5
	- No CO_2 emissions data compiled Estimated billing	-No CO_2 emissions data compiled -Energy data compiled on a regular basis	-Collation of CO_2 emissions for limited scope i.e. buildings only	-Annual collation of CO_2 emissions for: buildings street lighting transport/travel -Data internally reviewed	-Regular collation of CO_2 emissions for all sources -Data externally verified -Monitoring & Targeting in place for: buildings street lighting transport/travel
Launch July 2009		2			
April 2010			3		
Target (2014)					5

Table 6.4: Excerpt from the carbon management embedding matrix showing PPC's starting point, progress and end goal

Actions:

Installation of AMR's across the city council's estate – This will allow timely and accurate data collection - **Completion date:** April 2011

Obtain the Carbon Trust Standard –When feasible the city council will seek to obtain the Carbon Trust Standard or other such accredited Environmental Managemnt System (EMS) for individual departments, service areas and/or the authority as a whole. This scheme provides independent verification of the authority's ongoing comitment to carbon management - **Completion date:** Ongoing

6.5 Communication and Training – ensuring everyone is aware

Communication and Training	1	2	3	4	5
	-No communication or training	-Regular awareness campaigns -Staff given CM information on ad-hoc basis	- Environmental / energy group(s) given ad hoc: training communications	- All staff given CO2 reduction: induction communications -CM matters communicated to external community	- All staff given formalised CO2: induction and training communications -Joint CM communications with key partners -Staff awareness tested through surveys
Launch July 2009	1				
April 2010		2			
Target (2014)					5

Table 6.5: Excerpt from the carbon management embedding matrix showing the city council's starting point, progress and end goal

City council employees have received information about carbon management on an ad-hoc basis. This CMAP will deliver an ongoing campaign which will raise awareness of energy saving, carbon management and climate change through a rolling scheme which will aim to target all employees on an ongoing basis and at different periods within their employment at the city council alongside communication of achievements to Peterborough's residents.

Actions:

Awareness campaign – The Climate Change team will work alongside the Communications team to develop a targeted communications campaign designed to increase employees' knowledge of the environment, climate change and carbon management. The result will be to foster a culture of individual responsibility for carbon emissions - **Completion date:** Ongoing

Corporate induction – The Climate Change team will work alongside HR to develop the corporate induction for new employees joining the city council. The induction will include an item detailing the city council's commitment to carbon management and detailing the responsibility of individuals - **Completion date:** Ongoing

Training of Building Managers – Develop an online knowledge system which will allow individuals to obtain the necessary information to minimise their, or their service area's, environmental impact. We will also hold training events with key people across the organisation who have responsibility for energy management - **Completion date:** Ongoing

Monitor and publish success on a corporate and city wide level – We will periodically review and monitor success on individual, team, department and corporate levels and use this to prompt further action - **Completion date:** Ongoing

6.6 Finance and Investment – the money to match the commitment

Financa and Investment	1	2	3	4	5
	- No specific funding for CO_2 reduction projects	- Ad hoc financing for CO_2 reduction projects	- A view of the cost of CO_2 reduction is developing, but finance remains ad-hoc -Some centralised resource allocated -Finance representation on CM Team	-Coordinated financing for CO_2 reduction projects via Programme Board -Funding principles and processes agreed -Finances committed 1yr ahead -Some external financing	- Finance committed for 2+yrs of Programme -External funding being routinely obtained -Ring-fenced fund for carbon reduction initiatives
Launch July 2009		2			
April 2010		2			
Target (2014)					5

Table 6.6: Excerpt from the carbon management embedding matrix showing the city council's starting point, progress and end goal

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

Actions:

Sourcing external funding for carbon reduction projects– To ensure the potential for carbon reduction/energy efficiency measures is maximised the Climate Change team will work alongside strategic finance to identify and secure external funding for suitible projects. These funding sourcs will include Salix finance alongside other one off opportunities as and when they become available - **Completion date:** Ongoing

Consideration of a "ring fenced" fund for energy efficency/carbon reduction initiatives– Primarily in the case of schools we will consider introducing a ring fenced funding scheme whereby funds are secured and allocated to specific projects and the savings they achieve are reinvested within the limitations of the fund to ensure continued carbon reduction savings are achieved. This is particularly suitable for schools as this method will reduce the risk of dedicated schools' grant funding being used to fund wider council initiatives - **Completion date:** Ongoing

Ensure adequate resource allocation– Ongoing focus will be given to ensure the CMAP is adequatley resourced to meet the targets comitted to. This will include regular reviwes of capacity and bids made accordingly - **Completion date:** Ongoing

6.7 Policy Alignment – saving CO_2 across your operations

Policy allignment	1	2	3	4	5
	- No alignment of policies for CO_2 reduction	- Partial review of key, high level policies - Some financial quick wins made	- All high level and some mid level policies reviewed, irregularly - Substantial changes made, showing CO_2 savings	- Comprehensive review of policies complete - Lower level policies reviewed locally - Unpopular changes being considered	- CO_2 friendly operating procedure in place - Central team provide advice and review, when requested - Barriers to CO_2 reduction routinely considered and removed
Launch July 2009	1				
April 2010		2			
Target (2014)					5

Table 6.7: Excerpt from the carbon management embedding matrix showing the city council's starting point, progress and end goal

The city council aims to embed climate change adaptation and mitigation in to all policies and procedures as part of our cliamte change comitment. This work through the CMAP will contribute to delivery of the CMAP and associated climate change national and local indicators.

Actions:

Review all policy and procedure documents – In order to ensure all decsions and actions taken across the organisation consider the environmental impact, we will ensure that all policies are scrutinised by the Climate Change Team as and when they are due to be renewed. This process will ensure climate change mitigation is embedded across the organisation. The review will:

- Identify where current policies relate to carbon emissions and energy useage;

- Produce a list of key policies including dates of renewal, seeking to bring forward those where the biggest gain is thought to be achieved;
- Assess opportunities for amendment;

All policies will be considered through this process however specific policies will be looked at in line with the project they specifically relate to as part of this CMAP - **Completion date:** Ongoing

Inclusion of environmental impact in cabinet reports– The Climate Change team will work with Democratic Services to consider the inclusion of Carbon Management and overal environmental impact within the proforma for all reports made to the Corporate Management team, Scrutiny Panels, Councillors and Cabinet - **Completion date:** Ongoing

6.8 Engagement of Schools – influencing schools to reduce their carbon footprint

Enagagement of Schools	1	2	3	4	5
	- No CO_2 / energy reduction policy for schools	- Ad-hoc schools projects to specifically reduce energy / CO_2	- A person has responsibility for Schools' CO_2 reduction -Schools' CO_2 reduction projects coordinated -Ad-hoc funding	- A clear emphasis on energy / CO_2 reduction in schools -Council activities fully coordinated -Broad set of education stakeholders engaged -Funding in place	- A 'whole school approach' including curriculum -Mature programme of engagement in place -CO_2 saving in schools having a wider community impact
Launch July 2009)	1/	2			
April 2010			3		
Target (2014)					5

Table 6.8: Excerpt from the carbon management embedding matrix showing the city council's starting point, progress and end goal

Actions:

Develop a programme of curriculum support for schools – As part of the city council's commitment to local indicators within the Local Area Agreement the Climate Change team are developing an online toolkit to allow schools to deliver energy related education within schools. Alongside this a library of resources including a demonstration of renewable technologies will be available. This focuses upon primary schools at present but will be developed to include secondary schools - **Completion date:** Ongoing

Per pupil carbon footprint - Peterborough's primary and secondary schools vary considerably in size, age, condition, service provision and energy consumption. A key first step to allow us to develop a greater understand of our schools is to calculate a **carbon footprint of each school on a pupil by pupil basis**. In order to do this we will use energy data from the 2008/09 baseline period alongside the number of pupils and, if possible, the number of staff operating within each school. This will provide a very basic figure and some consideration will be required to account for anomalies such as extended opening hours. This exercise will highlight those schools using considerably more energy compared to others and therefore indicate where to target energy saving projects - **Completion date:** End 2009

Basic standards audit - A database will be formed detailing the basic energy efficiency measures that should be fitted as standard across our school estate, these include secondary glazing, loft insulation, cavity wall insulation. This will help to realise potential and bring all schools up to a minimum standard. This programme will recognise the energy saving hierarchy by improving energy efficiency prior to consideration of renewable energy technologies. Where possible the schools' Asset Management Plans will be used to obtain this data, where this is not possible additional surveying work will be commissioned - **Completion date:** Summer 2010

Schools' Carbon Reduction team - Facilitate a Schools' Carbon Reduction team for the five year period of the Carbon Trust work. This team will focus upon creating an individual Carbon Management Plan for each school enabling action to be prioritised in order to make reductions achievable, incorporating the work undertaken in the other stages - **Completion date:** Ongoing

6.9 Engagement of your Suppliers – working with suppliers to reduce your carbon footprint

In order to consider the true environmental impact of the city council's operations it is critical to ensure our contractors and suppliers are able to provide us with detailed data relating to energy consumption used whilst undertaking their assigned role on our behalf. Alongside this it is also key to ensure the city council procures using the most environmentally suitable options available.

Actions:

Review the procurement policy – As detailed above

Addition of clause to all contracts – Insert a new clause in to our tendering process and contracts to ensure those purchasing on behalf of the city council do so in an environmentally aware way - **Completion date:** Summer 2010

7 Programme Management of the CM Programme

This section details how the Carbon Management Action Plan will be governed, owned and managed in order to ensure the city council is able to fully realise the aims held within this CMAP. Succesful implementation and ongoing delivery requires a robust, transparent governance procedure which will ensure strategic ownership of the city council's carbon reduction aims in line with our corporate priorities. This governance process will bring together, the diverse range of projects undertaken throughout the city council which contribute to the organisation's overall environmental impact.

7.1 The Programme Board – strategic ownership and oversight

The Programme Board are responsible for providing strategic direction to the programme, overseeing corporate progress and providing a direct link to senior management through which blockages can be raised and removed. The Programme Board provide leadership and act as champions for the CMAP, developing strategic aims and targets, prioritising carbon reduction projects and ensuring sufficient time and financial resources are available for implementation of projects. The members of the Programme Board are:

Role	Name and position in the LA	Contact details
Project Sponsor	Teresa Wood *Group Manager – Transport and Sustainable Environment*	317451 teresa.wood@peterborough.gov.uk
Chair	Paul Phillipson *Executive Director of Operations*	453455 paul.phillipson@peterborough.gov.uk
Project Leader	Charlotte Palmer *Climate Change- Team Leader*	453538 charlotte.palmer@peterborough.gov.uk
Deputy Project Leader	Alice Mitchell *Climate Change Technical Officer*	864598 alice.mitchell@peterborough.gov.uk
Cabinet Advisor	Cllr Samantha Dalton *Cabinet Advisor for Environment Capital and Culture*	262384 Samantha.dalton@peterborough.gov.uk
	Helen Edwards *Solicitor to the Council*	452539 helen.edwards@peterborough.gov.uk
	Mike Heath *Commercial Services Director*	425301 mike.heath@peterborough.gov.uk
	John Harrison *Executive Director of Strategic Resources*	452398 john.harrison@peterborough.gov.uk
	John Richards *Executive Director of Children's Services*	863601 john.richards@peterborough.gov.uk

Table 7.1: Members of the Carbon Management Programme Board

Terms of reference: The Programme Board is fundamental to the success of the Carbon Trust programme, bringing strategic oversight, leadership and ownership. The Board will:

1. set and review the targets and strategic direction of the programme;
2. review and champion project plans for financial provision;

3. monitor the progress of individual projects in the programme on an ongoing basis and remove obstacles;
4. raise the profile of carbon management and help to embed carbon saving as part of the city council's culture.

The Programme Board should be more than a committee, they need to be a driver of the programme to ensure that the city council meets its ambitious 35 per cent reduction target.

The Board can realise this purpose in monthly meetings and the interim in four main ways:

1. **Regular reporting:** The Board will be provided with a comprehensive overview of the programme on a monthly basis in order to identify the priority areas of action and review progress. Progress will be presented to the board in the form of a status report, derived from the Carbon Management Team, including a RAG status of individual projects within the programme and an issues log. This will be produced using the Project Register in Verto, where Carbon Management will be entered as a programme with individual projects sitting within. This format will provide a good oversight to the total carbon savings while allowing projects to remain in the ownership of relevant service areas.
2. **Focus on projects:** The board will use their influence to ensure projects are developed. The focus will be upon areas where most can be gained in relation to carbon reductions. To achieve this the board will be able to call upon members of the Carbon Management Team, via the Project Leader, to present their contribution, be it projects or business as usual, so that they can be challenged as necessary. This will enable the board to influence the projects, remove obstacles and understand the necessary detail of the programme.
3. **Reporting upwards:** The board will report upwards to raise the profile of the programme and report progress.
4. **Meetings and communication:** The Programme Board meetings will take place on a monthly basis, within a week of the Carbon Management Team meeting. The agenda will be set following a pre-meeting with the chair of the Board. Decisions made by the Programme Board which require communication, either to the Carbon Management Team or elsewhere, will be undertaken by the Project Leader.

7.2 The Carbon Management Team – delivering the projects

The Carbon Management Team are responsible for the delivery of the programme, consisting of the core team and additional team members to be called upon where appropriate. The members of the Carbon Management Team are:

Role	Name and position in the LA	Contact details
Project Leader - **Chair**	Charlotte Palmer *Climate Change- Team Leader*	453538 charlotte.palmer@peterborough.gov.uk
Deputy Project Leader	Alice Mitchell *Climate Change Technical Officer*	864598 alice.mitchell@peterborough.gov.uk
Cabinet Advisor	Cllr Samantha Dalton *Cabinet Advisor for Environment Capital and Culture*	262384 Samantha.dalton@peterborough.gov.uk
Carbon Management Team	Andrew Edwards *Head of Strategic Property*	384530 Andrew.edwards@peterborough.gov.uk
	Robert Griggs *Head of Design Property and Maintenance*	207101 robert.griggs@peterborough.gov.uk

	Karen Craig *Senior HR Consultant - Policy Development*	384514 karen.craig@peterborough.gov.uk
	Nicola Francis *Travelchoice Team Manager*	317484 Nicola.francis@peterborough.gov.uk
	Steve Ward *Head of Business Support – Peterborough City Services*	425313 Steve.ward@peterborough.gov.uk
	Mick Robb *Environmental Manager*	425384 Mick.robb@peterborough.gov.uk
	Isabel Clark *Planning & Development Manager & Interim Head of Admissions*	863194 Isabel.clark@peterboroughg.gov.uk
	Andy Cox *Senior Category Manager for Procurement*	452465 andy.cox@peterborough.gov.uk
	Mark Gregson *Servers & Desktops Technical Manager*	317918 mark.gregson@peterborough.gov.uk
	Mike Lemmon *Head of Corporate Communications*	452313 Mike.lemmon@peterborough.gov.uk
	Martin Medlock *Street Lighting Manager*	453525 Martin.medlock@peterborough.gov.uk

Table 7.2: Members of the Carbon Management Team

Terms of reference: The Carbon Management Team provides input into the Programme and individual members own projects which are included within the CMAP. The roles of the Carbon Management Team are to support the Project Leader, provide baseline data, identify "quick win" projects, construct project definitions, calculate project costs and savings through quantification, implement projects under their ownership, provide ongoing progress reports and support other members of the Carbon Management Team as and when the need arises.

Management of CMAP projects should be undertaken via the council's project register, Verto. By managing these projects within this single system managing progress and highlighting failures will be completed with relative ease. The Carbon Management Team will provide the Programme Board with monthly updates on progress, allowing any shortcomings to be identified and blockages removed.

Meetings and communication: The Carbon Management Team will meet monthly either as a group or on a 121 basis. Meetings will take place approximately one week prior to the Programme Board. The Project Leader and Deputy Project Leader will provide the link to the Programme Board raising the relevant issues to Programme Board level.

7.3 Succession planning for key roles

We recognise that succesful implementation of this CMAP requires a strong commitment to succession planning, specifically within the key roles. These include:

Project Leader – The Project Leader is a critical element to the success of the campaign, providing a number of roles including overall co-ordination, management of communications, identifying and managing blockages, ensuring effective team working within the Carbon Management Team, preparing

reports for both the Carbon Management Team and the Programme Board and ensuring the profile of the programme is raised at all levels.

Deputy Project Leader – Will provide assistance as and when required to the Project Leader, they will collate technical data to allow progress to be monitored and reported upon and will deputise when the Project Leader is indisposed.

Project Sponsor – The Project Sponsor plays a critical role in embedding carbon management across the organisation. They are essential for successful implementation of the programme and to raise the profile of blockages.

Political Sponsor – The Political Sponsor is a crucial role for successful delivery of the programme, providing a link with Cabinet and a voice for the CMAP within members. The current political sponsor is the Cabinent Advisor for Environment Capital and Culture.

Succession plans have been developed for these key roles including measures to ensure new members are informed of their role and responsibilities within the programme. To faciliate the transition of new members into the role a meeting will be organised with the current holder of the role where possible. In addition comprehensive documentation of their roles and responsibilities and the current progress of the CMAP will be provided

Succession plans for roles within the Carbon Management Team and Programme Board will follow a similar route, with guidance provided as necessary by the Project Leader.

7.4 Ongoing stakeholder management

There are key people, groups and committees within the city council and external stakeholders which will require periodic progress reviews. We will aim to keep these stakeholders informed as identified below:

Individual or group	Influence	Impact	Frequency	Their interest or issue	Means of communication
Chief Executive	H	L	L	Corporate strategic direction and reputation	CMT
Directors	H	H	M	Corporate strategic direction and service delivery	CMT and Programme Board
Heads of Service	H	H	H	Service delivery	Carbon Management Team
Portfolio holder	H	H	H	Corporate strategic direction and reputation	Programme Board and 121
Members	H	H	H	Corporate strategic direction and reputation	Portfolio holder, Members Bulletin and Group reps
Strategic finance	H	H	H	Finance	CMT and Programme Board
Employees	L	H	M	Employers expectations	Communications campaign
Carbon Trust	L	L	L	National delivery	Annual progress review
Salix	L	H	L	Finance	As and when required
Unions	L	L	L	Issues relating specifically to employees	As and when required
Local Strategic Partnership - GPP	L	L	L	City wide delivery, CAA	Annual presentation to the board
Environment	L	L	M	City wide delivery, CAA	Half yearly presentation to the board

Capital Partnership					
Local businesses	L	L	L	Example of best practice	Chamber of Commerce
Local Community	L	L	M	Efficient public service	Your Peterborough, website and local media challenges
Schools					
Head Teachers	H	H	M	Budgets and reputation	Head teacher forums
Governors	H	H	M	Budgets and reputation	Governor forums
Bursars	H	H	H	Budgets and reputation	Bursar forums
Parent/teacher associations	M	M	M	Budgets and reputation	Parent teacher association forums

Table 7.3: Communication with carbon management stakeholder

7.5 Signoff Procedure and Annual progress review

Month	Audience
November/December	Carbon Management Programme Board and Management Team
November	Conservatives Group
January/February	Individiual metings with Group Leaders
February	Corporate Management Team (CMT)
February	Environment Capital Scrutiny
March	Cabinet
April	Full Council

Table 7.4: Signoff procedure for CMAP

The progress of the programme will be reviewed monthly by the Carbon Management Team and the Programme Board and annually by the Carbon Trust at the end of each financial year. The progress of the programme will be monitored against the targets set within this document and successful implementation of individual projects. The progress will be reviewed based upon financial savings, carbon dioxide savings and qualitative benefits. These include:

- Financial savings, including cashable and those reinvested into the programme
- CO_2 savings against the reduction target
- Reputational impact
- Successful implementation and delivery of the Carbon Reduction Commitment (CRC) Energy Efficiency Scheme
- Successful annual reporting in line with associated National Indicators

The reporting for this CMAP will be aligned with the annual reporting obligations in relation to NI185, the CO_2 emissions from the city council's operations, to avoid the burden of dual reporting. Targets for reduction in line with this indicator will also be aligned.

The progress of the CMAP will be reported to Cabinet through a formal annual report accompanied by presentations where appropriate.

Appendix A: Carbon Management Matrix - Embedding

	CORPORATE STRATEGY	PROGRAMME MANAGEMENT	RESPONSIBILITY	DATA MANAGEMENT	COMMUNICATION & TRAINING	FINANCE & INVESTMENT	POLICY ALIGNMENT *	ENGAGEMENT OF SCHOOLS
5 BEST	• Top level target allocated across organisation • CO_2 reduction targets in Directorate Business Plans • Action plans in place to embed strategy. Progress routinely reviewed	• Cabinet / SMT review progress against targets on quarterly basis • Regular diagnostic reports provided to Directorates • Progress against target published externally	• CM integrated in responsibilities of senior managers • CM part of all contracts / T's&C's • Central CO_2 reduction advice available • Green Champions leading local action groups	• Regular collation of CO_2 emissions for all sources • Data externally verified • Monitoring & Targeting in place for: ○ buildings ○ street lighting ○ transport/travel	• All staff given formalised CO_2: ○ induction and training ○ communications • Joint CM communications with key partners • Staff awareness tested through surveys	• Finance committed for 2+yrs of Programme • External funding being routinely obtained • Ring-fenced fund for carbon reduction initiatives	• CO_2 friendly operating procedure in place • Central team provide advice and review, when requested • Barriers to CO_2 reduction routinely considered and removed	• A 'whole school approach' including curriculum • Mature programme of engagement in place • CO2 saving in schools having a wider community impact
4	• CO_2 reduction commitment in Corporate Strategy • Top level targets set for CO_2 reduction • Climate Change Strategy reviewed annually	• Sponsor reviews progress and removes blockages through regular Programme Boards • Progress against targets routinely reported to Senior Mgt Team	• CM integrated in to responsibilities of department heads • Cabinet / SMT regularly updated • Staff engaged though Green Champion network	• Annual collation of CO_2 emissions for: ○ buildings ○ street lighting ○ transport/travel • Data internally reviewed	• All staff given CO_2 reduction: ○ induction ○ communications ○ CM matters communicated to external community	• Coordinated financing for CO_2 reduction projects via Programme Board • Funding principles and processes agreed • Finances committed 1yr ahead • Some external financing	• Comprehensive review of policies complete • Lower level policies reviewed locally • Unpopular changes being considered	• A clear emphasis on energy / CO2 reduction in schools • Council activities fully coordinated • Broad set of education stakeholders engaged • Funding in place
3	• CO_2 reduction vision clearly stated and published • Climate Change Strategy endorsed by Cabinet and publicised with staff	• Core team regularly review CM progress: ○ actions ○ profile & targets ○ new opportunities	• An individual provides full time focus for CO_2 reduction • Key individuals have accountability for carbon reduction • Senior Sponsor actively engaged	• Collation of CO_2 emissions for limited scope i.e. buildings only	• Environmental / energy group(s) given ad hoc: ○ training ○ communications	• A view of the cost of CO_2 reduction is developing, but finance remains ad-hoc • Some centralised resource allocated • Finance representation on CM Team	• All high level and some mid level policies reviewed, irregularly • Substantial changes made, showing CO_2 savings	• A person has responsibility for Schools CO2 reduction • Schools CO2 reduction projects coordinated • Ad-hoc funding
2	• Draft Climate Change Policy • Climate Change references in other strategies	• Ad hoc reviews of CM actions progress	• CO_2 reduction a part-time responsibility of a few department champions	• No CO_2 emissions data compiled • Energy data compiled on a regular basis	• Regular awareness campaigns • Staff given CM information on ad-hoc basis	• Ad hoc financing for CO_2 reduction projects	• Partial review of key, high level policies • Some financial quick wins made	• Ad-hoc schools projects to specifically reduce energy / CO2
1 Worst	• No policy • No Climate Change reference	• No CM monitoring	• No recognised CO_2 reduction responsibility	• No CO_2 emissions data compiled • Estimated billing	• No communication or training	• No specific funding for CO_2 reduction projects	• No alignment of policies for CO_2 reduction	• No CO2 / energy reduction policy for schools

* Major operational policies and procedures, e.g. Capital Projects, Through Life Costing, Procurement, HR, Business Travel

Appendix B: Definition of Projects

Project title:	
Project reference:	
Start date:	
End date:	
Owner (person)	
Department/Division	
Description	
Benefits	
Funding	
Resources	
Ensuring Success	
Risks	
Measuring Success	

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