

Coventry City Council Carbon Management Plan

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Foreword from the Leader and Chief Executive of the City Council

Coventry City Council is determined to lead the city to a sustainable and low-carbon future that will ensure that residents, visitors and businesses choose Coventry as a preferred location in which to live, work and invest. The challenges are significant. The period of growth and prosperity in the second half of the last century was based on affordable energy which gave rise to emissions of carbon that are now causing our climate to change. Some of these effects have already been seen in the city with heatwaves, extreme weather events and flooding in recent years.

Coventry City Council with the Coventry Partnership has produced the Sustainable Community Strategy which lists the outcomes to be achieved for the city in the next twenty years. One of the key underpinning themes is tackling climate change and in March 2008 an ambitious Climate Change Strategy was produced.

We must all play our part in making deep reductions in carbon emissions, this plan is the first step in the Council's journey to be a low carbon example to the city, the region and the country, as well as avoiding future increases in the cost of energy. This challenge is one of the biggest we have ever faced but we are confident that employees of the city council will pull together and help us achieve this ambitious plan, setting an example that the rest of the city will follow enthusiastically.



Councillor Ken Taylor
Leader of the Council



Martin Reeves
Chief Executive

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.

Coventry City Council was selected in 2008, amidst strong competition, to take part in this ambitious programme. The City Council partnered with the Carbon Trust on this programme in order to realise vast carbon and cost savings. This Carbon Management Plan commits the council to a target of reducing CO₂ by 17% by 2013 and underpins potential financial savings to the council of around £0.96 million.

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



Richard Rugg
Head of Public Sector, Carbon Trust



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Management Summary

Background

The city council first demonstrated its commitment to tackling climate change by signing the Nottingham Declaration in October 2006 requiring the council to contribute, at a local level, to the delivery of the UK Climate Change Programme and within two years to produce, with partners, a plan to address the causes and impacts of climate change. The Coventry Climate Change Strategy was compiled in collaboration with the Coventry Partnership, was publicly consulted upon and approved by Cabinet in March 2008. This document aims to reduce the carbon footprint of the whole city and commits to reducing emissions by 40% by 2025 and by 70% by 2050 (this is likely to be shortly revised to 80% to fit with the latest UK Government guidance).

In assessing Coventry's contribution to climate change and the ways in which this might be reduced, an assessment of the city's carbon dioxide emissions was made. This revealed that the city as a whole emits over 2 million tonnes of CO₂ each year with the city council's operations being responsible for around 2% of this, approximately 40,000 tonnes (2002/03 screening survey estimates).

An opportunity to join round six of the Carbon Trust's Local Authority Carbon Management Programme was presented in April 2008 and Coventry was successful in being accepted onto the programme in May 2008. The programme provides dedicated assistance and guidance from the Carbon Trust and its consultants to determine the city council's baseline carbon footprint as well as compile a costed and quantified plan to drive down the carbon dioxide emissions from the council over a five-year period. This programme closely complements the Climate Change Strategy in its aim to drive down the whole city's emissions.

A formal launch of the programme took place on 9th July 2008 at which elected members and senior officers of the council set an aspirational target to achieve a 30% reduction in carbon dioxide emissions in five years, this equates to 11,270 tonnes (2007 baseline figures).

The city council has been a voluntary member of the Carbon Trading Councils scheme since April 2008 and has gained valuable experience in the monitoring and measurement of energy and carbon emissions as well as in emissions trading. This will be valuable in preparing the council for the Carbon Reduction Commitment which commences in April 2010 and is expanded upon further in the next section.

Drivers for action

The drivers encouraging the council to implement effective carbon management are considerable. The Carbon Reduction Commitment (CRC) is a statutory scheme which will require councils and other large users of energy to buy allowances for their emissions of carbon starting at £12 for every tonne emitted for years 1 to 3 of the scheme with the market setting the rate for subsequent years. For the city council this could potentially lead to cashflow implications due to the six month period between buying allowances and then surrendering them. However poor performance could mean that penalties are applied which will impact directly on the council's finances as not all of the money spent on allowances may be returned. This bonus/penalty starts at 10% of the cost of allowances rising to 50% in year five.

Energy and fuel prices have fluctuated widely in the last year with the overall trajectory being upwards – this has caused significant pressures on budgets. For example, a 10% change in electricity prices increases the council's bill by £400,000 and for every penny that petrol or diesel goes up the annual fleet fuel price increases by £16,000. The cost of electricity and gas to the council has more than doubled since 2004 and shows a strong upward trend, bringing to an end a steady decline in the price of energy since the early 1990s.

The new Comprehensive Area Assessment of local authority performance now contains three National Indicators relating to climate change and requires the council to report on emissions from the council's own operations (NI 185), one relating to per capita emissions from its area (NI 186) and one relating to adapting to climate change (NI 188). One or more of these National Indicators are incorporated into Local Area Agreements between central Government and councils; in the case of Coventry NI 186 has been selected and the council has a target of delivering 4% year on year reductions over the next three years. A partnership with the Energy Saving Trust under their Local Authority One to One Support Programme will assist in driving down community emissions, contributing to performance against this indicator.

Aspirational position

As mentioned earlier, at the formal launch of the LACM programme an aspirational target to achieve a 30% reduction in carbon dioxide emissions in five years was chosen. This was slightly lower than the average aspirational target set by councils of 32% in round 6 of the programme but still presents a significant challenge.

In its role as community leader, property manager and service provider in ten years time the city council would like Coventry to be known as a place where:

- Low emission vehicles are designed, manufactured and used within the city and help reduce its carbon footprint.
- The message of low carbon living is taken up enthusiastically and effectively with the city having the lowest per capita emissions in the region and in the lowest five cities in the UK.
- Innovative new zero carbon housing developments are built well in advance of the Government's 2016 target of all new housing having to be carbon neutral.
- A massive redevelopment of the city centre embeds sustainability and low carbon offices and shops and invigorates the city as a place where people choose to live, work and visit.
- The city emerges from the recession of 2009 in a strong position economically and quickly recovers, attracting new businesses through low carbon working.
- All major council decisions are scrutinised to fully understand the implications for carbon emissions whilst aiming for clear reductions.
- The cost/benefit relationship of invest to save decisions to reduce carbon is well known and forms the basis of a robust business model to determine future projects' viability.
- There is a real understanding of carbon management from Elected Members, Directors, and managers down to all employees to ensure that reduction targets are achieved.
- The Carbon Reduction Commitment scheme proves to be an opportunity to galvanise low carbon ways of working in the authority and did not present a major cost to the council.
- Council tax payers see high quality everyday services being provided at a low cost, financially and in terms of carbon.
- Its carbon saving ideas are seen as trend setting and people visit to see for themselves how these ideas were implemented and delivered significant savings.
- Sustainability, economic development and regeneration converge to propel the city to a low carbon, soon to be zero carbon, future that brings massive benefits and profile.

Actions already in place

Much is already happening around the council to drive down carbon emissions as it is widely recognised that reducing energy use has a direct bearing on cost and that the council must clearly demonstrate value for money in all of its activities. Many improvement actions around buildings, transport, education, infrastructure and individuals' behaviour are already in place and the following list outlines some of the major initiatives:

- **Building Schools for the Future**, a £345 million scheme to rebuild or refurbish the majority of the city's secondary schools, will deliver over 2,800 tonnes of carbon savings over the next eight years.
- **Remote energy monitoring for schools** enables teachers and students to check on the energy used in their schools in order to more effectively manage energy use and make an interactive link with other initiatives such as eco-schools and the carbon busters project.
- **Street lighting** in the city will be transformed via a £278 million scheme to replace all 26,000 lighting columns in the city, allowing more energy efficient units to be used, saving nearly 1,000 tonnes of CO₂ in the process.
- **Improvements in the use of ICT equipment** allows carbon savings to be made through rationalising the use of printers, the introduction of multi-function devices (combined printers, photocopiers and scanners) and the use of virtual servers, reducing the need for so many fully specified PCs.
- **The Central Repairs Fund** presents opportunities to reduce carbon emissions as plant and equipment is renewed or repaired, for example architectural lighting systems and office refurbishment projects.
- **Project Transform** will oversee a rebuild of the city's Waste from Energy plant and improvements to recycling in the city to enable waste to be processed effectively for many years to come whilst reducing the carbon footprint of this operation and providing increased opportunity for heat and power to be sold.
- **De-illumination** of keep left bollards and street signs will save almost 500 tonnes of CO₂ over the next five years and make significant energy savings as new high technology reflective materials replace lighting units.
- An ambitious plan to recruit and train **energy wardens** is expected to save hundreds of tonnes of CO₂ each year by spreading the message about turning off equipment and being energy wise to teams in all the workplaces of the council.
- The annual **Switch It Off** campaign encourages everyone in the city to reduce their energy use at home and at work and highlights the amount of energy and carbon that can be saved by simple energy-saving measures.
- The Cenex-funded **low carbon vehicle** procurement programme will see a dozen low or zero-carbon vehicles on the council's fleet in 2009 saving nearly 50 tonnes of CO₂ and paving the way for more ambitious replacement programmes in years to come.
- Planned **upgrades to existing buildings** including installation of cavity wall insulation, draughtproofing, lighting upgrades, biomass boilers and improved heating controls will save over 250 tonnes of CO₂ in the next three years.
- Five **ambitious and ground-breaking projects** being actively promoted through the Coventry Partnership Environmental Theme Group are expected to reap significant carbon savings via a district heating scheme, a thermal aerial survey of the city, an eco-centre, a centre of excellence for electric vehicles and a scheme to encourage more local food growing.

Potential projects

Fifty-three projects have been identified through the work on the LACM programme since its launch in July 2008. Carbon saving projects across all directorates have been captured through meetings of the Carbon Management Team, through ideas sharing workshops as well as via advice and guidance provided by the Carbon Trust and its consultants.

In addition, several ideas suggested by employees of the City Council through the Carbon Hotline (set up on the same day as the launch of the LACMP) were developed into projects. This is a pleasing development as it is expected that as employee awareness of carbon management rises then increasing numbers of effective carbon management projects will be suggested.

The Carbon Trust advises that projects are categorised as to their funding status and whether they are planned in detail, as explained in section 4 of this report. This approach is useful in defining the status of projects and enabling payback periods to be accurately calculated, however, to enable the feasibility and funding status of the projects to be quickly identified, a colour coding scheme has been adopted as follows.

Colour	Explanation
Green	The project has or will take place and funding is available through existing budgets.
Yellow	The project is planned, costed and fulfils the funding criteria of the Salix scheme and sufficient Salix funds are available via the existing revolving fund.
Orange	The project is planned, costed and fulfils the funding criteria of the Salix scheme but no Salix funds are available.
Red	The project may be costed or may still require costing and feasibility to be examined and no funding is available.

The following table summarises the costs, carbon savings and financial savings of the fifty-three projects identified and indicates the potential source of the funding required to pursue them.

Salix funding allows the creation of a ring-fenced sustainable fund, this fund must be spent on proven energy efficiency projects with a specified project payback period. It is a way to effectively double a council's spending power on approved energy efficiency projects and has been used successfully in the council for several years.

Project code	Number of projects	Total carbon savings (tonnes per annum)	Total financial savings (£ per annum)	Total capital cost	Total revenue cost	Total resource cost	Source of funding proposed
Green	30	5,530 tonnes	£897,000	£1,837,000	£29,500	£122,500	Funding available and committed from existing budgets.
Yellow	4	740 tonnes	£67,000	£147,000	0	£4,125	Salix funding plus existing council budgets
Orange	9	3,800 tonnes	£595,000	£3,023,000	0	£148,000	Salix funding plus existing budgets
Red	10	5,230 tonnes	£1,188,000	£223,500	£81,000	£90,000	No funding identified as yet.
The estimates for the red coded projects above relate to seven of the ten identified projects – the remaining three cannot yet be quantified.							

The total carbon and financial savings are calculated using an approved Carbon Trust spreadsheet that includes validated methods for assessing the payback and effectiveness of projects in accordance with the Salix funding criteria.

The resource/fees cost column in the table above refers to the additional costs of delivering the projects due to anticipated project management fees using the average level encountered on other Salix funded carbon reduction projects. The city council's Design and Consultancy Services section would normally manage such projects carried out under Salix funding.

Financial implications

Given current level of funding, and using all available Salix funds to proceed with the most cost effective carbon management projects, a **17% reduction** in the council's carbon footprint is achievable. This equates to **6,270 tonnes** of carbon dioxide from the target of 11,270 tonnes. This will avoid energy cost rises of approximately **£964,000 per year**. These projects have been colour coded as green and yellow.

Additional projects have been identified (coded orange) which are capable of being funded by Salix to the value of **£3 million**, requiring the council to inject **£1.5 million** in order to access this funding. This would then allow a **27% reduction** in the council's carbon footprint, saving over **10,000 tonnes** of carbon dioxide and yielding savings of approximately **£1.56 million per year** by the end of the five year programme. It is proposed that a recycling invest to save fund

is established to enable the effective delivery of these projects. This would enable all the orange coded projects to be delivered.

A number of more stretching projects have also been proposed which require additional feasibility work to be carried out before being fully project planned. These have the capacity to save over **5,000 tonnes** of carbon dioxide per year which would allow the council's carbon footprint to be reduced by over **40%** placing it at the forefront of councils actively managing their carbon emissions and demonstrably tackling climate change. These red-coded projects cannot currently be funded and a robust business case for each of them would need to be made or external funds obtained. However, inability to secure funding would result in the city council incurring increased costs under the Carbon Reduction Commitment as well as missing the opportunity to avoid cost increases.

1. Introduction

Coventry City Council has a history of tackling large scale issues in a pro-active and ambitious way in order to make the city a better environment for its residents. We had the first smokeless zone in the UK in 1948 and the first pedestrianised shopping centre in the UK in 1955. Both of these environmental achievements were possible because of the widespread devastation of the city centre during the Second World War but another huge shift in geopolitics in 1973 with the first oil crisis provided the driver for increased energy efficiency. This led to the establishment of the Energy Efficiency Team within the city council in 1973.

This team has saved the council over £20 million, based on current fuel prices and has been instrumental in ensuring that energy efficient features are designed into all new buildings. Many school buildings and council offices have benefited from better insulation and improved heating controls as a result of the advice provided. Energy management systems are used to monitor over forty sites using a proprietary Trend-based system, this currently saves the city council in excess of 2800 tonnes of CO₂ per annum. Many of these systems have been installed over 15 years.

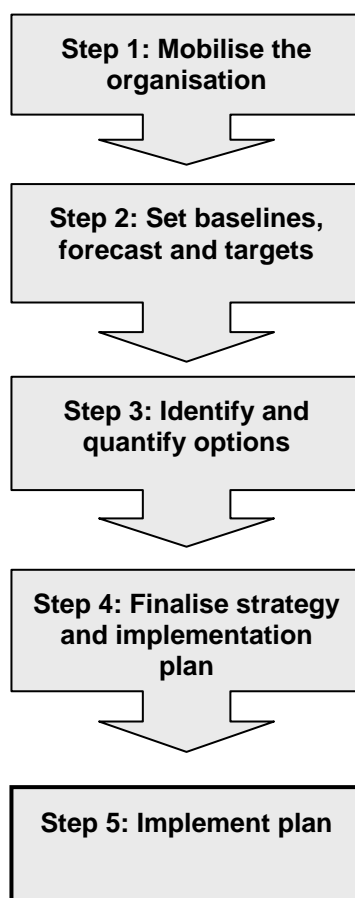
An extensive monitoring and targeting database is employed which holds data on the majority of city council buildings energy use as far back as 1985. The database is a key part of the Energy Management Section and helps inform finance teams on energy spend and outturn reports as well as assisting in the identification of potential new schemes and problem areas. The Energy Management Team through its work within council buildings has developed extensive knowledge and has close links with many schools and maintenance teams.

The concern over climate change has now cemented the link between environmental management and energy efficiency to the extent that the City Council's Sustainability Services and Energy Efficiency Sections work very closely together to ensure that carbon emissions are tightly managed in order to demonstrate significant reductions. In particular this joined up working is essential if the Council is to achieve the challenging targets within the Climate Change Strategy. This document, published in March 2008, seeks to set the city on a path to a low carbon future wherein we will reduce CO₂ emissions by 70% by 2050 (this is likely to be increased to 80% in the next revision of the strategy).

To achieve this low carbon future the council must take a leadership role in order to truly begin to influence the city's actions through its role as place shaper, property manager and provider of many hundreds of varied services to residents.

The Carbon Trust is charged with accelerating UK private and public sector organisations towards a low carbon way of working and its Local Authority Carbon Management Programme (LACMP) provides expert assistance to councils by helping them to produce robustly quantified and costed carbon management plans. Coventry City Council joined round 6 of the LACMP in May 2008 to access this expert advice to reduce its carbon emissions and to demonstrate to the city that it is serious about reducing the city's carbon footprint.

To initiate this process, the city council went through five LACM steps:



These steps are challenging. The embedding of carbon awareness into all sections of the council will take time as all employees must be made aware of their own personal duty to reduce carbon and save energy. The baseline setting and forecasting of emissions requires major changes to the council's record keeping systems in areas such as business travel and in procurement. Identifying options for reducing carbon requires the collective input of many from across the authority who have previously not been required to think in terms of carbon saving, as well as the development of robust business cases to justify the actions proposed.

However, the real proof of the success of this programme lies in the actual implementation of the plan in the short, medium and long term. The energy environment is very volatile at present with the cost of a barrel of oil changing by a factor of three inside a six-month period. However, effective carbon management requires a sustained year-on-year cut in emissions in order to achieve the target set by the council and to help achieve the Climate Change Strategy aims.

This Carbon Management Plan presents the compelling arguments for the city council to embark on an effective carbon management programme. The plan contains a series of quantified short and medium term carbon reduction projects that provide a starting point in propelling the city council towards achieving its vision of being an exemplar council within a low carbon economy.

2. Carbon Management Strategic Considerations

2.1 Context and drivers for Carbon Management

The evidence that the activities of humankind are having a profound effect on our climate is overwhelming. Avoiding the most serious consequences of climate change will require all of us to make changes to how we live our lives.

Coventry City Council acknowledges that climate change is happening, that it is a major concern and recognises that it has a responsibility in demonstrating leadership in tackling climate change.

To cement this responsibility the Council has, by signing the Nottingham Declaration on climate change in October 2006, committed itself to act decisively in its role as community leader to tackle the causes and effects of climate change.

One of the first actions undertaken by the Council as a result of signing the Nottingham Declaration was to publish a Climate Change Strategy for Coventry in 2008.

The strategy includes action plans for targeted CO₂ reductions encompassing all areas of the community including actions aimed at reducing our emissions arising from the Councils own activities.

The Climate Change Strategy commits to a reduction of 70% in Coventry's CO₂ emissions by 2050, with an intermediate target of 40% reduction by the year 2025 (likely to be increased to 80%).

A key element in delivering this challenging reduction target will be the need for the Council to demonstrate exemplar behaviour to engage and motivate other areas of the wider Coventry community to reduce their CO₂ emissions.

Therefore there is an implicit commitment for the Council to reduce CO₂ emissions from its own activities by levels at or above those stated in the Climate Change Strategy.

In taking a proactive approach in addressing the challenges of climate change and undertaking early action in reducing our carbon emissions, the Council will benefit by minimising financial and legislative risks associated with climate change.

A variety of Government policies and anticipated future economic circumstances will have a significant impact on the Council's budget, while the additional work involved in meeting our legal obligations will place a strain on available resources.

Known legislative drivers and financial risks include:

Carbon Reduction Commitment

The UK Government is introducing the Carbon Reduction Commitment (CRC) in January 2010. The CRC is a legally binding climate change and energy saving scheme based on emissions trading. It is applicable to large businesses and public sector organizations.

Coventry City Council will be subject to the Carbon Reduction Commitment emissions trading scheme at the outset in 2010. The scope of carbon dioxide emissions the Council will be responsible for includes those from schools.

The cost of carbon for the first three years of the CRC emissions trading scheme is likely to be £12 per tonne. For the city council, based on our current level of CO₂ emissions, the cost of purchasing the required carbon emission allowances each footprint year is estimated to be £500,000. However, a proportion of the initial cost of purchasing carbon allowances will be repaid later on during the financial year. The amount repaid will be dependant on how well the Council manages and reduces its emissions compared to other CRC obligated organisations. The carbon management performance of all CRC organizations will be evaluated and placed into a league table. The top performer in the CRC league table will gain a bonus in the first

year of the scheme of 10% of its annual footprint allowances, while the worst performer will receive a 10% penalty. The size of the bonus or penalty payment increases by 10% for each footprint year up to year 5, where the bonus or penalty will be 50% of an organisation's annual footprint allowance payment. For the city council this could result in a bonus or a penalty of £54,000 in year one, rising to at least five times this figure in year five depending on the rate the market sets for carbon.

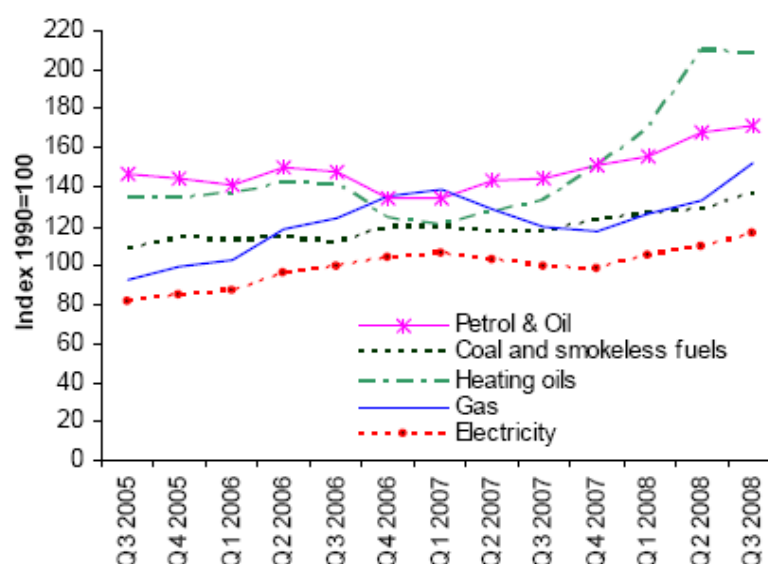
In preparation for the introduction of the CRC, the Council has joined the Carbon Trading Councils scheme set up by the Local Government Information Unit. This scheme enables Coventry City Council to participate and gain an understanding of the complexities of carbon trading in a financial risk free environment.

Energy Prices

The cost of energy has been increasing in recent years but with very sharp increases seen in 2008. The city council uses large amounts of electricity, gas, petrol and diesel and so even small shifts in price can give rise to large increases in costs. For example, a 10% increase in energy prices will increase the council's annual electricity bill by £400,000 and annual gas bill by £180,000 based upon 2007/8 energy consumption.

Similarly, for each penny increase in the price per litre of petrol or diesel the annual fleet fuel costs for the council can be expected to increase by around £16,000. During 2008 wholesale electricity and gas prices rose by over 60% and diesel fuel prices fluctuated between £1.00 and £1.33 a litre.

The council's energy contract is renewed in October 2009 and price increases ranging from 35% to 75% are anticipated. A recent tender for the supply of electricity for street lighting within the city saw an increase of £800,000 representing of 48% in energy cost per annum taking the cost of providing street lighting from £1,680,000 to £2,400,000 per annum.



Source: ONS, Retail prices index

Figure 2.1: Fuel price indices in real terms from Q3 2005 to Q3 2008

National Indicators linked to Climate Change

National Indicators are a single set of key indicators developed by Government to monitor the performance of local authorities and local partnerships. The Council is required to report on two indicators linked to carbon dioxide emissions.

NI185 – percentage CO₂ reduction from local authority operations: Measurement against this indicator requires each local authority to calculate its CO₂ emissions from analysis of the energy and fuel use in their relevant buildings and transport, including where these services have been outsourced.

NI186 – per capita CO₂ emissions in the LA area: The percentage reduction in CO₂ per capita in each LA will be reported annually. This will be produced by Central Government based on CO₂ emissions in the local authority area from the business and public sector, domestic housing, and road transport. The NI 186 target is a 4% year on year reduction in per capita CO₂ emissions within the Coventry area. A partnership with the Energy Saving Trust under their Local Authority One to One Support Programme will assist in driving down community emissions, contributing to performance against this national Indicator.

Best Value Performance Plan

Coventry City Council aims to provide the best possible services for the people of Coventry. To help us do this we have to measure how well we are doing and identify where improvements are most needed. Our annual Best Value Performance Plan plays an important part in this process as it brings together information about our services and helps us make decisions about priorities for improvement.

One of the themes of the Best Value Performance Plan is "Improving the way we work and deliver value for money". The BVP plan has targeted an annual efficiency saving of 2.5%. The carbon reduction projects identified in section 4 of this document will contribute to meeting the necessary efficiency savings. The projects are anticipated to help the city council avoid significant cost increases over the course of the 5-year programme

Display Energy Certificates: From 1 October 2008 there is a legal requirement for all public sector buildings with a total useful floor area of over 1,000m², to show a Display Energy Certificate (DEC) in a prominent place, clearly visible to the public. The number of Council buildings including schools requiring DEC's is 240.

2.2 Our low carbon vision

In this section the Carbon Trust invites councils to think imaginatively about how they would like their authority to be thought of in ten years time assuming that low carbon ways of living and working are actively taken up by employees and residents. In the spirit of this visioning approach, the following ideas are presented. In ten years time Coventry City Council would like Coventry to be known as a place where:

- Low emission vehicles are designed, manufactured and used within the city to lower its carbon footprint.
- The message of low carbon living was taken up enthusiastically and effectively with the city having the lowest per capita emissions in the region and in the lowest five cities in the UK
- Innovative new zero carbon housing developments were built well in advance of the Government's 2016 target
- A massive redevelopment of the city centre embedded sustainability and low carbon offices and shops and hugely invigorated Coventry as a place where people chose to live, work and visit.
- The city emerged from the recession of 2009 in a strong position economically and quickly recovered, attracting new businesses through low carbon working

- All major council decisions are scrutinised to fully understand the implications for carbon emissions whilst aiming for clear reductions.
- The cost/benefit relationship of invest to save decisions to reduce carbon is well known and forms the basis of a robust business model to determine future projects' viability
- There is a real understanding of carbon management from Elected Members, Directors, and managers down to all employees to ensure that reduction targets are sustainably achieved.
- The Carbon Reduction Commitment scheme proved to be an opportunity to galvanise low carbon ways of working in the authority and did not present a major cost to the council
- Council tax payers see high quality everyday services being provided at a low cost, financially and in terms of carbon
- Its carbon saving ideas are seen as trend setting and people visit to see for themselves how these ideas were implemented and delivered significant savings.
- Sustainability, economic development and regeneration came together to propel the city to a low carbon, soon to be zero carbon, future that brought massive benefits and profile.

2.3 Strategic themes

In this section are detailed the key strategic themes which encompass the majority of activities which will be pursued to move the city council nearer to its carbon reduction target. These are specified in greater detail in section 4.

- The City Council's stock of operational buildings are aging and require significant investment to bring them up to modern low carbon energy-efficient standards – investment will be sought to achieve this aim. The Annual Asset Management Plan will inform this process on an annual basis.
- The energy efficiency and carbon footprint of all secondary schools in the City Council's area will be improved through schemes such as the Building Schools for the Future programme as well as insulation and refurbishment activities.
- The replacement of all of the city's streetlights over the next ten years will allow significant improvements in lighting levels and energy efficiency to be achieved.
- An ambitious awareness raising and education campaign for all City Council employees will bring about significant savings in the use of energy and emission of carbon from core Council functions.
- A pilot scheme with Cenex to trial electric vehicles across the Council's fleet and then to procure them in large numbers will result in fleet emission levels reducing significantly.
- The rebuilding of the Waste from Energy facility will enable emissions from incineration to be reduced and to allow waste heat and electricity to be used within the city.
- The establishment of a dedicated climate change team within the Council will ensure that all aspects of the city council's operations are examined for carbon savings, supported by a dedicated campaigns team to ensure the message is reinforced through many channels.
- Enhanced knowledge and awareness of carbon emissions at individual service level will allow accurate carbon budgeting to be carried out and make the link with operations more visible, as well as beginning to assess the impact of the Carbon Reduction Commitment from 2010 onwards.
- Joint working with all sectors of the community through the Coventry Partnership will allow both the City Council internal carbon reduction targets to be achieved as well as the wider community per capita objectives.

2.4 Targets and objectives

The City Council has a crucial role in tackling climate change as community leader, property manager and service provider. The aspirational carbon reduction saving target given below reflects the Council's role as community leader acting as an exemplar and the magnitude of the climate change risks.

Coventry City Council will reduce CO₂ emissions from council operations by 17% by 2013 from 2007 calendar year baseline levels.

3. Emissions Baseline and Projections

To demonstrate that reductions in carbon emissions are being achieved it is essential that the current level of emissions resultant from the city council's activities is measured. The baseline emissions will be used as a marker to monitor the city council's improvement over the duration of the carbon management plan. National Indicator 185 defines a standardised scope for local authority operations and the council will report to the Government its CO₂ emissions based upon the NI 185 scope in July 2009.

3.1 Scope

The scope of the current baseline emissions used for this programme closely matches the scope of NI 185. It is envisaged that as gaps in data are eliminated then the baseline scope will be adjusted to exactly match NI 185. NI 185 describes its scope as follows:

"The indicator is to include all CO₂ emissions from the delivery of local authority functions...It covers all an authority's own operations and outsourced services...It relates to the energy used in buildings and transport of delivering the functions of a local authority, but not the embedded emissions in the goods procured by the authority..."

The variations between the current baseline emissions scope and NI 185 are described below:

The scope of the programme and therefore the project baseline will **include** emissions from:

- Council owned buildings energy use (including schools but excluding externally managed commercial property)
- Street lighting energy consumption
- Council owned fleet fuel use
- Council business travel
- Water used in council buildings and operations

The table below specifies the scope of emissions not included in the baseline and explains the reasons for their exclusion.

Emission source	Reason for Exclusion	Comments
Building energy use for outsourced council functions	No access to data for 2007 baseline year	Data collection to commence for 2008/9 footprint year.
Fleet fuel use for outsourced council functions	No access to data for 2007 baseline year)	Data collection to commence for 2008/9 footprint year.
Business travel for outsourced council functions	No access to data for 2007 baseline year	Data collection to commence for 2008/9 footprint year.
Council employees commuting emissions	Employee commuting outside scope of NI 185	No plans to obtain data.
Energy use in council owned housing.	Council does not own any housing stock	Social housing outside scope of NI 185

3.2 Baseline

The baseline year chosen for this CM Programme is calendar year 2007.

	Total	Buildings	Street lighting	Transport	Water
Baseline CO₂ emissions (tonnes)*	37,400	26,300	6,200	4,800	100

	Total	Buildings	Street lighting	Transport	Water
Baseline Cost of energy to Council *	£8,600 k	£4,400 k	£1,700 k	£2,000 k	£ 500k

*Figures have been rounded

Table 3.1 – Summary table of emissions for baseline year 2007

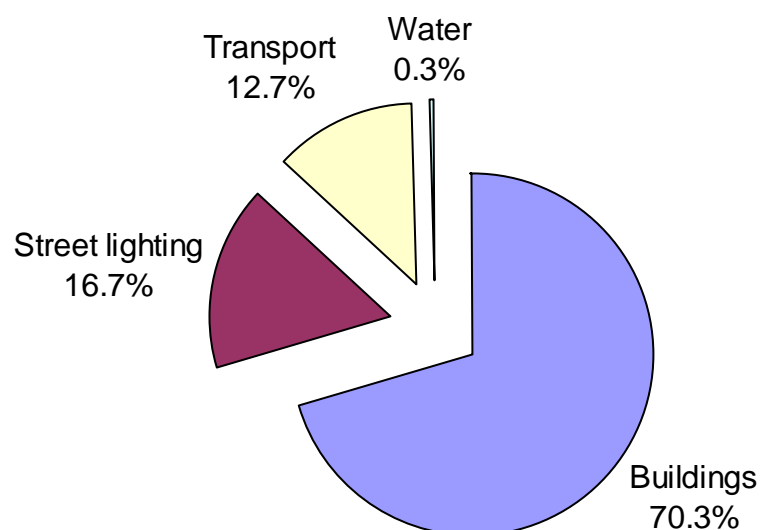


Figure 3.1 Summary of emissions for baseline year 2007

It is clear that the vast majority of carbon emissions arise from our use of buildings with the split being roughly 50% from operational property and 50% from schools. The following table provides an indication of the annual contributions from buildings with the highest carbon footprints:

Building/school	Carbon emissions (tonnes)
Civic Centres 1 to 4	775
Council House	707
Whitley Depot	607
Canley Crematorium	518
Retail Market	291
Elm Bank Corporate Training Centre	280
Broadgate House	269
Central Library	260
Christchurch House	211
Stoke House	202
Spire House	164
President Kennedy school (inc. swimming pool)	775*
Cardinal Newman school (inc. swimming pool)	753*
Finham Park school (no swimming pool)	574*

* scheduled for rebuild under Building Schools for the Future

3.3 Projections and Value at Stake

The Department for Business Enterprise and Regulatory Reform (BERR) produces statistics on projected energy demands and costs – these have been used to establish the council's predicted energy consumption and expenditure over the lifetime of the 5 year programme. The Carbon Trust prescribes that for the Business as Usual (BAU) scenario an annual increase in energy demand of 0.7% and a projected increase in energy costs of 8.4% per annum are used in order to consistently plan ahead.

In addition, the Carbon Trust model calculates that if an aspirational carbon reduction figure of 30% is adopted then this equates to an annual reduction of 6.9% when compounded across the five-year duration of the project.

In the graphs below the term "value at stake" is used, this relates to the Business as Usual projected cost minus the targeted projected costs - i.e. the cost to the Council of not achieving the programme's targets.

The graph below shows the predicted energy costs for Coventry City Council in 2012 being £13.87 million if we undertake no carbon reduction actions. Energy costs are reduced to £9.015 million in 2012 if our carbon reduction target is achieved. The difference between the two energy costs of £4.85 million is known as the Value at Stake.

It should be noted that the graph does not include the cost of the Carbon Reduction Commitment as it is not possible to predict the level of bonus or penalty to be applied to the allowances on surrender or the market price for carbon after year three of the scheme.

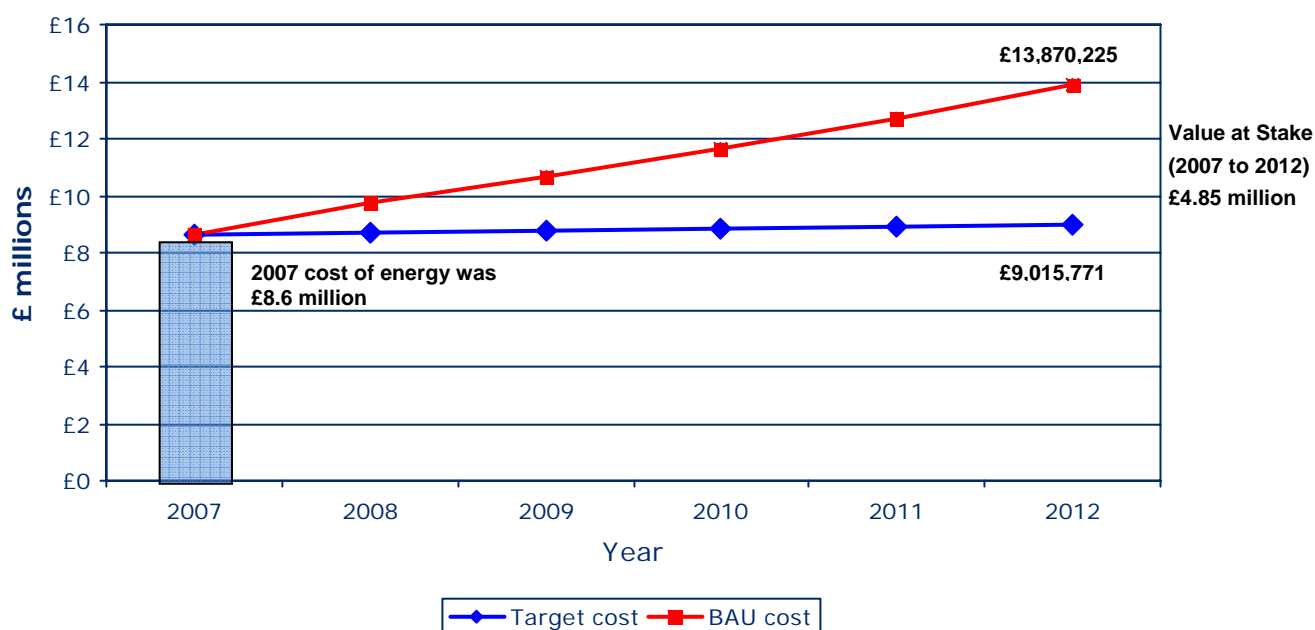


Figure 3.2 Comparison of cost of energy for Business as Usual (BAU) increases and planned reduction targets

Figure 3.3 illustrates the potential carbon emissions in 2012 if no action is taken versus the projected emissions if the aspirational 30% target is achieved.

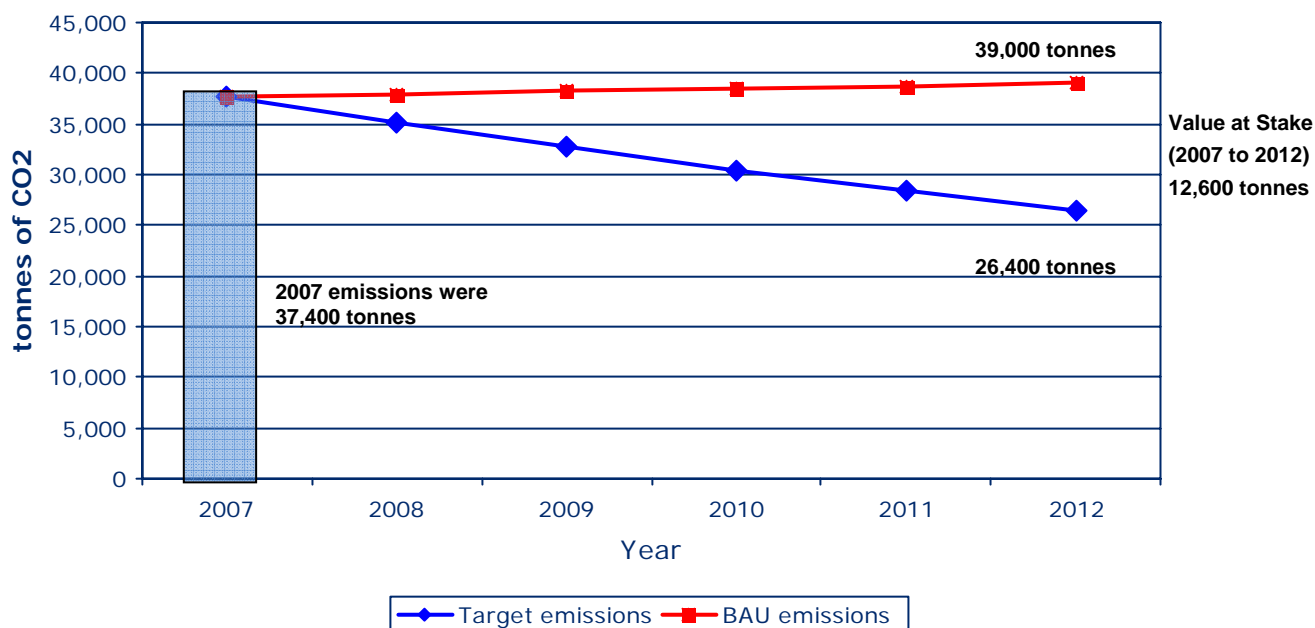


Figure 3.3 Comparison of carbon emissions for Business as Usual (BAU) increases and planned reduction targets

4. Carbon Management Projects

The following section describes fifty-three projects that have been identified through the work on the LACM since its launch in July 2008. Carbon saving projects across all directorates have been captured through meetings of the Carbon Management Team, ideas sharing workshops as well as via advice and guidance provided by the Carbon Trust and its consultants. Appendix B contains an example of a project definition form used to capture the key attributes of any carbon reduction project.

In addition, several ideas suggested by employees of the City Council through the Carbon Hotline (set up on the same day as the launch of the LACMP) were developed into projects. It is expected that as employee awareness of carbon management rises then increasing numbers of effective carbon management projects will be suggested.

The Carbon Trust advises that projects are categorised as follows:

- Those that are underway or have been completed which will deliver carbon savings since the baseline year of 2007 (section 4.1 below)
- Those that are definitely planned to take place and have funding allocated (section 4.2)
- Those that are planned to take place but are not yet funded (section 4.3)
- Those that are medium to long term projects which may take place but are not yet planned in detail or funded. These may require feasibility study to enable them to be progressed further (section 4.4)

The Carbon Trust approach is useful in defining the status of projects and factoring their effects into the project register spreadsheet which enables payback periods to be accurately calculated. However, to enable the feasibility and funding status of the projects to be quickly identified, a colour coding scheme has been adopted as follows.

Colour	Explanation
Green	The project has or will take place and funding is available through existing budgets.
Yellow	The project is planned, costed and fulfils the funding criteria of the Salix scheme and sufficient Salix funds are available via the existing revolving fund.
Orange	The project is planned, costed and fulfils the funding criteria of the Salix scheme but no Salix funds are available
Red	The project may be costed or may still require costing and feasibility to be examined and no funding is available.

The most crucial aspect of the success of this carbon management plan is the availability of funding to allow projects to be carried out. Some of the projects detailed below are already funded, some are capable of funding through the Salix scheme and some require detailed business cases to be compiled in order to investigate the possibility of funding. In the current

economic climate and with the present pressures on city council finances funding will be difficult to identify but it is important to realise that many of these measures will yield cost savings in terms of energy. They will also reduce the city council's exposure to the risk of increased costs under the Carbon Reduction Commitment, wherein each tonne of carbon will require an allowance to be purchased.

Salix is a government-backed institution that provides funds to the public sector for energy efficiency activities that must be matched pound for pound by the recipient to create a ring-fenced fund. The combined fund must be spent on proven energy efficiency projects with a specified project payback period or a carbon cost of less than £100 per tonne covering the lifetime of the carbon reduction improvement.

Financial savings made from Salix-funded projects are returned to the ring-fenced fund until the original project investment is repaid. Repayment of the original Salix funding is normally not required as long as the ring-fenced fund is still operational and financing new energy efficiency projects meeting the payback and lifetime carbon cost funding thresholds.

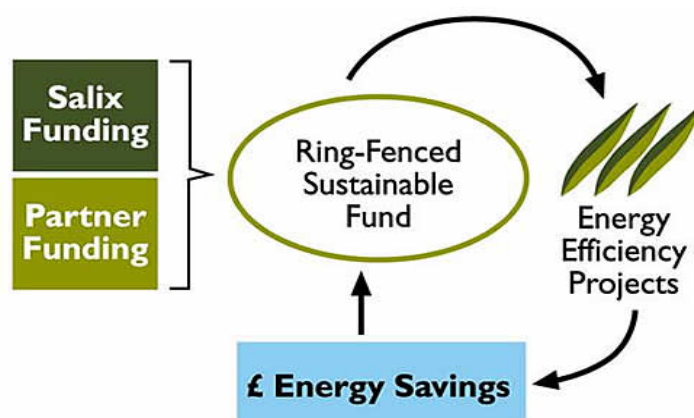


Figure 4.1 Outline of Salix financial model

This Salix tool represents a robust test of a project's cost efficiency and has therefore been used in the tables below to identify projects for which funding is sought (in orange).

4.1 Existing projects

This section includes projects that are already underway or have been completed that will deliver significant carbon savings since 2007.

Ref	Status	Project	Cost			Annual saving		Payback	% of 11,270 tonne target	Year of first saving	Carbon savings profile in five years					Lead Directorate	Funding source
			Capital	Revenue	Resource	£s	CO ₂ tonnes				2008	2009	2010	2011	2012		
02	Green	Upgrade lighting & controls to floor 4 of Broadgate House	£21,340	£0	£0	£2,961	22.7	7.2	0.2	2008	22.7	22.7	22.7	22.7	22.7	CDD	Existing budget
03	Green	De-illumination of street signs and bollards	£465,000	£0	£0	£59,556	456.9	7.8	4.1	2009		91.4	182.8	274.1	365.5	CSD	Government grant
05	Green	Architectural lighting - power reductions	£10,000	£0	£0	£2,146	9.3	4.7	0.1	2009		9.3	9.3	9.3	9.3	CDD	Existing budget
06	Green	Removal of bottled water dispensers from council offices	£250	£0	£0	£1,056	4.9	0.2	0.0	2008	4.9	4.9	4.9	4.9	4.9	CDD	Existing budget
07	Green	Stoke Park 6th Form College - ground source heat pump scheme	£60,000	£0	£0	£2,934	25.9	20.4	0.2	2008	25.9	25.9	25.9	25.9	25.9	CLYP	Targeted Capital DCSF
08	Green	Stivichall Primary School - rebuild with biomass boiler	£80,000	£1,500	£0	£14,175	163.9	5.6	1.5	2008	163.9	163.9	163.9	163.9	163.9	CLYP	Corporate Funding
09	Green	Gosford Park School - air to water heat pump	£70,000	£0	£0	£3,847	29.5	18.2	0.3	2008	29.5	29.5	29.5	29.5	29.5	CLYP	Modernisation DCSF

Note: the numbers in the ref column relate to references in the master project register and are therefore not sequential.

Ref	Status	Project	Cost			Annual saving		Payback	% of 11,270 tonne target	Year of first saving	Carbon savings profile in five years					Lead Directorate	Funding source
			Capital	Revenue	Resource	£s	CO ₂ tonnes				2008	2009	2010	2011	2012		
10	Green	Aldermoor Farm Primary School - ground source heat pump scheme	£112,000	£0	£0	£9,923	57.6	11.3	0.5	2008	57.6	57.6	57.6	57.6	57.6	CLYP	Targeted Capital DCSF
11	Green	Stanton Bridge School - biomass boiler scheme	£80,000	£1,500	£0	£4,960	87.5	16.1	0.8	2008	87.5	87.5	87.5	87.5	87.5	CLYP	PCP
12	Green	Grace Academy - build of new school	£0	£0	£0	£20,708	158.9	0.0	1.4	2008	158.9	158.9	158.9	158.9	158.9	CLYP	Capital grant plus sponsorship
13	Green	Castle Wood Primary School - rebuild	£0	£0	£0	£7,862	62.2	0.0	0.6	2009		62.2	62.2	62.2	62.2	CLYP	PCP
14	Green	Courthouse Green Primary School rebuild	£0	£0	£0	£6,010	51.1	0.0	0.5	2009		51.1	51.1	51.1	51.1	CLYP	PCP
15	Green	Post and Fast Print relocation of premises	£0	£0	£0	£2,143	13.1	0.0	0.1	2008	13.1	13.1	13.1	13.1	13.1	CDD	Existing budget
16	Green	Cavity wall insulation at 8 sites (already completed)	£55,000	£0	£0	£18,957	167.0	2.9	1.5	2008	167.0	167.0	167.0	167.0	167.0	CDD	Salix fund
20	Green	Grace Academy - installation of biomass boilers	£125,000	£3,159	£0	£7,101	146.1	17.6	1.3	2010			146.1	146.1	146.1	CLYP	Capital grant plus sponsorship monies

Note: the numbers in the ref column relate to references in the master project register and are therefore not sequential.

Ref	Status	Project	Cost			Annual saving		Payback	% of 11,270 tonne target	Year of first saving	Carbon savings profile in five years					Lead Directorate	Funding source
			Capital	Revenue	Resource	£s	CO ₂ tonnes				2008	2009	2010	2011	2012		
33	Green	Sowe Valley School - remodelling	£0	£0	£0	£2,979	23.8	0.0	0.2	2009	5.9	23.8	23.8	23.8	23.8	CLYP	Modernisation DCSF
Totals			£1.079 million	£6,159	£0	£167k	1,480 tonnes				737	969	1206	1297	1389		

Note: the numbers in the ref column relate to references in the master project register and are therefore not sequential.

4.2 Planned/funded projects

This section includes projects, which are definitely planned to take place and have funding allocated. These projects are well defined and, therefore, the quantification of costs and savings fairly robust.

Ref	Status	Project	Cost			Annual saving		Payback	% of 11,270 tonne target	Year of first saving	Carbon savings profile in five years					Lead Directorate	Funding source
			Capital	Revenue	Resource	£s	CO ₂ tonnes				2008	2009	2010	2011	2012		
17	Green	Energy warden project for all council city centre offices	£0	£2,000	£17,500	£230,262	1,000	0.0	8.9	2009		333.3	666.7	1000.0	1000.0	CSD	Existing budget
18	Green	Building Schools for the Future (Phase 1 completion pre 2012)	£0	£0	£0	£88,131	755.5	0.0	6.7	2010			755.5	755.5	755.5	CLYP	BSF
19	Green	Building Schools for the Future (phase 2/3 completion post 2014)	£0	£0	£0	£335,500	2,052.0	0.0	18.2	2014						CLYP	BSF
21	Green	Replacement of street lighting in city through PFI	£0	£0	£0	£122,500	939.8	0.0	8.3	2009		188	375.9	563.9	751.8	CSD	PFI
24	Green	CENEX funded scheme to procure twelve low carbon vehicles	£0	£0	£0	£13,122	30	0.0	0.3	2010			30.0	30.0	30.0	CDD	Cenex funding
25	Green	Expand energy warden project to all council premises	£0	£2,000	£17,500	£230,265	1,000	0.0	8.9	2009			333.3	666.7	1000.0	CSD	Existing budget

Note: the numbers in the ref column relate to references in the master project register and are therefore not sequential.

Ref	Status	Project	Cost			Annual saving		Payback	% of 11,270 tonne target	Year of first saving	Carbon savings profile in five years					Lead Directorate	Funding source
			Capital	Revenue	Resource	£s	CO ₂ tonnes				2008	2009	2010	2011	2012		
27	Green	Castle Wood Primary School - install 220 sq metres of roof mounted solar photovoltaic panels	£250,000	£0	£0	£1,647	12.6	N/A *	0.1	2009		12.6	12.6	12.6	12.6	CLYP	Primary Capital Programme
28	Green	Courthouse Green Primary School - ground source heat pump scheme	£100,000	£0	£0	£274	8.6	N/A *	0.1	2009		8.6	8.6	8.6	8.6	CLYP	Primary Capital Programme
30	Green	Schools engagement project - web based monitoring and targeting	£0	£1,000	£17,500	£71,953	524	0.0	4.6	2009		174.6	349.1	523.7	523.7	CDD	Existing budget
31	Green	Thermostatic radiator valves & cooling/heating mods in Lower Studio	£10,000	£0	£0	£1,692	8.2	5.9	0.1	2010			8.2	8.2	8.2	CDD	Central Repair Fund
34	Green	Broadgate House basement - replacement of pipework insulation	£4,500	£0	£0	£1,050	9	4.3	0.1	2009		9.3	9.3	9.3	9.3	CDD	Central Repair Fund
35	Green	Civic Centre 1 - installation of thermostatic radiator valves	£6,000	£0	£0	£250	2.2	N/A	0.0	2009		2.2	2.2	2.2	2.2	CDD	Central Repair Fund
36	Green	Trial of LED lighting upgrade in Civic Centre 4 LED lift lobby	£3,920	£0	£0	£581	4	6.7	0.0	2009		4.5	4.5	4.5	4.5	CDD	Existing budget

Note: the numbers in the ref column relate to references in the master project register and are therefore not sequential.

Ref	Status	Project	Cost			Annual saving		Pay back	% of 11,270 tonne target	Year of first saving	Carbon savings profile in five years					Lead Directorate	Funding source
			Capital	Revenue	Resource	£s	CO ₂ tonnes				2008	2009	2010	2011	2012		
49	Green	Secondary glazing and draught proofing to windows in Spire House	£80,000	£0	£0	£4,479	34	17.9	0.3	2010			34.4	34.4	34.4	CDD	Central Repair Fund
01	Yellow	Cavity wall insulation for Spire House and Christchurch House	£93,000	£0	£0	£10,435	45	8.9	0.4	2011			0.0	45.5	45.5	CDD	Salix fund and/or existing budgets
23	Yellow	Voltage optimisation scheme for Whitley Depot	£25,000	£0	£0	£4,994	38	5.0	0.3	2010			38.3	38.3	38.3	CDD	Salix fund and/or existing budgets
43	Yellow	Trial of boiler burner management controls in Broadgate House	£1,800	£0	£0	£2,345	20.7	0.8	0.2	2009		20.7	20.7	20.7	20.7	CDD	Salix fund and/or existing budgets
50	Yellow	Installation of network wide PC power management system	£27,500	£0	£1,375	£49,206	636	0.6	5.6	2010			635.6	635.6	635.6	CDD	Salix fund and/or existing budgets
Totals			£602k	£5,000	£53,875	£1,168k	7,121				0	754	3285	4360	4881		

Note: the numbers in the ref column relate to references in the master project register and are therefore not sequential.

N/A* means that a payback period cannot be quoted as the works were part of a much larger scheme which precludes an accurate payback period being calculated.

4.3 Near term projects

Near term projects are those which are planned to take place but are NOT yet funded

Ref	Status	Project	Cost			Annual saving		Payback	% of 11,270 tonne target	Year of first saving	Carbon savings profile in five years					Lead Directorate	Funding source
			Capital	Revenue	Resource	£s	CO ₂ tonnes				2008	2009	2010	2011	2012		
44	Orange	Boiler burner management controls - gas and oil fired boilers	£150,000	£0	£4,509	£147,909	1,368	1.0	12.1	2009		684.0	1368.1	1368.1	1368.1	CDD/CLYP	Possible Salix funding
22	Orange	Voltage optimisation scheme for Council House and Civic Centres 1 to 4	£120,000	£0	£6,000	£18,816	144	6.4	1.3	2010			144.4	144.4	144.4	CDD	Possible Salix fund and/or existing budgets
38	Orange	Upgrade T8 fluorescent tubes with T5 versions in primary schools	£1.1732 million	£0	£58,662	£187,906	816	6.2	7.2	2012					816.0	CDD/CLYP	Possible Salix fund
39	Orange	Upgrade T8 fluorescent tubes with T5 versions in all council offices	£723,990	£0	£36,200	£115,954	504	6.2	4.5	2011				503.6	503.6	CDD	Possible Salix fund and/or existing budgets
40	Orange	Upgrade T8 fluorescent tubes with T5 versions in Community Services premises	£270,630	£0	£13,532	£43,344	188	6.2	1.7	2010			188.2	188.2	188.2	CDD/CS	Possible Salix fund and/or existing budgets
41	Orange	Upgrade T8 fluorescent tubes with T5 versions in libraries	£90,180	£0	£4,509	£13,882	63	6.5	0.6	2009		62.7	62.7	62.7	62.7	CDD/CS	Possible Salix fund and/or existing budgets

Note: the numbers in the ref column relate to references in the master project register and are therefore not sequential.

Ref	Status	Project	Cost			Annual saving		Payback	% of 11,270 tonne target	Year of first saving	Carbon savings profile in five years					Lead Directorate	Funding source
			Capital	Revenue	Resource	£s	CO ₂ tonnes				2008	2009	2010	2011	2012		
26	Red	Eco-driving training for city council fleet drivers	£0	£11,000	£0	£83,107	190	0.1	1.7	2009		190.0	190.0	190.0	190.0	CDD	No budget identified
32	Red	Enhancement to Corporate Travel Plan through extra cars and cycles plus training	£0	£10,000	£0	£0	2	N/A	0.0	2009		2.3	2.3	2.3	2.3	CDD	No budget identified
Totals			£2.528 million	£21,000	£123,411	£610k	3,275				0.0	939	1956	2459	3275		

Note: the numbers in the ref column relate to references in the master project register and are therefore not sequential.

4.4 Medium to long term projects

Medium and long term projects are those which may take place but are not yet planned in detail. The detail on these may be subject to feasibility studies or further work and therefore the quantification of costs and savings will be less accurate.

Ref	Status	Project	Cost			Annual saving		Payback	% of 11,270 tonne target	Year of first saving	Carbon savings profile in five years					Lead Directorate	Funding source
			Capital	Revenue	Resource	£s	CO ₂ tonnes				2008	2009	2010	2011	2012		
29	Orange	Installation of motorised swimming pool covers plus new ventilation controls at two schools	£45,000	£0	£2,250	£10,500	93	4.3	0.8	2009		92.5	92.5	92.5	92.5	CDD	Devolved school budget
47	Orange	Installation of Energy Management Systems at six Primary Schools	£100,000	£0	£5,000	£20,006	176	5.0	1.6	2010			88.1	176.2	176.2	CDD	Devolved school budget
04	Orange	Upgrade of cavity wall and roof insulation for 45 council buildings	£350,000	£0	£17,500	£36,450	453	9.6	4.0	2011				226.6	453.3	CDD	Salix fund and/or existing budgets
37	Red	LED lighting upgrade for all floors of Civic Centre 4	£78,400	£0	£3,920	£11,619	89	6.7	0.8	2009		89.1	89.1	89.1	89.1	CDD	No budget identified
42	Red	Review of heating controls for Spire House and Christchurch House	£30,000	£0	£1,500	£2,986	23	10.0	0.2	2010			22.9	22.9	22.9	CDD	No budget identified
45	Red	Supply city street lights with power generated at Waste from Energy plant	£30,000	£0	£45,000	£1.0395 million	4,514	0.0	40.1	2012					4514.4	CDD/CSD	No budget identified

Note: the numbers in the ref column relate to references in the master project register and are therefore not sequential.

Ref	Status	Project	Cost			Annual saving		Pay back	% of 11,270 tonne target	Year of first saving	Carbon savings profile in five years					Lead Directorate	Funding source
			Capital	Revenue	Resource	£s	CO ₂ tonnes				2008	2009	2010	2011	2012		
46	Red	Introduce internal carbon trading scheme within city council building stock	£0	£30,000	£35,000	£45,490	369	0.7	3.3	2011				369.0	369.0	CDD plus CSD and FLS	No budget identified
48	Red	Installation of 150kW biomass boiler in council premises using Central & Maintenance Fund	£85,000	£0	£4,250	£4,990	44	17.0	0.4	2010			44.0	44.0	44.0	CDD	No budget identified
51	Red	Computer server virtualisation scheme to reduce numbers of servers	N/K	N/K	N/K	N/K	N/K				0	0.0	0.0	0.0	0.0	FLS	No budget identified
52	Red	Supply heat demands of city centre offices with heat from upgraded Waste from Energy Plant	N/K	N/K	N/K	N/K	N/K				0	0.0	0.0	0.0	0.0	CDD/CSD	No budget identified
53	Red	Upgrade Energy Management Systems within central council offices	£75,000	N/K	N/K	N/K	N/K				0	0.0	0.0	0.0	0.0	CDD	No budget identified
Totals			£793.4k	£30,000	£114,420	£1.171 million	5,761				0.0	182	337	1020	5761		

Note: the numbers in the ref column relate to references in the master project register and are therefore not sequential.

4.5 Projected achievement towards target

The chart below illustrates the projected carbon savings for four scenarios:

- Green line projected achievement using currently funded projects.
- Yellow line projected achievement using currently funded projects plus Salix eligible projects for which funding is available
- Orange line projected achievement if funding is made available for all Salix eligible projects (requires new funding to be injected)
- Red line achievement if all projects (red, orange, yellow and green) are included.

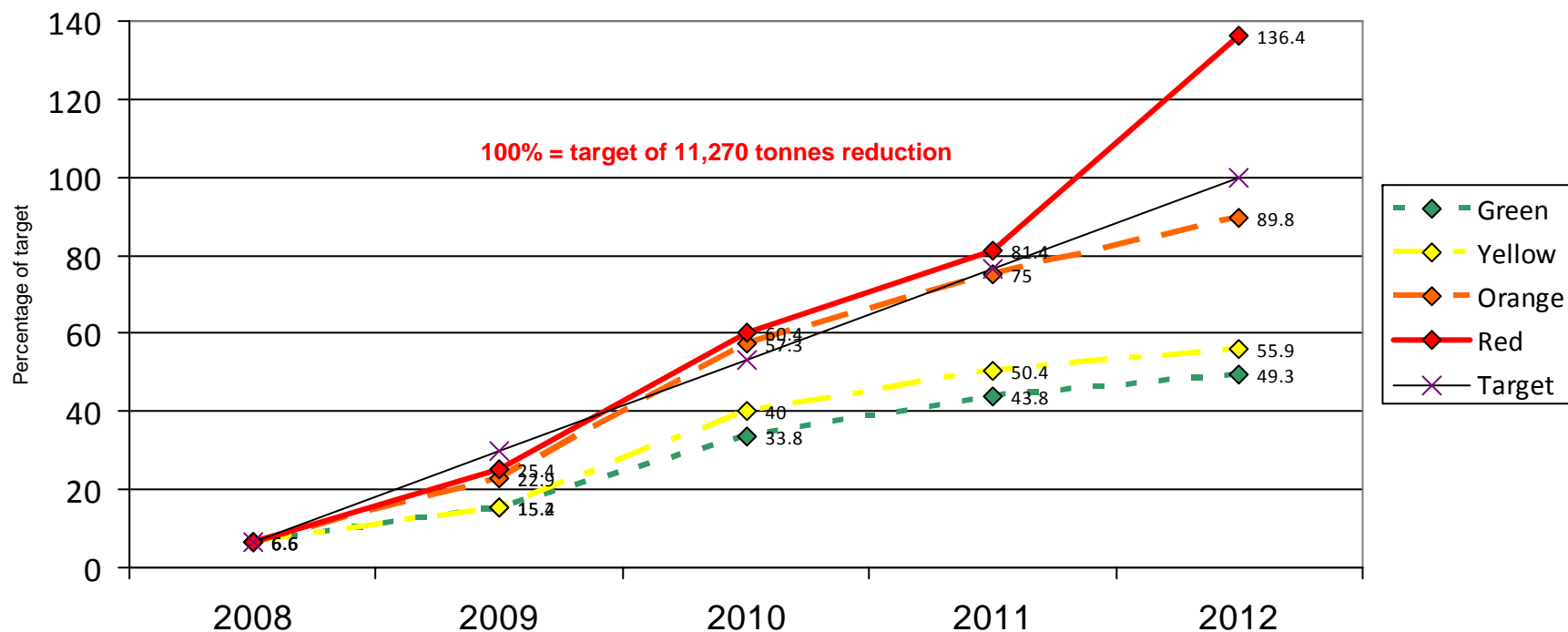


Figure 4.2: Carbon savings for four funding scenarios plus target reduction to achieve 30% in five years

4.6 Proposals

Given current level of funding, and using all available Salix funds to proceed with the most cost effective carbon management projects, a **17% reduction** in the council's carbon footprint is achievable. This equates to **6,270 tonnes** of carbon dioxide against the aspirational target of 11,270 tonnes. This is likely to avoid energy costs rises of approximately **£964,000 per year** using Carbon Trust predictions of energy price and demand increases. These projects have been colour coded as green and yellow.

Additional projects have been identified (coded orange) which are capable of being part-funded by Salix to the value of £3 million. This would require the council or schools to contribute £1.5 million in order to access this funding (£1.4 million city council and £145k from schools' devolved budgets). A **27% reduction** in the council's carbon footprint could then be achieved, saving over 10,000 tonnes of carbon dioxide and avoiding energy cost increases of approximately £1.56 million per year by the end of the five-year programme. This may be achieved by setting up a sustainable invest to save fund to enable the effective delivery of these projects.

However, in the current financial climate it is not possible to identify suitable funding for these schemes.

A number of more stretching projects have also been proposed which require additional feasibility work to be carried out before being fully project planned. These have the capacity to save over 5,000 tonnes of carbon dioxide per year which would allow the council's carbon footprint to be reduced by over **40%**, placing it at the forefront of councils actively managing their carbon emissions and demonstrably tackling climate change. These red-coded projects cannot currently be funded and a robust business case for each of them would need to be made or external funds obtained. These external funds can and do arise and your officers will continue to actively investigate all such sources. One example is the initiative to install a heat pipe from the Energy from Waste Plant to the city centre in order to supply council buildings with low cost heat with a low carbon footprint. Negotiations with funding bodies are ongoing for this project.

5. Carbon Management Plan Financing

5.1 Assumptions

The following assumptions have been made in calculating the benefits and savings related to the projects specified in section 4 and the value at stake figure given in section 3.3.

- A proportion of the Council's electricity is sourced on a green tariff of "good quality CHP". Where appropriate the carbon emission factor related to good quality CHP has been used to determine associated carbon dioxide emissions and to enable accurate decision-making about carbon reduction projects.
- The Carbon Trust predictions for energy price rises and energy demand remain accurate (section 3.3 refers)
- Unit cost of electricity for 2007 baseline year 7 pence per kilowatt hour (kWh)
- Unit cost of gas for 2007 baseline year 2.1 pence per kWh
- Unit cost of diesel for 2007 £1.00 per litre
- For projects related to refurbishment or rebuild of buildings it has been assumed that there will be no significant change in operational hours or the use of the buildings. Extensions to schools to accommodate more pupils would require separate consideration.
- For carbon reduction projects that are incorporated into larger schemes (such as school rebuilds) the project costs related to enhancing energy efficiency are best estimates.
- Project costs are based upon current prices and are liable to change due to market conditions.

The following assumptions have been made in relation to the delivery of carbon reduction projects.

- Salix funded projects will be matched with funds already allocated by the council.
- Sufficient capacity within the insulation installation industry will be available.
- Schools will readily engage with us to work in partnership to deliver carbon reduction projects.
- Project trials of energy wardens and LED lighting will be rolled out on the completion of successful trials.
- Adequate capacity of in-house maintenance and project management teams will be made available.

5.2 Benefits / savings – quantified and un-quantified

Four scenarios are outlined below showing the cost savings and CO₂ savings for each year of the programme. The four scenarios are those outlined at section 4.5 above but shown in tabular form.

Green projects	2008/09	2009/10	2010/11	2011/12	2012/13
Annual cost saving £s	£79,500	£242,000	£570,000	£784,000	£897,000
Annual CO ₂ saving tonnes	740	1,700	3,800	5,000	5,500
% of target achieved	7	15	34	44	50

Green plus yellow projects	2008/09	2009/10	2010/11	2011/12	2012/13
Annual cost saving £s	£79,500	£244,000	£627,000	£851,000	£964,000
Annual CO ₂ saving tonnes	740	1,700	4,500	5,700	6,300
% of target achieved	7	15	40	50	56

Green, yellow & orange projects	2008/09	2009/10	2010/11	2011/12	2012/13
Annual cost saving £s	£79,500	£416,000	£881,000	£1,258,000	£1,559,000
Annual CO ₂ saving tonnes	740	2,560	6,440	8,400	10,100
% of target achieved	7	23	57	75	90

All projects	2008/09	2009/10	2010/11	2011/12	2012/13
Annual cost saving £s	£79,500	£511,000	£984,000	£1,406,000	£2,747,000
Annual CO ₂ saving tonnes	740	2,840	6,780	9,100	15,300
% of target achieved	7	25	60	81	136

* Figures have been rounded

To summarise:

- Given the current level of resources for projects either completed or currently underway only 50% of the aspirational target can be achieved.
- If the current Salix fund is used in its entirety to provide resource for the yellow coded projects then this figure increases to 56% of the target.
- If a new ringfenced sustainable fund of £3 million is established under Salix funding rules then all the orange coded projects can be carried out enabling achievement of 90% of the target (this would require the city council to contribute half the funds, £1.5 million and would be subject to Salix approval as well as detailed project planning)
- If robust business cases can be made for the red coded projects (after detailed assessment of their feasibility) then this would enable the target to be overachieved by

36% - a total saving of 15,300 tonnes of carbon dioxide against the target of 11,270 tonnes

Unquantified benefits:

- Reduction of exposure to financial liabilities of the Carbon Reduction Commitment.
- Enhanced monitoring of carbon emissions for purposes of National Indicator 185.
- Embedding of carbon management strongly within corporate decisions and policy making
- Demonstration of strong leadership on carbon management to the community and the region.
- Demonstration of effective management of resources for Comprehensive Area Assessment under item 3.1 Use of Resources

5.3 Additional resources

The table below represents estimates of the resource required from directorates of the city council in order to effectively carry out projects within the green, yellow and orange categories. For the most part the resource represents calls on existing resource within the directorates identified for the purposes of project management, monitoring of energy consumption, forecasting as well as training and awareness raising. The units are full time equivalent posts (FTEs).

FTEs	2008/09	2009/10	2010/11	2011/12	2012/13
City Services	0.5	0.5	1.0	1.5	1.5
City Development	0	0.3	0.85	1.0	1.1
Customer and Workforce Services	0	0	0.04	0	0

5.4 Financial costs and sources of funding

Figures in £ 1000's	2008/09	2009/10	2010/11	2011/12	2012/13
Annual costs:					
Total annual capital cost	783	1,130	898	1,042	1,378
Total annual revenue cost	3	27	18	46	16
Total costs	786	1,157	916	1,088	1,394
Committed funding (green and yellow projects)					
Committed annual capital	783	841	268	93	0
Committed annual revenue	3	6	8	6	6
Total funded	786	847	276	99	6
Unallocated funding (orange and red projects)					
Unallocated annual capital	0	289	630	949	1378
Unallocated annual revenue	0	21	10	40	10
Total unfunded	0	310	640	989	1388

6. Actions to Embed Carbon Management within the city council

The Carbon Management Embedding Matrix (Appendix A) is a tool provided by the Carbon Trust to assess to what extent carbon management practices are embedded into council operations. Using the Carbon Management Embedding Matrix members of the Carbon Management Team and Project Board evaluated the council's current embedding performance against each of the seven criteria. The target level of embedding performance to be achieved within 3 years was also determined.

The table at the top of Appendix A gives the results of the Carbon Management Embedding exercise.

This section describes the key actions proposed to achieve best practice in embedding carbon management within the city council.

6.1 Corporate Strategy – embedding CO₂ saving across the city council

At the internal launch of the LACM 6 programme on 9th July 2008, it was jointly decided by a project board of senior officers and Elected Members that the carbon reduction target would be 30% by 2013 based on a 2007 baseline. This was subsequently publicised in the local press and promoted within the city council by Councillor Nigel Lee, Cabinet Member for Climate Change, Housing and Sustainability.

As mentioned in section 2.1, the city council with its partner, the Coventry Partnership, produced a Climate Change Strategy in March 2008 after a three-month period of public consultation. This commits the city to reduce its carbon dioxide emissions by 70% by 2050 (this figure is likely to be revised up to 80% at the next update of the strategy in April 2009).

This Carbon Management Plan, when approved by Management Board and Cabinet, will constitute a clear statement of commitment for the coming five years and will inform the council's other policies to continue to deliver carbon savings.

The apportionment of carbon saving targets to directorates and divisions has not yet taken place, however it is clear that making a tighter link between activities and carbon reduction targets is essential to connect activity and output more closely. This is further reinforced by the arrangements which will be necessary for the Carbon Reduction Commitment where a higher degree of accountability will be required. It is therefore intended to propose a scheme of internal carbon budgets in advance of the introduction of the CRC.

The city council no longer has a dedicated Corporate Plan but expresses its aims and objectives through the Coventry Partnership Sustainable Community Strategy. This has two underpinning themes, one of which is "making a positive environmental contribution and tackling climate change." This ensures that all activities and policies have climate change reflected in them and that the Local Area Agreement targets are efficiently delivered. As mentioned in section 2.1, the Coventry Partnership adopted NI 186 as one of the 35 national indicators in the LAA.

6.2 Programme Management – bringing it all together effectively

This element aims to pull together the key elements of managing the programme which includes factors such as the human resources required in the shape of the project board and the carbon management team as well as dealing with succession planning and ongoing stakeholder management. Section 7 of this report deals with these elements in more detail.

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

One of the key initiatives for embedding carbon management is to deploy energy wardens in each department to form a central part of the communications plan. Their role will be to educate and maintain awareness of carbon management amongst staff, and provide local feedback and support to the energy team. The aim of the programme is to bring about measurable environmental improvements in order to reduce carbon emissions from Council property.

Energy wardens will undergo formal training on environmental issues and how to audit their sites in relation to energy use and waste/recycling, in order to:

- increase awareness of resource efficiency of energy and water use along with waste management and identify potential savings.
- identify opportunities for improving energy, water and waste management.
- provide support to front line staff involved in energy, water and waste control
- inspire an informal competitive atmosphere between sections and departments to further drive down carbon emissions.

Sustainability is being communicated as a mainstream issue on the corporate agenda. The implications of the transition to a low-carbon workplace are profound, and steps are being taken to ensure that carbon management is a key consideration for all employees. These include:

- Raising awareness of energy issues to new employees at their initial corporate induction. Measures include the production of a new 'Climate Change' display panel, alerting staff to local climate change issues and how the Council is implementing strategies to mitigate and adapt to the potential threats of climate change. It is planned to ask employees to sign up to a Planet Pledge at their induction.
- Educating employees at corporate training sessions - this will be delivered to both new employees and existing staff to ensure that all employees are armed with the knowledge to take responsibility for energy use.
- A series of high profile internal campaigns will be launched to further raise awareness and educate employees about the importance of carbon management. This could follow the successful example of the Council's Switch It Off campaign that is now a regular citywide event each November.

The explicit inclusion of a responsibility to work in a low carbon way and to identify carbon saving opportunities is to be incorporated into job descriptions at all levels. In the same way as equality of opportunity and health and safety responsibilities are incumbent on all employees at all levels then it is intended to work with colleagues in HR to embed carbon management into duties in a consistent fashion.

At Project Board meetings since the internal launch Elected Members have strongly supported the idea of incorporating carbon management issues into employees' regular Personal Development Reviews (PDRs). PDRs are part of the employee development scheme and take place once a year between April and June to identify training needs as well as setting objectives for the coming year. The action plan produced as a result of an employee's PDR informs the discussion at regular supervision meetings with their manager. The inclusion of carbon management issues in the regular supervision meetings will allow the low carbon message to be consistently raised and monitored with all employees and facilitate the possible setting of targets at a directorate, department, division and team basis in the future.

6.4 Data Management – measuring the difference, measuring the benefit

As stated earlier in the introduction, the Energy Management section monitors and pays the energy bills for all the City Councils operational property including schools, and reports on the key performance indicator NI185. To assist in this, the Energy Management Section has an extensive monitoring and targeting database, supplied by SystemsLink, which has data on the majority of the buildings going as far back as 1985.

The database can hold simultaneously actual invoiced data, manual read data and where appropriate half hour read data. The Energy Management Team have developed a number of modelling and output reports that assist in identifying and reporting on energy and water. Weather data, from a local nationally-accredited weather station, is utilised by the team to accurately monitor the energy usage patterns against weather conditions. The Energy Management team, utilising nationally published degree day algorithms, have developed their own local degree day data modelling technique which allows for normal periods of building closure and consequently a reduced number of degree days. Modelling in this way ensures more accurate regression analysis producing a consistently higher correlation coefficient. The database can reside within a web environment which will allow site managers to access the database and to record their own meter readings via password protected access.

As part of the roll-out of the project to raise staff awareness it is intended to make this facility available to users. This will help support ownership and the work outlined in 6.3 and 6.5. The Energy Management Section routinely provides monitoring and reporting information at the start of each financial year to all sites and for each meter. The move toward a web based system would ensure ownership by key staff and remove the need for paper copies being produced. For those that are unable to access the data we will be looking to adopt an email reporting system.

6.5 Communication and Training – ensuring everyone is aware

A series of high profile campaigns will be launched to raise staff awareness of carbon management, in a drive to shift the organisation to a 'low carbon council culture'. The rolling awareness campaigns will include:

- Inclusion of energy, water and waste management issues in corporate inductions
- Rolling out of staff training sessions on carbon management, showing employees on how to save carbon both at work and home.
- Deployment of energy wardens in each department to educate and maintain awareness of carbon management amongst staff.
- A roll-out of internal campaigns will be consistent to ensure staff awareness is maintained, to include schemes such as 'Just-One-Thing' where employees are encouraged to make pledges to commit to a low-carbon lifestyle and the City Council's 'Switch It Off' campaign.
- A regular feature in the Core Brief to senior managers ensuring that carbon saving hints/tips and achievements are quickly and effectively cascaded down departments.

The introduction of carbon management at the staff induction is vital to educate new employees about how we plan to achieve a 'low carbon council culture'. Key messages deployed are:

- We turn off our computers, printers and photocopiers at evenings and weekends, and turn our monitors off if we are away from our desks for more than ten minutes.

- We avoid printing documents where possible but that if we really must print then we do so double-sided.
- We avoid posting documents and try to e-mail or telephone instead.
- We will open a window instead of turning on the air-conditioning.
- We try to take the stairs instead of the lift.
- We switch off lights when we leave the room.
- We try to conduct meetings via tele-link to avoid unnecessary travel.
- We consider carbon management in all meetings we attend, minimising unnecessary staff travel, limiting the amount of handouts and electronic equipment used.
- We consider sustainability when purchasing goods and services.
- We avoid driving alone into work and to meetings and instead we walk, cycle, take public transport or car share.
- We track our carbon footprints at our specific carbon account community <http://coventrycc.thecarbonaccount.com/>.

Staff training sessions will be tailored to specific groups of employees. For example, security and cleaners tend to be the last staff remaining at the end of the working day, so their training needs will focus on energy conservation. Appropriate and clear messages will be developed for all teams to ensure that they all grasp the key ways in which they can help cut carbon in their everyday activities.

It is important to know what people think about climate change, to check their understanding of the issues and their present behaviour so we can set a baseline against which improvements can be made. Staff attitudes to carbon saving will be monitored via online surveys conducted on the intranet, along with messages with payslips and appraisals, so that needs can be met and continual improvements be made.

The council's carbon saving successes will be communicated to local residents to demonstrate community leadership, primarily via the launch of a 'Go Green' supplement in the local newspaper, which will become a regular fixture. This will be accompanied by monthly features in council publications such as community news-magazine Citivision and corporate magazine Insight.

6.6 Finance and Investment – the money to match the commitment

Please see section 5 of this report for financial details.

6.7 Policy Alignment – saving CO₂ across our operations

It is clear that all city council policies will need to be scrutinised to take account of the carbon reduction target in the Carbon Management Plan alongside the commitments to reduce carbon within the Climate Change Strategy and the Sustainable Community Strategy. It is essential that all policies are aligned to maximise the synergies between plans and to ensure a consistent approach.

The key corporate policies in this respect are:

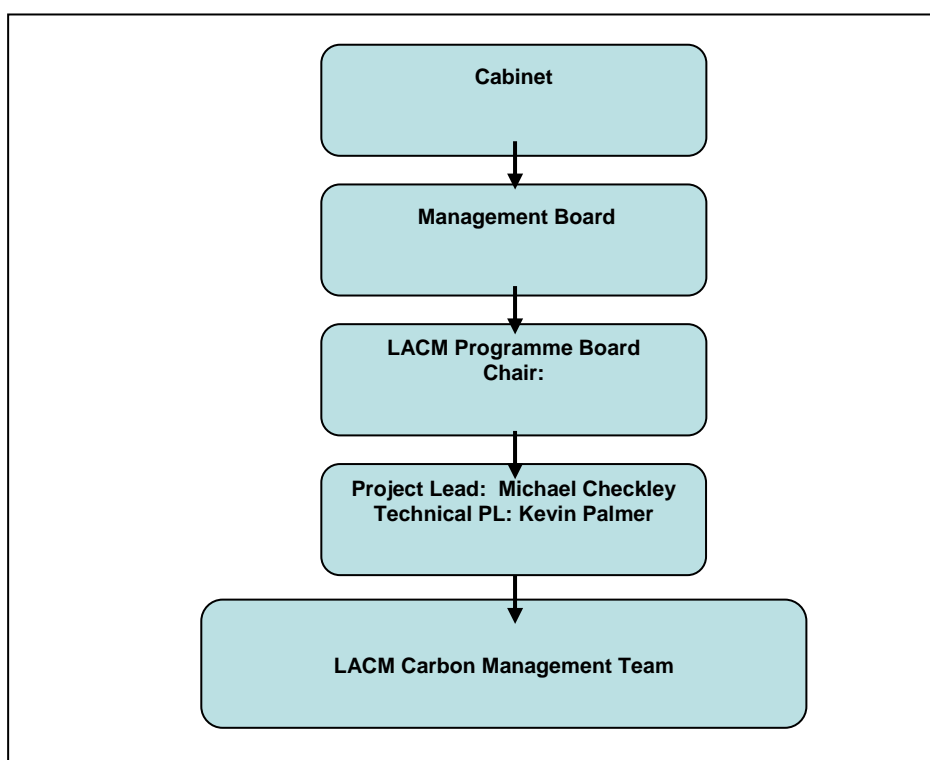
- Housing Strategy
- Private Sector Housing Strategy and Housing Assistance policy
- Green Space Strategy
- Corporate Property Strategy
- Sustainable Procurement Policy
- Environmental Policy
- Municipal Waste Management Strategy
- Education for Sustainable Development Strategy
- Air Quality Strategy
- Cultural Strategy
- Local Transport Plan
- Corporate Plan
- Cabinet Member Plans
- Local Area Agreement Delivery Plan
- Economic Development Strategy
- Training and Development Strategy
- Driving Policy
- Travel and Subsistence Policy
- Core Strategy
- Older Peoples' Strategy

It is important that the opportunity to input to the review of these policies and strategies is taken as soon as possible and contact will be made with Chief Executives Directorate to facilitate this.

7. Programme Management of the CM Programme

To ensure that the Carbon Management Programme is effective and has ownership it is important to define the responsibilities of key individuals and groups involved in delivering the programme.

The diagram below defines the levels of authority related to Carbon Management within Coventry City Council.



Sections 7.1 and 7.2 describe the managerial organisation for the programme and details the responsibilities of the Programme Board and Carbon management Team.

7.1 The Programme Board – strategic ownership and oversight

Senior managers from each directorate within the Council make up the Programme Board.

The Programme Board is responsible for setting the strategic direction for Carbon Management within the Council, agreeing the resources to be devoted to actions in the Implementation Plan and reviewing progress against the objectives outlined in this plan.

The Programme Board meets every two months and is chaired by the Head of Street Services and Public Protection.

The Programme Board comprises:

Cllr Nigel Lee – Cabinet Member for Climate Change, Housing and Sustainability (Political Sponsor)

Stephen Pickering – Director, CSD (Project Sponsor)

Head of Financial Management, FLS

Head of Policy and Business, CS

Head of Strategic Planning, CLYP

Assistant Chief Executive, CEx
Head of Property Services, CDD
Director, CLYP
Corporate Policy and Research Manager, CEx
Performance and Scrutiny Manager, CEx
Business Support Manager, CWS

7.2 The Carbon Management Team – delivering the projects

The Carbon Management Team

The Carbon Management Team is a group of key officers from across the Council whose role is to deliver the projects and improvements identified within this Carbon Management Plan. The Carbon Management Team meets monthly and is chaired by the Project Leaders, it comprises:

Michael Checkley – Climate Change Team Manager (Project leader – change management)
Kevin Palmer- Energy Manager (Project leader – technical)
John Kyffin-Hughes - Sustainability Consultant
Senior Communications Officer
Operational Property and Facilities Manager
Building Consultancy Manager
Sustainable Transport Co-ordinator
Transport & Supplies Manager
Fleet Manager (deputy for Transport & Supplies Manager)
Street Lighting PFI Manager Waste Services Manager
Major Projects Manager
Procurement Manager
Decent Homes Manager
Team Leader Development Plans
Building Control
BSF Programme Director
BSF Programme Manager (Deputy to BSF Programme Director)
City Services Finance Manager
Engineering Consultancy Manager
Head of Service for Community Services
Transport Planning Officer
Project and Value for Money Manager

7.3 Succession planning for key roles

Maintaining continuity of leadership for an ambitious project such as this is crucial and although staff turnover at senior levels within councils is usually quite low, it is prudent to plan for such eventualities.

To manage the risk of key individuals leaving the employment of the authority it is planned to embed the Carbon Management Plan within the corporate structure without delay and to ensure that Elected Members (through Cabinet) and the paid service (through Management Board and cascaded briefings) are made fully aware of its aims.

As mentioned previously, both the Climate Change Strategy and the Sustainable Community Strategy contain corporate commitments to carbon reduction which are closely monitored through National Indicators 185 and 186 – effective performance management of these is a key corporate priority and therefore will not be subject to difficulties with succession planning.

7.4 Ongoing stakeholder management

Achieving our challenging carbon reduction target will require the engagement and working in partnership with various internal and external organisations and groups of people. A range of stakeholders that will influence the successful outcome of the programme has been identified as given in the table below. Each stakeholder group has been rated on their influence in realizing a successful outcome of the programme and the level of impact the project will have on the stakeholder group.

To facilitate good stakeholder engagement regular targeted communications will be sent as detailed below:

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

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

Stakeholder Group	Influence*	Impact *	Their interest or issues	Means of Communication
Elected Members	H	H	Demonstrably serving their constituents' interests. Integration of national party policies with local priorities. Possible tensions with other cabinet portfolios. Delivering services within a balanced budget.	Six monthly performance reports. Monthly Cabinet Member briefings. Bi-monthly Project Board meetings.
Management Board	H	H	Delivering Council's services within a difficult financial climate. Tensions between directorates.	Project board précis presented to board every six months
Coventry Partnership incorporating environmental theme group	L	L	Delivering the strategic aims of the Sustainable Communities Strategy which includes a key theme of tackling climate change.	Reports to Coventry Partnership Operations Group.
Salix	H	L	Provision of funds for economic, proven carbon cutting projects	Existing communication lines used through Energy Manager.
Employees	H	L	Adapting to low carbon ways of	Production of clear communications

			working and possible undertaking tasks not currently expected of them. Acceptance of unpopular measures that may inconvenience certain employees.	strategy by colleagues in Corporate Communications.
Local Universities	M	L	Working in partnership with local authority to pursue joint projects aimed at carbon reduction between both parties.	Cenex working group and Coventry Partnership Environmental Theme Group
Cenex	M	L	Provision of funds to kick start low emission vehicle take up to economic sale volumes.	Cenex working group and Coventry Partnership Environmental Theme Group
Serco	M	H	Provision of ICT services to the City Council.	Contracts and Governance arrangements plus Procurement.
Schools, Head teachers, Governors, facilities staff, pupils	H	H	Delivering a high standard of educational achievement within budget.	Eco-schools, DEC's and energy benchmarking. Other training and support.
Improvement and Efficiency West Midlands (RIEP)	L	H	Potential provision of grant funding in order to pump-prime carbon reduction projects.	Procurement colleagues and ad hoc communications with project officers.
Coventry Teaching PCT	L	L	Partnership working in terms of reducing carbon footprint.	CWS colleagues and Coventry Partnership Environmental Theme Group
Coventry Mental Health Partnership Trust	L	L	Partnership working in terms of reducing carbon footprint.	CWS colleagues and Coventry Partnership Environmental Theme Group
University Hospital Coventry & Warwick	L	L	Partnership working in terms of reducing carbon footprint.	CWS colleagues and Coventry Partnership Environmental Theme Group

7.5 Annual progress review

Our progress against the Carbon Management Plan will be checked via the City Council's existing performance management process. The Carbon Management Plan will be owned by the Cabinet Member for Climate Change, Housing and Sustainability and will be reported on as part of his Cabinet Member Plan through to Cabinet.

In addition, the Project Board will receive two-monthly updates of progress against the plan. Management Board will receive six-monthly updates of progress.

Appendix A: Carbon Management Matrix - Embedding

Target	5	5	5	5	5	5	5
Present	4	4	3	4	3	4	2

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

Appendix B: Definition of Projects

This template should be used to define each of the projects within your programme. It should contain all the key information without being too long – one page would be a fair guide. The owner of the project should, if at all possible, complete the Project Definition.

Please take this template as a basis and tailor it to your own requirements.

Project:	A short name for the project
Reference:	It would help the Carbon Trust if you also use the following reference: LA6-[first three letters of your authority]–[sequence number, e.g. 001] but you may choose to use a unique reference of your own.
Owner (person)	Name of the person responsible for delivering the project
Department	Which part of the organisation the project sits within
Description	A short description of the project, no more than a paragraph
Benefits	<ul style="list-style-type: none"> Financial savings: £ [x] Payback period: [x] years CO₂ Emissions reduction: [x] tonnes of CO₂ % of target – the percentage of your CO₂ saving target will this project annually contribute
Funding	<ul style="list-style-type: none"> Project cost, e.g. the initial cost of implementing the project Operational costs, e.g. annual maintenance or running costs Source of funding: internal, external, investment criteria to be met etc. Say how /when decision on funding will be made
Resources	<ul style="list-style-type: none"> Additional resource (e.g. people) requirements to enable delivery and where these will come from If this project will be delivered within current resources, say so
Ensuring Success	<ul style="list-style-type: none"> Key success factors, or things that will need to happen for this project to succeed Principal risks: technical, financial (eg what happens if the project is insufficiently resourced), etc.
Measuring Success	<ul style="list-style-type: none"> Metrics for displaying performance or achievement When success will be measured / evaluated
Timing	<ul style="list-style-type: none"> Milestones / key dates e.g. <ul style="list-style-type: none"> start date: dd/mm/yyyy completion date (when it will deliver savings): dd/mm/yyyy interim deliverable / decision points <p><i>[you could also lay these out as a milestone chart for ease and clarity]</i></p>
Notes	