East Devon
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CARBON TRUST

Carbon Management Plan

2009 - 2014

Contents

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Foreword from Councillor Graham Brown and Mark Williams, Chief Executive East Devon District Council

East Devon District Council's vision is for an 'Outstanding and sustainable quality of life for everyone in East Devon'. This Carbon Management Plan is an important step in putting sustainability at the heart of the Council's activities and service delivery. In so doing the Plan reflects our Corporate values: the courage to lead, the wisdom to listen, a passion for people, places and performance and champions of improvement and challenge.

Cllr Graham Brown
Environment Portfolio Holder

Mark Williams
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 in line with its Kyoto commitments and the Local Authority Carbon Management programme is 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 by lowering their carbon emissions.

East Devon District Council was selected in 2008, admidst strong competition, to take part in this ambitious programme. East Devon District Council partnered with the Carbon Trust on this programme in order to realise vast carbon and costs savings. This Carbon Management Plan commits the council to a target of reducing CO_2 by 27% by 2014 and underpins potential financial savings to the council of around £500,000 per annum by 2014.

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

Richard Rugg
Head of Public Sector, Carbon Trust

Management Summary

East Devon District Council adopted its Climate Change Strategy in March 2008. One of the priority actions within the Strategy is to: 'Carry out a carbon management programme with the Carbon Trust to establish the carbon footprint for East Devon District Council and to establish a detailed action plan for energy savings'.

At the County level, the Carbon Management Plan is East Devon District Council's response to the Local Area Agreement target to reduce carbon dioxide emissions. At the National level, the same target is embedded within National Indicator185 and within the Comprehensive Area Assessment, Use of Natural Resources.

The Carbon Management Plan distinguishes between two different scope areas: Scope 1 covers those areas of activity where carbon saving would result in a relative financial saving to East Devon District Council. Data gathered so far suggests emissions from these sources are around 2,678 tonnes of carbon dioxide per annum. Scope 2 covers those areas of activity where carbon saving would result in a relative financial saving to another party – either Council house tenants, Leisure East Devon or staff who commute by car. Data gathered so far suggests emissions from these sources are around 22,724 tonnes of carbon dioxide per annum. East Devon District Council's target is for a reduction in emissions of 45% by 2014 from scope 1 and 25% from scope 2 areas, representing a total of 11,431 tonnes of carbon dioxide per annum. This averages out as a 27% reduction overall.

Due to the scope of this Carbon Management Plan being wide, including areas over which East Devon District Council has no financial control, there is a relatively low financial value at stake for East Devon District Council. However, there is a substantial value at stake for our Council house tenants and thus the Carbon Management Plan should reduce the number of tenants in, or close to, fuel poverty. Many of the measures would also increase comfort levels and therefore be of benefit to health.

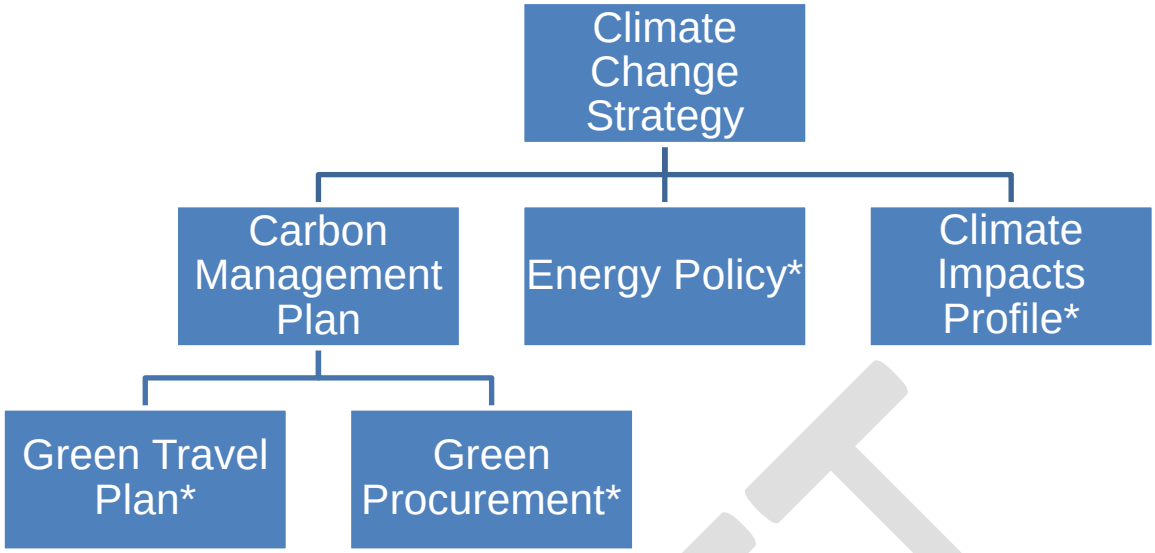
The main target for investment will be Council owned housing stock. It is recognised that a substantial proportion of this housing will still be in use in 2050, so measures taken now to improve its efficiency will have long term benefits. However, a substantial insulation programme has already been undertaken, resulting in the housing stock already having 22% lower carbon dioxide emissions than average for local authority housing. The second target for East Devon District Council is to reduce emissions from travel, both business and commuting. This is seen as hard to achieve because it is more about behavioural change than technical fixes. It is recognised that reducing travel can bring added benefit besides a reduction in emissions, such as improving the health of staff, providing a more efficient service to customers and having more cross departmental links. The third area for reduction is buildings. This is currently a difficult area to take forward not least due to the uncertainties of Local Government Reorganisation but there are many potential projects involving those buildings that are unlikely to be affected by any boundary changes such as Leisure East Devon facilities and public conveniences.

1 Introduction

The Carbon Management Plan will eventually be part of a suite of documents (see over page) which address the issues of climate change. There are two main areas of work in tackling climate change:

- **mitigation** measures are those actions designed to reduce the emission of greenhouse gases
- **adaptation** measures are those actions designed to reduce the impact of climate change

The Carbon Management Plan is only concerned with mitigation whereas the Climate Impacts Profile is only concerned with adaptation. Both the Climate Change Strategy and the Energy Policy involve consideration of both mitigation and adaptation.



*denotes document still in process of development

The Carbon Management Plan represents East Devon District Council's vision for carbon management over the next 5 years, from 2009 until 2014.

East Devon District Council has set a target of a 27% reduction in carbon dioxide emissions by 2014 in comparison to the 2007/08 baseline.

This is an ambitious target as it is challenging both quantitatively and in terms of the scope of the Carbon Management Plan. East Devon District Council has included areas which are outside its direct managerial control, such as its housing stock, commuting mileage and some outsourced services as these are significant contributors to local carbon dioxide emissions.

East Devon District Council embarked on the Carbon Management Programme in April 2008 as one of the actions contained within its Climate Change Strategy. The programme can be seen as a 5 step process:

Step 1: Mobilising the organisation

This included appointment of a Carbon Management Programme Leader, identifying Councillor and Corporate Sponsors and officers who would support and deliver the programme. Additionally providers of outsourced services were informed of the existence of the Programme and their role within it.

Step 2: Set baseline, forecast and targets

Prior to the Carbon Management Programme there had been little gathering and analysis of energy consumption data. The need to be able to accurately assess East Devon District Council's carbon footprint meant that new processes needed to be implemented. The first measure of East Devon District Council's carbon footprint will be approximate due to both the method of data collection and the use of a mathematical model to estimate emissions from the housing stock. It is expected that data collection methods will improve over time which will result in more accurate data in the future.

Step 3: Identify and quantify options

The Carbon Management Plan lists ideas for projects that could contribute towards the target of a 27% reduction in carbon dioxide emissions by 2014. There is some attempt at quantifying costs and potential savings, but it is recognised that the financial projections will improve after the experience of the first year of implementation. Projects to reduce carbon emissions have been identified from a variety of sources – including service plans, staff awareness sessions, the Green Team, the Climate Change Strategy, other local authorities and the Carbon Trust.

Step 4: Finalise Carbon Management Plan

It is envisaged that the Carbon Management Plan will be considered for approval by Executive Board on 7 October 2009.

Step 5: Implement Carbon Management Plan

The Carbon Management Plan is a 5 year programme so its implementation will be managed and monitored up until 2014 by the appropriate officers and Councillors. Some of the projects in the early years are experimental and the experience gained from them will influence choice of later projects.

2 Carbon Management Strategy

Carbon Management is a rapidly changing and developing area of work. Over the 5 years of the Carbon Management Plan, it is predicted that drivers stemming from EU directives and Government policy will get progressively more challenging. Indeed, immediately following the formation of the Department of Energy and Climate Change in October 2008 the Government increased its CO_2 reduction target from 60% to 80% by 2050, relative to the 1990 baseline. This is a major change and will only be achievable at the local authority level with substantial changes to the way that services are delivered.

One of the UK Government's most important mechanisms for carbon management is the Carbon Reduction Commitment, a system of trading in carbon credits, will be in force by 2011. In its current position, East Devon District Council's expenditure on energy is too low to be part of the first wave of carbon trading local authorities. However, it is possible that by 2014 the threshold for joining the carbon trading scheme will have been lowered and East Devon District Council would then be obliged to take part.

2.1 Context and drivers for carbon management

The UK Government has placed an emphasis on local authorities setting a leading example on Climate Change. Action by local authorities will be critical to the achievement of the Government's climate change objectives. This has created a number of legislative drivers for local authorities:

- **Energy Performance of Buildings Directive and Display Energy Certificates**: From 1 October 2008 there was a legal requirement for all public sector buildings with a total useful floor area of over 1,000m^2, to show a Display Energy Certificate in a prominent place, clearly visible to the public.[1] This applies to eight Council owned buildings.
- **NI185 – percentage CO_2 reduction from LA operations:** the public sector is in a key position to lead on efforts to reduce CO_2 emissions by setting a behavioural and strategic example to the private sector and communities. Measurement against this indicator requires each local authority to calculate its CO_2 emissions from analysis of the energy and fuel use in their relevant buildings and transport, including where these services have been outsourced.[2]

- [1] more information on DEC can be found at www.communities.gov.uk/planningandbuilding/theenvironment/energyperformance/certificates/displayenergycertificates
- [2] more information on National Indicators can be found at: www.defra.gov.uk/environment/localgovindicators/indicators.htm
- [3] EDDC is not required to report on this indicator which is based on centrally produced statistics.

- **NI186 – per capita CO_2 emissions in the LA area[3]:** local authorities are uniquely placed to provide vision and leadership to local communities by raising awareness and to influence behaviour change. The percentage reduction in CO_2 per capita in each LA will be reported annually. This will be produced by central Government based on CO_2 emissions in the local area from business and public sector, domestic housing and road transport.
- **NI187 – tackling fuel poverty:** this indicator measures the proportion of households on income related benefits for whom an energy assessment of their housing has been carried out, to produce a measure of their home's energy efficiency. It applies to all households in both private and social sectors. This indicator therefore identifies where it is likely that energy saving measures would be most effective. Any energy saving measures carried out as a result would impact directly on NI186, above.
- **NI188 – adapting to climate change:** this indicator measures a local authority's preparedness to manage risks to service delivery, the public, local communities, local infrastructure, businesses and the natural environment from a changing climate, and to make the most of new opportunities. Thus, although it is about adaptation to, rather than mitigation of, climate change, any measures taken under the carbon management programme have to be with due regard to the need for adaptation to the amount of climate change which is now unavoidable.
- **NI194 – Air quality – reduction in NO_x and primary PM_{10} emissions through local authority's estate and operations:** the aim of this indicator is to identify LAs that are proactive in minimising air pollution emissions from their estate and operations. Each LA will calculate their PM_{10} (particulate matter) and NO_x (nitrous oxides) emissions from analysis of the energy and fuel used in their buildings and transport, including where services have been outsourced. Efforts to reduce energy consumption will, in general terms, improve both this indicator and NI 185.

Non-legislative drivers include:

- **Devon Sustainable Community Strategy and Local Area Agreement** The Local Area Agreement is a three year plan towards achieving the 10 year targets of the Devon Sustainable Community Strategy. This includes targets to reduce carbon dioxide emissions, 'green' public sector procurement, improve energy efficiency of housing stock and to support businesses involved in renewable energy.
- **Rising energy costs:** although opinions are somewhat divided, the world is close to, if not past, the tipping point for peak oil. This means that oil supplies will be reduced whilst demand continues to increase and, what oil there is, will be more expensive to extract. This will result in further increases in the price of oil. Additionally, as the UK becomes a net importer of energy, so the security of energy supply can no longer be guaranteed.
- **Stern Review:** the important outcome of the Stern Review was the realisation that it is much better to mitigate against climate change now (by reducing carbon dioxide emissions) than to carry on with business as usual and then try to adapt to the new climate. However, we are already locked in to some degree of climate change due to the inertia in the climate system.
- **Demographic changes in East Devon:** there is a general movement of people towards the south west and the population of East Devon is expected to grow well in excess of 30,000 people by 2050 from a population of 135,000 in 2005. In addition, there is a trend for people to live in smaller numbers per household.
- **Public pressure:** there is considerable enthusiasm amongst the local community for tackling environmental issues. Community groups in Ottery St Mary, Seaton, Sidmouth and Exmouth are all working towards Transition Town status whereby their community works to build resilience in an oil restricted economy.

2.2 Strategic themes

- **Council owned housing stock:** A substantial proportion of the Council owned housing stock will still be in use in 2050, so measures taken now to improve its efficiency will have long term benefits. Additionally, the proportion of housing tenants' income spent on energy is rising so energy efficiency measures and the generation of electricity or heat renewably could result in a substantial relative financial saving for our Council house tenants. Thus the Carbon Management Plan should reduce the number of tenants in, or close to, fuel poverty. Besides reducing discomfort and risks to health due to cold in winter, improvements to housing stock could also reduce heat stress during summer heat waves.
- **Green travel plan** The reduction of carbon dioxide emissions from transport is seen as a difficult but vital part of the Carbon Management Plan. The challenge is great because it is more about behavioural change than technical fixes. It is recognised that establishing and maintaining the momentum of the Green Travel plan will require consistent effort, but it is hoped that behavioural change in the work place could well lead to behavioural change outside of the work place. It is also recognised that there are other benefits to reducing car travel such as improved health, providing a more efficient service to customers and having more cross departmental links.
- **Buildings** Uncertainty around Local Government Reorganisation is not helpful, but there are many potential projects involving those buildings that are unlikely to be affected by any boundary changes such as Leisure East Devon facilities and public conveniences.
- **Embedding** Embedding consideration of the carbon impact of any decision, process or action across all of East Devon District Council's activities is an essential part of getting carbon established as a 'bottom line'. The Carbon Management Plan includes steps to move towards the more challenging levels of the embedding matrix (Appendix A).

3 Emissions Baseline and Projections

3.1 Scope

Three levels of scope for carbon management have been identified:

Scope 1: Areas of service delivery in which reducing carbon emissions would result in a financial benefit to East Devon District Council. Due to the predicted rises in energy costs, this may not necessarily mean a reduction in energy costs but it would mean that energy costs would not be as high as they would have been had no action been taken. Scope area 1 includes:

- Council owned buildings energy use
- Council owned fleet fuel use
- Council business travel
- Refuse and recycling fleet fuel use
- Energy used in communal areas of Council owned housing
- Water used in Council buildings and operations
- Carbon embedded within procurement (Note: no attempt has been made to quantify this carbon in the 2007/08 financial year, but over the lifetime of the Carbon Management Plan the carbon cost of items will be an integral part of procurement policy.)

Scope 2: Areas of work in which reducing carbon emissions would result in a financial benefit to another party such as Council owned housing tenants, Leisure East Devon and staff. Measures to reduce carbon emissions within the level 2 scope will have a definite and measurable affect. Scope area 2 includes:

- Energy used in council owned housing
- Energy used by Leisure East Devon in delivering swimming pools and leisure centres

- Council employees commuting

Scope 3: Areas of work in which East Devon District Council's role is to encourage and guide people within the community and business sector to reduce their carbon emissions. Data collected regionally suggests that East Devon ranks 29th out of 45 local authorities in the south west with carbon dioxide emissions at 8.5 tonnes per capita. For comparison, West Wiltshire ranks 1st (worst) at nearly 14 tonnes and Weymouth and Portland ranks 45th (best) at 4.5 tonnes per capita. This Carbon Management Plan does not address emissions in Scope 3.

3.2 Baseline: Scope Area 1

Baseline data for scope area 1 was gathered from information on the Cedar financial system for the financial year 2007/08. The financial cost was converted to kWh using an average rate of 3.3p per kWh for gas, 10p per kWh for electricity and 5.0p per kWh for oil. No attempt was made to check whether bills were estimated.

Table 1: Sources and baseline (2007/08) carbon dioxide emissions for Scope 1: Areas in which carbon saving would result in a relative financial saving to EDDC

Source	C02 emissions (tonnes)	% of total emissions	Cost to EDDC (£)	% of total cost
EDDC Buildings	1,100	41	246,000	31
Fleet – excl waste and recycling	407	15	50,000	6
Fleet – waste and recycling	688	26	Embedded within SITA contract	n/a
Housing – communal areas	220	8	40,000	5
Water	40	2	219,000	27
Business travel	223	8	250,000	31
TOTAL	**2,678**	100	805,000	100

Chart 1: Sources of carbon dioxide emissions from Scope 1 areas

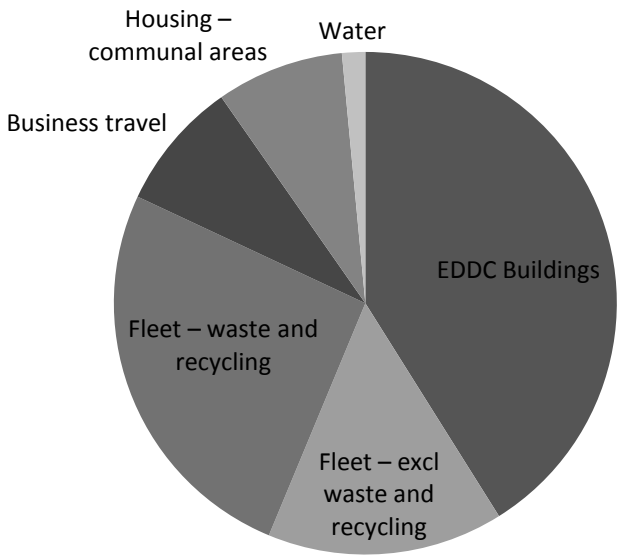


Chart 2: Target reduction in carbon dioxide emissions 2009-2014 compared to if no action is taken

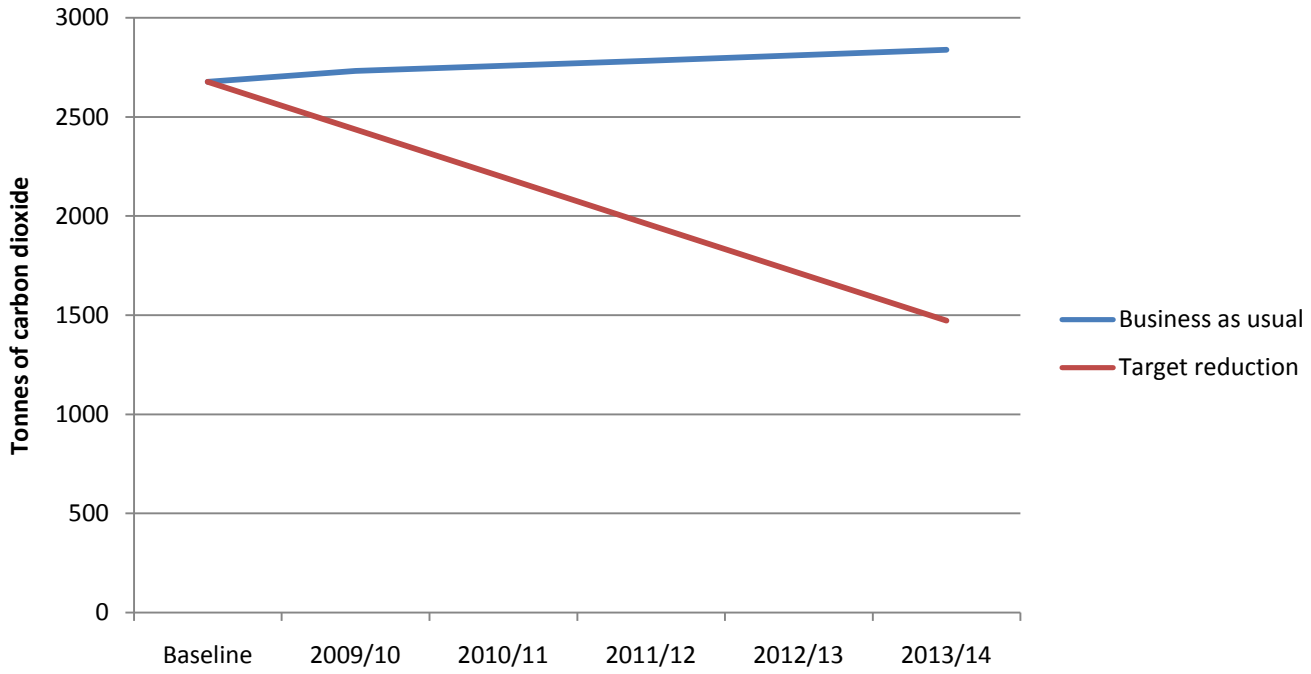
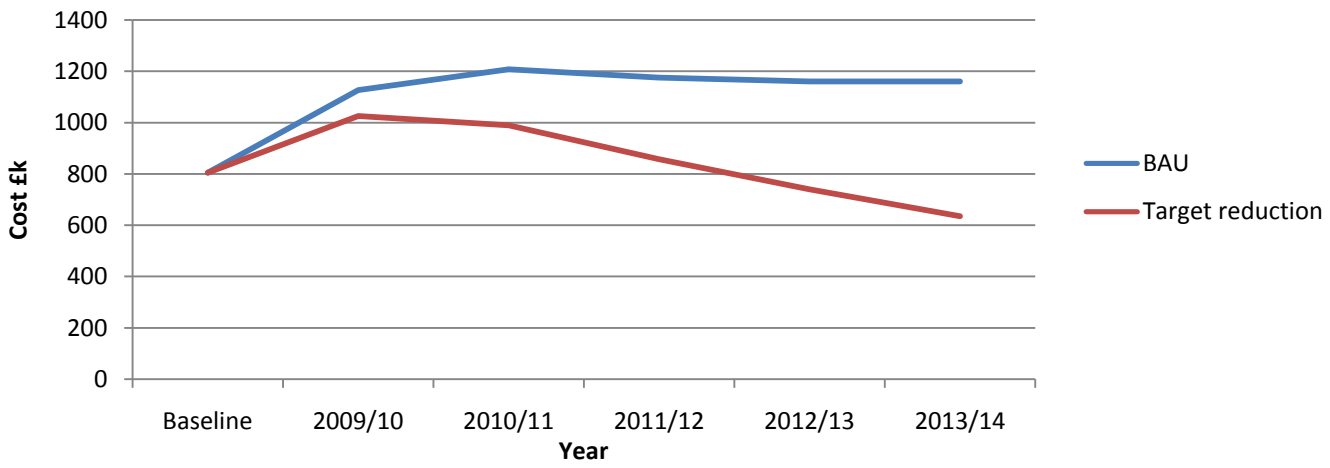


Chart 2 shows that by 2014, if no action to reduce carbon dioxide emissions were taken, then East Devon District Council's emissions from Scope 1 areas would be around 2,800 tonnes per annum (assuming a 1% increase in emissions annually). However if the 45% target reduction in emissions was reached by 2014, carbon emissions from scope 1 areas would be around 1,473 tonnes per annum.

The difference in carbon dioxide emissions between the 'business as usual' scenario and the meeting the target scenario is called the 'carbon at stake'. By 2014, this would be 1,327 tonnes per annum.

Chart 3: Forecast costs if target reduction achieved compared to if we do nothing



In Chart 3, the top line shows the predicted energy costs if carbon dioxide emissions continue to rise by 1% per annum – the 'business as usual' scenario. The lower line shows the cost of energy if the 45% reduction in carbon dioxide emissions from scope 1 areas is reached. Assumptions about the cost of energy have been made using research commissioned by the National Housing Federation.

The chart shows that energy costs will increase between 2009 and 2012 even if reductions in carbon emissions are on target. Beyond 2012 energy costs should be lower than they are today and by 2014 could be around £500,000 per annum lower than they would have been had no action to reduce energy use been taken. Note: This chart will be adjusted if necessary at the Carbon Management Plan's annual review if actual fuel costs are found to be very different from the current projections.

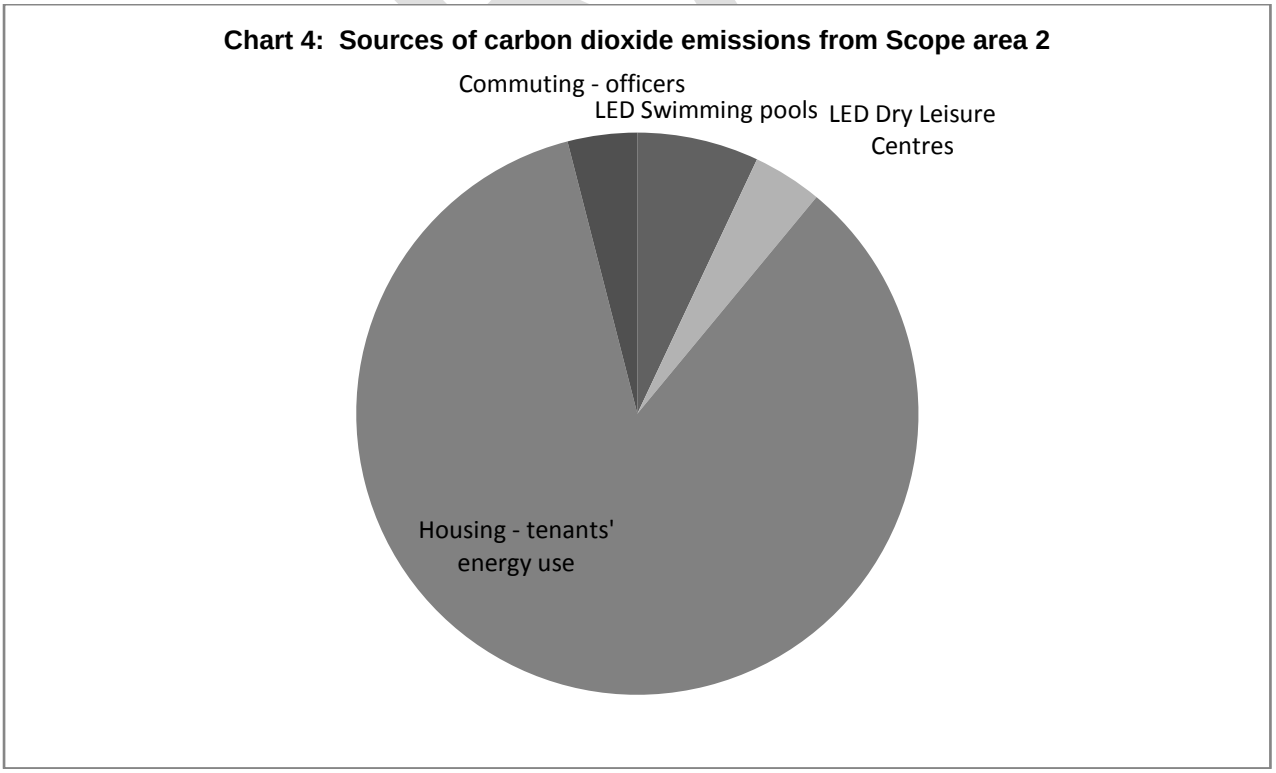
3.3 Baseline: Scope area 2

The baseline data for scope area 2 was gathered from meter readings from Leisure East Devon, a staff survey for commuting data and the Standard Assessment Procedure for local authority owned housing.

Table 2: Sources and baseline measurement of carbon dioxide emissions for Scope 2: Areas in which carbon saving would result in a relative financial saving to another party

Source	Carbon dioxide emissions (tonnes)	Financial beneficiary	Contribution to total emissions in scope 2
LED swimming pools	1,185	Leisure East Devon	7%
LED dry leisure centres	810	Leisure East Devon	4%
Housing – tenants energy use	15,622	Housing tenants	85%
Commuting	674	Staff	4%
TOTAL	**18,291**		**100%**

Chart 4: Sources of carbon dioxide emissions from Scope area 2



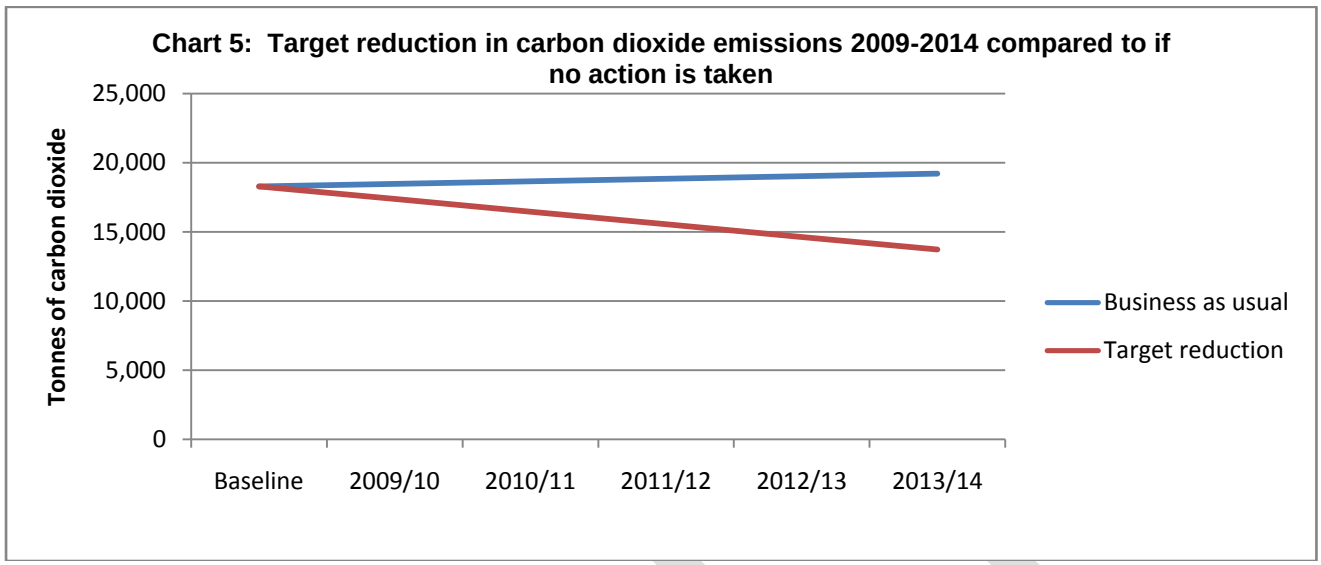
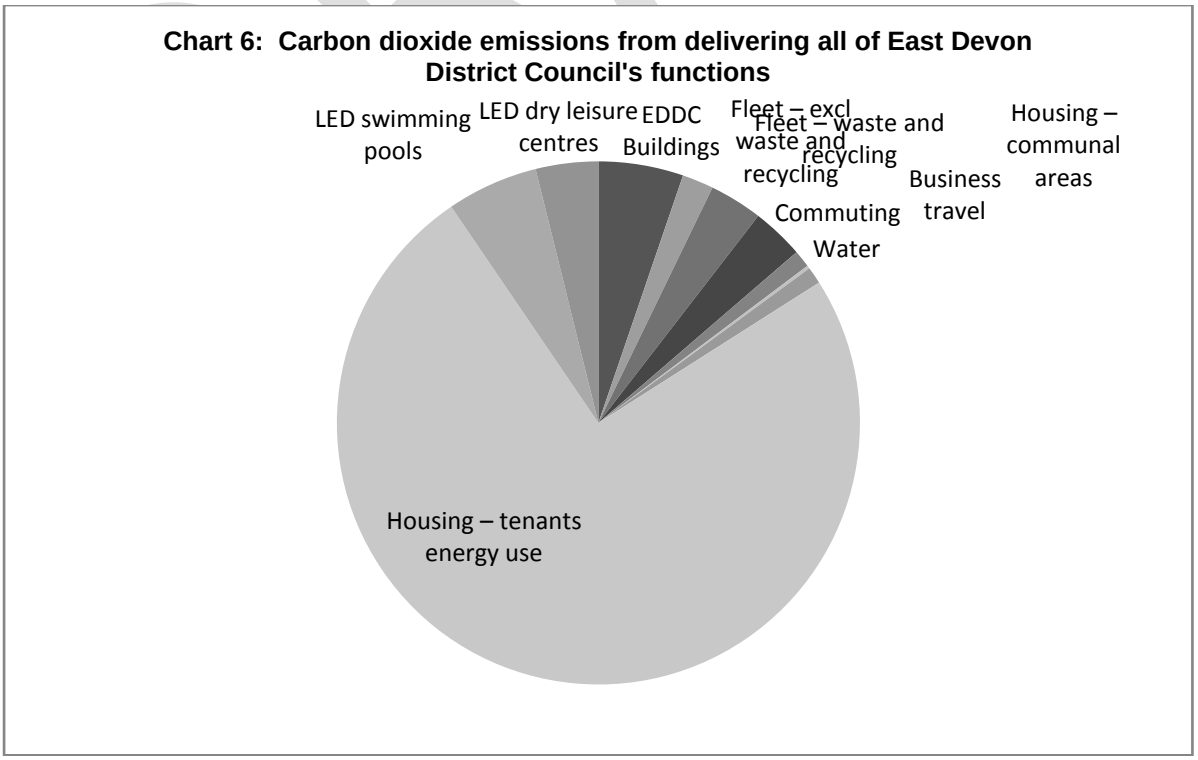


Chart 5 shows that the 'Carbon at Stake' for the areas covered by Scope 2 is 5,503 tonnes of carbon dioxide over the 5 year period. This is the difference between doing nothing and reaching the 25% reduction target over the 5 years. Any financial savings arising from the areas covered in scope 2 cannot be 'ring fenced' for investment in other carbon saving measures. Particularly for housing tenants and staff there is a risk that any financial saving made could just be spent on a carbon intensive activity – such as purchasing a holiday involving a flight, buying a high fuel consumption car or a plasma screen TV – resulting in little or no carbon saving overall. This is the big challenge: to ensure that any money saved as a result of energy saving is then spent in the local economy on low carbon activities.

3.4 Baseline for all areas covered by Carbon Management Plan

Data from scope areas 1 and 2 have been combined in Chart 6 so that their scale can be compared.



4 Carbon Management Projects

The following is a sample of some of the projects either already underway or proposed in the medium term. Most of them are either underway already or very likely to go ahead although the renewable energy project at Sidmouth swimming pool is yet to find a source of external funding.

The implementation of Feed in Tariffs for electricity sold to the grid (as from April 2010) and the availability of interest free loans from Salix Finance will both help to encourage Service Heads to come forward with other project ideas over the coming months (See Section 5).

4.1 Existing projects

Scope	Project	Lead	Description
1	Awareness campaign	DB	Developing officer and member awareness so that the low carbon option becomes the option of choice. Led by the Green Team and Green Champions network.
2	Swimming Pool Cover Honiton	AR	A pilot study. One pool cover costs around £17,000 and saves around 5 tonnes carbon dioxide per year. If successful, will be applied to Sidmouth and Exmouth pools.
2	Swimming Pool lighting	AR	Improvements to swimming pool lighting have cost around £65,000 and saved around 93 tonnes of carbon dioxide per year.
2	Renewable energy project at bungalows	AG	A pilot study. A solar thermal panel and an air source heat pump have been fitted to two EDDC owned bungalows to see if either of these technologies would be appropriate to roll out across the rest of the housing stock.
1	Printer rationalisation	CP	The printer rationalisation project is gradually phasing out older printers and copiers. The next phase is to reduce wasteful use of printers.
1	Fluorescent tube rationalisation	SA	The replacement of old fluorescent tubes by efficient T5 is nearly complete. The next phase is to reduce any over lighting and to encourage task lighting where appropriate.
1	Heating control at the Knowle	TC	External air temperatures are monitored on a daily basis and the heating managed appropriately. This makes the best use of a heating system that is not designed to be controlled at the point of use.
2	Council housing – loft insulation	AG	On-going project to bring all of EDDC's housing stock up to appropriate levels of loft insulation.
1	Recycling within the Knowle	DB	A pilot study to recycle waste paper, cardboard and plastic as separate waste streams. Tins and compostable waste streams will be included when the project goes Council wide.
1,2	Home based working	CP	Expand and enhance the provision for home based working to reduce travel mileage and to potentially reduce demand for office space whilst providing better service delivery.

4.2 Medium term projects

Scope	Project	Lead	Description
1	Relocation	KH/DB	Investigate relocation and building new headquarters to BREEAM excellent standard to establish carbon savings.
1	Green Travel Plan: business mileage	DB	Heads of Service will be encouraged to scrutinise more carefully officer's business miles to identify where efficiency savings can be made.
2	Green Travel Plan: Commuting	DB	Encouraging greater take up of the bike purchase and bus season ticket schemes and developing an intranet based care share facility.
1	Video conferencing	RA	Developing use of video conferencing facility that is already available.
1	Control off peak heating	SA	Better control of the night storage heating system at the Knowle.
1	Embedding carbon management	DB	Embedding carbon management in systems and processes so that EDDC rises through the embedding matrix (Appendix A)
2	Renewable energy project at Sidmouth swimming pool	AR	Initiated by a local community group, a proposal for a solar thermal project at Sidmouth pool is being investigated.
1	Voltage optimisation – Knowle	SA	Costing around £23,000 voltage optimisation at the Knowle would result in reduced electricity costs of at least £16,000 per annum, making a simple payback of under 2 years.
2	Voltage optimisation – Swimming pools	AR	Costing around £38,000 voltage optimisation at Sidmouth, Honiton and Exmouth pools would result in reduced electricity costs of at least £13,000 per annum, making a simple payback of 3 years.

4 Carbon Management Plan Financing

Energy efficiency projects will be subject to the same scrutiny and decision making process as any other local authority spending. However, there are some government initatives to encourage investment in energy efficiency measures and in small scale renewable energy production.

The Department of Energy and Climate Change has a programme to loan funds to local authorities for energy efficiency measures. This is delivered via the Carbon Trust's not-for-profit business, Salix Finance. Currently two loan schemes are available, the Energy Efficiency Loan Scheme and the Ring Fenced Fund. These operate under quite different mechanisms.

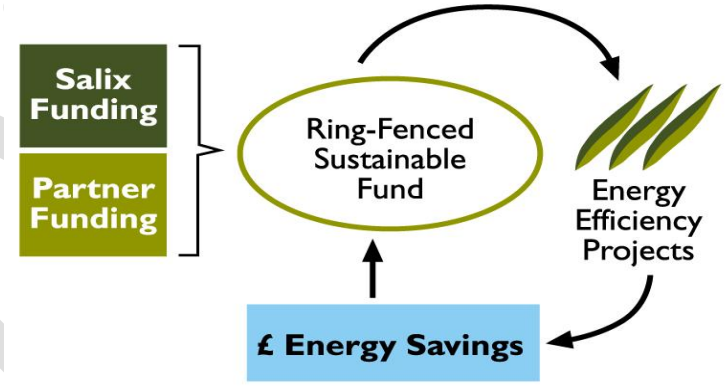
5.1 Salix Energy Efficiency Loan Scheme

£51.5 million is available as interest free loans to all public sector bodies in England. In summary:

- minimum loan is £5,000
- no upper limit to amount borrowed
- local authority can apply for multiple loans if wanted
- project must have lifetime cost of less than £100 per tonne carbon dioxide saved
- loans available for 80 different energy efficiency technologies
- the work must be completed within 9 months
- no match funding is required
- loan is not received until after completion of work
- simple payback should be within 5years
- simple repayment system: 8 equal installments every 6 months from March 2011
- final closing round is expected to be 31 December 2009

5.2 Salix Local Authority Programme

An interest free loan available to local authorities which requires match funding from the local authority to create a ring-fenced fund, as illustrated:



As energy savings are generated, these feed into the fund and finance further energy efficiency projects. The loan does not have to be paid back until qualifying projects cease and so it can be 'recycled' within the local authority for an anticipated 12-15 years. In summary:

- minimum loan £100,000 (although typical loan is £250,000)
- equal match funding required from local authority
- project must have simple payback of less than 5 years
- 5 year cost should be less than £100 per tonne of carbon dioxide saved
- energy savings are ring fenced for further investment in energy efficiency measures
- part of loan can be used for consultancy, human resources, monitoring etc

5.3 Feed in Tariffs

The Government is currently consulting on plans to develop a Feed in Tariff by which electricity generated renewably can be sold back to the grid if it is superfluous to requirements. The anticipated rates are:

36.5p/kWh for small solar photovoltaic systems up to 4kW
28p/kWh for solar photovoltaic systems up to 10kW
23.0p/kWh for small wind turbines between 1.5kW and 15kW

This measure reduces the pay back periods for photovoltaic and small wind turbines considerably and thus should stimulate expansion of 'micro-renewables'. It is not clear at the moment whether local authorities would qualify for these rates. Note that it is unlikely that the rates will be sufficiently high to bring renewable energy projects within the scope of the Salix Local Authority Programme ring fenced loan scheme described above.

6 Actions to Embed Carbon Management in EDDC

The Embedding Matrix appears as Appendix A. It shows where EDDC is now and where it aspires to be by 2014. No insurmountable barriers are perceived for achieving level 5 across areas of Corporate Strategy, Programme Management, Responsibility, Data Management, Communication & Training and Policy Alignment. There are barriers such as limited staff resources, cost and the impact of Local Government Reorganisation to achieving level 5 for Finance & Investment, Boilers, Insulation, Heating, Lighting and Travel.

6.1 Corporate Strategy – embedding CO2 saving across EDDC

The Corporate Strategy has a vision for an 'outstanding and sustainable quality of life for everyone in East Devon'. When the Corporate Plan is reviewed the 27% reduction in carbon dioxide emissions from the 2007/08 baseline will be added. Specific targets for buildings, housing and travel will be included in appropriate Service Plans at their next review.

6.2 Programme Management – bringing it all together effectively

Carbon management will only be effective if the carbon impact of every decision made and every action taken is considered. It is hoped that the CMP will drive the development of a carbon accounting system over the 5 year plan, such that by 2014 carbon is considered automatically in the same way that finance is considered now. An important aspect of this is the early development of 'branding' for the CMP whilst avoiding the tendency to see carbon considerations as an add-on.

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

Target group	How delivered	Who will lead
All staff	Green Champions	CMP Project leader
Individual services	Service planning	Heads of Service
All staff	Green team	CMP Project leader
All staff	Job descriptions	Human resources
All staff	Performance review	Line managers
Staff with procurement responsibility	Procurement policy	Procurement officer when in post Heads of Service in meantime

6.4 Data Management – measuring the difference, measuring the benefit

Category	How data will be collected	Frequency of data collection	Who is responsible for data collection
Buildings – Council occupied	Invoices	Monthly	Sue Hodges (Finance)
Buildings – LED occupied	Meter readings	Monthly	Andy Reay (LED)
Transport - commuting	Staff questionnaire	Annual	Green Team
Transport - business	Mileage claims, fuel purchase	Monthly	Payroll officer; Pauline Druce (Streetscene)
Housing – Council paid energy bills	Invoices	Monthly	Shared between Finance & Housing
Housing – tenant paid energy bills	?Tenant liaison groups or estimation	6 monthly	Tenant liaison officer

6.5 Communication and training – ensuring everyone is aware

Medium	Audience	Frequency
Induction training	New staff	As appropriate
The Knowledge (newsletter)	Staff, Councillors and public	Weekly
Team Brief	Staff and Councillors	Monthly
Green Wardens	All staff	Weekly
Workshops, film events	All staff	6 monthly
Meetings, workshops, film events	Local interested groups, public	As appropriate
Energy consumption graphs	Members of the public, staff	Quarterly
Display Energy Certificates	Members of the public, staff	Annually

6.6 Finance and investment – the money to match the commitment

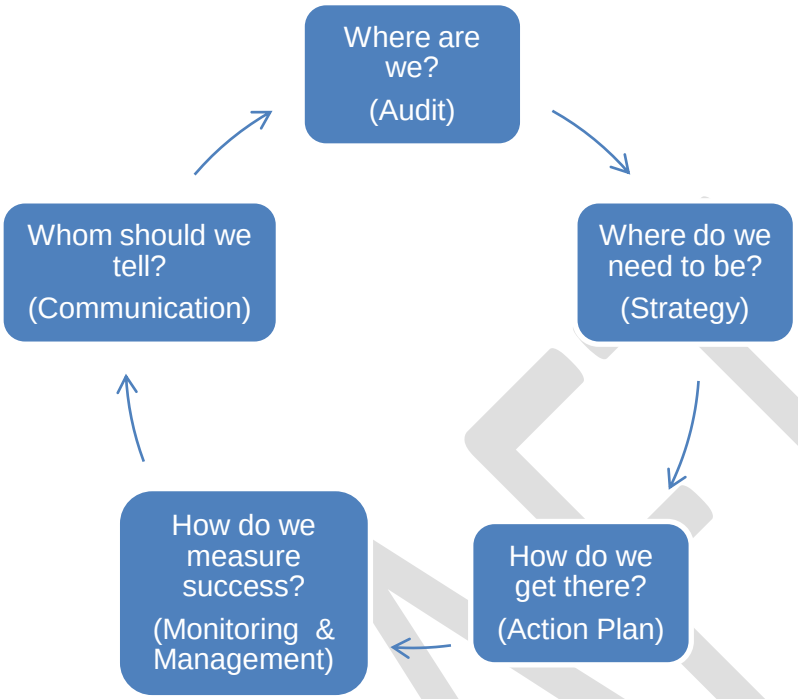
The current economic downturn and the many unknowns due to Local Government Reorganisation mean that the emphasis will be on low cost projects during 2009/10. The limit of £100 per tonne of carbon dioxide saved (as applies to the Salix Finance loans) is a sensible threshold for judging the feasibility of projects.

6.7 Policy alignment – saving CO2 across operations

Policy/activity	Relevance to carbon management	Planned review	Owner
Procurement	Embedded carbon, waste and recycling, social and environmental responsibility	When Procurement Officer in post	Heads of Service
Human Resources	Job descriptions, training, business travel, essential car users allowance, salary sacrifice schemes for cycling and bus transport	On-going	Various HR and payroll staff
Service Planning	Carbon management part of every service plan	Service plans reviewed annually. CM aspect of each to be reviewed by CMP leader	Head of appropriate Service

7 Programme Management of the Carbon Management Programme

Carbon Management is a continuous process as illustrated below. This can be applied at all levels: within projects, Services, Directorates and for the Council as a whole.



The pursuit of environmental excellence (adapted from Elkington & Jennings, 1991)

Good Programme Governance will be achieved by:

- ownership of CMP by senior members of Council eg Environment Portfolio Holder, Sustainability Champion, Chairs of appropriate Task and Finish Fora
- ownership of CMP by senior members of EDDC eg Chief Executive, All Directors, All Heads of Service
- ownership and involvement in CMP by all staff
- regular reporting via the weekly Knowledge (a public newsletter) and Team Brief (a monthly internal newsletter) to demonstrate progress and coherence of CMP

7.1 The Programme Board – strategic ownership

The Programme Board will comprise:

- Chair: Councillor Graham Brown, Portfolio Holder – Environment, Sponsor
- Karime Hassan, Corporate Director – Environment, Sponsor
- Councillor Frances Newth, Sustainability Champion, Co-Sponsor
- Mark Williams, Chief Executive, Co-Sponsor
- Simon Davey, Head of Finance

The Programme Board will meet twice a year to:

- Review progress of projects
- Monitor the direction and progress of the CMP as a whole
- Consider what it will report to SMT/Executive Board

7.2 The Carbon Management Team – delivering the projects

The Carbon Management Team will operate as three groups:

CMT group	Terms of reference	Frequency of meetings
Housing	Delivery of carbon saving projects for tenants in Council owned housing	3 monthly
Transport	15% reduction in commuting and business travel over 5 years	3 monthly
Buildings	Delivery of carbon saving projects for Council owned buildings, including those used for outsourced services	3 monthly

7.3 Succession planning for key roles

Local Government Reorganisation is currently underway in Devon. It is hoped that a clearer picture of future staffing will be available by the time of this Carbon Management Plan's first annual review.

7.4 Ongoing stakeholder management

Stakeholder	Area of interest	How engaged	Frequency
Staff	All of carbon management plan (CMP)	Workshops, films, other events	6 monthly
Green Team	All of CMP	Meetings	3 monthly
Programme Board	All of CMP	Meetings	6 monthly
Carbon Management Team	All of CMP	Meetings, workshops	3 monthly
Overview Committee	All of CMP	Meetings	Individual projects submitted as necessary
Housing Review Board	Housing	Meetings	Dependent on projects
Executive Board	All of CMP	Meetings	As required
Various Task and Finish Forums	Relevant aspects of CMP	Meetings	As required
Leisure East Devon	Buildings	Meetings	As required
SITA Trust	Waste and recycling	Meetings	As required
Other contractors	Buildings, housing	Meetings	As required
Community	All of CMP	Various groups	As required

7.5 Annual Progress Review

Progress of the Carbon Management Plan will be reviewed as follows:

- annual review by appropriate Overview Committee
- annual review by Programme Board
- annual review by Carbon Management Team

These reviews will include:

- delivered carbon savings against cost for most recent accounting period
- projected carbon savings against cost for next accounting period
- any financial savings to EDDC or other parties (eg tenants, outsourced service providers)
- other less quantifiable benefits of projects
- alignment of carbon management plan with NI185, NI186 and Comprehensive Area Assessment reporting

Appendix A: Embedding Matrix

Now	**3**	**2**	**2**	**2**	**2**	**2**	**2**
5yrs	**5**	**5**	**5**	**5**	**5**	**5**	**5**
	CORPORATE STRATEGY	**PROGRAMME MANAGEMENT**	**RESPONSIBILITY**	**DATA MANAGEMENT**	**COMMUNICATION & TRAINING**	**FINANCE & INVESTMENT**	**POLICY ALIGNMENT ***
BEST 5	• Top level target allocated across organisation • CO_2 reduction targets in Directorate Business Plans	• Cabinet / SMT review progress against targets on quarterly basis • Quarterly diagnostic reports provided to Directorates • Progress against target published externally	• CM integrated in responsibilities of senior managers • CM part of all job descriptions • Central CO_2 reduction advice available • Green Champions leading local action groups	• Quarterly collation of CO_2 emissions for all sources • Data externally verified • M&T in place for: o buildings o street lighting o waste	• All staff given formalised CO_2 reduction: o induction and training o communications • Joint CM communications with key partners • Staff awareness tested through surveys	• Finance committed for 2+yrs of Programme • External funding being routinely obtained • Ring-fenced fund for carbon reduction initiatives	• CO_2 friendly operating procedure in place • Central team provide advice and review, when requested • Barriers to CO_2 reduction routinely considered and removed
4	• CO_2 reduction commitment in Corporate Strategy • Top level targets set for CO_2 reduction • Climate Change Strategy reviewed annually	• Sponsor reviews progress and removes blockages through regular Programme Boards • Progress against targets routinely reported to Senior Mgt Team	• CM integrated in to responsibilities of department heads • Cabinet / SMT regularly updated • Staff engaged though Green Champion network	• Annual collation of CO_2 emissions for: o buildings o street lighting o transport o waste • Data internally reviewed	• All staff given CO_2 reduction: o induction o communications o CM matters communicated to external community	• Coordinated financing for CO_2 reduction projects via Programme Board • Finances committed 1yr ahead • Some external financing	• Comprehensive review of policies complete • Lower level policies reviewed locally • Unpopular changes being considered
3	• CO_2 reduction vision clearly stated and published • Climate Change Strategy endorsed by Cabinet and publicised with staff	• Core team regularly review CM progress: o actions o profile & targets o new opportunities	• An individual provides full time focus for CO_2 reduction and coordination across the organisation • Senior Sponsor actively engaged	• Collation of CO_2 emissions for limited scope i.e. buildings only	• Environmental / energy group(s) given ad hoc: o training o communications	• A view of the cost of CO_2 reduction is developing, but finance remains ad-hoc • Some centralised resource allocated • Finance representation on CM Team	• All high level and some mid level policies reviewed, irregularly • Substantial changes made, showing CO_2 savings
2	• Draft Climate Change Policy • Climate Change references in other strategies	• Ad hoc reviews of CM actions progress	• CO_2 reduction a part-time responsibility of a few department champions	• No CO_2 emissions data compiled • Energy data compiled on a regular basis	• Regular awareness campaigns • Staff given CM information on ad-hoc basis	• Ad hoc financing for CO_2 reduction projects	• Partial review of key, high level policies • Some financial quick wins made
1	• No policy • No Climate Change reference	• No CM monitoring	• No recognised CO_2 reduction responsibility	• No CO_2 emissions data compiled • Estimated billing	• No communication or training	• No specific funding for CO_2 reduction projects	• No alignment of policies for CO_2 reduction

- Major operational policies and procedures, e.g. Capital Projects, Procurement, HR, Business Travel

Now	**2**	**2**	**2**	**2**	**2**
5yrs	**4**	**4**	**4**	**4**	**4**
	BOILERS	**INSULATION**	**HEATING**	**LIGHTING**	**TRAVEL**

BEST 5	• Regular:
	  ○ Efficiency monitoring
	  ○ "Preventative", regular maintenance
	• BMS systems set to reflect occupancy
		• All Lofts insulated to >270mm,
		• All cavity walls filled
		• Internal solid wall insulation where appropriate
		• Floor /flat roof insulation where applicable
		• All window's double/secondary glazed
			Heating strategy includes:
			• Zoned controls
			• Bottom-up issue reporting
			• Weather correction
			• Regular Reviews
			• Advanced BMS
				• Occupancy and daylight controlled lighting systems installed
				• Consideration of best lamp and luminaire for job
				• Official switch off policy includes training to cleaners,
				• All switches labelled
					• Full time travel coordinator
					• Procurement of vehicles considers CO2 emissions
					• Mileage reimbursement carbon sensitive
					• Comprehensive travel plan includes: car sharing, cycle paths, subsidised bus pass
					• Internally bicycle compound, showers & drying room

4	• Combustion conditions maintained regularly
	• Results regularly logged & profiled
		• Loft insulation min 200mm, over half of cavity walls filled
		• Draught proofing/ draught strips to leaky windows doors
		• Majority of windows double/secondary glazed
			• Zoned controls accommodate:
			  ○ Local occupancy
			  ○ Temperature
			  ○ Times
			• Regular review
				• Zones created separate lighting controls for areas
				• Triphospor specified for new fluorescent lamps
				• Failing lamps replaced quickly
				• WSL cleaned quarterly
				• Switch off policy security led most switches labelled
					• Part time travel coordinator
					• Clean pool cars and vehicles available to staff are hybrid some electric but no green tariff in place
					• Thorough travel plan
					• Mileage reimbursement carbon sensitive

3	• Meters on all boilers
	• Results regularly logged
		• Loft insulation 100mm in majority of buildings,
		• A quarter of cavities filled
		• Door closers to external spaces
		• Double/secondary glazing over half of all sites
			• Controls have:
			  ○ Weather correction
			  ○ 24/7 time control
			  ○ Local adjustment capacity
			• Ad hoc Review
				• Time delay switches in some low occupancy areas
				• Failing lamps are replaced
				• WSL cleaned twice a year
				• Switch off campaign staff responsibility some labelling
					• Ad hoc travel coordination
					• Pool cars are available for short trips but are petrol/diesel
					• Basic green travel plan in place
					• Ad hoc promotion of cycling, walking and public transport

2	• Operational controls:
	  ○ In place
	  ○ Programme not changed regularly
		• Number of properties with pitched roofs/cavity wall known and majority not insulated
		• Majority of solid walls/floors not insulated
		• Less than half of windows are double/secondary glazed
			• Thermostatic Radiator Valves
			• Timed controls are 24h only
				• Sensors control external lighting
				• T2 fluorescent tubes replaced with T8 tubes
				• *Failing* lamps are replaced when a number require replacement
				• WSL cleaned once/yr
				• Informal switch off policy manual control only, no switches labelled
					• Little travel consideration
					• Draft travel plan
					• Some public reference to walking & cycling

1	• Operational controls:
	  ○ Manual
	  ○ Statutory maintenance only
		• Number of properties wit pitched roof or cavity wall unknown
		• Majority of windows single glazed
		• Basic instructions for door operation i.e. to keep shut
			• Boiler thermostat only control of temperature
			• Single pipe heating system
				• Like for like replacement of lamps on failure
				• Windows, Skylights, Luminaires (WSL) cleaned once or every other year
				• Only *failed* lamps replaced
				• No switch off policy or staff awareness
					• No green travel policy
					• No long term sustainable consideration of travel
					• No cycle lanes or reference to walking or public alternatives