



# **Carbon Management Plan**

## **2013 – 2017**

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## Foreword

Wiltshire Council had a carbon footprint of 60,436 tonnes in 2012/13. To put this in context, this is the same as the annual static carbon emissions from around 11, 800 Wiltshire homes. This Carbon Management Plan (CMP) sets a challenging target for the council to make a saving of 11,823 tCO<sub>2</sub> by 2016/2017.

This target requires us to continue to embed carbon reduction across the organisation to make fuel and energy savings in light of the challenging financial climate. It requires us to find smarter ways of working and to be resourceful and innovative in order to achieve more with less available resource, and for this to become business as usual. Wiltshire Council is committed to driving forward financial savings by cutting waste, streamlining the way we do things and making the most of the way that we use our assets and resources.

We have an ambitious programme to rationalise our office buildings from 98 to three main hubs, which are all undergoing refurbishment to maximise energy efficiency. This will not only generate capital and dramatically cut operational and administrative costs, but will significantly reduce energy wastage, cutting both our carbon footprint and energy bills. This is just one example of how we are embracing innovation to create savings and reduce our environmental impact.

The impact of our work will be amplified if it is matched by the commitment of businesses, other public sector organisations and local residents to reducing their carbon footprints. The Wiltshire and Swindon Local Economic Partnership identified the low carbon/renewable sector as one of its nine strategic sectors to prioritise. The council is also working more closely and innovatively with public sector partners, for example, sharing buildings and services with Wiltshire Police, to further maximise efficiency and cut costs, leading to further reductions in our collective environmental impact.

These challenging financial times call for new approaches. Our ambitious target places the council firmly at the forefront of the fight against climate change. This plan outlines how the council is embracing new ways of working in order to continue to improve its approach to carbon reduction and lead the way for cutting carbon in Wiltshire.

**Cllr Toby Sturgis**

**Cabinet Member for the Environment**

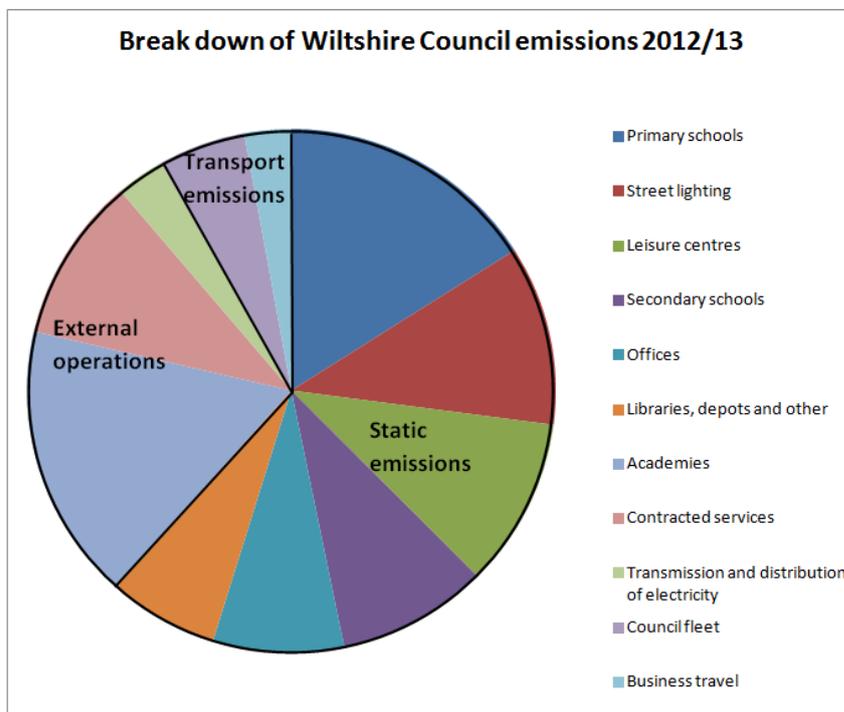
## Executive summary

### Why we need a carbon management plan:

Wiltshire Council is committed to moving towards a low-carbon future and the Carbon Management Plan documents the council's vision and details the means for achieving it. Wiltshire Council committed to tackling carbon emissions by signing the Nottingham Declaration in May 2009 and plans to sign up to Climate Local, the successor to the Nottingham Declaration, in 2014.

Good carbon management is important as it reduces the council's environmental impact and operating costs, allowing the council to provide better value for money in its services to taxpayers.

In 2012/13, the council's total carbon footprint was 60,436 tonnes of CO<sub>2</sub>, arising from energy use for property, transport and street lighting (see **figure 1** for a break down). This figure includes external emissions, for example, those from some contracted services (e.g. recycling collections) as well as from in-house operations. These emissions were associated with an annual expenditure on energy and transport of around £12 million. The Carbon Reduction Commitment Energy Efficiency Scheme (CRC) cost associated with this was a further £0.5 million. Through implementing a carbon management plan, there will be opportunities to both reduce the council's carbon footprint and avoid some of these considerable costs.



**Figure 1:** Demonstrates the council's emissions broken down by activity area

### What this plan seeks to achieve:

The council's vision is to embed carbon management into the delivery of all services and to set an example to the business sector and communities of Wiltshire. The council will work to

influence and support others to reduce their carbon emissions, thereby taking the lead and driving forward efforts to reduce the effects of climate change. The consequences of excessive climate change are very severe and the appropriate response is to ensure the targets for carbon reduction are correspondingly challenging. Such targets should emphasise strong, early action and the council has set a target to make a saving of 11,823 tCO<sub>2</sub> by end 2016/17.

#### **How we will deliver this plan:**

Since the Carbon Management Plan review in June 2013, we have introduced action plans for key areas to set out how they will reduce their emissions and associated costs through the way they operate. In this document, we set out how to develop this approach further to align the document to the council's new way of working as set out in the Business Plan 2013-2017 and to ensure comprehensive, senior level accountability across all council carbon emissions. This will ensure that the document remains resilient to future changes and embeds carbon reduction consistently across council operations.

Carbon-saving opportunities of all types will be considered in terms of contribution to the overall objective and the council's commitment to value-for-money. £2.8m capital is allocated over two financial years for energy efficiency projects in buildings and £2m capital is allocated to improving street lighting so that part-night lighting can be enabled. In addition, a revolving energy efficiency revenue fund of £105,000 is available for reinvestment, built up using savings from previous projects. Therefore the council has allocated just **over £5m over two years** to improve its energy efficiency.

These funds will achieve important financial savings by avoiding energy and associated CRC costs. Where possible the council will seek external investment to lever additional resources in its response to climate change. Future projects will see the council estate becoming increasingly energy efficient and new facilities will be built to be both sustainable and suitable for a changing climate. Procurement policy will be reviewed to ensure that our approach to contractor emissions is fit for purpose. Sustainability will be embedded as a core value and future decision making on all major projects will be informed by the impact on the environment.

#### **Monitoring progress:**

The intention is for the plan to be regularly updated and to be produced as a web-based, living document. Progress towards our target will be reported on an annual basis.

Some change in the natural climate is now believed to be inevitable, but strong and consistent actions to reduce carbon emissions is a vital step to minimising any further changes and reduce the future financial and human cost of actions taken today. This plan provides a clear direction for reducing carbon emissions and for embedding a culture of awareness and responsibility throughout Wiltshire Council.

# 1. Introduction

## 1.1 Background

In 2011, Wiltshire Council adopted its first Carbon Management Plan (CMP). This plan demonstrated the commitment of the council to moving towards a low-carbon future, its vision, and the means for achieving it. The plan included a target to reduce the council's carbon footprint by 20% of the 2008/09 emissions baseline<sup>1</sup> equating to 11,823 tonnes of CO<sub>2</sub> to be delivered by 2014. This target was subsequently adopted in the Council's Business Plan 2011-2015 with a new delivery date of 2015.

An interim review on progress was conducted in June 2013 against the 2011/12 dataset and since that review, the dataset for 2012/13 has become available. It has been identified that:

- The level of the council's reported carbon dioxide emissions and associated costs has fluctuated from year to year since 2008/09, even when weather correction is applied and we can expect to see further fluctuations over the coming years (see Section 2).
- The direct financial costs associated with the council's emissions (e.g. purchased electricity and fuels, transport provisions and financial liability under the CRC Energy Efficiency Scheme (CRC)) has fluctuated between £11m and £13m and we can expect to see further fluctuations over the coming years (see Section 2).
- In 2012/13, Wiltshire Council's total emissions – including internal and external – were 60,436 tCO<sub>2</sub>. 70% of these emissions were 'internal', while 30% were 'external' (see section 2.2 for a definition of internal and external emissions)
- Most of the council's internal emissions are from stationary rather than transport sources, although the second highest direct cost associated with the council's emissions is for business mileage claims (20% of the council's direct costs, or £2.5m).
- The highest proportion of internal emissions comes from (in descending order):
  - Primary Schools (excluding academies)<sup>2</sup>
  - Street lighting
  - Leisure Centres
  - Secondary Schools (excluding academies)
  - Offices
  - Other (including business travel, libraries and depots)
- Carbon reduction activity is underway across all these sectors; see **Table 3** in Section 3.
- Through the carbon reduction programme, the council has delivered a number of benefits:
  - Financial – cost savings
  - Environmental – tCO<sub>2</sub> reduction

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<sup>1</sup> Emissions data relating to the financial year 2008/09 included in this plan have been amended from that used to calculate the council's emissions target due to revised carbon dioxide emissions factors for the financial year 2008/09 published in June 2013 by the Department for Environment, Food and Rural Affairs (DEFRA).

<sup>2</sup> As at June 2013, 39 schools comprising primary and secondary schools had converted to academy status and as such the council has no direct control over them.

- Reputational
- Good performance under the national carbon reduction scheme (CRC)
- Increased awareness and internal stakeholder engagement, which will lead to increased benefits as above

Progress towards our CMP target has been slow and we need to step up carbon reduction and cost saving activity in order to meet the carbon reduction target. In June 2013, it was proposed that this is done by key services developing their own carbon reduction action plans.

It is recognised that there is likely to be a step change in our emissions around 2016/17 as some key activities are delivered, for example, significant changes to our property estate and a new configuration to our waste management service.

The CMP Review June 2013 recommended that we:

- Amend the wording of the target for greater clarity to ‘the council will make a carbon saving of 11,823 tCO<sub>2</sub>’ to the revised target date of end 2016/17.
- Produce a revised Carbon Management Plan (this document)
- Develop Action Plans in specific areas in order to further embed carbon management within relevant service areas – See Appendix 4.

This updated CMP incorporates the recommendations agreed by the ECO board in June 2013 and makes subsequent recommendations to further improve the CMP and re-address the corporate carbon reduction target.

## 1.2 Our low carbon vision, target and objectives

Wiltshire Council’s low carbon **vision** is:

Wiltshire Council will embed carbon management into the delivery of all services to reduce our carbon emissions and set an example to the business sector and communities of Wiltshire. We will use the experience gained to influence and support others to reduce their carbon emissions, thereby mitigating the effects of climate change.

Our low carbon **target**:

Wiltshire Council will make a saving of 11,823 tCO<sub>2</sub> by end 2016/17

The **objectives** of this carbon management plan are to ensure the council:

1. Makes energy cost savings
2. Reduces the council's carbon footprint
3. Leads by example in embedding carbon management across its services and works with partners to do the same.

## 1.3 Key drivers and strategic fit

Good carbon management delivers clear benefits:

- **it reduces the impact of carbon emissions on the environment**

- **it reduces operating costs**

These benefits align with the **council's Business Plan 2013-2017**, which identifies reducing carbon emissions and costs as priority actions and states how these will be delivered:

<b>How the council will deliver the business plan</b>	<b>CMP fit</b>
Work with our partners, businesses and communities	Leading by example to influence partners (e.g. Wiltshire Police), businesses and communities
Manage our resources robustly and sharing resources and facilities, where appropriate	Reduce energy consumption and energy costs
Create a culture that promotes innovation and new ways of doing things	Embeds the identification and implementation of energy efficiency measures and new technologies where possible
Continually look at what we can do better, delivering improvements and quality services.	Embeds the identification and implementation of energy efficiency measures and new technologies where possible. Supports changes in the structure and delivery of CMP to improve its effectiveness.

Good carbon management also enables us to comply with and reduce our costs under the national, mandatory **Carbon Reduction Commitment Energy Efficiency (CRC)** scheme. The scope and impacts of the CRC are set out in Section 2.

The **cost of energy** has risen considerably in recent years and is expected to continue to rise over the coming years as primary energy reserves dwindle and are replaced by technologies with a higher minimum cost than is currently attainable. The level of cost increase is likely to be higher than inflation which means the council will face much higher operating costs from energy consumption unless it can be more energy efficient or find non-fossil fuel alternatives.

Wiltshire Council's strategic response to climate change is set out in the Energy, Change and Opportunity (ECO) Strategy 2011-2020. The strategy incorporates two types of response:

- **Mitigation:** those responses that seek to reduce the impact of our behaviour on the natural systems of our planet; that is, reducing greenhouse gas emissions.
- **Adaptation:** those responses that seek to prepare us better for the challenges likely to arise from climate change.

This Plan is an action plan listed in the ECO Strategy and sets out the council's own action on climate change mitigation.

The Plan is also a key element in meeting our **Climate Local** commitment, showing local leadership by example. Climate Local is a Local Government Association initiative to drive, inspire and support council action on a changing climate. It succeeds the Nottingham Declaration on climate change which the council signed in 2009. The Climate Local initiative supports councils' efforts both to reduce carbon emissions and also to improve their

resilience to the effects of our changing climate and extreme weather and will be signed by Wiltshire Council in 2014.

In addition, the **Climate Change Act 2008** put in place a framework to achieve a mandatory 80% cut in the UK's carbon emissions by 2050 (compared to 1990 levels), with an intermediate target of 34% by 2020. The **Stern Report** of 2006 presented a persuasive case for the economics of tackling climate change, highlighting that action taken now will be more cost effective than action taken later. The **Energy Performance of Buildings Directive** has introduced Display Energy Certificates meaning that the energy use in council buildings is now open to public scrutiny.

## 2. Costs and emissions

The council's carbon dioxide emissions arise as a result of the energy it consumes in undertaking its operations. Energy is generally consumed for heating, lighting, operating equipment and transportation.

The financial costs associated with these emissions are a result of the purchase of energy and transport provisions by the council directly; indirectly, where they are included in contract costs; and as a result of the council's liability for its emissions under the Carbon Reduction Commitment (CRC).

This section of the plan shows how these emissions and associated costs are distributed.

### 2.1 Council emissions and finance data for 2012/13

**Table 1** shows the direct financial costs associated with the council's emissions that relate to purchased electricity and fuels, transport provisions and financial liability under the CRC. See appendix 2 for full explanatory notes for financial and emissions data for 2012/13.

Area of expenditure	Expenditure, £ million	Emissions, tonnes of CO <sub>2</sub>
Council estate electricity and fuels	5.8 (46%)	30, 000 (72%)
Business mileage claims	2.5 (20%)	1, 700 (4%)
Fleet fuel	2.2 (18%)	3, 200 (7%)
Street lighting electricity	1.4 (11%)	6, 900 (16%)
Train travel tickets	0.1 (1%)	17 (<1%)
<b>Total energy expenditure</b>	<b>12 (96%)</b>	
Wiltshire Council CRC Liability	0.5 (4%)	
<b>Grand total</b>	<b>12.5</b>	<b>42, 000 (100%)</b>

**Table 1:** Demonstrates council expenditure in respect of purchased electricity and fuels, transport provisions and financial liability under the CRC.

## 2.2 Distribution of emissions for council operations for 2012/13

**Figure 2** shows how the council's emissions are distributed in terms of 'scope' as defined in the Greenhouse Gas (GHG) Protocol Corporate Standard and set out below.

### Scope 1 (Direct emissions)

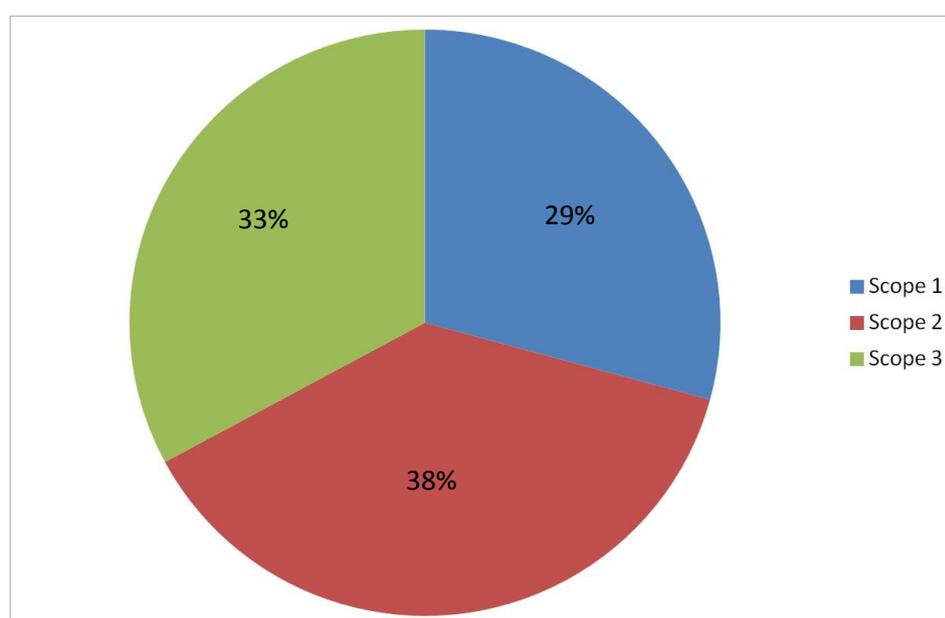
Emissions released into the atmosphere from operations owned or controlled by the council. These are direct emissions and relate to **emissions arising from the combustion** of Natural Gas, Oil, Liquid Petroleum Gas (LPG) and Automotive Fuels.

### Scope 2 (Energy indirect)

Emissions released into the atmosphere associated with the council's consumption of purchased electricity for operations owned or controlled by the council. These arise from the emissions associated with the generation of **electricity** purchased by the council. These are indirect emissions that are a consequence of the council's operations but that are released at sources the council does not own or control.

### Scope 3 (Other indirect)

Emissions that are a consequence of the council's operations that occur at sources the council does not own or control and that are not classed as scope 2 emissions. These relate to emissions associated with the transmission and distribution of electricity purchased by the council for use by the council's estate and street lighting; contracted operations; and business travel by staff in their own vehicles.

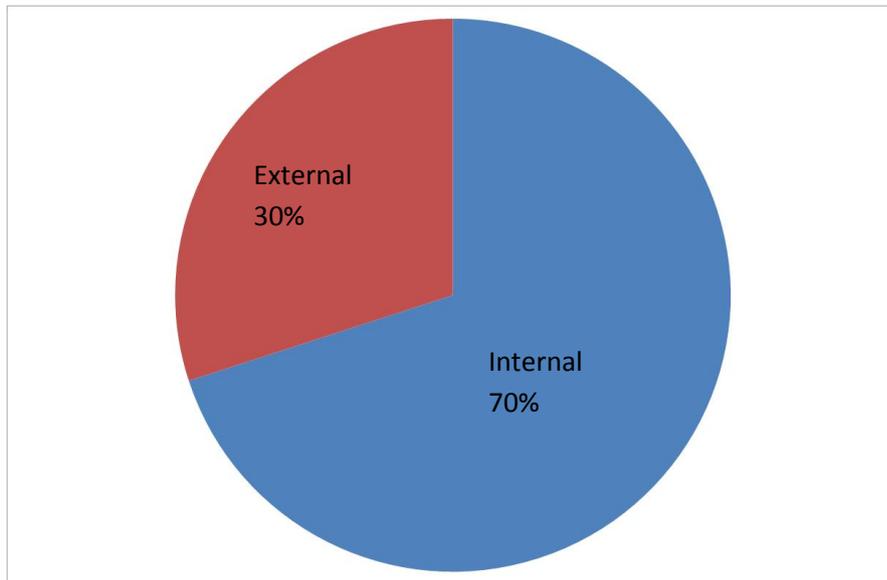


**Figure 2:** The distribution of emissions between scope 1, scope 2 and scope 3 operations.

**Figures 3 to 8** show how the council's emissions are distributed between 'Internal' and 'External' operations as defined below.

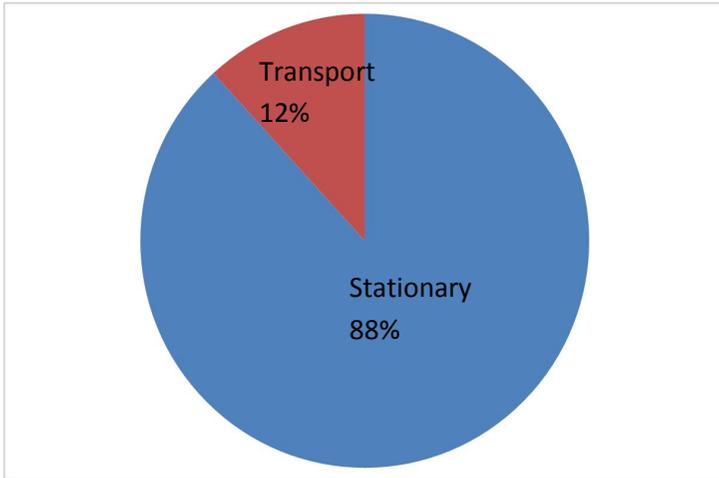
**Internal operations:** Emissions arising from council owned or controlled estate and buildings, including offices, schools and streetlights; council operational fleet; and business travel.

**External operations:** Emissions arising from contracted operations; academies; and those associated with the transmission and distribution of electricity purchased by the council for use by council owned or controlled estate and street lighting.

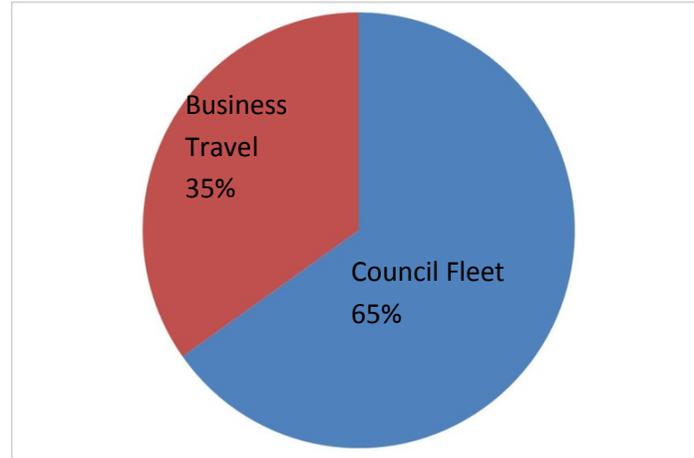


**Figure 3:** Distribution of emissions between internal and external operations.

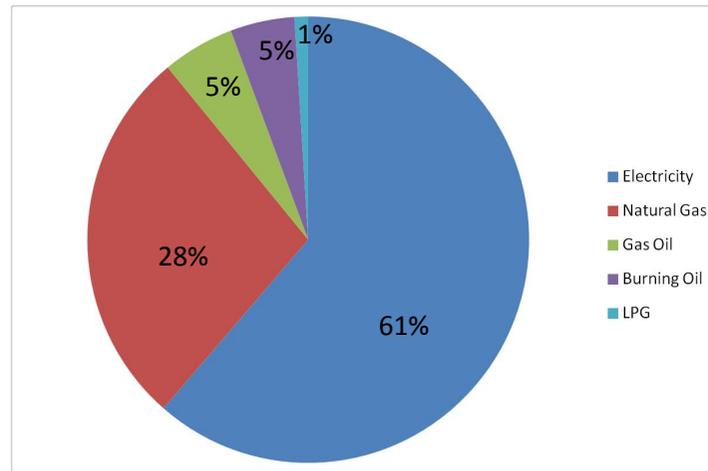
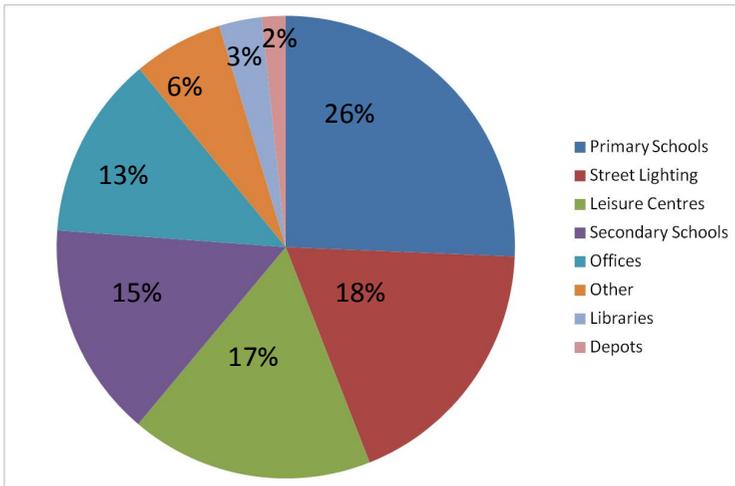
**Distribution of emissions for internal operations**



**Figure 4:** Distribution between stationary and transport operations.



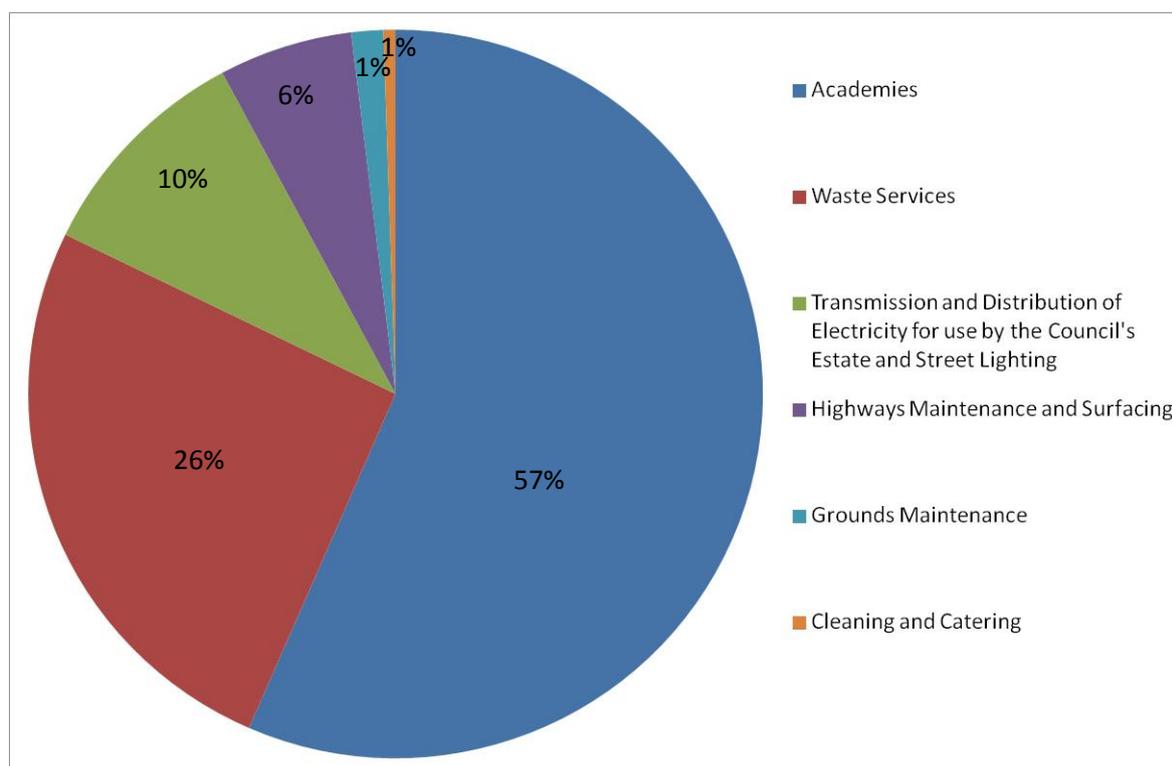
**Figure 5:** Distribution between transport modes.



**Figure 6:** Distribution between stationary emissions sources.

**Figure 7:** Distribution between fuel types for stationary

## Distribution of emissions captured in 2012/13 for external operations



**Figure 8:** Distribution of emissions for quantified external operations (not exhaustive of all contracts)

### 2.3 Tracking emissions and costs over time

**Figure 9** shows the calculated carbon dioxide emissions footprint for council operations for the five financial years from 2008/09.

**Figure 10** shows the direct financial costs for the purchase of energy and transport provisions for council operations. This is presented for the four financial years from 2009/10. Financial data is unavailable for the financial year 2008/09 as it is stored on legacy systems that operated before the introduction of the software package SAP that holds financial records.

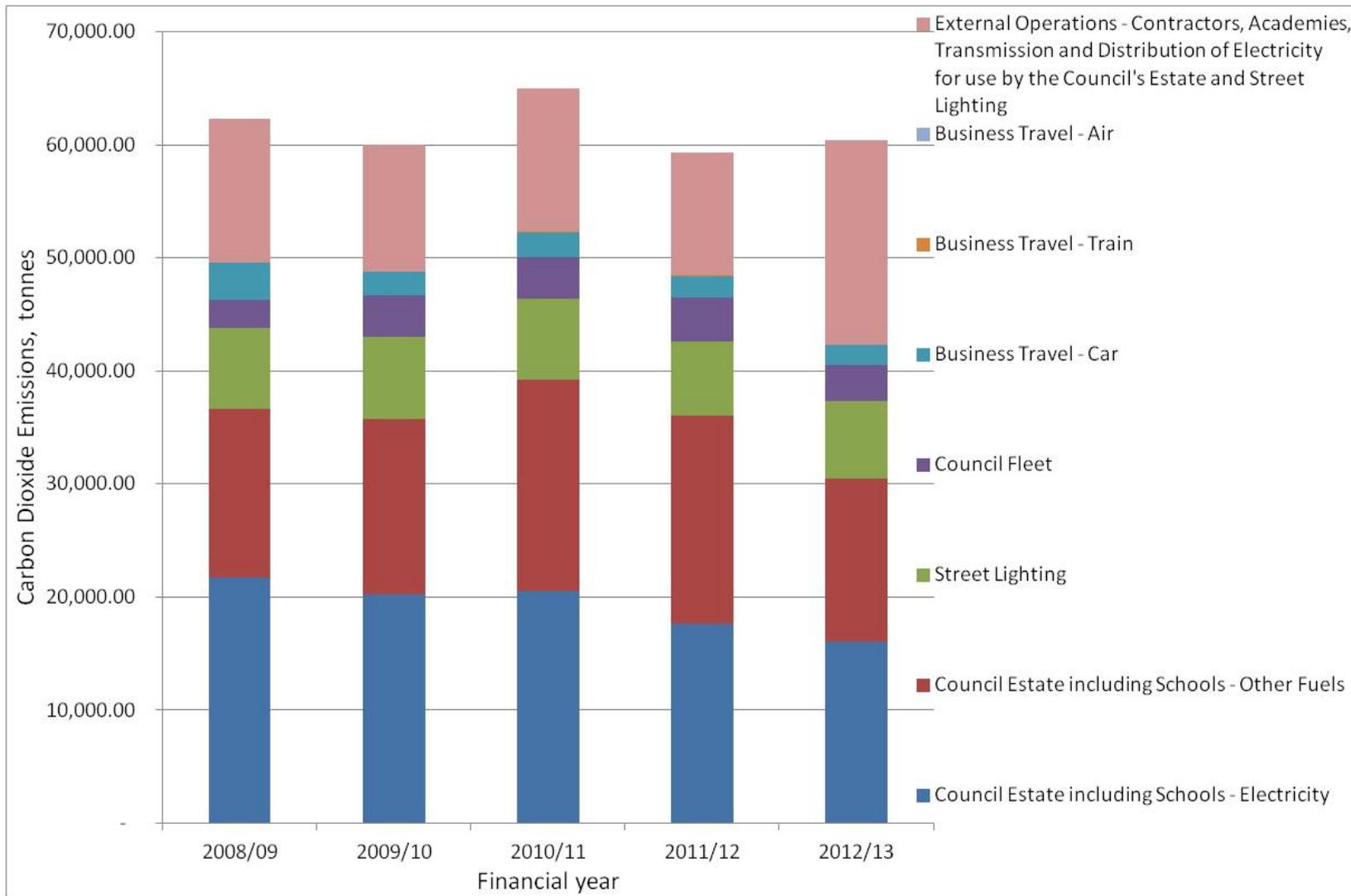
In each case, fluctuations in the values each year are a result of a number of influencing factors, some of which apply to both the emissions and financial cost data sets and some to just one (see Appendix 1).

Particular factors that would have significantly influenced the reported emissions are described below:

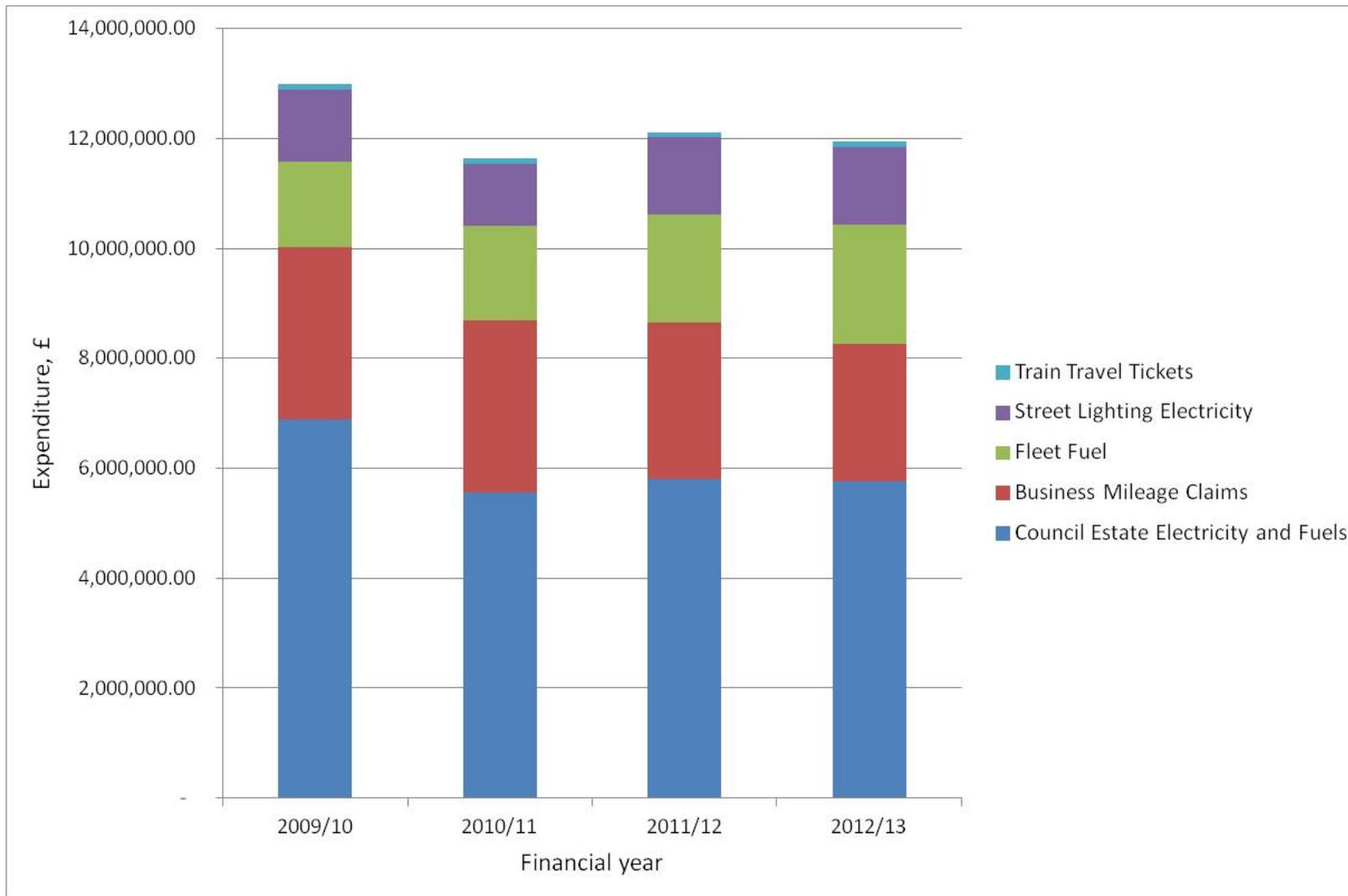
- Management of energy use for a number of leisure centres was in-sourced during the financial year 2011/12, where previously it had been managed by external contractor. As such, their emissions were transferred from reporting as external operations to reporting as internal operations and their energy costs from costs to the contractor to direct costs to the council.

- During the financial years 2011/12 and 2012/13 an increasing number of schools were converting to academies. As such, their emissions were transferred from reporting as internal operations to reporting as external operations and their energy costs from direct costs to the council to costs to academies.
- Since the formation of Wiltshire Council in April 2009 from its former constituent organisations, work has taken place to align the energy management of its now combined estate. In order to ensure the council accounted for the energy use and emissions associated with this estate for the first reporting year under the CRC, a number of additional data sets were created. These were to provide estimated data for sites where actual data was unavailable and where it was unclear whether their supply came under the responsibility of the council. As the council's understanding of the energy use and property portfolio improved, it was able to remove many of these additional data sets as they were found to not be required. At the same time the council was able to reduce the amount of data derived from estimates through the introduction of smart meters for accurate data measurement. This resulted in a step reduction in the council's reported emissions between the financial years 2010/11 and 2011/12.
- The unit price of purchased electricity has fluctuated between financial years. This unit price changed most markedly and by a decrease in the financial year 2010/11. This resulted in a step reduction in the council's reported electricity expenditure between the financial years 2009/10 and 2010/11.

See appendix 3 for the full explanatory note for data used for tracking emissions and financial costs.



**Figure 9:** Weather-corrected carbon emissions from the council's operations, in tonnes of CO<sub>2</sub>, for the financial years 2008/09, 2009/10, 2010/11, 2011/12 and 2012/13.



**Figure 10:** Direct financial costs for the purchase of energy and transport provisions for council operations for the financial years 2009/10, 2010/11, 2011/12 and 2012/13.

## 2.4 Headline figures for emissions and associated financial costs for the council's operations in 2012/13

The figures for 2012/13 are summarised below as evaluated in terms of financial cost; level of influence the council has for directing emissions; and emissions levels.

### Financial costs

- Direct council expenditure for electricity, fuels, transport provisions and liability under the CRC totalled £12 million.
- 57% of this expenditure was in respect of gas and other heating fuels and electricity for the council estate and street lighting.
- 20% of this expenditure was for business mileage claims and a further 18% for fleet fuel.

### Emissions levels

- 70% of emissions were from internal operations and 30% from external operations.
- 88% of emissions from internal operations were derived from stationary sources and 12% from transport sources.
- 41% of internal stationary emissions were from schools, 18% from street lighting and 17% from leisure centres.
- 65% of internal transport emissions were from fleet and 35% from business travel.
- 57% of emissions from external operations were derived from academies and 26% from waste operations.

### Influence for directing emissions levels

- 31% of emissions were associated with leisure centres, offices, libraries, depots, other estate sources and fleet fuel and these are areas over which it is considered the council has the greatest level of influence.
- 25% of emissions were associated with schools, and this is an area over which it is considered the council has a reduced level of influence. In 2012/13, 17% of emissions were associated with academies. This is an area where it is considered the council has a low level of influence.
- 30% of emissions were associated with external operations and this is an area over which it is considered the council has a reduced level of influence, although different procurement practices could change this in future.

## 2.5 Outcomes to date

- Over 45 energy efficiency projects have been installed across the estate in buildings, leading to energy cost and carbon savings
- Electric vehicles have been procured for pool car fleet and the council has bid for external funding to support a strategic network of electric vehicle charging points
- Successful, no-cost, behaviour change campaigns have been carried out in schools leading to energy cost and carbon savings
- Carbon considerations have been embedded into the decision-making process.

The above outcomes have led to a quantifiable saving of:

→ Approximately £460k annual cost savings, including both energy costs and CRC Costs

→ Approximately 1,644 tCO<sub>2</sub> savings

## 2.6 Benefits realisation

Through implementing the Carbon Management Plan 2011-2014, the council has realised the following benefits:

- **Cost savings:** energy efficiency measures lead to avoided energy costs and reduced CRC costs
- **Reduced environmental impact:** reducing carbon emissions reduces the council's level of energy consumption and the use of limited natural resources. As such, the council is therefore driving the efficient use of natural resources and contributing to their conservation. Reducing carbon emissions also reduces the council's contribution to climate change
- **Enhanced environmental reputation:** The council's carbon reduction programme demonstrates clear leadership and commitment to reducing the causes of climate change, and demonstrates the benefits of resources efficiency by making financial savings that can be invested back into the services it provides to the community.
- **Improved data:** one of the first activities under the CMP was for the Energy Services Team to vastly improve our energy consumption data, including bringing the former five local authority energy management systems together into a single database for the new Wiltshire Council. This improved database means we have a better understanding of our emissions and their sources and subsequently are able to more effectively target energy reduction.
- **Compliance with the national carbon reduction scheme (CRC):** One of the objectives of the CMP was to perform well in the CRC scheme. Having improved energy data means that we can more accurately report our emissions which in turn means we reduce our CRC costs (by avoiding the uplift associated with estimated data). In the second year of the CRC Wiltshire Council improved its ranking in the CRC by moving up the scheme's Performance League Table to 247<sup>th</sup> in 2011/12 from 1020 in 2010/11.

- **Increased awareness and internal stakeholder engagement**, which will lead to increased benefits and continuous improvements as above.

## 3. Implementation strategy

### 3.1 Embedding carbon reduction across services

In order to maintain a continuous cycle of improvement with regards to carbon reduction, it is necessary to embed responsibility for carbon management across the whole council so that it becomes business as usual. This can be achieved by aligning carbon reduction with the drive for financial savings across the council.

In June 2013, the ECO Board agreed to the development of action plans in each of the following service areas:

1. Property operations
2. Asset management and corporate buildings
3. Schools
4. Street lighting
5. Fleet
6. Waste management
7. Transport emissions
8. Sustainable procurement

With each of these action plans capturing:

- Carbon footprint in each area
- Energy costs
- Opportunities for savings: short / medium / long term
- Resources required to deliver savings (both financial investment and identification of officers to take it forward)
- Prioritisation of actions low cost -> high cost (see below)
- Action plan and timeline to deliver savings
- Agreement on setting a performance target
- Agreement on how to measure and report on progress towards the target
- Sign off by associate director

As part of the carbon management plan review, this information has been collected from Corporate Procurement Unit (CPU), Strategic Property Services (SPS), Environmental Services and Street lighting, with a view to improve and consolidate the council's understanding of carbon dioxide emissions for its operations and their associated financial costs; opportunities for savings; the resources that need to be committed and the approach

for their. The information collected indicates both that savings have already been made and opportunities for further savings have been identified. As the actions plans developed so far are not exhaustive of all council services, there is further scope to identify carbon savings in other areas.

The key **opportunities for savings** identified by the plans are summarised below:

In the council's buildings, opportunities include:

- Vacating and disposing of buildings as the council consolidates its estate through hubs and campuses (carbon savings not yet quantified but likely to be significant)
- Development of design standards for new buildings
- Implementation of an energy management system for existing buildings
- Improvements to the services provided by utility suppliers
- Further financial investment in building operational equipment including renewable energy technologies.

In street lighting, opportunities include:

- Introduction of energy efficient units on new street lighting installations
- Implementation of a management system to control lighting use
- Upgrades to existing units.

In Fleet Services (FS), opportunities include:

- Investment in new lower emission vehicles
- Investment in charging infrastructure for electric vehicles
- Implementation of systems to influence driving behaviour through monitoring and feedback provided through training and for grey fleet (employee owned vehicles on business travel)
- Introduction and promotion of alternative modes of transport.

In highways and estate maintenance, opportunities include:

- Route optimisation
- Vehicle and equipment upgrades
- Consolidation of operational processes for efficiency.

In procurement, opportunities include:

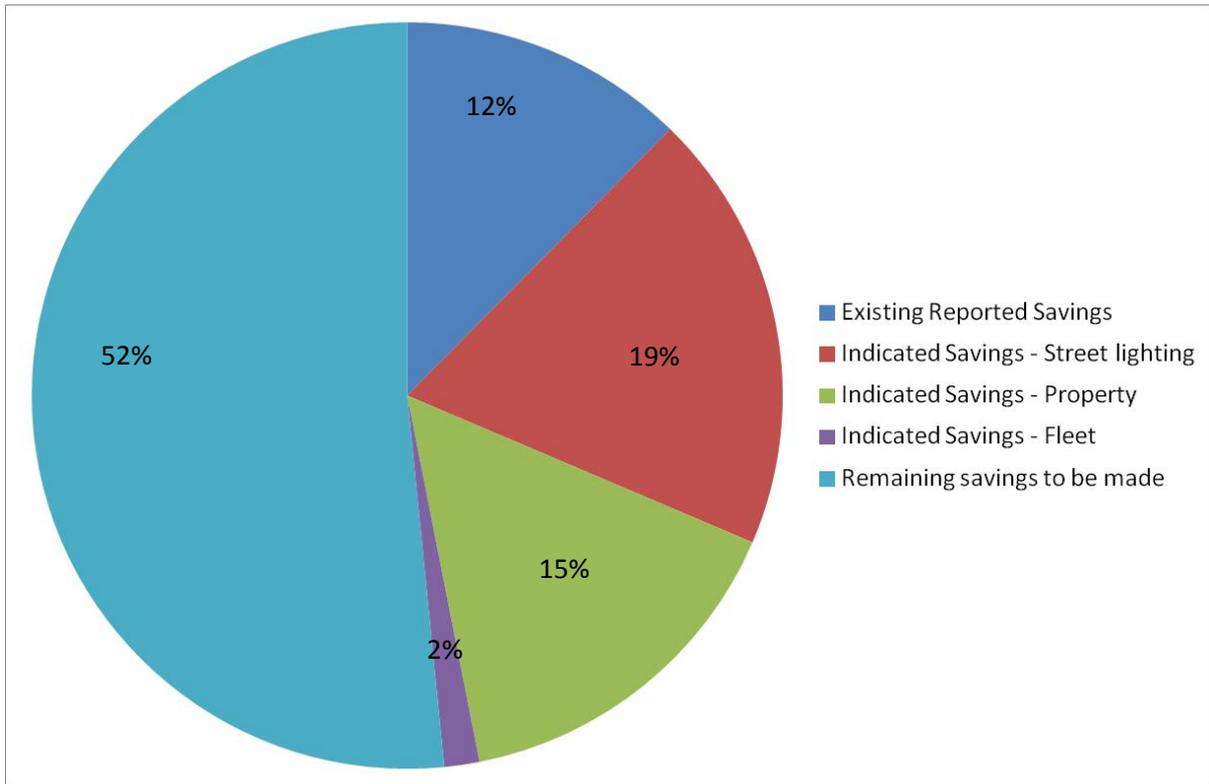
- Developing an approach to isolate energy costs from the overall costs of the contract in order to enable separate management of these costs and their associated emissions
- Identifying main areas within existing contracts that the council can influence to reduce emissions
- Developing an approach to embed emissions management in the supplier pre-qualification questionnaire (PQQ) and invitation to tender (ITT) contract letting stages.

Within the action plans, service areas have indicated carbon dioxide emission savings and financial cost savings that could be delivered. Figure 11 and table 2 show the contribution these indicated emission savings could make to the council's carbon reduction target. They are represented together with the existing reported savings against the target and the remaining savings to be made. Table 3 shows the quantified indicated emissions savings identified through the action plans together with their indicated financial savings where these were included.

In addition to the opportunities outlined in the action plans, there are a large number of activities that have either been implemented or are planned that are not currently quantified that will reduce the carbon dioxide emissions arising from the council's operations and will contribute to the remaining emission required to meet the target. Further work is required if all the savings associated with these activities are to be quantified and contribute towards the corporate emissions target.

Significant currently unquantified activities include:

- The hub programme of office redevelopments will have been completed by the end of the financial year 2016/17, together with works to optimise the building operational controls
- Buildings rationalisation, leading to the sale of a large proportion of the council's existing and inefficient buildings and their removal from the council's operational requirements
- The campus programme, designed to achieve emissions and financial cost savings will have delivered the first seven campuses by 2016
- The biomass programme is replacing inefficient oil boilers with new and efficient biomass boilers in schools and in key campus locations.



**Figure 11** illustrates the council's corporate emissions target of 11,823 tCO<sub>2</sub> represented proportionately in terms of: existing emissions savings for the invest to save programme of energy efficiency works undertaken within the council estate as modelled and reported in June 2013; additional indicated savings as identified from the service area action plans and the remaining savings to be made by 2016/17.

Emissions target, tonnes of Carbon Dioxide		
11, 823		
Existing reported savings, tCO <sub>2</sub>	Indicated savings, tCO <sub>2</sub>	Remaining savings to be made by 2016/17, tCO <sub>2</sub>
1, 459	4, 267	6, 097

**Table 2** shows the council's corporate emissions target represented proportionately in terms of existing emissions savings for the invest to save programme of energy efficiency works undertaken within the council estate as modelled and reported in June 2013, additional indicated savings as identified from the service area action plans and the remaining savings to be made by 2016/17.

Emissions category	Identified opportunity from the service action plan	Indicated Annual Emissions Saving, tonnes of Carbon Dioxide	Indicated Annual Financial Saving, £
Street lighting	Implementation of an energy management system for street lighting	2000	180K
Street lighting	Conversion of highways bollards to more efficient lighting units	160	-
Street lighting	Introduction of part night lighting in some areas	140	-
Property	Invest to save programme of energy efficiency works in council estate	1000	-
Property	Reduce energy demand from current buildings by 5%	800	160K
Fleet	Reduction in grey fleet mileage between 5% and 10%	120	180K
Fleet	Introduction of vehicle use monitoring equipment in fleet for improving driving performance	60	40K
Total		4, 300	560K

**Table 3:** A total indicated carbon dioxide emissions saving of 4,300tCO<sub>2</sub> and £560,000 financial cost savings where provided that could be made by implementing the stated measures from the service area action plans.

For the council to meet its corporate emissions target, further work is necessary to quantify the emissions savings from opportunities that have already been identified by service areas and to identify and quantify additional emission saving opportunities. The action plans are driven by the need to deliver financial savings as the implemented measures focus on reducing the energy demand of the council and therefore ultimately its energy costs. This area of work will now inform the thematic action plans to be developed and delivered by

those service areas with responsibility for the council's emissions as outlined in the implementation strategy to the carbon management plan.

## **3.2 Reviewing our approach**

In working with other services to support the development of the action plans, some areas for further improvement have presented themselves which would reflect the council's new way of working, make the document more fit for purpose and resilient to further organisational changes. These are summarised below.

### **Approach to action plans**

The approach to the Action Plans previously agreed by the Board is based upon existing relationships within the council, some of which have been affected by recent redundancies and all have been affected by the senior management review. Furthermore, the identified persons for delivering the action plans varied from Project Officers to Associate Directors, with some areas not represented at the ECO Board. In order to embed the document within the organisation, there needs to be increased accountability for delivery from the key services where our carbon emissions sit. It is recognised that coverage could be more consistent, less dependent on existing relationships, and with more emphasis on comprehensive coverage and top-level accountability via the relevant Associate Directors.

The current approach poses risk of duplication in emissions reporting, for example, whether Waste or Property Services report on the MBT plant's energy use in Westbury, or whether Waste or Fleet Services report on waste collection vehicle emissions.

When considered objectively, there are three key areas of council emissions: energy use in buildings and streetlights, transport, and contracts. Therefore, to address the emissions using this as the basis of our approach would simplify reporting and improve oversight and consistency of emissions reporting.

### **Ownership of CMP**

Responsibility for both reporting on and implementation of the CMP and savings currently sits with the Green Economy Team working in partnership with those key services generating the emissions. By transferring the ownership of action plans identifying financial and carbon savings to the relevant service areas, there will be more opportunities for service managers to embed carbon reduction targets in all areas of their work and to make the right operational decisions to drive carbon savings.

### **Delivery of the corporate target**

Some of the corporate carbon saving target has already been delivered and some has been identified, however there remains a gap in achieving the target. With a move towards three thematic plans, clear actions can be outlined to demonstrate what more each area can do to contribute to the overall target. This will demonstrate whether any gap remains between planned savings and the corporate reduction target.

## Approach to contractor emissions

Some contracts are included and others excluded from our emissions reporting, as this data has previously been collected as and when the opportunity has become available. Although this data has been improved over time, gaps still remain. The difficulty in reporting on these 'Scope 3' emissions is widely recognised nationally. Moving forward, it is important that the council understands the magnitude of these emissions and the level of impact it could have over them and makes a decision on how to report on these emissions to ensure consistency.

In order to exemplify the level of emissions that might be associated with contractors, work with the Help to Live at Home team has resulted in an estimate that some £3.4m will be spent on contracted staff transport for service delivery across a 5 year contract term for their four major contracts (see table below). Therefore, if the council was able to influence the level of travel within this particular contracted service area (for example, by sharing its own approach to driving down travel-related emissions by using vehicle telemetry, electric vehicles and travel to work policies), it is estimated that financial savings realised could be in the region of £70,000 per year for this contract alone.

Data period: five-year contract term		
Total distance travelled, KM	Transport carbon dioxide emissions, tonnes of CO <sub>2</sub>	Financial claim costs, £
13.6m	2, 400	3.4m

**Table 4:** This table shows for the Help to Live at Home Service an estimate of the total distance travelled by staff visiting residents in their homes, the associated transport carbon dioxide emissions and the associated financial travel claims by staff over a 5 year contract term with the providers.

It is currently unknown how many other comparable or even more sizeable opportunities lie within other, currently un-captured contracted services and what the council's level of influence might be over these, but this area warrants further investigation in order to understand the potential for impact on contract efficiency and subsequent financial savings.

The captured contracted emissions currently represent 10% of our overall reported carbon footprint, therefore any decision the council makes relating to how we report on contracted emissions will influence the size of our overall carbon footprint.

### 3.3. A new thematic approach

In light of these observations, it is apparent that the CMP would benefit from a move to a thematic rather than Service-level approach, with only three action plans, outlining how carbon will be saved within the following areas:

- Static (energy use from council-owned buildings and streetlights)
- Business mileage (fuel use from council-owned vehicles plus grey fleet)
- Contracted operations (defining a consistent approach to all council contracts)

These action plans will require strategic ownership, placing accountability with the Associate Directors of the services within which the emissions are directly generated. These services are best placed to understand and outline how they can make savings, implement the changes required and report on progress to the ECO Board against the corporate target. The Green Economy Team would support the identified areas in the transition of responsibility on the CMP.

It is envisaged that this approach will:

- Create the opportunity for more cash and carbon savings
- Ensure comprehensive coverage of all council emissions
- Clarify and harmonise ownership of the document
- Streamline the data collection process
- Truly embed carbon reduction throughout the whole of the organisation, from top-down
- Ensure consistency in calculating and recording carbon emission data
- Reduce duplication across the organisation
- Increase resilience to organisational change for the future
- Demonstrate the capacity of each action plan area to create savings against the target between now and 2016/17; which will in turn demonstrate how challenging and realistic the corporate target is
- Create greater accountability and encourage greater forward planning to create savings

Under this approach, the Associate Directors with accountability for carbon reduction would be formally invited to attend the ECO board and mandated with developing an action plan

The approach for emissions reporting for council contracted operations will be reviewed.

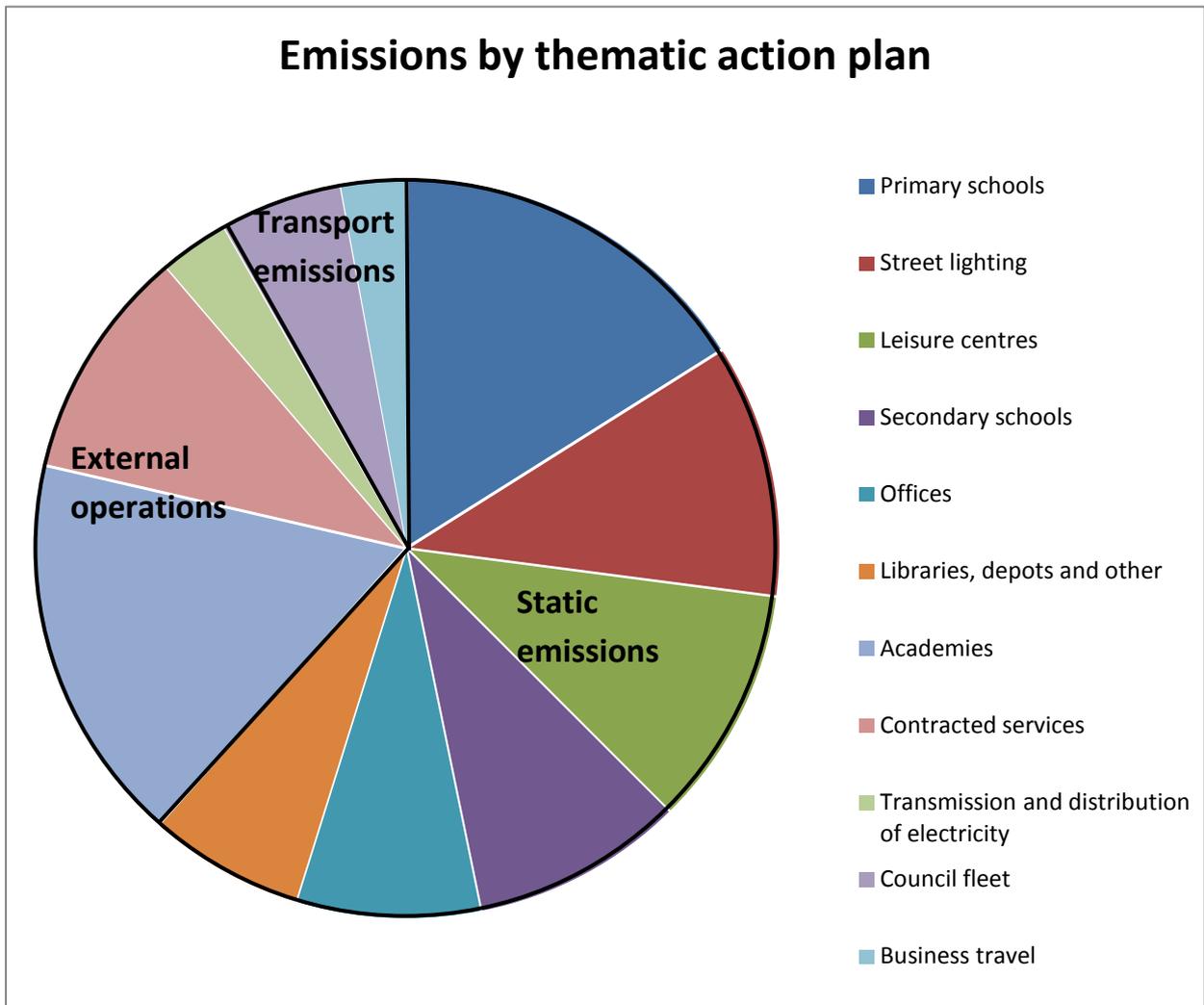
### 3.4. Embedding thematic action plans

#### Responsibilities in the thematic action plan approach



**Figure 12** illustrates the responsibilities through the thematic action plan approach. It is proposed that the CMP is owned and delivered by the three key service areas. These areas would report progress against their respective action plans on a regular basis to the ECO Board. The board would be responsible for ensuring the CMP clearly sets out how the council will meet its corporate carbon target and progress is made. The Green Economy Team would be available to support the respective service areas firstly in embedding this new approach and going forward with identifying opportunities.

### 3.5. Thematic action plan roles and responsibilities



**Figure 13** Illustrates which emissions would be covered by each of the three proposed thematic action plans: Static emissions (including street lighting and illuminated signs), transport emissions and external operations. The majority (62%) of the council's carbon footprint falls under static emissions. External operations stand at 30%, with contracted operations accounting for approximately 10% council emissions. Currently, we do not know the true proportion of contracted emissions, as we have an incomplete dataset. Transport emissions represent a smaller proportion of the overall footprint at 8%.

#### Static emissions action plan

**Owner: Transformation Programme (Mark Stone, Programme Director)**

**Proportion of existing corporate carbon footprint: 62%**

This action plan would relate to the emissions resulting from the electricity and heating use of all council-operated properties plus street lighting. The Transformation programme would own and compile this action plan, but delivery would require substantial collaboration with Property Operations, as the area responsible for property maintenance and operations and

for energy management and billing, and Highways Assets and Commissioning, as the owners of street lighting.

The Transformation Programme is well-placed to identify and create substantial, strategic opportunities for energy efficiency savings, as the key decision-makers that specify, design, manage and deliver new buildings and decide which are sold and which are refurbished. This strategic decision-making role is where the biggest opportunity for efficiencies lie, as substantial investment decisions appropriate to council, community and partner needs can be made for long-term, significant benefits. Additionally, the Systems Thinking arm of this area can support corporate carbon reduction by embedding innovative low carbon approaches within the culture of the council and support may also be sought from the Green Economy team on identifying technologies and approaches to consider for maximising carbon reduction within the estate.

This action plan will rely on support from Highways Assets and Commissioning to provide regular reporting on street lighting and illuminated signs electricity consumption and planned works for reducing these emissions as a part of the wider action plan monitoring and reporting.

It will also require significant support from Property Operations, a key area for implementing carbon savings. Substantial opportunities exist in the way that the council maintains and invests on the existing estate. Furthermore, the Energy Services Team within this area procures and manages the council's energy contracts and manages all the council's electricity and heating data, as well as being responsible for implementing the BS ISO 50001 energy management standard throughout the council. They also provide the annual statutory CRC report on council energy performance and will therefore be critical for continued reporting in the CMP.

### **Responsibilities summarised**

- **Action plan owner (Programme Director)**-overall responsibility for ensuring that the action plan sets out and quantifies in detail how cash & carbon will be saved from the estate in order to sufficiently contribute to the council meeting its corporate carbon reduction target. Also responsible for ensuring that the action plan is updated to reflect progress at each ECO Board.
- **Transformation teams**-to report on how they will commit to embedding carbon reduction into their plans and decision-making.
- **Property Operations**- to report on how they will commit to embedding carbon reduction into their refurbishment, maintenance and facilities operations in order to sufficiently contribute to the council meeting its corporate carbon reduction target; to effectively embed the ISO50001 energy management standard; to report on corporate energy compliance (CRC and GHG reporting) and collect, manage and provide accurate energy data for the action plan.
- **Highways Assets and Commissioning**- to report on how they will commit to embedding carbon reduction into existing and planned street lighting and illuminated sign provisions and to collect and provide accurate street lighting electricity data for the action plan.

## **Transport emissions action plan**

**Owner:**

**Environmental Services (Tracy Carter, Associate Director, Environment and Leisure)**

**Percentage of existing corporate carbon footprint: 8%**

This action plan would relate to both the mileage of the council's corporate fleet and business mileage by council staff. Environment and Leisure would own and compile this action plan, but would require support from Information Services and Payroll in order to obtain accurate mileage data. Support may also be drawn upon from HR to establish best practice policies to reduce staff mileage and from the Green Economy and Systems Thinking teams to consider further innovative ways to maximise carbon reduction from business travel.

Fleet Services within this area is central to decision-making regarding the corporate fleet, including pool cars. They have already made significant progress in this area and continue to identify opportunities to increase electric charging infrastructure for both staff and the public, as well as increasing their low carbon pool car fleet. Waste Services have also been making significant steps to reducing emissions through optimising waste collection vehicle routes and have recently moved into this service area, which brings stronger opportunities for Fleet and Waste services to work closely together.

### **Responsibilities summarised**

- **Action plan owner:**  
**(Associate Director, Environment and Leisure)**-overall responsibility for ensuring that the action plan sets out and quantifies in detail how cash & carbon will be saved from transport emissions in order to sufficiently contribute to the council meeting its corporate carbon reduction target. Also responsible for ensuring that the action plan is updated to reflect progress at each ECO Board.
- **Fleet Services**-to report on how they will commit to embedding carbon reduction into their plans and decision-making.
- **Waste Services**- to collaborate with Fleet Services to maximise opportunities to reduce costs and associated carbon emissions in their procurement and operations.
- **Information and Payroll Services**- to provide accurate and consistent data reports to Fleet Services.

## **Contracted operations action plan**

**Owner:**

**Corporate Procurement Unit (Robin Townsend, Interim Service Director-Executive Services)**

**Percentage of existing corporate carbon footprint: 10%**

This action plan would relate to emissions resulting from both static (electric and heating) and mileage associated with council contracts. Emissions relating to contracts represent 10% of overall emissions, as part of the 30% represented by wider external emissions. The Corporate Procurement Unit (CPU) would own and compile this action plan, but would require significant input from contracts officers throughout the council to both collect carbon emissions data from contractors and identify and influence the uptake of carbon and cost saving opportunities within those contracts, as part of their wider contract-management responsibilities. How this action plan is taken forward will depend on the outcome of the review of our approach to contracted emissions.

As previously mentioned (see Section 3) there are currently gaps in the way that the council collects contracted emissions data and it is important that a policy is established to determine which contracted emissions are included in data collection and which are excluded. The CPU will need to introduce guidelines and contract clauses to communicate and embed this approach and contracts officers will then need to implement them accordingly. This will ensure a consistent approach on collecting contracted emissions data, based upon what is both realistic and has potential for influence to create savings. The CPU may wish to draw upon the support of the Green Economy and Systems Thinking Teams to determine an approach to maximising cost and emissions savings through contract management.

#### **Responsibilities summarised (subject to outcome of review)**

- **Action plan owner (Interim Service Director-Executive Services)**-overall responsibility for ensuring that the action plan sets out and quantifies in detail how cash & carbon will be saved from corporate contracts in order to sufficiently contribute to the council meeting its corporate carbon reduction target. Also responsible for ensuring that the action plan is updated to reflect progress at each ECO Board.
- **CPU**- to implement an approach to carbon data collection and reduction for contracted operations. To create policy modifications to reflect these changes and to liaise with contracts officers to ensure consistent implementation across contracted services. To consider, with support, best practice ways to reduce carbon emissions and associated costs through contracted services. To request data on an annual basis from contractors using a consistent approach. To liaise with contractors in order to regularly update to the ECO Board on progress against its action plan and the corporate target.
- **Contracts officers**-to modify relevant contracts according to the instruction of the CPU in order to require regular carbon reporting to the council and, with support, to identify opportunities for creating carbon and cost savings within their respective contracts. To ensure data is submitted by contractors and to liaise with contractors to embed carbon reduction. To provide the CPU with updates to ensure accurate reporting of progress to the ECO Board.

### **3.6.Embedding the new thematic approach - Interim plan**

To allow the thematic approach to be successfully embedded, and to allow the respective service areas to establish ways of working to enable them to execute these new responsibilities going forward, an interim period should be allowed for. The Green Economy Team will be on hand to support the transfer of responsibility and to establish new ways of working over the next few months. At the ECO Board in Spring 2014, the respective service areas will be in a position to report on progress against this process and present a scheduled plan for the CMP going forward. At this stage, it will become clear whether this change in approach to the CMP has been fully embedded. Once the respective areas have completed their detailed action plans (using the current action plans as a basis), it will be clear whether there is a gap in planned savings against the corporate target.

### 3.7. Assessment of extent of embedding carbon reduction

The action plans are key for embedding responsibility and positive carbon reduction action across Wiltshire Council.

The Carbon Trust's carbon management self-assessment matrix considers the extent to which an organisation has embedded carbon management, through eight indicative areas (see Appendix 5 for full matrix description). A maximum score of 5 is achievable in each area. Wiltshire Council's self-assessment is set out below, demonstrating a significant improvement in the last two years. It is hoped that the new approach to the action plans will enable the council to further progress against this matrix over the coming years, enabling a score of 5 to be achieved for Responsibility.

	Corporate Strategy	Programme management	Responsibility	Data mgt	Communication and training	Finance and investment	Policy Alignment	Engagement of Schools
Jul 2009	1	2	3	3	2	2	1	2
Mar 2010	2	4	3	4	2	5	2	2
Jan 2011	3-4	4	3-4	4	3	4	2-3	3
Nov 2013	5	5	4	5	4	5	5	4

Where 5 = best score, 1 = worst score

Assessment area	Evidence
Corporate Strategy	<ul style="list-style-type: none"> <li>Carbon reduction highlighted in Business Plan</li> <li>Action Plans in place in strategic areas of the council, to be reviewed by the ECO Board</li> <li>Key decisions deliberated by Cabinet must now include an assessment of the carbon emissions and climate</li> </ul>

	change adaptation impacts
Programme Management	<ul style="list-style-type: none"> <li>• ECO Board reviews progress regularly</li> <li>• Progress against target reported on the website</li> </ul>
Responsibility	<ul style="list-style-type: none"> <li>• Green Champions network engaged</li> <li>• Central CO<sub>2</sub> reduction advice available</li> <li>• Cabinet member regularly updated</li> </ul>
Data Management	<ul style="list-style-type: none"> <li>• Data regularly collated for all sources</li> <li>• CRC Data verified annually</li> <li>• Data monitored for all areas, and targets set through individual action plans</li> </ul>
Communication & training	<ul style="list-style-type: none"> <li>• Regular Green issues communicated on the intranet</li> <li>• Council's ECO programme widely communicated, including receiving an award in 2012</li> </ul>
Finance & investment	<ul style="list-style-type: none"> <li>• Budget identified for 2013-14 and 2014-15 for invest to save energy efficiency projects</li> </ul>
Policy Alignment	Relevant council policies / strategies: <ul style="list-style-type: none"> <li>• ECO Strategy</li> <li>• Core Strategy</li> <li>• Sustainable Procurement</li> <li>• Adaptation Plan</li> <li>• Transformation programme – hub, depot and campus strategies</li> <li>•</li> </ul>
Engagement of Schools	<ul style="list-style-type: none"> <li>• Learning for sustainability programme offered to all schools</li> </ul>

#### 4. Financing

£2.8m capital is allocated over two financial years for energy efficiency projects in buildings and £2m capital is allocated to improving street lighting so that part-night lighting can be enabled. In addition, a revolving energy efficiency revenue fund of £105,000 is available for reinvestment, built up using savings from previous projects. Therefore the council has allocated just **over £5m over two years** to improve its energy efficiency.

	2013/14		2014/15	
	Rev	Capital	Rev	Capital
<b>Total budget</b>	<b>105,000</b>	<b>2,050,000</b>	<b>£105,000</b>	<b>2,750,000</b>
Allocation to Strategic property services	105,000	1,189,000	£105,000	850,000
Allocation for street lighting	0	750,000	0	1,550,000
Allocation to Fleet	0	111,000	0	200,000
ESCO investment	0	0	0	150,000
<b>Total allocation</b>	<b>105,000</b>	<b>2,050,000</b>	<b>£105,000</b>	<b>2,750,000</b>

## 5. Programme management

### 5.1 The programme board – strategic ownership and oversight

Strategic ownership and oversight of the carbon reduction work programme is undertaken by the ECO Board. Chaired by the Cabinet Member for the Environment, it includes directors from across the council. The full membership is presented in **Table 3**.

**Table 5: Membership of the Energy Change and Opportunity Board**

Cllr Toby Sturgis	Cabinet member with responsibility for Environment (Chair)
Carlton Brand	Corporate Director
Alistair Cunningham	Associate Director, Economic Development & Planning (Project Sponsor)
Parvis Khansari	Associate Director, Highways and Transport
Laurie Bell	Associate Director, Communications and Communities
Nick Glass	Manager for School Strategic Planning, School Effectiveness
Michael Hudson	Associate Director, Finance Revenues & Benefits and Pensions
Mark Stone	Programme Director, Transformation
Tracy Carter	Associate Director, Environment and Leisure
Greg Lewis	Places Category Manager, Procurement
Ariane Crampton	Head of Service, Energy and Environment

The board's Terms of Reference (ToR) are as follows:

<p>Wiltshire Council ECO Board</p> <p>Terms of Reference</p> <p>The board will:</p> <ul style="list-style-type: none"> <li>➤ Champion and provide leadership on ECO programme</li> <li>➤ Set and review strategic direction and targets</li> <li>➤ Own the scope of the ECO programme and prioritise carbon reduction projects</li> <li>➤ Monitor progress towards objectives and targets</li> <li>➤ Remove obstacles to successful completion of projects</li> <li>➤ Review and champion plans for financial provision of projects</li> <li>➤ Ensure there is a framework to co-ordinate projects</li> </ul> <p>The Board will meet on quarterly basis or more often if deemed necessary. Minutes and action points from the meeting will be recorded and distributed to members.</p>
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## 5.2 Succession planning for key roles

It is important that the momentum of the carbon reduction programme continues to drive forward. Key steps have been:

- Holding regular ECO Board meetings, with leadership from the Cabinet member for the environment, and membership at director level across a wide range of the council's services.
- Ensuring capital budget resources are allocated to support implementation of the programme.
- Ensuring all services and policies align with the council's low-carbon vision; all reports considered by Cabinet include an assessment of the environmental and climate change adaptation implications.

These measures ensure that there is support both top down and across the organisation to secure carbon reduction activities as a priority. An absence of progress results in issues being escalated (either to higher levels of management or to the ECO Board) to ensure progress is maintained.

## 5.3 Review and monitoring

We will:

- procure audit verification for data management systems on an annual basis and complete annual statutory returns for Greenhouse Gases and Carbon Reduction Commitment;
- provide regular updates to the Cabinet member for the Environment;
- report progress on implementation of this plan to the ECO Board at its 4-monthly meetings;
- present updates to Environment Select Committee as appropriate.

## 6. Performance and risk management

In order for the Council to achieve its 2016/17 target it will be necessary for all areas of council operations to be engaged and aware of carbon emissions. Direct reductions will be possible through funding specific projects, which will need to be continuously identified and funded. A project register should be used to record new projects and to prioritise them for funding through the ECO Board. The council is also taking action to improve its procurement strategy and reviewing options regarding requiring carbon reduction through its contracts with suppliers.

The carbon management programme will consist of a large number of projects spread across a wide range of the council's activities, including both technical projects (e.g. installing insulation in buildings) as well as corporate functions (e.g. corporate strategy, procurement policy, financial risk assessment, etc). It is therefore essential to have in place a rigorous management system to ensure the progress and success of the programme.

Sufficient carbon reduction projects will have to be identified and implemented in order to meet the challenging target. Although a number of projects have already been identified,

the achievement of the target will require a step change in the way carbon reduction is dealt with in the council.

## 6.1 Risks

Risks associated with carbon management include:

	Risk	Owner	Mitigation
1.	Adequate financing is not made available.	Corporate	Business cases will be presented to the Cabinet member for the Environment, ECO Board, SMT and Cabinet as appropriate. It essential to have adequate finance or the carbon reduction target will not be met.
2.	A reputational risk against failing to lead by example in reducing carbon emissions.	Corporate	ECO Board ensures adequate funding is available and monitors progress of the carbon reduction programme
3.	Missed opportunity to deliver energy efficiencies that have the potential to deliver benefits over many years (depending on the measures implemented).	Corporate	ECO Board ensures strategic opportunities are identified by board members.  Respective service areas to identify strategic opportunities in service action plans and Cabinet reports.
4.	Failure to meet our CRC obligation, which could lead to a fine against the council and poor performance on the CRC with corresponding impact on our environmental reputation.	Corporate	The Senior Responsible Officer (Corporate Director) monitors progress against CRC requirements.
5.	Failure to respond to priorities identified locally through Wiltshire Assembly, leading to an impact on our reputation	Corporate	Carbon reduction is included as a action in the council's Business Plan 2013-2017

	amongst both the Wiltshire public and our strategic thematic partners.		
6.	Failure to reduce carbon emissions from services which are not fully under the control of the council or involve a third party – e.g. schools, academies, PFI arrangements, contracted services	Corporate Schools Procurement	ECO Board includes appropriate associate directors and ensures engagement with contracted services via new Procurement Strategy
7.	Increased future cost of energy:  Energy is procured by the council as an annual contract, so costs are fixed for a one year period. As prices are generally expected to increase, the council therefore faces increased energy cost.	Corporate Property Operations Procurement	Increasing energy costs increases the council's operational budget. This will increase the imperative for invest-to-save energy efficiency projects.  Procurement should endeavour to ensure that the council procures energy at the most favourable rate.
8.	Decreased future cost of energy:  Alternatively, effective procurement which results in lower energy prices will result in invest-to-save projects becoming less cost-effective.	Corporate Strategic Property Services Transformation Fleet Services	Careful consideration of invest-to-save projects will be necessary to ensure the council invests in projects with the best financial and carbon reduction return.
9.	Quality of energy data not good enough to comply with CRC	Corporate Strategic Property	AMR meters to improve data collection and increase the proportion of actual data readings compared with

	<p>requirements.</p> <p>Quality of energy data not good enough to be used to identify potential efficiency projects.</p>	<p>Services</p>	<p>estimated data.</p> <p>Meter reading programme to ensure that remaining energy data captured.</p> <p>Use of monitoring and targeting software to identify data-quality issues</p>
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## Appendices

### Appendix 1: Factors affecting carbon emissions data and footprint calculation

A number of factors affect the reported emissions footprint and associated costs for the council each year. It is not possible to draw detailed conclusions on what specific factors have caused any variation between any set of years as these factors are acting on the data in combination to varying degrees. Further work would be necessary to attempt to quantify and account for the effect of each of these factors and make the data comparable.

#### 1. Data accuracy

The emissions are calculated from indicative data. This data comprises both actual measured data but also estimated data where this is not available. In both cases, it carries an element of error and this is introduced into the calculated emissions data. Data accuracy is improving. Examples of improvement areas include data relating to the council's estate, with the installation of the software package SystemsLink for data management, and the introduction of Smart Meters (AMR) for recording energy consumption.

#### 2. Data coverage

The scope of data included in the footprint has changed between years. The council has been implementing an ongoing programme of transformation. This includes the rationalisation of its property portfolio, integration of organisations with the council, and changes to the council's operations. There have also been changes to the data available for inclusion in the footprint each year. Examples include: the closure or vacation of sites such as Browfort and Bradley Road, refurbishment of County Hall and the population of sites such as Shurnhold and Bourne Hill; the integration of the police into council offices; changes to waste service provisions and street lighting; and the availability of data on buildings.

The financial cost data is also affected by data coverage.

#### 3. Energy efficiency and carbon reduction

The council has been undertaking a programme of work to improve the energy efficiency of its operations and reduce its carbon emissions. As this programme of work is delivered, these savings are starting to impact on the council's footprint. Examples include large scale refurbishment of buildings such as County Hall and smaller scale projects such as lighting improvements, boiler replacements, equipment upgrades and thermal insulation measures in buildings.

The financial cost data is also affected by this programme of work through reduced expenditure on energy.

#### 4. External weather-related temperatures

Carbon emissions arising as a result of heating systems depend in part on external weather-related temperatures. Where the winter is colder than normal, the heating energy consumption and associated carbon emissions will tend to be higher. Conversely, when winters are milder, the consumption and associated emissions will be lower.

## **5. Carbon Dioxide emissions conversion factors**

The emissions are calculated from indicative data collected by the council by applying the relevant conversion factor for the data type and financial year to which it relates. The conversion factors are released through DEFRA and have been revised each year. These revisions impact on the emissions reported by the council.

## **6. Electricity costs, fuel costs, transport costs and travel claim rates**

The overall associated financial costs to the council are affected by electricity costs, fuel costs, transport costs and travel claim rates which are subject to change each financial year.

## **7. Data normalisation: Weather correction methodology**

A methodology has been applied to the emissions data in order to approximately account for the varying effect of external weather-related temperatures on different years. The methodology used degree-day data to approximate the significance of this effect on the data in each of the years and applied a corresponding correction factor.

For each year a degree day value is reported. This shows for how many days and by what temperature difference the external temperature was from 15.5 degrees (the temperature below which it is assumed heating was used). For the reported years these values were: 2008/09, 2112; 2009/10, 2233; 2010/11, 2155; 2011/12, 1854; 2012/13, 2490.

On this basis, 2012/13 would have been the coldest followed by 2009/10, 2010/11, 2008/09 and 2011/12.

## Appendix 2: Explanatory Notes for the financial and emissions data for 2012/13

### Emissions data

- **Council estate**

Data for the council estate has been provided by Energy Services. The data has been taken from the SystemsLink database administered by this team. The data includes energy consumption relating to council owned or controlled estate and buildings including offices and schools and also energy consumption relating to academies. The data excludes consumption relating to council housing and streetlights.

- **Streetlights**

Data has been provided by Mouchel. The data is derived from invoiced accounts and where this information is unavailable, the meter administrator. The consumption data relates to energy consumed in illuminating street lighting.

- **Fleet**

Data has been provided by Fleet Services and taken from the Triscan Software Package. The data is for the entire council operational fleet.

- **Business Journeys - Car**

Data has been provided by Pacroll Services and taken from SAP. The data is derived from business journey claims input through SAP Employee Self Service (ESS) and those submitted using a claim form. The data is for council non-schools staff, members and schools staff (including the majority of non-teaching and teaching staff but excluding academies). The data also excludes journeys made to attend training which are not classed as business journeys.

- **Business Journeys - train**

Data has been provided by Shared Services and comes from Evolvi Rail Systems Limited. The data is based on business journeys by train where tickets are purchased through Trowbridge Tourist Information Centre. The data excludes any business journeys undertaken by train that are claimed back following travel.

- **Business Journeys - air**

Data has been estimated.

- **Hills Waste solutions**

Data has been provided by Hills Waste Solutions. The data covers consumption data for Household Recycling Centres, Materials Recovery Facilities, Waste Transfer Stations and Landfill Sites. Where a site processes waste from more than one customer, a council share of the consumption is calculated. The scope of transport included in the data is vehicles undertaking waste and recycling collection and vehicles supervising these collections for the council.

- **Ringway Highways maintenance**

Data has been provided by Ringway. The data was for all commercial vehicles employed on the Wiltshire Term Maintenance Contract (TMC) undertaking all tasks under the contract. This includes normal routine maintenance, schemes, emergency call outs and transfer of waste to landfill.

- **Ringway surfacing**

Data has been provided by Eurovia Infrastructure. The data is for vehicles and equipment undertaking road surfacing activities for the council.

- **English Landscapes**

Data has been provided by English Landscapes. The data was for vehicles undertaking grounds maintenance activities.

- **Sodexo**

Data has been provided by Sodexo. The data included vehicles undertaking cleaning and catering activities, management business travel and supplier business travel.

## **Finance Data**

- **Estate electricity and fuels**

Data has been provided by Finance and taken from SAP. The finance figure is derived from the sum of all transactions made by the council against the following General Ledger codes for the school and non-school estate: 210000 'Electricity'; 212000 'Gas'; 211000 'Oil'. The values are net values and do not include VAT. The majority of transactions will relate to energy consumed in the financial year. In a number of cases however, the bills for the energy consumed will have been settled late and therefore will appear in the following financial year.

- **Business mileage claims**

Data has been provided by Payroll Services and taken from SAP. The performance team ran a report to derive a breakdown of mileage claims made against employee number. The performance team ran a report to determine total claim cost for each employee. This cost includes mileage claim costs as well as all other expense claims such as car parking and beverages. They ran a report to show all other expenses and deducted this from the total claim cost to show the mileage claim cost only. The mileage claim cost includes an element of VAT.

- **Street lighting**

Data has been provided by Finance and taken from SAP. The finance figure is derived from the sum of all transactions made by the council against the Cost Centre 51415 'Street lighting energy' and General Ledger 210000 'Electricity'. The values are net values and do not include VAT.

- **Fleet fuel**

Data has been provided by Finance and taken from SAP. The finance figure is derived from the sum of all transactions made by the council against the Cost Centres 54930 'Fleet Operations', 79090 'Housg Mtc Trading Ac' and General Ledger 316000 'Vehicle fuel'. The values are net values and do not include VAT.

- **Train travel**

Data has been provided by Finance and taken from SAP. The finance figure is derived from the sum of all train ticket transactions excluding administration fees made by the council to the Trowbridge Tourist Information Centre. The data excludes any business journeys undertaken by train that are claimed back following travel.

### **Carbon dioxide emission conversion factors**

The carbon dioxide emissions are calculated from indicative data by applying a conversion factor based on the data type and financial year to which it relates. The conversion factors have been taken from the factors produced by DEFRA for company reporting of Greenhouse Gas (GHG) emissions in line with the DEFRA Environmental Reporting Guidelines.

### **Degree-day data**

The degree-day data used to correct for the effects of external weather-related temperatures has been taken from the organisation Degree Days Direct Limited. Degree day data is available for different regions of the UK to account for regional variation in external weather temperatures. It is also necessary to select a base temperature for the correction, where this is taken as the external weather temperature above which it is assumed supplementary building heating is not required. The region specified for the data in this report is Severn Valley and the base temperature is taken as 15.5°C.

### **Appendix 3: Explanatory notes for data used for tracking emissions and financial costs**

#### **Emissions data**

Financial years 2008/09, 2009/10

The emissions data is taken from the inventory of data collected for reporting under National Indicator NI185 'Percentage CO<sub>2</sub> reduction from local authority operations' and this defines its scope.

Financial years 2010/11, 2011/12 and 2012/13

The emissions data is taken from the inventory of data collected for reporting on the council's greenhouse gas emissions and this defines its scope.

#### **Finance data**

Financial year 2009/10

- **Estate electricity and fuels**

Data was provided by Finance and taken from SAP. The finance figure is derived from the sum of all transactions made by the council against the following General Ledger codes for the school and non-school estate: 210000 'Electricity'; 212000 'Gas'; 211000 'Oil'.

The extracted data in this year included records relating to the main street lighting account and council housing. This data was removed from the data set as street lighting data was sourced from the contractor separately and council housing data is not currently reported.

- **Business mileage claims**

Data was provided by Payroll Services and taken from SAP.

The data available in this year is for council non-schools staff only and therefore excludes members and schools staff.

#### Appendix 4: Detailed action plans

Detailed action plans were agreed to as part of the CMP review in June 2013. In August 2013, action plans were requested of the following service areas to inform version 2.0 of the CMP:

1. Property operations
2. Asset management and corporate buildings
3. Schools
4. Street lighting
5. Fleet
6. Waste management
7. Transport emissions
8. Sustainable procurement
9. Health/adult social care
10. Strategic Energy planning

With each capturing:

- Carbon footprint in each area
- Energy costs
- Opportunities for savings: short / medium / long term
- Resources required to deliver savings (both financial investment and identification of officers to take it forward)
- Prioritisation of actions low cost -> high cost
- Action plan and timeline to deliver savings
- Agreement on setting a performance target
- Agreement on how to measure and report on progress towards the target
- Sign off by Associate Director

Draft plans were delivered to varying degrees of completion, with factors influencing the levels of progress outlined in section 3.

## Appendix 5: The Carbon Trust's Carbon Management Matrix

	CORPORATE STRATEGY	PROGRAMME MANAGEMENT	RESPONSIBILITY	DATA MANAGEMENT	COMMUNICATION & TRAINING	FINANCE & INVESTMENT	POLICY ALIGNMENT *	ENGAGEMENT OF SCHOOLS
<b>5</b>	<ul style="list-style-type: none"> <li>• Top level target allocated across organisation</li> <li>• CO<sub>2</sub> reduction targets in Directorate Business Plans</li> <li>• Action plans in place to embed strategy. Progress routinely reviewed</li> </ul>	<ul style="list-style-type: none"> <li>• Cabinet / SMT review progress against targets on quarterly basis</li> <li>• Regular diagnostic reports provided to Directorates</li> <li>• Progress against target published externally</li> </ul>	<ul style="list-style-type: none"> <li>• CM integrated in responsibilities of senior managers</li> <li>• CM part of all contracts / T's&amp;C's</li> <li>• Central CO<sub>2</sub> reduction advice available</li> <li>• Green Champions leading local action groups</li> </ul>	<ul style="list-style-type: none"> <li>• Regular collation of CO<sub>2</sub> emissions for all sources</li> <li>• Data externally verified</li> <li>• Monitoring &amp; Targeting in place for:                             <ul style="list-style-type: none"> <li>○ buildings</li> <li>○ street lighting</li> <li>○ transport/travel</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• All staff given formalised CO<sub>2</sub>:                             <ul style="list-style-type: none"> <li>○ induction and training</li> <li>○ communications</li> </ul> </li> <li>• Joint CM communications with key partners</li> <li>• Staff awareness tested through surveys</li> </ul>	<ul style="list-style-type: none"> <li>• Finance committed for 2+ yrs of Programme</li> <li>• External funding being routinely obtained</li> <li>• Ring-fenced fund for carbon reduction initiatives</li> </ul>	<ul style="list-style-type: none"> <li>• CO<sub>2</sub> friendly operating procedure in place</li> <li>• Central team provide advice and review, when requested</li> <li>• Barriers to CO<sub>2</sub> reduction routinely considered and removed</li> </ul>	<ul style="list-style-type: none"> <li>• A 'whole school approach' including curriculum</li> <li>• Mature programme of engagement in place</li> <li>• CO<sub>2</sub> saving in schools having a wider community impact</li> </ul>
<b>4</b>	<ul style="list-style-type: none"> <li>• CO<sub>2</sub> reduction commitment in Corporate Strategy</li> <li>• Top level targets set for CO<sub>2</sub> reduction</li> <li>• Climate Change Strategy reviewed annually</li> </ul>	<ul style="list-style-type: none"> <li>• Sponsor reviews progress and removes blockages through regular Programme Boards</li> <li>• Progress against targets routinely reported to Senior Mgt Team</li> </ul>	<ul style="list-style-type: none"> <li>• CM integrated in to responsibilities of department heads</li> <li>• Cabinet / SMT regularly updated</li> <li>• Staff engaged through Green Champion network</li> </ul>	<ul style="list-style-type: none"> <li>• Annual collation of CO<sub>2</sub> emissions for:                             <ul style="list-style-type: none"> <li>○ buildings</li> <li>○ street lighting</li> <li>○ transport/travel</li> </ul> </li> <li>• Data internally reviewed</li> </ul>	<ul style="list-style-type: none"> <li>• All staff given CO<sub>2</sub> reduction:                             <ul style="list-style-type: none"> <li>○ induction</li> <li>○ communications</li> <li>○ CM matters communicated to external community</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Coordinated financing for CO<sub>2</sub> reduction projects via Programme Board</li> <li>• Funding principles and processes agreed</li> <li>• Finances committed 1yr ahead</li> <li>• Some external financing</li> </ul>	<ul style="list-style-type: none"> <li>• Comprehensive review of policies complete</li> <li>• Lower level policies reviewed locally</li> <li>• Unpopular changes being considered</li> </ul>	<ul style="list-style-type: none"> <li>• A clear emphasis on energy / CO<sub>2</sub> reduction in schools</li> <li>• Council activities fully coordinated</li> <li>• Broad set of education stakeholders engaged</li> <li>• Funding in place</li> </ul>
<b>3</b>	<ul style="list-style-type: none"> <li>• CO<sub>2</sub> reduction vision clearly stated and published</li> <li>• Climate Change Strategy endorsed by Cabinet and publicised with staff</li> </ul>	<ul style="list-style-type: none"> <li>• Core team regularly review CM progress:                             <ul style="list-style-type: none"> <li>○ actions</li> <li>○ profile &amp; targets</li> <li>○ new opportunities</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• An individual provides full time focus for CO<sub>2</sub> reduction</li> <li>• Key individuals have accountability for carbon reduction</li> <li>• Senior Sponsor actively engaged</li> </ul>	<ul style="list-style-type: none"> <li>• Collation of CO<sub>2</sub> emissions for limited scope i.e. buildings only</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental / energy group(s) given ad hoc:                             <ul style="list-style-type: none"> <li>○ training</li> <li>○ communications</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• A view of the cost of CO<sub>2</sub> reduction is developing, but finance remains ad-hoc</li> <li>• Some centralised resource allocated</li> <li>• Finance representation on CM Team</li> </ul>	<ul style="list-style-type: none"> <li>• All high level and some mid level policies reviewed, irregularly</li> <li>• Substantial changes made, showing CO<sub>2</sub> savings</li> </ul>	<ul style="list-style-type: none"> <li>• A person has responsibility for Schools CO<sub>2</sub> reduction</li> <li>• Schools CO<sub>2</sub> reduction projects coordinated</li> <li>• Ad-hoc funding</li> </ul>
<b>2</b>	<ul style="list-style-type: none"> <li>• Draft Climate Change Policy</li> <li>• Climate Change references in other strategies</li> </ul>	<ul style="list-style-type: none"> <li>• Ad hoc reviews of CM actions progress</li> </ul>	<ul style="list-style-type: none"> <li>• CO<sub>2</sub> reduction a part-time responsibility of a few department champions</li> </ul>	<ul style="list-style-type: none"> <li>• No CO<sub>2</sub> emissions data compiled</li> <li>• Energy data compiled on a regular basis</li> </ul>	<ul style="list-style-type: none"> <li>• Regular awareness campaigns</li> <li>• Staff given CM information on ad-hoc basis</li> </ul>	<ul style="list-style-type: none"> <li>• Ad hoc financing for CO<sub>2</sub> reduction projects</li> </ul>	<ul style="list-style-type: none"> <li>• Partial review of key, high level policies</li> <li>• Some financial quick wins made</li> </ul>	<ul style="list-style-type: none"> <li>• Ad-hoc schools projects to specifically reduce energy / CO<sub>2</sub></li> </ul>
<b>1</b>	<ul style="list-style-type: none"> <li>• No policy</li> <li>• No Climate Change reference</li> </ul>	<ul style="list-style-type: none"> <li>• No CM monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• No recognised CO<sub>2</sub> reduction responsibility</li> </ul>	<ul style="list-style-type: none"> <li>• No CO<sub>2</sub> emissions data compiled</li> <li>• Estimated billing</li> </ul>	<ul style="list-style-type: none"> <li>• No communication or training</li> </ul>	<ul style="list-style-type: none"> <li>• No specific funding for CO<sub>2</sub> reduction projects</li> </ul>	<ul style="list-style-type: none"> <li>• No alignment of policies for CO<sub>2</sub> reduction</li> </ul>	<ul style="list-style-type: none"> <li>• No CO<sub>2</sub> / energy reduction policy for schools</li> </ul>

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