



To: Executive Councillor for Planning and Climate Change: Councillor Tim Ward
Report by: David Kidston, Strategy and Partnerships Manager
Relevant scrutiny committee: Environment 11/6/2013
Scrutiny Committee
Wards affected: All Wards

ANNUAL CLIMATE CHANGE STRATEGY, CARBON MANAGEMENT PLAN AND CLIMATE CHANGE FUND STATUS REPORT
Not a Key Decision

1. Executive summary

- 1.1 This report provides an update on progress during 2012/13 on actions to deliver the three strategic objectives of the City Council's current Climate Change Strategy, which covers a five year period from 2012-2016. As part of this, the report includes an update on progress in implementing the Council's Carbon Management Plan 2011-2016. The Plan sits under the Strategy and plays a key role in achieving its first strategic objective, which is to reduce carbon emissions from the City Council's estate and operations.
- 1.2 The report also provides an update on the current position of the Climate Change Fund, which provides support to projects that help to reduce the Council's own carbon emissions and/or manage climate change risks to Council staff and property.

2. Recommendations

The Executive Councillor is recommended to:

- a) Note the progress achieved during 2012/13 in implementing the Climate Change Strategy and the Carbon Management Plan.
- b) Note the Climate Change Fund Status Report.

3. Background

- 3.1 At Environment Scrutiny Committee on 9 October 2012, the Executive Councillor for Planning and Climate Change approved a revised Climate Change Strategy and Action Plan, following a 10 week public consultation period. The Strategy sets the framework for the City Council's action to address the causes and consequences of climate change between 2012/13 and 2015/16. It has three strategic objectives, which are:
1. To reduce carbon emissions from the Council's estate and operations and manage the risks to its staff and property;
 2. To set high standards and assist residents, businesses and organisations to reduce their carbon emissions and manage climate risks;
 3. To work in partnership with other organisations to address the causes and effects of climate change.
- 3.2 As part of the performance management arrangements for the Climate Change Strategy, it was agreed that officers would provide an annual update on progress in delivering the Climate Change Strategy Action Plan to the Executive Councillor for Planning and Climate Change at Environment Scrutiny Committee. This report provides details of progress on some of the key actions during the first year of the Strategy. A full list of progress towards all the 44 actions in the Action Plan is available on request.

4.0 Progress in delivering the key actions during 2012/13

Objective 1 - To reduce carbon emissions from the Council's estate and operations and manage the risks to its staff and property

- 4.1 Objective 1 will be delivered primarily through the Council's Carbon Management Plan for 2011-2016, which was approved at Environment Scrutiny Committee by the Executive Councillor for Planning and Climate Change on 26 June 2012. The Carbon Management Plan sets out 64 carbon reduction projects targeted at the areas of the Council's activity which contribute most to our carbon emissions (e.g. swimming pools, car parks, vehicle fleet, offices and sheltered and temporary housing). This is the first time that progress in delivering the Carbon Management Plan has been reported to the Committee, so this report provides details of projects delivered in both 2011/12 and 2012/13.

- 4.2 Wherever possible we have sought in this report to quantify the impact of individual projects included in the Carbon Management Plan on the Council's finances and its carbon emissions. It is anticipated that these projects will reduce the Council's energy and fuel usage, which will lead to reductions in the Council's carbon emissions. By reducing energy and fuel usage at key sites, the projects will also lead to reductions in what the Council would otherwise have spent on energy and fuel costs at these sites. However, it should be noted that the actual amount that the Council spends on energy and fuel at these sites may also be influenced by other factors, such as any changes in usage of buildings, changes to service levels, unseasonal variations in weather or increases in energy costs beyond those already budgeted for. For this reason, this report provides figures on 'project cost avoidance' rather than financial savings.
- 4.3 It should also be noted that some of the project cost avoidance figures and carbon saving figures provided are estimates, because it is too soon to fully determine the performance of some of the projects that were implemented in 2012/13.
- 4.4 A total of 22 projects have been delivered to date: nine in 2011/12; 12 in 2012/13; and one in 2013/14. Full details of projects implemented in 2011/12 and 2012/13 are provided at Appendix A. The key Carbon Management Plan projects delivered to date include:
- Installation of a range of energy efficiency improvements at Parkside Pools, Abbey Pool, Jesus Green Lido and Kings Hedges Learner Pool. The measures installed have included: LED lighting, pool covers, Building Energy Management Systems¹ and Variable Speed Drives². It is estimated that these measures will deliver total annual carbon savings of 394 tC20e and project cost avoidance of £63,420.
 - Installation of a solar thermal system at Abbey Pool, which will use an array of photovoltaic (PV) panels installed on the roof of the pools to capture solar energy and provide a renewable source of

¹ Building Energy Management Systems (BEMS) control and monitor a building's mechanical and electrical equipment, such as ventilation, lighting, power systems, fire systems, and security systems.

² Variable speed drives (VSD) regulate the speed and rotational force of electric motors at the pools in response to changing levels of demand for energy from water and air pumps at the pools.

hot water for the pool. It is estimated that the system will achieve annual carbon savings of 15.6 tC20e and project cost avoidance of £10,900.

- Replacement of existing lighting in the Grand Arcade Annex car park and the Corn Exchange house lighting with more energy efficient LED lighting. It is estimated that these improvements will deliver total annual carbon savings of 153 tC20e and project cost avoidance of £19,900.
- Installation of a solar PV system and a range of energy efficiency measures, including internal wall insulation, heating upgrades and LED lighting, as part of the wider refurbishment of the Brandon Court sheltered housing scheme. A further solar PV system has also been installed at New Street hostel. It is estimated that these improvements will deliver total annual carbon savings of 56 tC20e and project cost avoidance of £13,900.
- Installation of a heat recovery system at the crematorium. It is estimated that this system will achieve total annual carbon savings of 22 tC20e and project cost avoidance of £2,600.
- Installation of more efficient boilers at Llandaff Chambers and Mill Road Depot and associated improvements to start controls and pipework. It is estimated that this will deliver achieve total annual carbon savings of 63 tC20e and project cost avoidance of £10,100.

4.5 The total cost of projects implemented during 2011/12 and 2012/13 was £1,126,000, which is lower than the amount we expected to spend during this period (£1,321,000) when the Carbon Management Plan was published in June 2012. The main reasons for this difference are:

- As projects have been refined and moved forward into implementation, and suppliers' quotes have been obtained, their costs have varied from our original estimates, in some cases considerably. For example, we originally expected the LED lighting upgrade in the Grand Arcade Annex car park (which was fully funded by the Climate Change Fund) to cost in the region of £120,500; in practice, the project cost £94,100. This partly reflects the rate at which LED products are developing and becoming more cost effective.
- Eight of the projects proposed for implementation in 2012/13 were not completed. Some of these projects have been rephased and

will be completed in later years of the Plan, but others will not be taken forward as further investigation into their feasibility revealed that there was not a viable business case. For example, there were a number of changes to the proposed roll-out of voltage optimisation (VO) technology across the Council estate. The installation at Mandela House was delayed due to the need to avoid disruption to the site during essential upgrades to the Revenue and Benefits IT system necessitated by the Welfare Reforms, but was completed on 13 April 2013. The proposed installation at Mill Road Depot did not proceed because further site surveys showed that the technology was not appropriate for the site and did not present a strong business case. The proposed installations at Parkside Pools and Queen Anne Terrace car park have been placed on hold until the outcome of both the award of the new leisure management contract and the possible refurbishment of the car park.

- 4.6 It is estimated that the projects delivered in 2011/12 and 2012/13 will have reduced the Council's energy expenditure by around £123,800 per year; and achieved on-going carbon savings of around 713 tonnes of CO₂ equivalent (tCO₂e) per year.
- 4.7 When the Carbon Management Plan was published, it was estimated that the projects delivered in 2011/12 and 2012/13 would deliver a total energy cost reduction of £198,000 annually and total carbon savings of 1,033 tCO₂e per year. The main reasons for the difference in projected and actual reductions are:
- The rescheduling of some projects and the decision not to proceed with some others, as outlined at 4.5, has contributed to the savings achieved being lower than originally forecast.
 - Some of the project cost avoidance and carbon savings figures presented in the Carbon Management Plan were estimates, developed with the aid of quantification tools and industry-average guides provided by the Carbon Trust. The data available for some projects that have been implemented suggests that, due to a variety of site-specific factors, the performance of some projects has differed from the original estimates.
 - When developing the Carbon Management Plan, it was anticipated that the route optimisation project would considerably reduce the mileage of the Council's fleet, leading to significant fuel cost and carbon savings. Although the project was implemented

successfully, the demand for the Council's waste collection service has substantially increased as new housing developments have completed, which will have an impact on the original savings projections for this project.

Improvements to Energy Monitoring and Baseline Measurement

- 4.8 As previously reported to Environment Scrutiny Committee, the City Council discovered in 2012 that it cannot be completely confident in the accuracy of its total energy usage figures, and therefore its total greenhouse gas emissions, because it is currently reliant on the data provided by our energy suppliers for some sites. Our energy suppliers take meter readings at these sites, but the frequency with which they do this varies greatly from site to site and rarely provides data for a complete financial year. As a result, for many of these sites we are currently reliant, at least in part, upon estimated energy usage data.
- 4.9 During 2012/13, we have taken steps to ensure that we have accurate data for all City Council sites included in the baseline for the Carbon Management Plan. The Council has invested in the installation of Automatic Meter Readers (AMRs) at all major sites that did not previously have them. AMRs will remove the need for estimated billing by automatically and remotely reading meters and helping to record meter readings. This will provide more reliable data on our energy usage at all sites, but it will also enable us to identify any patterns or trends in energy usage at particular sites and help highlight opportunities for future carbon reduction measures.
- 4.10 While AMRs will considerably improve the accuracy of our energy usage data, they are not failsafe. As an additional measure to increase our confidence in the accuracy of our energy usage figures, officers will also be taking annual visual meter readings at all sites. We have assigned responsibility for reading each meter to a specific officer and provided them with training to ensure that they are able to read the meters correctly. Meter readings have been taken for all sites in March 2013 and will be taken again in March 2014, which will provide us for the first time with data on our actual energy usage for a full financial year (2013/14).

4.11 The original Carbon Management Plan set a working target to reduce the Council's carbon emissions by 20% between 2010/11 and 2015/16. However, for the reasons outlined above, we recognise that we do not currently have reliable energy usage data for all our sites for the baseline year of 2010/11, so it is not possible to measure performance against this target. In April 2014 we will identify a new baseline for 2013/14 based on the reliable data gathered over the preceding 12 months. We will also set a new target for reducing the Council's emissions from this point, to be measured against the 2013/14 baseline figure.

Climate Change Fund status

4.12 The City Council's Climate Change Fund was established in 2008 to help deliver schemes or activities that would contribute to the achievement of its corporate climate change objectives, through both carbon reduction and climate change risk management. Since 2009, an annual status report on the Climate Change fund has been presented to Environment Scrutiny Committee, with the exception of 2011 when Strategy and Resources Scrutiny Committee received the report due to a change of Executive Councillor and Portfolio.

4.13 To date, a total of £813,820 has been invested in the Climate Change Fund. An initial investment into the Fund of £250,000 was agreed in 2008. A further £250,000 was approved as part of the November 2010 Medium Term Strategy (MTS) and £184,770 was approved by Council on 7th April 2011. Council then approved an additional £129,050 on 23rd February 2012.

4.14 A full break down of all expenditure from the Fund is provided in Appendix B. This shows that, to date, a total of 26 projects have been supported by the Fund, representing a total investment of £422,808. Since 2011/12, the Fund has primarily been used to support the delivery of projects through the Carbon Management Plan. 9 of the 11 projects funded since 2011/12 were included in the Plan. These projects account for a total of £265,716 expenditure from the Fund. Two additional projects (the Tree Canopy study and the LED audit of multi-story car parks) have been supported since 2011/12 at a total cost of £21,500 because they met the wider criteria of the fund.

4.15 The current remaining balance of the Fund is £391,012. No additional provision was made in the Council's 2013/14 because this existing balance is sufficient to meet the majority of projected future expenditure associated with the Carbon Management Plan. The projects currently identified for delivery during 2013/14 will require total funding from the Climate Change Fund of £166,170. The projects currently scheduled for delivery in 2014/15 and 2015/16 are provisionally expected to require a total contribution of £278,000.

Objective 2 - To set high standards and assist residents, businesses and organisations to reduce their carbon emissions and manage climate risks

4.16 Objective 2 of the Climate Change Strategy will be achieved by putting climate change at the heart of services such as Planning (not least through the development of the Council's new Local Plan), Refuse and Environment, and Estates and Facilities.

4.17 Significant progress has been made during 2012/13 in developing the Cambridge Local Plan, which will set high sustainability standards for new developments. A range of options for policies on sustainability standards were developed and presented in an Issues and Options report, which was the subject of two public consultations in June-July 2012 and January-February 2013. The draft Local Plan, which addresses climate change and managing resources in section four of the document, will be scrutinised at Development Plan Scrutiny Sub-Committee on 29 May 2013; at Environment Scrutiny Committee on 11 June 2013 and at Full Council on 27 June 2013. Subsequently, public consultation on the draft Local Plan is programmed to take place between 19 July and 30 September 2013.

4.18 The draft Local Plan includes a range of policies to minimise the impact of future development in the City on climate change, including:

- Action 15a): Requiring a minimum of Code for Sustainable Homes Level 4 for all new residential development, with on-site levels of carbon reduction of 44% from 2014, and zero carbon development from 2016.

- Action 15a): Requiring a minimum of BREEAM³ 'very good' certification for non-residential development from 2014, rising to BREEAM 'excellent' from 2016. On-site levels of carbon reduction will be set in line with future changes to Building Regulations.
- Action 15 b): Requiring all new developments to be designed to: optimise the reduction of construction waste through design; maximise the reuse and recycling of materials at all stages of a developments life cycle; and provide well designed, integrated recycling and waste facilities for future occupants.
- Action 15d): Requiring Code for Sustainable Homes Level 5/6 for water consumption in new homes (equivalent to 80 litres/head/day compared to an average current potable water consumption in Cambridge of 150 litres/head/day). For non-residential development, maximum BREEAM credits for reducing water consumption will be required.
- Action 24: Requiring climate change adaptation measures to be integrated into the design of new developments. The precise measures to be implemented will vary from development to development, taking account of the context of each specific proposal, but a list of example measures will be provided in the Local Plan.

4.19 The City Council has also assisted residents to reduce their carbon emissions through a range of measures in 2012/13 to improve the energy efficiency of existing homes in the City, including:

- Action 9 b): Spending over £1.45 million on improving the energy efficiency of Council homes, through: replacing 490 older boilers with more energy efficient condensing boilers; installing 100 loft and cavity wall insulation measures; installing external insulation to 42 flats at Davy Road; and installing energy efficiency measures as part of wider housing maintenance work.
- Action 11 b) and c): Providing support to homeowners to improve the insulation of their properties. The Heatseekers thermal-imaging project identified properties in the City which would benefit from improved insulation. It led to the installation of 673 insulation measures under the national CERT scheme, which will deliver an estimated annual reduction in carbon

³ BREEAM is an internationally recognised assessment method for sustainable building design, construction and operation

emissions of 445 tonnes. The Cambridge Home Insulation Scheme provided grant funding towards the cost of a further 674 loft and cavity wall insulation measures in 519 properties across the City.

- Action 11 d): Providing grant funding to landlords applying to the landlord accreditation scheme to improve the energy efficiency of 27 privately-rented homes.

4.20 The Council has also assisted residents to reduce their carbon emissions through its recycling and waste collection services during 2012/13:

- Action 12 b) Promoting use of a new commingled recycling service to businesses, which has resulted in an increase in recycling of commercial waste collected by the Council from 21% in 2011/12 to 29% in 2012/13.
- Action 12b): Raising awareness of recycling through using volunteers from the Recycling Champions scheme to carry out door-knocking exercises in blocks of flats. They have also attended local events to provide information and communicate with residents about any barriers they may have to recycling.
- Action 14: Increasing the types of material that can be recycled. Plastic pots, tubs and trays were added to the blue bin recycling scheme in August 2012 and new electrical and electronic equipment banks have been provided at 5 bring bank sites across the city. The Council intends to further increase the materials that can be recycled when the contract for sorting recyclables is renewed in 2014.

Objective 3 - To work in partnership with other organisations to address the causes and effects of climate change

4.21 Objective 3 of the Climate Change Strategy will be achieved by continuing to play a leading role in partnerships with neighbouring local authorities, the city's universities, and the voluntary, community and business sectors.

4.22 The City Council continues to work closely with partners, particularly with the County Council in their role as Highways Authority, to help promote access to sustainable modes of travel and reduce transport-related emissions. A significant proportion of

the City's population already cycle regularly, with the 2011 Census data confirming that over 30% of residents in the city cycle to work, the highest proportion in the UK. However, Cambridge is a small, compact city, which suffers from congestion on most major radial roads at peak times. Increased growth in the area over the next few years will place additional pressure on these roads. It is therefore imperative that the City Council continues to promote a reduction in single car trips and a shift to more sustainable forms of transport, including walking, cycling and public transport. Key actions in the past year have included:

- Action 19: Developing draft Local Plan policies which will minimise traffic generation and promote sustainable transport, including:
 - Ensuring that major development on the edge of the city and in the urban extensions are accessible to Cambridge City Centre and major centres of employment by public transport, cycling or walking.
 - Safeguarding land for new public transport infrastructure, such as bus lanes, interchange facilities and junction improvements.
 - Safeguarding existing cycling and walking routes, identifying new cycle routes on land outside the public highway, and requiring developers to fund high-quality cycle paths.
 - Setting minimum standards for numbers of cycle parking spaces to be provided in all new developments.
 - Ensuring that new roads make provision for the needs of pedestrians, cyclists and public transport users, including safety measures.
- Action 20: Progressing a £267,000 programme of improvements to bus shelters across the city, including the installation of shelters at 12 new sites and the replacement of 60% of existing shelters by autumn 2013.
- Action 37: Progressing a joint programme of improvements to existing highways for cyclists with Cambridgeshire County Council, including the Downham's Lane adoption and improvement scheme and changes to the Perne

Road/Radegund Road roundabout to reduce vehicle speeds and increase cycle safety.

- Contributing funding to the Cambridgeshire Travel for Work Partnership, which works with employers to develop workplace travel and implement measures to reduce drive alone commuting and business travel. The Partnership works with businesses in the City which have a total of 38,000 employees. These businesses implemented measures that reduced carbon emissions from 10.4kg per commuter in 2010/11 to 8.86kg in 11/12.

4.23 Over the past year the City Council has worked in partnership with a range of partners, including the private sector, the University of Cambridge, Anglia Ruskin University, Cambridgeshire County Council and neighbouring district Councils, to progress a number of major long-term schemes which will help reduce the impact of climate change. These include:

- Action 11 d): Progressing the development of a local Green Deal offer, which will maximise opportunities for Cambridge residents to benefit from this national energy efficiency scheme. A Memorandum of Understanding for a Cambridgeshire Green Deal Partnership has been agreed with Cambridgeshire County Council and neighbouring district councils. 75 free Green Deal assessments will be piloted to Cambridge residents and the Partnership is currently undertaking a procurement process to appoint a common Green Deal Provider from autumn 2013.
- Action 29: Carrying out technical feasibility work and an initial economic analysis for the development of a District Heating Scheme focussing on the city centre. The next stages of the project will include the development of a detailed business case and the appointment of a Project Manager. The new Local Plan will also contain a policy requiring development within a Strategic District Heating Zone to connect to district heating where this is available.
- Action 30: Entering into a formal partnership with other local authorities in Cambridgeshire and Peterborough to gain access to technical assistance through the EU Mobilising Local Energy Initiative (MLEI) programme. The authorities will work together to develop low carbon renewable energy and energy efficiency

schemes and develop a low carbon investment fund and delivery vehicle.

4.24 The City Council has worked closely with local voluntary and community groups during 2012/13 and helped build their capacity to undertake activities to address climate change, including through:

- Action 12 a): Providing presentations and marketing support for a number of climate-change related community projects and events, including Cambridge Carbon Footprint's 'Trumpington Warm Homes' and 'Open Eco Homes' projects, and the Home Energy Fair organised by Transitions Cambridge.
- Action 27: Providing a total of almost £48,000 in grants to 17 local environmental groups as part of the annual Sustainable City Grants programme. A total of 21 projects were supported which tackled issues such as home energy efficiency, sustainable food and farming, cycling promotion and recycling. The Council also awarded £10,000 in cycling and walking promotion grants to local groups.

5.0. Implications

(a) Financial Implications

Funding for projects included in the Carbon Management Plan (which is the primary vehicle for delivering Objective 1 of the Strategy) will come from a number of different funding sources, including the Climate Change Fund and existing General Fund or Housing Revenue Account (HRA) budgets for delivering services.

The actions contained in the Climate Change Strategy Action Plan under Objectives 2 and 3 will be funded through:

- Existing budgets for delivering key services, particularly for projects or actions that will deliver climate change benefits as part of wider planned developments or improvements to key services. These fall within the General Fund or the HRA depending on the services involved.
- Government and other external funding sources for climate change initiatives.

(b) Staffing Implications (if not covered in Consultations Section)

Lead officers have been identified for projects in the Climate Change Strategy Action Plan and Carbon Management Plan who have the capacity to deliver the projects within the stated timescales. The Climate Change Officer will manage and co-ordinate the overall delivery of the Carbon Management Plan, with support from the Carbon Management Team, which is a corporate group that includes many of the lead officers. The Environmental Strategy Group (ESG), which is chaired by the Chief Executive and relevant Heads of Service, will provide strategic direction for the delivery of the Climate Change Strategy Action Plan and the Carbon Management Plan.

(c) Equal Opportunities Implications

An Equalities Impact Assessment (EqIA) of the aims and objectives was carried out when the Climate Change Strategy and the Carbon Management Plan were developed. This did not identify any specific negative impacts, but the needs of different protected characteristics will need to be considered when implementing the range of actions contained in the two documents. This is to ensure that the strategy is implemented effectively and that all people are able to benefit from the work being undertaken. Consequently further Equality Impact Assessments may be undertaken for individual projects. For example, an EQIA has recently been carried out for the developing Local Plan.

The original EqIA can be accessed on the City Council's website at:

<http://www.cambridge.gov.uk/ccm/content/council-and-democracy/how-the-council-works/council-policies-and-plans/equality-and-diversity/equality-impact-assessments.en>

(d) Environmental Implications

The Climate Change Strategy and Action Plan and the Carbon Management Plan will have a high impact on the environment by setting out a planned approach to: reducing the Council's carbon emissions; setting high standards for residents, businesses and organisations to reduce their carbon emissions and manage climate risks; and working in partnership with, influencing and learning from other organisations to address the causes and effects of climate change.

(e) Procurement

The Climate Change Strategy Action Plan includes two actions relating to procurement. The first focuses on improving the Council's contract management processes to ensure that contractors deliver the sustainability requirements of contracts. The second relates to exploring with partner organisations the potential for procuring a joint energy contract with associated sustainability criteria.

(f) Consultation and communication

Public consultation was carried out on a draft of version of the Climate Change Strategy and Action Plan for 10 weeks, starting on 5 July 2012 and finishing on 5 September 2012. The consultation was promoted through a variety of methods, including: promotion on the consultation pages of the Council's website and the Council's Twitter feed; distribution to local residents associations; and meetings with key local partners, including Transitions Cambridge, Cambridge Carbon Footprint, Addenbrooke's Hospital, and the University of Cambridge. The views expressed by respondents to the consultation were taken into consideration in developing the final strategy and were presented to the Executive Councillor and members of the Environment Scrutiny Committee before the Strategy was approved.

(g) Community Safety

The Strategy and Action Plan have minimal impact on Community Safety.

6. Background papers

These background papers were used in the preparation of this report:

- Cambridge City Council Climate Change Strategy and Action Plan
- Cambridge City Council Carbon Management Plan

Both documents can be viewed on the Council's website at:

<https://www.cambridge.gov.uk/climate-change>

7. Appendices

Appendix A – Details of Carbon Management Plan projects implemented during 2011/12 and 2012/13
Appendix B – Climate Change Fund Annual Status Report

8. Inspection of papers

To inspect the background papers or if you have a query on the report please contact:

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APPENDIX A: DETAILS OF CARBON MANAGEMENT PLAN PROJECTS IMPLEMENTED DURING 2011/12 AND 2012/13

Ref	Project	Lead Officer	Total Implementation Cost	Annual Carbon Savings - tCO2e	Annual Project Cost Avoidance - £ (Gross)
2011/12					
1	Community Centre Energy Efficiency Improvements	Jackie Hanson	£9,800	7	£1,100
2	Pools Energy Efficiency Improvements - Parkside Pools changing areas	Ian Ross	£40,000	40	£10,300
3	Grand Arcade Annex Car Park LED Lights	Sean Cleary	£94,100	121	£15,400
4	Brandon Court Energy Efficiency Measures	Will Barfield	£440,000	42	£6,500
5	Brandon Court - PV cells	Will Barfield	£130,000	12	£5,800
7	Crematorium Heat Recovery Project	Paul Necus	£23,145	22	£2,600
8	Install electric bin lift on replacement refuse vehicle	Dave Cox	£5,000	3	£1,300
9	Replace boiler at Llandaff Chambers	Jim Stocker	£28,966	53	£8,600
62	Solar PV installation at New Street Hostel	Sam Griggs	£23,600	2	£1,500
2012/13					
10	Implement RHI technologies - Non-housing properties	Ian Ross	£143,833	16	£10,900

Ref	Project	Lead Officer	Total Implementation Cost	Annual Carbon Savings - tCO2e	Annual Project Cost Avoidance - £ (Gross)
12	Abbey Energy Efficiency Improvements (VSD and BeMS)	Ian Ross	£24,650	137	£20,200
13	Pools Energy Efficiency Improvements – Cherry Hinton Village Centre Changing Room Refurbishment	Ian Ross	TBC	TBC	TBC
14	Pools Energy Efficiency Improvements - Jesus Green and Kings Hedges: Phase 1	Ian Ross	£9,000	10	£1,500
15	Pool covers for Abbey and Parkside and Kings Hedges Learner Pool	Ian Ross	£23,270	70	£11,400
16	Parkside Energy Efficiency Improvements (VSD and BeMS)	Ian Ross	£42,640	136	£20,000
22	Corn Exchange - Upgrade to LED House lighting	Chris Norton	£39,652	31	£4,500
24	Mill Road Depot - upgrade to condensing boilers	Jim Stocker	£33,394	10	£1,600
25	Mill Road Depot - Heating optimum start controls	Jim Stocker			
26	Mill Road Depot - pipework inspection & insulation	Jim Stocker			
27	Route optimisation for refuse trucks (HGVs)	Chloe Hipwood	£15,000	To be confirmed	
28	Install stop/start technology on 12 replacement light commercial vehicles	Dave Cox	£0 ⁴	1	£600

⁴ The cost of these projects is shown as zero, as Stop/Start technology is now required on replacement fleet vehicles as standard and at no additional cost.

Ref	Project	Lead Officer	Total Implementation Cost	Annual Carbon Savings - tCO2e	Annual Project Cost Avoidance - £ (Gross)
			£1,126,050	713	£123,800

N.B. Figures shown in italics are estimates.

APPENDIX B: CLIMATE CHANGE FUND ANNUAL STATUS REPORT 2013

Position as of 10th May 2013

All Figures in £'s	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Investment into Fund	(250,000)		(250,000)	(184,770)	(129,050)	
Cumulative funding available by year	(250,000)	(243,900)	(457,465)	(567,915)	(525,319)	(409,749)
Project Expenditure to date:						
Pilot of Electric Bin Lifts	2,100					
Chesterton Road Toilet Modernisation	900					
Corn Exchange Christmas Lighting Lamps	600					
Arbury Court WC Rainwater Harvesting	2,500					
Romsey Rec Rainwater Harvesting		2,500				
Energy Audit of Pools & Leisure Centres		3,750				
Grand Arcade Annex Car Park Fan system		21,700				
Public Conveniences & Park St Car Park Energy Survey		2,730				
Watercourses Flood Risk Survey			4,510			
Community Centres Energy Audits		2,995				
Corn Exchange LED lighting		2,760				
Mill Road water efficiency (1)			36,000			
Mill Road water efficiency (2)			11,700			
Replacement boiler - Barnwell House			3,150			
Guildhall Voltage optimisation			17,960			
Market Stall LED Lighting			1,000			
Tree Canopy Study				10,870	4,130	
LED Lighting at the Grand Arcade				100,000	(5,900)	

All Figures in £'s	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
Annex Car Park						
Community Centres energy efficiency measures				9,800		
Heat recovery at the Crematorium				11,600		
Water and energy saving measures in changing rooms at Parkside Pool				35,000		
LED audit of multi-storey car parks				5,420	1,080	
Refund from PowerPerfector - Voltage Optimisation Target Failure Payout				(1,044)		
Variable Speed Drives (VSD) and BMS at Parkside Pool.					42,640	
Variable Speed Drives (VSD) and BMS at Abbey Pool.					24,650	
Corn Exchange LED House Lights					25,700	
Pool Covers for Abbey, Parkside Pools and Kings Hedges Learner Pool					23,270	
Voltage Optimisation Roll Out: Mandela House						18,737
Total spend by year (net any refunds)	6,100	36,435	74,320	171,646	115,570	18,737
Cumulative spend to date	6,100	42,535	116,855	288,501	404,071	422,808
Balance remaining (carried forward)	(243,900)	(207,465)	(383,145)	(396,269)	(409,749)	(391,012)

N.B. Those projects shown in highlighted cells are projects that are included in the Council's Carbon Management Plan 2011-2016.