



To: Executive Councillor for Finance and Resources:
Councillor George Owers

Report by: David Kidston, Strategy and Partnerships Manager

Relevant scrutiny committee: Strategy & Resources
18/1/2016
Scrutiny
Committee

Wards affected: Abbey Arbury Castle Cherry Hinton Coleridge
East Chesterton King's Hedges Market Newnham
Petersfield Queen Edith's Romsey Trumpington
West Chesterton

CARBON MANAGEMENT PLAN

Key Decision

1. Executive summary

- 1.1 This report presents the Council's new Carbon Management Plan, which provides the blueprint for reducing energy and fuel consumption and carbon emissions across our estate and activities over the next five years (between 2016/17 and 2020/21). The plan identifies 22 carbon reduction projects which officers currently believe can be delivered in 2016/17 and 2017/18, and a number of potential additional projects which could be delivered from 2018/19 onwards, subject to further investigation and development.
- 1.2 The new Carbon Management Plan builds on the learning and achievements of the first Carbon Management Plan, which led to the delivery of 47 carbon reduction projects from 2011/12 to 2015/16. In particular, the new plan continues the strategic approach adopted in the first plan, by focussing resources on projects which aim to reduce carbon emissions from the buildings and activities which contribute most to our total carbon emissions.

2. Recommendations

The Executive Councillor is recommended:

- 2.1 to approve the new Carbon Management Plan and task officers to deliver the carbon reduction projects set out in the plan.

3. Background

- 3.1 In June 2012, the Council published a Carbon Management Plan for the period from 2011/12 to 2015/16, which set out a strategic and planned approach to reducing carbon emissions from our estate and operations.
- 3.2 Over the past five years, the Council has delivered 47 carbon reduction projects. These projects were targeted at the areas of the Council's activity which contribute most to our carbon emissions (e.g. swimming pools and leisure centres, car parks, the crematorium, vehicle fleet, offices, community centres and sheltered and temporary housing).
- 3.3 More information on these projects is provided at 2.3 in the new Carbon Management Plan, and in Appendix A to the new plan. A wide range of measures and technologies have been installed at different Council sites, including:
- a solar thermal system;
 - solar PV panels;
 - LED lighting and lighting sensors;
 - voltage optimisation;
 - energy efficient heating and air conditioning systems;
 - building energy management systems;
 - a heat recovery system; and
 - stop-start technology on fleet vehicles.

4. Carbon Management Plan projects

- 4.1 Officers have developed a new Carbon Management Plan, which sets out the achievements and learning from the delivery of the first plan, and which provides the blueprint for reducing energy and fuel consumption and carbon emissions across our estate and activities over the next five years (between 2016/17 and 2020/21). The new Carbon Management Plan continues the strategic approach adopted in the first plan, by focussing on reducing carbon emissions from the buildings and activities which contribute most to our total carbon emissions.
- 4.2 Through a combination of site assessments and discussions with building and service managers, 22 carbon reduction projects have been identified which officers currently believe can be delivered in 2016/17 and 2017/18. A summary of these projects is provided at 4.4 in the attached draft of the new Carbon Management Plan. Many of

the projects focus on rolling out measures and technologies trialled in the first carbon management plan to other suitable sites, including:

- major LED lighting projects and other lighting improvements;
- boiler and heating system upgrades;
- insulation improvements; and
- electric vehicles and more fuel efficient vehicles.

- 4.3 A full list of the projects is provided at Appendix B to the plan, including estimated costs, carbon reduction figures and financial savings for each project. Based on the performance of similar technologies in other areas of the Council's estate, it is estimated that in total these 22 projects will cost a total of around £1.72 million, deliver annual financial savings of over £90,000 and reduce carbon emissions from the Council's estate and operations by almost 500 tonnes of carbon dioxide equivalent (tCO₂e). However, it should be noted that these figures are subject to change, as they will be refined when more detailed feasibility studies for some projects are carried out and the projects proceed to implementation.
- 4.4 Officers have greater confidence about the delivery of projects for the first two years of the plan period, because we have greater certainty over the availability of funding and the operational requirements for our buildings in the short term. However, experience gained from delivering our first Carbon Management Plan shows that there needs to be a degree of flexibility and the new plan should not be considered to be 'set in stone'.
- 4.5 In addition to the 22 projects for 2016/17 and 2017/18, officers have also identified further projects which could potentially be delivered during the course of the plan period. A list of these projects is provided at 4.9. These projects are subject to further feasibility assessments, and therefore they are not sufficiently developed at this point to identify precise delivery timescales, costs, financial savings and carbon reductions at this point. Once the viability and likely impact of these projects has been fully assessed, we would expect to add them to the Carbon Management Plan as appropriate.
- 4.6 The proposals to reduce the Council's office accommodation and operational estate outlined in the developing Office Accommodation Strategy are also likely to lead to a reduction in the council's carbon footprint. A report to the Council's Strategy and Resources Committee proposes disposing of Hobson House by July 2016 and Mill Road Depot by mid-2017, and vacating the South Area Housing Office at Cherry Hinton Road by April 2016. Although it is proposed that some of the staff currently working at Mill Road Depot will be relocated to

shared service offices in partner organisations or to new facilities at the Cowley Road site, the majority of staff currently located at Hobson House and Cherry Hinton Road would be relocated to existing buildings. Although energy usage would increase consequently at these existing buildings, there is likely to be a net reduction overall in energy usage and carbon emissions.

5. Measuring and monitoring impact

- 5.1 In keeping with the approach recommended by the Department for Energy and Climate Change, we will continue to monitor energy usage and carbon emissions from all sites where the Council pays the energy bills. We will gather data for all these sites, using visual meter readings and half-hourly data from Automatic Meter Readers (AMRs) installed at all sites. We will publish total energy usage and carbon emissions figures annually in our Greenhouse Gas Report.
- 5.2 We will measure any reductions in our energy usage and greenhouse gas emissions against the baseline year for this plan, which is 2014/15. We anticipate that overall the Council could reduce its carbon emissions by up to 15% from 2014/15 levels by the end of 2020/21. This would be achieved through a combination of:
- the carbon reduction projects identified to date, which could reduce our carbon emissions by around 6% compared to 2014/15 levels;
 - the additional potential carbon reduction projects identified in the Carbon Management Plan, or further carbon reduction projects to be identified over the next five years as this plan develops; and
 - the impact of rationalising our office accommodation and operational estate, which could reduce our carbon emissions by up to 8%. This will depend on how reduction in energy usage through disposing of assets is offset by increases in energy usage at existing sites and energy usage at shared service partner sites.
- 5.3 There have been suggestions that the Council should set a more ambitious target, for instance 10% per year for the five years of the plan. That would equate to a 41% reduction from the 2014/15 baseline position. Drastic action would be required to achieve this level of reduction in our emissions.
- 5.4 Our understanding is that there is a general rule that buildings can achieve up to 30% reductions in the long term through the retrofit application of all main carbon reduction measures, from a base starting point. We believe that we have already applied many of the economically viable technologies to our buildings through the first

Carbon Management Plan (see 3.3 above and 2.3 in the Carbon Management Plan in the annex for a list of measures). We estimate that the projects that we have delivered through the first Carbon Management Plan have achieved a 13% reduction in emissions from base levels. Through a combination of the further lighting, heating, and insulation retrofit projects identified in the new Carbon Management Plan (see 3.5 above and 4.4 in the Carbon Management Plan in the annex), and reducing the number of administrative buildings we occupy, we estimate that we will achieve a further 15% reduction in our emissions.

5.5 We are not currently aware of further economically viable technologies that would allow the Council to reduce its emissions by more than this level and maintain current services. To achieve the further reductions suggested by commentators would therefore seem to require the Council to stop some of the services it carries out, and/or close some of its buildings. For example:

- If the Council were to close all its swimming pools and leisure centres, this would reduce our emissions by around 24%.
- If the Council were to close all its sheltered and temporary housing accommodation and community centres, this would reduce our emissions by a total of around 14%.
- If the Council were to reduce the mileage travelled by its fleet vehicles by half, this would reduce our emissions by around 7.5%. This would require fewer journeys by vehicles used in refuse and recycling collection; street cleansing, parks and open space maintenance; or housing and property maintenance.

5.6 It should be noted that the above examples are provided purely for illustrative purposes, and the Council is not considering making these changes. Officers would not recommend pursuing such options, given the other environmental, health and community benefits provided by these buildings and services. The council is committed to a range of objectives, including maintaining core services and looking after the vulnerable. The implications for services of reducing emissions by 41% over 5 years are not considered consistent with these objectives.

5.7 The Council is keen to play our part in working towards the targets agreed at the recent COP21 international conference in Paris. We will remain open to new suggestions, ideas, technologies and opportunities during the life of the Carbon Management Plan, and will keep our carbon reduction target under review as further projects are identified. We will be keen to work closely with the Universities and Cleantech businesses in the city to explore new approaches. As the

Council transforms the way some of its services are delivered and structured, we will look for further ways to be more resource-efficient in everything we do.

6. Implications

(a) Financial Implications

The 22 projects identified to date will cost an estimated £1.72 million, and deliver estimated annual savings of around £90,000, albeit potentially in the form of future cost-avoidance. Around two-thirds of this expenditure is already budgeted for through a combination of: the Housing Revenue Account; the office accommodation planned maintenance programme; the commercial property planned maintenance programme; and the fleet repairs and renewals budget.

However, it is estimated that a contribution of around £520,000 will be needed from the Council's dedicated Climate Change Fund. In some cases this funding will be used to supplement existing budgets. For example, the Climate Change Fund can be used to part fund replacement of boilers with more efficient models rather than like for like replacement. However, for other projects, including major LED lighting projects at the Grand Arcade car park, Grafton East car park, the Guildhall and Mandela House, the Climate Change Fund would need to meet the majority of implementation costs.

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

Lead officers have been identified for projects in the Climate Change Strategy. They have the capacity to deliver the projects within the stated timescales. Many of the projects will be commissioned by the Estates and Facilities service and delivered by the Council's planned maintenance contractor.

The Climate Change Officer will be responsible for strategic co-ordination of the overall delivery of the Climate Change Strategy, including the Carbon Management Plan. The Environmental Policy Group (EPG), which is chaired by the Director of Environment and attended by the relevant Heads of Service, will provide strategic direction for the delivery of the Carbon Management Plan.

(c) Equality and Poverty Implications

An Equality Impact Assessment is not required for the Carbon Management Plan, as the projects included in the plan are primarily capital projects which will not have a direct impact on staff or residents.

(d) Environmental Implications

The Carbon Management Plan will have a high positive impact on the environment by reducing energy and fuel consumption and resulting carbon emissions from the City Council estate and operations.

(e) Procurement

Projects identified in the Carbon Management Plan for the Council's office buildings, community centres, and sheltered and temporary housing will be commissioned by the Estates and Facilities service and delivered by the Council's planned maintenance contractor, TSG or via new arrangements with Bouygues Group PLC.

In the latter case, the Council has recently signed access agreements to allow it to make use of the Greater London Authority's (GLA) RE-FIT framework agreement specifically designed for energy performance contracting. This allows us to access Bouygues Group PLC as a contractor to identify and deliver energy efficiency projects. The principle benefit of this arrangement is that Bouygues will guarantee the energy savings predicted for projects that they deliver for the Council (subject to the new equipment being managed within defined limits).

It is currently proposed that Bouygues will develop proposals for two major projects included in the Carbon Management Plan: LED lighting installations at the Grand Arcade Car Park and Grafton East Car Park. However, there may be scope to use the company to deliver other projects in other Council buildings under the terms of the agreement.

Bouygues has prepared Desk Top Assessments (DTAs) for LED lighting at the two car parks. Under the terms of the arrangement, the DTAs were prepared at no cost to the Council and identified the range of works possible, the estimated capital installation costs and the energy and carbon savings benefits of projects. Subject to approval of the DTAs, Bouygues will be commissioned at cost to prepare a more detailed Investment Grade Proposal to inform any final decision by the Council to proceed with actual site works.

(f) Consultation and communication

Public consultation is currently being carried out on the Council's draft Climate Change Strategy for 2015/16 to 2020/21. This consultation involves a range of different consultation methods, including a survey on the Council's website, workshops with members of local environmental groups

and one-to-one meetings with key experts and stakeholders, including the University of Cambridge and Anglia Ruskin University.

The Carbon Management Plan is the primary vehicle for delivering one of the five key objectives of the wider strategy, which is to reduce carbon emissions from the Council's estate and operations. Since the projects included in the Carbon Management Plan affect the Council's own estate and services, it has not been considered appropriate to undertake public consultation on the plan.

(g) Community Safety

The Carbon Management Plan will have minimal impact on Community Safety.

7. Background papers

No background papers were used in the preparation of this report:

8. Appendices

Carbon Management Plan 2015/16 to 2020/21

9. Inspection of papers

If you have a query on the report please contact:

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