
CARBON MANAGEMENT PLAN

**Responsible Cabinet Member –
Councillor Nick Wallis, Sustainable Environment & Climate Change Portfolio**

**Responsible Director –
Richard Alty, Assistant Chief Executive, Regeneration**

SUMMARY REPORT

Purpose of the Report

1. To seek Members approval of the Council's Draft Carbon Management Plan (CMP), including proposed projects, governance and finance arrangements. A copy of the Plan is attached at **Appendix 1**.

Summary

2. Climate change and carbon reduction are high on the Government agenda. There are many international and national drivers putting increasing pressure on local authorities to reduce carbon emissions from their own operations. Government has established that to avoid the potentially devastating effects of climate change, the UK needs to reduce emissions by 80% by 2050 against a 1990 baseline.
3. Darlington Borough Council was one of 63 Local Authorities to take part in Phase 7 of the Carbon Trust's Local Authority Carbon Management (LACM) Programme. Over the 10 month period to March, the LACM Programme has provided free technical and change management support to help officers plan for carbon emissions savings from the Council's operations.
4. This Carbon Management Plan indicates a target of 25% reduction in carbon emissions over the next 5 years. If the Council achieves this target it could also achieve significant financial savings.
5. Although a living document that will be subject to review, initial work has identified 19 projects to deliver the reduction target. The key projects are Voltage Optimisation in the Dolphin Centre, energy efficiency improvements to operational buildings, projects in schools and awareness raising and behaviour change. To ensure that any reductions in energy use and carbon emissions are sustainable over the longer term a number of measures to embed carbon management within Council policy and procedures are recommended in the plan.

6. Key to the successful delivery of the plan will be the project management, governance and funding arrangements.

Recommendation

7. It is recommended that :-
 - (a) Members approve the content of the Carbon Management Plan
 - (b) Members approve establishment of a Rotating Investment Fund, and the potential requirement to bid for external funding.
 - (c) The Scheme of Delegation to officers be amended to include a power for the Director of Corporate Services under A, Financial Matters as a new item 18, as follows:
“Approve capital expenditure up to a maximum of £250,000 in any one financial year for carbon management schemes where projects are expected to have a net financial saving, and appropriate funding is in place.”
 - (d) Members request that the Economy and Environment Scrutiny Committee monitors progress against the Plan and reports back to Cabinet, as necessary.

Reasons

8. The recommendations are supported by the following reasons :-
 - (a) National targets require local authorities to consider carbon emissions from their own operations. Local Authorities are in a unique position to lead by example to their Communities. The CMP directly delivers against NI185 which feeds into NI186, an indicator included in the Local Area Agreement.
 - (b) Delivering carbon reductions results in reducing energy consumption and therefore will deliver significant efficiency savings.
 - (c) To ensure adequate resources are available to deliver projects
 - (d) To ensure timely and efficient decision making on funding requirements
 - (e) To ensure Member involvement and, through the Scrutiny process, to consider progress on a regular basis.

**Richard Alty,
Assistant Chief Executive (Regeneration)**

Background Papers

There were no background papers used in the preparation of this report.

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S17 Crime and Disorder	There are no specific implications for crime and disorder
Health and Well Being	The Programme may result in recommendations to improve the energy efficiency of the Council's buildings, which could result in improved working conditions for employees
Sustainability	The Programme will result in the reduction of the Council's carbon footprint, therefore contributing to the sustainability of the Borough.
Diversity	There are no specific implications for diversity
Wards Affected	All wards are affected equally
Groups Affected	All groups are affected equally
Budget and Policy Framework	This report does not represent a change to the budget or policy framework
Key Decision	This is not a Key Decision
Urgent Decision	This is not an urgent decision
One Darlington: Perfectly Placed	The Programme directly contributes to the delivery of the SCS priority 'A low carbon Borough tackling climate change'.
Efficiency	The Programme will result in improved efficiencies through reduced fuel bills for both buildings and fleet vehicles, and has the potential to result in longer term efficiencies.

MAIN REPORT

Introduction

9. Local Authorities are in a key position to take the lead on tackling climate change directly through mitigation actions to reduce carbon emissions from their own operations and buildings, and indirectly through encouraging the community to reduce carbon emissions.
10. Darlington Borough Council made an Expression of Interest to the Carbon Trust to be involved in the Local Authority Carbon Management Programme (LACM) in late 2008, as this was an action in the Darlington Climate Change Action Plan. Confirmation of the Council's inclusion in Phase 7 of the LACM Programme was received in March 2009, following a vetting interview between the Carbon Trust and the Council.

Why do we need a Carbon Management Plan (CMP)?

11. There are many international and national drivers putting increasing pressure on local government to reduce carbon emissions. Government has established that to avoid the potentially devastating effects of climate change the UK needs to reduce emissions by 80% by 2050 against a 1990 baseline. Darlington Council needs to 'do its bit' to contribute to these targets. The move towards a low carbon economy presents significant challenges but also huge opportunities.
12. By analysing carbon emissions and setting targets for reduction the Council can lead by example to the community of Darlington and be in a better position to approach key stakeholders when revising the Darlington Climate Change Action Plan.
13. Reducing carbon emissions is an outcome outlined in One Darlington: Perfectly Placed and the Corporate Plan. The Audit Commission will assess localities against Key Line of Enquiry 3.1 – Use of Resources which includes reducing carbon emissions, and the CAA will assess the Council, and partners, performance in tackling climate change.
14. The Council reports against 3 climate change National Indicators. The CMP directly supports the delivery of 2 of them. NI185 – carbon emission reductions from LA operations which feeds into NI186 – carbon emission reduction per capita. NI186 is in the Local Area Agreement.
15. There are significant cost savings to be made from the delivery of the actions outlined in the CMP. This will, in turn contribute to the Council's performance within the Carbon Reduction Commitment (CRC), considered by Cabinet on 2 March 2010.

Local Authority Carbon Management Programme

16. The Programme has provided free technical advice and support for the development of a Carbon Management Plan. This sets out a business case supporting each of the most appropriate measures to reduce carbon emissions. The action plan highlights actions that can be taken at no cost, as well as projects that through investment, would result in significant fuel savings and consequent reductions in carbon emissions and cost savings.

17. The Council has benefitted from consultant support in the form of audits, workshops and other support over the 10 months of the programme. The LACM process has taken the Council through:
- (a) A systematic analysis of its existing carbon footprint;
 - (b) A calculation of the value at stake and the case for taking action;
 - (c) An assessment of the opportunities to help manage carbon emissions;
 - (d) The development of a structured action plan for realising carbon savings and embedding carbon management in how the Council does its day-to-day business.
18. The above process has produced a good understanding of the Council’s carbon footprint and what can be done to reduce it. Details of the supporting technical evidence for the Plan are described below. In some areas data quality is inevitably better than others, and so some projections of CO₂ savings can be made with more confidence than others. However, the Plan overall maps out a practical and achievable way to meet overall reduction targets.

Darlington Council Carbon Management Plan

The Baseline and Target Setting

19. The Council’s carbon footprint was calculated for the year 2008/09, the first year of a full dataset. This is the baseline year for the Carbon Management Plan. The carbon baseline figure for the Council’s operations has been calculated as 17,939 tonnes of CO₂ .
20. The scope of the baseline is the same as NI185 – CO₂ emissions from LA operations which covers energy consumption from buildings (not housing), including operational buildings, cultural facilities and schools, emissions from fleet vehicles and emissions from employee travel, excluding commuter travel.
21. The graph in Figure 1 shows the breakdown of the baseline emissions. Nearly two-thirds of the emissions are from stationary sources, with schools accounting for 37%. Streetlighting accounts for 19% of the total emissions with transport emissions totalling 11%, including employee travel and fleet vehicle emissions.

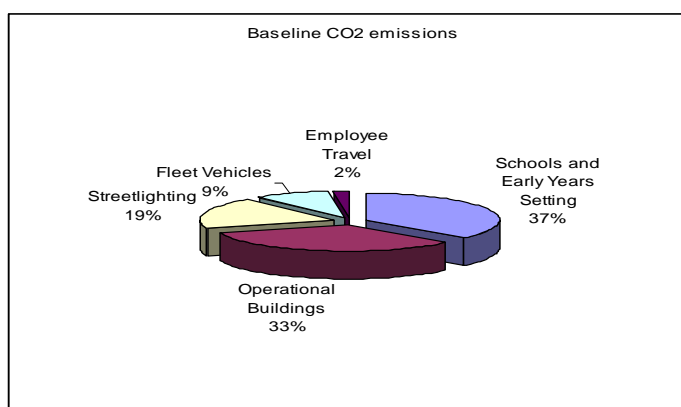


Figure 1 – Baseline carbon emissions

22. At the launch of the Carbon Management Programme, the Board and the Carbon Management Team discussed with the Carbon Trust what a reasonable carbon reduction target would be to set. Using the baseline figure, the experience of previous LACM phases, and knowledge of officers on what was feasible, a 25% reduction target to 2014 has been proposed.

Carbon Reduction Projects

23. Officers have met regularly with the Carbon Trust to identify opportunities for carbon reduction within the Council's operations. Using the tools provided by the Carbon Trust these opportunities have been quantified in terms of cost to implement and potential energy savings.
24. The projects listed in Section 4 of the CMP have been identified from a number of sources, including existing work programmes. Projects were selected for inclusion in the CMP using a combination of priority, feasibility and quantification.
25. This initial work has identified 19 projects. These projects include measures to improve the energy efficiency of the Council's operational buildings such as pipework insulation, boiler upgrades, lighting controls and replacing and retrofitting lights with low energy alternatives as a matter of course.
26. Another key action is the installation of Automatic Meter Reading(AMR), which will improve the accuracy and availability of energy consumption data. Recruitment to an Energy Manager post is underway. This post will be funded from savings made in energy costs from initiatives undertaken. This officer will work with building managers to ensure that the reduction of energy consumption from operational buildings is maximised.
27. Voltage optimisation (VO) has been installed in the Dolphin Centre with the aid of funding from TADEA. This technology can make significant energy savings in large and energy intensive buildings such as the Dolphin Centre. Studies will be carried out as to the feasibility of installing VO in larger secondary schools.
28. Other actions included in the CMP include installing data management systems for fleet vehicle mileage and fuel consumption and implementing the Council's Travel Plan.
29. Awareness raising and behaviour change feature significantly in the CMP, as it has been shown that this can achieve large carbon reduction levels.
30. Xentrall has identified 2 key projects within ICT over the next 2 years, which will achieve large carbon savings. Server rationalisation and printer consolidation will significantly reduce energy consumption within ICT and therefore reduce carbon emissions.
31. In terms of quantified projects it is estimated that about 83% of the 25% carbon reduction target will be met through them. However, there are other major projects involving streetlighting management, schools energy, and a potential combined heat and power district heating network, which have not yet been quantified and require further assessment. It is anticipated that, if implemented they would contribute significantly to achieving the overall target.

Ensuring carbon reduction is sustainable in the long term

32. The physical actions outlined in Section 4 of the CMP will deliver carbon savings, but to ensure that carbon reduction remains at the centre of the Council's operations a number of measures have been proposed within Section 6, which will embed carbon management across the Authority.
33. There are several key areas for action to ensure that carbon management is embedded within the Council operations.
 - (a) Corporate Strategy – ensuring that carbon management is allocated as a top-level target with carbon reduction targets in Service Plans.
 - (b) Programme Management – extensive discussions have taken place with Board members and the Carbon Trust about future governance arrangements for the carbon management programme. Section 7 outlines the programme management process.
 - (c) Responsibility – actions to ensure that carbon management becomes everyone's responsibility include:
 - (i) Expansion of the Green Champions network to ensure representation from across the Council with recruitment of Senior level and Elected Member Green Champions.
 - (ii) Carbon Management to become integrated within the responsibilities of senior managers to signify to all staff that carbon management and energy savings are a corporate priority.
 - (iii) Carbon Management to be included in summary section of Cabinet and Committee reports.
 - (d) Data Management – actions to improve data management include:
 - (i) Installation of AMR within operational buildings and schools and, a fleet data management system.
 - (ii) Recruitment of an Energy Officer post to support building managers when improving energy efficiency of buildings. This post will be funded from energy savings resulting from the initiatives undertaken.
 - (e) Communication and training - essential to the delivery of the carbon reduction target. Actions to ensure that everyone is aware of carbon management include:
 - (i) Development of a communications strategy to deliver a whole organisation awareness raising campaign and ensure that key stakeholders are engaged.
 - (ii) Delivery of training on carbon management to key officers and incorporation of carbon management within the induction process.

- (f) Policy alignment – the need to undertake a review of policy, including HR, Capital Projects etc, to ensure that policies and strategies do not contradict each other or undermine any potential carbon savings.
- (g) Engagement of schools – schools represent 37% of the total baseline emissions. There is the need to engage with schools on carbon reduction, particularly in light of the Carbon Reduction Commitment implications. It is proposed that this is incorporated within the Sustainable Schools and Eco Schools work in the short term with the view to developing a schools carbon programme in the longer term.

Funding

- 34. The amount of investment required to deliver the projects identified in the CMP currently stands at £0.911 million. At this stage this figure is indicative as a number of projects are estimated and additional schemes will be added into the plan as they are identified.
- 35. Projects are to be funded by savings/cost avoidance accruing from reduced energy and maintenance costs. The table below shows the potential carbon and cost savings from the projects included within the CMP. At this stage the figures included within the table are indicative as true savings will not be known until the projects are fully assessed. The figures have been calculated using conversion factors determined by the Carbon Trust and therefore are the best estimates available at this stage.

	2010	2011	2012	2013	2014
Cumulative cost saving	£0	£51,145	£178,835	£207,756	£345,994
Cumulative CO₂ tonnes saving	0.00	503.47	1682.46	1951.30	3157.90

- 36. It is intended that, where practical, the projects with the shortest payback period and lower costs will be implemented first. Only projects that have been assessed as giving value for investment will be progressed. All projects will be approved by the Carbon Management Board before progressing towards the implementation stage. **It is intended that, where practical, the projects that present the most efficient yields will be implemented first. Only projects that have been assessed as giving value for investment will be progressed. All projects will be approved by the Carbon Management Board before progressing towards the implementation stage**
- 37. The projects once implemented will create savings within departmental revenue budgets through reduced energy and maintenance costs. It is intended to extract these savings from departments and to create a centrally held fund to invest in other carbon management projects. This fund will be ring fenced for CMP projects only and will be a rotating fund, in that any projects that are funded from this resource, that create future savings, these savings will also be extracted and invested into the central budget to allow further projects to take place.
- 38. In addition to the rotating investment fund proposed, it is anticipated that the following sources of funding will also be used to deliver the Plan.

- Building Schools for the Future and Primary Capital Programme budgets (it is unclear at the time of writing the CMP as to the certainty of funding to deliver capital projects in schools)
 - External sources including Salix Energy Efficiency Loan Scheme and European Investment Bank
39. To deliver the targeted carbon reductions a number of small capital schemes will be required. To maximise carbon and cost savings, schemes will need to be delivered as soon as assessment of viability and funding is in place. Quick decision making is required over schemes to make the most efficient procurement terms and in addition there are a number of funding streams that require quick delivery to hit funding timescales. As a result of this need to act quickly, it is requested that the Director of Corporate Services be given delegated powers to authorise up to £250,000 of capital expenditure on CMP projects in any one year, where funding is in place to deliver the scheme.

Governance

40. The flow diagram in **Appendix 1 of the CMP (page 29)** demonstrates the governance arrangements for the programme.
41. The Carbon Management Programme will be managed in accordance with the Council's Corporate Capital Projects process. The Carbon Management Board will meet at least every two months to review progress towards the target. The Carbon Team will be responsible for the specific projects they are involved with to the relevant project manager. Progress on Capital projects will be reported on a regular basis in accordance with the Capital Projects Process.
42. It is proposed that the Economy and Environment Scrutiny Committee monitors progress on the CMP, through six monthly reports, and that it reports back to Cabinet as necessary on an exceptions basis, where projects are failing to deliver key milestones.

Risks

43. The Plan is based on current best available baseline information and assumptions/forecasts of potential CO₂ savings for each project, however, as with all projects, there will be risks attached which will need to be managed and mitigated throughout the life of the projects. Systems will be in place, in line with the Council's Capital Projects process, to identify risks and triggers. For example, a risk log will be included with project management documents, which will be regularly reviewed and mitigation actions identified as necessary.
44. Examples of the type of triggers which may arise and potential responses to such circumstances include:
- (a) **Where project costs increase as further feasibility work is done, or some projects become impractical.** Here a decision will need to be taken whether the extra costs are such that the project should or should not be implemented at that time. A cost benefit analysis would need to be considered.

- (b) **Where external funding sources such as Salix loans or EIB funds are not available, or only partially meet project costs.** Before a project commences, the Board would require a business case, which confirmed funding was available, whether this be from the internal Rotating Investment Fund, or externally or both. It may be necessary to consider alternative funding sources.

- (c) **Where projects are implemented but do not achieve the CO₂ savings anticipated.** It would be important to revisit the assumptions/forecasts built into the original project plan and investigate whether circumstances have changed significantly since then. If reasons can be identified, it may be possible to resolve the issues. The CMP is based on the best available data, in some areas assumptions about savings resulting from particular measures are generic and rudimentary, so are very unlikely to prove completely accurate in every case.

- (d) **Where the Council's CO₂ emissions continue to rise despite projects.** Again it will be important to understand why this has happened, and once known, apply existing mitigation measures, or if necessary introduce new projects if practicable.