

13 November 2017

Carbon Management Plan

Joint report of Lorraine O'Donnell, Director of Transformation and Partnerships and Ian Thompson, Corporate Director of Regeneration and Local Services

Purpose of the Report

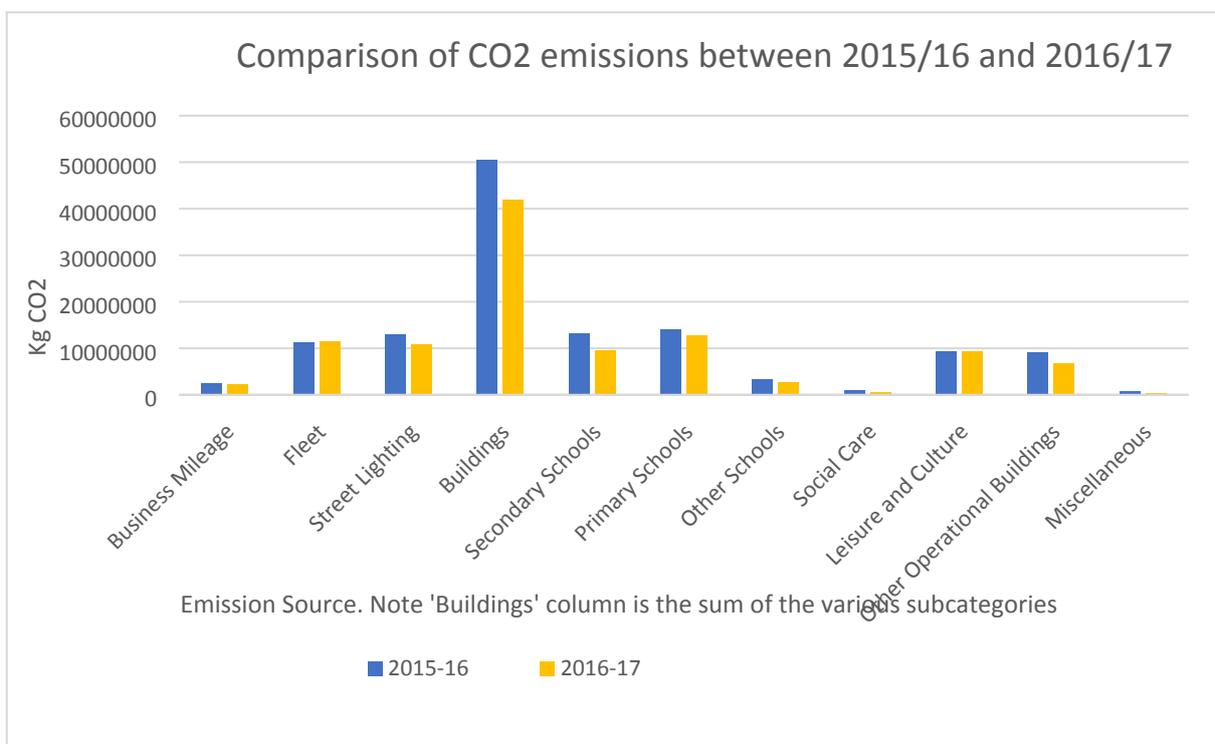
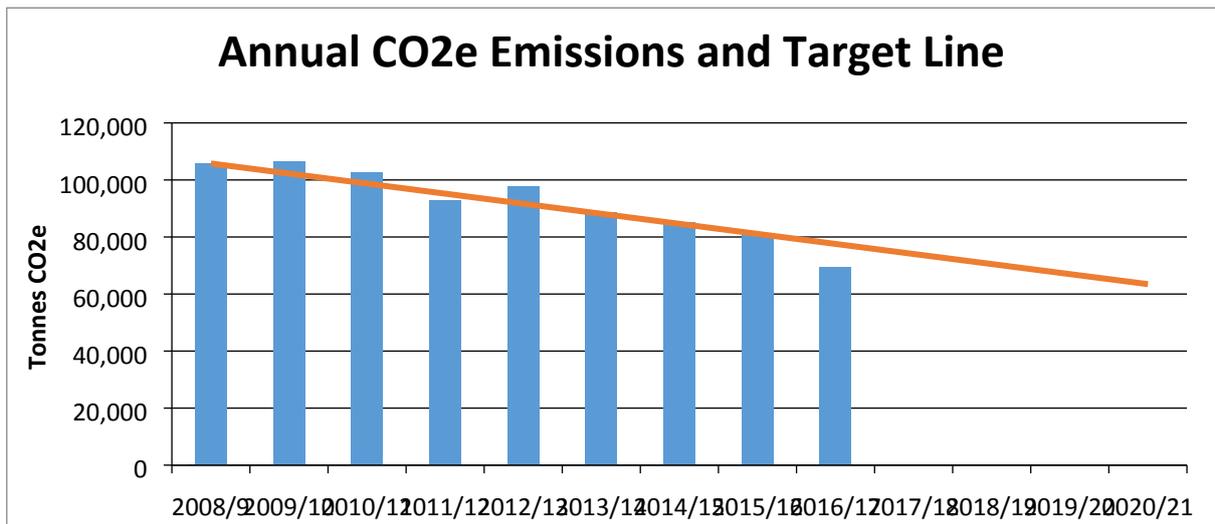
1. To provide Members of the Environment & Sustainable Communities Overview & Scrutiny Committee with a progress report on the Carbon Management Plan prior to a presentation by Stephen Beresford, Senior Carbon Management Officer focusing on
 - Progress in 2016/17
 - Projects delivered
 - On-going projects
 - Future work.

Background

2. The County Council's first Carbon Management Plan covered 2010-15 and it has been succeeded by a second plan covering the years to 2020. It is aspiring to a 40% saving by 2020, based on a 2008/9 baseline.

Overview

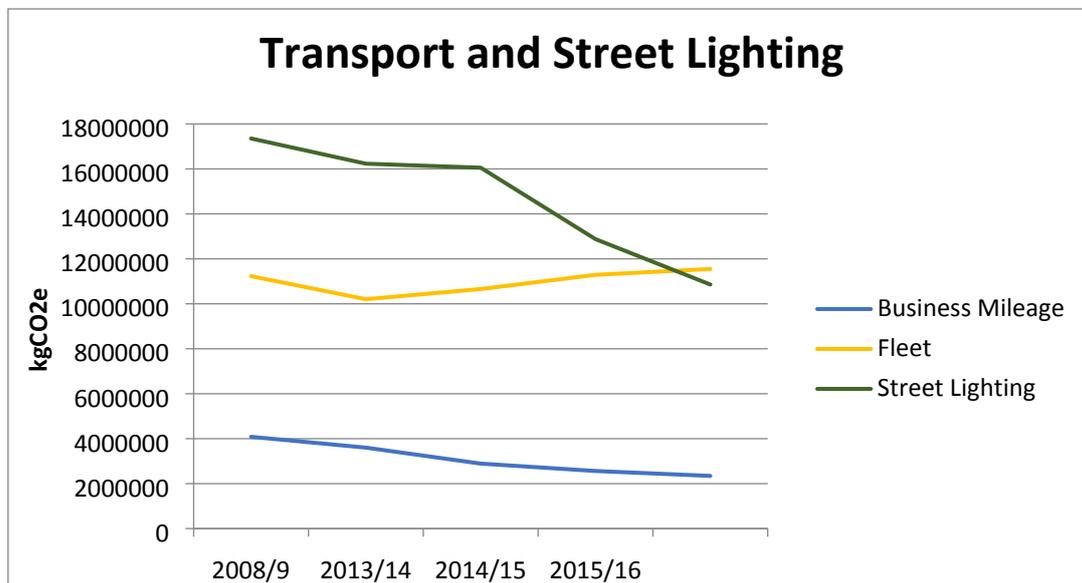
3. The Carbon Management Plan covers emissions from the operations of the Authority and includes carbon emissions from electricity used and heating from buildings and from fuel used in transporting staff as part of their duties.
4. The Carbon Programme Board has continued to direct carbon reduction activities, supported by the Revenue and Capital Boards which lead on project activities.
5. The Council is continuing to make carbon savings across its portfolio with reductions coming from behavioural changes, building improvements and a rationalising of the estate. The following chart show progress to date and a breakdown by source.



6. In 2016/17 emissions from Council operations reduced significantly and we are ahead of schedule in meeting our 2020 target. This is as a result of a number of factors including
- Decarbonising of the electricity grid - Electricity is not as carbon intensive as it was;
 - Street lighting LED replacements - Results of project are now visible;
 - Portfolio rationalisation - Reduction in the number of properties;
 - Energy efficiency projects in retained buildings;
 - Relatively mild winters.

On-going projects

7. Since the last report a number of work packages have been delivered. These include replacement pool covers at leisure centres and better controls on equipment at the crematoria to enable them to be managed more efficiently.
8. The fourth phase of the Building Energy Efficiency Retrofit (BEER) project is reaching its conclusion. Over the next 2-3 months we are looking to complete major lighting and insulation projects in Spectrum 8, the Education Development Centre, the Gala Theatre, and Teesdale and Woodhouse Close Leisure Centres. Almost all lighting in these buildings will be replaced with energy efficient LEDs, saving approximately £50,000 per year and reducing our annual carbon footprint by 160 tonnes.
9. The Schools Carbon Reduction Programme has been continuing, with schools who have bought into the energy management SLA. There has been significant focus on ensuring out of hours gas and electric usage is reduced as much as possible. A more detailed presentation on this work and future plans is scheduled for the December meeting.
10. Eco-champions and Big Switch Off. It is proposed to align the Eco Champions with the broader Inspire programme. The Big Switch Off programme was temporarily paused and will resume as staff move into refurbished civic centres.
11. The Street Lighting LED Retrofit programme is continuing to deliver savings. The programme has been very successful in reducing energy use across our highway network. The following chart shows the carbon savings that are now being realised.



12. Feasibility works are on-going for a number of projects including connecting the Freemans Reach hydro-electric plant to the nearby leisure centre. At the moment the renewable electricity is going into the National Grid, but if the connection is viable, DCC will be able to realise the savings and make significant financial and carbon savings.

Future work

13. We are reaching a point where most of our buildings suitable for full retrofits have been investigated and improved, and almost all of our largest consuming buildings have had some form of energy efficiency works in the past 10 years. We are now investigating smaller buildings and considering thematic improvements (e.g. lighting upgrades across a number of smaller units) to continue making savings but these are likely to have longer payback periods.
14. The programme includes a number of actions that are speculative in nature and not all proposed projects progress to completion. The proposal to develop a solar farm adjacent to the data centre at Tanfield was halted due to the cost of connecting to the National Grid. As prices of PV systems have dropped, we are re-visiting this project but limiting the scope to powering the data centre, which will reduce the cost of connection.
15. Heat Storage. Renewable heat is harder to deliver than electricity, but we are investigating the possibility of storing waste heat in innovative batteries and using it when there is greater demand. We are also exploring the potential for an ERDF bid to secure funding for an innovative heating system at Stanley.
16. Other work programmes being developed include
 - Investigating battery storage to offset peak energy costs;
 - Working to embed energy efficiency into proposals for the new HQ;
 - Solar for Schools - Working with a provider who will install solar panels on schools and sell the electricity to the school at a reduced rate;
 - Revisit solar PV on DCC buildings - Costs have decreased and may be feasible again. This could also include solar panels on car ports.
17. There is an increasing driver to investigate shifting our electricity consumption away from peak hours (early evening). Charges, tariffs and incentives are encouraging users to avoid this time period if possible. Projects looking to shift demand away from this period could prove financially beneficial, but would not significantly reduce overall emissions.

Financial Savings

18. The following table shows that work from the Carbon Management Plan and other associated projects has saved the Authority £1,719,349 since 2012.

IN YEAR CARBON PROGRAMME FINANCIAL BENEFITS					
	2012/13	2013/14	2014/15	2015/16	2016/17
Savings / Income	£ 213,882	£ 675,667	£1,300,872	£ 1,793,901	£ 2,377,159
Finance Costs	-£ 284,348	-£ 402,042	-£ 829,647	-£1,190,518	-£ 1,535,577
MTFP Savings	£ -	£ -	£ -	-£ 200,000	-£ 200,000

Annual Balance	-£ 70,466	£ 273,625	£ 471,225	£ 403,383	£ 641,582
-----------------------	------------------	------------------	------------------	------------------	------------------

Recommendations

19. The Environment and Sustainable Communities Overview and Scrutiny Committee is asked to :
- Note and comment on the content of the report and presentation
 - Offer views as to the direction of travel
 - Receive a further progress report as part of the committee's work programme for 2018/19.

Background Papers

Environment OSC – Carbon Management Plan Report – 18 November 2016

Durham County Council Carbon Management Plan 2015-2020

Stephen Beresford, Senior Carbon Management Officer
Stephen.beresford@durham.gov.uk

Appendix 1: Implications

Finance – The Carbon Reduction Programme has made significant financial savings for the authority

Staffing –None

Risk – None

Equality and Diversity / Public Sector Equality Duty - None

Accommodation - None

Crime and Disorder – None

Human Rights - None

Consultation - None

Procurement - None

Disability Issues - None

Legal Implications – None