

CABINET

14 SEPTEMBER 2011

GREENHOUSE GAS EMISSIONS PERFORMANCE

REPORT OF ASSISTANT DIRECTOR (HIGH QUALITY ENVIRONMENT)

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RECENT REFERENCES:

[CAB1920](#) - Council Energy And Council Emissions, 12 November 2009

[CL 60](#) – Notice Of Motion – The 10:10 Challenge, 4 November 2009

EXECUTIVE SUMMARY:

Cabinet last received a report on the City Council's performance in addressing its greenhouse gas (GHG) emissions and energy management in November 2009. At that time Council also considered a Notice of Motion relating to the '10:10 Commitment' i.e. to commit to reduce its CO₂ emissions by 10% between 1st April 2009 and 31st March 2010 to build upon an existing commitment to reduce emissions by 20% by 2012.

This report provides an update on progress on meeting these aspirations and includes details of a new mechanism for publicising progress following the abolition of the National Indicator framework.

The City Council has made some progress in meeting its commitments and the development of an energy reduction plan and ongoing progress with the Travel Plan will assist further. However as the majority of the City Council's emissions arise from energy usage in buildings the role and funding of the proposed Asset Management Plan is critical if significant progress is to be made in future.

RECOMMENDATIONS:

That Cabinet:

1. Notes the City Council's progress in meeting its CO₂ reduction commitments;
2. Takes the content of this report into account when considering the proposed Asset Management Plan;
3. Approves the content and format of the report at Appendix 1 for publication via the City Council's website;
4. That representations be made to DEFRA and DECC regarding the inability of the CO₂ calculation methodology to recognise improvements in outsourced fleets such as refuse collection vehicles, or to recognise initiatives such as the reduction of traffic emissions through expanding park and ride services.

CABINET14 SEPTEMBER 2011GREENHOUSE GAS EMISSIONS PERFORMANCEREPORT OF ASSISTANT DIRECTOR (HIGH QUALITY ENVIRONMENT)1 Introduction

- 1.1 Cabinet last received a report on the City Council's performance in addressing its greenhouse gas (GHG) emissions and energy management in November 2009 ([CAB1920](#), 12 November 2009 refers). At that time the City Council was required to report its performance to Government through National Indicator 185 which captured all emissions from vehicles and buildings.
- 1.2 At that time Council also considered a Notice of Motion relating to the '10:10 Commitment' i.e. to commit to reduce its CO₂ emissions by 10% between 1st April 2009 and 31st March 2010 in order to build upon an existing commitment to reduce emissions by 20% by 2012.
- 1.3 This report provides an update on progress on meeting these aspirations and includes details of a new mechanism for publicising progress following the abolition of the National Indicator framework.

2. Progress report

- 2.1 Since the original commitment was made work has continued to try and meet these aspirations. So far as energy use in our own estate is concerned, this has proved a challenge within limited resources and there is a need to develop a more comprehensive Asset Management Plan with a future programme to drive improvements not only in energy consumption but also in wider property maintenance and management.
- 2.2 The development of the High Quality Environment Change Plan and its link to the wider Climate Change programme provided the opportunity to reinvigorate work on our estate alongside other initiatives, and has culminated in the recent appointment of an energy manager to deliver projects and the completion of the draft Asset Management Plan which is elsewhere on this agenda (Report CAB2209 refers).
- 2.3 Completion of these important steps does not mean there has been no progress since 2009 merely that the opportunities have been limited without specific funding for the programme. The City Council has used the need for boiler replacement and the refurbishment of the Guildhall to improve its overall performance whilst at the same time refreshing it's Travel Plan which has delivered improvement of reduced staff travel mileage and increased use of low emission vehicles.

- 2.4 The City Council has also begun the process of preparing a 5 year energy reduction plan which will support not only its own aims but also contribute towards the wider climate change programme led by the High Quality Environment Group.
3. Performance reporting changes
- 3.1 Progress on meeting CO₂ reductions was previously reported to Government through National Indicator (NI) 185 which within Hampshire was collated by Hampshire County Council using data provided by each of the Districts. However the new Government abolished the NI framework and instead required local authorities to report such data at a local level and has recently published guidance on the format of this information.
- 3.2 Following collation of the City Council's emission data it is now possible to report progress in the format recommended by Government using the report attached at Appendix 1. The report will be made available via the City Council's website.
4. Comments on progress
- 4.1 Looking at the data it is pleasing to note progress in reducing emissions from some areas notably gas emissions and transport and there is further scope to improve these following recent additional changes to the Council's lease car scheme which will encourage even lower emission vehicles.
- 4.2 When the next figures are reported it is likely that there will be changes to the areas reported within each scope, including inclusion of the new Streetcare and pest control services within scope 1 once they have been brought back in house. Whilst this may result in an increase in scope 1 emissions, this should be cancelled out by a corresponding reduction in scope 3.
- 4.3 A disappointing factor of the DECC/DEFRA framework for calculating emissions is that it does not take into account improvement in emissions from particular elements. For example the new refuse collection vehicles will meet the tougher EURO 5 emission standards (the current vehicles are 10 years old and only meet the Euro2 standard). However the spreadsheet provided by DEFRA and used to calculate emissions classifies them as the same type of vehicle and does not recognise the improved performance. For these reasons officers will be looking at ways in which this improvement can be assessed and reported in future within the reporting framework. Members may also wish to consider whether to send written representations to DEFRA regarding this issue.
- 4.4 The framework is also flawed in that it counts the increased emissions from our greater use of (low emission) park and ride buses following the opening of the South Winchester Park and Ride, but without recognising the offsetting reductions in car flows into the City. We are at present attempting to quantify these reductions to present a more balanced picture. Members may also wish to draw this weakness to DEFRA's attention.

- 4.5 In terms of the City Council's two commitments it is only possible to comment on the 10:10 commitment as the 2012 data will not be available any earlier than summer 2013. It should be remembered that the 10:10 commitment does not include outsourced emissions (although it does include emissions from River Park Leisure Centre) unlike the DEFRA/DECC reporting framework. Recalculation of the figures using these principles results in a net reduction in CO₂ emissions of 3.83%. Appendix 2 gives further details of the calculation of the 2008/09 and 2009/10 emissions figures with regard to the 10:10 Campaign.
- 4.6 The progress made so far is encouraging overall although it is still important to continue to investigate any sources of increased emissions such as River Park Leisure Centre. The development of the Energy Reduction Plan including a number of quick wins and ongoing progress with the Travel Plan will be key factors in dealing with these issues. However, as the majority of the City Council's emissions arise from energy usage in buildings, the role and funding of the proposed Asset Management Plan is critical if significant progress is to be made in the future. The anomaly regarding the Park & Ride buses also needs to be resolved as this causes artificial skewing of the emission data

OTHER CONSIDERATIONS:

5. SUSTAINABLE COMMUNITY STRATEGY

- 5.1 The delivery of the GHG reductions is a commitment made in the High Quality Environment section of the Sustainable Community Strategy and is delivered through the objectives supporting the HQE Change plan including development of a 5 year Carbon reduction and energy management plans.

6. RESOURCE IMPLICATIONS

- 6.1 Delivery of a GHG reduction programme requires resources and as the majority of the City Council's emissions are from buildings so it is closely related to the proposed Asset Management Plan (AMP) which identifies the likely resource requirements.
- 6.2 As specific projects develop through the AMP and Energy Reduction Plan the exact resource requirements will be identified. It is important to consider that in many cases energy reduction measures will result in corresponding cost reductions with an eventual return on investment and possible income streams through projects such as renewables or budget savings as a result of reduced bills.

BACKGROUND DOCUMENTS:

See previous reports described above and project papers (other than exempt reports).

APPENDICES:

Appendix 1 - Proposed Greenhouse Gas report

Appendix 2 - Winchester 10:10 Campaign

Appendix 1**Winchester City Council Greenhouse Gas Emissions Report for 2010/11****1. What is this report about?**

- 1.1 This report provides data on the Greenhouse Gas (GHG) Emissions for Winchester City Council for the three financial years 2008/09 to 2010/11.
- 1.2 Guidance from DEFRA (Department of Energy Farming & Rural Affairs) sets out that all local authorities should annually produce a GHG report that is published on their website. This report replaces National Indicator 185, which focussed on the annual CO₂ reduction from local authority operations.

2. What period does it cover?

- 2.1 This report covers the financial years 2008/09, 2009/10 and 2010/11. The data collected is usually for the period 1 April to 31 March for each of the years although some of the energy consumption data may relate to a few days either before or after the start or end of the financial year.

3. How are the figures calculated?

- 3.1 In compiling this report, the DEFRA Guidance on how to measure and report you greenhouse gas emissions has been followed.
- 3.2 The DEFRA/DECC (Department for Energy & Climate Change) spreadsheet "2010 Guidelines to DEFRA/DECC Conversion Factors for Company Reporting" has been used as a tool to convert source data to tonnes of CO₂ equivalent which is shown as CO₂e.

4. Which emissions are included?

The report includes 3 types of emissions called scopes:

- 4.1 **Scope 1 – Direct Emissions** - this includes direct emissions due to the consumption of natural gas used by boilers in buildings and the emissions from transport owned by the Council, i.e. fleet vehicle business mileage calculated as follows:
- Natural gas consumption has been taken from individual meter readings at the beginning and end of each year. Meter readings are taken staff and, where this has not been possible, the information taken from energy bills.
 - The buildings covered are those that are owned or leased by the Council and used for operational purposes (e.g. offices, Car Parks and Public Conveniences). Figures relating to River Park Leisure Centre, and more recently Meadowside Leisure Centre are included under Scope 3 as they are managed by DC Leisure and not under the control of the Council.

- Council fleet vehicle emissions are based on actual business miles for Council supplied lease cars over the course of the financial year.

Note: The guidance recommends that fugitive emissions (e.g. air conditioning and refrigeration leaks) are included under Scope 1 however it has not been possible to obtain this data at this time. It is not anticipated that the level of emissions would be significant.

4.2 **Scope 2- Indirect Energy Emissions:** this scope includes emissions from the consumption of purchased electricity at owned/leased buildings used by the Council for operational purposes. The data is based on actual meter readings taken by staff or energy bills for each year. Emissions relating to the consumption of electricity at River Park Leisure Centre and Meadowside Leisure Centre are again included under Scope 3

4.3 **Scope 3 – Other Indirect Emissions:** the reporting of these emissions is discretionary. However, significant emissions from a number of Council operations fall within this heading and are therefore included in this report. They include emissions arising from the waste and grounds maintenance contracts, River Park Leisure Centre, Meadowside Leisure Centre and the Park and Ride buses. Also included are the emissions from business mileage covered by elected members and staff who use their own vehicles. Emission calculations are based on mileage rather than fuel consumption.

Note: Business mileage covered by other means of transport, e.g. rail, bus and taxi has not been included given that this would be time consuming to collate and represents a very small amount of the Council's total emissions.

5. **How do we compare to others?**

5.1 The DEFRA guidance includes the use of intensity measurements (e.g. energy use per employee) to compare greenhouse emissions with other similar organisations. The City Council does not currently have this data available but will be working on using these measurements over the coming months and they will be added to the report once they are available.

6. **What is the Base Year?**

6.1 The baseline year for monitoring of greenhouse gas emissions is 2008/09 which is the first year that the City Council reported its emissions to DEFRA. During this year there was incomplete data for car parks energy consumption so this has been calculated to be equivalent to approximately 45 tonnes of CO₂e.

7. **How Have the Emissions Changed?**

7.1 The figures in Table 1 report show that overall greenhouse gas emissions for the Council in 2010/11 have risen by 2.56% when compared with the baseline year of 2008/09.

- 7.2 The main reason for this increase relates to the additional bus routes following the opening of the South Winchester Park and Ride in April 2010. This has seen an annual increase of approximately 240,000km covered by the buses now that they serve the new park and ride site. This equates to an increase of 240 tonnes of CO₂e per year but is compensated by the reduction in cars using the City Centre where air quality is poor.
- 7.3 Unfortunately the DEFRA method for calculating emissions does not take this into account. Without this increase, the net emissions would have reduced by 162 tonnes CO₂e or 5.39%.
- 7.4 Table 2 explains the reasons for the significant increases and reductions in the emission figures.

Table 1

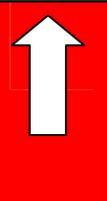
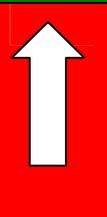
Winchester City Council - GHG report**Greenhouse Gas Emissions data for Winchester City Council**

Data for the period 1 April to 31 March

Figures are for tonnes of CO₂e

	2008/09	2009/10	2010/11	% Change 08/09 to 10/11
Scope 1 (direct)				
- Gas	267.04	212.21	183.70	-31.21%
- Transport (Lease Cars/Fleet Vehicles)	75.46	70.84	66.36	-12.06%
Total Scope 1	342.50	283.04	250.06	-26.99%
Scope 2 (energy indirect)				
- Electricity	1,607.80	1,667.28	1,537.27	-4.39%
Total Scope 2	1,607.80	1,667.28	1,537.27	-4.39%
Scope 3 (other indirect)				
- Electricity (Outsourced Services)	85.85	90.48	107.92	25.70%
- Gas (Outsourced Services)	62.80	59.81	55.15	-12.18%
- Transport (Serco/Grey fleet)	808.55	814.12	795.99	-1.55%
- Park & Ride Buses	108.84	108.84	347.30	219.10%
Total Scope 3	1,066.04	1,073.25	1,306.36	22.54%
Total Gross Emissions	3,016.34	3,023.57	3,093.69	2.56%
Carbon offsets	0.00	0.00	0.00	0.00
Green Tariff	0.00	0.00	0.00	0.00
Total Net Emissions	3,016.34	3,023.57	3,093.69	2.56%

Table 2

Scope	Area	Change	Reason	
Scope 1	<i>Buildings (Natural Gas)</i>		Reduction of 27% or 84 tonnes of CO ₂ e since 2008/09.	Boilers replaced with energy efficient units
	<i>Fleet Vehicles</i>		Reduction of 12% in emissions due to Council leased cars	<ul style="list-style-type: none"> • 12,00 miles reduction in business mileages • Revised lease car scheme which encourages users to opt for low emission vehicles.
Scope 2	<i>Buildings (Electricity)</i>		The emissions associated with the consumption of electricity have fallen by 4% or 70 tonnes of CO ₂ e.	Refurbishment of Winchester Guildhall which included energy saving measures although impact reduced by increases in the electricity usage at River Park Leisure Centre of 20% since 2008/09.
Scope 3:	<i>Park and Ride buses</i>		240 tonnes or 219% increase of CO ₂ e quality	Due to the additional mileage covered by the buses following the opening of the South Winchester Park and Ride and additional bus routes added.
	<i>Transport</i>		1.5% decrease in emissions relating to the vehicles used by Serco for the waste and grounds maintenance contracts Reduction of 13 tonnes of CO ₂ e or 30,000 miles of business mileage over that in 2008/09.	Contracted services have not changed during this period. From the 1 October 2011, new contractors will provide waste collection using new cleaner and environmentally friendly vehicles.
	<i>Electricity</i>		25% increase in total emissions in 2010/11 from River Park Leisure Centre, and Meadowside Leisure Centre from April 2010.	Increased energy usage though reason not known at this stage. Switch of Meadowside emission data from scope 2 to scope 3 from April 2010
	<i>Gas</i>		Gas emissions from outsourced contracts at both River Park Leisure and from April 2010 Meadowside Leisure Centre have decreased by 12% (7 tonnes of CO ₂ e) when comparing the figures for 2010/11 to those in 2008/09.	A number of measures have been put in place recently to reduce gas consumption, one of which was to install pool covers at River Park Leisure Centre to prevent heat loss from the pool

Winchester City Council: 10:10 Campaign

The table below provides an update to the emissions figure that was used as the base for the 10:10 campaign for 2008/09, now taking into account revised consumption figures received after NI185 was calculated. The original figure was 3,056 tonnes of CO₂; however after taking into consideration the updated figures, this is now 3,357.89 tonnes of CO₂.

Furthermore, the table provides the calculation for the equivalent 2009/10 figure. Starting with data for Scope 1 and 2 extracted from the GHG report in Appendix 1, it is necessary to add amended emission figures for both the River Park Leisure Centre and Street lighting. The reason is that the emission factors used for Scope 1 and 2 are significantly higher than those used for Scope 3 because Scope 3 relates to indirect emissions from outsourced services. To be consistent the emission figures for RPLC and Street lighting have been recalculated using the same conversion factors as those used for calculating Scope 1 and 2 emission figures and importantly on the same basis as the calculation of the 2008/09 figures. The comparable total emissions figure 2009/10 is 3,229.16 tonnes of CO₂.

Table 3

	Tonnes of CO ₂	Comments
2008/09 Calculation		
Base 2008/09 emissions	3,056.00	As per NI185 submission and report CAB1920
Corrections to base figure:		
Street Lighting	+ 50.45	Updated consumption figures received from HCC for 2008/09 by after NI185 calculated
City Offices	+4.75	Minor amendment following re-calculation of consumption figures
Brooks Car Park	+226.31	Recalculation following incorrect reading of electricity consumption data.
Fleet Vehicles	+20.38	Omitted from NI185 due to data being unavailable.
Total 2008/09 emissions	3357.89	
2009/10 Calculation		
Scope 1	283.04	Taken from GHG report, Appendix 1, Table 1
Scope 2	1667.28	Taken from GHG report, Appendix 1, Table 1
River Park Leisure Centre	1,197.87	This amount relates to the increase in the conversion factors used between Scope 1 (gas) and Scope 2 (electricity) and those used for calculating emissions for Scope 3.
Street Lighting	80.97	This amount relates to the increase in the conversion factor used between Scope 2 (electricity) and those used for Scope 3.
Total 2009/10 emissions	3,229.16	
Percentage Decrease	3.83%	