

**Carbon Management Plan 2013-2016 Final Report****Report by Garry Sheret Head of Property & Facilities Management****1 Purpose of Report**

The purpose of this report is to advise Members of the outcome 2013 to 2016 Carbon Management Plan and the Councils position at the conclusion of this plan.

**2 Background**

**2.1** The Carbon Management Plan 2013 - 2016 was initiated with the target of achieving a 25% reduction in carbon emissions based on the 2006/7 Carbon output tonnage of 27,237CO<sub>2e</sub>. This equated to a target tonnage reduction of 8,800 tonnes CO<sub>2e</sub> over the period.

**2.2** During the plan period actions were taken to reduce carbon emissions potentially in the areas of Building Energy, Street Lighting, Fleet Transport and Waste Management.

**2.3** The attached final report (Appendix 1) confirms that the Council has exceeded its target and achieved a CO<sub>2</sub> emissions tonnage of 11,035 tonnes or 31% reduction.

**3 Report Implications****3.1 Resource**

The implementation of the Carbon Management Plan its associated projects, ongoing energy management, energy awareness campaigns and capital programmes (EWiM, Boiler replacement etc) have resulted in a reduction in the level of electricity and gas resources used and an overall financial saving.

**3.2 Risk**

Failure to implement Carbon Reduction measures will result in the Council failing to meet its Carbon reduction commitment targets and the contribution this makes to national targets.

**3.3 Single Midlothian Plan and Business Transformation**

Themes addressed in this report:

- ☐ Community safety
- ☐ Adult health, care and housing
- ☐ Getting it right for every Midlothian child
- ☐ Improving opportunities in Midlothian

- ☒ Sustainable growth  
☐ Business transformation and Best Value  
☐ None of the above

### **3.4 Key Priorities within the Single Midlothian Plan**

The proposals as set out in this report may also be applicable to the Council's Community Planning partners.

### **3.5 Impact on Performance and Outcomes**

The proposals set out the outcome of actions taken to date in reducing the Council's Carbon emissions against national targets.

### **3.6 Adopting a Preventative Approach**

None.

### **3.7 Involving Communities and Other Stakeholders**

Achieving the outcomes of the Carbon Management Plan involved working with partners and contractors and the wider community.

### **3.8 Ensuring Equalities**

There are no Equality implications arising from this report.

### **3.9 Supporting Sustainable Development**

The outcomes reported contribute to the Council's territorial CO<sub>2</sub> emissions reduction targets.

### **3.10 IT Issues**

There are no IT issues arising from this report.

## **4 Recommendations**

Cabinet are recommended to:

- a) Note the outcome of the 2013-2016 Carbon Management plan and that the plan's targets have been exceeded.
- b) Note that a new Carbon Management Plan is currently being prepared and will be presented to a future Council meeting.

**8 September 2016**

### **Report Contact:**

Gareth E Davies Tel No 0131 2713495

[gareth.davies@midlothian.gov.uk](mailto:gareth.davies@midlothian.gov.uk)

### **Background Papers:**





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**MIDLOTHIAN COUNCIL**  
**CARBON MANAGEMENT PLAN**  
**2013 - 2016**

FINAL REPORT 2016

Date: September 2016  
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## Executive Summary

The Carbon Management Plan (CMP) 2013-16 for Midlothian Council has now concluded. The Target reduction of 25% (8,800 tonnes CO<sub>2</sub>) has been achieved.

## INTRODUCTION

This report represents the conclusion of Midlothian Council's 2013-2016 Carbon Management Plan (CMP). At the outset of the plan Midlothian Council's overall target for carbon reductions was 25% to be achieved by the financial year end 2015/16 (based on a baseline year of 2006/7). This equated to a target reduction of 8800 tonnes of CO<sub>2</sub>. The actual reduction achieved was 31.2% (11035 tonnes CO<sub>2e</sub>)

Throughout the period regular reports have been provided on actual progress towards the target carbon emissions reduction.

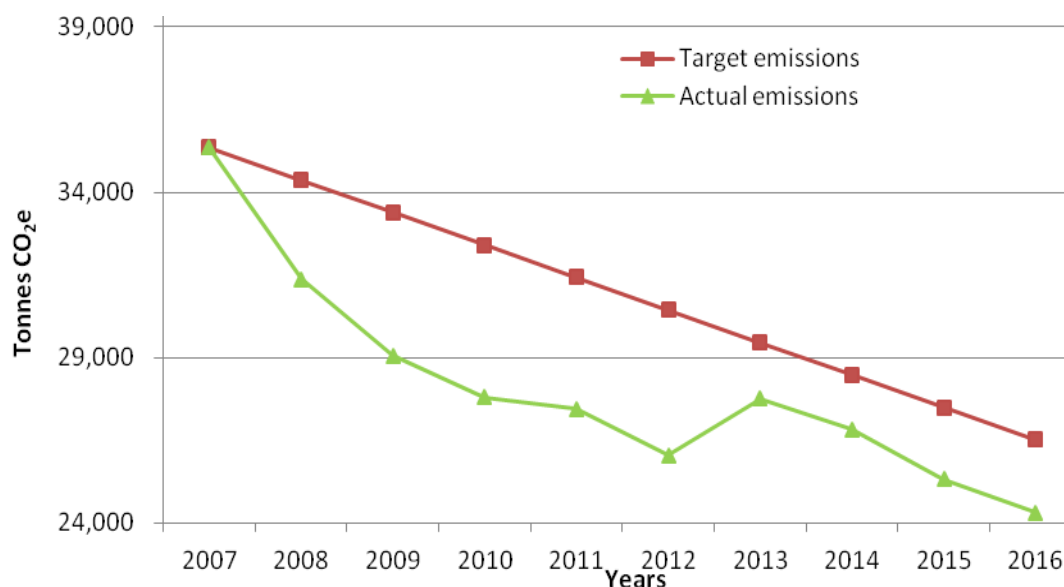
## PROGRESS REVIEW

This progress report includes information on actual CO<sub>2e</sub> emissions for Midlothian Council through to end March 2016.

**Table 1: Midlothian Council Reported Carbon Emissions (all figures in tCO<sub>2e</sub>)**

Category	Financial Year									
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Building Energy Consumption	17,850	14,876	12,912	13,978	14,240	13,141	14,445	13,516	11,950	11,894
Waste (Landfill)	11,218	10,226	9,784	8,222	7,561	8,052	7,755	7,536	7,726	7,052
Waste (Recycled)	994	1,085	1,114	418	432	470	455	457	453	477
Streetlights	2,711	2,449	2,610	2,609	2,645	2,332	2,817	3,113	3,013	2,789
Transport	2,543	2,702	2,600	2,532	2,523	2,008	2,245	2,161	2,139	2,063
Water	38	41	44	50	40	45	45	42	44	44
<b>TOTAL</b>	<b>35,354</b>	<b>31,379</b>	<b>29,064</b>	<b>27,809</b>	<b>27,441</b>	<b>26,048</b>	<b>27,762</b>	<b>26,825</b>	<b>25,325</b>	<b>24,319</b>
Target Emissions	35,354	34,372	33,390	32,408	31,426	30,444	29,462	28,480	27,498	26,516
<b>Variance</b>	<b>0</b>	<b>-2,993</b>	<b>-4,326</b>	<b>-4,599</b>	<b>-3,985</b>	<b>-4,396</b>	<b>-1,700</b>	<b>-1,655</b>	<b>-2,173</b>	<b>-2,197</b>
% Change from baseline		-11.2	-17.8	-21.3	-22.4	-26.3	-21.5	-24.1	-28.6	-31.2
% Annual Change		-8.1	-7.4	-4.3	-1.3	-5.1	+6.6	-3.4	-5.6	-40
% Annual Change (by category)										
Building Energy Consumption		-16.7	-13.2	+8.2	+1.9	-7.7	+10.0	-6.4	-11.6	-0.5
Waste (Landfill)		-8.8	-4.3	-16.0	-8.0	+6.5	-3.7	-2.8	+2.5	-8.7
Streetlights		-9.7	+6.6	0	+1.4	-11.8	+20.8	+10.5	-3.2	-7.4
Transport		+6.2	-3.8	-2.6	-0.3	-20.4	+11.8	-3.7	-1	-3.5
Water		+7.9	+7.3	+13.6	-20.0	+12.5	0	-6.7	+4.8	-0.9

**Figure 1: Midlothian Council Carbon Emissions**



### Commentary

**Building Energy** – Energy consumption across the entire buildings portfolio continues to be monitored on a monthly basis. Accurate monitoring capacity has been further enhanced due to an extension in the number of automatic read meters installed and improvements in data capture enabling remote monitoring of the meter readings by the Council's Energy Team. Further smart meters, capturing gas supplies in a number of buildings have been progressed, and more are planned for the year ahead.

There has been a two year light replacement programme in the majority of schools.

Building asset rationalisation under the EWIM project through the closure, demolition and selling of properties have had a beneficial effect on energy consumption resulting in fewer emissions.

**Waste** – The Council operates kerbside recycling collections, incorporating paper, card, plastic bottles, glass bottles/jars and food/drink cans. In 2015/16, kerbside food waste was introduced. In addition there are two community recycling centres available for disposal of a wide range of items.

The Council is committed to achieving the targets set out by the Scottish Government in Scotland's Zero Waste Plan. To that end present services are being reviewed to determine the most effective means of meeting these targets. In April 2016, Midlothian signed up to the Scottish Waste Charter. Zero Waste Scotland will review waste collections across Scotland with the view to standardising the collection system. In collaboration with City of Edinburgh Council a site at Millerhill has been developed for receipt of both food (now operational) and residual waste (due in the next few months) and this scheme would ensure that the Council meets its zero waste targets.

**Street lighting** – The operation of street lighting across Midlothian is subject to constant monitoring, maintenance and upgrade. The potential for replacement of older lanterns with more energy efficient alternatives is continually assessed during ongoing maintenance and refurbishment programmes. The Council is also introducing emerging technologies, such as LED lighting with Central Management Systems (CMS)(also known as tele-management to further reduce emissions. All lighting improvements are required to meet existing British Standards.

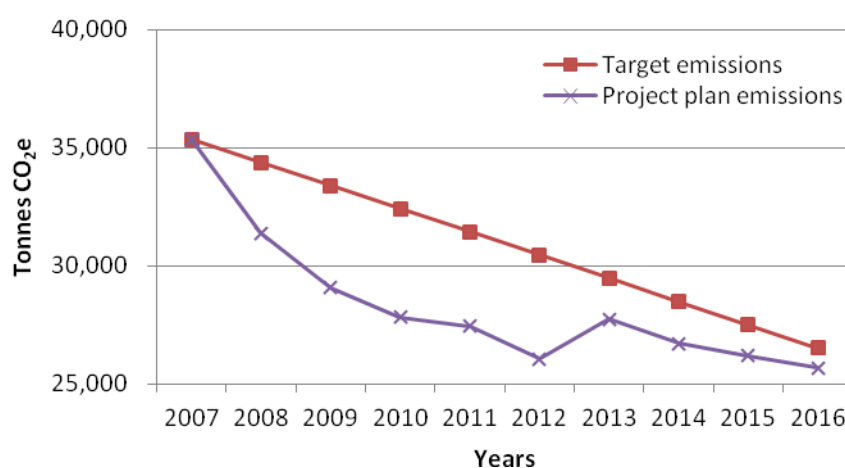
LED upgrades have taken place over 25% of the street lighting network. On the more recent upgrades the LED have been dimmed by 30%. A trial is on going with lights being dimmed by 10% at 10pm and 50% between 12am-5am. Through capital investment there is a column replacement programme on going that replaces the old galvanised steel to aluminium columns with upgrades to LED at the same time. All new housing developments are installing LED lanterns with CMS. New LED traffic systems are being installed with SELV (safety extra low voltage).

Going forward existing lanterns will be upgraded to LED subject to capital funding.

**Transport** – Fleet fuel monitoring software continues to assist the Council in maximising the efficiency of its fleet vehicles in operation. The size of the fleet remains under review, ensuring that the number of vehicles in operation is matched with service requirements. Ongoing cycles of fleet vehicle replacement include consideration of environmental credentials and compliance with Euro engine standards.

There are 11 electric vehicles in the fleet. The majority of the fleet have Euro 5 engine standards and all new vehicles over 7½ tonnes have Euro 6 engine standards. Going forward the Euro 6 engine standard will be applied to new vans over the next 3 years subject to available funding.

**Figure 2: Midlothian Council Projected Carbon Emissions**



### Summary

Midlothian Council has achieved a 31.2% (11035 tonnes CO<sub>2e</sub>) exceeding its 2015/16 final target of 25% CO<sub>2e</sub> (8800 tonnes CO<sub>2e</sub>) based on the 2006/7 baseline.

Energy consumption in buildings has reduced by a further 0.5% in the last year (2015/16) augmenting the 11.6% decrease achieved the year 2014/15.



This recovery is mainly due to resolving heating and plant issues at major sites and delivery of Building rationalisation (EWIM) and completion of Carbon Management Plan projects.

There has been a continued decrease in street lighting electrical consumption of almost 7.4% in 2015/16 compared to the previous year. This is a result of the implementation of more energy efficient lighting technologies and effective remote monitoring throughout the lighting network.

Transportation emissions indicate 3.5% reduction building on last year's decrease. This reflects the ongoing cycle of vehicles replacement with consideration of environmental credentials and compliance with Euro engine standards.

Waste to Landfill has decreased 8.7% last year after the previous year's increase. The introduction of kerbside food waste collection and new food waste site has contributed to the decrease. Once the Zero Waste plant is fully operational and residual waste processing comes on stream, Midlothian council will meet its zero waste targets.

A new Carbon Management Plan is being developed along with a number of new projects. This will build on the 31% reduction achieved last year by working towards a minimum 11% CO<sub>2e</sub> reduction by 2020/21. This will ensure that we meet the government's target of 42% CO<sub>2e</sub> by 2020/21.

Work is currently in hand to develop a further CMP for the period 2016/17- 2020/21 following a standardised format developed by Resource Efficient Scotland for use by the public sector. The new CMP, which will baseline in 2016/17 will also be wider in scope than the 2013-16 plan in that it will cover all corporate properties (rather than a limited group as with the previous plan). The overall UK Target for 2020/2021 is a 42% reduction in Carbon emissions. The new CMP will therefore have a minimum target of 11%.