



Greenhouse Gas Emissions Report for 2013-14



TOWN HALL, EVREUX WAY
RUGBY, WARWICKSHIRE
CV21 2RR

GREENHOUSE GAS EMISSIONS REPORT

1. Introduction

Greenhouse Gas Emissions (GHG)

The UK government has requested local authorities to measure and report the GHG emissions from the council's own estates and operations. Beginning this year, Rugby Borough Council (RBC) will publish greenhouse gas emissions for the previous financial year. Data reported will be used as a step to understand the current emissions and help the council towards further reduction of those emissions.

2. Company Information

Rugby Borough Council is a public limited company, incorporated in the UK. Registered address is Town Hall, Evreux Way, Rugby, CV21 2RR.

3. Reporting period

1st April 2013 to 31st March 2014

4. Change in Emissions

Reported emissions from RBC's activities have dropped dramatically since 2009/10 and continued to go down between 2012/13 and 2013/14.

Our reported emissions have fallen since 2009/10 because we have invested in more energy efficient measures in our operations. In 2012 the Council published the Carbon Management Plan (CMP) which commits the council to a target carbon emissions reduction of 30% by 2016/17.

At the time of publishing the CMP the council had already taken action to reduce its carbon emissions by implementing a number of projects since 2009. Among other projects mentioned later in this report, the implemented projects are as listed below but not limited to:

- Closure of the Retreat and Lawn building
- Town Hall roof refurbishment
- Town Hall voltage optimisation

5. Quantification and Reporting Methodology

Our approach follows [UK Government's \(DEFRA and DECC\) guidance](#) provided by the Department for Food, Environment and Rural Affairs (DEFRA) The council has followed the guidance issued by [DEFRA's 2012 and 2013 UK Government's conversion factors for company reporting](#).

Emissions from all these gases are expressed as CO₂ equivalent (CO₂e) emissions as recommended by the guidance. However years following the baseline year (2009/10) have taken into account up to date emission conversion factors

6. Organisational boundary

We have used the organisational control approach which accounts for emissions from services over which we have control. A new leisure centre, The Queen Diamond Jubilee Centre and Rainsbrook Crematorium are new builds which started operating within the 2013/14 financial year. However, emissions from these have been excluded from the reports. We have chosen to exclude emissions from the new builds due to the complexity of data collection since the opening of the sites in September 2013 and February 2014 respectively.

Emissions relating to individual social housing are generally excluded from emissions reports; however emissions from communal housing have been included.

Table 1: Scope boundaries

Included in the Footprint	Excluded from the footprint
Electricity consumption	Waste
Natural gas consumption	Staff commuting
Business/staff mileage	Business travel on public transport
Fleet/owned vehicles	Private housing
Water	Leased buildings
Refrigerants	New builds 2013/14
	Street lights

Further exclusions are unmetered supplies for communal housing, car parks and ticket machine for which there is no data collection in place yet.

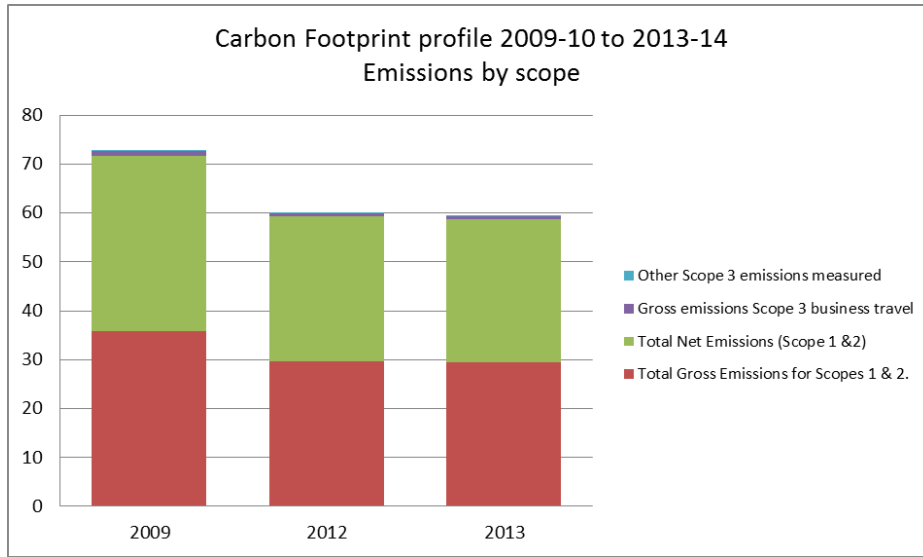


Figure 1: Carbon Footprint profile showing RBC's emissions scenario since the baseline year 2009/10

7. Operational scopes

We have measured scope 1, 2 and certain scope 3 emissions – see Figure 2 for details.

We have not estimated a percentage of emissions for exclusions because we have not carried out this estimation yet.

	Operational scopes 2013/14			Operational scopes 2012/13		
		kgCO2e	tCO2e		kgCO2e	tCO2e
Scope 1	Gaseous fuels	515	0.515	Gaseous fuels	541	0.54
	Vehicle fleet	1,673	1.673	Vehicle fleet	1,613	1.61
	Refrigerant Gases	34	0.034	Refrigerant Gases	34	0.03
	Total	2,222	2.222		2188.52	2.19
Scope 2	Purchased electricity (Grid)	716	0.716	Purchased electricity (Grid)	782	0.78
	Total	716	0.716		781.84	0.78
Scope 3	Business Travel	51	0.051	Business Travel	45	0.04
	Water	11	0.011	Water	11	0.01
	Total	62	0.062		55.71	0.06
Total for All Scopes		3000	3		3026	3

Figure 2: Emission sources broken down into relative scopes

Scope 1

These are direct emissions to the atmosphere from activities that are owned or controlled by the council. These include combustion of natural gas in council owned boilers for heating the building. This scope covers combustion of fuel in vehicles owned by the council such as the fleet from the Work Services Depot plus emissions from air-conditioning reported under the refrigerants category.

Gas consumption.

Since a large portion of the council's gas is used for heating the buildings, adverse weather has contributed to higher energy use within period 2013/14, however at least 0.02tCO₂e was saved in 2013/14 compared to 2012/13.

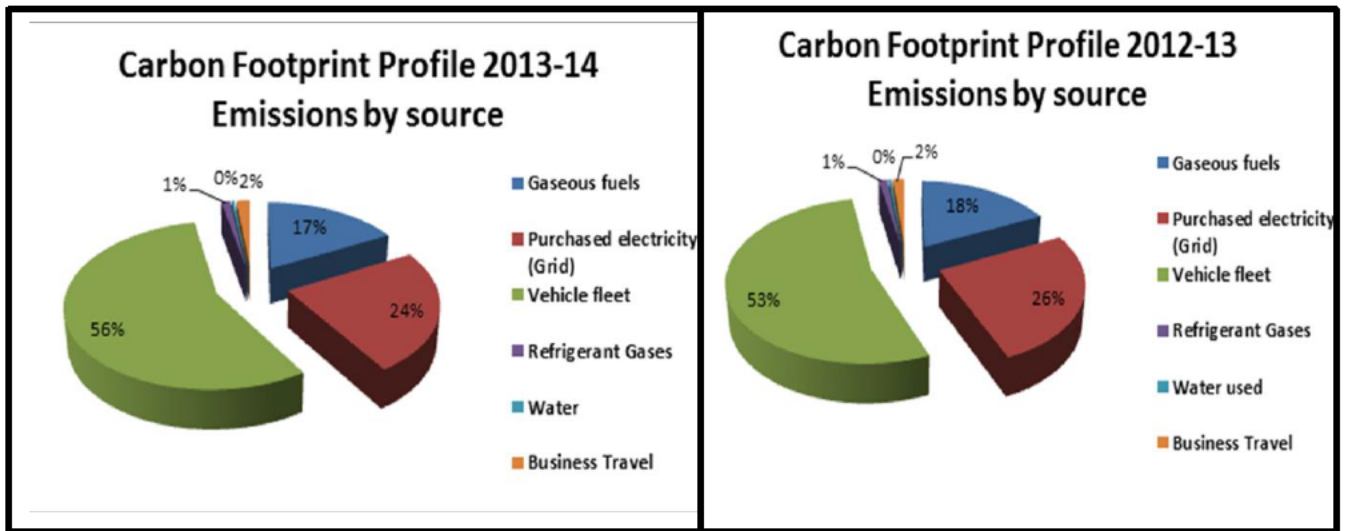


Figure 3: Carbon Footprint Profiles

Figure 3 shows that an average of 17% of the total tonnage of greenhouse gases is attributed to natural gas each year compared to 18% in 2012/13. However, a record 2,883,098kWh have been saved on gas alone since 2009/10 as a result of the following carbon emission reduction measures

- Installation of smart meters
- new thermal efficient roof
- cavity wall insulation to Town Hall offices, East wing
- new condensing boilers
- plant optimisation
- pipework insulation

Owned Transport/Fleet

Owned cars and owned operational vehicles are included within this scope. Emissions generated from council owned vehicles contribute to 56% of the total emissions emitted per year.

As seen from Figure 3, the majority of our emissions come from Fleet vehicles. These include refuse trucks, recycling collection trucks, street sweepers amongst other waste collection trucks.

In the recent year, the fleet benefited from a new stock of Euro V engine vehicles (cleaner exhaust systems with less CO₂ emissions). A new vehicle management tracking system has been put in place. This serves to track vehicles going out of bounds/routes and the system supports better energy management of vehicles.

Refrigerants

Emissions from fridges have not been included and are estimated to be less than 1% of the total emissions. Air conditioning units are included. The amount is unchanged since the baseline year as no further units were neither changed, nor taken out of service.

Overall, emissions in scope 1 have increased by 1.5% since 2012/13 due to an increase in Fleet emissions

Scope 2

Purchased electricity decreases in this scope. The emissions are a consequence of the council's activities, but not owned or controlled by the council. Electricity emissions come from electricity used in council's office buildings and communal buildings. There has been a steady decrease in emissions from use of electricity on council sites as a result of implementing energy efficiency projects as listed below.

- LED and lighting controls installation to the Town hall
- LED and lighting controls installation to John Barford car park
- Voltage optimisation
- IT server virtualisation
- Printer rationalisation and upgrade to energy efficient models.

Overall, scope 2 emissions have decreased by 8.4% within period 2012/13 to 2013/14. In total, electricity alone has contributed to an excess of 50% tCO₂e savings since the baseline period (2009/10), see Figure 4 below.

Scope 3

Scope three emissions occur at sources the authority does not own or control such as business mileage paid out to officers using their own cars for council business.

Summary Emissions					
GHG emissions data for period 1 April 2009/10 to 31 March 13/14					
Tonnes of CO₂e					
	Base Year 2009-10	2012-13	2013-14	% Difference since 2012/13 & 2013/14	% Difference since 2009/10 & 2013/14
Scope 1	2141	2,189	2,222	-1.5%	-3.8%
Scope 2	1446	782	716	8.4%	50.5%
Scope 3	109	56	62	-11.9%	42.8%
Total gross emissions	3696	3026	3000	0.9%	18.8%
Carbon offsets	0	0	0	0.0%	0.0%
Green Tariff	0	0	0	0.0%	0.0%
Total Annual Net emissions	3,696	3,026	3,000	0.9%	18.8%

Figure 4: All emissions: Further breakdown of scopes

The Scope 3 categories for which we have reported emissions have changed for the following reasons:

Business travel (mileage) – Data supplied for this category covers, car mileage expenses incurred by staff using their personal cars while on RBC business. Figure 4 shows that emissions from business travel have dropped by 43% since the base year. However, there is a rise of 0.011tCO₂e for the period 2012/13 to 2013/14. This may be due to a subsequent rise in staff figures within the 2013/14 compared to previous years.

Employee commuting – Mileage from the tickets submitted for claims for use of public transport, hire cars, etc. has not been included as figures cannot be calculated due to the current method of data collection which accounts for cost claims only. The system records amount paid out only with no further details. It was decided not to revisit individual expense claims for this reporting year, but review data collection procedures on individual claims to specify mode of transport and mileage for future reporting years. The finance team are working with IT staff to set up a new recording system to comply with the GHG reporting guidance published in June 2013.

Scopes 1, 2 and 3 contributed to a decrease 26 tonnes of CO₂e within the last year alone (0.85%) reduction. Overall, a total of 18.8% reduction in CO₂e has been achieved since the baseline year (2009/10)

The projects undertaken to achieve these savings have been supported by capital and operational funding of the Carbon Management Plan plus external funding from the Improvement and Efficiency West Midlands (IEWM) low carbon fund.

8. Base Year

We have a fixed base year of 2009-10. This was selected as it was the first year for which we had reliable data as reported in our Carbon Management Plan and it was typical in respect of our operations.

We have not recalculated our base year to account for the sale of our facilities, the demolishing and building of the new leisure centre (the Queens Diamond Jubilee Centre) and a new crematorium (Rainsbrook Crematorium), plus the closure of some sites which accounted for a huge difference in tonnes of CO₂e emissions since the base year.

Targets

RBC has already taken action to reduce its carbon emissions through implementing the Carbon Management Plan in 2011/12.

The council aims to reduce carbon emissions from its activities in tonnes of CO₂e by 30% from a 2009/10 baseline of 3,696tCO₂e down to 1,109tCO₂e by 2016/17.

Our progress towards reaching this target has been reasonable to date, achieving 18.8% (see Figure 5) between 2009/10-2013/14.

Summary	Tonnes of CO ₂ e			
	2012-13	2013-14	% difference	tCO ₂ e difference
Total annual net emissions	3026.10	3000.19	0.86%	25.91

Figure 5: Annual net emissions from 2012

9. Intensity Measurement

The council has chosen to use Full Time Equivalent (FTE), which is the measure of tonnes of CO₂e per employee.

Summary	tCO ₂ e	tCO ₂ e	% difference
	2013-14	2012-13	
Intensity measurement 'tonnes of CO₂ per FTE'	6.11	6.78	9.79%
Number of FTE	490.87	446.64	-9.90%
Total annual net emissions (tCO₂e)	3000.17	3026.07	0.86%

Figure 6: Intensity Measure

The tonnage per full time employee shows a decrease of about 10% tCO₂e as a result of an increase in staff numbers, but a 0.86% change in overall emissions since 2012/13 – see Figure 6.

10. External Assurance Statement

We have not sought an independent external assurance statement. .

11. Carbon Offsets

We have not purchased carbon credits

12. Actions taken over the last year to mitigating Climate Change emissions

RBC is committed to reducing carbon emissions to meet the climate change and the environmental challenges through the Carbon Management Plan, which has been in place since 2012/13 with a list of projects which will help meet our targets by 2016/17.

We will soon be embedding a new Energy policy with a view to participating in the Energy Demand Reduction pilot offered by DECC.

13. Summary

The report submitted is a true reflection of RBC's carbon emissions for all scopes included. We will endeavor to put appropriate corrective measures in place for those emissions excluded from this year's reporting scope.

14. Contact

For information relating to the figures or development of this report, please contact Angeline Murungu, Energy Officer, Tel 01788 533407 or angeline.murungu@rugby.gov.uk