

# **Runnymede Borough Council Greenhouse Gas Emissions Annual Report 2017/2018**



**Verena Boxall  
Energy and Sustainability Manager  
Runnymede Borough Council  
August 2018**

## **Purpose of the report**

The Greenhouse Gas Emissions Report details carbon emissions resulting from the operations of the authority during 2017-2018. This annual report is a requirement of the Department for Business, Energy and Industrial Strategy.

## **Background**

The then Department of Energy and Climate Change signed a Memorandum of Understanding (MOU) with the Local Government Association on 9 March 2011 to recognise the pivotal role local authorities have in reducing emissions at the local level.

Local Authorities in England are required by the Department for Business, Energy and Industrial Strategy to measure and report on their Greenhouse Gas Emissions from their own estate and operations.

This report outlines the authority's GHG emissions for the past nine years. It presents the energy that is consumed as a result of the authority's operations and the results of the measures introduced to strive to reduce those emissions of the authority.

## **Key organisational statistics**

Runnymede Borough Council currently serves a population of approximately 82,200 residents and 2,300 shops and businesses. The authority owns and manages its housing stock of approximately 3,200 properties. There were 358 FTE employees during this reporting period.

## **Baseline year and reporting period**

The baseline year used for carbon reporting is the financial year 2009/2010.

Gas, water and electricity consumption data has been gathered by Runnymede Borough Council since 1995 to monitor and target consumption within their portfolio of public buildings quickly identifying any pipeline losses i.e. gas and water and excessive electricity consumption. Emissions are monitored against the baseline year annually and published within this report. The reporting period coincides with the financial year from 1st April to 31st March.

The reporting requests data from natural gas and electricity consumption, electricity transmission and distribution losses, fuel usage including our grey fleet emissions (i.e. business mileage incurred via officers own vehicle usage), water supply and waste water treatment.

## **Approach**

The authority has followed the Government's guidance on how to measure and report greenhouse emissions. This format follows the internationally recognised GHG protocol and is recommended by Government for adoption by all local authorities and the private sector.

## Operational Scopes

- Scope 1 - To calculate emissions from the use of fuels including natural gas, diesel and petrol
- Scope 2 - To calculate emissions from the use of electricity
- Scope 3 - To calculate emissions from electricity transmission and distribution losses, water supply and treatment and our fuel consumption via our grey fleet

**Scope 1** – Natural Gas consumption is measured in kWh net CV (Gross CV or higher heating value is the Calorific Value under laboratory conditions. Net CV or lower heating value is the useful Calorific Value in typical real world conditions e.g. boiler plant) from corporate properties over 250 sqm. gross internal area (GIA). GIA is a method of measurement that measures the whole enclosed area of a building within the external walls. Properties include:

- Civic Centre
- Chertsey Hall
- Woodham Lodge IRL Centre
- Chertsey DSO
- Eileen Tozer IRL Centre
- Manor Farm IRL Centre
- Chertsey Museum
- The Hythe Centre

Diesel and petrol fuel use measured in litres from The DSO (Direct Services Organisation) includes DSO operational vehicles, recycling vehicles, community services vehicles. Parks and amenities contractor vehicles and machinery.

**Scope 2** – Electricity consumption measured in kWh from our corporate properties over 250 sqm GIA that again includes:

- Civic Centre
- Chertsey Hall
- Woodham Lodge IRL Centre
- Chertsey DSO
- Eileen Tozer IRL Centre
- Manor Farm IRL Centre
- Chertsey Museum
- The Hythe Centre

**Scope 3** – Electricity transmission and distribution losses measured against kWh consumed on the following properties:

- Civic Centre
- Chertsey Hall
- Woodham Lodge IRL Centre
- Chertsey DSO
- Eileen Tozer IRL Centre
- Manor Farm IRL Centre
- Chertsey Museum
- The Hythe Centre

**Scope 3** – Water Supply and Treatment measured in cubic metres at the following sites:

- Civic Centre
- Chertsey Hall
- Woodham Lodge IRL Centre
- Chertsey DSO
- Eileen Tozer Day Centre
- Manor Farm IRL Centre
- Chertsey Museum
- The Hythe Centre

**Scope 3** – Business mileage 'Grey Fleet' measured in miles travelled

Emission Source	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Natural Gas Consumption	335.50	333.93	235.62	351.07	322.28	309.57	300	319.5	306.7
Fuel Use - Direct Services Diesel	1373.92	1401.47	1063.26	875.94	549.29	578.90	613.7	<del>676.50</del> 724.50	695.7
Fuel Use - Direct Services Petrol	0.90	1.00	1.27	1.40	5.73	5.56	5.1	4.2	5.3
Electricity Consumption	837.98	817.69	572.75	558.54	582.16	547.88	472.8	444.8	310.1
Electricity T&D Losses	71.65	69.92	48.97	44.12	49.78	45.20	42.7	40.2	26.4
Water Supply	3.37	3.17	2.22	2.17	1.91	1.93	2.4	2.3	2.4
Water Treatment	6.93	6.52	4.58	4.47	3.93	3.97	5.0	4.7	4.8
Managed Assets - Grey Fleet Vehicles	53.34	56.84	52.32	50.12	35.90	36.18	<del>33.2</del> <b>41.1</b>	45.1	40.4
<b>Total tonnes CO<sub>2</sub>e emissions per annum</b>	<b>2683.59</b>	<b>2690.54</b>	<b>1980.99</b>	<b>1887.83</b>	<b>1550.98</b>	<b>1529.19</b>	<del>1474.9</del> <b>1482.8</b>	<del>1537.3</del> <b>1585.4</b>	<b>1391.9</b>
<b>Annual percentage (reduction)/increase</b>							3.04%	6.92%	-12.21%

### Corrections

**2015-2016** - Due to an accounting error, the figure of 33.2 originally quoted for Grey Fleet Vehicles for 2015-2016 has been revised to **41.1** thereby increasing the total tonnes of CO<sub>2</sub>e emissions for that year from 1474.9 to **1482.8**

**2016-2017** – The diesel consumption return of 18,370 litres from G. Burley & Sons, who are responsible for maintenance of Green Spaces, was omitted from the Greenhouse Gas emissions analysis. This was identified in June 2018 prior to the commencement of the 2017-2018 analysis

17<sup>th</sup> July 2018

## **Carbon Emissions Reduction Strategy**

In line with the Surrey Energy and Sustainability Partnership strategy our target is to achieve a 30% reduction in CO<sub>2</sub>e emissions by 2020 compared to 2006 levels. The UK target is currently set at a reduction of 34% by 2020 and 80% by 2050 compared to 2006 levels.

### **Annual Carbon Savings**

The total annual tonnes of CO<sub>2</sub>e emissions have decreased by 193.5 metric tonnes on the previous year. This represents a 12.21% annual reduction.

The UK electricity factor is prone to fluctuate from year to year as the fuel mix consumed in UK power stations (and auto-generators) and the proportion of net imported electricity changes.

These annual changes can be large as the factor depends very heavily on the relative prices of coal and natural gas as well as fluctuations in peak demand and renewables. Given the importance of this factor, the explanation for fluctuations will be presented here henceforth.

In the 2017 GHG Conversion Factors, there was a 15% decrease in the UK electricity CO<sub>2</sub>e factor compared to the previous year because there was a decrease in coal generation and an increase in gas and renewables generation, in 2015 (the inventory year for which the 2017 GHG Conversion Factor was derived). In this 2018 update, the CO<sub>2</sub>e factor has decreased again (compared with 2017) by 19% due to a decrease in coal generation and an increase mainly in natural gas and to a much lower extent renewable generation.

### **Annual Cost Savings**

As a consequence of the decrease in carbon emissions during 2017/2018 annual cost savings, based on £150 benchmark per tonne of CO<sub>2</sub>e, was £29k.

### **Total Carbon Savings Achieved On Baseline**

The total carbon savings achieved for the authority on our baseline from 2009 is 1,291 tonnes of CO<sub>2</sub>e of greenhouse gasses. This represents a 48.13% reduction over-achieving on the UK Governments 2020 target.

### **Total Avoided Cost Savings Achieved On Baseline**

The total avoided cost savings to the authority based on £150 benchmark per tonne of CO<sub>2</sub>e, is £194k over the ten year period of reporting.

## References

Sharing information on greenhouse gas emissions from local authority own estate and operations (the successor to National Indicator 185)'. Full information and requirements at:

<https://www.gov.uk/measuring-and-reporting-environmental-impacts-guidance-for-businesses>

Key Organisational Statistics

<http://neighbourhood.statistics.gov.uk/dissemination>