



GUILDFORD
BOROUGH

Guildford Borough Council Green House Gas Emissions
report from the estate and operational activities

Reporting period: 2011/2012

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1) Introduction

Purpose of the report

The report fulfils the requirement by the Department of Communities and Local Government, DCLG for local authorities to report their Greenhouse gas emissions

a) Background Guildford Borough Council is part of a two-tier authority for Surrey. Alongside Surrey County Council, Guildford is one of 11 district and borough councils. The area of the borough is 270.87km² with a population of 129,701 residents¹. It is a prosperous borough with the population split between living in urban and countryside areas. Guildford Borough Council's main areas of responsibility are council tax, housing, parks, sports, arts, planning, environmental health, waste and recycling collection and street cleaning.

b) Reporting period

The reporting period is 1 April 2011 to 31 March 2012.

c) Approach and methodology

The methodology used is in accordance with the "Guidance on how to measure and report your greenhouse gas emissions"². The document identifies the main types of emissions sources in 3 categories known as 'scopes'. These are defined as:

Scope 1: Direct emissions from sources that are owned or controlled by the reporting company, e.g. boilers for heating buildings, transport fuel used by company vehicles.

Scope 2: Indirect emissions from the consumption and purchase of electricity, heat and cooling generated off site.

Scope 3: Indirect emissions from all other activities, which release green house gases into the atmosphere. This includes products and outsourced services which are bought on behalf of the council. For most organisations these are the largest area of emissions but are acknowledged by Defra as the most difficult to measure.

Reporting of Scope 1 and 2 emissions is mandatory; Scope 3 is discretionary. Guildford Borough Council's Scope 3 emissions have not been reported as we do not possess accurate information.

The Baseline year for carbon emissions report is 2008/09 financial year. The reason for this is that Guildford Borough Council committed to a Carbon Management Plan with targets to reduce carbon dioxide (CO₂) emissions, by 34% by 2015 and 43% by 2020 based on our 2008/09 baseline.

¹ Office for National Statistics 2001

² <http://www.defra.gov.uk/publications/files/pb13309-ghg-guidance-0909011.pdf>

d) Results

Summary of Greenhouse gas emissions for Guildford Borough Council

	Tonnes of CO ₂ ^e			
	Baseline Year	Year 1	Year 2	Year 3
	Apr 08 -Mar 09	Apr 09 -Mar 10	Apr 10 -Mar 11	Apr 11 -Mar 12
Scope 1	5352	5248	5398	4709
Natural Gas	3709	3412	3759	3006
Fuels	1643	1836	1639	1703
Scope 2	7456	6685	6735	6763
Total Gross Emissions	12808	11993	12216	11472
Total carbon offsets				
Generated & used (CHP)	375	463	641	398
Total Net Emissions	12433	11470	11575	11074
Overall percent reduction		7.75	6.9	10.93
Renewable carbon offsetting				
Biomass MWh produced	0	0	25.8	39.9
Generated, exported (FIT paid)	91	65	93	40

N. B. Savings for 2010/11 are lower than expected due to the use of heating oil at the Lido, when gas boilers were condemned due to a insufficient gas supply. Savings for 2011/12 are lower than expected due to breakdown of the CHP and the hydro plant.

Scope 1 emissions include 100% of our total gas consumption based on 2011/12 figures, mainly for heating, all of our diesel, unleaded petrol, other petroleum gases and heating oil when used.

Scope 2 emissions consist of 100% of our total electricity consumption based on 2011/12 figures for some heating, lighting, computers, tills and mechanical work.

All conversion factors used have been sourced through the recommended [“August 2011 Guidelines to Defra/DECC’s Greenhouse Gas Conversion Factors for Company Reporting”](#) spreadsheet from the Defra website.

Carbon offsets have been included as we generate and consume electricity from a good quality CHP plant. We record, but do not include, energy generated and exported to the national grid from a micro hydro plant for which we claim FiT’s. We also show energy derived from burning biomass in our however, this too has been omitted from our CO₂ emissions. The calculations for the carbon offsets have been calculated from the lower conversion factors quoted in the guidelines above.

All our main sites are half hourly metered or sites we regularly meter read. AMR (automated meter readings) meters were installed in the summer of 2011 which has improved the quality of the data collected over the last year. The remainder is primarily energy used for communal areas in social housing. Transport fuels are quoted in full.

e) Actions taken to reduce emissions

To reduce the council's carbon emissions and energy consumption we have:

- Installed automated meter readers for the electricity and gas meters across most of our estate during 2011. This provides better quality data with which to manage energy projects
- Retrofitted a biomass boiler to heat the main council offices during the winter months.
- Installed 5 Solar Photovoltaic systems on various council properties with more to come.
- Upgraded internal and external car park lighting at Spectrum leisure centre to LED lighting.
- Installed energy efficient gas boilers to heat the Lido.
- Upgraded lighting at Burchatt's Barn, Stoke Park Nurseries and Green Ark to LED lighting.
- Installed variable speed drives at Japonica Court.
- Fitted lighting motion sensor controls in all kitchens and toilets in the main council offices.
- An ongoing gas boiler replacement program
- Committed to insulating as many loft and cavity walls in council homes before December 2012 (this is dependent on accessing CERT funding)