READING BOROUGH COUNCIL: GREENHOUSE GAS (GHG) REPORT 2013 - 14

Reading Borough Council (RBC) is committed to working to reduce its Greenhouse Gas emissions across its estate and operations.

This year (2013/14) the Council had over a 3 % decrease in absolute gross corporate emissions against our 2012/13 levels. When taking into account the gross emissions of the wider influence of the Council, the footprint decreased by just less than 1 %.

Reading Borough Council is in the process of approving a new Energy, Water and Carbon Management Strategy, 2015-2020 for the organisation. As part of this process the data collation and reporting methodology has been refined. The GHG report will now separately report emissions from RBC's corporate activities, which are under its operational control, and emissions from schools and managed services, whose operations can be influenced but not controlled. Further details on this can be found in Section 2.2.

1 Introduction

1.1 Our Vision

As part of Reading Borough Council's commitment to 'Reading's Climate Change Strategy 2013-2020; Reading Means Business on Climate Change', the council supports the vision that

> *'Reading's thriving network of businesses and organizations will be at the forefront of developing solutions for reducing carbon emissions and preparing for climate change. Low carbon living will be the norm in 2050.'*

And work with others to '*…reduce the carbon footprint of the borough in 2020 by 34% compared with levels in 2005*.'

1.2 Leading by Example

Reading Borough Council has been leading by example by actively reducing its carbon emissions. Since signing the Nottingham Declaration on Climate Change in March 2006, there have been numerous local and national policies and targets, an legislation which have influenced the council's energy management work. In 2007 RBC worked with the Carbon Trust to produce Reading's Local Authority Carbon Management Plan (LACM). Since 2008 the authority has managed a rolling investment programme in energy efficient technologies to achieve carbon reduction. The Council has been working in partnership with other public sector organisations, businesses and local residents to reduce emissions and dependency on fossil fuel.

Our Sustainable Community Strategy (2011) highlights renewable energy as one of eight key 'building blocks' for the future of Reading and Reading's Climate Change Strategy 2013-2020 also aims to '*increase the amount of energy generated locally using renewable technologies'*. RBC's investments in photovoltaic solar panel are generating savings, with about over 425 MWh electricity generated in 2013/14 by schools, local businesses, corporate buildings and sheltered housing. The Council

plans to continue to develop and facilitate renewable schemes across the borough. These schemes will be providing a return in investment to Reading as a whole and stimulate the local low carbon economy.

As stated previously, RBC is currently developing a new Energy, Water and Carbon Management Strategy, 2015-2020, which aims to; reduce costs; reduce negative impacts on the environment; continue to decarbonise energy supply and manage demand; and make energy, carbon and water savings an integral part of the organisation. This strategy is scheduled to be adopted by 2015/16.

2 Reading Borough Council Greenhouse Gas (GHG) Emissions

2.1 The Organisation

Reading Borough Council is a unitary local authority. The organisation has been subject to significant reorganisation over the last 3 years. RBC is now comprised of three directorates; Directorate of Environment and Neighbourhood Services (DENS); Directorate of Corporate Support Services (CSS); and Directorate of Education, Adult and Children's Services (DEACS). Carbon Management for the Council is managed in the Sustainability Team, within 'Planning, Development and Regulatory Services' in the Directorate of Environment and Neighbourhood Services.

This report covers the RBC corporate GHG footprint and the 'wider influence' GHG footprint for 2013/14 (1st April 2013 to 31st March 2014).

2.2 Scope

In previous reporting years, through the LACM and National Indicator 185, energy use and carbon emissions from schools and outsources services have been reported within the council's total scope. In more recent years, through the GHG Protocol reporting, outsourced services have been reported in Scope 3. How different aspects of the 'wider' organisation are defined within the scopes of the GHG Protocol and are reported has been reviewed this year.

The reporting approach is based on guidance by the Department for Environment Food and Rural Affairs (DEFRA) *Environmental Reporting Guidelines: Including mandatory greenhouse gas emissions reporting* June 2013 and *UK emission factors* published by DEFRA for 2012. The most appropriate way to define the scope of the energy and water use of the organisation is by the 'Operational control boundary', where by '[y]our organisation reports on all sources of environmental impact over which it has operational control'. Importantly this boundary definition recognises the significance of the ability of the organisation to have the 'full authority to introduce and implement its operating policies at the operation'.

By revisiting the 'Operational control boundary' it has been recognised that the reporting of certain operations that are 'separate' from the main corporate operations of the authority should be redefined. As such, all schools (including community, voluntary aided, diocese, Academy and Free Schools) and managed services (including Rivermead Leisure centre, Academy Sports, Reading Buses and NCP car parks) will be reported in Scope 3, where RBC can influence, rather than control, the operations.

The list of GHG activities measured by RBC is as follows below. A detailed breakdown of the activities that are reported, and within which scope, can be found in Appendix 1.

Scope 1 (Direct emissions)

- Fossil fuels – Natural Gas and burning oil consumption
- Transport Fleet
- Fugitive emissions from air conditioning units only (excluding emissions from domestic fridges and freezers)
- Self-supplied renewably generated electricity or heat

Scope 2 (Energy indirect)

- Purchased electricity
- Passenger Vehicle - Reading Car Club

Scope 3 (Other indirect)

- Electricity losses from transmission and distribution
- Managed Assets - Business travel
- Schools (Community, Voluntary Aided, Diocese, Academy and Free Schools)
- Outsourced services (5 car parks, 2 leisure centres and bus company office).

New Outside Scopes

- CO_2 equivalent emissions from biofuels

Renewable electricity

- Renewably generated electricity from systems owned by RBC, but supplying electricity to other parties

2.3 Baseline Year and reporting

The Council has been reporting its carbon footprint since 2005/6. Since this time, the reporting systems have changed several times and data collection has improved. As part of the development of the first Climate Change Strategy for Reading (2008-2013) our baseline line was recalculated in 2008; therefore the Council's current baseline year is 2008/9.

The Council has been required to annually report carbon emissions for the Carbon Reduction Commitment Energy Efficiency Scheme since 2010/11.

The emissions factors for the GHG footprint 2013/14 (1st April 2013 to 31st March 2014) are those published by DEFRA, based on a 1 year average factor for each year.

2.3.1 Weather Correction

A considerable contribution to the greenhouse emissions of the Council is from space heating. With changing heat demand depending on the weather of each year; there can be an increased fuel demand, which will have an impact on our emissions. Weather correction calculations can undertaken to adjust for this bias. Weather corrected figures can be found in Appendix 2.

2.4 Recalculation

The historic carbon footprint data has been recalculated due to refining the scope of the 'Operational control boundary', as outlined above, and consistent errors in reporting outsourced services. These recalculated figures are illustrated in Table 2.1 and Figure 2.1 below. A full breakdown of the figures can be found in Appendix 2.

YEAR	2008/09	2009/10	2010/11	2011/12	2012/13
	tCO2	tCO2	tCO2	tCO2	tCO2
SCOPE 1 - Corporate					
TOTAL	**6,594**	**5,940**	**5,733**	**5,488**	**5,463**
SCOPE 2 - Corporate					
TOTAL	**11,850**	**10,710**	**8,712**	**8,015**	**7,706**
SCOPE 3					
CORPORATE	**1318**	**1269**	**1030**	**985**	**886**
SCHOOLS	**5,216**	**7,203**	**7,877**	**6,882**	**7,651**
MANAGED ASSETS/SERVICES	**3,125**	**2,806**	**2,838**	**2,128**	**2,580**
GROSS EMISSIONS - Scope 1, 2, 3 - CORPORATE	**19,761**	**17,919**	**15,475**	**14,487**	**14,056**
GROSS EMISSIONS - ALL	**28,103**	**27,928**	**26,190**	**23,498**	**24,287**
ELECTRICITY EXPORTED/SOLD TO GRID/OTHERS				9	158
NET EMISSIONS - Scope 1, 2, 3 - CORPORATE	**19,761**	**17,919**	**15,475**	**14,478**	**13,898**
NET EMISSIONS - ALL	**28,103**	**27,928**	**26,190**	**23,488**	**24,128**

Table 2.1: Recalculated RBC carbon footprint for the period 2008/9 to 2012/13.

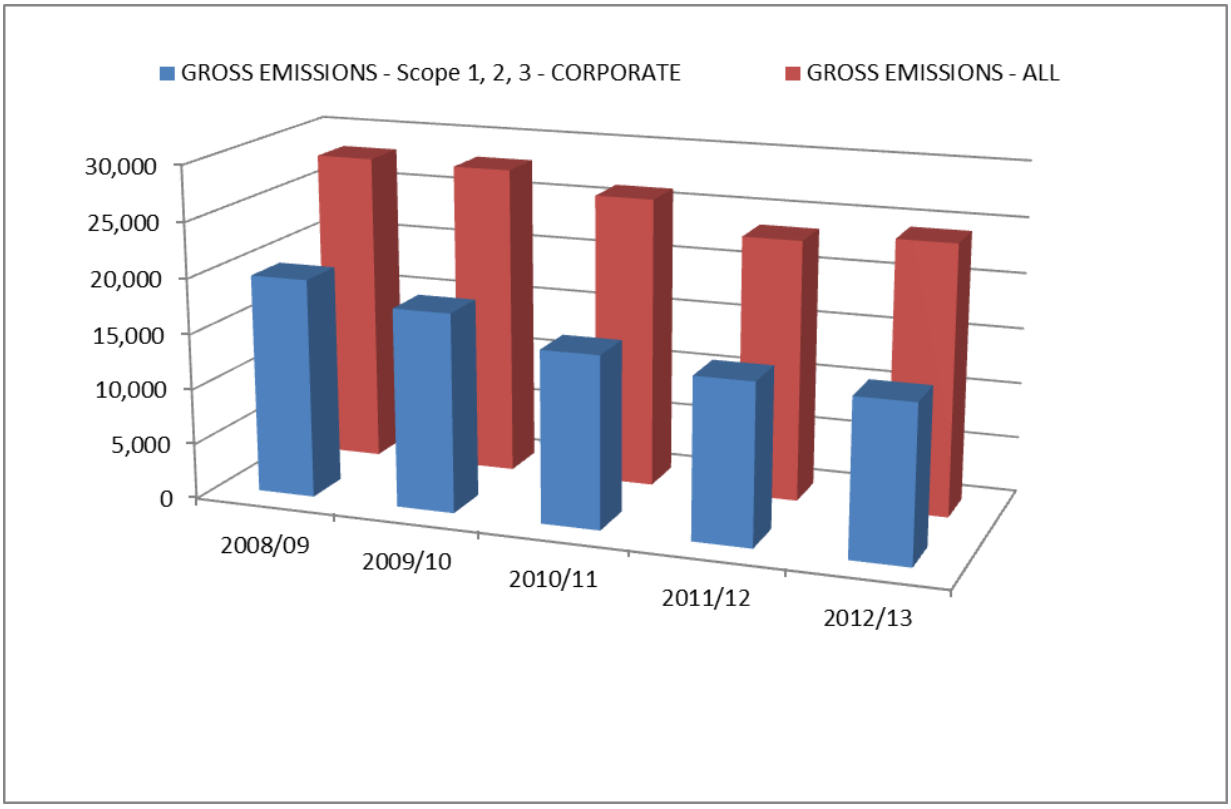

Figure 2.1: recalculated RBC carbon emissions, corporate 'control' and wider influence, for the period 2008/9 to 2012/13.

2.5 Reading Borough Council Greenhouse Gas carbon footprint, 2013/14

Reading Borough Council's absolute (gross) corporate carbon emissions for 2013/14 were 13,584 tCO_2, down 3.4 % against 2012/13 emissions. Renewably generated electricity, exported to the grid, or sold to third parties can be netted off against this gross figure, to the sum of 186 tCO_2, giving net corporate carbon emissions of 13,398 tCO_2.

The absolute carbon emissions of the organisations' wider activities, including emissions from schools and managed services, were 24,139 tCO_2 (gross) for 2013/14, down 0.7 % compared to 2012/13 figures. Activities under the council's influence (not control) accounted for 10,555 tCO_2 in 2013/14, up 3 % from the previous year (2012/13).

The GHG carbon footprint figures for 2013/14 are illustrated in Table 2.2 below, compared against 2012/13 data. A full breakdown of the data can be found in Appendix 3.

	New BASELINE	
YEAR	**2012/13**	**2013/14**
	tCO2	tCO2
SCOPE 1 - Corporate		
	5,463	**4,819**
SCOPE 2 - Corporate		
	7,706	**7,842**
SCOPE 3		
CORPORATE	**887**	**923**
SCHOOLS	**7,651**	**7,778**
MANAGED ASSETS/SERVICES	**2,580**	**2,777**
GROSS EMISSIONS - Scope 1, 2, 3 - CORPORATE	**14,056**	**13,584**
GROSS EMISSIONS - ALL	**24,287**	**24,139**
ELECTRICITY EXPORTED/SOLD TO GRID/OTHERS	158	186
NET EMISSIONS - Scope 1, 2, 3 - CORPORATE	**13,898**	**13,398**
NET EMISSIONS - ALL	**24,128**	**23,953**

Table 2.2: Reading Borough Council GHG Emissions 2013/14, compared to 2012/13 figures.

2.6 Intensity Measurement

This measures an organisation's GHG emissions against a specific relevant activity. There are a number of factors that determine and influence the level of GHG emissions of an organisation, such as size of buildings, number of employees (activity ratios), financial turnover of the business (financial ratio) etc.

For Reading Borough Council, the intensity ratio is measured by number of Full Time Equivalent (FTE) staff working for the Council. The recommended methodology by the Defra/DECCS guide is to measure using direct emissions (Scope 1 and 2) only which occurs as a direct result of staff activities.

In March 2014 we had 2,036.31 staff (FTE) employed by the Council as against 2,057.99 staff (FTE) in March 2013.

The employee intensity ratio for Reading Borough Council, for 2013/14 is

$$TCO_2e \text{ per FTE} = \frac{12{,}661}{2{,}036.31} = 6.22\ tCO_2e/FTE$$

Compared to the employee intensity ratio for Reading Borough Council, for 2012/13 is

$$TCO_2e \text{ per FTE} = \frac{13,169}{2,057.99} = 6.40\ 6.22\ tCO_2e/FTE$$

2.7 Progress against target

Reading's Climate Change Strategy 2008 – 2013 set a reduction target of 4 % per annum, which equates to a total of 16 % carbon reduction by 2013, for Reading's owned estate and operations. The subsequent Reading Climate Change Strategy 2013-20, a collaborative strategy with business, community and public sector, has set a target for borough-wide carbon emissions reductions of 34 % by 2020, against a 2005 (2005/6) baseline. This would be achieved in part by encouraging participants to achieve a 7% per annum reduction. Figure 2.2 below illustrates RBC's corporate emissions reductions, compared against the annual reduction targets.

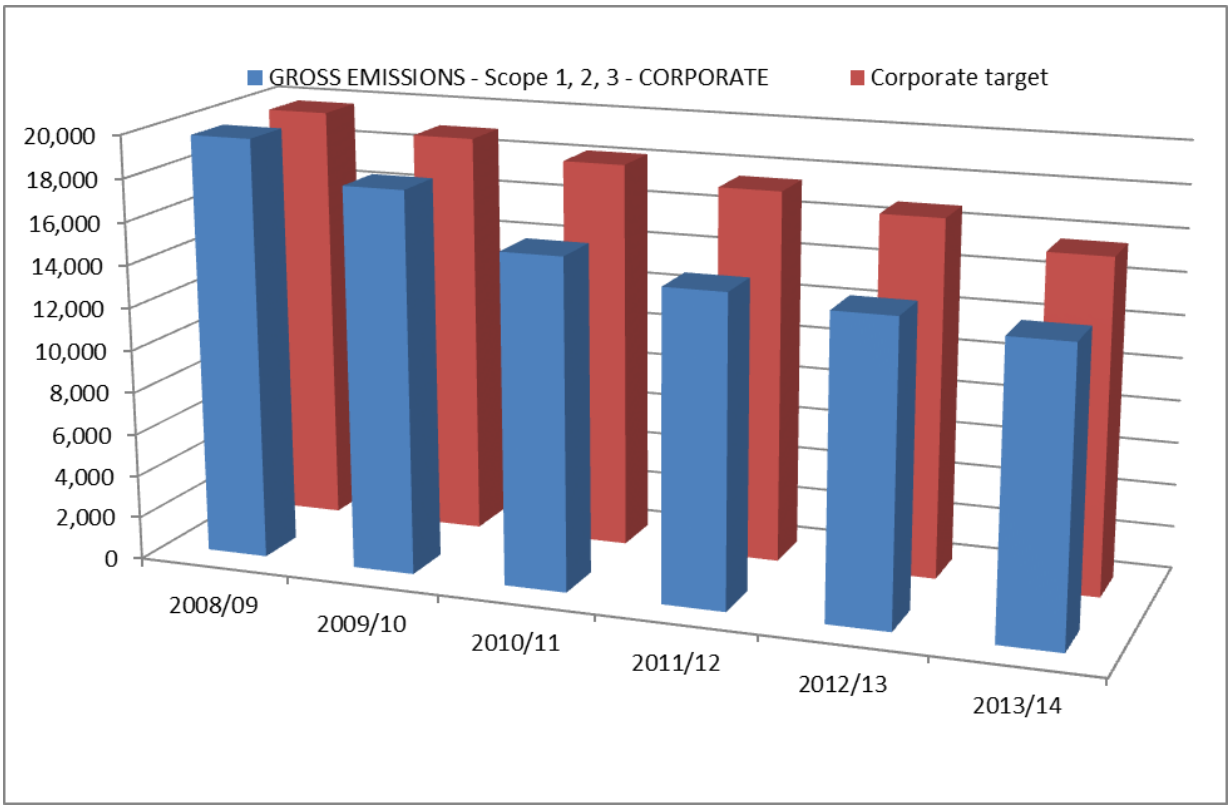

Figure 2.2: a) Reading Borough Council's corporate GHG emission performance against annual 4% target from the Baseline year (2008/9) through to 2013/14

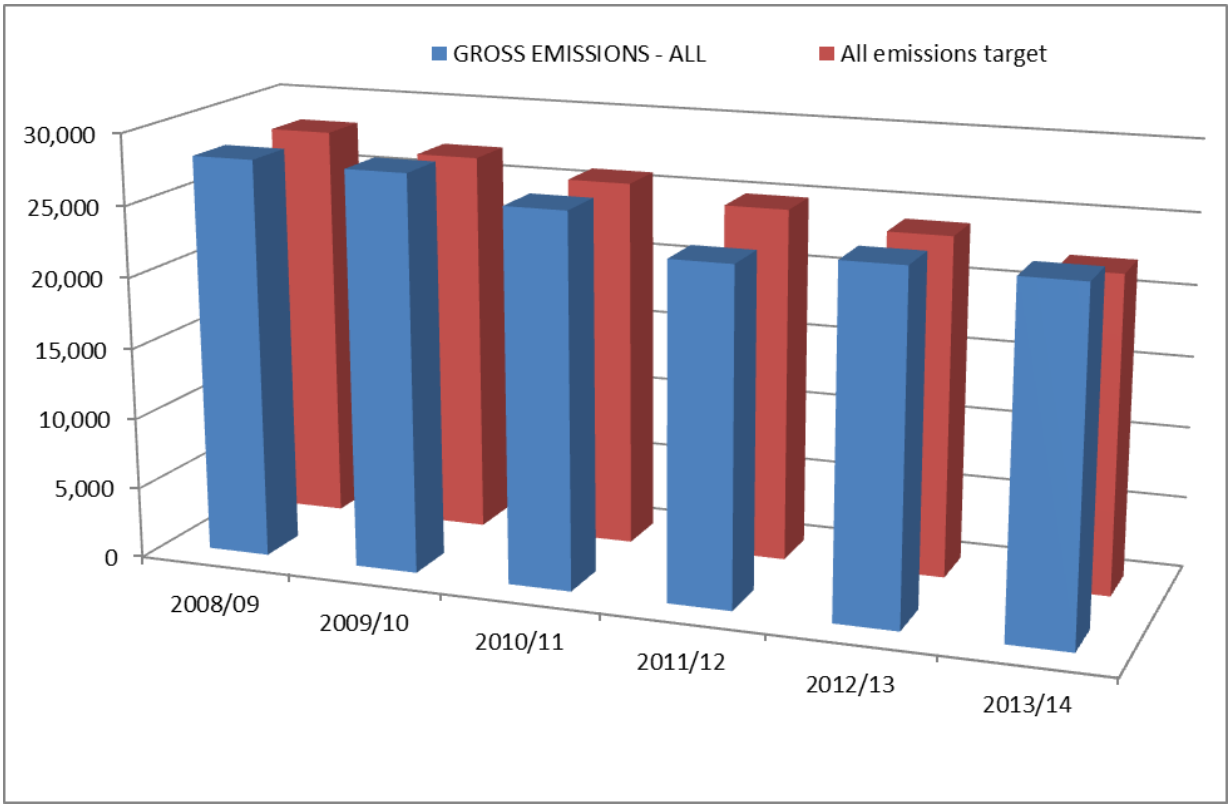

Figure 2.2: b) Reading Borough Council's wider GHG emission performance against annual 4% target, from the Baseline year (2008/9) through to 2013/14 (including schools and managed services).

2.8 Renewable / low carbon energy

Part of our electricity consumption across Reading Borough Council estate is sourced from green energy, supplied by EDF and British Gas.

Electricity generated onsite by gas-fired Combined Heat and Power (CHP) plants produced 453,745 kWh of electricity, from 1,737,886 kWh of gas, in 2013/14.

Reading Borough Council owns 46 PV arrays which generate onsite electricity through the Feed In Tariff (FiT) subsidy. In total, these 46 arrays exported 229,197 kWh to the Grid (deemed) in 2013/14, saving 102 tonnes of CO_2. Twenty-two arrays generated and self-supplied 74,674 kWh to RBC sites. The remaining 24 arrays generated and supplied 155,507 kWh to schools and other parties in 2013/14, saving 69 tCO_2. These carbon emissions savings are 'netted off' against the RBC gross emissions.

A number of schools own their own PV arrays, self-supplying and generating electricity on site. In 2013/14 these systems generated 49,566 kWh, saving 24 tCO_2.

3. Risks and Opportunities

There is overwhelming global consensus that society should rise to the challenge of tackling climate change. In times of economic uncertainty and with the planet facing unprecedented pressures on natural resources, energy reserves and land use; Reading Borough Council is committed to playing its part in averting the risks of severe climate change. We will act locally in the global interest, but we will not overlook the local opportunities and benefits of this action. These benefits include improving the efficiency and resilience of our local communities and infrastructure.

References

Environmental Reporting Guidelines: Including mandatory greenhouse gas emissions reporting, June 2013

Reading's Climate Change Strategy 2008-2013. Stepping forward for Climate Change

Reading's Climate Change Strategy 2013-2020; *Reading Means Business on Climate Change*

Reading's Local Authority Carbon Management Plan (LACM) 2007

Sustainable Community Strategy, 2011. Levers for change.

Appendices

Appendix 1: GHG Protocol scope and treatments of renewables

Reporting of GHG emissions for RBC, divided into 3 scopes	
Scope 1 (Direct emissions): Emissions from activities owned or controlled by your organisation that release emissions into the atmosphere. They are direct emissions.	
Fossil fuels – Natural Gas and burning oil consumption	Direct emissions from combustion of natural gas and oil
Transport Fleet	Direct emissions from combustion of diesel and petrol
Fugitive emissions from air conditioning units only (excluding emissions from domestic fridges and freezers)	Emissions released from equipment leaks
Self-supplied renewably generated electricity or heat	Direct emissions at site (zero emissions). See Figure A1 below for further detail on treatment of renewables.
Scope 2 (Energy indirect): Emissions released into the atmosphere associated with your consumption of purchased electricity, heat, steam and cooling. These are indirect emissions that are a consequence of your organisation's activities but which occur at sources you do not own.	
Purchased electricity	Electricity purchased from supplier. Emissions at source, outside RBC control.
Passenger Vehicle – Reading Car Club	Emissions from use of cars due to RBC activity, but Car Club not owned by RBC.
Scope 3 (Other indirect): Emissions that are a consequence of your actions, which occur at sources which you do not own or control and which are not classed as scope 2 emissions.	
Electricity losses from transmission and distribution	Emissions as a result of losses from transmission and distribution of electricity on the national grid
Managed Assets – Business travel	Emissions as a result of travel by means not owned or controlled by RBC
Schools (Community, Voluntary Aided, Diocese, Academy and Free Schools)	Emissions from activities within schools, which are not controlled by RBC
Outsourced services (5 car parks, 2 leisure centres and bus company office)	Emissions from activities within managed services, which are not controlled by RBC
Outside Scopes:	
CO_2 equivalent emissions from biofuels	Other GHG emissions from combustion of biofuels. Awaiting emissions factors
Renewable electricity:	
Renewably generated electricity from systems owned by RBC, but supplying electricity to other parties	Emissions avoided by generating electricity renewably at site. See Figure A1 below for further detail on treatment of renewables.

Exclusions:
Water supplied & sewerage: to date the data available for reporting emissions from water use is not sufficiently robust. Work is being undertaken to enable this for future years.

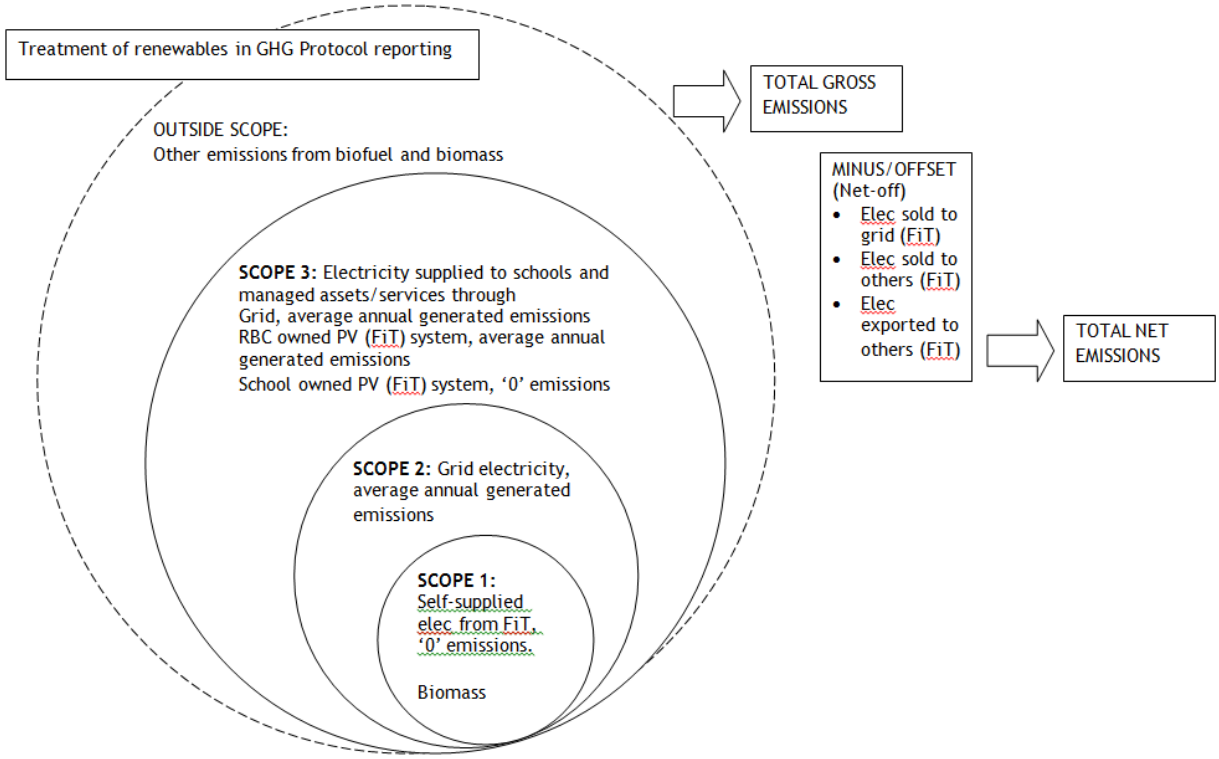

Figure A1: Treatment of renewables in GHG Protocol reporting, depending on system ownership and reporting scope

Appendix 2: Historic data

YEAR		2008/09			2009/10			2010/11			2011/12			2012/13		
	REPORTING UNITS	kWh/litres/km/m3/kg	conversion factor	tCO2	kWh/litres/km/m3/kg	conversion factor	tCO2	kWh/litres/km/m3/kg	conversion factor	tCO2	kWh/litres/km/m3/kg	conversion factor	tCO2	kWh/litres/km/m3/kg	conversion factor	tCO2
SCOPE 1																
GAS	kWh	26,624,860	0.1836	4,888	24,224,208	0.1836	4,448	23,045,716	0.18360	4,231	21,738,716	0.18360	3,991	19,048,224	0.18521	3,528
OIL	litres	329,462	0.2468	81	360,437	0.2468	89	28,691	0.24681	7	116,300	0.24681	29	13,384	2.5443	34
FLEET - DIESEL	litres	616,794	2.5725	1,587	530,858	2.5725	1,366	563,583	2.57250	1,450	546,045	2.57250	1,405	538,214	2.5835	1,390
FLEET - PETROL	litres	16,717	2.2450	38	13,698	2.2450	31	13,730	2.24500	31	15,410	2.24500	35	15,404	2.2423	35
FUGITIVE - R12	kg			-			-			-			-	0.33	1725	1
FUGUTIVE - R22	kg			-	3.40	1,810	6	0.50	1,810	1	15.00	1,810	27	1.60	1810	3
FUGITIVE - R407C	kg				0.61	1,526	1	5.30	1,526	8			-			
FUGITIVE - R134A	kg							0.40	1,300	1			-			
FUGITIVE - R410A	kg							2.80	1,725	5	0.95	1,725	2			
FUGITIVE - R49a	kg										0.65	-	-			
CHP - GAS	kWh			-			-			-			-	2,552,025	0.18521	473
CHP - ELECTRICITY	kWh			-			-			-			-	806,081	0	-
BIOMASS				-			-			-			-			
ELECTRICITY FROM RENEWABLES	kWh		-	-		-	-			-	5,631	-	-	58,450	0	-
	TOTAL			**6,594**			**5,940**			**5,733**			**5,488**			**5,463**
SCOPE 2																
ELECTRICITY FROM GRID	kWh	24,416,596	0.4853	11,850	23,691,580	0.4521	10,710	18,930,473	0.46002	8,708	17,975,180	0.44548	8,008	16,742,424	0.46002	7,702
CAR CLUB - SMALL	km	-	-	-	1,601	0.1711	0	14,926	0.17112	3	17,750	0.26590	5	15,720	0.16522	3
CAR CLUB - MEDIUM	km	-	-	-	-	-	-	5,343	0.21209	1	6,833	0.33418	2	7,580	0.20765	2
	TOTAL			**11,850**			**10,710**			**8,712**			**8,015**			**7,706**
SCOPE 3																
CORPORATE																
ELECTRICITY FROM GRID T&D	kWh	24,416,596	0.0391	954	23,691,580	0.0386	915	18,930,473	0.03634	688	17,975,180	0.03809	685	16,742,424	0.03634	608
BUSINESS MILEAGE	km	1,742,835	0.2086	364	1,695,598	0.2086	354	1,638,790	0.20864	342	1,438,801	0.20864	300	1,429,879	0.19469	278
				-			-			-			-			
SCHOOLS				-			-			-			-			
GAS	kWh	12,243,654	0.1836	2,248	18,387,169	0.1836	3,376	20,032,892	0.18360	3,678	15,969,052	0.18360	2,932	18,710,786	0.18521	3,465
OIL	litres	4,375,859	0.2468	1,080	3,130,463	0.2468	773	3,280,009	0.24681	810	2,197,476	0.24681	542	165,777	2.5443	422
ELECTRICITY FROM GRID	kWh	3,599,802	0.4853	1,747	6,224,888	0.4521	2,814	7,033,167	0.44548	3,133	7,041,178	0.44548	3,137	7,503,153	0.46002	3,452
ELECTRICITY FROM GRID T&D	kWh	3,599,802	0.0391	141	6,224,888	0.0386	240	7,033,167	0.03634	256	7,041,178	0.03809	268	7,503,153	0.03634	273
ELECTRICITY FROM RBC FIT	kWh		0.4853	-		0.4521	-		0.46002	-	7,078	0.44548	3	84,986	0.46002	39
ELECTRICITY FROM RENEWABLES	kWh		-	-		-	-		-	-		-	-	31,422	0	0

YEAR		2008/09			2009/10			2010/11			2011/12			2012/13		
	REPORTING UNITS	kWh/litres/km/m3/kg	conversion factor	tCO2	kWh/litres/km/m3/kg	conversion factor	tCO2	kWh/litres/km/m3/kg	conversion factor	tCO2	kWh/litres/km/m3/kg	conversion factor	tCO2	kWh/litres/km/m3/kg	conversion factor	tCO2
				-			-			-			-			
MANAGED ASSETS/SERVICES				-			-			-			-			
GAS	kWh	6,108,386	0.1836	1,121	5,300,173	0.1836	973	4,733,434	0.18360	869	1,234,507	0.18360	227	3,462,697	0.18521	641
OIL	litres			-			-			-			-		2.5443	-
ELECTRICITY FROM GRID	kWh	3,822,312	0.4853	1,855	3,736,393	0.4521	1,689	3,967,816	0.46002	1,825	3,926,624	0.44548	1,749	3,868,240	0.46002	1,779
ELECTRICITY FROM GRID T&D	kWh	3,822,312	0.0391	149	3,736,393	0.0386	144	3,967,816	0.03634	144	3,926,624	0.03809	150	3,868,240	0.03634	141
ELECTRICITY FROM RBC FIT			0.4853	-		0.4521	-		0.46002	-	5,411	0.44548	2	41,273	0.46002	19
ELECTRICITY FROM RENEWABLES	kWh		-	-		-	-		-	-		-	-			
	TOTAL			**9,659**			**11,278**			**11,745**			**9,995**			**11,118**
OUTSIDE SCOPE																
FLEET - DIESEL - BIOFUEL MIX	litres													538,213		
FLEET - PETROL - BIOFUEL MIX	litres													15,404		
BIOMASS																
	TOTAL															
GROSS EMISSIONS - CORPORATE				**19,761**			**17,919**			**15,475**			**14,487**			**14,056**
GROSS EMISSIONS - ALL				**28,103**			**27,928**			**26,190**			**23,498**			**24,287**
GROSS EMISSIONS - CORPORATE - weather corrected				**19,606**			**17,638**			**14,970**			**14,524**			**13,353**
GROSS EMISSIONS - ALL - weather corrected				**27,809**			**27,329**			**25,046**			**23,568**			**22,691**
ELECTRICITY EXPORTED/SOLD TO G	kWh										19,404	0.48357	9	319,090	0.49636	158
NET EMISSIONS - CORPORATE				**19,761**			**17,919**			**15,475**			**14,478**			**13,898**
NET EMISSIONS - ALL				**28,103**			**27,928**			**26,190**			**23,488**			**24,128**
NET EMISSIONS - CORPORATE - weather corrected				**19,606**			**17,638**			**14,970**			**14,515**			**13,195**
NET EMISSIONS - ALL - weather corrected				**27,809**			**27,329**			**25,046**			**23,558**			**22,533**

Appendix 3: Full breakdown 2013/14 GHG data

YEAR		2012/13			2013/14		
	REPORTING UNITS	kWh/litres/km/m3/kg	conversion factor	tCO2	kWh/litres/km/m3/kg	conversion factor	tCO2
SCOPE 1							
GAS	kWh	19,048,224	0.18521	3,528	16,479,082	0.18404	3,033
OIL	litres	13,384	2.5443	34	14,800	2.538	38
FLEET - DIESEL	litres	538,214	2.5835	1,390	538,259	2.6008	1,400
FLEET - PETROL	litres	15,404	2.2423	35	13,051	2.2144	29
FUGITIVE - R12	kg	0.33	1725	1	-		0
FUGUTIVE - R22	kg	1.60	1810	3	-		0
FUGITIVE - R407C	kg						
FUGITIVE - R134A	kg						
FUGITIVE - R410A	kg						
FUGITIVE - R49a	kg						
CHP - GAS	kWh	2,552,025	0.18521	473	1,737,886	0.18404	320
CHP - ELECTRICITY	kWh	806,081	0	-	453,745	0	-
BIOMASS							
ELECTRICITY FROM RENEWABLES	kWh	58,450	0	-	74,674	0	-
	TOTAL			**5,463**			**4,819**
SCOPE 2							
ELECTRICITY FROM GRID	kWh	16,742,424	0.46002	7,702	17,594,359	0.44548	7,838
CAR CLUB - SMALL	km	15,720	0.16522	3	15,654	0.16192	3
CAR CLUB - MEDIUM	km	7,580	0.20765	2	6,178	0.2049	1
	TOTAL			**7,706**			**7,842**
SCOPE 3							
CORPORATE							
ELECTRICITY FROM GRID T&D	kWh	16,742,424	0.03634	608	17,594,359	0.03809	670
BUSINESS MILEAGE	km	1,429,879	0.19469	278	1,331,431	0.19023	253
							-

YEAR		2012/13			2013/14		
	REPORTING UNITS	kWh/litres/km/m3/kg	conversion factor	tCO2	kWh/litres/km/m3/kg	conversion factor	tCO2
SCHOOLS							-
GAS	kWh	18,710,786	0.18521	3,465	18,210,886	0.18404	3,352
OIL	litres	165,777	2.5443	422	158,565	2.538	402
ELECTRICITY FROM GRID	kWh	7,503,153	0.46002	3,452	8,233,209	0.44548	3,668
ELECTRICITY FROM GRID T&D	kWh	7,503,153	0.03634	273	8,233,209	0.03809	314
ELECTRICITY FROM RBC FIT	kWh	84,986	0.46002	39	95,940	0.44548	43
ELECTRICITY FROM RENEWABLES	kWh	31,422	0	0	49,566	0	0
							-
MANAGED ASSETS/SERVICES							-
GAS	kWh	3,462,697	0.18521	641	4,549,139	0.18404	837
OIL	litres		2.5443	-		2.538	-
ELECTRICITY FROM GRID	kWh	3,868,240	0.46002	1,779	3,970,380	0.44548	1,769
ELECTRICITY FROM GRID T&D	kWh	3,868,240	0.03634	141	3,970,380	0.03809	151
ELECTRICITY FROM RBC FIT		41,273	0.46002	19	43,826	0.44548	20
ELECTRICITY FROM RENEWABLES	kWh						
	TOTAL			**11,118**			**11,478**
OUTSIDE SCOPE							
FLEET - DIESEL - BIOFUEL MIX	litres	538,213			538,259		
FLEET - PETROL - BIOFUEL MIX	litres	15,404			13,051		
BIOMASS							
	TOTAL						
GROSS EMISSIONS - CORPORATE				**14,056**			**13,584**
GROSS EMISSIONS - ALL				**24,287**			**24,139**
GROSS EMISSIONS - CORPORATE - weather corrected				**13,353**			**13,399**
GROSS EMISSIONS - ALL - weather corrected				**22,691**			**23,677**
ELECTRICITY EXPORTED/SOLD TO GF	kWh	319,090	0.49636	158	384,704	0.48357	186
NET EMISSIONS - CORPORATE				**13,898**			**13,398**
NET EMISSIONS - ALL				**24,128**			**23,953**
NET EMISSIONS - CORPORATE - weather corrected				**13,195**			**13,213**
NET EMISSIONS - ALL - weather corrected				**22,533**			**23,491**