

READING BOROUGH COUNCIL: GREENHOUSE GAS (GHG) REPORT 2016 - 17

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

This year (2016/17) the Council had a 13.1 % decrease in absolute gross corporate emissions against our 2015/16 levels.

The gross emissions of the wider influence of the Council also decreased in 2016/17 compared to 2015/16 levels, by 11.5 %.

Reading Borough Council's 'Carbon Plan, 2015-2020', was approved in 2014/15, which reinforced the organisation's target to reduce carbon emissions by 50% against the 2008/9 baseline. In addition a renewable energy target was set to generate renewable energy equivalent to 15% of total energy consumed, by 2020. This plan identifies actions to further reduce carbon emissions and to generate renewable energy by 2020. Reading Borough Council has a vision to have energy and water efficient estate and operations, in which best practise is sought.

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, and 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 1.5 MWh electricity generated in 2016/17 by schools, local businesses, corporate buildings and housing. The Council plans to continue to explore further opportunities for renewable schemes across the borough.

Reading Borough Council's 'Carbon Plan, 2015-2020', was approved in 2014/15, which reinforced the organisation's target to reduce carbon emissions by 50% against the 2008/9 baseline. In addition a renewable energy target was set to generate renewable energy equivalent to 15% of total energy consumed, by 2020. The Carbon Plan, 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.

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 5 years. RBC is now comprised of four directorates; Directorate of Environment and Neighbourhood Services (DENS); Directorate of Corporate Support Services (CSS); and Directorate for Adult Care & Health Services (AC&HS), Directorate for Children, Education & Early Help Services (CE&EHS). 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 2016/17 (1st April 2016 to 31st March 2017).

2.2 Scope

As clarified in the 2013/14 GHG Report, RBC continues to report carbon emissions from corporate activities under its direct operational control separately from those activities which are (only) under its influence. 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)

Outside Scopes

- CO₂ 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 between 2010/11 to 2013/14.

The emissions factors for the GHG footprint 2016/17 (1st April 2016 to 31st March 2017) 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 be undertaken to adjust for this bias. Weather corrected figures can be found in Appendix 2.

2.4 Reading Borough Council Greenhouse Gas carbon footprint, 2016/17

Reading Borough Council's absolute (gross) corporate carbon emissions for 2016/17 were 10,845 tCO₂, down 13.1 % (1,640 tCO₂) against 2015/16 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 610 tCO₂, giving net corporate carbon emissions of 10,235 tCO₂.

The absolute carbon emissions of the organisations' wider activities were 20,018 tCO₂ for 2016/17. Carbon emissions from schools were 6,944 tCO₂ (gross) for 2016/17, down 7.3 % compared to 2015/16 figures.

The GHG carbon footprint figures for 2016/17 are illustrated in Table 2.1 below, compared against 2015/16 data. A full breakdown of the data can be found in Appendix 3.

YEAR	2015/16	2016/17
	tCO ₂	tCO ₂
SCOPE 1 - Corporate		
	4,609	4,348
SCOPE 2 - Corporate		
	7,054	5,776

SCOPE 3		
CORPORATE	822	721
SCHOOLS	7,487	6,944
MANAGED ASSETS/SERVICES	2,656	2,229
GROSS EMISSIONS - Scope 1, 2, 3 - CORPORATE	12,485	10,845
GROSS EMISSIONS - ALL	22,628	20,018
ELECTRICITY EXPORTED/SOLD TO GRID/OTHERS	368	610
NET EMISSIONS - Scope 1, 2, 3 - CORPORATE	12,117	10,235
NET EMISSIONS - ALL	22,260	19,409

Table 2.1: Reading Borough Council GHG Emissions 2016/17, compared to 2015/16 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 2017 we had 2019.19 staff (FTE) employed by the Council as against 2,090.18 staff (FTE) in March 2015.

The employee intensity ratio for Reading Borough Council, for 2016/17 is

$$\text{TCO}_2\text{e per FTE} = \frac{10,124}{2,019.19} = 5.01 \text{ tCO}_2\text{e/FTE}$$

Compared to the employee intensity ratio for Reading Borough Council, for 2015/16 is

$$\text{TCO}_2\text{e per FTE} = \frac{11,663}{2,090.18} = 5.57 \text{ tCO}_2\text{e/FTE}$$

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 36.5 % carbon reduction by 2016/17, 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 2.1 below illustrates RBC's corporate emissions reductions, compared against the annual reduction targets.

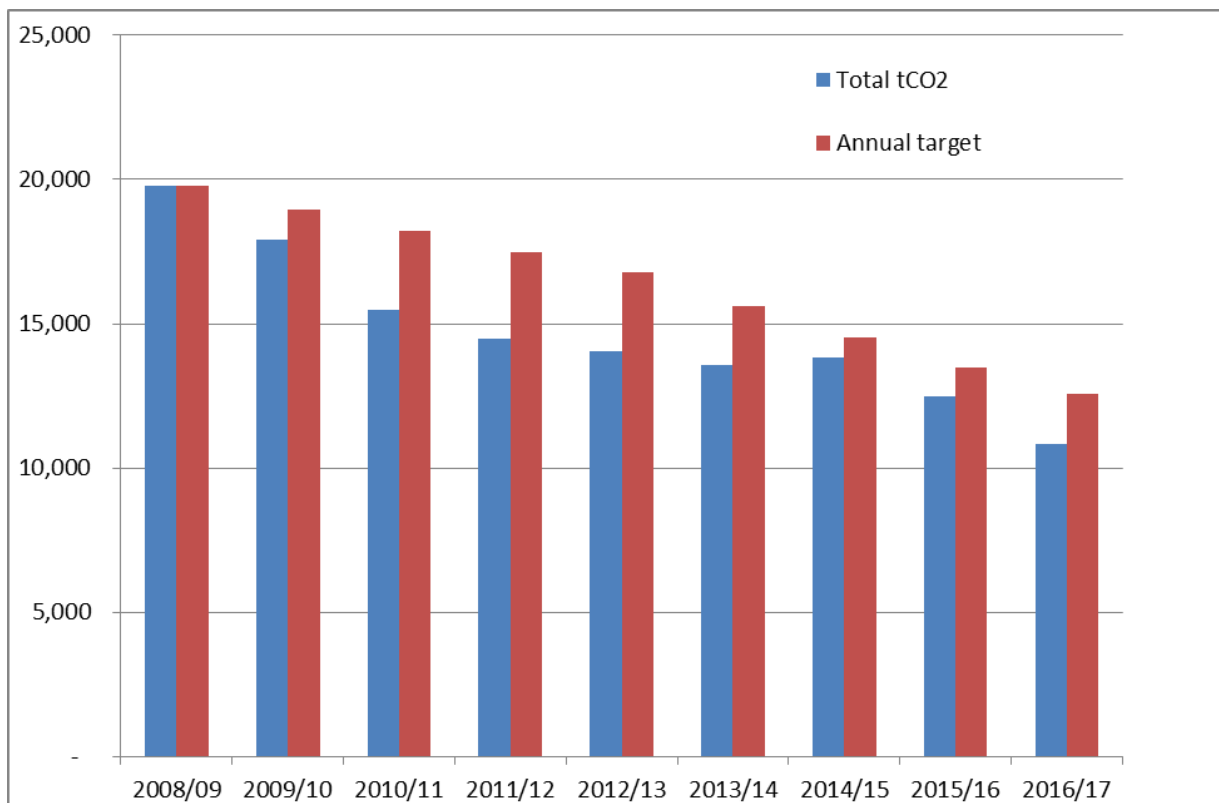


Figure 2.1: Reading Borough Council's corporate GHG emission performance against annual 4% target from the Baseline year (2008/9) through to 2016/17

2.8 Renewable / low carbon energy

Reading Borough Council no longer operates a gas-fired Combined Heat and Power (CHP) plant, as it was decommissioned when the organisation moved from the old Civic Offices.

Reading Borough Council owns numerous PV arrays which generate onsite electricity through the Feed In Tariff (FiT) subsidy. In total, these arrays exported 657,831 kWh to the Grid (deemed) in 2016/17. Twenty-three systems generated and self-supplied 196,925 kWh to RBC sites. The remaining arrays generated and supplied 195,706 kWh to schools and other parties in 2016/17. These carbon emissions savings are 'netted off' against the RBC gross emissions (excluding those 'self-supplied').

A number of schools own their own PV arrays, self-supplying and generating electricity on site. In 2016/17 these systems generated 19,383 kWh.

In 2013, a project to install photovoltaic solar panels onto over 400 Council houses was instigated. Tenants benefit from free electricity from the panels and the Council receive payment from the Feed in Tariff and export of electricity to the National Grid. The programme was completed in 2015, on 457 properties. The total annual energy generation is predicted to be 1,070 MWh. In 2016 the solar pv on these properties generated 1,006,742 kWh from systems installed part-way through the year, 50 % of this is deemed to be exported to the Grid and 50 % is deemed to be supplied to the tenant.

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.

Fleet fuel data from Managed Services (Reading Buses) in Scope 3 are quoted, but not included in total carbon footprint figures, due to some missing data (2014/15).

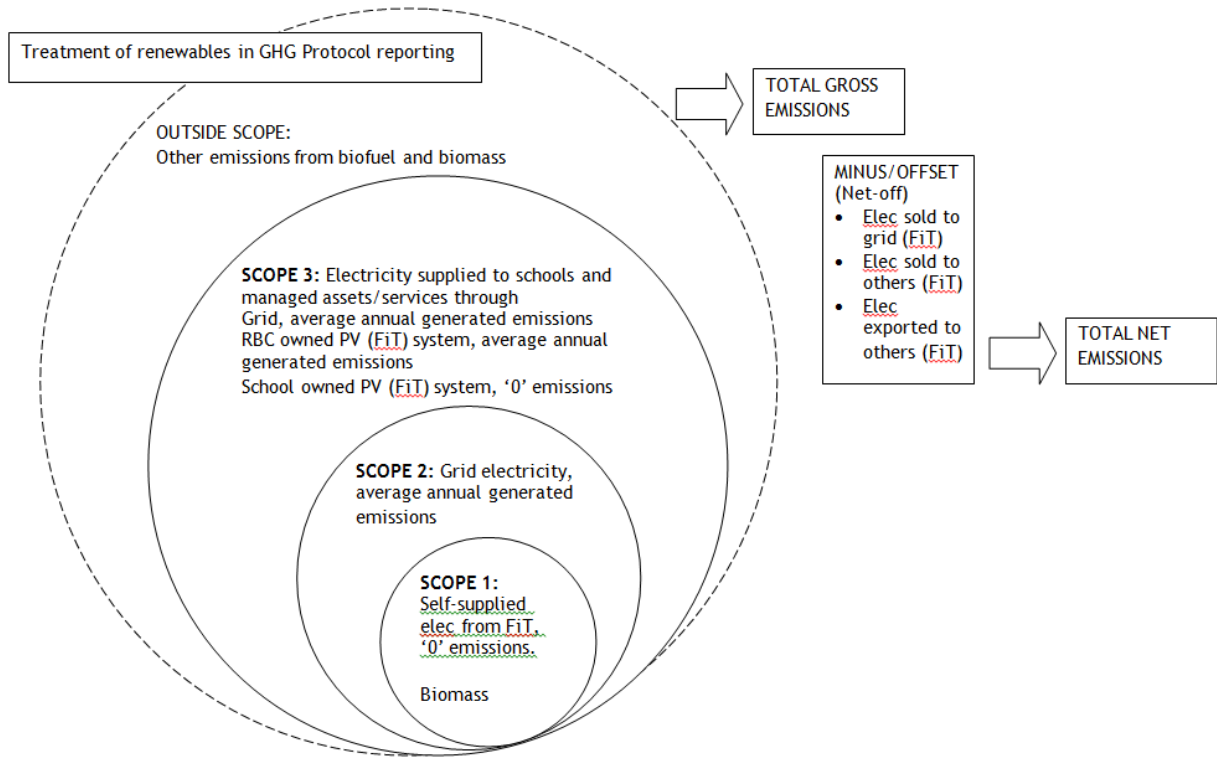


Figure A1: Treatment of renewables in GHG Protocol reporting, depending on system ownership and reporting scope

Appendix 2: Historic data

YEAR		BASELINE: 2008/09			2013/14			2014/15			2015/16			2016/17		
	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	16,479,082	0.18404	3,033	17,244,563	0.184973	3,190	17,930,037	0.18445	3,307	16,507,378	0.184	3,037
OIL	litres	329,462	0.2468	81	14,800	2.538	38	15,702	2.537971	40	13,851	2.53215	35	18,700	2.53215	47
FLEET - DIESEL	litres	616,794	2.5725	1,587	538,259	2.6008	1,400	526,743	2.6024	1,371	474,783	2.5839	1,227	416,684	2.61163	1,088
FLEET - PETROL	litres	16,717	2.2450	38	13,051	2.2144	29	12,538	2.1914	27	11,577	2.1944	25	44,998	2.19697	99
FUGITIVE - R12	kg			-	-						-	0				-
FUGITIVE - R22	kg			-	-			0.65	1810	1	-	0	-			-
FUGITIVE - R407C	kg							10.3	1526	16	-	0	-			-
FUGITIVE - R134A	kg										0	1300	0			0
FUGITIVE - R410A	kg							0.31	1725	0.5	-	0	-	37	2088	76
FUGITIVE - R49a	kg										-	0	-			-
FUGITIVE - R404a	kg										4	3921.6	14.5			0
CHP - GAS	kWh			-	1,737,886	0.18404	320	509,368	0.184973	94	-	0	-	-		-
CHP - ELECTRICITY	kWh			-	453,745	0	-	146,961	0	-	-	0	-	-		-
BIOMASS				-							-	0	-	61		0
ELECTRICITY FROM RENEWABLES	kWh			-	74,674	0	-	77,214	0	-	179,520	0	-	196,925	0	-
TOTAL				6,594			4,819			4,740			4,609			4,348
SCOPE 2																
ELECTRICITY FROM GRID	kWh	24,416,596	0.4853	11,850	17,594,359	0.44548	7,838	16,751,671	0.49426	8,280	15,256,177	0.46219	7,051	14,015,798	0.41205	5,775
CAR CLUB - SMALL	km	-	-	-	15,654	0.16192	3	13,491	0.16061	2	12,843	0.15859	2	4,879	0.16027	1
CAR CLUB - MEDIUM	km	-	-	-	6,178	0.2049	1	5,755	0.20088	1	5,000	0.19931	1	1,945	0.20033	0.4
TOTAL				11,850			7,842			8,283			7,054			5,776
SCOPE 3																
<i>CORPORATE</i>																
ELECTRICITY FROM GRID T&D	kWh	24,416,596	0.0391	954	17,594,359	0.03809	670	16,751,671	0.0432	724.01	15,256,177	0.0382	582	14,015,798	0.03727	522
BUSINESS MILEAGE - average fuel unkn	km	1,742,835	0.2086	364	1,331,431	0.19023	253	1,320,563	0.1894	250.15	1,284,393	0.1864	239	1,067,231	0.1856	198
BUSINESS MILEAGE - average petrol														2,585	0.19184	0.5
BUSINESS MILEAGE - supermini petrol														932	0.16285	0.2
BUSINESS MILEAGE - MPV petrol														225	0.20761	0.0
BUSINESS MILEAGE - MPV diesel														80	0.18965	0.0
BUSINESS MILEAGE - executive petrol														93	0.24707	0.0
BUSINESS MILEAGE - executive diesel														398	0.19118	0.1
BUSINESS MILEAGE - lower medium petrol														554	0.19027	0.1
BUSINESS CYCLE	km							12,992		-	-		-	13,626		-
BUSINESS MOTORCYCLE	km							1,794	0.1196	0.21	-		-			-
WATER SUPPLIED	m3			-		0.3441	-			-	-		-			-
WATER SEWERAGE	m3			-		0.7085	-			-	-		-			-

YEAR	REPORTING UNITS	BASELINE: 2008/09			2013/14			2014/15			2015/16			2016/17		
		kWh/litres/km ³ /kg	conversion factor	tCO ₂	kWh/litres/km ³ /kg	conversion factor	tCO ₂	kWh/litres/km ³ /kg	conversion factor	tCO ₂	kWh/litres/km ³ /kg	conversion factor	tCO ₂	kWh/litres/km ³ /kg	conversion factor	tCO ₂
SCOPE 3																
<i>SCHOOLS</i>				-			-			-			-			-
GAS	kWh	12,243,654	0.1836	2,248	18,210,886	0.18404	3,352	17,814,444	0.1850	3,295	17,306,100	0.1845	3,192	17,015,787	0.184	3,131
OIL	litres	4,375,859	0.2468	1,080	158,565	2.538	402	120,654	2.5380	306	100,637	2.5322	255	128,863	2.53232	326
ELECTRICITY FROM GRID	kWh	3,599,802	0.4853	1,747	8,233,209	0.44548	3,668	8,121,358	0.4943	4,014	7,939,271	0.4622	3,669	7,576,362	0.41205	3,122
ELECTRICITY FROM GRID T&D	kWh	3,599,802	0.0391	141	8,233,209	0.03809	314	8,121,358	0.0432	351	7,939,271	0.0382	303	7,576,362	0.03727	282
ELECTRICITY FROM RBC FIT	kWh		0.4853	-	95,940	0.44548	43	77,970	0.4943	39	145,993	0.4622	67	160,795	0.41205	66
ELECTRICITY FROM RENEWABLES	kWh		-	-	49,566	0	0	20,431	0.0000	-	19,383	0.0000	-	19,383	0	-
WATER SUPPLIED	m ³			-		0.3441	-			-			-			-
WATER SEWERAGE	m ³			-		0.7085	-			-			-			-
FUGITIVE - R410A	kg			-										8	2088	16
				-						-			-			-
<i>MANAGED ASSETS/SERVICES</i>				-			-			-			-			-
GAS	kWh	6,108,386	0.1836	1,121	4,549,139	0.18404	837	4,847,143	0.1850	897	4,952,281	0.1845	913	4,082,951	0.184	751
OIL	litres			-		2.538	-			-			-			-
ELECTRICITY FROM GRID	kWh	3,822,312	0.4853	1,855	3,970,380	0.44548	1,769	3,838,088	0.4943	1,897	3,405,270	0.4622	1,574	3,220,481	0.41205	1,327
ELECTRICITY FROM GRID T&D	kWh	3,822,312	0.0391	149	3,970,380	0.03809	151	3,838,088	0.0432	166	3,405,270	0.0382	130	3,220,481	0.03727	120
ELECTRICITY FROM RBC FIT			0.4853	-	43,826	0.44548	20	78,782	0.4943	39	83,326	0.4622	39	73,692	0.41205	30
ELECTRICITY FROM RENEWABLES	kWh		-	-									-			
FLEET - DIESEL	litres	3,817,389	2.5725	9,820	2,714,427	2.538	6,889				3,561,684	2.5839	9,203	3,044,721	2.61163	7,952
FLEET - CNG	tonnes	-	-	-	630	2,707.21	1,706				957	2,726.05	2,610	957	2,715.83	2,599
WATER SUPPLIED	m ³			-		0.3441	-									
WATER SEWERAGE	m ³			-		0.7085	-									
TOTAL				9,659			11,478			11,978			10,964			9,894
OUTSIDE SCOPE																
FLEET - DIESEL - BIOFUEL MIX	litres				538,259			526,743			474,783			416,684		
FLEET - PETROL - BIOFUEL MIX	litres				13,051			12,538			11,577			44,998		
CNG	litres															
BIOMASS														61		
TOTAL																
GROSS EMISSIONS - CORPORATE				19,761			13,584			13,997			12,485			10,846
GROSS EMISSIONS - ALL				28,103			24,139			25,000			22,628			20,018
GROSS EMISSIONS - CORPORATE - weather corrected				19,606			13,399			13,971			12,521			10,573
GROSS EMISSIONS - ALL - weather corrected				27,809			23,677			24,941			22,710			19,374
ELECTRICITY EXPORTED/SOLD TO GRID	kWh				384,704	0.48357	186	346,924	0.53748	186	735,091	0.50035	368	1356908	0.44932	610
NET EMISSIONS - CORPORATE				19,761			13,398			13,997			12,117			10,236
NET EMISSIONS - ALL				28,103			23,953			24,814			22,260			19,409
NET EMISSIONS - CORPORATE - weather corrected				19,606			13,212			13,785			12,153			9,963
NET EMISSIONS - ALL - weather corrected				27,809			23,767			24,754			22,343			18,764

Note: Fleet fuel data in 'Managed Services' Scope 3 are not included in total emissions figures

Appendix 3: Full breakdown 2016/17 GHG data

YEAR	REPORTING UNITS	2015/16			2016/17		
		kWh/litres/km/m ³ /kg	conversion factor	tCO ₂	kWh/litres/km/m ³ /kg	conversion factor	tCO ₂
SCOPE 1							
GAS	kWh	17,930,037	0.18445	3,307	16,507,378	0.184	3,037
OIL	litres	13,851	2.53215	35	18,700	2.53215	47
FLEET - DIESEL	litres	474,783	2.5839	1,227	416,684	2.61163	1,088
FLEET - PETROL	litres	11,577	2.1944	25	44,998	2.19697	99
FUGITIVE - R12	kg						
FUGITIVE - R22	kg						
FUGITIVE - R407C	kg						
FUGITIVE - R134A	kg	0.22	1300	0.3		0	0.0
FUGITIVE - R410A	kg				36.5	2088	76.2
FUGITIVE - R49a	kg						
FUGITIVE - R404a	kg	3.7	3921.6	14.5		0	0.0
CHP - GAS	kWh				0		
CHP - ELECTRICITY	kWh				0		
BIOMASS					60.5	0	
ELECTRICITY FROM RENEWABLES	kWh	179,520	0	0	196,925	0	0
	TOTAL			4,609			4,348
SCOPE 2							
ELECTRICITY FROM GRID	kWh	15,256,177	0.46219	7,051	14,015,798	0.41205	5,775
CAR CLUB - SMALL	km	12,843	0.15859	2	4,879	0.16027	1
CAR CLUB - MEDIUM	km	5,000	0.19931	1	1,945	0.20033	0
	TOTAL			7,054			5,776
SCOPE 3							
CORPORATE							
ELECTRICITY FROM GRID T&D	kWh	15,256,177	0.03816	582	14,015,798	0.03727	522
BUSINESS MILEAGE	km	1,284,393	0.18635	239	1,067,231	0.1856	198
BUSINESS MILEAGE - average petrol					2,585	0.19184	0.5
BUSINESS MILEAGE - supermini petrol					932	0.16285	0.2
BUSINESS MILEAGE - MPV petrol					225	0.20761	0.0
BUSINESS MILEAGE - MPV diesel					80	0.18965	0.0
BUSINESS MILEAGE - executive petrol					93	0.24707	0.0
BUSINESS MILEAGE - executive diesel					398	0.19118	0.1
BUSINESS MILEAGE - lower medium petrol					554	0.19027	0.1
BUSINESS CYCLE	km				13,626		
BUSINESS MOTORCYCLE	km						
WATER SUPPLIED	m ³						
WATER SEWERAGE	m ³						

		2015/16			2016/17		
YEAR							
	REPORTING UNITS	kWh/litres/km/m3/kg	conversion factor	tCO2	kWh/litres/km/m3/kg	conversion factor	tCO2
SCOPE 3							
<i>SCHOOLS</i>							
GAS	kWh	17,306,100	0.18445	3,192	17,015,787	0.18400	3,131
OIL	litres	100,637	2.53215	255	128,863	2.53232	326
ELECTRICITY FROM GRID	kWh	7,939,271	0.46219	3,669	7,576,362	0.41205	3,122
ELECTRICITY FROM GRID T&D	kWh	7,939,271	0.03816	303	7,576,362	0.03727	282
ELECTRICITY FROM RBC FIT	kWh	145,993	0.46219	67	160,795	0.41205	66
ELECTRICITY FROM RENEWABLES	kWh	19,383	0	0	19,383	0	0
WATER SUPPLIED	m3						
WATER SEWERAGE	m3						
FUGITIVE - R410A	kg				7.78	2088	16.2
<i>MANAGED ASSETS/SERVICES</i>							
GAS	kWh	4,952,281	0.18445	913	4,082,951	0.184	751
OIL	litres						
ELECTRICITY FROM GRID	kWh	3,405,270	0.46219	1,574	3,220,481	0.41205	1,327
ELECTRICITY FROM GRID T&D	kWh	3,405,270	0.03816	130	3,220,481	0.03727	120
ELECTRICITY FROM RBC FIT		83,326	0.46219	39	73,692	0.41205	30
ELECTRICITY FROM RENEWABLES	kWh						
FLEET - DIESEL	litres	3,561,684	2.5839	9,203	3,044,721	2.61163	7,952
FLEET - CNG	litres	957,421	2,726.05	2,609,978	957.078	2,715.83	2,599
WATER SUPPLIED	m3						
WATER SEWERAGE	m3						
	TOTAL			10,964			9,894
<i>OUTSIDE SCOPE</i>							
FLEET - DIESEL - BIOFUEL MIX	litres						
FLEET - PETROL - BIOFUEL MIX	litres						
CNG	litres						
BIOMASS	tonnes				60.5		
	TOTAL						
GROSS EMISSIONS - CORPORATE				12,485			10,845
GROSS EMISSIONS - ALL				22,628			20,018
<i>ELECTRICITY EXPORTED/SOLD TO GRID</i>							
ELECTRICITY EXPORTED/SOLD TO GRID	kWh	735,091	0.50035	368	1,356,908	0.44932	610
NET EMISSIONS - CORPORATE				12,117			10,235
NET EMISSIONS - ALL				22,260			19,409