



Annual Greenhouse Gas Emissions Report 2016/17

East Hampshire District Council

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I. Greenhouse Gas Emissions Reporting Requirements

Climate Change is becoming increasingly more important at the local and national level. Since 2011 local authorities have been required by The Department of Energy and Climate Change (DECC), now the Department for Business, Energy & Industrial Strategy (BEIS), to measure and report their greenhouse gas emissions. According to BEIS¹, East Hampshire has been reducing their total CO₂ emissions steadily since 2005. In 2015, East Hampshire reported 746.5 kilo tonnes (kt) of Carbon Dioxide, compared to 949.5 kt in 2005, which equates to a reduction per capita from 8.6 tonnes (t) to 6.3t. Over 10 years, there has been a 17% reduction in per capita emissions.

The council has put many measures in place to reduce its carbon emissions, including the implementation of the Energy Strategy in 2014. The Council replaced two vehicles with electric vehicles for council business in 2016 and moved to energy efficient street-lighting across the district. The low-carbon Penns Place project demonstrates the Council's leadership at its own HQ building. Initiatives include installing LED lighting fixtures and double glazed windows.

II. Green House Gas Emissions Reporting Period April 2009 to March 2017

Table 1 below shows the East Hampshire District Council's (EHDC) total greenhouse gas emissions between 2009/10 to 2016/17, measured in tonnes of CO₂ equivalent (tCO₂e). Due to limited data between 2009/10 and 2012/13 the baseline has been determined as 2012/13. This gives a clearer understanding of the % change in emissions over the years.

Scope one emissions from gas consumption and owned transport has reduced by 59% between 2012/13 – 2016/17. In 2016 EHDC sold off the petrol fuelled pool car and purchased a Nissan Leaf 100% electric vehicle.

Scope two emissions from street lighting and purchased electricity has reduced significantly from 2009/10 – 2016/17. This dramatic reduction is largely due to the efficiency measures placed on street lighting across the district, which were brought about in 2013/14.

Scope three emissions from outsourced services², transmission & distribution of energy and water supply have reduced slightly since 2009/10, but there has not been a significant change. Water treatment was included in scope three, but due to limited data it has not been included on this report.

¹ <https://www.gov.uk/government/statistics/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-2015>

² Due to difficulties collecting this data, we have used 2013/14 figures between 2012/13 – 2016/17

Table 1: East Hampshire District Council greenhouse gas emissions 2009/10 - 2016/17

		tCO ₂ e									
Scope	Source	2009/10 ³	2010/11 ⁴	2011/12 ⁵	Baseline 2012/13 ⁶	2013/14 ⁷	2014/15 ⁸	2015/16 ⁹	2016/17 ¹⁰	Change since 2012/13	% change since 2012
1	Total scope one	0.000	0.000	51.463	77.893	73.899	69.831	55.889	32.738	-45.155	-58%
2	Total scope two	394.313	376.374	352.149	300.528	249.587	270.716	263.273	230.356	-70.172	-23%
3	Total scope three	24.446	24.213	23.742	809.977	810.086	812.004	810.121	811.125	1.148	0.14%
Total	Total emissions	418.759	400.587	427.354	1,188.398	1,133.572	1,152.552	1,129.283	1,074.219	-114.179	-10%

Table 2 shows the EHDC greenhouse gas emissions between 2009/10 – 2016/17 in more detail.

Table 2: East Hampshire District Council greenhouse gas emissions 2009/10 - 2016/17 in more detail for each scope

		tCO ₂ e									
Scope	Source	2009/10	2010/11	2011/12	Baseline 2012/13	2013/14	2014/15	2015/16	2016/17	Change since 2012/13	% change since 2012
One	Gas consumption			51.463	74.129	70.032	65.935	52.448	31.562	-42.567	-57%
	Owned transport				3.764	3.867	3.897	3.441	1.176 ¹¹	-2.588	-69%
	Total scope one	0.000	0.000	51.463	77.893	73.899	69.831	55.889	32.738	-45.155	-58%
Two	Street lighting	178.759	165.976	162.738	107.740	67.713	73.150	67.018	54.391	-53.349	-30%
	Purchased electricity	215.554	210.398	189.411	192.788	181.874	197.566	196.255	175.965	-16.823	-8%
	Total scope two	394.313	376.374	352.149	300.528	249.587	270.716	263.273	230.356	-70.172	-23%
Three	Outsourced services ¹²				787.490	787.490	787.490	787.490	787.490	0.000	0%

³ Calculated using the 2011 Greenhouse Gas Conversion factors, 2009 electricity conversion factors and 2012 water supply conversion

⁴ Calculated using the 2011 Greenhouse Gas Conversion factors and 2010 electricity conversion factors and 2012 water supply conversion

⁵ Calculated using the 2012 Greenhouse Gas Conversion factors and 2011 electricity conversion factors and 2012 water supply conversion

⁶ Calculated using the 2012 Greenhouse Gas Conversion factors and electricity conversion factors

⁷ Calculated using the 2013 Greenhouse Gas Conversion factors and electricity conversion factors

⁸ Calculated using the 2014 Greenhouse Gas Conversion factors and electricity conversion factors

⁹ Calculated using the 2015 Greenhouse Gas Conversion factors and electricity conversion factors

¹⁰ Calculated using the 2016 Greenhouse Gas Conversion factors and electricity conversion factors

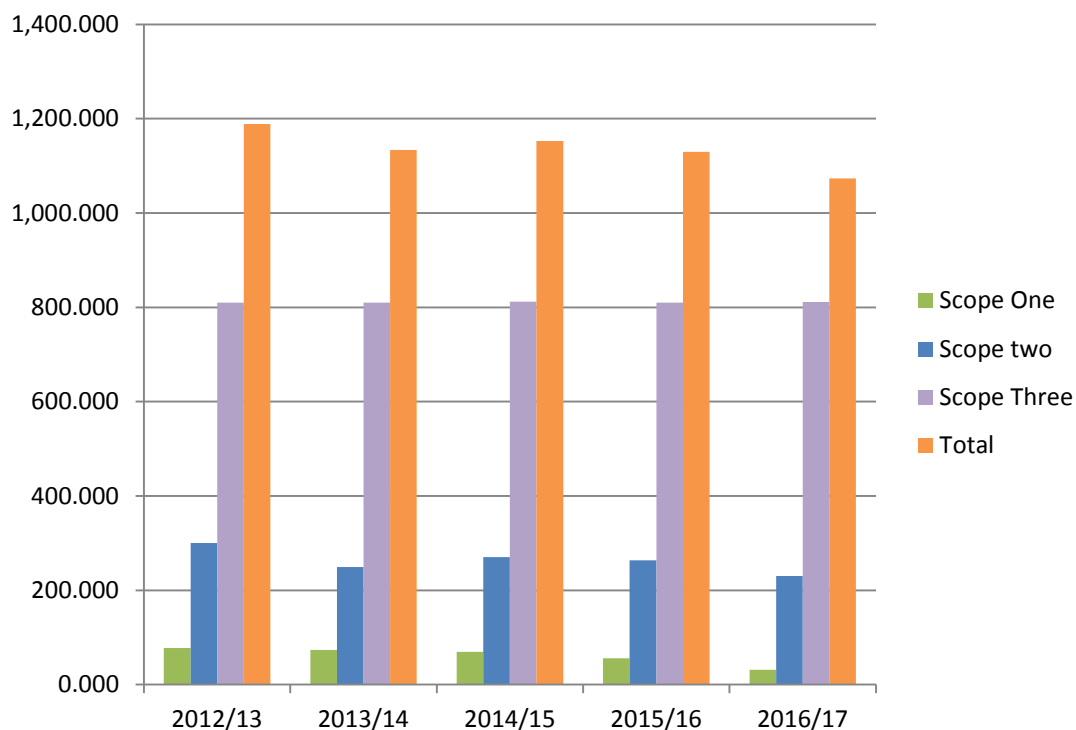
¹¹ Calculated using data from the Electric pool Vehicles (see VI below)

¹² Due to difficulties collecting this data, we have used 2013/14 figures between 2012/13 – 2016/17

Transmission & distribution	17.068	16.942	16.186	15.230	15.551	17.276	16.204	15.916	0.686	5%
Water supply	7.379	7.270	7.556	7.257	7.045	7.238	6.428	7.719	0.462	6%
Total scope three	24.446	24.213	23.742	809.977	810.086	812.004	810.121	811.125	1.148	0.14%
Total emissions	418.759	400.587	427.354	1,188.398	1,133.572	1,152.552	1,129.283	1,073.043	-115.355	-10%

Figure 1 shows the EHDC greenhouse gas emissions between 2009/10 – 2016/17

Figure 1: East Hampshire District Council greenhouse gas emissions 2009/10- 2016/17 (tCO2e)



III. Breakdown of Gasses

Table 3 shows the EHDC breakdown of greenhouse gas emissions by type. Since the baseline in 2012/13, CO₂, CH₄ and N₂O figures have reduced from 77.73, 298.59 and 74.13 tonnes to 31.50, 228.97 and 15.82 tonnes, respectively.

Table 3: East Hampshire District Council greenhouse gas emissions breakdown by type

Breakdown of GHG emissions by gas type (t)															
Scope	2016/17			2015/16			2014/15			2013/14			2012/13 (Baseline)		
	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O
One	31.50	0.04	0.02	55.77	0.08	0.04	69.67	0.11	0.05	73.74	0.11	0.05	77.73	0.11	0.06
Two	228.97	0.22	1.17	261.17	0.20	1.90	268.51	0.18	2.02	247.85	0.16	1.57	298.59	0.18	1.74
Three	15.82	0.01	0.08	44.71	0.04	0.27	56.45	0.05	0.35	129.97	0.12	0.59	74.13	0.06	0.34

IV. Scope breakdown

Table 4 below shows what was included in the calculations for total greenhouse gas emissions and what was omitted.

Scope One	Scope Two	Scope Three	Not Included
Natural gas use in council offices and leisure centres	UK Electricity use in council offices and street lighting,	Contractor electricity, gas, oil and fuel use and mileage ¹³	Business mileage by car ¹⁴
Fuel (petrol) used in council vehicle fleet ¹⁵		Transmission & distribution losses	Council office waste collection, treatment and disposal
		Water supply	Staff commuting ¹⁶
			Water treatment ¹⁷

V. Local Authority BEIS data¹⁸

Table 4 below shows the CO₂ for East Hampshire in Kilo tonnes. From 2005 to 2015 kilo tonnes of CO₂ have reduced significantly in each of the three areas; Industrial & Commercial, Domestic and Transport. Reductions equate to 36%, 28% and 4% respectively, which leads to a total reduction in emissions of 21% (203kt). Per capita emissions have reduced from 8.6 tonnes (t) in 2005 to 6.3t in 2015, a reduction of 26% (2.2t).

¹³ This uses data from 2013/14 for all years as data has not been collated since

¹⁴ This data is too difficult to collect and therefore is not reported

¹⁵ This data was only available until 2015/16 when the petrol pool car was replaced by a 100% electric vehicle

¹⁶ This data is not collected and is subsequently not reported

¹⁷ This data was only collected between 2012/13 and 2015/16 so adds no benefit to the report

¹⁸ <https://www.gov.uk/government/statistics/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-2015>

Table 4: East Hampshire CO₂ emissions (kt)

Local Authority CO ₂ Emissions (kilo tonnes- kt)						
Year	Industry and Commercial Total	Domestic Total	Transport Total	N. LULUCF Net Emissions	Grand Total	Per Capita (t)
2005	262.7	308.8	367.4	10.6	949.5	8.6
2006	260.3	310.9	355.5	9.0	935.8	8.4
2007	256.7	298.9	358.0	7.8	921.4	8.2
2008	244.3	304.6	347.3	6.7	902.9	8.0
2009	239.5	276.1	335.3	7.6	858.5	7.5
2010	263.1	297.9	331.9	6.7	899.6	7.8
2011	235.6	260.2	329.8	5.4	831.0	7.2
2012	226.9	281.2	332.4	4.0	844.4	7.3
2013	205.8	273.7	338.0	4.1	821.7	7.0
2014	184.8	231.6	346.0	2.2	764.5	6.5
2015	167.3	222.7	354.3	2.2	746.5	6.3

VI. Implementation of low carbon initiatives

In 2016 the East Hampshire District Council procured two electric vehicles to replace the pool car and provide a designated courier van for post room use. This fleet not only replaces petrol with electric, making it a more sustainable energy use, but it has reduced the councils' carbon emissions. To provide a comparison, the electricity use by the car in 2016/17 equated to 1.176 tCO₂e, compared with the 3.764,3.867,3.897 and 3.441 tCO₂e in fuel used by the pool car in years 2012/13, 2013/14, 2014/15 and 2015/16 respectively.

2016/17	
Electricity use (kWh)	2854.182
Total (tCO ₂ e)	1.176