

Greenhouse Gas Report 2015/16 – Norfolk County Council

1. Organisational background information

Norfolk is the fifth largest county in England covering 5,371 km². It is a highly rural county very much dependent on the car for transport. It delivers its services from its base at County Hall near Norwich, with additional assets throughout the County.

As part of its remit it is responsible for a range of services that cover the areas of Education – including Schools, Social Care, Cultural Services including Museums and Libraries provision; Highways; Public Health; Education; regulatory functions including Trading Standards and Planning and Flood Management; Fire and Rescue Services and environmental services that includes the disposal of waste.

2. Carbon Reduction Strategy

NCC has an ambitious Carbon Reduction and Energy Management programme which has been expanded from 2014 to 2020 with a target of 50% of its original baseline year (2009-10). Since the start of the original programme, NCC has widened its brief to accommodate obligations around the Carbon Reduction Commitment Energy Efficiency Scheme (CRC) as well as Greenhouse Gas Reporting (GHG). As such it has an established platform going forward to address energy management in all its forms as it seeks to continually improve its energy efficiency, in support of wider savings initiatives across the organisation.

A mature carbon management programme with strong investment in improving the energy efficiency of the corporate assets, is a key component to an efficiency programme.

NCC continues to invest significant resources to improve its building stock. The investment to date should continue to reap benefits in the future as behaviour change activity reinforces the work that has been done to improve the fabric of the buildings infrastructure. Currently, it is in the process of a major refurbishment of the County Hall Headquarters, which has been the opportunity to improve the energy efficiency of this site.

In addition, some activity has been undertaken to install renewable energy on the estate, with over 80 sites benefiting from solar photovoltaic installation and some biomass heating schemes. The Corporate Property Team was established on April 2015 to manage and ensure that surplus properties are disposed of, further reducing any energy and cost liabilities. This team's remit is to drive down Corporate Energy costs as well as develop innovative ways to use the corporate assets.

3. Reporting Period

Reporting periods relate to the financial year from 1st April to 31st March. The baseline year is 2009/2010 (the first year for GHG reporting). Additional

reporting scopes (explained in section 5 below) have been added from the 2014-15 reporting year. Therefore the format of the GHG report is different to NCC's reports in previous years.

4. Operational scopes and data collection

For reasons of continuity, schools, including academies, are still tracked for this report. As part of the work on the Carbon Reduction Commitment, they no longer form part of this work. However, their impact continues to be tracked, and they collectively still form the largest proportion of the building estate.

Scope	Description	Relevance to NCC	Source of data
1	Direct emissions – activities owned or controlled by NCC that release emissions straight to the atmosphere (e.g. combustion in boilers, vehicles)	Gas purchased	Financial and Energy Management Systems
		Oil purchased	Financial and Energy Management Systems
		LPG purchased	Financial and Energy Management Systems
		Biomass purchased	Financial and Energy Management Systems
		Fleet vehicles fuel purchased	Financial Management System
2	Indirect energy - emissions being released into the atmosphere associated with NCC consumption of purchased electricity	Purchased Electricity	Financial and Energy Management Systems
3	Other indirect energy – emissions that are a consequence of NCC actions which occur at a source not owned or controlled by NCC i.e. business travel and other emissions associated with extraction, refining and transportation/distribution of fuels.	Business travel – travel claims	Monthly mileage claims
		Waste disposal – landfill gas emissions	Waste disposal data from closed landfill sites.

Summary data

GHG emissions data for 01/04/15 to 31/03/16 plus base year			
	Global tonnes of CO ₂ e		
	2015/16	2014/15	Base Year 2009/10
Scope 1	26,159	25,326	41,195
Scope 2	38,380	41,735	45,811
Scope 3	34,608	27,758	38,375
Total gross emissions	99,147	94,819	125,381

5. Breakdown of greenhouse gas emissions

The table below shows the greenhouse gas emissions for the last 2 years and the Base Year Data for NCC. Evidently the data collection for 2014/15 and 2015/16 does not directly correspond to the way greenhouse gas emissions were measured in the base year 2009/10 and the subsequent years, so the comparison is included for information purposes only. In addition, over time data gathering has become more refined, hence the inclusion of additional scope 3 emissions for the years 2014/15 and 2015/2016.

However, if you compare like for like emissions going back to the base year, without the additional scope data, there has been an overall reduction of 27% in carbon emissions since the baseline data however there is a 5% increase from the 2014/15 data caused mainly by increased emissions from Landfill Gas (Scope 3) for 2015/16. The Building Estate has a 7% (4770 tCO₂e) reduction overall from the previous year.

GHG emissions data for 01/04/14 to 31/03/16 plus base year			
	Global tonnes of CO ₂ e		
	2015/16	2014/15	Base Year 2009/10
Scope 1			
Gas Oil consumption	4,677	4,930	7,628
Fuel Oil Consumption (kerosene)	1,381	1,390	1,346
Natural Gas	17,078	17,964	27,748
LPG Consumption	997	995	1,068
Biomass	56	47	No published CO ₂ factors
Owned fleet – all fuels (4)	1,971	1,708	3,405
Public Transport (2)	not available	not available	not available
Scope 1 Total	26,159	25,326	41,195
Scope 2			
Purchased Electricity (3)	38,380	41,735	45,811
Scope 2 Total	38,380	41,735	45,811
Scope 3			
Business Travel	2,680	3,009	4,023
Landfill Gas	24,446	17,162	34,352
Owned fleet – all fuels (4)	436	not available	not available
<i>Subtotal indirect energy</i>	<i>27,563</i>	<i>20,171</i>	<i>38,375</i>
Scope 3 - Other Indirect Energy			
Air Travel	21	not available	not available
Train Travel	69	not available	not available

Electricity	3,169	3,649	no published CO2 factors
Gas	2,299	2,411	no published CO2 factors
Gas Oil	940	987	no published CO2 factors
Kerosene	286	288	no published CO2 factors
LPG	125	125	no published CO2 factors
Biomass	136	127	no published CO2 factors
<i>Subtotal – other indirect energy</i>	<i>7,045</i>	<i>7,587</i>	
Scope 3 Total	34,608	27,758	38,375
Grand Total	99,147	94,819	125,381
<i>Grand Total minus additional scope data</i>	<i>92,102</i>	<i>87,232</i>	<i>125,381</i>

Notes :

⁽¹⁾ All conversion factors in the above tables are taken from the Defra GHG CO2 conversion factors for the appropriate year.

⁽²⁾ Scope 1 Public Transport – this is not included as only cost-related data is available for the bulk of public transport used.

⁽³⁾ Electricity - this is the total supply. It includes unmeasured supplies for street lighting (~11,000 tCO2/year)

⁽⁴⁾ Scope 3 Business Travel – due to incomplete data on fuel type used, the average car and average fuel type conversion factor is used.

⁽⁵⁾ Renewable Generated Electricity is excluded (1,011 MWh generated 2015-16).

⁽⁵⁾ All NCC buildings (including schools) are included.