

**Daventry District Council**  
**2017/18 Greenhouse Gas Emissions Report**



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# 1. Introduction

## Aims and Purpose

This report was initially produced to comply with the Government's request that local Councils measure and report greenhouse gas emissions from their own estate and operations. However, the Department for Energy and Climate Change (DECC) was abolished in 2016 and merged into a newly formed Department for Business, Energy and Industrial Strategy (BEIS) and subsequently the requirement to provide a greenhouse gas report was no longer deemed mandatory for local authorities. It has been decided that reporting of emissions will continue for consistency and internal reporting requirements.

This report has been structured in line with Defra's 'Guidance on how to measure and report your greenhouse gas emissions'.

## Organisation Information

Daventry District Council is a small rural council employing approximately 178 FTE staff members. The main offices at Lodge Road are located in Daventry and the Council is responsible for other buildings notably the Leisure Centre, currently outsourced to 'Everyone Active' and The Abbey building consisting of office space which is occupied by a range of organisations largely from the third sector. In June 2011, the waste collection service was outsourced along with grounds maintenance activities, the management of open spaces and Daventry Country Park and was operated by Amey until June 2018. Since then a new joint venture has been in place with environmental services contractor, Norse who have taken over the management of these services.

## Types of Emissions - Scopes

The Government has identified three types of emissions, referred to as Scopes 1, 2 and 3 - these categorise emissions into three different types as follows.

**Scope 1 - Direct emissions.** These emissions relate to activities that are owned or controlled by the Council and involve the release of emissions straight into the atmosphere. Examples include combustion emissions from gas boilers in our buildings and from council owned vehicles.

**Scope 2 - Energy indirect emissions.** These emissions are associated with the consumption of purchased electricity, heat, steam and cooling. These emissions arise as a consequence of the Council's activities but are not owned or controlled by the Council as they are released at power stations where the electricity is generated.

**Scope 3 - Other indirect emissions.** These are emissions that are a consequence of the Council's actions that occur at sources that are not directly owned or controlled. Examples include outsourced activities, business travel by staff using their own vehicles and at work air and rail travel.

## Data to be reported

It is best practice and was previously recommended by the Government that organisations report on Scope 1 and 2 emissions whereas the reporting of Scope 3 emissions is discretionary; this report includes Scope 1, 2 and some Scope 3 emissions. The report for 2017/18 will only be able to compare Scope 1 and 2 emissions due to some of the data for outsourced activities not being received from the contractor Amey for the last year of the contract. This was expected and allows the Council the opportunity to re-baseline the emissions following the first year of the new contract in June 2019 should this be deemed appropriate.

## Reporting Period

The reporting period is for the financial years from 2008/9 through to 2017/18.

# 2. Measuring and Reporting Approach

A number of gases contribute to climate change and six main greenhouse gases (GHGs) are covered in the Kyoto Protocol: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), hydrofluorocarbons (HFCs), nitrous oxide (N<sub>2</sub>O), perfluorocarbons (PFCs) and sulfur hexafluoride (SF<sub>6</sub>)<sup>19</sup>. Different activities emit different gases, for example, burning fossil fuels releases carbon dioxide, methane and nitrous oxide into the atmosphere.

It is standard practice to report GHGs in tonnes of CO<sub>2</sub> equivalents (CO<sub>2</sub>e). In order to achieve this, conversion factors are used that are located on the Defra website along with guidance in the document 'Guidance on how to measure and report your greenhouse gas emissions' – this document is available online at [www.defra.gov.uk/publications/files/pb13309-ghg-guidance-0909011.pdf](http://www.defra.gov.uk/publications/files/pb13309-ghg-guidance-0909011.pdf)

The Council had already calculated the data for its baseline year under the Government's National Indicator reporting requirements 'Emissions from own estate and local authority operations' (NI185) using the Defra spreadsheet tool. Our carbon footprint has been restated for 2008/09 to 2015/16 to account for material changes to the conversion factors provided by Defra and organisation reporting purposes and corrected conversion factors.

Conversion factors help companies convert their activities into equivalent carbon emissions. The conversion factors change annually at the end of May taking into account a number of influences including fuel mix, consumption from UK power generation along with imports and exports in relation to gas and electricity. With regards to petrol, factors such as bioethanol mix is taken into consideration but there are a huge number of other influences.

### **3. Organisational Boundary**

All areas of the Council's operations have been considered.

### **4. Operational Scopes**

The Scope 1 emissions include the gas emissions from the Council's buildings, council owned vehicles and all business lease vehicles such as Environmental Health vans/pool cars. Fugitive emissions relating to air conditioning and refrigeration units have been excluded.

The Scope 2 emissions include the electricity consumption from the Council's buildings.

The Scope 3 emissions include the gas and electricity consumption from outsourced activities, the business mileage from private and leaseholder vehicle use, in addition to air, rail and bus travel. Buildings that are managed by outsourced contracts are also included where the contractor is responsible for bill payments. Emissions from commuter travel have been excluded. Data on refuse and recycling trucks, road sweepers, grounds maintenance mowers and vans managed by Enterprise Managed Services have been excluded from this year's report as the data has not been received for 2017/18.

### **5. Base Year**

The carbon footprint baseline year is 2008/09, and this enables the Council to check the impact of the efficiency measures that are being implemented in order to reduce emissions. As eluded to in section 1, there is an opportunity to re-baseline Scope 3 emissions in 2019 after the first year of the environmental services contract.

### **6. Carbon Management Progress**

The Council is committed to reducing its carbon emissions and recognises that this not only minimises the impact on climate change but also reduces the operating costs of the Council. Given that the price of electricity, gas and vehicle fuel continues to rise, efficiencies are needed to prevent existing costs rising.

The Carbon Management Plan adopted by Daventry District Council in 2010 identified a number of actions to reduce energy use and carbon emissions in relation to its operations and most of these have successfully been pursued to conclusion. A 31% reduction in carbon emissions was achieved by the end of the 2016/17 year which meets the overall aim of the Carbon Management Plan. This report will continue to be produced annually to report on ongoing emissions levels.

Key areas of progress in carbon reduction are listed below.

- Construction of new low carbon business unit development in Prospect Way, Daventry.
- Construction of “green” community buildings, including the 2<sup>nd</sup> Daventry Scout Hall, Daventry and the Brass Band Hall, Daventry.
- Project partner in construction of new low carbon innovation centre for Sustainable Construction (iCon).
- Part implementation of thin client technology replacement.
- Centralised copier and printers also set to duplex and black and white printing by default.
- Setting carbon emission limits on vehicle choice as part of the staff lease car scheme.
- Implementation of outdoor covered bicycle storage and purchase of a satellite navigation system.
- Taking part in the voluntary Local Government Information Unit’s ‘Carbon Trading Councils: In Practice’ scheme to raise awareness of internal energy efficiency opportunities.
- Installation of a new energy efficient gas boiler at the main offices.
- Internal recycling, composting and waste reduction improvements.
- Use of low wattage bulbs in the council chamber.
- LED lighting at the outside of the main Council offices.
- Employee engagement on ‘greener workforce’ activities including incentivising switch off activities, green travel to work and recycling activities.
- Server virtualisation project has been implemented to remove three physical servers.
- Replacement of 136 lights with new LED lighting at The Abbey.
- Calorex heat pump ventilation unit refurbished at the Leisure Centre.
- Liquid pool cover trialled at the Leisure Centre to reduce evaporation.
- Installation of Solar PV Arrays (total 96kWp) on the Council’s three main buildings; Lodge Road, The Abbey and the Leisure Centre.
- Installation of two electric vehicle charge-points at the Lodge Road car park for public use and a further chargepoint for council vehicles.
- Double-glazing fitted to the committee meeting rooms and office on the ground floor.
- Variable speed drive and energy efficient lighting improvements at the Leisure Centre.
- Thermostatic radiator valves replaced at Lodge Road.
- Use of an electric van for the Environmental Health department.
- LED lighting installed in the Council Chamber and Committee Rooms.
- Nissan LEAF electric vehicle in place for casual employee mileage at work.

## 7. Greenhouse Gas Emissions

The table below summarises the Greenhouse Gas Emissions the Council has been responsible for, split into scopes 1, 2 and 3 for the years 2008/9 (base-year) to 2017/18.

Scope / Activity	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
	(base year)									
	Kg CO2e	Kg CO2e	Kg CO2e	Kg CO2e	Kg CO2e	Kg CO2e	Kg CO2e	Kg CO2e	Kg CO2e	Kg CO2e
<b>Scope 1</b>										
Gas consumption	124,980	126,053	100,434	66,727	122,769	98,387	92,073	82,530	75,329	84,572
Lease Vehicles	10,086	9,099	8,753	9,309	20,879	20,033	18,472	15,788	18,104	16,200
Electric Vehicles (pool car)										1,976
Refuse and Recycling Trucks including Road Sweepers	890,273	766,295	991,502	785,552	Scope 3	Scope 3	Scope 3	Scope 3	Scope 3	Scope 3
Vans relating to waste, cleansing	40,703	98,650	54,482	2,429	Scope 3	Scope 3	Scope 3	Scope 3	Scope 3	Scope 3
Other Vans	36,046	48,673	13,279	6,791	9,527	9,374	9,596	4,209	4,492	2,831
Grounds maintenance mowers	57,492	35,346	35,346	48,050	Scope 3	Scope 3	Scope 3	Scope 3	Scope 3	Scope 3
<b>Total (Scope 1)</b>	<b>1,159,580</b>	<b>1,084,115</b>	<b>1,203,797</b>	<b>918,858</b>	<b>153,175</b>	<b>127,793</b>	<b>120,142</b>	<b>102,526</b>	<b>97,925</b>	<b>105,579</b>
<b>Scope 2</b>										
Purchased electricity	461,609	404,554	372,403	355,311	299,644	268,933	293,680	252,340	229,426	176,289
<b>Total (Scope 2)</b>	<b>461,609</b>	<b>404,554</b>	<b>372,403</b>	<b>355,311</b>	<b>299,644</b>	<b>268,933</b>	<b>293,680</b>	<b>252,340</b>	<b>229,426</b>	<b>176,289</b>
<b>Total Scope 1 and Scope 2 excluding outsourced</b>	<b>596,674</b>	<b>539,706</b>	<b>481,590</b>	<b>431,347</b>	<b>443,293</b>	<b>387,353</b>	<b>404,226</b>	<b>350,658</b>	<b>322,858</b>	<b>279,037</b>
<b>Scope 3</b>										
Refuse and Recycling Trucks including Road Sweepers	Previously reported under Scope 1				734,897	544,066	513,537	640,541	425,053	Not available
Vans - refuse and recycling	Previously reported under Scope 1				0	0	0	0	0	Not available
Grounds maintenance mowers	Previously reported under Scope 1				49,590	65,375	34,629	56,802	24,236	Not available
Gas and electricity from outsourced buildings	810,438	795,457	766,315	1,044,938	1,054,088	1,010,572	1,055,369	822,137	926,241	811,268
Business travel from greyfleet (staff own vehicles)	78,359	97,037	113,685	34,076	21,626	24,228	18,763	19,603	17,847	20,478
Rail travel	258	257	173	61	155	54	49	544	562	551
Air travel	555	0	252	0	72	0	0	0	0	0
Bus travel	0	0	169	0	0	0	0	0	0	0
<b>Total (Scope 3)</b>	<b>889,610</b>	<b>892,751</b>	<b>880,594</b>	<b>1,079,075</b>	<b>1,860,427</b>	<b>1,644,295</b>	<b>1,622,348</b>	<b>1,539,627</b>	<b>1,393,939</b>	<b>832,297</b>
<b>Total Gross Emissions (kg)</b>	<b>2,510,798</b>	<b>2,381,420</b>	<b>2,456,794</b>	<b>2,353,245</b>	<b>2,313,247</b>	<b>2,041,022</b>	<b>2,036,170</b>	<b>1,894,494</b>	<b>1,721,290</b>	<b>1,114,165</b>
<b>Total Gross Emissions (t)</b>	<b>2,511</b>	<b>2,381</b>	<b>2,457</b>	<b>2,353</b>	<b>2,313</b>	<b>2,041</b>	<b>2,036</b>	<b>1,894</b>	<b>1,721</b>	<b>1,114</b>

## **GHG Emissions Summary and Explanation of changes against Baseline**

**Scope 1 emissions** - The gas consumption data relates to Lodge Road and The Abbey. Gas emissions from Lodge Road and The Abbey increased in 2017/18 which can be attributed to the extremely cold winter and increased heating need. However, this is still a significant decrease in gas consumption since the baseline year due to a number of efficiency measures listed above. Emissions from business lease vehicles have decreased from the previous year and a conversion factor for use of electric vehicles has been introduced by BEIS. Vans used internally by DDC have been differentiated as 'other vans' in scope 1 emissions, these have seen a decrease in emissions compared to the previous year and significantly lower than the baseline year since the outsourcing of most environmental services. Although there has been a minor increase in emissions since the previous year, total percentage change for scope 1 emissions against baseline is a decrease of 91%, due to the refuse and recycling trucks now being reported in Scope 3.

**Scope 2 emissions** - The purchased electricity has continued to decrease since the baseline year, with savings made through the installation of large solar PV systems to the Lodge Road and Abbey buildings. Both buildings have also benefitted from lighting upgrades which would have impacted the amount of electricity used. The Leisure Centre and Sports Park buildings are the responsibility of Everyone Active and are reported under the Scope 3 emissions. The St. John's toilets and pavilions have been closed as part of a cost saving exercise. Total percentage change for scope 2 emissions against baseline is a decrease of 62%.

There has been a large decrease in total emissions from Scope 1 and Scope 2, excluding outsourced activities, since the baseline year. Due to the incomplete data for Scope 3 emissions for 2017/18, the most comparable data is the combined total emissions for Scope 1 and Scope 2. Over the past year there has been a significant reduction in the amount of electricity used which is the main reason there is a large decrease in total Scope 1 and 2 emissions compared to the previous year, which can be seen in the table above.

**Scope 3 emissions** – Since the outsourcing of some activities in 2011, overall emissions from Scope 3 have increased due to the inclusion of some activities previously reported under Scope 1. This resulted in Scope 3 emissions contributing the largest amount of emissions from all council activities. Refuse, recycling trucks and road sweeper emissions decreased in 2016/17 due to a significant reduction in fuel usage, although the accuracy of the external data cannot be verified. This data has not been received for the final year of the Amey contract so it is not possible to compare Scope 3 emissions accurately for this activity. Overall electricity and gas use from the Sports Park has continued to decrease although there was an increase in gas use over the last year which is attributed to the cold winter as with many other buildings. Gas usage at the Leisure Centre has returned to normal levels after a spike in usage last year. There has been an increase in grey fleet mileage during 2017/18 which has resulted in increased emissions and coincided with a reduction in usage of the electric pool cars. The use of the pool cars is being monitored and it is hoped a replacement electric vehicle will be leased in 2019 when the Nissan Leaf lease expires which will enable us to continue reducing emissions associated with business mileage.

It should be noted that when excluding outsourced activities that have now moved to Scope 3 and comparing emissions from 2017/18 against 2008/9 baseline, Scope 1 and 2 emissions have decreased by 54% demonstrating a good progress in emissions reduction as a result of cost and carbon saving initiatives.

## **8. Reduction Targets**

The Council is guided by the following targets/commitments.

- National Target - Reduce greenhouse gas emissions by 34% by 2020 (based on 1990 levels).
- Achieve an annual cumulative reduction in CO<sub>2</sub> emissions

It is important to the Council to set local targets and improve cost efficiency, demonstrate leadership in the area of greenhouse gas emission reduction and encourage local communities and businesses to do the same.

## **9. Summary**

The council has made significant progress in reducing carbon emissions since the baseline year of 2008/09 due to a number of initiatives outlined in this report. The monitoring of emissions from the council's activities will continue to be a priority as progress is monitored through the annual environmental goals with a commitment to reduce emissions annually.

The Council has now entered into the new environmental services contract with Norse since June 2018 and as anticipated, this provides an opportunity to review performance after the first year of the contract (June 2019) and re-baseline where possible. This will allow further targets to be set based on the performance of the first year of this ten year contract. The Council can then focus resources on reducing emissions from the largest polluting activities and work with the external contractor to do so.