

**Northamptonshire  
Climate Change Strategy  
2014 – 2017**

**Final**

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## Executive Summary

A Northamptonshire Climate Change Strategy for 2010-2014 was adopted in April 2010. This document provides a review of what has been achieved over the last four years and refreshes the strategy for another three years. This report aims to be a working document that can stand-alone but references the original 2010-2014 strategy document as necessary rather than replicating or replacing it.

The implementation of the strategy is overseen by the Northamptonshire Climate Change Officers Group (NCCOG) and this final draft has been prepared following discussion of a first draft at the NCCOG meeting in February 2014 and the incorporation of feedback from this meeting and further feedback from members of the group.

This strategy has been formally endorsed by the Northamptonshire Local Nature Partnership and is due to be endorsed by the Northamptonshire Leadership Group in 2015, due to the reduction in the number of times they now meet annually. An action plan for the next year (2014-2015) will also be developed.

The intention is to continue the strategy for a further three years in much the same way as before since the 2010-2014 strategy has provided an effective framework for the co-ordination of activities in the county. In particular, the Climate Change Strategy Action Plans have been successfully delivered each year over the past four years, with over 95% of actions within each year's Action Plans implemented as intended.

There has also been clear progress in the reduction of carbon dioxide emissions in the county, with an almost 14% reduction in total emissions between 2005 and 2013 or a 20% reduction in per capita emissions. This exceeds the target set of an 8.9% in per capita emissions that was set in the 2010-2014 strategy. This update for 2014-2017 proposes a target of a further reduction in emissions of 1.5% per year (or 4.5% over the three years of the strategy) to match and support the national targets for reducing emissions.

Progress on adaptation to climate change is less clear but there is no doubt that there is now much more awareness of the need for adaptation. Some minor changes to the structure of the strategy have been made to match more closely the headings used in the National Adaptation Programme.

## **1. Introduction**

### **1.1. The 2010-2014 strategy**

The Northamptonshire Climate Change Strategy for 2010-2014 set the framework for action by members of the Northamptonshire Partnership to:

- Raise awareness of the issues of climate change and its impact on Northamptonshire;
- Reduce greenhouse gas emissions across the county; and
- Plan for and adapt to the predicted impacts of climate change.

The strategy was prepared through the auspices of the Northamptonshire Climate Change Officers Group (NCCOG), which reported via the EnvironMEANT Group to the former Regeneration and Growth Board (see Appendix One for NCCOG membership). It was endorsed in May 2010 by the Public Service Board, together with the first year Action Plan for 2010-11.

In order to implement the Strategy, annual Action Plans detailing the various activities to be undertaken by partners over each forthcoming year were developed. The actions, which follow the headings used in the Strategy, are all funded/resourced and highlight the 'lead organisation' for each activity. These annual Action Plans provide the framework for monitoring and capturing the various activities being undertaken to tackle the causes and effects of climate change. They are actively monitored on a quarterly basis via NCCOG with progress on actions assessed using a RAG rating.

The Northamptonshire Climate Change Strategy for 2010-2014 was adopted in April 2010 and it has been successful in supporting the implementation of a range of actions in the county over the past four years. Therefore it is intended that the Strategy should be updated and refreshed so that it can continue for a further three years from 2014 – 2017.

This document provides a review of what has been achieved over the past four years and updates the Strategy to reflect the changes in the national and local context and the developments in the understanding of the impacts of climate change that have occurred since 2010.

### **1.2. Changes in the local and national context since 2010**

Reporting on the Climate Change Strategy is now through the Northamptonshire Local Nature Partnership (LNP) to the Northamptonshire Leadership Group (who will need to endorse this strategy update). The LNP has replaced the former EnvironMEANT Group which was formed as part of the countywide response to delivering the Northamptonshire Sustainable Community Strategy and the associated Local Area Agreement (LAA) environment targets. The LNP brings together the work of NCCOG with elements of the Local Flood Risk Operational Group, the Biodiversity Partnership and Local Wildlife Sites group.

There have also been changes to the way that local authorities are required to report on data to central government. The LAAs and National Indicators around which the targets for the 2010-2014

Climate Change Strategy were set have been replaced by a 'Single Data Set'<sup>1</sup>. Although the reporting requirements have been reduced, the Single Data Set still includes:

- The need for local authorities to report on reducing greenhouse gas emissions from their own buildings and operations (former NI 185),
- Local nature conservation/biodiversity management (former NI 197),
- The government is also still issuing per capita CO<sub>2</sub> emission data (former NI 186) so this can still be used for monitoring progress of the strategy, and
- Government has retained the power to instruct local authorities to report on adaptation under the Climate Change Act 2008 (former NI 188).

Thus, although there are no longer any LAA targets to refer to, it is still intended to use national targets as the basis of the Climate Change Strategy, with consideration given to the implications if the national targets are adopted locally rather than setting any specific local targets.

### **1.3. Developments in the understanding of the impacts of climate change since 2010**

A series of exceptional weather patterns in the UK over the last four years, including periods of unusually cold, dry and wet weather, have led to an increased perception that we are already experiencing aspects of climate change in this country. This in turn has led to more of a focus on the need to adapt to climate change as well to mitigate the impacts through the reduction of greenhouse gas emissions.

A hundred potential impacts of climate change in the UK were identified in a climate change risk assessment carried out in 2012, following which the government has adopted a National Adaptation Programme (NAP).

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<sup>1</sup> The Single Data List is a list of all the data that local authorities are required to submit to central government departments in a given year - <https://www.gov.uk/government/publications/single-data-list>

## 2. The national context

### 2.1. Central government policy

Despite some controversy regarding conflicting short term priorities (e.g. the affordability of domestic fuel bills), central government policy on climate change remains clear, with respect to both the need to significantly reduce carbon dioxide emissions and the need to adapt to the consequences of climate change.

### 2.2. Greenhouse gas emission targets

The overall national target for the UK's greenhouse gas emissions is an 80% reduction compared to the 1990 baseline to be achieved by 2050. This is a legally binding target established by the 2008 Climate Change Act. Intermediate targets towards this have been set for a 34% reduction to be achieved by 2020 and a 50% reduction by 2027.

Actions to achieve this target through the development of a 'low carbon economy' and a series of 5-year carbon budgets are set out in the Carbon Plan<sup>2</sup>.

Current initiatives to support progress towards these targets include:

- Participation in the EU Emissions Trading Scheme, which covers energy-intensive industrial installations and the aviation industry.
- Supporting the increasing use of renewable energy generation at large and small scale, including through Feed in Tariffs and the Renewable Heat Incentive.
- The introduction of the Green Deal to provide loans for energy efficiency improvements to domestic and non-domestic buildings, as well as the Energy Company Obligation to fund domestic energy efficiency improvement measures.
- Further reductions to the maximum emissions from new buildings through changes to Part L of the Building Regulations implemented in April 2014.
- The installation of 'smart meters' to facilitate the monitoring of energy consumption.
- The CRC Energy Efficiency Scheme and Climate Change Agreements.
- Salix finance for energy efficiency improvements by public sector organisations.
- Supporting the increasing use of biofuels for transport and electric vehicles.
- Action to reduce greenhouse gas emissions from agriculture, which are primarily nitrous oxide (from fertiliser use) and methane.

The Committee on Climate Change provides independent advice to government on the implementation of the Climate Change Act 2008 and their website is a useful source of accessible data on UK emissions broken down by sector<sup>3</sup>.

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<sup>2</sup> <https://www.gov.uk/government/publications/the-carbon-plan-reducing-greenhouse-gas-emissions--2>

<sup>3</sup> [www.theccc.org.uk](http://www.theccc.org.uk)

### 2.3. The National Adaptation Programme

Following the completion of a climate change risk assessment in 2012, which identified 100 potential impacts of climate change in the UK, the government has adopted a National Adaptation Programme (NAP). This sets out what government and others are doing to become more 'climate ready' and identifies potential benefits of climate change as well as costs and other adverse implications.

The National Adaptation Programme<sup>4</sup> has 7 key headings:

- Built Environment
- Infrastructure
- Healthy and Resilient Communities
- Agriculture and Forestry
- Natural Environment
- Business
- Local Government

The Northamptonshire Climate Change Strategy 2010-2014 used five headings in the adaptation section:

- There were no specific sections on Infrastructure or Healthy and Resilient Communities.
- There was one section on Biodiversity, Agriculture and the Natural Environment (which has been split into two in the NAP).
- There was a specific section on Flood Risk Management (whereas in the NAP, flood risk is considered as a key 'focus area' in most of the sections).

In order to be consistent, it is proposed that the updated Northamptonshire Climate Change Strategy should adopt revised headings for the adaptation section and action plan that more closely match those in the NAP. This is discussed further in section 6 of this report.

### 2.4. National initiatives

There are two national initiatives that partners in the county are participating in – Climate UK and Climate Local.

Climate UK<sup>5</sup> co-ordinates and promotes local climate action across the UK, offering support to local authorities, businesses and communities to respond effectively to the challenges posed by climate change. It is a network constituting all of the climate change partnerships across the UK, including Climate East Midlands, through which Northamptonshire County Council (NCC) and other partners in the county contribute.

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<sup>4</sup> Full details of the NAP can be found at <https://www.gov.uk/government/publications/adapting-to-climate-change-national-adaptation-programme>

<sup>5</sup> [www.climateuk.net](http://www.climateuk.net)



Climate Local<sup>6</sup> is a new initiative promoted by the Local Government Association to support local authorities' efforts to reduce greenhouse gas emissions and to adapt to climate change. It has superseded the Nottingham Declaration on Climate Change that many local authorities were signed up to. Daventry District Council has been a signatory to Climate Local since December 2012 with Corby Borough Council becoming a signatory in June 2014. Other district/borough Councils in the county are considering going through this process as well.

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<sup>6</sup> [http://www.local.gov.uk/the-lga-and-climate-change/-/journal\\_content/56/10180/3574359/ARTICLE](http://www.local.gov.uk/the-lga-and-climate-change/-/journal_content/56/10180/3574359/ARTICLE)

### 3. The local context

#### 3.1. Changes to local strategies and commitments

The Northamptonshire Local Nature Partnership has been established to rationalise the number of existing 'environment' based groupings operating in the county and provide a coherent framework to ensure the remaining groups can work effectively together. This has brought together the work of NCCOG, elements of the Local Flood Risk Operational Group, the Biodiversity Partnership and Local Wildlife Sites group.

The LNP aims to help the local area to manage the natural environment as a system and to embed its value in local decisions for the benefit of nature, people and the economy. It is a strategic partnership of a broad range of local organisations, businesses and people with the credibility to work with and influence other local strategic decision makers.

The Climate Change Strategy has also led to an increasing focus on planning for adaptation in the county. A series of training events for planners have been held to ensure that planning officials in Northamptonshire (NCC, districts and boroughs and the Joint Planning Units (JPUs)) are aware of and planning for the threats posed by climate change.

The Northamptonshire Home Energy Efficiency Partnership is now known as Northamptonshire Warm Homes, with its main focus being to reduce fuel poverty and improve home energy efficiency.

Following the implementation of the Flood and Water Management Act 2010, the County Council has also now become the Lead Local Flood Authority<sup>7</sup>. This means that NCC is responsible for developing, maintaining and applying a strategy for local flood risk management in the county and for maintaining a register of flood risk assets. They also have lead responsibility for managing the risk of flooding from surface water, groundwater and ordinary watercourses.

#### 3.2. Report on what has been achieved since 2010

The following is a summary of the high level achievements:

- **The Climate Change Strategy Action Plan has been successfully delivered** each year over the past four years, with over 95% of actions within each year's Action Plans implemented as intended.
- Work on Environment has been **acknowledged by Northamptonshire Leadership Group**.
- **LAA targets for reduction in CO<sub>2</sub> emissions for the county have been exceeded**. The per capita emissions in Northamptonshire (former NI186) have decreased by 21.1% over the six year period from 2005 to 2011. (Analysis of the latest available emissions data is included in section 5 below).

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<sup>7</sup> For further information on this, see: <https://www.gov.uk/flood-risk-management-information-for-flood-risk-management-authorities-asset-owners-and-local-authorities>

- **Level FOUR of the former indicator NI 188** has been achieved. Northants Authorities were **first in the UK** to submit their self-assessment adaptation matrix to central government.
- Further improvements in the Biodiversity indicator have been achieved working in partnership with the Wildlife Trust, with **37% of local wildlife sites in active management** in 2013 (from a baseline of 22% in 2008-9).
- Funding has been secured through partnership bids to establish the **River Nene Nature Improvement Area** and the **Local Nature Partnership for Northamptonshire**.
- Various local and regional events have been delivered, including a successful **‘Peer Learning’ regional event** to share our approach to climate change and carbon and energy matters; and an **East Midlands Conference on ‘Allowable Solutions’**.
- The **Local Flood Risk Management Strategy** has been finalised and endorsed and approved by EDT Scrutiny Committee on the 11<sup>th</sup> September 2013 and by Cabinet on the 8th October 2013.
- The **DEFRA Community Resilience Pathfinder Scheme**<sup>8</sup> is under way with the implementation stage starting in January 2014. This scheme provides funding for innovative community responses to increase flood resilience.
- NCC re-certified with the **Carbon Trust Standard**, valid from 01/04/2013 to 31/03/2015, following the achievement of an absolute carbon footprint reduction of 18% from 01/04/2011 to 31/03/2013<sup>9</sup>.
- NCC’s Energy and Carbon Management Team has gained **ISO50001 Energy Management Certification** from 10/10/2014 to 09/10/2017.

### 3.3. East Midlands Regional Climate Change Partnership

Northamptonshire County Council and other partners from the county are actively participating in Climate East Midlands, the publically funded regional climate change partnership that is implementing a Regional Programme of Action: ‘Tackling Climate Change in the East Midlands’.

### 3.4. Local climate change impact

The UK Climate Impact Programme, UKCIP, continues to disseminate information on the impacts of climate change based on the predicted changes in the climatic system in UKCP 09, which is still the latest available source of climate predictions.

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<sup>8</sup> <https://www.gov.uk/government/publications/flood-resilience-community-pathfinder-scheme-prospectus>

<sup>9</sup> <http://www.northamptonshire.gov.uk/en/councilservices/environ/carbon/pages/default.aspx>

The Local Climate Impacts Profile (LCLIP) for Northamptonshire that is referred to in the 2010-2014 Climate Change Strategy is also still applicable and has not been updated.

## 4. Awareness of the issue of climate change

The need to raise awareness about climate change cuts across every area of the Strategy and for this reason it was highlighted within a specific section in the 2010-2014 strategy document.

A 'Greener Northants' website<sup>10</sup> has been set up by the LNP to promote green behaviours and issues to everyone in the county and the projects being run by the partners. It was officially launched at the Northamptonshire Local Nature Partnership's Inaugural Annual Conference on 9th October 2013 at the University of Northampton. The website provides information on local projects, news and events and policies, guidance and strategies. There is also a dedicated Twitter feed @greennorthants.

A number of events and workshops have been held in the county with the aim of raising awareness of the issues of climate change and sustainability. Examples of these have included:

A Local Nature Partnership conference designed to outline the key themes and priorities of the LNP was held on 09/10/13. This was attended by over 250 delegates and speakers included the Director of Public Health and the Bishop of Peterborough.

An Allowable Solutions 'Nearer to Zero' event was held in July 2013 and September 2014 to support the development of a county-wide policy to support the utilisation of funding that may become available from this source.

A number of workshops on energy efficiency and climate change were delivered to farmers and landowners in 2012-13 by Groundwork, EA and NFU.

With regard to raising awareness through education settings, the Northamptonshire County Council Waste & Energy Education Team (NWEET)<sup>11</sup> has been working with approximately 24 schools across the county to increase recycling and improve energy efficiency through the EU funded ZECOS Project. This has led to the installation of biomass boilers in 3 schools, exemplar sustainability case studies and the appointment of a Schools Resource Efficiency Officer.

Activities to raise awareness need to be continued over the next three years and a range of factsheets are being planned to target different audiences with information about climate change and what they can do.

Over the next three years, there is also the opportunity to raise the awareness of landlords of properties (in the domestic and non-domestic sectors) that are not energy efficient that forthcoming legislation is likely to require them to carry out improvements. From April 2016, landlords should not be able to unreasonably refuse requests from their tenants for consent to energy efficiency

<sup>10</sup> <http://www.greenernorthants.org>

<sup>11</sup> <http://www.wasteandenergyeducation.co.uk/>

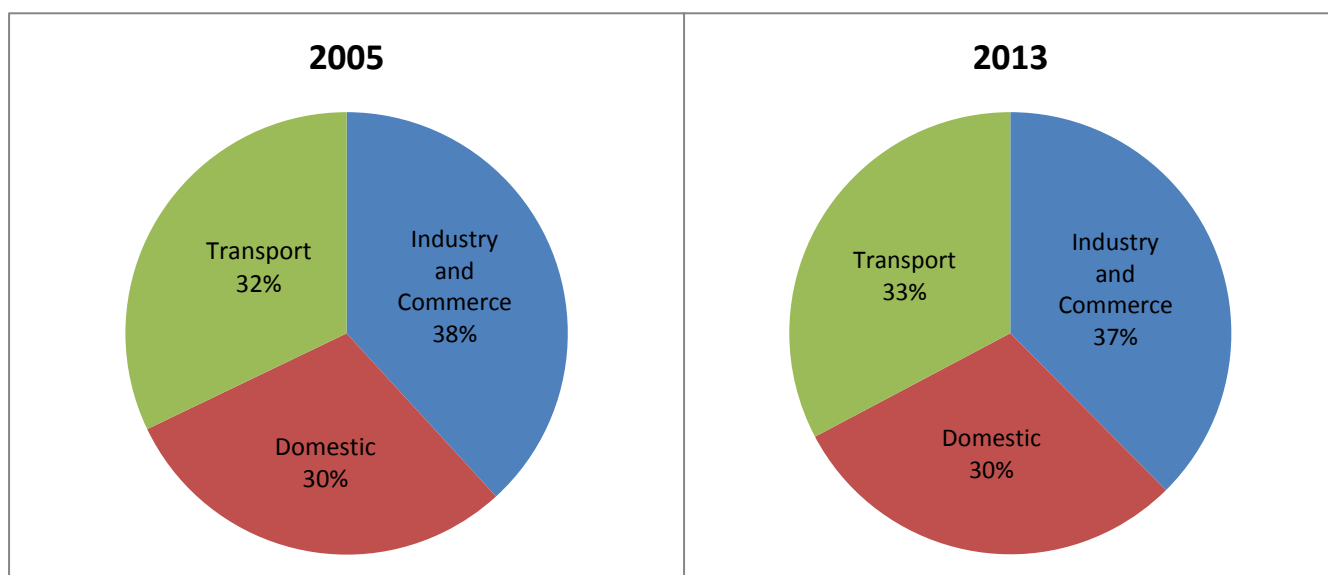
improvements, where financial support is available, such as the Green Deal and/or the Energy Company Obligation (ECO). From April 2018, all private rented properties should be brought up to a minimum energy efficiency standard rating, likely to be set at EPC rating “E”. This legislation will support the achievement of carbon reduction targets as well as reducing energy costs for tenants.

## 5. Reducing greenhouse gas emissions

### 5.1. Trends in emissions data

Local authority carbon dioxide emissions are now published annually by DECC<sup>12</sup>, with the latest available data relating to 2013 together with revised figures for each year since 2005. Note that two sets of these figures are published – a full data set and a reduced set showing just emissions within the scope of influence of local authorities. It is data from the latter that is quoted below since these correspond to the former NI186 data that was used for the original strategy. The main difference between these is that transport emissions are much lower in the latter set.

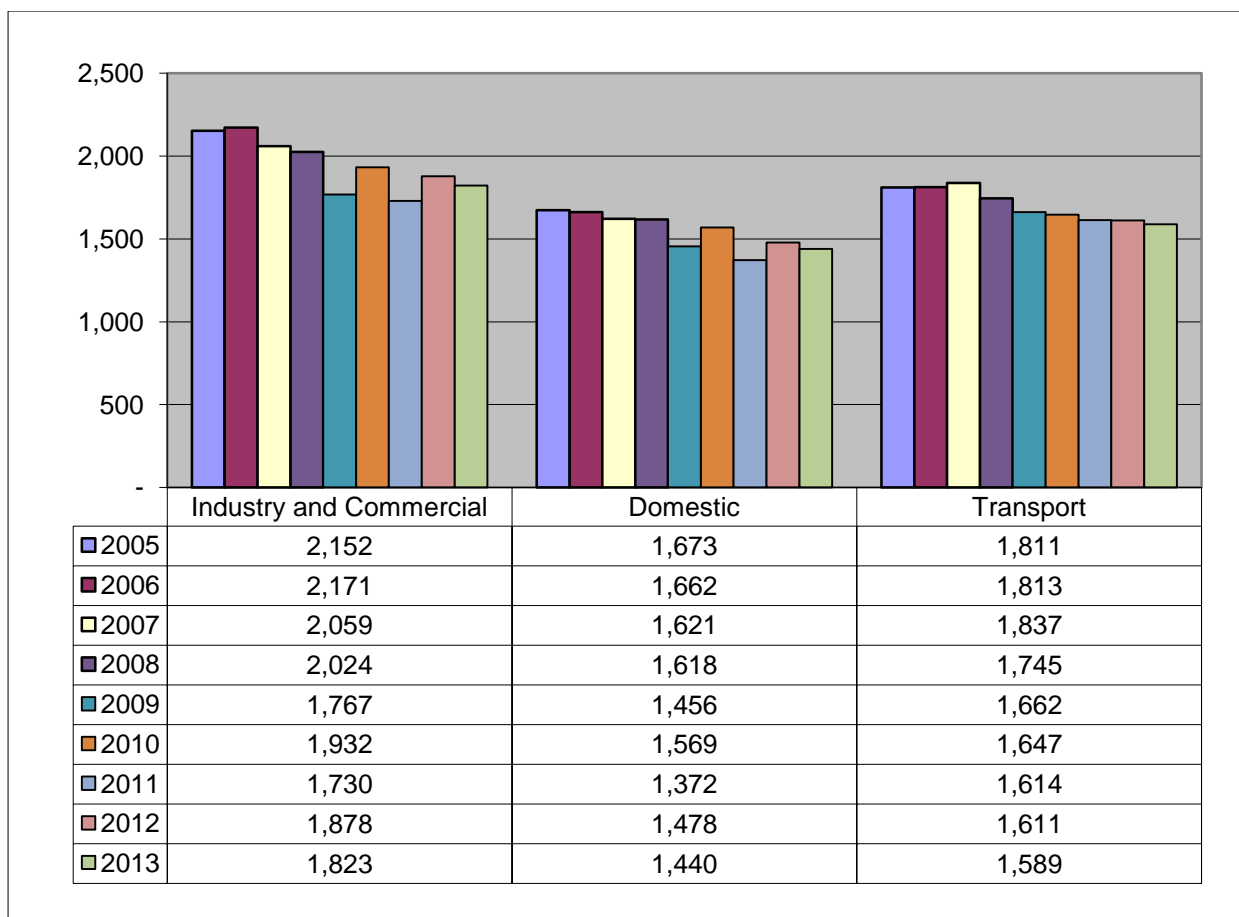
Figure 1 below shows the percentage breakdown of the CO<sub>2</sub> emissions by sector in Northamptonshire in 2005 and 2013. This shows that Northamptonshire's industry and commerce sector produces the greatest proportion of the county's CO<sub>2</sub> emissions (37% in 2013). There has also been an increase in the proportion due to transport of 1% over the eight year period while the proportion due to the industry and commercial sector has fallen by 1%.



**Figure 1: CO<sub>2</sub> emissions by sector in Northamptonshire**

However, looking at the actual consumption figures between 2005 and 2013 in Figure 2, the overall trend is a gradual reduction in all sectors with the exception of 2010 and 2012, where the higher emissions are likely to be due to the exceptionally cold months at the beginning and end of that year.

<sup>12</sup> <https://www.gov.uk/government/statistics/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-2013>



**Figure 2: CO<sub>2</sub> emission trend per sector in Northamptonshire (units: kilotonnes of CO<sub>2</sub> p.a.)**

Therefore emissions are falling in all sectors but more slowly in the transport sector (a reduction of just over 12% compared to 14% in the domestic sector and 15% in industry and commercial). Overall the reduction in total emissions is just under 14%.

	Northamptonshire			England
	Total emissions (kT p.a.)	Population (thousands)	Per capita emissions	Per capita emissions
2005	5,636	654.4	8.6	7.2
2006	5,646	663.6	8.5	7.1
2007	5,517	672.1	8.2	6.9
2008	5,387	678.3	7.9	6.7
2009	4,885	683.4	7.1	6.0
2010	5,148	687.9	7.5	6.3
2011	4,717	693.9	6.8	5.7
2012	4,967	700.6	7.1	5.9
2013	4,851	706.6	6.9	5.7

**Table 1: Total CO<sub>2</sub> emissions and per capita Northamptonshire vs. England**

The figures in Table 1 show that the per capita emissions in Northamptonshire have decreased by 20.3% over this eight year period – this is higher than the decrease in total emissions due to an 8% increase in the population.



For England as a whole, there has been a similar decrease in the per capita emissions from 7.2 to 5.7 tonnes per year (a decrease of 20.8%). Northamptonshire is thus slightly above the national average in terms of per capita emissions.

The 2010-2014 Climate Change Strategy included a target, initially set through the Local Area Agreement, of an 8.9% reduction in CO<sub>2</sub> emissions per capita for this period. The above data suggests that this target has been substantially exceeded.

While the percentage decreases in the emissions for the county have been similar to those for England as whole, there have been significant differences between the decreases in the local authority areas within the county. The following table summarises the reductions in each district/borough:

	2005 emissions (kT)	2013 emissions (kT)	Percentage reduction
Corby	695.1	593.8	14.6%
Daventry	810.8	706.1	12.9%
East Northants	658.9	563.1	14.5%
Kettering	752.4	709.4	5.7%
Northampton	1,391.2	1,133.1	18.5%
South Northants	738.0	648.9	12.1%
Wellingborough	589.5	497.0	15.7%
Northamptonshire	5,635.8	4,851.4	13.9%

**Table 2: Total emissions by local authority area**

These figures indicate that there have been greater percentage reductions in Northampton and Wellingborough in particular and lower reductions in Kettering. However, these differences appear to be primarily due to the respective changes in the Industry and Commercial sector in these areas, which probably reflect changes in economic activity levels rather than investment in measures designed to achieve reductions in emissions.

When the emissions for each local authority area are expressed as per capita (see table 3 below), a slightly different pattern emerges due to differing rates of increase in the population, with Corby closely followed by Northampton experiencing the greatest percentage reductions (both over a 25% reduction over this eight year period).

	2005 per capita emissions (T)	2013 per capita emissions (T)	Percentage reduction
Corby	12.8	9.2	27.5%
Daventry	10.7	9.0	16.1%
East Northants	8.0	6.4	20.4%
Kettering	8.7	7.4	14.7%
Northampton	7.1	5.2	26.0%
South Northants	8.7	7.4	14.7%
Wellingborough	8.0	6.5	17.9%
Northamptonshire	8.6	6.9	20.3%

**Table 3: Per capita emissions by local authority area**

A table providing full details of the breakdown of total and per capita emissions by local authority area and by sector is provided in Appendix 2.

## 5.2. Other local achievements in climate change mitigation

The NCC Energy & Carbon Management team (E&CM) were the first local authority shortlisted for an award at the Energy Awards 2012 (jointly with one of our contactors M&C Energy Group). The E&CM team's achievements include reduced energy bills for NCC as a result of their approach to energy procurement and solar PV installations to schools, fire stations and libraries.

Northamptonshire County Council has been awarded the Carbon Trust Standard – for successfully measuring, managing and improving carbon efficiency across all operations, including schools, by a further 18 per cent. This award is the highest recognition of achievement the county council can gain regarding carbon management and actual carbon reduction. In the last two years the authority has honed its energy efficiency strategies to cut carbon emissions by another 15,812 tonnes of CO<sub>2</sub>. These carbon reductions have been achieved by three key strategies:

- The street lights switch off and implementation of the street lighting PFI programme
- The rationalisation of the council's office and other non-school property estate.
- The continued investment in energy efficiency works in schools and other council buildings.

The ZECOS project has been implemented, which aims to reduce carbon emissions in three communities across Northamptonshire (Oundle, Braunston and Crick and Long Buckby). A series of community engagement events are underway to try to work with the public to develop schemes that will meet this aim, including energy efficiency and renewable generation projects.

Northamptonshire Warm Homes (NWH)<sup>13</sup> has co-ordinated a number of fuel poverty projects including:

**'Wrapped Up'** – Emergency thermal improvements for householders in fuel poverty or with health problems that are likely to be exacerbated by a cold home. Primarily targeted at those over 70.

**NCC WHPP project** – Debt and energy efficiency advice to those in fuel poverty, delivered by Community Law. Targeting of assistance is to be based on data purchased from the Energy Savings Trust.

**DECC Fuel Poverty Project** – Full funding for insulation and heating improvement measures for those in fuel poverty as determined by a questionnaire (not necessarily requiring receipt of benefits) and others at risk including those over 70, with health problems, off gas or in private rented homes.

<sup>13</sup> <http://www.northantwarmhomes.com/>

NWH are also promoting the availability of financial assistance through ECO and the Green Deal, collective fuel switching and oil buying syndicates in rural areas. There are also further schemes planned by individual boroughs/districts, e.g. Wellingborough BC's partnership with Yorkshire Energy Partnership (YEP) and its contractor Cosyseal Ltd to offer residents in the Borough free energy efficiency measures under ECO obligations from March 2014.

In the business and public sectors, there has been ongoing work with Investors in the Environment (IIE) to assist SMEs in the county to become more resource efficient, saving carbon and money.

Implementation of the Northants Transport Plan to ensure that more focus is given to behaviour change to achieve carbon reduction through modal shift, and an increased emphasis on low carbon fuels.

Northamptonshire Waste Partnership (NWP) has implemented a Waste Strategy and Action Plan (2012-16) to continue to engage with NCCOG to help reduce CO<sub>2</sub> by reducing, reusing and recycling waste. NCC is also aiming to divert 25% of waste from landfill by 2015/16 through the Residual Waste Project.

KierWSP, who run the Northamptonshire Highways contract, are implementing a Sustainability Action Plan in relation to this contract. The key performance indicator for this is the reduction in carbon footprint based on fuel (including red diesel), electricity, gas (where available), water (excluding Towcester) and waste to landfill. A 47.9% reduction was reported for 2011/12 compared to the baseline year of 2008/09.

A range of partnership projects have been implemented that are aiming to support increasing low and zero carbon energy use, including the promotion of the Renewable Heat Incentive, community energy schemes and opportunities to use waste heat and anaerobic digestion. There are also plans for solar parks in Corby, an energy efficiency park in Kettering and an alliance with British Gas on solar pv initiatives.

### **5.3. Implications of national emissions targets over 2014 – 2017**

It is proposed that any targets set for Northamptonshire should be set in line with the national targets. The government's Carbon Plan defines targets in terms of 5 year carbon budgets, i.e. total emissions over 5 years with a total of 3,018 MtCO<sub>2</sub>e for 2008 – 2012 and 2,782 MtCO<sub>2</sub>e for 2013 – 2017. This corresponds to a 7.82% reduction over 5 years or an average of a 1.56% reduction each year. It is therefore suggested that the 2014-2017 should also aim for reductions in the emissions in the county of 1.5% per year or 4.5% over the 3 years.

Based on the 2013 data reported above, a reduction of 1.5% per year corresponds to the following reduction in emissions for each sector:

- Industry and commerce - about 27,300 tonnes per year reduction
- Domestic - about 21,600 tonnes per year reduction
- Transport – about 23,800 tonnes per year reduction

It is acknowledged that a large proportion of these reductions will be the result of the local implementation of national schemes such as Feed-in-Tariffs, the Renewable Heat Incentive and Green Deal and (in the domestic sector) the Energy Company Obligation (ECO). However, the actions associated with this Climate Change Strategy will support the uptake of these schemes within the county and also seek to support the development of community energy projects in line with the aims of the government's recently published Community Energy Strategy<sup>14</sup>.

However there is increasing investment in renewable electricity generation in the county, e.g. Wellingborough BC has approved solar photovoltaic installations on both buildings and land that they own.

It should also be noted that one of the key ways to reduce emissions is to support the development of alternative, low carbon energy sources of heat. In particular, opportunities will be sought to promote the use of wood fuel, especially in rural areas, and to encourage the establishment of district heating networks where these may be viable.

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<sup>14</sup> <https://www.gov.uk/government/publications/community-energy-strategy>

## 6. Adaptation to the impacts of climate change

### 6.1. Revised headings related to adaptation

It was decided that the adaptation section of the Strategy should be restructured so that the five headings more closely match the seven key headings used in the National Adaptation Programme. The main implications of this are that Flood Risk Management has been absorbed into a new section entitled 'Healthy and Resilient Communities' and that 'Infrastructure' has been specifically included with the Built Environment.

The key achievements and current initiatives relating to adaptation are summarised under the revised headings below.

In the case of adaptation in particular, it is intended that we will work closely with the Environment Agency (EA) to implement local initiatives to improve climate resilience and to draw on the resources available via the EA's 'Climate Ready'<sup>15</sup> service to support decision making in this area.

#### 6.1.1. Built Environment and Infrastructure

(Previously Built Environment)

The Planning Authorities' Development Plan documents have been reviewed to ensure policies are effective in encouraging sustainable construction and adaptation, including the next steps towards what will be needed in 50-100 years and the promotion of Northamptonshire as a sustainable and pro-active county. Surface water management plans will also be required for new developments.

A number of Green Infrastructure projects have been implemented in the county, including effective implementation of Sustainable Drainage Systems (SuDS) as part of NCC's new role as the Lead Local Flood Authority, working with KierWSP (the contractor working in partnership with the County Council to maintain and improve the highways infrastructure), working with the districts to increase the number of street trees in the county and exploring opportunities for large scale woodland creation in planned sustainable urban extensions.

#### 6.1.2. Healthy and Resilient Communities

(Previously combined with Natural Environment, now includes Flood Risk Management)

The **Local Flood Risk Management Strategy**<sup>16</sup> has been finalised and was endorsed and approved by EDT Scrutiny Committee on the 11<sup>th</sup> September 2013 before being finally approved by NCC Cabinet on the 8th October 2013.

The **Northampton Surface Water Management Plan** (SWMP) is now complete and four further SWMPs (for South Northants, Daventry District, East Northants and Wellingborough) have commenced.

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<sup>15</sup> <http://www.environment-agency.gov.uk/research/137559.aspx>

<sup>16</sup> <http://www.northamptonshire.gov.uk/en/councilservices/Environ/flood/Pages/Strategy.aspx>

**Flood Risk Management Plans (FRMP):** NCC is one of only three Lead Local Flood Authorities that have supported the Environment Agency with the development of the ‘mock-up of a draft FRMP’. These new plans are a legal requirement under the Flood Risk Regulations (2009) and must be in place by April 2015<sup>17</sup>.

A process and formal protocol for the reporting and investigation of flooding incidents has also been developed.

Northamptonshire is proud to be one of 13 **Pathfinder Projects** funded by DEFRA exploring how to support communities to improve their flood resilience. The Northamptonshire Pathfinder Project sets out to provide information about community flood resilience through an online toolkit detailing ‘how to’ information on the actions residents, businesses and communities can take to improve their flood resilience. The toolkit is being developed throughout 2014 and will be available on the Northamptonshire County Council website.

The impact of climate change on health also needs to be considered. In particular, extreme weather conditions such as heat waves, severe cold snaps and flooding present challenges to delivery of health services as well as introducing new risks to health. The Sustainable Development Unit is funded by the NHS to promote sustainability across the public health and social care system. They have developed a toolkit - “Under the Weather - Adapting to a changing climate”<sup>18</sup> - to support Health and Wellbeing boards, and others; and ensure organisations and communities are prepared for the impact of climate change.

### **6.1.3. Natural Environment, Agriculture and Forestry**

(Previously Biodiversity, Agriculture and the Natural Environment)

The **Towards a Naturally Resilient Northamptonshire Strategy** has been implemented to promote the use of natural interventions to adapt to the likely impacts of climate change.

**Nene Valley has become a Nature Improvement Area (NIA).** Partners ranging from the Wildlife Trust, RSPB, Environment Agency, Joint Planning Units, River Nene Regional Park, as well as the County Council received approximately £700k funding from DEFRA over three years (2012-2015) to work with landowners and partners to restore habitats along the River Nene. This funding is part of an £11m overall project and investment in the Nene Valley.

The annual **Northamptonshire Tree Planting Scheme**, delivered in conjunction with the Woodland Trust, has resulted in over **125,000 trees being planted in schools, communities and farms** across Northamptonshire since 2012.

There has also been the **development of new Guidance on Highway Tree Planting**, helping to encourage tree planting on new and existing developments, as well as a trial of a slow/low growing climate resilient grass seed mix for the county verges to help reduce maintenance costs and help in adapting to a changing climate.

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<sup>17</sup> [http://a0768b4a8a31e106d8b0-50dc802554eb38a24458b98ff72d550b.r19.cf3.rackcdn.com/LIT\\_8650\\_2787bc.pdf](http://a0768b4a8a31e106d8b0-50dc802554eb38a24458b98ff72d550b.r19.cf3.rackcdn.com/LIT_8650_2787bc.pdf)

<sup>18</sup> <http://www.sduhealth.org.uk/areas-of-focus/community-resilience.aspx>

**Biodiversity in the county** has improved, with the percentage of Local Wildlife Sites in positive management (formerly NI 197) up to **37% in 2013**; up from 22% in 2008/9.

An event on soil management is being planned with the NFU to replicate similar events that have been successful in Derbyshire/Leicestershire.

The Nene Catchment Partnership<sup>19</sup> (between Natural England, the Environment Agency and RNRP) has been running since 2009 with the aim of promoting Catchment Sensitive Farming. This is land management that minimises pollution of watercourses through an arrangement of measures such as appropriate management of the use of fertilisers and pesticides and promoting good soil structure and rain infiltration. This is consistent with the Defra Catchment Based Approach<sup>20</sup> to improve the quality of our water environment, which was launched across the whole of England in June 2013 after an initial pilot phase in 2012. It also offers the opportunity for integrated delivery of NAP objectives and associated Green Infrastructure.

The agriculture and forestry theme will become more of a focus for EA and Climate East Midlands over the next year, which may lead to further initiatives in this area.

#### **6.1.4. Business, Industry and Commerce**

(Previously Industry and Commerce)

Business and supply chain resilience is high on the agendas of many of the partners involved in the climate change strategy.

Targeted support is available for 'Business Continuity' to businesses in Northamptonshire that are most sensitive to the impacts of climate change to help them take adaptive action, continuing the work being carried out by Climate East Midlands with funding from the EA. This has included a number of workshops being held across the county for businesses and organisations on business resilience and adapting to the impacts of severe weather. More of these events will be arranged, specifically targeting areas that have suffered from flooding in the past.

The Environment Agency are providing guidance (via the Climate Ready Support Service) on identifying new risks and opportunities within a supply chain and working out how to increase business resilience by making targeted changes to chain operations. 'Assessing and managing climate change risks in supply chains'<sup>21</sup> provides a five step framework to help businesses understand and manage the risks that extreme weather and our changing climate pose to the increasingly complex supply chains of UK companies.

Business Resilience Healthchecks can be carried out online via the Climate East Midlands website<sup>22</sup>.

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<sup>19</sup> <http://www.riverneneregionalpark.org/default.asp?PageID=286&n=RNRP+Project+CSF>

<sup>20</sup> <https://www.gov.uk/government/publications/catchment-based-approach-improving-the-quality-of-our-water-environment>

<sup>21</sup> <http://www.environment-agency.gov.uk/research/137639.aspx>

<sup>22</sup> <http://www.climate-em.org.uk/resources/item/business-resilience-healthcheck/>

### **6.1.5. Local Government and Public Services**

(Previously Public Services)

‘Planning to adapt’ activities will continue to be embedded into public sector processes, practices and policies through:

- A dedicated post to progress this via an EM led programme.
- Implementation of Environment Agency supported guidance and tools that are being produced to support Local Authorities.
- Local Authority Climate Adaptation Indicator Project.



## **7. Implementation 2014-2017**

The Strategy will continue to be implemented by NCCOG in association with a range of partners as relevant for each activity. In addition there are a number of groups that focus on specific areas of the Strategy (e.g. NCCOG, Northamptonshire Home Energy Efficiency Partnership, Northamptonshire Biodiversity Partnership and many others) to ensure that the actions are taken forward and that objectives and targets are met.

Each year, the Strategy will be supported by an Action Plan that covers each area of the Strategy and provides additional information about what we will do and the measures we will use to track our progress and the targets that we have set ourselves. The actions, which will follow the headings used in the Strategy, will highlight the 'lead organisation' for each activity and be funded/resourced appropriately.

These annual Action Plans will provide the framework for monitoring and capturing the various activities being undertaken to tackle the causes and effects of climate change. They will be actively monitored at the quarterly NCCOG meetings with progress on actions assessed using a RAG rating.

The Action Plan will be reviewed at the end of each financial year and a further Action Plan will be developed for the following year, along with an annual progress report for the Northamptonshire Leadership Group. Targets will also be reviewed regularly to ensure that they are consistent with the evolving science and any changes to related national or regional strategies.

## **Appendices**

**Appendix 1 – Northamptonshire Climate Change Officer Group (NCCOG) – Membership**

**Appendix 2 – Summary of emissions by local authority area**

## Appendix 1 – Northamptonshire Climate Change Officer Group (NCCOG) Membership

- Northamptonshire County Council
- Corby Borough Council
- Daventry District Council
- East Northamptonshire Council
- Kettering Borough Council
- Northampton Borough Council
- South Northamptonshire Council
- Borough of Wellingborough Council
- Northamptonshire Police
- Northamptonshire NHS
- University of Northampton
- Climate East Midlands
- Environment Agency
- Northamptonshire Enterprise Partnership
- Northamptonshire Chamber
- Groundwork Trust
- Northamptonshire ACRE
- North Northants Joint Planning Unit
- West Northants Joint Planning Unit
- Northamptonshire Waste Partnership
- Northants Warm Homes (Formerly Northamptonshire Housing Energy Efficiency Partnership)
- MG-WSP
- Electric Corby

**Appendix 2 – Summary of emissions by local authority area**

<b>Local Authority Area</b>	<b>Year</b>	<b>Industry and Commercial Total (kT)</b>	<b>Domestic Total (kT)</b>	<b>Transport Total (kT)</b>	<b>Grand Total Emissions (kT)</b>	<b>Population ('000s)</b>	<b>Industry and Commercial Per Capita (T)</b>	<b>Domestic Per Capita (T)</b>	<b>Transport Per Capita (T)</b>	<b>Grand Total Per Capita Emissions (T)</b>
Corby	2005	461.9	139.0	94.1	695.1	54.5	8.5	2.6	1.7	12.8
	2006	459.5	138.5	92.6	690.6	55.4	8.3	2.5	1.7	12.5
	2007	440.5	134.7	92.8	668.0	56.8	7.8	2.4	1.6	11.8
	2008	424.4	134.4	88.6	647.4	57.9	7.3	2.3	1.5	11.2
	2009	366.1	122.6	85.9	574.6	59.0	6.2	2.1	1.5	9.7
	2010	413.0	133.3	85.6	631.8	60.1	6.9	2.2	1.4	10.5
	2011	358.8	117.3	84.0	560.0	61.6	5.8	1.9	1.4	9.1
	2012	385.3	125.1	82.9	593.3	63.1	6.1	2.0	1.3	9.4
	2013	387.3	124.0	82.5	593.8	64.2	6.0	1.9	1.3	9.2
<b>Percentage change</b>		<b>-16.2%</b>	<b>-10.8%</b>	<b>-12.3%</b>	<b>-14.6%</b>	<b>17.8%</b>	<b>-28.8%</b>	<b>-24.3%</b>	<b>-25.6%</b>	<b>-27.5%</b>
Daventry	2005	280.6	204.1	326.1	810.8	75.7	3.7	2.7	4.3	10.7
	2006	283.5	204.0	328.7	816.2	76.5	3.7	2.7	4.3	10.7
	2007	268.3	198.3	337.6	804.1	77.0	3.5	2.6	4.4	10.4
	2008	260.5	197.9	313.6	772.0	77.1	3.4	2.6	4.1	10.0
	2009	241.7	179.5	296.9	718.2	77.7	3.1	2.3	3.8	9.2
	2010	267.8	192.4	295.2	755.3	77.7	3.4	2.5	3.8	9.7
	2011	242.2	168.5	294.9	705.6	78.1	3.1	2.2	3.8	9.0
	2012	241.4	180.8	296.1	718.3	78.3	3.1	2.3	3.8	9.2
	2013	242.0	174.6	289.5	706.1	78.6	3.1	2.2	3.7	9.0
<b>Percentage change</b>		<b>-13.8%</b>	<b>-14.5%</b>	<b>-11.2%</b>	<b>-12.9%</b>	<b>3.8%</b>	<b>-16.9%</b>	<b>-17.6%</b>	<b>-14.4%</b>	<b>-16.1%</b>

<b>Local Authority Area</b>	<b>Year</b>	<b>Industry and Commercial Total (kT)</b>	<b>Domestic Total (kT)</b>	<b>Transport Total (kT)</b>	<b>Grand Total Emissions (kT)</b>	<b>Population ('000s)</b>	<b>Industry and Commercial Per Capita (T)</b>	<b>Domestic Per Capita (T)</b>	<b>Transport Per Capita (T)</b>	<b>Grand Total Per Capita Emissions (T)</b>
East Northamptonshire	2005	167.6	210.2	281.1	658.9	81.9	2.0	2.6	3.4	8.0
	2006	171.7	210.4	278.0	660.1	83.3	2.1	2.5	3.3	7.9
	2007	162.4	206.7	280.7	649.8	84.8	1.9	2.4	3.3	7.7
	2008	156.1	204.3	267.7	628.2	85.6	1.8	2.4	3.1	7.3
	2009	140.3	185.7	256.5	582.5	85.9	1.6	2.2	3.0	6.8
	2010	155.1	200.6	251.1	606.8	86.3	1.8	2.3	2.9	7.0
	2011	139.4	175.0	246.5	560.8	86.9	1.6	2.0	2.8	6.5
	2012	146.2	189.1	248.0	583.2	87.4	1.7	2.2	2.8	6.7
2013	135.2	183.3	244.7	563.1	88.0	1.5	2.1	2.8	6.4	
Percentage change		<b>-19.4%</b>	<b>-12.8%</b>	<b>-13.0%</b>	<b>-14.5%</b>	<b>7.4%</b>	<b>-24.9%</b>	<b>-18.8%</b>	<b>-19.0%</b>	<b>-20.4%</b>
Kettering	2005	220.8	223.9	307.7	752.4	86.6	2.5	2.6	3.6	8.7
	2006	240.7	223.2	318.3	782.2	88.0	2.7	2.5	3.6	8.9
	2007	221.8	217.1	324.9	763.8	89.9	2.5	2.4	3.6	8.5
	2008	221.5	217.1	309.3	747.9	91.2	2.4	2.4	3.4	8.2
	2009	192.7	195.9	286.1	674.8	92.1	2.1	2.1	3.1	7.3
	2010	239.3	212.0	289.6	740.8	92.9	2.6	2.3	3.1	8.0
	2011	220.2	185.1	284.0	689.4	93.8	2.3	2.0	3.0	7.3
	2012	231.3	199.5	281.5	712.4	94.8	2.4	2.1	3.0	7.5
2013	235.4	194.9	279.1	709.4	95.7	2.5	2.0	2.9	7.4	
Percentage change		<b>6.6%</b>	<b>-13.0%</b>	<b>-9.3%</b>	<b>-5.7%</b>	<b>10.6%</b>	<b>-3.6%</b>	<b>-21.3%</b>	<b>-18.0%</b>	<b>-14.7%</b>

<b>Local Authority Area</b>	<b>Year</b>	<b>Industry and Commercial Total (kT)</b>	<b>Domestic Total (kT)</b>	<b>Transport Total (kT)</b>	<b>Grand Total Emissions (kT)</b>	<b>Population ('000s)</b>	<b>Industry and Commercial Per Capita (T)</b>	<b>Domestic Per Capita (T)</b>	<b>Transport Per Capita (T)</b>	<b>Grand Total Per Capita Emissions (T)</b>
Northampton	2005	585.7	490.8	314.7	1,391.2	196.8	3.0	2.5	1.6	7.1
	2006	578.3	482.4	313.6	1,374.3	200.4	2.9	2.4	1.6	6.9
	2007	546.7	469.8	313.7	1,330.2	203.0	2.7	2.3	1.5	6.6
	2008	547.9	470.1	302.1	1,320.1	205.6	2.7	2.3	1.5	6.4
	2009	449.7	419.0	290.0	1,158.6	207.9	2.2	2.0	1.4	5.6
	2010	466.6	451.0	285.3	1,203.0	210.1	2.2	2.1	1.4	5.7
	2011	425.9	393.4	276.9	1,096.2	212.5	2.0	1.9	1.3	5.2
	2012	485.7	425.2	273.9	1,184.8	214.6	2.3	2.0	1.3	5.5
	2013	446.5	415.0	271.7	1,133.1	216.7	2.1	1.9	1.3	5.2
Percentage change		<b>-23.8%</b>	<b>-15.4%</b>	<b>-13.7%</b>	<b>-18.5%</b>	<b>10.1%</b>	<b>-30.8%</b>	<b>-23.2%</b>	<b>-21.6%</b>	<b>-26.0%</b>
South Northamptonshire	2005	214.6	223.7	299.7	738.0	84.9	2.5	2.6	3.5	8.7
	2006	213.3	224.5	296.9	734.8	85.5	2.5	2.6	3.5	8.6
	2007	201.3	221.0	301.2	723.5	85.9	2.3	2.6	3.5	8.4
	2008	203.0	220.5	286.5	710.0	85.8	2.4	2.6	3.3	8.3
	2009	189.4	197.8	270.0	657.2	85.7	2.2	2.3	3.2	7.7
	2010	197.2	213.2	267.1	677.5	85.6	2.3	2.5	3.1	7.9
	2011	178.5	187.8	262.7	629.0	85.4	2.1	2.2	3.1	7.4
	2012	199.1	201.2	263.2	663.4	86.4	2.3	2.3	3.0	7.7
	2013	193.5	195.6	259.8	648.9	87.5	2.2	2.2	3.0	7.4
Percentage change		<b>-9.8%</b>	<b>-12.6%</b>	<b>-13.3%</b>	<b>-12.1%</b>	<b>3.0%</b>	<b>-12.5%</b>	<b>-15.2%</b>	<b>-15.9%</b>	<b>-14.7%</b>

<b>Local Authority Area</b>	<b>Year</b>	<b>Industry and Commercial Total (kT)</b>	<b>Domestic Total (kT)</b>	<b>Transport Total (kT)</b>	<b>Grand Total Emissions (kT)</b>	<b>Population ('000s, mid-year estimate)</b>	<b>Industry and Commercial Per Capita (T)</b>	<b>Domestic Per Capita (T)</b>	<b>Transport Per Capita (T)</b>	<b>Grand Total Per Capita Emissions (T)</b>
Wellingborough	2005	221.2	181.1	187.1	589.5	74.0	3.0	2.4	2.5	8.0
	2006	224.4	178.7	185.0	588.1	74.5	3.0	2.4	2.5	7.9
	2007	218.3	173.5	186.1	577.9	74.7	2.9	2.3	2.5	7.7
	2008	210.9	173.5	177.3	561.6	75.1	2.8	2.3	2.4	7.5
	2009	187.3	155.5	176.7	519.5	75.1	2.5	2.1	2.4	6.9
	2010	192.9	166.6	173.3	532.7	75.2	2.6	2.2	2.3	7.1
	2011	165.4	145.1	165.3	475.7	75.6	2.2	1.9	2.2	6.3
	2012	189.4	156.8	165.5	511.8	76.1	2.5	2.1	2.2	6.7
	2013	182.8	152.5	161.8	497.0	76.0	2.4	2.0	2.1	6.5
Percentage change		<b>-17.4%</b>	<b>-15.8%</b>	<b>-13.6%</b>	<b>-15.7%</b>	<b>2.6%</b>	<b>-19.5%</b>	<b>-18.0%</b>	<b>-15.8%</b>	<b>-17.9%</b>
Northamptonshire Total	2005	2,152.4	1,672.9	1,810.5	5,635.8	654.4	3.3	2.6	2.8	8.6
	2006	2,171.4	1,661.7	1,813.1	5,646.2	663.6	3.3	2.5	2.7	8.5
	2007	2,059.2	1,621.1	1,836.9	5,517.2	672.1	3.1	2.4	2.7	8.2
	2008	2,024.2	1,617.8	1,745.1	5,387.1	678.3	3.0	2.4	2.6	7.9
	2009	1,767.2	1,456.0	1,662.1	4,885.4	683.4	2.6	2.1	2.4	7.1
	2010	1,931.9	1,569.0	1,647.1	5,147.9	687.9	2.8	2.3	2.4	7.5
	2011	1,730.4	1,372.0	1,614.2	4,716.7	693.9	2.5	2.0	2.3	6.8
	2012	1,878.4	1,477.7	1,611.2	4,967.2	700.6	2.7	2.1	2.3	7.1
	2013	1,822.6	1,439.8	1,589.1	4,851.4	706.6	2.6	2.0	2.2	6.9
Percentage change		<b>-15.3%</b>	<b>-13.9%</b>	<b>-12.2%</b>	<b>-13.9%</b>	<b>8.0%</b>	<b>-21.6%</b>	<b>-20.3%</b>	<b>-18.7%</b>	<b>-20.3%</b>