

Third Annual Carbon Report

2013

JOBS & ENTERPRISE



SOCIAL JUSTICE



HEALTH & WELL-BEING



LOCAL ACTIVISM



CARBON





I am delighted to present this 3rd Annual Carbon Report to full Council. Just like any Annual Budget, the objective of this report is to provide transparency and accountability to the carbon emission levels of both the Council, and the Borough as a whole. This report has been input into from across Council departments and Cabinet portfolios.

Since our second Annual Carbon Report as a Council we have been extremely busy across a whole range of activities. Of particular note was that Haringey led a successful bid on behalf of several north London boroughs to Government to provide hundreds of free Green Deal energy assessments, helping people identify the measures they need to live more comfortably, save money and reduce carbon emissions. There was a remarkable spread of take up across all wards in the borough. Alongside this the scheme developed a network of hundreds of businesses who stand to benefit from the growth of this market by up-skilling their employees and gaining the necessary accreditations, helped by Haringey.

Apart from our practical work installing energy saving measures and providing outreach to residents and businesses we have been working on some very exciting plans with a leading UK University which could in the long term lead to a research facility being established in the borough with the prospect to accelerate low carbon commercial opportunities through research and innovation.

In addition, we have been developing plans for low carbon heat network that could in its first phase span a distance of five kilometres, save residents 10% on their fuel bills and reduce carbon emissions from heat by a massive 60% compared to business as usual. We have a once in a lifetime chance to implement this infrastructure as part of the major regeneration plans for Tottenham and I hope we will make this a reality.

Over the past year the 40:20 Steering Group have also developed and formed new working groups that will help to coordinate activity develop collaborative schemes. We will not achieve our target alone. Delivering our ambitious plans as have been laid out by the Carbon Commission will require support from national government and, more importantly, coordinated action from everyone, be that, businesses, faith groups, schools, public bodies, charities and every individual who lives in the borough.

I hope you find this report an interesting source of inspiration to come and join us on the journey to a more sustainable future for Haringey.

A handwritten signature in blue ink, appearing to read 'Joe Gower', with a stylized flourish at the end.

1. Summary.....	3
1.1 Introduction.....	3
1.2 Haringey CO2 emissions (data released 2013).....	4
1.3 Key progress from April 2012 – March 2013.....	5
1.4 Challenges & priorities for the year ahead.....	7
2. The Global Climate Challenge.....	9
3. Haringey’s Carbon Emissions.....	12
3.1 CO2 Emissions 2010-2011 (released 2013)	12
3.1 CO2 emissions – change from 2005 baseline.....	14
4. Borough wide carbon reduction policies and initiatives	18
4.1 Designing buildings for the future	18
4.2 Low carbon heat infrastructure.....	20
4.3 Domestic building retrofit and energy saving	21
4.4 Business sector	30
4.5 Council Carbon Management Plan	33
4.6 Transport Emissions.....	37
4.7 Indirect Emissions.....	40

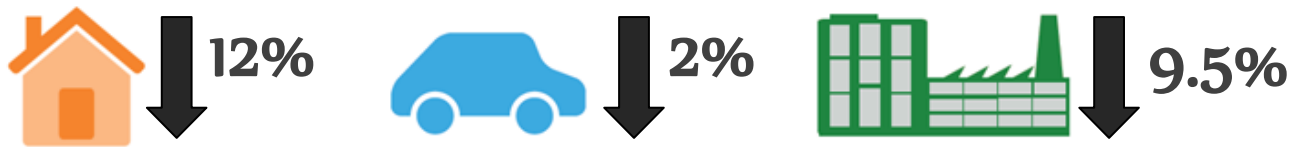
1. Summary

1.1 Introduction

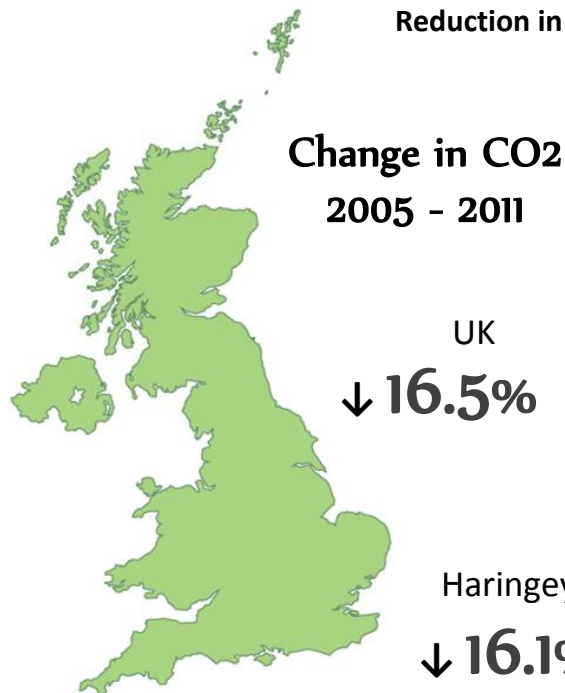
The Annual Carbon Report provides year on year account of progress made to reduce carbon emissions in Haringey. The report includes:

- Official carbon emissions data for April 2011- March 2012 (published by the Department of Energy and Climate and Change in 2013)
- An overview of key Council programmes and collaborative initiatives to reduce CO2 emissions in April 2012- March 2013; and
- Next steps and priorities for the future.

1.2 Haringey CO2 emissions (data released 2013)

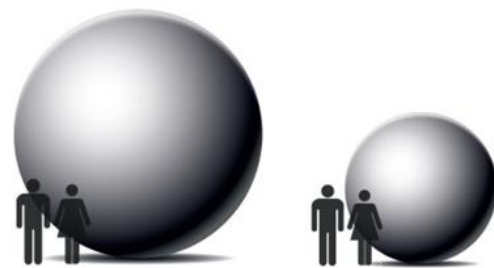


Reduction in CO2 from Homes, Transport and Business 2010 - 2011



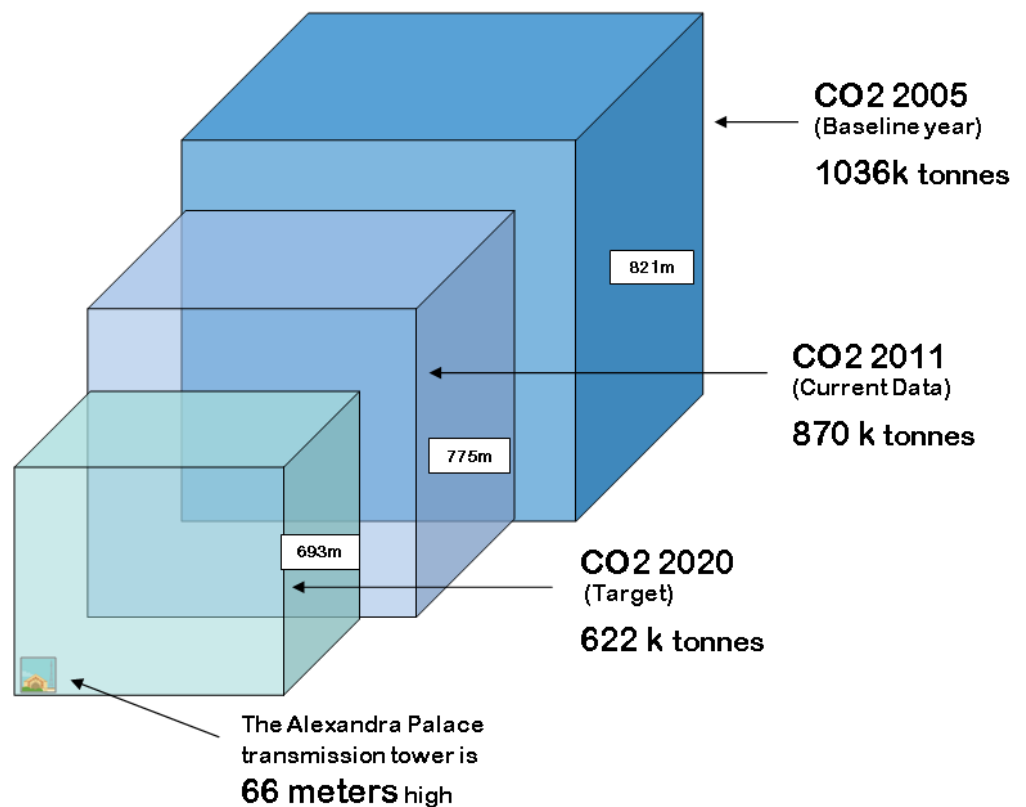
Haringey
↓ 16.1%

London
↓ 14.2%



To achieve 40% CO2 reduction target
emissions per person must be halved

Haringey population will
increase
20% by 2020



1.3 Key progress from April 2012 – March 2013

Since the launch of the Carbon Commission Report in November 2012, which set out recommendations for achieving a 40% carbon reduction in Haringey by 2020, the Council has made significant progress.

- The Council began work to develop a strategic **research partnership** with a major Russell Group university, with the long term aim of attracting a Higher Education partner to locate in the borough and drive growth of the low carbon economy.

The first stage of the partnership involves collaborative research with leaders from among the business and local community to address key challenges facing the borough, such as energy vulnerability of households, and opportunities for new uses of IT and resource data to open up **new commercial**

opportunities. This partnership will be publically launched in January 2014.

- Significant progress was made to develop proposals for a **district heat network** that would provide lower cost and lower carbon heating and hot water to thousands of homes as well as serving commercial customers. In partnership with the Greater London Authority and London Borough of Enfield, the Council completed several detailed technical studies and an outline business case demonstrating the benefits of the heat network, which includes proposals for heat off-take from the Energy from Waste Plant at the Edmonton Eco Park.

The first phase of the heat network would deliver:

60% CO₂ reduction

5km of pipes laid underground

10% reduction in heating costs

- Haringey Council was one of a number of local authority areas selected by the Department of Energy and Climate Change to test and develop the **Green Deal** – a new way of financing building energy saving improvements (also known as building ‘retrofit’).

Working in partnership with local organisations, Haringey Council provided over four hundred free Green Deal Assessments to households, and in doing so created valuable employment opportunities for home energy assessors and training opportunities for organisations carrying out community engagement outreach work.

75% of households planned to make energy saving improvements in the next 12 months as a result of their Green Deal Assessment.

- The Council commissioned proposals for a local cooperative, formed of local retrofit installers, community organisations, local authorities and other partners, to drive retrofit from the ‘ground up’. The proposals were tested and developed with community groups and local business. **RetrofitWorks: the Good Building Cooperative** has now been formally established and is the first of its kind in the UK.

The cooperative will drive both the energy saving retrofit of thousands of homes, protecting people against raising fuel costs, and development of a trained local supply chain. The coop currently has 25 business members and will complete its first pilot projects in winter 2013, before scaling up its operations in 2014.

- Following an award from the One Borough One Future Fund, Tottenham based charity Living Under One Sun (LUOS) were commissioned to meet with residents to discuss their energy issues and help them to take part in the **Big Community Switch**, a collective energy switching scheme. The project focuses on supporting vulnerable and fuel poor residents to cut the cost of their energy bills. To date over 3000 people have received advice.

- The Council's business support project, **Green Light North London** provided one-to-one advice to 51 businesses helping them to cut their running costs and improve their business prospects by 'going green'. Examples of action being taken switching to cost saving LED lighting and taking part in fuel saving driver training. This project also piloted the first commercial Green Deal Assessments to be delivered in the UK.

Savings identified for local businesses:

Up to **18 tonnes CO2** savings a year

£60,000 energy bill savings

Total CO2 per year **327 tonnes**

- The Council has continued to lead by example, reducing its own carbon footprint, through investment made via the Council's revolving **Sustainable Investment Fund** for energy efficiency improvements, and additional investment in solar photovoltaic panels.

Some of the biggest reductions were made in leisure services, prior to outsourcing its management to Fusion Leisure. This will be driven down further by contract agreements made at the point of outsourcing this service.

Decrease in the overall size of the corporate estate, for example due to conversion of schools to academy status, has meant that total emissions under the Council's control have reduced. Emissions from these assets will need to be addressed as part of borough wide plans.

To date the Council has achieved:

21% CO2 reduction, that's
2,000 cars off the roads,
saving **1.1** million each year on
energy costs

- Continued investment in cycle routes, bicycle parking and cycle training has continued to increase the number of journeys made by bike and delivered an 8% annual increase in cycle trips over the last decade which equates to over 3,000 additional cycle trips now being made each day.

An extensive transport study has identified locations across the borough where 'Dutch-style' high standard **cycling facilities**, such as segregated cycle lanes and bicycle parking provision, could be implemented to make the roads safer and more accessible for cyclists.

1.4 Challenges & priorities for the year ahead

Opportunity for the delivery of a strategic heat network in Tottenham.

The regeneration of Tottenham provides an unparalleled opportunity to create 21st century energy infrastructure and sustainable neighbourhood design, delivering low carbon, lower cost heating to thousands of new homes, while also serving commercial customers and the redeveloped Tottenham Hotspur's stadium. This can be achieved through the Council's leadership of major regeneration plans and statutory planning powers, and by securing necessary infrastructure as part of any disposal or development agreements.

In early 2014, Haringey Council will review the final business plan for phase 1 of the network and assess delivery options.

Attracting a university research partner to locate in the Borough.

The Council will progress work on a business case to attract a university research centre in the borough that will stimulate growth of low carbon enterprise. A number of possible sites have already been identified with the necessary requirements for this purpose.

Develop partnerships that will support innovation and accelerate the use of low carbon technologies and enterprise.

The Council will work collaboratively with leading universities, businesses, central government, organisations such as the Energy Technologies Institute, and the local community to develop collaborative research and implement demonstration projects.

One scheme currently being explored is a 'system' based approach to low carbon heat, incorporating local energy generation and heat storage, ICT systems and controls for building energy management and building fabric improvements, such as insulation.

Tackling 'hard to treat' homes and developing local supply chains and a skilled workforce in building retrofit.

Haringey Council is leading proposals for a scheme to insulate 1,000 homes and commercial premises in north London that are 'hard to treat' or 'hard to reach'. These properties include those with solid walls, which are difficult to insulate but are typical within Haringey.

This work will also aim to support the development of a local network of skilled assessors and installers, by providing specialist training and support to approximately 60 businesses.

Over time this will build capacity in the area to deliver retrofit on a much larger scale. To achieve a 40% reduction in CO2 by 2020 an estimated 10,000 homes will need to be retrofitted, which could lead to the creation of hundreds of new high skilled jobs.

Further reducing the carbon footprint of the Council's estate.

The potential redevelopment of the Council's civic complex in Wood Green presents a major opportunity for developing the boroughs district heating network and reducing the carbon footprint of the Council's corporate estate towards the 40% target by 2015.

Retrofit of social housing to reduce fuel poverty, create skilled jobs and provide training opportunities.

Achieving the national 'standard for affordable warmth' across all social housing stock is estimated to cost £129m. This represents a major financing and delivery challenge for the Council.

The cost of this work can potentially be offset by ECO (Energy Company Obligation) funding contributions and by gains made improve associated health and well being. The Council's 30 Year Social Housing Investment & Renewal Strategy, which is being developed, will set out the Council's approach to approach to delivering energy saving improvements.



The Carbon Commission

The Carbon Commission brought together a team of sustainability and carbon management experts who donated their time to prepare a set of recommendations for how Haringey can achieve its ambition to reduce CO2 emissions by 40% by 2020, safeguard prosperity and improve the quality of life for everyone living and working in the borough.

The recommendations report, published in November 2012, contained **five key recommendations:**

- 1.** Create new cooperative and mutual business which invest wealth back in to the borough
- 2.** Develop a thriving Low Carbon Economy including establishing a low carbon enterprise district and partnerships with training providers to develop local work-based skills in sustainable industries.
- 3.** Boost Innovation by partnering with high profile businesses, Universities and research specialists to create a 'living innovation lab' in Haringey.
- 4.** Invest in Low Carbon Transport - Go Dutch', develop market for alternative fuelled vehicles, develop transport plans with neighbouring boroughs.
- 5.** Strengthen Community Organisations - Help increase reach and impact of organisation.

Based on this report the Council developed an Action Plan. Both the Carbon Commission Report and the Action Plan can be downloaded at www.haringey4020.org.uk

CARBON
Commission

2. The Global Climate Challenge

Globally there is a need to reduce overall emissions even as populations increase and nations such as China and India become more energy and resource intensive. As one of the most unequal local authorities in the UK, Haringey can be seen as a microcosm of our global sustainability challenge, to live within environmental limits while raising prosperity.

Increasing levels of greenhouse gases (GHGs) are causing the planet to warm up, which is affecting our climate and will continue to do so. If GHG emissions are left unchecked, average global temperatures could rise by up to 6°C by the end of the century. This is likely to leave communities vulnerable to extreme weather and flooding, and the cost of adapting our infrastructure and lifestyles could significantly damage our economy.

On a global scale we would also have to cope with famine and significant levels of population displacement in an already overcrowded planet. In Haringey, as in the rest of the world, climate change will have a disproportionate impact on the poorest and most vulnerable people in the community; those who lack the means to absorb the rising costs of heating their home and the increased cost of food and travel, however taking action now can benefit us all. Managing carbon more effectively makes economic, social and environmental sense.

Haringey has committed to reduce CO2 emissions by 40 per cent by 2020. As the most unequal borough in London, the challenge for Haringey is a microcosm of the global sustainability challenge – to live within environmental limits while reducing inequality.

Climate change is not just about avoiding environmental disaster; it is about securing the future growth of our economy through green investment to create a prosperous and fairer future for all. Action to reduce carbon emission levels has wide ranging benefits that hit all of the Council's key priorities: regeneration, jobs and training, fuel poverty mitigation and health & well being, irrespective of environmental considerations.

The **UK** 2008 Climate Change Act established the world's first legally binding climate change target. The UK aims to reduce greenhouse gas emissions by at least **80%** (from 1990 levels) by 2050.

Moving to a more energy efficient, low-carbon economy will create economic growth, new jobs, help protect the UK from rising energy prices and reduce reliance on imported fossil fuels.

By 2020 the **EU** must achieve binding "20-20-20" targets:

- **20%** reduction greenhouse gas emissions (from 1990 levels)
- **20%** improvement in energy efficiency
- **20%** of energy produced from renewable resources

It is estimated that meeting the 20% renewable energy target could create around **417,000** additional **jobs**, while the 20% energy efficiency is forecast to boost employment by **400,000 jobs**.

Good News: It's happening!

Portugal hits 70% renewable power and they're not alone. Right now, 46 countries use at least 60% clean electricity

The London Array, the world's largest wind-farm powers half a million homes year planned for 2015!

Image: VATTENFALL



The UK now gets one sixth of its electricity from clean sources like wind, solar and hydro power. That's up 56% on this time last year

In Bangladesh, a new solar panel is plugged in every 90 seconds

Image: IDCOL



Electric car sales in the USA reached a record high this August. That's a 125% increase on August 2012 year planned for 2015!



2 million of Peru's poorest households are getting free government funded solar powered electricity

Image: GTR PUCP



700,000 solar lamps sold in east Africa and counting! SolarAid aim to sell 1m by the end of 2013

Image: Solar Aid

In Holland, a crowd-funded wind turbine raised €1.3m in 13 hours

Haringey 40:20



Haringey 40:20 brings together people, businesses and community groups to reduce carbon emissions in the borough 40% by 2020 and create a vibrant sustainable borough, with a good quality of life for everyone. By supporting sustainable economic growth, which helps adapt to climate change and reduce carbon emissions, we can protect our future prosperity.

The challenge we face to reduce carbon emissions across the borough, is not one the Council can achieve on its own. This will take action from among residents, businesses, the council and other public and third sector organisations.

A **40:20 Steering Group** has been established, which includes representatives from community organisations; Sustainable Haringey, Tottenham Friends of the Earth, Muswell Hill Sustainability Group, not-for-profits and charities; Living Under One Sun, EN10ERGY, Community Energy Lab and new economics foundation, a business network Tottenham Traders and the Housing ALMO Homes for Haringey. The group also includes Cabinet Member for Carbon Reduction; Cllr Joe Goldberg, cross party Councillors; Cllr Juliet Solomon and Cllr Toni Mallet, and Council officers.

The role of the Steering Group includes engaging local communities and developing new initiatives to support change for a low carbon future, actively promoting the 40:20 agenda, and exchange of ideas and knowledge between 40:20 Steering Group members and wider 40:20 community. The group also provide input, scrutinise, challenge and monitor the delivery of the Council's 40:20 Action Plan.

Communications and Housing Retrofit working groups were formed earlier this year and are looking to new recruit members to help take forward key projects. The Retrofit Group for example, are involved with developing a retrofitting cooperative for Haringey, new project proposals and funding bids. The Communications group are devising a Haringey 40:20 short film and other outreach activities.

If you are a local person with an interest in either of these groups and expertise to offer please contact haringey4020@haringey.gov.uk

We have everything we need to start making changes.

Many people are already making great strides forward – our families, our neighbours, local entrepreneurs on our high streets and volunteer organisations across the borough are already doing this.

The changes we make, such as improving our homes; making streets more fit for cycling and walking and

developing new innovative technologies and processes fit for a sustainable economy are the same things that will lead to a better quality of life for all as well as new, quality skilled jobs.

Together we can start creating the future we want to see right now – a Haringey which is cleaner, greener and more prosperous.

Let's start together, today.

Are you in?

Visit www.haringey4020.gov.uk and join in today!



3. Haringey's Carbon Emissions

3.1 CO2 Emissions 2010-2011 (released 2013)

Haringey carbon reduction target

In November 2009, following a campaign led by Friends of the Earth and involving hundreds of local residents, Haringey Council became the first major local authority to adopt a target to reduce carbon emissions by 40% by 2020. This equates to a reduction of more than 400,000 tonnes of CO2 per year, equivalent to taking 130,000 cars off the road¹.

Reduction in CO2 emissions between 2010 and 2011

Between 2010 – 2011 Haringey's carbon emissions have decreased by **9.7 per cent**. There has been a decrease in emissions across all sectors as follows:

- Domestic emissions decreased by more than 12%
- Emissions from Industry and commercial have decreased by 9.5%
- Transport emissions have decreased by 2%

The carbon emission data reported here are official statistics for "Emissions within the scope of influence of Local Authorities" published annually by the Department of Energy & Climate Change's (DECC).

The latest data (released in July 2013) relates to emissions generated in April 2010 – March 2011.

Table: Percentage reduction CO2 emissions from 2010 to 2011

	Industry and commercial	Domestic	Transport	Total
Haringey	9.5%	12.3%	2.0%	9.7%
London	10.8%	11.8%	2.3%	9.7%
UK	9.9%	12.2%	1.6%	8.8%

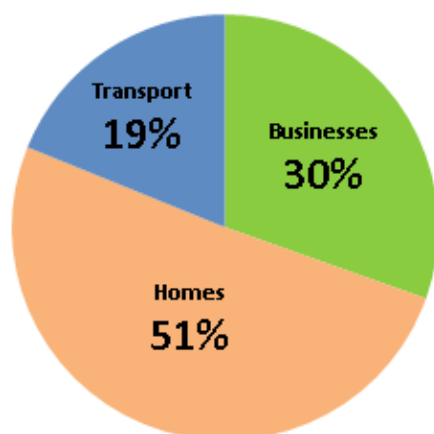
The reduction in total emissions between 2010 and 2011 in Haringey is consistent with the national trends. This decrease can be attributed to a number of factors including implementation, local, regional and national schemes to reduce carbon emissions, the mild winter temperatures in 2011 (the national figures are not corrected to account for weather changes from year to year)² and rising energy prices.³

Domestic emissions are strongly influenced by average temperature. The decrease in domestic emissions from 2010 can be attributed to a decrease use of natural gas for space heating as 2011 was, on average, warmer than 2010.

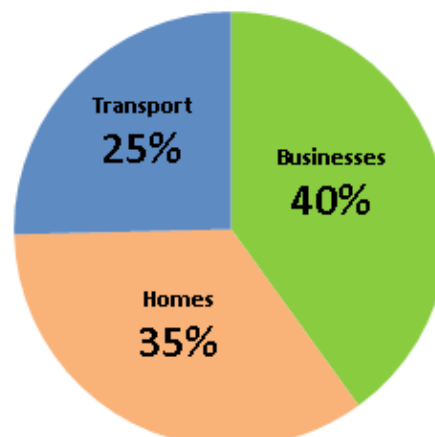
Transport emissions include transport for both private and for business purposes. Emissions estimates are made based traffic distribution, therefore some of the emissions within an authority represent through traffic, or part of trips into or out of the area whether by residents or non-residents.

Haringey is one of only ten local authorities nationally where home energy use (domestic emissions) account for more than half of total carbon emissions¹

Haringey CO2 emissions 2011



UK CO2 emissions 2011



In 2011 30 percent of direct emissions in Haringey were attributed to the industry and commercial sector, 51 percent to the domestic sector, and 20 percent to road transport. A smaller proportion of Haringey's CO2 emissions come from both transport and businesses than in the UK as a whole.

How are CO2 emissions for a Local authority area calculated?

Carbon emissions data was first published for Local Authorities in 2005 (the 'baseline' year). At the time of reporting, the most recent figures, released by DECC in 2013, relate to the period April 2010 – March 2011 (published July 2013). DECC apply the following approach to preparing the emissions data:

- Wherever possible, estimates are based on 'real' local data such as electricity and gas consumption.
- All emissions from energy production (e.g. from electricity generation or refineries) are allocated according to where energy is actually consumed by householders and businesses, rather than where the energy is produced is located.
- Other emissions are 'de-aggregated' from national data and assigned to local authority areas on the basis of local information such as traffic flow estimate, population, employment and household fuel types.¹

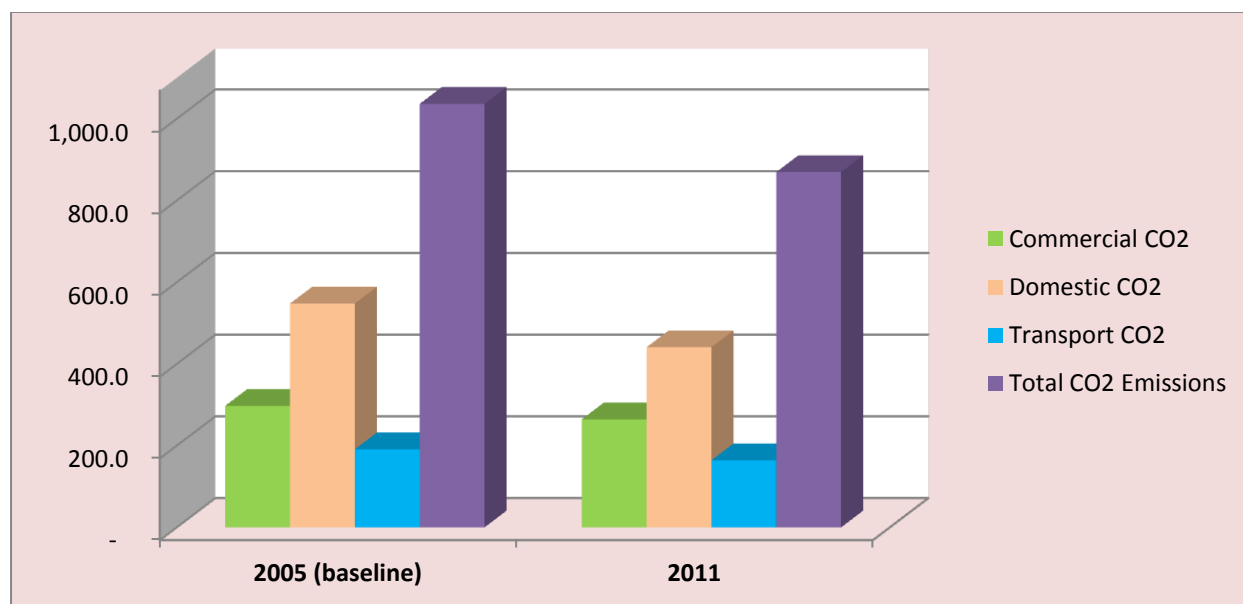
'Emissions within the scope of influence of Local Authorities' are defined at a national level as those that occur within the boundaries of the local authority; this excludes:

1. Emissions which LAs are considered unable to directly influence. These are emissions from motorways, diesel railways, EU Emissions Trading System sites (with the exception of energy suppliers e.g. power stations, whose emissions are indirectly included via the end-user estimates for electricity use) and Land Use, Land Use Change, and Forestry (LULUCF) net emissions sector.
2. Emissions which cannot be disaggregated and attributed to Local Authorities. These are offshore emissions from oil and gas extraction, domestic aviation emissions, fishing, coastal shipping, exports and waste incineration (except for energy generation).

3.1 CO2 emissions – change from 2005 baseline

In 2011 total carbon emissions for Haringey were 870,000 tonnes. This is a **16 percent** decrease since the baseline year 2005, equivalent to removing more than 52,000 cars off the roads.

Graph: Change in CO2 emissions from 2005 (baseline) to 2011



Over the 6 year period, emission from all sectors have decreased. The largest decrease has been in emissions related to home energy use.

Table: Percentage reduction CO2 emissions from 2005 (baseline) to 2011

	Industry and Commercial	Domestic	Transport	Total
Haringey	11.1 %	19.5 %	14.1 %	16.1 %
London	12.7%	16.5%	13.2%	14.2%
UK	20.0%	17.1 %	9.3%	16.5%

Since 2005 total carbon emissions in Haringey have decreased by nearly 2% more than London-wide emissions. Haringey's transport and domestic emissions have reduced by more than the UK average, however UK wide Industrial and Commercial emission have fallen by nearly twice as much as in Haringey.

Between 2005 and 2011, the population of Haringey is estimated to have increased by 11% (ONS, 2012), despite this total CO2 emissions in Haringey have decreased and corresponding per capita (per person) emissions have decreased by a quarter.

Graph: Haringey CO2 emissions and population growth

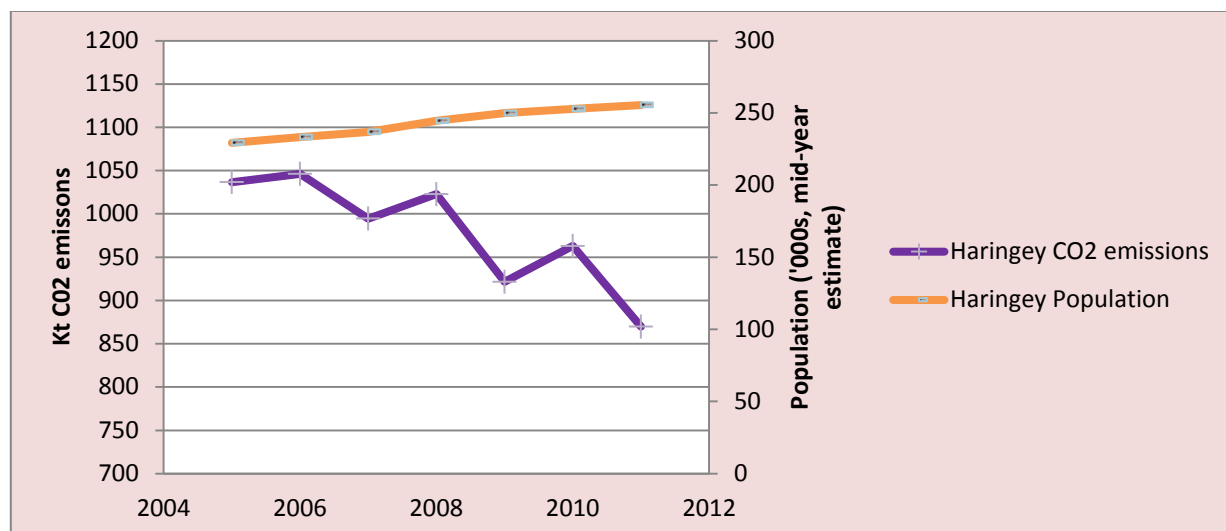
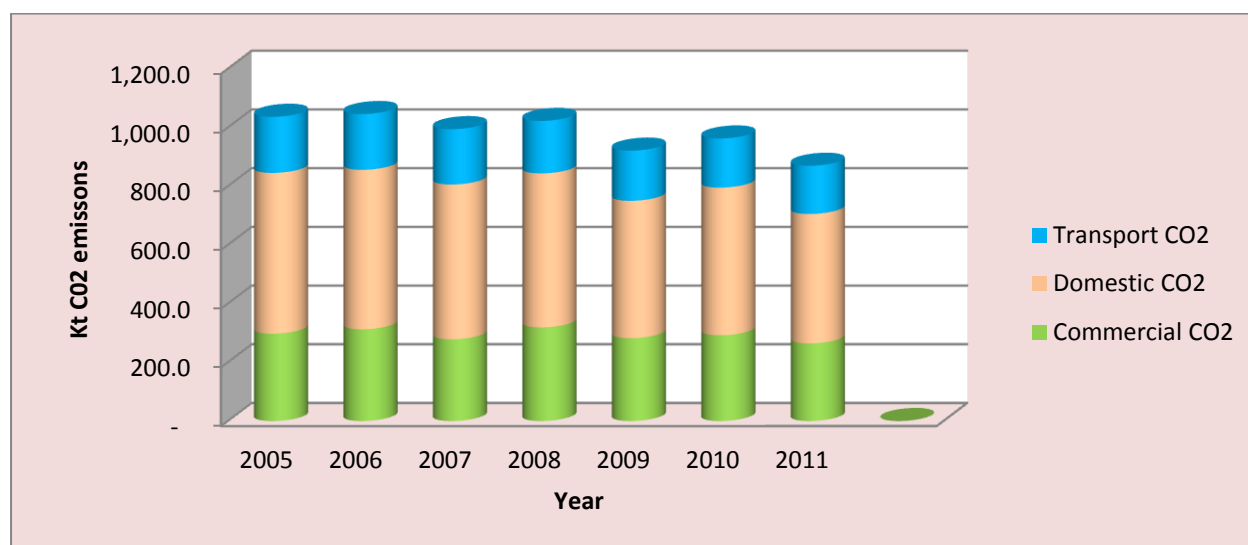


Table: Haringey annual CO2 emissions⁴ 2005- 2011 by sector, (kilo tonnes per annum)

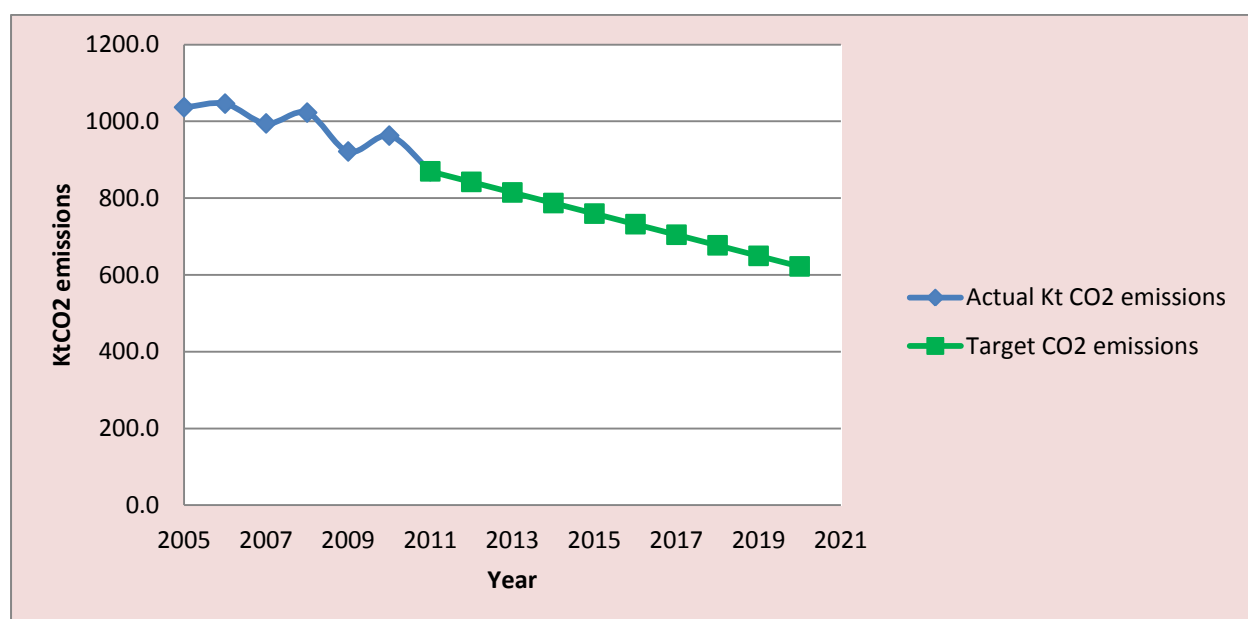
	Total Industry and Commercial CO2	Total Domestic CO2	Total Transport CO2	Total CO2 Emissions (kt CO2)
2005	297.6	547.9	191.2	1036.7
2006	312.6	543.3	190.2	1046.2
2007	278.5	527.4	188.7	994.6
2008	319.1	524.7	178.9	1022.7
2009	282.4	468.0	171.1	921.4
2010	292.2	503.1	167.5	962.8
2011	264.5	441.0	164.2	869.7

The reduction in emissions achieved locally between 2005 and 2011, can be attributed to local carbon reduction initiatives such as those outlined in this report, and will also reflect national trends, including year variations in average temperature, the economic down-turn, falling real incomes and changes to the power generation fuel mix as we move from coal to gas and more renewable energy, causing a decrease in the 'emissions factor' for electricity generation.

Graph: Annual total CO2 emissions by sector 2005 (baseline) to 2011



Graph: Actual CO2 emissions and decrease required to meet 2020 target



The latest emissions data suggests that the borough is on track to meet its carbon reduction target for 2020. However the borough must also deliver on reducing the high levels of inequality that currently exist across the borough, towards a more equal, active and connected society that supports higher levels of well-being.

Haringey Council has major plans to deliver significant growth; including new homes, new jobs and commercial space, and an increasing population. This will lead to a rise in CO2 emissions unless measures, such as those outlined in the Carbon Commission Report, are taken to switch to more sustainable practices. This report can be downloaded at www.haringey4020.org.uk/report

Decarbonisation of Electricity Generation

Decarbonisation of electricity generation is key to achieving carbon reduction targets across the UK, as it is a major source of greenhouse gas emissions:

In 2008 power sector emissions accounted for around 28% of total greenhouse gas (GHG) emissions, with average emissions in power generation of around 540 gCO₂/kWh; this will fall to around 300 gCO₂/kWh by 2020 if current Government ambition on renewable electricity and other low-carbon generation sources is delivered.¹

In Haringey, modelling work carried out for the Carbon Commission Report forecast that decarbonisation of the electricity grid would reduce emissions locally by 12% on 2005 levels. That is, grid decarbonisation accounts for over one quarter of the emissions reductions needed to meet our 40% reduction target for 2020 target.

The carbon intensity of electricity generation in the UK has already fallen due to decommissioning inefficient old coal fired power stations, increased use of newer gas-fired power stations, imports of electricity from France's nuclear generation, improved efficiency from the UK's nuclear generation and increased use of renewable energy sources.

Total electricity generation from renewable sources in 2011 increased by 33 percent on 2010. The majority of this increase came from wind power, with onshore wind 45 percent higher than in 2010 and offshore wind generation 68 per cent higher than in 2010. In both cases this was due to an increase in installed capacity and also higher average wind speeds over the course of the year.¹

However in 2012, CO₂ emissions from the power sector increased, and the carbon intensity of electricity consumed increased by 10%. This was due to an increase of highly carbon-intensive coal generation at the expense of gas, driven by a low price of coal in the global market, and increase to the wholesale gas price.

Although the carbon intensity of the power sector has decreased since 2005, the year on year fluctuation highlights the importance of robust national policy to deliver the significant level of grid decarbonisation needed to meet the 2020 target.



4. Borough wide carbon reduction policies and initiatives

4.1 Designing buildings for the future

The way buildings are designed and constructed has an impact on the quality of our lives and health as well as on energy use, natural resources and our immediate and wider natural environment.

The Council's Supplementary Planning Document (SPD) on Sustainable Design and Construction, was approved at Cabinet in February 2013. This guidance includes information on materials, environmental performance, ecological impact assessment, light pollution, air quality and waste.

The document will also support the Local Plan: Strategic Policies, which were adopted in March 2013, and include the following CO2 targets:

- From 2011 all new residential development will achieve a minimum 25% reduction in total CO2 emissions in line with Code for Sustainable Homes Level 4 energy standards, and should aim to achieve Level 6. All new residential development will be zero carbon from 2016 onwards.
- From 2011 onwards all new non-residential development shall be built to at least BREEAM "very good" standard and should aim to achieve BREEAM "excellent" or the current nationally agreed standard. All new non-residential development shall be zero carbon from 2019.
- Requiring all developments to assess, identify and implement, where viable, site-wide and area-wide decentralised energy facilities including the potential to link into a wider network;
- Establishing local networks of decentralised heat and energy facilities by requiring developers to prioritise connection to existing or planned networks where feasible;
- Working with neighbouring boroughs and other partners to explore ways of implementing sub-regional decentralised energy networks including the potential in the Upper Lee Valley Opportunity Area.

Table: Sustainability standards achieved for major developments in Haringey during 2012/13

Building Name	Code for Sustainable Homes/ BREEAM level	On site renewable energy	District or community heating	Other sustainability information
Brook House , Former Canon Rubber Factory, Tottenham, (residential and a school)	BREEAM targeted rating/possible rating Very Good. Code Level 4 for Flats	(n/a)	Combined Heat & Power	(n/a)
Lawrence Road, South Tottenham (residential and commercial space)	Code Level 4	(n/a)	Communal onsite heat network via CHP plant (and connection to an area wide energy network, if offered before construction start)	(n/a)
Forester House, Bounds Green (commercial)	BREEAM Very Good	(n/a)	Combined Heat & Power	(n/a)
Lymington Avenue, Wood Green (residential)	Code Level 4	Air Source Heat Pump	(n/a)	(n/a)
Highgate Junior School	BREEAM Very Good	Ground Source Heat Pump with gas boilers to top up and Solar Photovoltaics	(n/a)	Passivhaus design principles. Mechanical ventilation with heat recovery.



Brook House, on the site of the old Cannon Rubber factory, close to White Hart Lane, will provide 230 new homes with Combined Heat & Power (due to be completed March 2015).

4.2 Low carbon heat infrastructure

Heat is the single biggest reason we use energy and results in approximately one third of the UK's carbon emissions.

Satellite schemes

Two exciting regeneration developments in Haringey, Brook House and Lawrence Road, have been approved with their own on-site low carbon heat generation and site-wide heat distribution networks.

Brook House in North Tottenham, will also be designed to enable future connection to an area-wide alternative energy network which could further reduce carbon.

The Council will continue to work with developers through the planning application process to bring forward low carbon developments. The combination of a high standard of insulation and connection to an area-wide alternative energy network presents an economical approach for developers to meet the targets for carbon and energy reduction required at a local, regional and national level.

Strategic heat network

Haringey Council is also progressing proposals for an ambitious cross borough strategic heat network. The network would capture heat from existing and proposed sources in Enfield, and distribute affordable low carbon heat in the form of hot water to residential, private, and public sector customers through a new heat network.

Annual CO₂ emissions savings from the first phase of the heat network are estimated to 60% over a 'business as usual' scenario which is in excess of 4,000 tonnes per annum. The proposed network would cover a distance of 5km, with a total installation cost for the network and associated plant estimated at £12.5m.

- An outline business case was prepared with support from the GLA in early 2013. Based on its positive outcome Haringey, the GLA and the Enfield Council agreed to develop a business plan for the network.
- More detailed engineering design proposals and costing assessments were completed in 2013, including evaluation of the options for heat off-take from the Energy from Waste plant at the

Across the UK, buildings will need to be essentially zero carbon by 2050 if we are to achieve our carbon reduction targets. This will require transformational change, and new approaches to heat generation and heat distribution at a local scale, as different solutions will work best for different types of locations.

In dense urban areas with high heat demand, such as London, significant carbon savings can be delivered through localised combined heat and power with heat distributed to buildings for space heating and domestic hot water through heat networks. As heat networks essentially circulate hot water, they are heat-technology "agnostic", which means they offer flexibility to transition to lower carbon heat sources over time and a number of different heat sources can supply the same network.

Heat networks could also provide a potential route to market for low and zero carbon heat from energy from waste, surplus heat from industry, and in future, other sources of surplus low carbon waste heat such as data centre cooling, electricity substations, and sewage works may become viable.

Edmonton Eco-Park, network route analysis, and concept mechanical and controls design of the energy system.

In the future the vision for the strategic network proposed to serve North Tottenham would see it expand to become a 'city-wide' District Heat network connecting to neighbouring boroughs with multiple low carbon heat sources. At this scale, the network would look very similar to the city-wide heating schemes that have been operating in Northern European cities, such as Copenhagen, for many decades.

4.3 Domestic building retrofit and energy saving

London's target of a 60% reduction in carbon emissions requires the retrofit of 2.4m properties by 2020.

To achieve our carbon reduction target thousands of households in Haringey will need to be retrofitted with energy saving measures. This will require skilled local contractors who can deliver specialist insulation and install renewable technology systems. There are over 900 small businesses across North London who could potentially benefit from this work and the growth of the wider London market.

Employees will need to up-skill and businesses will need gain the necessary accreditations to deliver works as part of the national Green Deal and ECO energy supplier obligation schemes. A number of relevant courses are now being provided by local training colleges such as CONEL.

In January 2013 Haringey Council launched the 'North London Retrofit SME Network', which aims to promote retrofit market opportunities to local tradesmen and building companies, and provide information and training to support access this potential market. Activities carried out included:

- A 'retrofit' briefing event, attended by over one hundred businesses
- Workshops delivered by the Energy Saving Trust on Green Deal PAS 2030 certification
- Workshops delivered by consultants Parity Projects to develop the RetrofitWorks cooperative (see below).

Benefits of supporting the retrofit market:

- Local job creation
- Carbon savings
- Investment in the local economy
- Fuel poverty alleviation
- Growth of the low carbon skills sector
- Protection against rising energy costs
- Health benefits

RetrofitWorks: The Good Building Cooperative

Haringey Council pioneered the development of a cooperative to that will help local businesses benefit from the emerging retrofit market by provide opportunities for local businesses to compete for retrofit work and by working with local community groups drive uptake from the ground up. With funding awarded by the Department of Energy & Climate Change, the Council commissioned development and testing of a cooperative business model for the delivery of energy saving 'retrofit works' in North London, working with consultants Parity Projects.

This initial phase involved 25 local businesses who supported the process of developing governance arrangements, contracts and operational tools for the cooperative. Several community and voluntary sector organisations also helped to develop plans for driving uptake of retrofit. The RetrofitWorks Cooperative has now been formally established as not-for-profit network, owned by its members.

Membership

The cooperatives members will benefit from a sophisticated web portal which offers comprehensive project management for each job, from initial pricing through to work on site and completion, access to discounted training, and basic marketing materials.

There are three levels of membership:

Tier 1: Governance and strategic roles such as trade associations, professional Institutions and Local Authorities.

Tier 2: Lead generators such as community organisations, housing associations etc who will have a numbers of clients that are seeking a retrofit provider

Tier 3: Energy Assessors and installers, such as tradesmen, and will be allowed to bid for customer quotes and who will need to be PAS 2030 accredited.

“ The 'RetrofitWorks' Cooperative is a fantastic opportunity for smaller businesses like ours to work together to offer wide range of home improvements that would not be possible for each individual company.

Mike Ellinas, Director of Axios Energy Ltd

Next steps

Pilot projects, to test and demonstrate the operational viability of the cooperative, will be complete and evaluated in December 2013. Recruitment of additional member businesses, community organisations, local authorities will then begin on a larger scale. Haringey Council's will also consider options for its role in the cooperative.



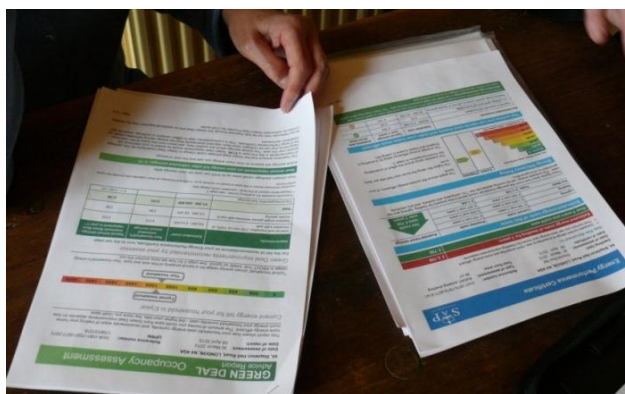
Green Deal Assessments

Haringey Council was one of 30 areas selected nationally to become a Green Deal Pioneer Place by the Department of Energy and Climate Change, and as part of this scheme received funding to deliver free Green Deal Assessments in the borough.

Drawing on experience from the Muswell Hill Low Carbon Zone, the assessments were promoted through a combination of community networks, door-to-door canvassing, leaflet drops and events; and by engaging with the Warner End Residents Association in the Alexandra Palace area to test an area based approach.

Outreach activity was delivered by the Community Energy Lab at the Selby Trust. – identifying home energy improvements

- 15 Green Deal Assessors were employed (with the majority of assessors from within the borough Haringey) to deliver the assessments. They carried out 528 Green Deal assessments across Haringey and Islington (422 assessments in Haringey).
- 75% of residents said that following assessment they were considering making energy saving improvements their home in the next 12 months. Of these, approximately 60% said they would install substantial improvements, in addition to low



the
to
Of

cost
mea
sure
s.

- Over half of participants said they would rather pay for these measures upfront, rather than use Green Deal finance as they did not want debt attached to their property or a long term loan to repay for the works.

“

I think the Green Deal is a good idea and was very pleased with the thoroughness of my assessment. Also – I am very pleased to get the report and am considering some *measures*.

Kamila, Haringey Resident

The Green Deal

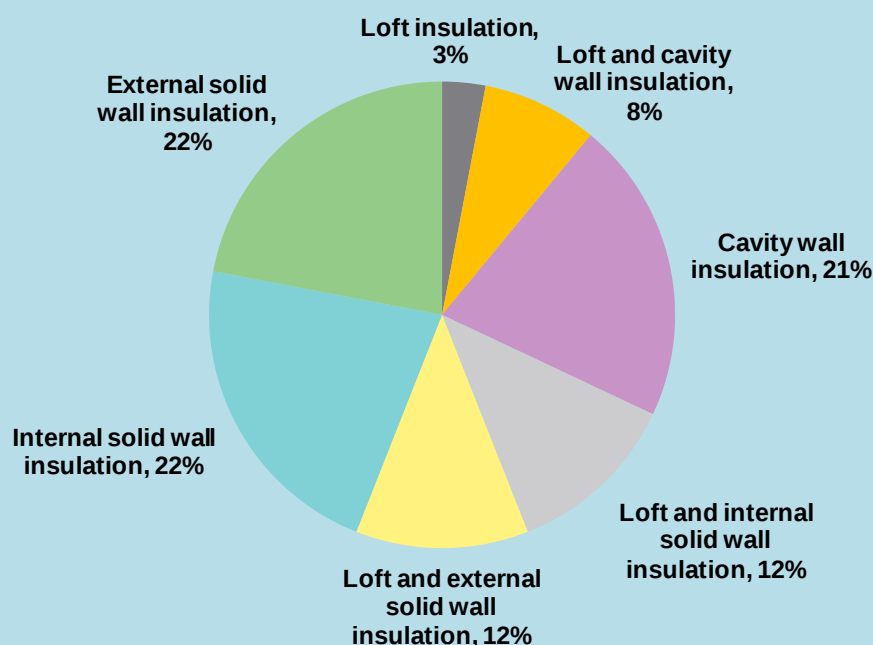
The Green Deal is a mechanism introduced by Government in 2013 to help households install energy saving measures, such as insulation and heating improvements in their home without having to pay the upfront costs. The Green Deal loan is repaid, with interest, via a charge on the household's electricity bill.

'Green Deal' improvements can only be installed after an assessment has been carried out by a certified Green Deal Assessor and are only recommended if they meet the 'Golden Rule'. This means that estimated gas and electricity bill savings must always be equal to or exceed the cost of the loan repayments.

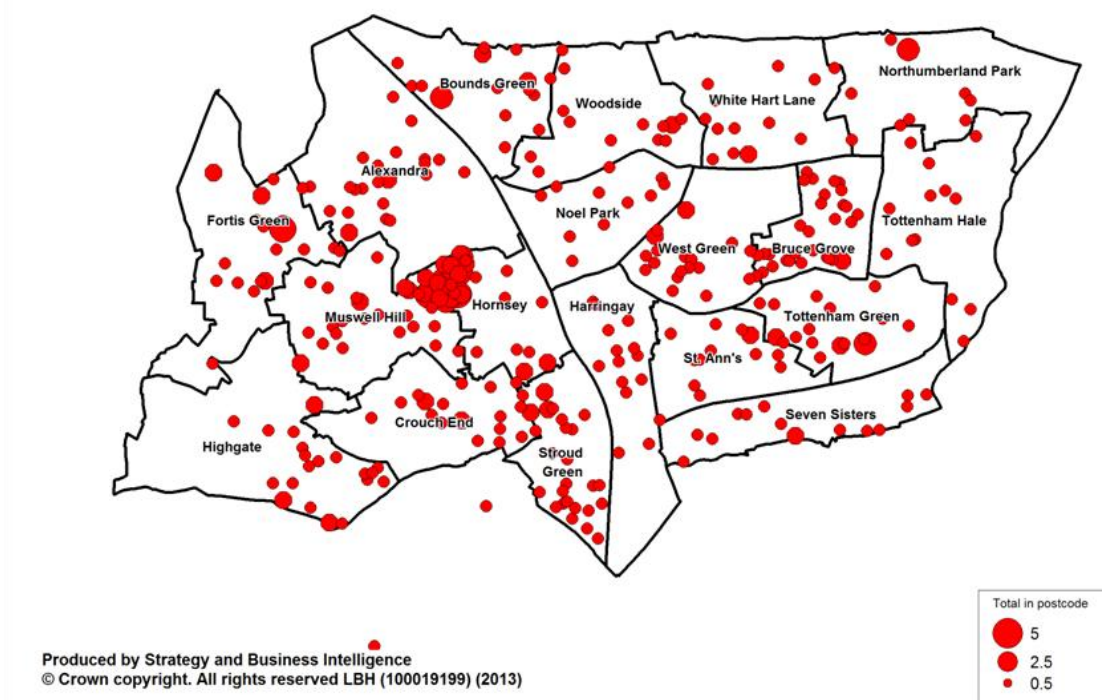
In some circumstances ECO (Energy Company Obligation) grant funding is available to help cover the cost of home improvements. This funding can be combined with a Green Deal. Different types of ECO are available, including for properties that are difficult to insulate or for vulnerable residents on low incomes.

In 2012, Haringey and Islington Council, supported by the GLA, worked together to investigate the potential for the Green Deal locally. A three year programme of works in Haringey to retrofit 10,000 homes could create **140 skilled jobs**, the majority associated with installation of solid wall insulation. The total value of this is estimates to be £75 million, with the average cost per of household energy saving measures installed £7,750.

Percentage of Haringey households requiring each type of insulation



The map below shows that take up of the free Green Deal Assessments was seen in all areas of the borough with a particular concentration in the Alexandra Palace area, as a result of an area based approach to engagement, carried out by the local resident's association.



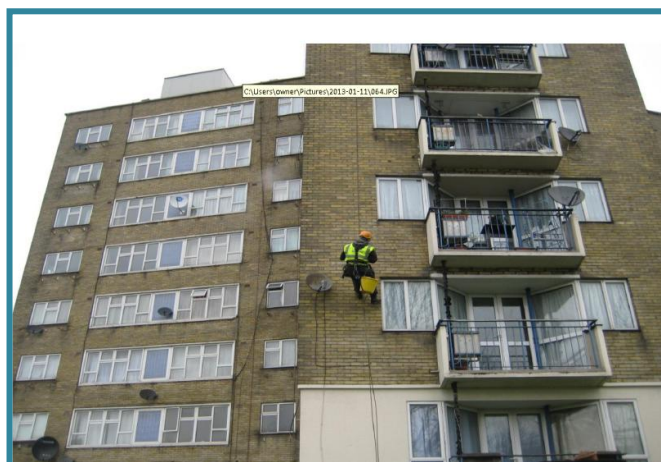
The Warm & healthy scheme

The Warm & healthy scheme, funded by the Department of Health and delivered by AgeUK Haringey, provided assistance to 500 elderly and vulnerable people over the winter period November 2012 to March 2013, including home energy efficiency checks, benefits advice and information, access to AgeUK's enabling service and also Decent Homes grants for minor home improvement works including energy retrofit.

Subsidised Insulation for priority groups

Free loft and cavity wall insulation and cash back of £100 per measure installed was promoted to residents identified to be in a "Super Priority Group" for insulation under the CERT energy supplier obligation scheme. This group includes those in receipt of certain benefits, such as pension credit, and a low income. 487 lofts and several cavities were insulated as part of the scheme. 84 residents received between £100-£200 cash back.

Warren Court, a high rise social housing building, was also identified as suitable for cavity wall insulation. This work was entirely funded by the CERT energy supplier obligation and was carried out in December 2012 by an abseiling team!



‘Decent Homes’ grants for vulnerable homeowners

Funded by the North London Sub Region using funding received from Government Office for London this programme provided small grants to vulnerable homeowners to raise their living conditions to a ‘decent homes’ standard. Approximately 200 households received assistance, around half received a new energy efficient boiler and/or other heating and insulation improvements.

Better quality, thermally efficient housing can reduce fuel poverty and the associated problems of respiratory problems, heart disease and strokes.

Retrofit of Homes for Haringey social housing

Energy supplier obligations

Homes for Haringey were successful in securing CESP funding to fund efficiency measures carried out in 2012/13. The total CESP funding secured was approximately £1.1m and was used to install the following measures:

Measure installed	Number of Homes
Draught proofing	79
External Solid Wall Insulation	273
Single to Double Glazing	341
Flat Roof Insulation	136
G-Rated Boiler to A-Rated Boiler	175
Heating Controls	206
Loft Insulation	75
Cavity Wall Insulation	180

Decent Homes Improvements

The Decent Homes programme began in 2008. This work includes installing measures that can improve the energy performance of homes, such as insulation, heating systems and double glazing . The number of homes that benefited from energy efficiency improvements under the Decent Homes Programme in 2012/13 is shown below . Homes for Haringey also carried out additional boiler renewals, outside of the Decent Homes Programme, which are also included in the table below .

Measure installed	Number of Homes
Loft Insulation	12
Cavity Wall Insulation	11
Heating/Boiler Renewal	531
Double Glazing	260
Other Boiler renewals	1,341

Any measures delivered under the Decent Homes programme which also attracted CESP funding will be shown in the CESP table above and are not included here to avoid double counting.

Keepmoat have been appointed as contractor to carry out the second phase of Decent Homes work at Ferry Lane estate in 2013/14. They are in process of carrying out surveys to establish scope of works required which will include solid wall insulation and potentially other ECO eligible measures under the CERO and CSCO funding streams. Homes for Haringey will be working with Keepmoat in order to claim ECO funding for the scheme.

Homes for Haringey are currently in the process of procuring new major works frameworks to commence in April 2014. The successful contractors are expected to be announced by the end of this year. Once the contractors are in place the Council will explore opportunities for using Decent Homes and other capital works programmes to leverage ECO.

Homes for Haringey – future energy strategy

A Homes for Haringey energy strategy has been drafted and it is likely that this will be incorporated into the Housing Investment and Renewal Strategy currently being developed.

Further to the Energy strategy, a study was commissioned to produce funding options for the improvement of Haringey's social housing stock to the SAP 80 standard which is taken as the benchmark for affordable warmth. The cost of improving the housing stock up to SAP 80 energy rating is estimated to be £129m. Across a 30 year programme this would require an investment of £4.3m per year to achieve.

While the Decent Homes Programme includes elements that can improve the SAP rating of a home, a Housing Stock Energy Study previously carried out shows that the measures required to achieve SAP 80 go well beyond the scope of works for Decent Homes.

It is estimated that the overlap in works expected to be delivered in the next two years of the Decent Homes Programme and those specified in the Housing Stock Energy Study as necessary to achieve SAP 80 is equivalent to approximately £2.6m of the £129m required.

The study assessed the likely levels of additional funding the necessary work could attract, based on existing schemes such as ECO, the Renewable Heat Incentive and Feed-in Tariff. It also considered two pay as you save (PAYS) schemes; the Green Deal, and a potential Haringey run PAYS scheme based on prudential borrowing by the council.

The study found that the existing funding streams and an "in house" pay as you save scheme could potentially fund up to £37m of the required works leaving a shortfall of £82.4m that would need to be funded by the council or other sources where these can be identified, for example avoided costs associated with increased health and well being. This represents a considerable funding challenge for the borough.

What is SAP 80?

The Standard Assessment Procedure is used to assess and compare the energy and environmental performance of dwellings. SAP 80 is taken as the 'proxy' for affordable warmth. SAP calculates how much energy a dwelling will consume and how much carbon dioxide (CO₂) will be emitted in delivering a defined level of comfort (space and water heating and ventilation and lighting). It is based on standardised occupancy conditions. The SAP rating is expressed on a scale of 1 to 100, the higher the number the lower the running costs leading to higher comfort levels.

The Haringey Big Community Switch

Fuel costs are expected to rise by £286 for the average household by 2020⁵.

The Haringey Big Community Switch taps into collective consumer power to help residents get a better deal on their gas and electricity. The project, which is funded by the One Borough One Future Fund, focuses on supporting the most vulnerable residents to save money on their fuel bills.

A community outreach worker based at Living Under One Sun in Tottenham is been employed by the Big Switch to provide energy saving advice, as well as information on fuel related grants, how to understand energy bills and how switch to a better energy deal.

The first Big Switch took place in spring 2013:

- Over 650 people in Haringey registered to take part.
- 76% could save money on their energy bills by switching to the new supplier.
- The average saving for a Dual Fuel direct debit customer was £130 per year
- The average saving across all tariffs including pre-payment meter was £68 per year
- One to one energy saving advice was offered to over 1300 people at outreach sessions and events



How Collective Switching Works:

Collective switching taps in to consumer power to help residents get the best deal on their gas and electricity bills. The more people who register to switch, the better the deal is likely to be.

1. **Sign up online** at www.haringey.gov.uk/switch to register interest in switching to a new tariff. Registering is completely free and no obligation.
2. A **'reverse auction'** takes place where energy companies offer lower and lower tariffs to those who have registered, until the lowest bidder wins.
3. Everybody who has registered is sent an email with details of a **new tariff offer**, which they can choose to accept or not.
4. If a resident accepts the offer they will be sent a new contract by the winning energy supplier.

“ A collective energy switching scheme enables the people of Haringey to take a proactive role in their energy choices and reduce their energy costs.

Leyla Laksari, Haringey
40:20 Steering Group
member

“ Lots of people tell me they thought switching to a new tariff was too difficult, but they find Collective Switching makes it much easier.

Joanne, Living Under One
Sun

4.4 Business sector

The green economy is worth £25.4 billion to London's economy; has increased by 5.22% from 2010/11 and is set to grow until the end of the next decade by over 5% per annum, faster than the UK average for the same period⁶

Green Light North London

Green Light North London provides free advice and one to one support to help small and medium sized businesses (SMEs) in Haringey to save businesses money cuts costs, reduce carbon emissions and improve their business. There are approximately 9,000 thousand SMEs in Haringey. The project is delivered by the Environmental Resources team at Haringey Council and is match funded by the European Regional Development Fund.

During 2012/13 Green Light North London provided one-to-one support to 51 businesses in the borough and identified:

- Potential carbon savings per business ranging from 0.2 tonnes to 18 tonnes
- Total potential financial savings from energy saving measures of £60,000 per year
- Total potential CO2 savings of 327 tonnes per year
- Barriers and potential solutions to achieving large scale uptake of commercial retrofit across Haringey

The project has also provided environmental information to a much larger number of businesses, for example a mail out of environmental fact sheets to all businesses on the Council's business rates data base.

Commercial Green Deal

Several Haringey businesses also received a free Green Deal Assessment, funded by the DECC funded Green Deal Pioneer Places programme. The Muswell Hill Golf Club received the first commercial Green Deal assessment to be lodged in UK. Haringey Council also supported DECC's evaluation of this trial scheme.

“ We are currently developing a five year plan for our golf club to cover all aspects of the club and this sounded like a great opportunity to try and reduce heating bills and protect the environment by reducing our energy usage.

John Brazier, Chair of the Estates Committee at
Muswell Hill Golf Club



BONAFIDE RECORDING STUDIOS, Muswell Hill – financial saving of £553 on lighting costs per year

- Reduced its carbon emissions by 2 tonnes per year
- Replaced halogen spotlights with LEDs reducing lighting costs by 84%.
- Set up a mixed recycling contract diverting 0.3 tonnes from general waste.
- Installed a bike rack (provided for free from TFL). Offer a 10% discount to clients using public transport.
- Adopted an environmental policy
- Future plans included planting a wildlife garden and reducing air conditioning usage by raising staff awareness.

“Green Light North London is a very worthwhile project and with their help we have seen the difference in our energy bills. But it's not just about the financial savings we are very proud to be helping the environment

CYBERCANDY (sweet importer) Tottenham Hale – financial savings of £1,500 per year

- Free wooden pallet recycling opportunity identified with recycler also located in Tottenham Hale, saving 7 tonnes of waste and £1,500 per annum
- 0.3 tonnes of IT waste recycled for free with 123 Recycle
- Water consumption reduced by 11,000 litres by fitting save 'a' flush devices
- Staff to receive Sustainable driving training
- Environmental Policy adopted

FAST FORWARD GROUP (removal company), Tottenham – financial savings of £1,289 from fuel costs

Michael Bradley of the Fast Forward Group (FFG) originally contacted Green Light North London looking for opportunities to help **recycle furniture** that clients no longer required. However, since their initial telephone call they have not only increased their recycling but written an environmental policy and taken steps to reduce their fuel consumption.

Haringey team were also able to link FFG with a local social enterprise RESTORE to recycle unwanted furniture free of charge. In addition, the company was linked up to a service recycling fridges and freezers, creating additional financial savings for the company. Drivers were offered free training in fuel efficient driving, saving 2.4 tonnes per annum and £1,289 from fuel costs.

“Green Light North London have provided valuable help & assistance to our company & clients, as we manage our handling of environmental issues in 2013”

Michael Bradley, Managing Director, Fast Forward Group

Large Businesses

The borough is dominated by micro-businesses; 76.6 per cent of businesses employ 0-4 people with only 0.2 per cent of businesses employing more than 250 people. However large organizations responsible for a significant proportion of the UK's greenhouse gas emissions - they are also sensitive to rising energy prices as energy can account for a large part of their operating costs.

National policies designed to reduce CO2 emissions from large sized corporate sector include:

- The CRC Energy Efficiency Scheme is a mandatory reporting and pricing scheme to improve energy efficiency in large public and private organisations.
- Enhanced Capital Allowances (ECAs) let businesses that invest in certain energy-saving equipment write off the total cost of the equipment against their taxable profit as a 100% first-year capital allowance.
- Climate Change Agreements (CCAs) give energy-intensive industries a discount on the Climate Change Levy (a tax on energy use in industry, commerce and the public sector) as long as they meet government-agreed energy efficiency improvement targets.
- The EU Emissions Trading System (EU ETS) puts a price on greenhouse gas emissions to create financial incentives for industry and businesses to reduce emissions. It also limits emissions from electricity generation and the main energy-intensive industries.



Tottenham Hotspurs football club reduced their carbon emissions by 14% in one year, through energy efficient lighting, heating controls and cutting short-haul flights, saving 400 tonnes of carbon each year.

Source: www.1010global.org/uk/spurs

4.5 Council Carbon Management Plan

The Council's Carbon Management Plan has saved an estimated £1.1 million on fuel bills⁷

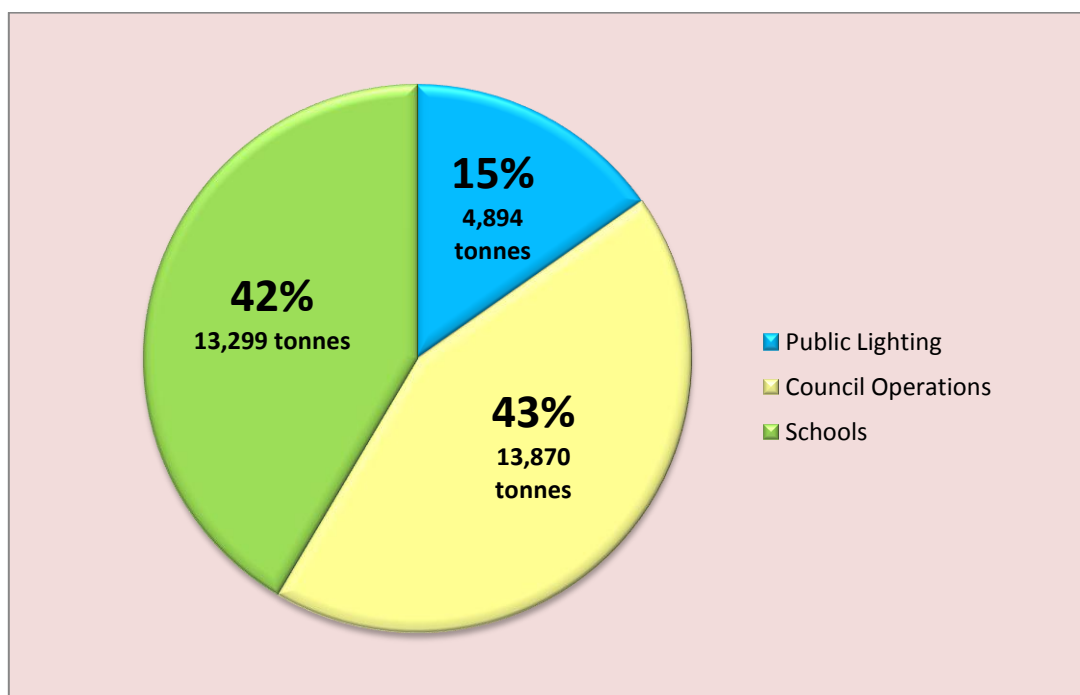
Overview

Haringey Council has set a target of achieve a 40% carbon reduction from Council operations by 2015 (against a 2006/7 baseline).

The Council has made steady progress in reducing its emissions. To date the Council has reduced CO2 emissions from its operations by **8,566 tonnes**, equivalent to removing 2,690 cars from the roads, and is on track to meet its target. This includes measures to council offices, libraries and CCTV, community buildings, park buildings, schools and street lighting. This is despite challenges which it has needed to overcome related to:

- The national austerity measures have significantly reduced the funding available for requisite works, and the number of staff available to deliver them.
- The uncertainty surrounding incentive mechanisms like the Feed-in-Tariff has caused delays to delivery of an ambitious Solar PV plan agreed in 2011.

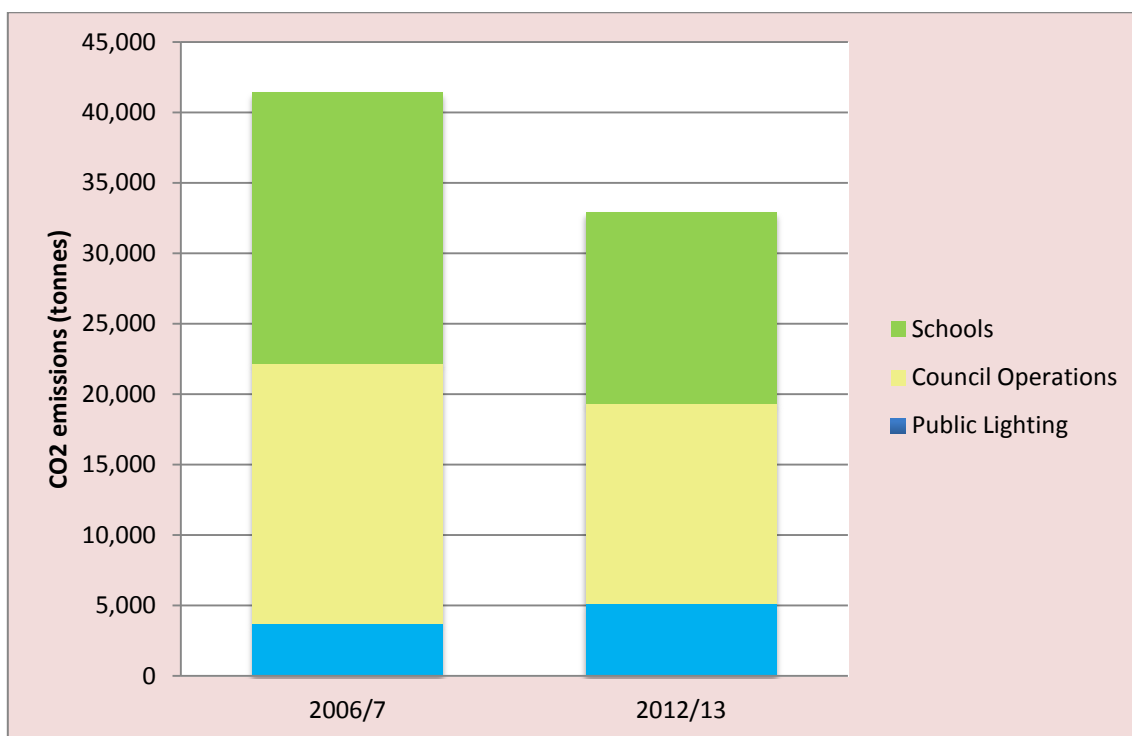
Chart: CO2 emissions from Council estate and operations 2012/2013



By the end of 2012/13 the Council's performance was as follows⁸

Year	Target CO2		Actual CO2		On target?	Cars off the Road ⁹
	Tonnes	%	Tonnes	%		
2006/7	Baseline		41,430	-	N/A	N/A
2007/8	-	-	40,875	-1.34%	-	174
2008/9	40,394	-2.50%	40,070	-3.28%		427
2009/10	38,627	-5.50%	38,021	-8.23%		1,071
2010/11	36,063	-10%	36,091	-12.89%		1,677
2011/12	32,318	-15%	37,205	-10.20%		1,327
2012/13	28,873	-20%	32,864	-20.68%		2,690
2013/14	26,044	-30%				
2014/15	20,186	-40%				

Graph: CO2 emissions (tonnes) Council estate/operations – change to date from baseline year (2006/7)



Over the past 6 years, emissions from Council Operations have decreased by 23 percent and schools emissions have decreased by 30 percent. Investment has been made to improve the energy efficiency of public lighting; however reported emissions have increased by 41%. This is because the Council's street lighting inventory has not yet been updated to reflect these upgrades. It is anticipated the inventory will be updated in November 2013.

Carbon reduction measures

The reduction in overall Council carbon emissions is largely due to:

- Significant improvements to street lighting, including the introduction of LED lighting and streetlight dimming. It is anticipated that the reduction in electricity consumption and associated carbon emissions will be realised upon submission of the next streetlight inventory to the Council's electricity supplier.
- Management of leisure centres has been outsourced to Fusion Leisure. This includes several of our highest energy consuming sites. However, prior to outsourcing, the Council had made some of the biggest gains in carbon savings on this estate. For example, at Tottenham Green Leisure Centre, the Council had reduced electricity use by 25% and gas consumption by 13% before handing the site over in December (mid-way through reporting year). Fusion Leisure were required to submit a carbon management plan for each site, to be delivered under contract with the Council.
- 11 schools have been removed from the Council's portfolio in 2012/13 due to conversion to academy status and therefore the emissions resulting from these sites will need to be targeted as part of borough wide plans.¹⁰
- Investment has been made in the following renewable and energy efficient equipment:

Renewables	Date Installed	Location	Utility	Savings p.a.		
				CO2 (t)	Cost (£)	CRC (£)
Solar PV	Jul-12	River Park House	Elec	1	262	0
		Total for 2012/13		1	262	0

Sustainable Investment Fund Projects	Date Installed	Location	Utility	Savings p.a.		
				CO2 (t)	Cost (£)	CRC (£)
Hand Dryers	Sep-12	13-27 Station Road 40 Cumberland Road 48 Station Road Alexandra House Civic Centre River Park House	Elec	11	2,095	132
Street Light Dimming	Mar-13	Street Lights	Elec	228	44,702	2736
Lighting Sensors	Mar-13	Alexandra House	Elec	2	331	24
		Total for 2012/13		241	47,128	2,892

SSIF Projects	Date Installed	Location	Utility	Savings p.a.		
				CO2 (t)	Cost (£)	CRC (£)
Lighting Upgrade	Aug-12	Chestnuts Primary School St Ignatius Primary School	Elec	45	8,877	540
Auto TRVs	Aug-12	Chestnuts Primary School St Ignatius Primary School St Mary's RC Primary School	Gas	53	8,524	636
Radiator Panels	Aug-12	Chestnuts Primary School St Ignatius Primary School St Mary's RC Primary School	Gas	4	702	48
Boiler Controls	Aug-12	Chestnuts Primary School St Ignatius Primary School St Mary's RC Primary School	Gas	37	6,018	444
Valve Wrap	Aug-12	St Ignatius Primary School	Gas	3	453	36
Total for 2012/13				142	24,574	1,704

Future priorities

For the next two years leading up to the target deadline, the Energy Management Team at the Council will prioritise two major projects:

1. Solar photovoltaic installations; including four schools in 2013/14 and schools, Council buildings and commercial sites in 2014/15, to deliver up to 507kWp and an additional 126 tonnes of CO2 saved per annum.
2. Delivery of an energy efficiency programme across the Council operations in 2014/15, utilising the government's RE:FIT programme to ensure economies of scale (lower cost of installation) and guaranteed energy savings (all underwritten by the installer).

The Sustainable Investment Fund

and Schools Sustainable Investment Fund (SSIF) are a ring-fenced funds for projects requiring significant capital investment, with a return on investment of less than five years through energy cost reduction.

They are open, interest free, to all Council business units and schools where they lack capital for carbon reducing technologies. The loan is repaid in instalments matching energy cost savings made.

4.6 Transport Emissions

Local safety schemes

On West Green Road the one-way system was removed to create an improved public space with better pedestrian and cycle facilities. This project will reduce the impact of traffic on the local area and improve pedestrian and cyclist movement, leading to improved road safety, lighting and better use of the existing green space which was previously locked away between 3 busy roads. The project area is bounded by 3 large schools which are expected to see an increase of 1200 pupils – as a result of these improvements one school has moved their pedestrian entrance to this area.



Artist impression of the West Green Improvements

Walking & cycling infrastructure study

The Walking and Cycling Infrastructure study, completed in 2013, compared the Borough's A and B roads – excluding TfL roads – against the London Cycling Campaign's Go Dutch principles. Gaps were identified in Haringey cycle route network and proposals were developed to improve existing infrastructure including a network of Quietways as per Mayor's Vision for Cycling. The Walking and Cycling study, along with the North London Cycle Strategy have identified investment requirements for walking and cycling facilities in Haringey. In total these are £3.2 million for cycling and for walking is £561k.

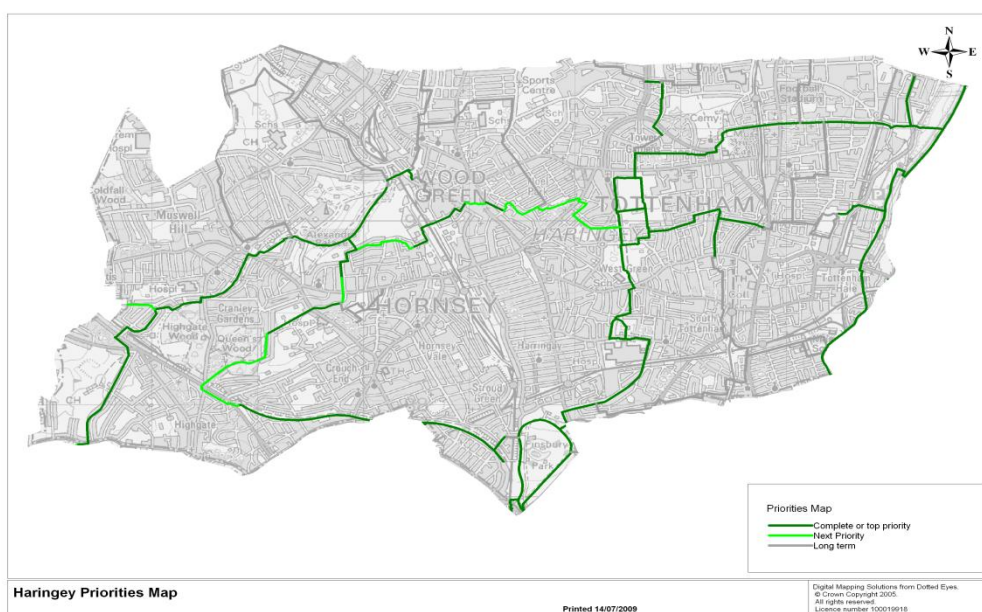
Cycling infrastructure delivered

Key schemes delivered in 2012-13 include:

- Installation of 65 cycle parking stands;
- A 20mph zone scheme on Upper Tollington Park to improve safety for cyclists and pedestrians;
- Raised entry treatment on Cornwall Road to ease access to Chesnuts Park for cyclists; and,
- Converting pathways to shared pedestrian on cycle use by widening and improving street lighting St Michael's Terrace to Bounds Green Road.

The Greenways routes provide increased accessibility, safety and connectivity for pedestrians and cyclists through a network of traffic-free green corridors and numerous specially constructed sections that create a quality cycling and pedestrian link across the borough. Monitoring of the greenways usage shows an impressive uptake with an estimated 214,000 pedestrians and 24,000 cyclists annually accessing the newly installed Belmont Road section of the Greenways route. A further section of Greenways Link 4 is planned between Wood Vale and Park Road by Crouch End playing fields.

Map: Current and proposed greenways routes



Recycle and Waste collection vehicles

Operational efficiencies have reduced fuel use by Haringey Veolia Recycling and Waste collection vehicles by 22% in one year, leading to a reduction in carbon emissions of 464 tonnes.

	2010-2011	2011-2012
Haringey Veolia diesel drawn 2011 (litres)	811,624.4	636,235.0
DEFRA diesel emission factor 2011 (kg CO ₂ / litre)	2.648	2.648
Total CO ₂ emissions (tonnes)	2,149.2	1,684.8

Smarter Travel

A comprehensive cycle projects programme including routes, parking and training is being provided. This continuing investment has delivered an 8% annual increase in cycle trips over the last decade which equates to over 3,000 additional cycle trips now being made each day.

Key activities in 2012-13 include:

- 30 Smarter Travel road shows (which is an event with our trailer or marquee),
- 5 smaller promotional activities including organised rides, promotions for road safety week
- 6 London Cycling Campaign promotional events in schools, workplaces and on estates in the borough.
- 1586 general Smarter Travel questionnaires were completed.
- 680 questionnaires were completed for a specific Walk and Cycle to the shops initiative based on Harringay Green Lanes and outside Hornsey Town Hall in Crouch End.
- In addition 51 Dr Bike sessions fixing 430 bikes took place and around 700 school pupils and 227 adults received cycle training.

Smarter Travel also commissioned a Personalised Travel Planning project in Northumberland Park and White Hart wards aimed at encouraging behaviour change away from the car to walking, cycling and public transport. In total, 9115 homes were visited and conversations held with 3,365 households. Of these households 1,424 requested further information about sustainable travel, including cycling and walking guides, information about safer cycling/driving/road safety and greener driving.

Promotion of active transport, particularly walking and cycling, can reduce obesity and heart disease, improve physical fitness, life expectancy, mental health and help create stronger local communities

Cleaner vehicles and traffic reduction can improve air quality, which currently leads to 4,000 premature deaths per year in London, and reduce road casualties.



Smarter driving

A new project specifically aimed encouraging people to drive smarter to save money and reduce Co2 emissions was launched during the year. The Sustainable Driver Simulator was available at six Smarter Travel Road Shows in 2012/2013.

Shared cross borough transport plans

Analysis of North London's highways journeys highlights that the vast majority of car journeys in Haringey are cross boundary, with nearly half of these involving journeys to and from Enfield. Further

analysis of Haringey's highway journeys will be undertaken (by TfL) to establish destination and journey purpose trends, focusing on the journeys to/from Enfield, specifically for leisure and shopping destinations. Smarter travel initiatives can then be targeted at these specific journey habitats.

Haringey Council have been working on a joint project with LB Enfield and TfL to develop cross-borough smarter travel measures as actions to reduce car use can be most effective at a sub-regional level as much car travel crosses borough boundaries. In developing our programme we have taken advantage of specialist expertise and databases used by TfL. The use of market segmentation data [MOAIC] has been used to assess the effectiveness of types of interventions.

Haringey Staff Travel Plan

Haringey Council's Smarter Travel team are undertaking a staff travel survey during Autumn 2013 and will use the survey analysis to update and revise the Council's staff travel plan. The results of the survey will form the evidence base for obtaining further internal investment to encourage low carbon travel amongst staff, i.e. increasing secure cycle parking facilities, showers, drying rooms, lockers, increasing fleet of low emission pool vehicles/ incorporating low emission car club business use etc.

4.7 Indirect Emissions

Recycling and Waste

The proportion of household waste recycled or composted increased from 19% in 2005/6, to over 32% in 2012/13.

The tonnage of household waste recycled or composted increased from 15,500 tonnes in 2005 to 28,510 in 2012/13, while the level of residual waste decreased from 65,124 tonnes to 60,113 tonnes over the same period.

There is no nationally agreed reporting system for the carbon impact of waste management. However, the carbon saving from diverting this increased level of waste from disposal to recycling will be significant. Further significant carbon savings will be delivered if the Council is to achieve its recycling target of 40% by 2020.

The estimated carbon saving from recycling waste, rather than disposing of it **38.2 kg CO₂ per household per week** (or 16.6 kg CO₂ per person per week).

It costs councils an average of £120 a tonne to send rubbish to landfill. Recycling therefore not only reduces carbon emissions but also helps to put money back into the community.

Direct emissions are those which related to energy and transport fuels used in the borough (Direct emissions are reported in this document)

Calculate your own direct CO₂ emissions:

<http://carboncalculator.direct.gov.uk/index.html>

Indirect emissions related to the 'embedded energy' of good and services used in the borough. These emissions may have been generated outside of the borough, even on the other side of the world. They include for example emissions related to food growing, manufacturing and waste disposal. There is currently no nationally agreed data set reporting on indirect emissions.

Endnotes

¹ The figure for the number of cars equivalent based on 3.184 tonnes CO2 per car per annum. Defra 2008

² Department of Energy & Climate Change, 2013, An Introduction to the UK's Greenhouse Gas Inventory

³ Source: <http://www.theccc.org.uk/tackling-climate-change/reducing-carbon-emissions/how-the-uk-is-progressing/> accessed 17/10/13

⁴ Local Authority emissions are estimated by disaggregating the total UK carbon dioxide emissions to the regional and local level. The total CO2 emissions are derived from the UK greenhouse gas inventory (<https://www.gov.uk/government/publications/uk-greenhouse-gas-inventory>) and are calculated based on the sub-national energy consumption statistics produced by DECC: <https://www.gov.uk/government/collections/sub-national-energy-consumption>)

The greenhouse gas inventory is produced to fulfil the UK's obligation to report its emissions to the European Commission (EC) and United Nations Framework Convention on Climate Change (UNFCCC), The UK Greenhouse Gas Inventory is compiled in accordance with international protocols and methodological guidance, produced by the Intergovernmental Panel on Climate Change (IPCC) and adopted by the UNFCCC. This guidance ensures that all countries inventories attain similar standards and are comparable.

The inventory is revised each year to take into account a new or improved data sources and calculation methodology. To provide a consistent data series, and allow year-on-year comparisons to be made these improvements are implemented across all previous reported years.

This means that the carbon dioxide emissions allocated to each Local Authority can change slightly each year. Further information on the reasons for changes to previous years' emissions estimates are outlined in chapter 4 (page 20) of the [LA methodology summary](https://www.gov.uk/government/publications/local-authority-carbon-dioxide-emissions-methodology-notes) available at: <https://www.gov.uk/government/publications/local-authority-carbon-dioxide-emissions-methodology-notes>.

⁵ [https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/172923/130326 - Price and Bill Impacts Report Final.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/172923/130326_-_Price_and_Bill_Impacts_Report_Final.pdf).

⁶ Greater London Authority, Green Economy Snapshot (published 2013).

⁷ Annual cost avoidance derived by multiplying an average 8p/kWh electricity price by the electricity consumption difference between 2006/7 and 2012/13; multiplying an average 3p/kWh gas price by the weather corrected percentage difference (expressed as kWh) in gas consumption; and multiplying £12 by the number of tonnes CO2 saved (CRC).

⁸ The Council's carbon figures have been adjusted to align with the mandatory reporting requirements of the Department for Communities and Local Government.

⁹ The figure for the number of cars equivalent based on 3.184 tonnes CO2 per car per annum. Defra 2008.

¹⁰ The rationalisation of Council assets and the conversion of schools to academies removes the building emissions from the Council's control. It should be recognised that the emissions associated with each building remain, and carbon reduction is still required to help meet the borough-wide target.