

# Annual Carbon Report

Full Council

19 November 2012

## Contents

<b>Foreword</b> .....	3
<b>1. Introduction</b> .....	4
1.1. Climate change matters.....	4
1.2. About this report.....	5
1.3. Summary.....	7
<b>2. Haringey's carbon footprint</b> .....	8
2.1. Direct and indirect emissions.....	8
2.2. Direct emissions.....	9
2.2.1. Calculation.....	9
2.2.2. CO <sub>2</sub> emission levels 2005-2010.....	9
<b>3. The Council's carbon management plan</b> .....	10
3.1. Emission baseline and target setting.....	10
3.2. Progress to date.....	11
3.2.1. Installing energy, heat and water saving measures.....	11
3.2.2. 40% CO <sub>2</sub> reduction target.....	12
3.2.3. Renewable energy – solar photovoltaic programme 2011-12.....	13
<b>4. Reducing carbon emissions in the community</b> .....	14
4.1. Carbon saving measures.....	14
4.2. Borough wide partnership and action plan.....	15
4.2.1. Haringey 40:20.....	15
4.2.2. Haringey Carbon Commission and Action Plan.....	16
4.3. Practical action 2011-12.....	18
4.3.1. Trailblazing pilot projects.....	18
4.3.2. Low Carbon Zone.....	19
4.3.3. Haringey 40:20 community fund.....	21
4.3.4. Working with small and medium enterprises.....	22
4.3.5. Home energy efficiency programmes.....	22
4.3.6. Homes for Haringey.....	23
4.3.7. Sustainable transport and smarter travel.....	24
4.3.8. Exemplar Buildings.....	25
<b>5. Looking at the year ahead</b> .....	27
<b>Appendix 1. Council Carbon Management Programme – progress and assumptions</b> .....	28
<b>Appendix 2. Carbon Reduction Scenario Modelling</b> .....	31
<b>Appendix 3. Carbon Reduction Action Plan</b> .....	33
<b>Appendix 4. Low Carbon Zone Timeline</b> .....	39
<b>List of figures, tables and endnotes</b>	
<b>Figure 1. Quick facts</b> .....	7
<b>Figure 2. Breakdown of direct and indirect CO<sub>2</sub> emissions</b> .....	8
<b>Figure 3. Carbon emissions from council property by sector</b> .....	10
<b>Figure 4. The scale of home retrofitting required – highlights</b> .....	15
<b>Figure 5. Carbon Commission recommendations</b> .....	17
<b>Table 1. CO<sub>2</sub> emissions by sector</b> .....	9
<b>Table 2. Corporate carbon reduction progress</b> .....	12
<b>Endnotes</b> .....	40

# Foreword

by Councillor Joe Goldberg

**Cabinet Member for Finance and Carbon Reduction**

I am delighted to present this 2nd Annual Carbon Report to full Council. Just like any Annual Budget, the objective of this report is to provide transparency and accountability regarding the carbon emission levels of both the Council, and the Borough as a whole. This report includes input from across Council departments and Cabinet portfolios, and I would like to congratulate colleagues for their efforts in this area. In particular, Cllr Nilgun Canver whose sustainable transport programme has achieved a number of successes this past year.

Since our first Annual Carbon Report as a Council we have been extremely busy across a whole range of activities. From practical schemes on the ground, installing energy and cost cutting measures in homes and offices, inspirational new low carbon community buildings, seeking out every last solar panel we could get our hands on to install before the Government FIT cuts, completing the Muswell Hill Low Carbon Zone, to our work on the Carbon Commission engaging around seventy experts and local activists to identify the actions we need to achieve our longer term ambition for the borough.

The Carbon Commission report identifies how Haringey can take the first clear steps to becoming a centre of innovation for tackling climate change. In doing so we have the opportunity to create thousands of job opportunities, benefitting from what is one of the UK's strongest prospects for growth. In all it identifies a potential for 11,000 jobs by 2031, and provides a strong basis for being put at the core of our regeneration efforts, in Haringey, and in Tottenham in particular.

I believe the Carbon Commission Report stands as a strong challenge to those who mistakenly believe there is a conflict between action on climate change, action on inequality, and economic prosperity. While our efforts have been thwarted by the Government, this report demonstrates the ambition we hold in Haringey to tackle climate change, and through it deliver greater prosperity for people in our borough, and help us tackle the levels of inequality that currently exist.

Over the past year the 40:20 Steering Group has also worked to build collaborative activity across hundreds, and in the future thousands of people. We will not achieve our target alone. Reaching a 40% reduction in emissions 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.

# 1. Introduction

---

## 1.1 Climate change matters

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 CO<sub>2</sub> 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, as detailed below.

- **Secure employment opportunities** from the growth of new low carbon enterprise which is **currently worth £76bn nationally and growing by 4% per annum** while the economy as a whole stagnates<sup>1</sup>. The total employment growth potential for Haringey is up to 11,000 by 2031<sup>2</sup>.
- **Secure inward investment:** The UK's Green Investment Bank (GIB) aims to **catalyse £200bn investment into waste and energy infrastructure projects by 2020**. UK Green Investments which has been established to develop a pipeline of investments for the GIB has to date committed £180m worth of investments (including into the East London Green Enterprise District supported by Mayor)<sup>3</sup>.
- **Sustain existing economic activity** in low carbon sectors in Haringey – there approximately up to 800 SME businesses in Haringey working in the construction sector as a whole and 3,000 people employed in this area across the Upper Lee Valley. The environmental and low carbon sectors in Haringey have **a combined annual turnover of approximately £267m**<sup>4</sup>.

- **Support regeneration:** Over the next 15 years Haringey has plans to build around 15,000 new homes, commercial space and new leisure attractions in the borough. Improving transport infrastructure and managing the growth of car travel will be essential to avoid additional congestion and air quality impacts. Establishing a vehicle to finance and deliver decentralised energy networks would help developers to meet the stringent targets for energy reduction imposed at a regional and national level. Retrofitting homes with external solid wall insulation can in some parts of the borough help to improve the visual appearance of existing housing stock in the area giving this a “facelift” and supporting wider regeneration activity.
- **Increase health & well being: mitigate the estimated £100m per annum cost to NHS Haringey** from health impacts associated with inactive lifestyles, obesity, poor quality housing and fuel poverty. The estimated health cost in Haringey related to “excess winter deaths” is in excess of £2 million. Evidence suggests that approximately 39 per cent of people living in fuel poverty experience some level of mental health illness.<sup>5</sup>
- **Energy efficiency measures** installed in homes have the potential to **reduce home energy consumption by up to approximately 60%** thereby **mitigating the 62% and 70% rise expected for electricity and gas respectively by 2020<sup>6</sup>**. In addition this will help to mitigate fuel poverty risk which has risen in fourteen out of a total of eighteen wards in Haringey during the period 2006 to 2010 and is 7% higher in Haringey than the average for London<sup>7</sup>.
- **Prevent the budget deficit from increasing:** Haringey’s corporate energy & sustainability improvements could lead to **avoided energy costs of £7.4m per annum by 2014/15, equivalent to around one quarter of the Councils total budget gap for 2013/14-14/15**. In addition, recent solar photovoltaic array investment is **creating an additional source of revenue** for the Council projected to be £100k by the time the programme has completed.

## **1.2 About this report**

This report sets out the following;

- Explanation of carbon targets and comparison with regional and national targets
- Carbon footprint for borough and the Council’s operations
- CO<sub>2</sub> reduction activity in 2010/11 and 2011/12
- Carbon Commission and 40:20 Action Plan
- A look at the key projects taking place in the year ahead

### 1.3 Summary

Haringey has made significant commitments to reducing carbon emissions while tackling inequality. Through the adoption of the Carbon Commission recommendations and an action plan to begin to implement these, the Council has **established itself as a leading London borough**.

There have been **significant practical achievements** over the past year, particularly in improving the energy efficiency of buildings, developing new models of partnership working between the Council and local community, and creating visible exemplar green buildings that will further help to engage local communities. Some of the headline achievements outlined within the report are can be seen below:

- Engaged with over 70 experts and local activists as part of the Carbon Commission to identify the measures needed to reduce emissions and tackle inequality
- Established the SIF and SSIF and used these funds to implement energy saving projects with a cumulative carbon saving of 1470 tonnes
- Identified significant projects for 2012/13 and beyond that will almost double the savings achieved so far
- Agreed a solar PV installation programme for the Council estate
- Improved the energy efficiency of our housing stock
- Supported community projects including EN10ergy, 100 Homes, The Community Energy Lab and 21<sup>st</sup> Century Homes to deliver behaviour change messages and retrofitting installations
- Launched the Green Light North London programme and supported business across the borough
- Encouraged hundreds of residents to take up cycling and walking
- Carried out detailed feasibility and business planning work to support future development of ambitious plans for housing retrofit and decentralised energy
- The RE:NEW energy efficiency scheme in Northumberland Park brought energy saving devices, such as energy monitors, to 1,500 homes.
- The Warm and Healthy campaign resulted in 400 wellbeing checks to help older residents keep warm over the winter period

The Haringey 40:20 steering group and wider membership body will be instrumental in galvanising residents and businesses in Haringey into action, bringing about significant social and economic benefits for the borough. Working groups are currently being formed and are looking to recruit members to take forward specific actions.

**If you are a local person with an interest and expertise to offer please contact [haringey4020@haringey.gov.uk](mailto:haringey4020@haringey.gov.uk)**

# Quick Facts

## Total CO<sub>2</sub> emission for Haringey

In Haringey more than **50 per cent of direct emissions are domestic**, around 30 per cent are from industry and commercial and less than 20 per cent are from roads.

## Total greenhouse gas emissions

Total carbon emissions for Haringey were 1,035kt in 2008, **equivalent to the emissions from 325,000 average cars** over the course of a year – around one tenth of all cars owned in London.

## Direct emissions versus consumption emissions

Taking into account the energy used to produce goods and services, it is estimated that this would more than **double Haringey's carbon footprint** from 1,035kt CO<sub>2</sub> per annum to 2,533kt CO<sub>2</sub> per annum.

## Haringey greenhouse gas emissions

**CO<sub>2</sub> accounts for more than 99 per cent** of Haringey's greenhouse gas emissions. Most Carbon emissions come from everyday energy use such as travel, entertainment, heat and lighting, food and drink.

## Link between household income and CO<sub>2</sub> emissions

Average direct household emissions are around **one fifth lower in the east of the borough** compared to the west of the borough.

- In **Tottenham Green ward 56 per cent of the population do not own a car** compared to 35 per cent in Highgate. Multiple car ownership in Highgate is more than double that found in Tottenham, 18 and 7.6 per cent respectively.
- Overall the average carbon footprint based on direct energy use and consumption is **38 per cent lower in the east compared to the west of the borough**.
- If average household incomes in the east of the borough increase to the levels of those in the west this could **increase total CO<sub>2</sub> by 35 per cent** or 1,266,300t.

## London's carbon footprint

Haringey contributes to around **2.3 per cent of the total carbon footprint of London**, and has the ninth lowest emissions of all boroughs in London, as a result of high levels of income deprivation within the borough.

Figure 1. Quick facts

## 2. Haringey's Carbon Footprint

In November 2009, Haringey became the first major local authority to adopt a target to reduce carbon emissions by 40% by 2020 (against a 2005 baseline), in response to a Friends of the Earth campaign involving hundreds of local residents.

Carbon emissions resulting from activity in Haringey can be divided into two types:

- **Direct** emissions are those which relate to energy and transport fuels used in the borough.
- **Indirect** emissions are those which relate to goods or services used in the borough.

### 2.1 Direct and indirect CO<sub>2</sub> emissions

An analysis of indirect CO<sub>2</sub> emissions takes into account the energy that has gone into producing the goods and services that are used in Haringey, with these emissions often happening outside the UK. The things we buy, from food & drink to consumer goods and entertainment, all have a carbon impact irrespective of where they are produced. The people who live and work in Haringey therefore have a role in contributing to CO<sub>2</sub> emissions elsewhere in the world.

Considering the indirect energy use alongside the direct sources already discussed more than doubles Haringey's carbon footprint (from 1,035kt to 2,533kt per year). See Figure 2 below for the breakdown of emissions in Haringey.

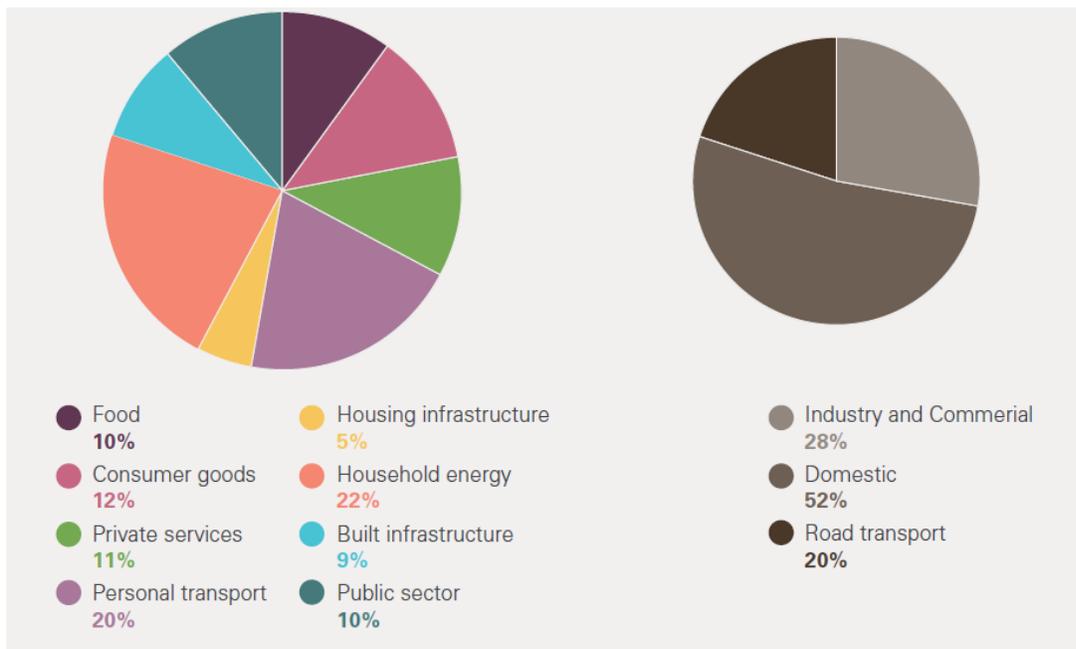


Figure 2: Breakdown of indirect (left) and direct (right) CO<sub>2</sub> emissions in Haringey

## 2.2 Direct CO<sub>2</sub> emissions

### 2.2.1 Calculation

Direct CO<sub>2</sub> emissions are calculated by measuring energy and fuel use in the borough, and then applying a standard national factor for each. This approach means that carbon emissions are attributed to the point where fuels are used, and so emissions from cars and buses travelling through the borough contribute to Haringey's carbon footprint.

### 2.2.2 CO<sub>2</sub> emissions levels 2005 - 2010

Table 1 shows CO<sub>2</sub> emissions from the residential, commercial/industrial and road transport sectors for Haringey, over the period 2005 -2010

At the last Annual Carbon Report in January 2011, CO<sub>2</sub> emissions levels for the borough had fallen by 1.1% from the baseline year 2005. By 2010 emissions have fallen by 9.3%, just below the 13% CO<sub>2</sub> reduction needed to put the borough on a straight line trajectory towards a 40% reduction by 2020.

Some of the factors that contributed to this decline in CO<sub>2</sub> emissions have been the switch from coal to gas fired electricity generation, rise in fuel costs and the economic downturn. At a global level it was anticipated that the economic decline could have halted the level of global CO<sub>2</sub> emissions however this was not the case due to the significant growth of carbon intensive activity in countries such as China, the USA and India<sup>8</sup>.

Year	Industry and Commercial	% change from 2005	Domestic	% change from 2005	Road Transport	% change from 2005	Grand Total	% change from 2005	Population ('000s, mid-year estimate)	Per Capita Emissions (t)	% change from 2005
2005	298.7	-	547.0	-	199.5	-	1,045.2	-	224.4	4.7	-
2006	312.5	4.6%	541.7	-1.0%	199.9	0.2%	1,054.0	0.8%	225.4	4.7	0.0%
2007	278.7	-6.7%	526.3	-3.8%	200.2	0.4%	1,005.3	-3.8%	224.7	4.5	-4.3%
2008	319.0	6.8%	523.1	-4.4%	191.5	-4.0%	1,033.5	-1.1%	225.3	4.6	-2.1%
2009	282.2	-5.6%	466.7	-10.8%	182.6	-4.6%	931.4	-9.9%	225.5	4.1	-10.9%
2010	292.2	-2.2%	501.9	-8.2%	181.1	-9.3%	975.1	-6.7%	225.0	4.3	-8.5%

Table 1: CO<sub>2</sub> emissions by sector, 2005 – 2010 (DECC, 2012)

### 3. The Council's Carbon Management Plan

Haringey Council is the borough's largest employer, and with a number of buildings, a large vehicle fleet and wide array of services being provided, it is one of the more significant sources of non-domestic emissions. As at April 2007, the Council's own operations accounted for 3.5% of total borough-wide CO<sub>2</sub> emissions.

#### 3.1 Emission baseline and target setting

The Council's CO<sub>2</sub> 2006/7 baseline has been calculated to be 36,583 tonnes per annum. Figure 3 presents a percentage breakdown of the sector emissions.

Our carbon management plan for our own estate has been in operation since March 2010, and we have an ambitious target to reduce our own emissions by 40%, relative to our 2006/7 baseline, by 2014/15.

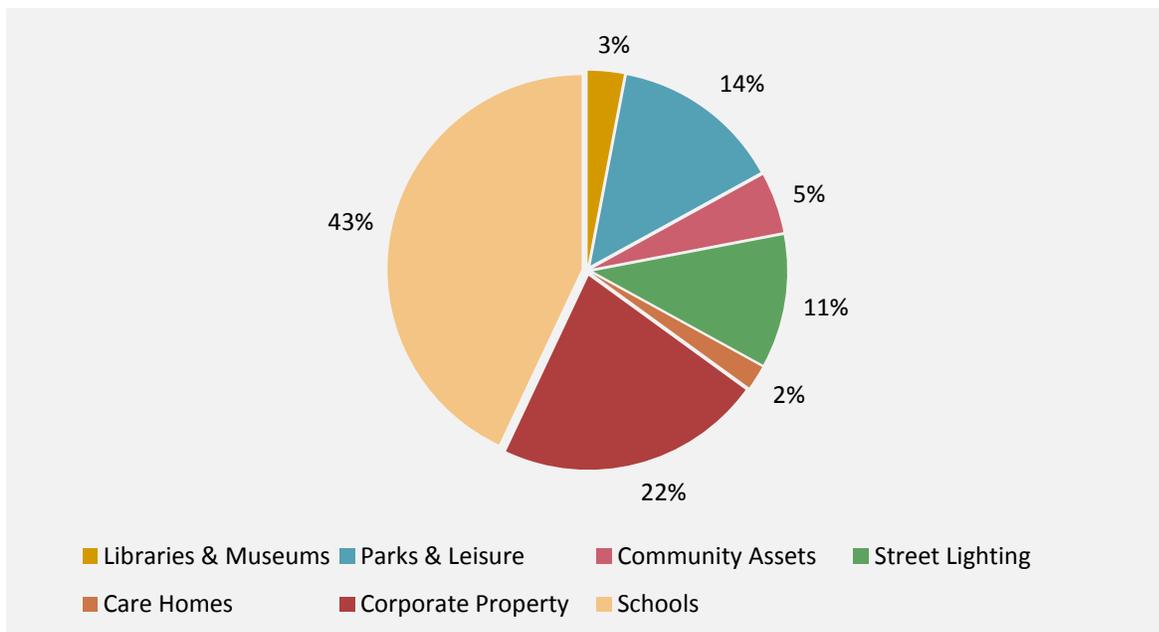


Figure 3: Carbon emissions from Council operations listed by source for 2007

## 3.2 Progress to date

### 3.2.1 Installing energy, heat and water saving measures

The Sustainable Investment Fund (SIF) is a £1 million, ring-fenced fund supplementing Business Unit budgets ensuring that installations and works are not simply replaced, but completely upgraded mainstreaming whole-life costing by removing the 'price premium' and focusing on the combined costs of price, operations and disposal. The success of the SIF provided the evidence base to produce the Schools Sustainable Investment Fund (SSIF). This operates as the SIF but is derived from the overall sum of existing school balances. The SSIF loan funding available will vary year-on-year, but will never exceed 12.5% of total balances. Using these funds, the Council has undertaken a range of energy efficiency projects from lighting upgrades to swimming pool covers saving heat. A full inventory of projects implemented is detailed in Appendix 1. Key achievements include:

- By the end of 2011-12, the sustainable investment funds had supported the delivery of projects with a cumulative carbon benefit of 1,470 tonnes (weather corrected) – **this equates to 40% of the total CO<sub>2</sub> reduction target achieved.**
- SIF schemes have led to avoided costs of over £0.25m per year. This reduction eases budgetary pressures within the Council, which exist following funding cuts resultant of the Comprehensive Spending Review 2010.
- Looking forward to 2012-13 and beyond, the Council has a series of sustainable investment fund supported initiatives, which could see us almost double the impact that the funds have achieved to date.
- To increase activity in this area the Council is seeking additional external support as, following funding cuts; to undertake tasks such as project management for work in schools. A Muswell Hill based social enterprise (funded with start up funding from the Council) – EN10ERGY – has provided support to install a raft of energy efficiency measures in a small number of Tottenham primary schools. Should this programme be successful, the intention is to role the programme out to all primary schools in Haringey, thus creating economies of scale – reducing product and installation costs and increasing coverage of our carbon reduction work.

### 3.2.2 40% CO<sub>2</sub> reduction target

- Progress against towards the 2014/15 target is shown in table 2 below.
- 2011/12 was the first year following the completion of the Building Schools for the Future programme. The programme was a big success in terms of environmental sustainability. All works to secondary schools were completed with either 'Excellent' or 'Very Good' BREEAM status and Heartlands High School won Best Green Design at the Haringey Design Awards 2012. The building includes the following features: passive solar gain and shading; gas fired combined heat and power; ground source heat pumps; photovoltaic panels; living willow walls; sedum green roof; locally sourced bricks; recycled aggregates; and an existing historic wall incorporated into the design.
- On an energy used per square meter basis, secondary school consumption actually decreased following the delivery of BSF. However, the number of schools has increased, the size of our schools has increased and we have increased the amount of technology in our schools – fantastic for pupils but a dent in our carbon reduction performance as gross energy consumption has increased.
- Whilst secondary school emissions increased, the Council was able to mitigate the effects on the overall footprint with a series of energy efficiency projects. Indications in 2012-13 are that we are beginning to close the gap on our targets.

Year	Target CO <sub>2</sub>		Actual CO <sub>2</sub>		Cars off the Road
	Tonnes	%	Tonnes	%	
2006/7	Baseline		41,999		
2007/8	N/A	N/A	41,597	-0.96	126
2008/9	40,975	-2.5	40,867	-2.70	356
2009/10	39,428	-5.5	38,618	-8.05	1,062
2010/11	37,152	-10	36,851	-12.26	1,617
2011/12	33,581	-15	38,323	-8.75	1,155
2012/13	30,709	-20	36,773	-12.44	1,641
2013/14	29,479	-30	-	-	-
2014/15	26,266	-40	-	-	-

Table 2. Corporate carbon reduction progress

### 3.2.3 Renewable energy - solar photovoltaic programme 2011-2012

In July 2011, Cabinet agreed a £16m solar PV installation programme on Council buildings, schools and social housing. A key objective of the programme was to generate revenue to support action on the 40:20 Commission and other frontline services. The financial implications of the solar PV programme were the generation of £253k income and avoided electricity costs of approximately £270k per annum for the benefactors of the solar installations (residents, schools and the Council).

Due to the government's attempts (and ultimate failure) to amend feed-in-tariff rates for the 12th December 2011 and subsequent revision of the date to the 3rd March 2012, the market experienced a micro boom and bust cycle, resulting in bottlenecks in supplier capacity before each deadline revision. This significantly impacted on the Council's programme, which was scaled back from a potential 5.5MWp to 369kWp.



During 2011/12 the solar PV was installed on 13 hostels, 12 social housing blocks across 9 estates and one office around the borough. The Council anticipates benefitting from approximately £26,000 per annum which will be used to pump prime green initiatives across the borough.

The installations are also anticipated to reduce carbon in the borough by 156 tonnes per annum.

On residential properties eco retrofitting of energy efficiency measures and solar panels could create significant employment opportunities in Haringey in addition to mitigating rising energy costs and increasing warmth and comfort. Currently the Council was negotiating with our solar PV roof rental provider over ambitious plans to install arrays on one of our large street property estates.

## 4. Reducing Carbon Emissions in the Community

---

There is great potential for reducing carbon emissions in Haringey, through coordinated action from residents, businesses, the council and other public sector organisations.

Action to reduce carbon emissions 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 Haringey Carbon Commission reporting in October 2012, have **developed a set of recommendations which together form the foundations of a transition to a low carbon economy**. The various roles for civil society, business and government are detailed in the main body of the Commission's report. A supportive national policy framework is required to fully realise the 40 per cent reduction in carbon emissions and associated economic benefits.

### 4.1 *Carbon saving measures*

An indication of the scale and mix of the measures that could be needed to meet the 40% target has been provided using 'carbon reduction scenario modelling' that has been carried out for Haringey, as detailed in Appendix 2. This is shown against a "local delivery" scenario which, while extremely ambitious to achieve could be possible if the recommendations from the Carbon Commission are fully implemented and would lead to a 30% CO<sub>2</sub> reduction saving by 2020. The periods 2010-2015 and 2016-2020 provide an indicative "carbon budget" for each period. An indication of the scale for some of the measures needing to be implemented across the borough are highlighted in Figure 4 below.

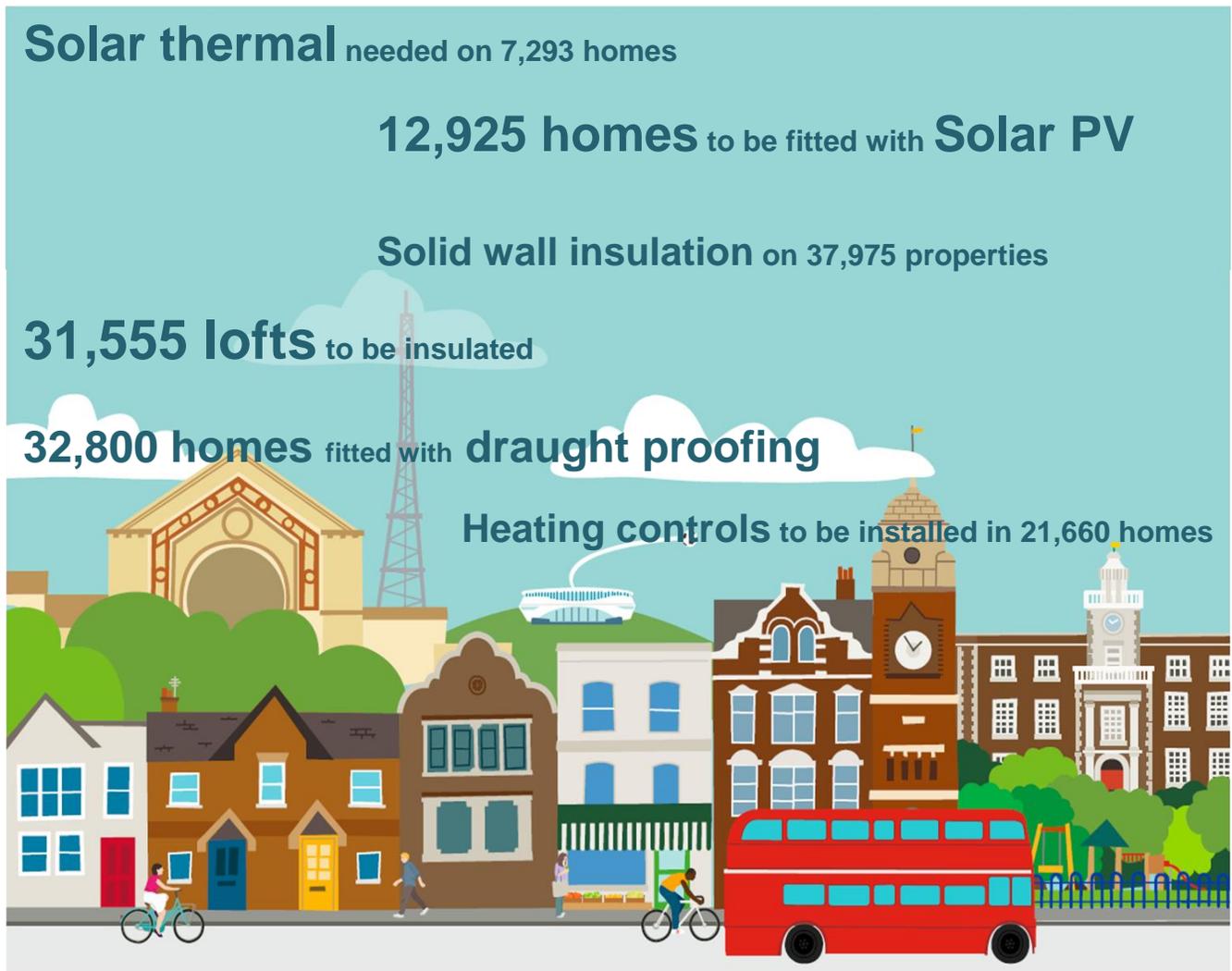


Figure 4. Setting the scene for a substantial home retrofit – some of the measures needed across Haringey by 2020

## ***4.2 Borough wide partnership and action plan***

### **4.2.1 Haringey 40:20**

Haringey 40:20 was launched in January 2011, as a membership organisation for all residents, businesses and organisations working together to achieve 40:20.

A steering group has been formed with representatives from the voluntary sector, social enterprises, the Housing ALMO, cross party Councillors and Council officers. The steering group fed into the Carbon Commission, taking part in discussions and reviewed draft papers. Working groups are currently being formed and are looking to recruit members to take forward specific actions. If you are a local person with an interest and expertise to offer please contact [haringey4020@haringey.gov.uk](mailto:haringey4020@haringey.gov.uk)

The second Haringey 40:20 action conference was held in October 2012 and over 100 people attended to discuss the Carbon Commission's recommendations and begin to form working groups to develop local action further. A full write up of the report is available at [www.haringey4020.org.uk/conference](http://www.haringey4020.org.uk/conference)

## 4.2.2. Haringey Carbon Commission and Action Plan

The Commission report presents the final recommendations of the Haringey Carbon Commission, set up to identify measures to achieve a 40% CO<sub>2</sub> reduction in Haringey, taking an approach that also addresses inequality in the borough. The Commission is supported by *new economics foundation*, a leading think tank in the sector.

The full action plan is included in Appendix 3 of this report. A summary of the key recommendations that have been agreed by Cabinet are shown in figure 4 below.

**A full copy of the Commission Report 'A Sustainable New Economy' is available at**  
[www.haringey4020.org.uk/report](http://www.haringey4020.org.uk/report)



**CARBON**  
Commission

## Steering Group Members

**Cllr Joe Goldberg**, Cabinet Member for Finance & Sustainability, Chair  
**Dermot Barnes**, EcoDomus  
**Johnathan Boswell**, Highgate Climate Action Network  
**Quentin Given**, Friends of the Earth, Ferry Lane Action Group  
**Anne Gray**, Green Party, Growing in Haringey  
**Cara Jenkinson**, EN10ERGY  
**Leyla Laksari**, Living Under One Sun  
**Peter Maddison**, Homes for Haringey  
**Cllr Antonia Mallett**, West Green Ward Councillor, LBH  
**Alan Morton**, Muswell Hill Sustainability Group  
**Adam Parvez**, Environmental Resources Officer, LBH  
**Nicky Price**, Tottenham Traders Association, Tottenham Carnival  
**Nick Powell**, Head of Carbon Management & Sustainability, LBH  
**Joyce Rosser**, Sustainable Haringey  
**Jessica Sherlock**, Policy & Projects Manager, LBH  
**Cllr Juliet Solomon**, Alexandra Ward Councillor, LBH  
**Jacinta Walters**, Homes for Haringey

**“We are looking for local people to join our working groups who are interested in reducing inequality and carbon in the borough and feel they have skills they can share with us”**

**To get involved please email**  
[haringey4020@haringey.gov.uk](mailto:haringey4020@haringey.gov.uk)

## 1. CREATE BUSINESS MODELS

### WHICH REINVEST WEALTH BACK INTO THE BOROUGH

The development of mutual enterprises is an effective way to reinvest wealth back into the borough by giving local people a stake and a share in the resulting benefits and responsibilities. Direct involvement in the enterprise as a member, employee or customer is also a way to encourage sustainable action more widely.

#### Alternative energy supply mutual

Set up an **alternative energy supply mutual** working with at least one other north London borough to create a scale of investment opportunity and reduce costs.<sup>4</sup> The company will finance and deliver heat and energy networks, serving residential, public and commercial buildings. Profits would be re-invested into further low-carbon development.

#### A retrofitting co-operative network

Develop a retrofitting network of co-operatives with at least one other London borough to deliver the scale of intervention needed to reap the financial benefits.<sup>5</sup> The retrofitting co-operative would provide a flexible structure to deliver a range of local services associated with retrofitting activity and for **contracting with local installers**, including the Green Deal and ECO subsidy financed measures. This would build on previous technical and financial modelling work carried out with the London Borough of Islington and the wider north London Local Carbon Framework group involving Camden, Hackney, Newham and Waltham Forest to identify mechanisms to drive a large-scale retrofit programme.<sup>15b)</sup>

## 2. BUILD A LOW CARBON ECONOMY

Establish a **low carbon enterprise district** in the Upper Lee Valley, safeguarding land for the purpose of pro-actively recruiting enterprises to co-locate in the area. Provide incentives and broker partnerships to support closed loop production systems with the support of the Low-Carbon Innovation Labs.

The Council should show leadership through its procurement strategy, business support services and influence over local business rates to drive development of the local sustainable supply chain and retain value in the local economy.

**Develop partnerships with training providers** to carry out skills development initiatives in emerging sustainable industries. In the short term this should be focussed on eco-retrofitting and the Green Deal to support the development of the co-operative network.

## 3. BOOSTING INNOVATION

Continuing business as usual will not deliver the scale of change necessary. In this report we strongly recommend that the Council actively promotes innovation, and develops prototyping and demonstration projects to effectively launch ideas into borough-wide action.

This requires working in partnership with a range of lead businesses, higher education and research partner organisations, funders and local sustainability groups to establish Low-Carbon Innovation Labs in three areas of activity:

- (i) **Low-carbon technology** and building design demonstrator projects on Council properties, new developments and social housing.
- (ii) **Social innovation** in service provision, developing prototypes for new service offers and mechanism to drive adoption of long term low-carbon goods and services.
- (iii) **Financial mechanisms** to support the financing of infrastructure improvements, measures with longer payback periods and integrated delivery of measures.

## 4. INVEST IN LOW-CARBON TRANSPORT

Three priority areas of action are identified.

**“Go Dutch.”** Work with local people to identify where segregated **cycle lanes, improvements to urban design** and smaller scale changes such as cycle parking are needed. To enable these changes, space for walking and cycling will need to be created by progressively removing private car parking spaces.

**Develop the market for alternative fuelled vehicles** by providing incentives and supporting the growth of new alternative refuelling stations within a new low-carbon enterprise district in the Upper Lee Valley.

Develop strong **shared transport plans** with neighbouring boroughs to tackle the 88 per cent of journeys that start and end outside the borough, beginning with Enfield and Waltham Forest and Lobby for investment into transport (low carbon bus network, tube extension, east to west bus link).

## 5. STRENGTHEN COMMUNITY ORGANISATIONS

The Council needs to help **increase the reach and impact** of community and voluntary organisations that are already encouraging a transition to more sustainable lifestyles. Examples of support may include access to resources and know how as part of the social innovation lab and competitive funding to seed innovation.

Drawing on the diversity of the borough the Commission recommends an awareness campaign to **twin six Diaspora communities in Haringey to those around the world on the front line of climate change**. This is a mechanism not only to share best practice and innovation but also to tangibly connect local action to global consequences.

Figure 5. Summary of Carbon Commission Recommendations taken from the Commission's Report 'A Sustainable New Economy'

## **4.3 Practical action delivered during 2011-12**

### **4.3.1 Trailblazing pilot projects**

#### **Local Carbon Framework Pilots**

Haringey was one of 9 local authorities selected to take part in the Department of Energy and Climate Change (DECC) Local Carbon Framework (LCF) Pilot Project. This nationwide initiative was set up to explore how national carbon targets can be achieved on a local spatial level. Funding for several projects was awarded to help the Council develop the 40:20 Action Plan.

Haringey has been working in partnership with a number of boroughs in the north London region on the LCF pilot. Many of the key priorities for local authorities such as decentralised energy, retrofitting building and transport infrastructure, growing the green economy, employment and skills are likely to benefit from attracting economies of scale and investment and enabling Councils to share expertise.

The Carbon Commission reviewed these studies in addition to other evidence in order to make their recommendations for the 40:20 Action Plan.

The 5 LCF studies carried out look at:

- [Housing retrofit potential in North London](#)
- [Solar Power on Council buildings](#)
- [Green enterprise in the Upper Lee Valley](#)
- [Selling electricity from Combined Heat and Power Schemes](#)
- [Producing guidance for Decentralised Energy Schemes](#)

#### **100 Homes Project**

Based on the Muswell Hill 100 Homes project and learning some lessons from Low Carbon West Oxford's Low Carbon Living Programme, a new project has been launched in 2012 to reach further communities, focusing on the Haringey Ladder, St Anns, Noel Park and Crouch End. Volunteers work with the paid coordinator to offer home visits where carbon foot printing and energy assessment questionnaires are completed with the householder. Workshops offering practical demonstrations are also held and participants are able to share details of reputable installers as well as participate in a Low Carbon Buying Scheme.

## EN10ERGY

EN10ERGY a community energy company supported with start-up funding from the Council in 2010 is currently working with Haringey Council's Sustainable Business on a pilot with six schools in Tottenham.

The pilot aims to demonstrate the potential for bulk purchasing energy saving measures such as voltage optimisation and quick pay back of energy saving measures that can then be promoted more widely to schools in Haringey. In the past the Council has found it difficult to encourage schools to take part in eco-retrofitting despite the availability of the Schools Sustainable Investment Fund, a zero interest loan available for quick payback energy efficiency measures – this partnership aims to overcome this challenge.

Building on this foundation of delivering community benefit EN10ERGY have also been actively:

- negotiating bulk deals with suppliers of energy saving measures e.g loft insulation, condensing boilers, solar thermal heating
- making householders aware of local grant schemes to allow them to implement measures as cheaply as possible
- raising awareness in the wider community through working with local schools/parents associations and residents associations

### 4.3.2 Low Carbon Zone

The LCZ has achieved a 17% saving to date making it one the most successful Zones in London. A full evaluation report is currently being produced.

The Muswell Hill Low Carbon Zone is an innovative carbon reduction project delivered through collaboration between Haringey Council, Muswell Hill Sustainability Group, local residents groups, businesses and the London Sustainability Exchange, supported by the Mayor of London and Department of Energy & Climate Change.

The project aimed to achieve a 20% carbon saving from the 2009 base line by 2012. There are several work streams ongoing in the Zone setting it on the path to achieving the 40:20 target of 40% in 2020, and the GLA target of 65% in 2025. A timeline of the project is attached in Appendix 4.



The Muswell Hill area was selected by the Mayor of London because of the level of commitment shown by the local community to the aims of the project and the innovative approach proposed involving establishing a social enterprise company (EN10ergy) to create a long term vehicle for delivering carbon saving schemes in the area and working through local networks to promote take up of schemes. In addition to this the area provided a good test case to address the challenges posed by working in a Conservation Area with predominately technically hard to treat privately owned Victorian properties.

Carbon savings in the zone were achieved across a number of sectors and are related to direct emissions related to buildings across the 860 homes, 60 SME's and community buildings. This also included:

- 735 halogen lights in homes replaced with LED bulbs
- Boiler and lighting replacement at the Muswell Hill Community Centre
- Lighting and hand dryers replaced at the local library
- Lighting and controls replaced at the North London Performing Arts Centre with a predicted financial saving of over £5,000 off their annual bill
- Saving over £13,000 across 12 businesses through lighting changes

The principle method of community engagement was through a network of neighbourhood champions and volunteers organised by a dedicated community coordinator with each scheme supported by a full time Council Officer as outlined below.

- 8 'In The Zone' newsletters to over 1000 properties
- 6 steering group members
- 19 home door knocking volunteers
- 3 neighbourhood champions
- 5 business engagement volunteers
- 18 LCZ stall volunteers
- 7 event & workshop volunteers



Residents and Businesses in the Zone did not just receive occasional contact but were immersed within an on-going programme of community events door knocking, newsletters, information evenings and other events promoting uptake of a range of initiatives from behaviour change to installation of energy saving physical measures.

- 650 homes door knocked
- 453 home energy audits completed
- 5,116 inexpensive measures installed
- 235 medium value measures installed

### 4.3.3 Haringey 40:20 Community Fund - Grants for local projects

This fund, for local groups in Haringey, was made possible through feed-in-tariff payments from solar panels on local schools and through sponsorship from British Gas.

#### Community Energy Lab

The Community Energy lab, operating from the Selby Centre in North Tottenham, aims to retrofit existing 'hard to treat' homes in Haringey. This will be done by training disadvantaged young people in retrofitting techniques using a variety of insulation materials, some of which will be waste insulation materials from construction sites diverted from landfill.

The project will take on two trainees, five work placements and two staff – over the first six months the project aims to retrofit thirty homes, and some buildings at the Selby Centre, creating direct annual savings of approximately fifteen tonnes of CO<sub>2</sub>.

*We are very excited to get this project off the ground. The opportunity to provide much needed training and green jobs in Tottenham is really fantastic.*

**Abigail Stevenson, The Community Energy Lab**

#### Highgate Society

The Highgate Society, working with Muswell Hill Sustainability Group are planning to encourage the take up of green retrofitting measures among the local 'able-to-pay' sector of their community through a weekend event followed by a series of outreach projects. The weekend event included ask-an-expert sessions ('house clinics, renewable energy clinics and window clinics') plus an exhibition largely from local suppliers. Alongside 'open house' tours of local houses that have been eco-refurbished. An information pack for distribution via estate agents with information on refurbishment and energy, local contacts and funding is also being developed. The Highgate Society plans to follow-up this event with a series of regular talks, house visits and local workshops on a monthly basis until February 2013. In January, a thermal imaging specialist will carry out a survey showing where heat is being lost from homes, and present the results to launch a spring programme promoting insulation.

*We are very pleased that our bid was successful – taking part in the application process really helped our plans and the funding will make a huge difference in getting our project off the ground*

**Jackie Jones, Highgate Society**

#### 4.3.4 Working with small and medium sized enterprises

With a target to work with 100 Businesses by March 2013, Haringey council is currently supporting 31 local businesses through the Green Light North London programme. Green Light North London is part funded by the European Regional Development Fund and supports small and medium sized businesses to improve their environmental performance, cut costs and gain more business. Each business receives a site visit, bespoke action and follow-on support and several businesses have already made substantial savings:-

- A local dentist has recently replaced their halogen lighting for LED's saving just over £1,000 per annum in energy and replacement costs.
- By switching to a green energy tariff a gym saved £100 per annum
- A warehouse has diverted 7.5 tonnes of waste from landfill for free



#### 4.3.5 Home energy efficiency programmes

There have been significant achievements in helping to reduce fuel poverty. A mailing exercise in January 2012 resulted in Haringey being the highest Warm Front referring borough in England for February and March.

From 2010/11 to 2011/12 over £1,000,000 has been spent as part of the Warm Front scheme making homes warmer and more energy efficient in the last year.



Other initiatives have had similar successes; the RE:NEW energy efficiency scheme in Northumberland Park and White Hart Lane have brought energy saving measure to 1,510 homes. The Warm and Healthy campaign resulted in 400 wellbeing checks to help older residents keep warm over the winter period.

### 4.3.6 Homes for Haringey

#### Decent Homes Programme

The Decent Homes programme began in 2008. The scope of works includes measures such as insulation, heating systems and double glazing that can improve the energy performance of homes. The table below shows the numbers of dwellings that benefited from energy efficiency improvements in the Decent Homes Programme in 2010/11 and 2011/12. Homes for Haringey also carried out additional boiler renewals outside of the Decent Homes Programme included in the table below.

	2010/11	2011/12	Total
<b>Loft Insulation</b>	440	340	780
<b>Cavity Wall Insulation</b>	180	190	370
<b>Heating/Boiler Renewal</b>	497	594	1,091
<b>Double Glazing</b>	1,071	1,023	2,094
<b>Other Boiler Renewals</b>	1,050	1,135	2,185

#### Community Energy Saving Programme (CESP)

Since its launch in 2009, Homes for Haringey have been working with various obligated parties to achieve a viable CESP scheme. In early 2010/11, we began working with SSE and secured CESP funding for eligible measures in the 2010/11 and 2012/13 Decent Homes Programme. This is estimated to deliver around £160k of energy efficiency improvements including cavity wall insulation, loft insulation, boiler renewal and double glazing.

#### Energy Strategy and Housing Stock Energy Study

Work commenced on our new Energy Strategy in 2011/12 with the production of a comprehensive Housing Stock Energy Study (HSES). This study has calculated the average SAP rating of the stock to be 60 (SAP2005). The HSES defines a number of archetypes that represent the stock and suggests a tailored set of energy improvement measures for each archetype to achieve:

1. SAP rating of 80; and
2. A 60 % reduction in carbon emissions (where realistically achievable)

The HSES energy study has been used to inform the Housing Strategy to be published shortly (currently in 5<sup>th</sup> draft).

## Energy Efficient 'Pod' Pilot

The pilot of 183 and 183a Gladstone Avenue is a retrofit project to help understand the technical difficulties with whole house retrofit in preparation for potential Green Deal initiatives and also to meet the challenge of planning and conservation area requirements. The pilot saw old bathroom 'pods' removed and replaced with a new prefabricated 'pod'.

Some of the energy efficiency measures carried out on the pilot project of 183 & 183a Gladstone Avenue and benefits are:

- 90% of the old pod is recycled
- Solid wall insulation, under floor insulation, double glazed windows and loft insulation were installed to the external walls
- The before SAP rating of the properties of 183 & 183a Gladstone Avenue were 57 and 47 respectively and after the energy efficiency work and pod replacement is 73 and 80 respectively.



## 4.3.7 Sustainable Transport & Smarter Travel

Since April 2012, Haringey's smarter programme has delivered 20 road shows, with 1012 Smarter Travel questionnaires completed. 680 questionnaires completed for Walk and Cycle to the shops initiative. In addition **34 Dr Bike sessions** fixing 573 bikes (from April to July 2012) have taken place and **772 children and 146 adults have received cycle training**.

A number of installations have taken place across the borough:

- **68 new cycling parking spaces**
- **96 car club bays**
- **19 electric charging points** available through the source London scheme.

Haringey was **awarded Biking Borough status**, enabling Council to obtain additional cycling funding from TfL to promote cycling uptake in borough.

In March, Haringey Council won the **Transport Times 'Most Improved Transport Borough of the Year Award, 2012'** in recognition of delivering a range of sustainable transport initiatives across the borough, which improves access for all, and facilitates behavioural change to low carbon modes of travel.

**18 Haringey schools received TfL's sustainable travel accreditation** award which included 3 gold 2 silver and 13 bronze. Bounds Green School has received a Beacon Award from TfL for their work on their School Travel Plan



**DIY Streets** scheme in Langham Road and Turnpike Lane area completed in Spring 2012. Post completion photos below.

Further Community street schemes are being progressed in Hornsey and Warwick gardens during 2012-13.

#### 4.3.8 Exemplar green buildings

##### **Heartlands School, Best Green Design, Haringey Design Awards 2012**

The Heartlands School in Wood Green completed in 2012, funded by the Building Schools for the Future Programme, achieved BREEAM excellent standard and demonstrates to the wider community the following features: Passive solar gain and shading, gas-fired heat and power, Ground Source Heat Pumps, Photovoltaic panels, living willow walls, Sedum roof, recycled material and locally-sourced bricks, as well as the incorporation of an existing historic wall.



## The Lordship Rec Passivhaus

The 2<sup>nd</sup> of its kind in London this zero carbon community and environmental education centre was built as part of the redevelopment of the Lordship recreation Ground in Tottenham.

One of the most innovative aspects of the building is its use of straw bale wall



construction, a waste product of the agricultural industry. As well as providing a valuable opportunity for the local community to be involved in the buildings construction as volunteers, straw is super insulating, and locks in CO<sub>2</sub> absorbed during its growth period. Along with gabion wall protection, the straw bale walls are a robust but friendly building element.

## 5. Looking at the Year Head

---

### *5. 1 Alternative energy network*

Haringey is currently developing plans for a cross borough vehicle to deliver an alternative energy network in the Upper Lee Valley. The network will provide a low carbon, long term stable priced source of heat to commercial and domestic users, thereby supporting the competitiveness of the economic area and potentially attracting new industry to locate in the Upper Lee Valley. **The scheme would be the first of its kind in London.** A business case and plan for the scheme are being presented for discussion by Councillors in early 2013.

### *5. 2 Low carbon economic area*

The Council has recently set up a cross borough initiative to begin to develop plans for a low carbon economic area in the Upper Lee Valley. It is calculated that the **environmental and low carbon sectors in Haringey already have a combined annual turnover of approximately £267m.**

The sector is currently one of the fastest growing in the UK and the Council plans to ensure that Haringey benefit from its fair share of this growth through a range of measures and levers, including (but not limited to), provision of infrastructure to create a low carbon competitively priced source of heat and energy, developing collaborative partnerships to support innovation and co-location of businesses to generate additional value from waste resources arising from industrial processes.

Detailed proposals are being developed working with neighbouring north London Boroughs and the North London Strategic Alliance in 2013/14.

### *5. 3 Large scale housing retrofit*

The Council is developing proposals to support growth of the housing **retrofit market in the borough which is projected to be worth up to £1bn over the next 10 years** for the north London sub-region as a whole. Earlier this year, the Council worked with Islington Council and the Greater London Authority to develop a business case for becoming a Green Deal provider.

Although the model is not considered viable in its current form due primarily to low uptake of the Green Deal (anticipated by Department of Energy and Climate Change), the data and modelling produced for the business case are being used to develop alternative plans targeting retrofitting activity in the “able to pay” sector and social housing market, thereby avoiding the need to rely entirely on Green Deal financing.

A business case to will be presented to Council in 2013 for agreement.

## Appendix 1: Council Carbon Management Plan – progress to date and assumptions made

### Monitoring and Performance Assumptions

- All emissions are weather corrected. Weather correction provides a better indication of trends in energy consumption without extreme weather affecting the figures.
- We have left the carbon conversion factor at 0.537kg CO<sub>2</sub> per kWh for electricity and 0.185kg per kWh gas as preferred by Defra in their NI185 reporting tool. It should be noted that conversion factors vary, but this, like extreme weather conditions, distorts the figures.
- The figure for the number of cars equivalent equals 3.184 tonnes CO<sub>2</sub> per car per annum. Defra 2008.
- The 2012/13 figure is only for the rolling Quarter 1 figure (i.e. July 2011 – June 2012).

The Council has undertaken the following energy efficiency projects (*italics indicate future projects and indicative/non-validated savings*):

SIF Projects	Location	Utility	Savings p.a.		
			CO <sub>2</sub> (t)	Cost (£)	CRC (£)
<b>Boiler Replacements and Control Upgrades</b>	2 Ermine Road	Gas	9	1,459	108
	40 Cumberland Road	Gas	11	1,784	132
	48 Station Road	Gas	24	3,892	288
	639 High Road	Gas	6	973	72
	Ashley Road Depot	Gas	30	4,865	360
	Chestnuts Recreation Ground Pavilion	Gas	3	486	36
	Faith Plant Centre	Gas	105	17,027	1,260
	Finsbury Park Admin Building	Gas	18	2,919	216
	Red House Elderly Peoples Home	Gas	36	5,838	432
<b>Energy Efficient Hand Dryers</b>	Alexandra Park Library	Elec	1	186	12
	Muswell Hill Library	Elec	1	186	12
	St Ann's Library	Elec	1	186	12
	<i>13-27 Station Road</i>	Elec	1	186	12
	<i>40 Cumberland Road</i>	Elec	1	186	12
	<i>48 Station Road</i>	Elec	2	372	24
	<i>Alexandra House</i>	Elec	3	559	36
	<i>Civic Centre</i>	Elec	1	186	12
	<i>River Park House</i>	Elec	3	559	36
<b>LED Lighting</b>	Street Signs	Elec	15	28,11	1,812

			1	9	
<b>Lighting Upgrades and Controls</b>	Alexandra Park Library	Elec	2	372	24
	Marcus Garvey Library	Elec	29	5,400	348
	Park Road Swimming Pools	Elec	14	2,607	168
	Tottenham Green Leisure Centre	Elec	23	4,283	276
	White Hart Lane Sport Centre	Elec	13	2,421	156
	<i>40 Cumberland Road</i>	Elec	4	745	48
	<i>48 Station Road</i>	Elec	1	186	12
	<i>River Park House</i>	Elec	1	186	12
	<i>Alexandra House</i>	Elec	2	372	24
<b>Perlite Water Filtration System</b>	Park Road Swimming Pools	Gas	65	10,541	780
	Tottenham Green Leisure Centre	Gas	106	17,189	1,272
<b>Swimming Pool Covers</b>	Park Road Swimming Pools	Gas	84	13,622	1,008
	Tottenham Green Leisure Centre	Gas	113	18,324	1,356
<b>Street Light Dimming</b>	<i>Street Lights</i>	Elec	339	63,128	4,068
<b>Variable Speed Drives</b>	Park Road Swimming Pools	Gas	21	3,405	252
	Tottenham Green Leisure Centre	Gas	120	19,459	1,440
<b>Voltage Optimisation</b>	48 Station Road	Elec	24	4,469	288
	Alexandra House	Elec	42	7,821	504
	River Park House	Elec	116	21,601	1,392
	Wood Green Library	Elec	36	6,704	432
	<i>2 Ermine Road</i>	Elec	4	745	48
	<i>40 Cumberland Road</i>	Elec	11	2,048	132
	<i>Apex House</i>	Elec	20	3,724	240
<b>Totals to 2011/12</b>			1,204	206,141	14,448
<b>Totals All</b>			1,597	279,326	19,164

SSIF Projects	Location	Utility	Savings p.a.		
			CO <sub>2</sub> (t)	Cost (£)	CRC (£)
Auto Thermostatic Radiator Valves	Highgate Wood Secondary School	Gas	20	3,243	240
	<i>Northumberland Park Community School</i>	Gas	78	12,649	936
	South Harringay Primary School	Gas	10	1,622	120
	Stamford Hill Primary School	Gas	19	3,081	228
	<i>St Gilda's Primary School</i>	Gas	10	1,622	120
	<i>St Ignatius Primary School</i>	Gas	34	5,514	408
	<i>St Mary's RC Primary School</i>	Gas	41	6,649	492
	<i>St Thomas More Secondary School</i>	Gas	71	11,514	852
	<i>Chestnuts Primary School</i>	Gas	78	12,649	936
	<i>Lordship Lane Primary School</i>	Gas	22	3,568	264
	<i>Campsbourne Primary School</i>	Gas	32	5,189	384
	Boiler Control Upgrades	<i>Chestnuts Primary School</i>	Gas	59	9,568
<i>St Ignatius Primary School</i>		Gas	19	3,081	228
<i>St Mary's RC Primary School</i>		Gas	31	5,027	372
Lighting Upgrades and Controls	Devonshire Hill Primary School	Elec	20	3,724	240
	Stamford Hill Primary School	Elec	23	4,283	276
	Fortismere Secondary School	Elec	6	1,117	72
	<i>St Ignatius Primary School</i>	Elec	19	3,538	228
	<i>Belmont Primary School</i>	Elec	9	1,676	108
	<i>Chestnuts Primary School</i>	Elec	17	3,166	204
Pipe Work Insulation	Stamford Hill Primary School	Gas	1	162	12
	<i>St Ignatius Primary School</i>	Gas	8	1,297	96
	<i>St Mary's RC Primary School</i>	Gas	9	1,459	108
Radiator Panels	<i>St Ignatius Primary School</i>	Gas	6	973	72
	<i>St Mary's RC Primary School</i>	Gas	2	324	24
	<i>Chestnuts Primary School</i>	Gas	4	649	48
Voltage Optimisation	Highgate Wood Secondary School	Elec	62	11,546	744
	Hornsey School for Girls	Elec	23	4,283	276
	Northumberland Park Community School	Elec	57	10,615	684
	John Loughborough Secondary School	Elec	7	1,304	84
	<i>Fortismere Secondary School</i>	Elec	43	8,007	516
	<i>Heartlands High School</i>	Elec	73	13,594	876
	<i>Park View Academy</i>	Elec	65	12,104	780
<b>Totals to 11/12</b>			248	44,980	2,976
<b>Totals All</b>			978	168,795	11,736

Table 1: Carbon saving measures installed to 2011/12

## Appendix 2: Carbon reduction scenario modelling

### 2005 Baseline

Baseline kT CO <sub>2</sub> per annum	989
Commercial and Industrial	287
Domestic	524
Transport	179

Targets and Savings	2005-2009	2010-2015	2016-2020
Growth (BAU) ktCO <sub>2</sub>	-	16	19
Target Savings ktCO <sub>2</sub>	99	214	414
Actual Savings	99	146	290
Percentage of Target Met	100	68	70

Measure	Unit	Local delivery			40% target
		2005-2009	2010-2015	2016-2020	2016-2020
Large Generation					
CHP biomass	MWe*	0	0	0	0
CHP large gas	MWe	0	0	0	0
CHP buildings gas	MWe	0	2	5	7
Heat from power station	MWth**	0	0	2	4
Power only biomass	MWe	0	0	0	0
Green grid	%	1	2	3	3
Wind large	MWe	0	0	0	0
Wind medium	MWe	0	0	0	0

Measure	Unit	2005-2009	2010-2015	2016-2020	2016-2020
<b>Domestic Measures</b>					
Solar PV (Domestic)	Homes	3,064	4,386	8,771	12,926
Solar thermal (Domestic)	Homes	1,729	2,475	4,949	7,293
Biomass boilers (Domestic)	Homes	39	55	110	2,749
Air source heat pump (Domestic)	Homes	227	325	649	957
Ground source heat pump (Domestic)	Homes	39	55	110	162
Cavity wall insulation (Domestic)	Homes	3,991	5,712	11,424	33,360
Solid wall insulation (Domestic)	Homes	3,811	5,455	10,910	37,975
Loft insulation (Domestic)	Homes	6,652	9,520	19,040	31,549
Tank insulation (Domestic)	Homes	4,891	7,000	14,000	56,037
Draught proofing (Domestic)	Homes	11,878	17,000	34,000	32,854
Double glazing (Domestic)	Homes	1,027	1,470	2,940	4,333
Energy efficient lighting (Domestic)	Lamps	487,859	698,250	1,396,500	929,670
Energy efficient appliances (Domestic)	Homes	24,398	34,920	69,840	92,967
Boiler replacement (Domestic)	Homes	7,018	10,045	20,090	31,871
Fuel switch (Domestic)	Homes	7	11	21	0
Heating controls (Domestic)	Homes	5,135	7,350	14,700	21,663
Smart meters Electric (Domestic)	Homes	34,236	49,000	98,000	100,418
Smart meters Gas (Domestic)	Homes	30,352	43,442	86,884	94,833
Energy assessment (Domestic)	Homes	13,694	19,600	39,200	57,769
Solar PV (Non-Domestic)	MWe	1	1	3	11
Biomass boilers (Non-Domestic)	MWth	1	3	3	5
Energy efficient street lighting	Lamps	2,978	4,262	8,524	8,524
<b>Overall Transport</b>					
5.2% Local Savings	Ktpa***	3	5	9	9
12.3% EU, National and Sub-regional Policy Savings	ktpa	8	11	22	22
Additional 10.8% Local Savings (£750k)	ktpa	7	10	19	19
<b>Transport breakdown of measures</b>					
Travel demand management	ktpa			9	9
EU carbon standards for the production of new vehicles by 2020	ktpa			16	16
Population changes	ktpa			1	1
Infrastructure improvements (e.g. cycle superhighways)	ktpa	8	11	5	5
Total				22	22
Personalised Travel Planning	ktpa			4	4
Low Carbon Bus Corridors	ktpa			11	11
Driver training	ktpa			4	4

\*MWe (Megawatt Electrical) \*\*MWth (Megawatt Thermal)  
\*\*\*ktpa (kilotonnes per annum)

## Appendix 3. Carbon reduction Action Plan

Commission Recommendation	N°	Council action agreed	Timescales	Lead officer(s)	Resources	External support needed	Link to Council priority
<b>1. Business models investing wealth back into the borough</b>	1	Establish legal structure for alternative energy company (mutual)	Legal structure agreed 2012/13 Business plan early 2013	S. Sullivan, J. Sherlock (CM&S)	Existing resources. (Business plan to request start up funding and access to low cost finance)	LB Enfield, LB Waltham Forest, GLA	Create jobs in Haringey
	2	Large commercial and public sector heat users sign up to purchase agreements	Major heat customers signed 2012/2013	S. Sullivan, J. Sherlock (CM&S)	(As above)	LB Enfield, LB Waltham Forest, GLA	Create jobs in Haringey
	3	Pilot collective purchase of energy scheme	Pilot scheme to start 2012/13	S. Sullivan, J. Sherlock (CM&S)	Existing staff resource Environmental Resources team and potential OBOFF grant.	Haringey 40:20, local networks, HfH, Frontline Services	Improve well-being of residents
	4	Feasibility for community share ownership in mutual	Feasibility complete by 2012/13	S. Sullivan, J. Sherlock (CM&S)	Existing resource Environmental Resources team plus local networks TBA	Haringey 40:20, local networks	Improve well-being of residents
	5	Council Planning documents to safeguard network routes	Tottenham Master Plan complete by 2012/13. Borough wide energy master plan agreed 13/14	S. Sullivan, J. Sherlock (CM&S), Team Tottenham	Existing resource Environmental Resources team	Homes for Haringey	Create jobs in Haringey
	6	Lobby national Government and OFGEM enable small and medium scale energy producers to sell directly to customers	On-going campaigning activity	S. Sullivan, J. Sherlock (CM&S), Cabinet Member	Existing resource Environmental Resources team	GLA, LGA, sector, 40:20 Steering Group	Create jobs in Haringey

7	Business plan developed for co-operative network providing energy efficiency services	Business plan 2012/13	M. McInerney, J. Sherlock (CM&S)	Low cost finance and some start up costs. Existing officer resources.	Local SMEs, 40:20 Steering Group, GLA, Cooperative	Create jobs in Haringey
8	ECO subsidy pilot for Homes for Haringey and private households and feasibility	ECO leveraging scheme pilot 2012/13	M. McInerney, J. Sherlock (CM&S), TBI (HfH)	Officer time and potential match funding from HfH/Private households	Homes for Haringey, and 40:20 Steering Group, community networks	Improve well-being of residents
9	HfH Front Line staff and peer to peer networks provide advice to residents on cost saving and sustainable lifestyles when retrofit	HfH Energy Strategy Action Plan 2012/13	TBI HfH Strategy	Existing HfH Resident support team	Haringey 40:20, local resident networks	Improve well-being of residents
10	Feasibility work for use of ECO subsidy in conjunction with HRA/borrowing to deliver advanced energy improvements to social housing	Homes for Haringey 2013/14	M. McInerney, J. Sherlock (CM&S), TBI (HfH)	Existing staff resources and funding	Energy suppliers, possible external expertise, other north London boroughs	Improve well-being of residents and create jobs for local people
11	Template contract clauses developed to secure jobs and training outcomes from construction and building installations contracts	Proposal developed 2012/13	M. Wood (CP), M. McInerney (CM&S) M. Tucker (PRE)	Existing resources	Construction/building installation contractors	Create jobs in Haringey
12	Feasibility for expanding network of green show homes across the borough.	Proposal developed 2012/13	M. McInerney (CM&S), Jacinta Walters (HfH)	Existing resources plus external resources TBI	Haringey 40:20, Victeri, Architects/Contractors	Improve well-being of residents
13	Government to introduce additional support for the Green Deal to maximise job creation and carbon emissions reduction benefits.	<i>On-going campaigning activity</i>	M. McInerney, J. Sherlock (CM&S), Cabinet Member	<i>Existing resource Environmental Resources team</i>	<i>GLA, LGA, sector</i>	Improve well-being of residents

<b>2. Build a low carbon economy</b>	14	Delivery plan developed for a low carbon enterprise district in the Upper Lee Valley	Delivery plan 2013/14	TBA Team Tottenham, NLSA, J. Sherlock (CM&S)	Additional resource required	LBH Property Services. GLA, LB Enfield, LB Waltham Forest	Create jobs in Haringey
	15	Feasibility work and business case for Innovation Lab	Business case 2013/14	TBA, Economic Regeneration Team Tottenham, NLSA J. Sherlock (CM&S),	Additional resource required	Innovation Lab partners, LBH Property Services	Create jobs in Haringey
	16	Map future Council spending into the long term providing certainty for sustainable investors	Sustainable procurement actions agreed 2012/13	M. Wood (CP) J. Sherlock (CM&S), NLSA, Economic Regeneration, Team Tottenham	Existing resource (CP)	External expertise, local supply development	Create jobs in Haringey
	17	Feasibility work to build social value into key Council contracts	Sustainable procurement actions agreed 2012/13	M. Wood (CP) J. Sherlock (CM&S), NLSA, Economic Regeneration, Team Tottenham	Existing resource (CP)	External expertise, local supply development	Create jobs in Haringey
	18	Feasibility work to prioritise Council business support services for sustainable enterprise activity (e.g. office space)	Proposal 2012/13	Economic Regeneration, Team Tottenham, J. Sherlock (CM&S),	Existing resource (PRE)	NLB, neighbouring boroughs	Create jobs in Haringey
	19	10 large enterprises operating in the borough commit to a carbon reduction plan	First 10 med-large enterprises signed up by 12/13	Natalie Butler (CM&S), Jessica Sherlock (CM&S), SMT	Existing resource (CM&S)	Private Sector	Create jobs in Haringey
	20	Set up network of local retrofitting SME installers.	Network established 12-13	M. McInerney (CM&S) M. Tucker (PRE)	Existing resource (CM&S)	SMEs, Haringey 40:20	Create jobs in Haringey
	21	Skills and training review for construction and retrofitting.	Develop action plan by 12/13	M. McInerney (CM&S) M. Tucker (PRE)	Existing resource (CM&S)	CHENEL, private sector partners, HE sector	Create jobs in Haringey

<b>3. Boosting Innovation</b>	22	Council to work with partner organisations to develop proposal for Low Carbon Innovation Labs	Outline proposal developed 12/13	J Sherlock (CM&S), Team Tottenham, NLSA	Existing staff resources	Partners organisations HE, private sector, research, Property Team, Homes for Haringey	Create jobs in Haringey Reduce inequality, improve sustainability
<b>4. Investing in Transport</b>	23	Feasibility for shared low carbon transport plans with neighbouring borough to tackle car journeys, starting with Enfield and Waltham Forest.	Plans developed 2013/14	M. Smith, E. Leigh (CM&S) J. Sherlock (CM&S),	Existing Council resources	LB Enfield, LB Waltham Forest, GLA	Tottenham Regeneration, reduce health inequality
	24	Walking and cycling infrastructure study carried to identify improvements needed. To support this, feasibility work for the gradual removal of some private car parking spaces where appropriate to create additional space public amenities (e.g. cycle lanes, wider pavements).	Study completed 2013/14	M. Smith, E. Leigh (CM&S) J. Sherlock (CM&S),	Existing Council resources and LIP funding	LB Enfield, LB Waltham Forest, TfL, Community Groups	Tottenham Regeneration, reduce health inequality
	25	Carry out feasibility for a free electric vehicle car and van trial and potential for safe on-street electric vehicle charging and zero car parking charge incentive.	Scheme operational and feasibility work complete 2013/14	M. Smith, E. Leigh (CM&S) J. Sherlock (CM&S),	Existing Council resources, LIP funding	Other north London boroughs	Tottenham Regeneration
	26	Transport Forum, Council and 40:20 Steering Group to develop campaigning on public transport and investment needed in walking and cycling facilities.	Workshop to identify options held 2013/14	M. Smith, E. Leigh (CM&S) J. Sherlock (CM&S),	Existing Council resources, LIP funding	Other north London boroughs, Sustrans, LCC	Reduce CO2 emissions, improve air quality and health
	27						

	28	Feasibility for alternative refuelling infrastructure serving freight, waste collection and buses in ULV	Feasibility complete 2013/14	M. Smith, E. Leigh (CM&S) J. Sherlock (CM&S),	Existing Council resources, LIP funding	Other north London boroughs, TfL, GLA	Reduce CO2 emissions, improve air quality and economic competitiveness
	29	Review of the Council's travel plan to ensure CO2 efficient travel by staff	2013/14	M. Smith, E. Leigh (CM&S) J. Sherlock (CM&S),	Existing Council resources, LIP funding	Transport for London	Reduce CO2 emissions
<b>5. Strengthening community organisations</b>	30	Identify how Council support for voluntary led action can be increased and resources available e.g. capital investments, existing Community Fund and external grants	Workshop to identify needs and options held 12/13	Adam Parvez, J. Sherlock (CM&S)	Additional resource TBI	HAVCO, Haringey 40:20, wider Council	Improve well-being of residents and create jobs
	31	Work with Haringey TimeBank to develop a green bank providing a means to exchange time and skills.	Workshop held 12/13 to develop approach	Adam Parvez, J. Sherlock (CM&S),	Existing resource Haringey 4020/Environmental Resources	Haringey 4020, Local voluntary sector	Improve well-being of residents
	32	Identify opportunities to increase the visibility of activity through public communications spaces and other Council space	Workshop held 12/13 to develop approach	Adam Parvez, J. Sherlock (CM&S),	Additional resource required	Haringey 4020, Local voluntary sector, Property Team, Communications team	Reduce CO2 emissions

## Appendix 4: Low Carbon Zone Timeline

# MUSWELL HILL LOW CARBON ZONE

The Muswell Hill Low Carbon Zone was launched in September 2009.

A lot has happened in the Zone since then. This timeline shows some of the ways that carbon emissions have been reduced in the Zone so far.

# 2009 • 2010



**September 2009** Muswell Hill is selected by the Mayor of London to become a Low Carbon Zone.

**EN10ERGY**  
SOCIAL ENTERPRISE

**October 2009** The Muswell Hill Sustainability Group set up a social enterprise eN10ergy to invest in community owned renewable energy. eN10ergy has installed solar panels on the roof of Marks & Spencer on the Muswell Hill Broadway and the Muswell Hill Methodist Church. The profit made from these panels is recycled back in to local environmental projects.



**February 2010** A launch party for the Low Carbon Zone is held at the Muswell Hill Primary School.

**February – March 2010** Public consultation is carried out to find out local views on how the Low Carbon Zone target can be achieved.

**May 2010** A quarterly newsletter 'In the Zone' is launched and delivered to all residents in the Low Carbon Zone.



**July 2010** 24 solar panels are installed at Rhodes Avenue Primary School.



**June 2010** Energy efficient lighting and a new gas boiler is installed at the Muswell Hill Centre.

The projects carried out to reduce carbon emissions in the Low Carbon Zone have been funded by the Mayor of London, the Department of Energy and Climate Change, European Regional Development Funding and Haringey Council.

**Muswell Hill Sustainability Group**

**August 2010** The '100 Homes Project' is launched by the Muswell Hill Sustainability Group. 100 households measured their total carbon emissions and received advice on how to reduce them. A year later some homes have reduced their carbon emissions and energy use by 50%!



**September 2009** Electric car charging points are installed in the Summerland Grange car park.



**December 2009** The Muswell Hill Low Carbon Zone is awarded 'Low Carbon Communities Challenge' funding from the Department of Energy and Climate Change.



**June 2010** 24 solar panels are installed at Alexandra Park School.



**June 2010** Energy efficient lighting is installed at the Muswell Hill Library.



**August 2010** 60 solar panels are installed at Fortismere Secondary School.



**September 2010** Community-owned solar panels are unveiled at Marks & Spencer on the Muswell Hill Broadway. These panels generate enough energy each year to power the in-store bakery.

# MUSWELL HILL LOW CARBON ZONE



**September 2010** Local small businesses are offered a free environmental audit to help them reduce their energy use and become greener businesses.

The Muswell Hill Low Carbon Zone is a locally-led project delivered in partnership with the Muswell Hill Sustainability Group, local residents, businesses, schools and community buildings, Haringey Council and other local organisations.



**December 2010** The LivingARK is unveiled at Muswell Hill Primary School. The LivingARK is a zero-carbon educational cabin which demonstrates a living 'green roof', sheep's wool insulation, a composting toilet, low-e glass, solar PV panels and FSC-certified wood.



**July 2011** An awards ceremony is held for businesses in the Low Carbon Zone. Some local businesses have reduced their carbon emissions by 90%!



**December 2011** LED light-bulb exchanges are launched. So far residents and businesses have exchanged over 850 high energy using halogen light-bulbs for low energy LEDs, saving over 45 tonnes of CO2.



**February 2012** 20 Homes for Haringey properties receive new double glazing and a more energy efficient boiler. 5 properties also have loft insulation installed.  
**February 2012** Over 450 Green Home Makeovers have been carried out in the Zone.  
**March 2012** Loft and cavity wall insulation is installed at the Summerland Grange blocks of flats.

**Target 20% carbon reduction achieved.**

The lessons learnt from the Muswell Hill Low Carbon Zone will be incorporated in to the Haringey 4020 Action Plan to reduce borough-wide carbon emissions by 40% by 2020.

**2010 • 2011 • 2012**



**November 2010** eN10ergy launch a bulk buying scheme offering Muswell Hill residents discounts on higher cost energy saving products, such as condensing boilers, solar PV panels and solar thermal panels.  
**November 2010** 20 local volunteers are recruited to support the Low Carbon Zone project.  
**November 2010** A 'Green Home Makeover' is offered to all homes in the Zone which includes free installation of energy saving measure such as draught proofing and loft insulation.



**November 2010** 30 new cycle parking hoops are installed around the Zone.



**April 2011** Over 300 homes have received a Green Home Makeover.  
**April 2011** eN10ergy install community-owned solar panels on the roof of the Muswell Hill Methodist Church.  
**June 2011** Over 1000 low energy light bulbs have been installed in homes in the Zone, saving over 80 tonnes of CO2 emissions.

**August 2011** A 10% carbon reduction in the Low Carbon Zone is achieved

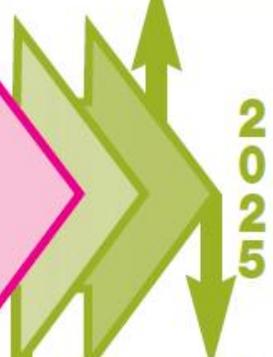
The Low Carbon Zone target is to reduce carbon emissions by 20% by 2012 and 60% by 2025.



**December 2011** The Low Carbon Loan is launched, offering home owners in the Zone low interest loans to install larger energy saving measures, such as double glazing, solar panels or to even carry out a whole house eco-retrofit.  
**December 2011** Discounted green energy tariffs are offered to residents and businesses in the Low Carbon Zone.



**March 2012** The Muswell Hill bag-for-life is launched at the 'Green is Good' event held by the Muswell Hill Traders Group to celebrate loving the planet and Muswell Hill.  
**March 2012** An awards ceremony is held for the Low Carbon Zone volunteers.  
**March 2012** Energy efficient lighting is installed at the North London Performing Arts Centre, saving 30 tonnes of carbon a year.



**60% carbon reduction achieved in London by 2025** A lower carbon life style, including more renewable energy, electric cars and eco-home renovations is enjoyed in Muswell Hill.

The Muswell Hill sustainability group's '100 Homes Project' which helped households reduce their carbon emissions by up to 50% will be carried out in new areas of the borough.



Haringey Council

## Footnotes

---

<sup>1</sup> Low Carbon Environmental Goods and Services (LCEGS) Report for 2010/11, Department for Business Innovation & Skills, May 2012

<sup>2</sup> GLA 2009 Job Creation data projection for Haringey across all sectors

<sup>3</sup> Department for Business Innovation & Skills, accessed October 2012  
<http://www.bis.gov.uk/greeninvestmentbank>

<sup>4</sup> Upper Lee Valley Low Carbon Economy, GVA 2011

<sup>5</sup> The Haringey Carbon Commission Report, October 2012 [www.haringey4020.org.uk/report](http://www.haringey4020.org.uk/report)

<sup>6</sup> North London Sub-Regional Housing Stock Analysis, Haringey 2011 (CAMCO), Energy and gas price rises (DECC 2012) quoted in Homes for Haringey Draft Energy Strategy 2012

<sup>7</sup> London Fuel Poverty Risk Indicators Data  
<http://data.london.gov.uk/datastore/package/london-fuel-poverty-risk-indicators-wards>

<sup>8</sup> The Global Carbon Report, Annual Carbon Budget, 2010,  
<http://www.globalcarbonproject.org/carbonbudget/10/hl-compact.htm>