

Climate Change Strategy for the London Borough of Hackney

14th September 2009 Cabinet

(Version 13, 12th August 2009)

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Executive Summary

The London Borough of Hackney is a signatory of the Nottingham Declaration and is committed to reducing the borough's impact on climate change. As carbon dioxide (CO₂) is the biggest contributor to man-made greenhouse gas emissions the Council has adopted a borough wide CO₂ reduction target of 80% by 2050 against a 2005 baseline and is addressing climate change issues through this initial borough-wide Climate Change Strategy.

By 2050 we aim to have transformed the way we live and dramatically reduce our carbon emissions. All our existing and planned buildings used for housing, commercial and public services will need to be highly energy efficient. Substantially more energy will be generated locally and a much greater proportion will be generated from renewable sources. People will make many more trips by cycle, foot, bus or rail with much less use of private cars..

This, our initial Climate Change Strategy, has a focus on carbon dioxide emissions from the main activities of the borough and provides an overarching strategy of how Hackney's residents, schools, businesses and organisations and can make a contribution to reducing this greenhouse gas and thus reduce global warming. This Strategy is predicated on the fact that climate change is about people not just nature and is a social as well as an environmental issue.

The Strategy presents the carbon baseline for the borough and sets out our vision and objectives for reducing carbon emissions in the borough. The strategy also covers the key priority areas for emissions reductions: raising awareness and involvement; leading by example; promoting and delivering energy efficiency in the built environment; sustainable design and construction; promoting and delivering renewable energy and district heating schemes; and promoting sustainable travel.

This Strategy provides a solid basis for the development of a Climate Change Action Programme later in 2009-10, which will contain specific projects, initiatives and actions to meet our carbon reduction targets and address fuel poverty. We aim to revise the initial Strategy and the Programme on a 3 year rolling programme following a process of consultation, refinement and evolution during 2010-11.

Our Vision

Climate change is recognised as one of the biggest threats to humans and the natural environment as we see it today. Challenges lie ahead on a global scale and in order to protect the future for later generations it is the responsibility of each and every person and organisation, particularly national and local government to contribute to reducing the level of greenhouse gas emissions. Changes in our climate are already taking place and we will need to radically change our behaviour and learn how to deal with these changes whilst working towards minimising resource use and eradicating fuel poverty.

The London Borough of Hackney, together with our local partners, neighbouring boroughs, our residents, and those who are visiting, working and learning in Hackney, aims to secure a sustainable community and environment for all.

Introduction

London Borough of Hackney recognises that climate change is one of the greatest threats to humans today. Globally, the atmospheric concentrations of greenhouse gases have been rising for many years and there is now an international consensus that human activity is largely responsible for this.

It is clear that we must now take steps to reduce emissions at all levels of society, from small individual actions to international policies. Local authorities are an important link in this chain and are strategically placed to facilitate and implement action on the local level. A certain level of temperature rise is expected until the middle years of this century due to past greenhouse gas emissions, and we will need to adapt to a changing climate. Action is required in improving our built environment, finding alternatives to traditional energy sources, and most importantly changing our behaviour to develop less energy intensive lifestyles. It is important that behaviour change happens at an early stage, as it will create a positive environment for progress towards meeting the Hackney carbon reduction target of 80% reduction by 2050 against 2005 levels.

Hackney is one of the greenest boroughs in London in terms of energy use, the number of people walking and using bicycles or taking buses when travelling in and around the borough, and in the amount of open space. The borough had the lowest carbon emissions of any borough in London based on 2005 data. There is, however, some evidence that shows that lower levels of energy use are linked to higher levels of deprivation and there are relatively high levels of fuel poverty in the borough. Hackney's aims for carbon emissions reduction are therefore more challenging than other areas due to the potential for energy requirements to increase as a result of programmes to regenerate our housing estates in Hackney, the need for new private and social housing, the need for new commercial and business development, and the Olympic Games in 2012.

Hackney Council is a signatory of the Nottingham Declaration on Climate Change, and is uniquely placed to influence climate change. The Council has an obligation to lead and deliver change in its role as a service provider; in exercising its regulatory functions; in undertaking physical intervention via regeneration programmes; leading by example as a property and transport owner and user; and in partnership with other public, private and voluntary sector bodies.

This document outlines an initial Climate Change Strategy for Hackney. It focuses on the reduction of CO₂ emissions in the borough. The issue of adaptation to climate change is not part of this Strategy as this requires a separate detailed assessment which will be carried out in accordance with action in response to National Indicator 188 (Planning to Adapt to Climate Change). This Strategy also does not focus on the wider sustainability objectives and priorities of the Council and partners as this forms part of a suite of strategies and plans that collectively form the Council's response to the wider sustainability agenda.

The initial Strategy is intended to:

1. Provide the overarching vision and key strategic objectives for how the borough will tackle the challenge of climate change,
2. Give a climate change policy background outlined with signposts and references to documents and information. This includes international and European policies

aimed at reducing carbon emissions that are already in place and these influence national regional and local policies,

3. Present Hackney's carbon baseline,
4. Outline Hackney's past and current achievements in reducing CO₂,
5. Outline key priorities,
6. Set specific short and long term targets to reduce CO₂ emissions,
7. Outline what future actions will be taken by the borough, and
8. Show how success will be measured.

The Strategy is supported by a technical report, providing detailed information on the carbon baseline and carbon reduction scenarios, a detailed glossary and reference section with signposts to help access further information on this topic.

The Strategy and carbon emissions assessments will be revisited periodically so that progress can be effectively monitored.

Hackney in context

Hackney is an inner London borough with an ethnically diverse population of 210,000 people spread across densely developed neighbourhoods. With access to large open areas along the Lower Lea valley it is also the greenest inner London borough. The borough has two busy town centres in Dalston and Hackney Central, and other smaller centres including thriving cultural and creative neighbourhoods of Stoke Newington, Shoreditch, Hoxton and Broadway market.

Housing stock in the borough is ageing and a number of housing estates and streets are in need of refurbishment. With high levels of fuel poverty there is an opportunity to make improvements to the existing housing stock. Regeneration schemes for eight of Hackney's housing estates are underway, including the Woodberry Down Estate which is the largest estate renewal project in Europe.

The service and retail industries consist mainly of small to medium size enterprises, located in and around Hackney's town centres and towards the south of the borough. The borough has above average levels of deprivation, which further affects investment. However, it also has the lowest level of carbon emissions and the use of sustainable modes of transport is high. Hackney is strategically located, bordering on the heart of the City's financial district in the south of the borough, and the Docklands, Thames Gateway and the Olympic zone towards the east. The borough is one of the hosting boroughs of the 2012 London Olympics which will bring about employment opportunities and redevelop the area of Hackney Wick, positively impacting on the rest of the borough.

New City Academies and the Building Schools for the Future (BSF) programme of improving primary and improved secondary schools are offering better education facilities. The borough has a high usage of sustainable modes of transport compared to other London boroughs, and will soon benefit by improvements to the rail link to Stratford and the forthcoming East London Line, creating four new tube stations within the borough boundaries.

The threat of climate change

Greenhouse gases are naturally present in the atmosphere and determine the temperature of the earth. However, man-made emissions, such as the burning fossil fuels (mainly oil, coal, and gas) release additional greenhouse gases into the atmosphere, and such emissions are contributing to heating the earth's atmosphere.

Although some of these gases are far more potent than carbon dioxide (CO₂), the quantities released in the atmosphere are negligible compared to CO₂ emissions. There are no simple solutions as the economy and society heavily rely on the supply of energy and goods that are made from fossil fuels.

The UK Climate Impacts Programme shows that:

- The UK temperature is predicted to rise by 1 – 2 °C by 2040 depending on season even if emissions of CO₂ were completely stopped today
- The mean temperature in London has risen from 10 °C to 11.5 °C between 1914 and 2004
- The thermal growing season for plants has increased by up to 30 days since 1900 and this trend is likely to continue.
- Heavier winter snow and rainfall is expected to become more frequent and summer rainfall will decrease
- The number of days that buildings require heating will decrease, and the need for cooling during summer months will increase

Risks from climate change will come from many sources and the effects can be quite complex. Approximately 10% of Hackney (in the east of the borough around the River Lee) is within a flood zone. In this area, flooding may occur due to excessive rainfall and rises in the water table, and areas around the canals and river networks may be affected. Most of this area is in and around the river networks which are uninhabited and hence not a direct threat to people. However, flooding can also pose a risk to human health through water-borne diseases and contamination particularly in low-lying areas, making mitigation of flood risk a key consideration.

Global warming increases the risk of extreme weather conditions and it is predicted that the UK will experience hotter drier summers and warmer wetter winters. A predicted increase in the frequency and intensity of storms is likely to lead to damage to infrastructure and the built environment and pose a greater threat to personal injury for example from flying debris and falling trees. Risks also include increased risk of water shortages in hot weather, but also infrastructure failure such as through roads melting and railways buckling. Other risks to human health could arise from increased levels of UV radiation from warmer summers creating additional cases of skin cancer, and ozone pollution causing difficulties for those with respiratory problems.

The scale of London already places pressure on natural resources due to the population size working and living in the area. Water is the most obvious example of this strain on our natural resources. Changing weather patterns are likely to increase water stress, especially during hot periods. Our natural environment could also be affected as some of our native plant species will not be able to cope with the changing climate.

We need to take responsibility for reducing our impact on global warming, but also we must learn how to adapt to those changes already taking place due to existing emissions. If everybody reduces their individual emissions the combined effect would make a significant difference to overall levels. It is important to realise each of us can make an impact on climate change by leading our lives in a sustainable way.

Evidence and Drivers for Change

National and Regional Policy

The UK government has set legally binding targets for greenhouse gas emissions in the 2008 Climate Change Act, particularly focussing on CO₂, which requires the UK to reduce its CO₂ emissions by 80% by 2050. The draft National Heat and Energy Saving Strategy is aimed at homes and businesses towards meeting the target by energy efficiency measures.

The Mayor for London's Spatial Development Strategy (the London Plan) mirrors this drive towards reducing CO₂ emissions by incorporating a host of policies on sustainable construction practices including mitigation and adaptation to climate change (see appendix 3 for more detail of European, National and Regional policy).

Local Policy

On the local level the Council has produced a number of plans, programmes and strategies which incorporate sustainability and the climate change agenda (see Appendix 4 for a comprehensive list). This is particularly addressed in the Sustainable Communities Strategy (SCS), the Hackney Transport Strategy, and the Local Development Framework (LDF). These form the overarching policy framework within which the Climate Change Strategy sits.

The Hackney Sustainable Community Strategy (SCS) 2008 sets the strategic direction for the environmental, social and economic future of Hackney. It updates the previous 2005 strategy and takes into account the impact of the Olympics, the new overground rail line in the borough and the way that local authorities are funded. The Hackney SCS provides a 10 year vision for the borough and has been developed and agreed with Team Hackney – the Local Strategic Partnership. The Hackney SCS has prioritised the need to:

- *Use excellent sustainable urban design across the borough in our streets and on our estates, and in our town centres and in other public spaces and local amenities;*
- *Achieve a reduction in CO₂ emissions; and*
- *Be a sustainable community where all the citizens take pride in and take care of Hackney and its environment for future generations.*

These priorities will be supported by the Strategy and the Climate Change Action Programme which will provide specific action and targets towards behaviour change and reducing emissions.

The LDF sets out the Council's plans and planning requirements as a planning authority for development in the borough. This acts as a tool to deliver targets on sustainable construction by requiring higher environmental standards and strategic placement of new developments to create sustainable communities. The Hackney Transport Strategy sets targets and provides the strategy for how the council and its residents can decrease car usage and increase the use of cycling, walking and public transport. This will be supported by the currently draft Sustainable Transport SPD to provide further detailed planning guidance.

Key principles from the climate change and environmental sustainability chapter in the LDF core strategy are listed below:

- Boosting energy production from renewable and low carbon sources: helps to cut CO₂ emissions, improving Hackney self-sufficiency for power and reducing dependency on fossil fuels and the national grid.
- Embed consideration of climate change in all proposals: by ensuring that demand for heating and cooling is met in low carbon manner, flood risk is addressed taking account of predicted changes in weather patterns,
- Improving recycling and minimising waste: Managing waste in line with the waste hierarchy will help to cut CO₂ emissions and recycling can save money for consumers. New waste treatment facilities will be located where most needed.
- Promote sustainable transport: by helping to encourage modal shift away from private car use to public transport, and building on Hackney's award-winning work on cycling.

Carbon Baseline

The Strategy has been informed by the work of external consultants to develop a carbon baseline assessment for Hackney, based on data published by the Department for Environment, Food and Rural Affairs (DEFRA) and other local information. The baseline provides existing CO₂ levels against which future data can be compared. The Hackney carbon baseline report was approved by Cabinet in June 2008 and is available online at www.hackney.gov.uk

The total CO₂ emissions for 2005 for Hackney were 937,000 tonnes (937 kilotonnes) or 4.5 kg per capita.

The carbon baseline shows that the majority of emissions are coming from the housing sector, followed by industrial and commercial, and finally road transport.

The baseline data was also used to create a computer model which assessed options and potential mixes of how Hackney can most realistically reach an 80% CO₂ reduction target by 2050

Figure 1 – CO₂ emissions in Hackney by sector:

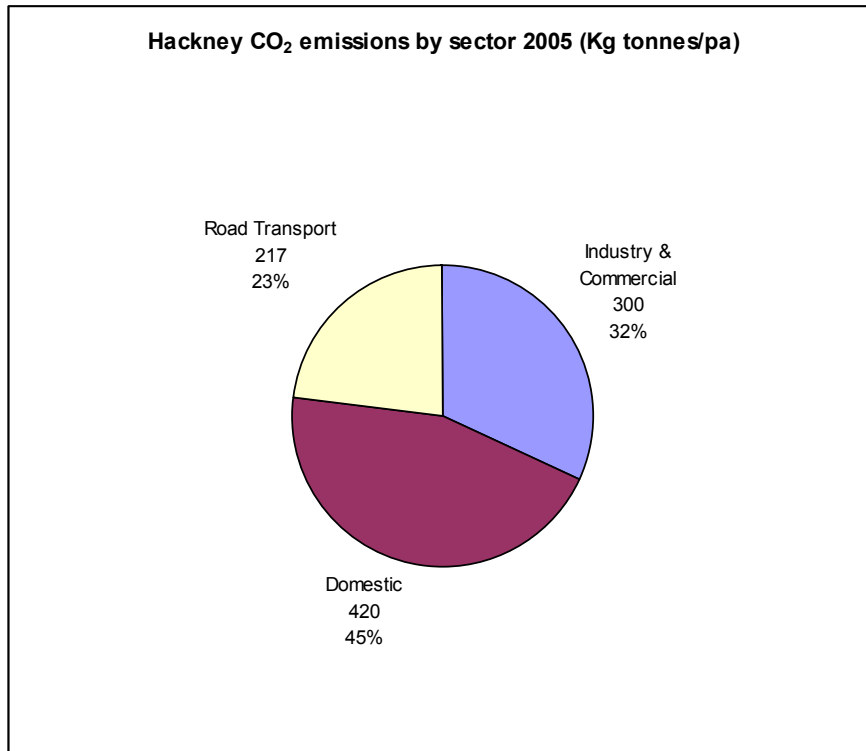


Table 1 below provides a breakdown of the percentage CO₂ savings attributed to each key area in order for Hackney to achieve its 80% emissions reduction by 2050. This is an indicative breakdown and will be revised in line with revised legislation, technological advances and new evidence.

Figure 2 and Table 1 highlight that in the short term (i.e. by 2013) the largest contribution of CO₂ reduction will be attributed to behavioural change (34.5%) and energy efficiency measures (24.1%). Over a longer period of time the contribution from these measures will decrease whilst CHP, transport efficiency and renewable energy technologies contributions will increase. By targeting behavioural change in the short term it is anticipated that a subsequent shift in people’s priorities will provide quick wins, and over time technological advances will make physical infrastructure options such as CHP and renewables more viable.

Figure 2 – CO₂ reduction by 2050 to achieve Hackney’s 80% reduction target:

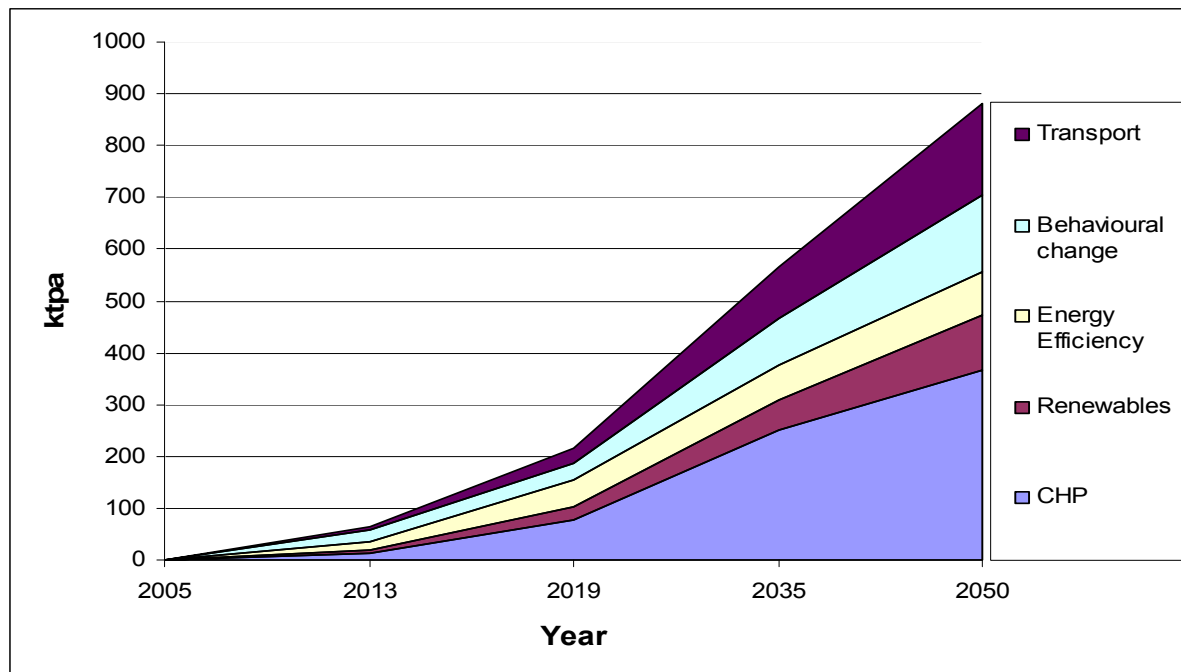


Table 1 – CO₂ reduction by 2050 to achieve Hackney’s 80% reduction target:

Technology / Year	2013	2019	2035	2050
CHP: % Reduction on baseline, Total emissions reduction (ktpa)	20% 13.5 ktpa	36% 77.3 ktpa	44% 249.9 ktpa	43% 386.0 ktpa
Renewables: % Reduction on baseline, Total emissions reduction (ktpa)	7.5% 4.9 ktpa	12.6% 26.9 ktpa	10.2% 57.9 ktpa	11.8% 105.9 ktpa
Energy Efficiency: % Reduction on baseline, Total emissions reduction (ktpa)	24.1% 15.9 ktpa	23.6% 50.6 ktpa	12.1% 68.6 ktpa	9.3% 83.5 ktpa
Behavioural change: % Reduction on baseline, Total emissions reduction (ktpa)	35.4% 23.3 ktpa	14.0% 30.1 ktpa	15.6% 88.4 ktpa	16.3% 146.5 ktpa
Transport: % Reduction on baseline, Total emissions reduction (ktpa)	12.5% 8.3 ktpa	13.7% 29.3 ktpa	18.1% 102.6 ktpa	19.7% 176.6 ktpa
% Reduction on baseline, Total emissions reduction (ktpa)	3.0% 66.1 ktpa	15.9% 202.8 ktpa	49.2% 577.8 ktpa	80.1% 902.7 ktpa

Ktpa – kilo tonnes per annum

The Story So Far

Hackney Council and its partners are committed to a variety of actions which support the reduction of CO₂ emissions across the borough. The Climate Change Strategy consolidates this. Below is a list of some of the various activities that the council and its partners have, and are currently doing to support CO₂ reduction:

Making a commitment

- Hackney Council has signed the Nottingham Declaration on Climate Change to publicly commit to take action on Climate Change and demonstrate political leadership
- The Local Strategic Partnership (Team Hackney) has made a partnership wide commitment in the Local Area Agreement which will be carried forward under the Comprehensive Area Agreement, and has recently established an environment sub-group.
- The Council commissioned a carbon emissions baseline assessment of the borough to provide evidence for the development of a Climate Change Strategy and set reduction targets.
- The Council has funded the establishment of the Hackney Environment Forum, and is supportive of local initiatives such as Transition Towns

Our own assets and services

- Our ALMO, Hackney Homes have prepared an Asset Management Strategy which prioritises the need for investment in the housing stock to provide environmentally sustainable homes,
- Hackney Council is taking part in the Carbon Trust Carbon Management Programme to implement energy efficiency measures in its own buildings and fleet management
- The Council established a GLO (Green Liaison Officer) scheme to encourage behavioural change amongst our own staff
- The Council has a Sustainable Procurement Strategy and was the winner of the Mayor for London's Green Procurement Award in 2007, achieving Silver status
- Sustainability criteria are being incorporated within business plans for all service areas
- Green flags awarded for 7 of our public parks in 2009
- Hackney is part of a carbon trading pilot project which aims to assess the effectiveness of the forthcoming carbon trading scheme starting in 2010
- The Council's fleet of vehicles is currently using 5% biodiesel blend in its fuel.

Private houses and commercial buildings

- Require high levels of sustainable design and construction through the Code for Sustainable Homes and BREEAM ratings for new developments
- Require an energy assessment for major new developments to establish feasibility of CHP and renewable energy technologies
- Hackney Council continues to support the Thames and Central Energy Efficiency Advice Centre (TACEEAC) which provides free advice on energy efficiency to Hackney residents and distributes energy saving light bulbs,

- Promotion of private sector central heating and energy efficiency grants through Hackney Homes, Energy Action Grants Agency (EAGA) and partners working collaboratively
- TACEEAC in partnership with Hackney Homes have provided awareness training for community representatives, borough residents and school children,
- LED light pilot project launched in Hackney estate
- Coldline project run by Age Concern Hackney to provide energy efficiency advice to older people in the borough
- Renovation grant to owner occupiers and private tenants
- The Council offers a range of facilities for composting and recycling. A total of 24% of all household waste in Hackney was recycled in 2008.
- Pilot project - Green estates programme for residents of the Whiston and Goldsmiths Estates. Monitoring of energy usage by residents and behavioural change.
- Continuous work by our communications team to promote energy efficiency and recycling to residents
- The Mayor of Hackney Business Awards. Annual awards are dedicated to recognising and celebrating the excellence and diversity of businesses in the borough and include a category on best Environmental Practice.

Transport

- Continuous work to encourage and promote use of sustainable modes of transport via our communications and transport teams.
- Ensure that all schools have a travel plan (we are now up to 70%)
- Free cycle training is available for those who live, study or work in the Borough
- Car clubs have been established in the borough with 2793 members and 59 car bays by April 2009
- Working in partnership with Transport for London (TFL) on East London Line extension which will create the first four tube stations in the borough
- The Council won the Transport Borough of the Year award in 2008 and 2009.
- 40% of parking meters in the borough are now solar powered, aiming to include all as and when older models wear out.

A number of initiatives are also available to Hackney residents via external agencies. Hackney has been working through the East London Renewal Partnership with London warm zones to provide measures on energy efficiency to private sector homes. The Carbon Trust and Energy Saving Trust provide support to businesses and residents on climate change and energy efficiency. Age Concern offer energy saving and health advice and support for pensioners in Hackney.

Attitudes to climate change

A series of workshops were held for Council officers, Members and key partner organisations to seek their input to the Strategy. In addition, 558 residents responded to our e-panel questionnaire on climate change. The following respondents agreed strongly/agreed slightly to :

- 93% of respondents would be prepared to change their behaviour to help limit climate change.
- 92% would be like to see more action taken in their local area to tackle climate change

- 48% felt that they would like to do more but that they can't afford it
- 44% felt that climate change can only be tackled by the bigger players. The individual making a few changes won't make a big enough difference

When asked about the type of support residents would like from their local Council to help tackle climate change, 75% wanted recycling, 70% making their home more energy efficient, 62% using public transport, 59% cycling in their area, 52% reducing the amount of waste their home produces, 51% walking in their area, and 41% wanted composting.

Just under half of residents are aware of something Hackney Council has done to reduce climate change, mainly recycling.

The results show that our residents are concerned about waste management and improving public transport as two key areas by which climate change could be addressed. This finding can be linked to the awareness raising campaigns that Hackney has already undertaken in these areas.

However, the baseline results have shown that Hackney's key production of CO₂ comes from the built environment mainly for space and water heating, with transport accounting for only 25% of emissions. Awareness raising will play an important role in achieving emissions reduction from energy usage from the built environment.

Equalities Impact Assessment (EqIA)

An EqIA was carried out to assess the impact of the Climate Change Strategy on the six equalities target groups (race, gender, sexuality, faith, disability and age). The recommendations from the assessment have been incorporated into the report, and the full assessment can be made available on request.

Objectives of the Strategy

The Hackney CCS focuses primarily on the emissions of CO₂, which has been recognised as being the single most important greenhouse gas that needs to be mitigated in cities and urban areas. Emissions of other greenhouse gases such as methane (CH₄), nitrous oxide (N₂O), ozone (O₃), and CFCs are present in negligible amounts and hence have not been included in the scope of this strategy.

Our Strategy has the following objectives:

1. *Identifying and outlining key priority areas for the mitigation of climate change in Hackney.*
2. *Providing an overarching framework for Hackney Council to guide future policies and strategies.*
3. *Providing a steer for the development of a Hackney specific climate change action plan.*

The Strategy will help to realise the Climate Change objectives of the SCS for Hackney 2008-2018.

The Strategy will be followed by action plans which will set out our immediate (2009/10) short term (2010/11 – 2012/13) and medium to long term (2012/13 – 2050) actions to meet the objectives.

Hackney CO₂ reduction targets

The Strategy sets a borough wide reduction in CO₂ emissions by 80%, by the year 2050 against the 2005 baseline levels. The reduction target is in line with the aspirations of national government target published in the Climate Change Act 2008. Progress against targets will be measured via National Indicator 186 (per capita carbon emissions for the borough) which is calculated centrally for all authorities by the Government (DEFRA). Targets for NI186 (per capita carbon emissions) within the Corporate Plan and supporting the Sustainable Community Strategy are for reductions of 4%, 9% and 11% for 2009-10 to 2011-12.

At the corporate level the Council aims to reduce emissions year on year. The Council is developing a Carbon Management Plan (CMP) with the Carbon Trust which will set out targets and actions for council buildings and vehicles, council housing landlord services (i.e. based on all energy not used directly by tenants in their homes) as well as schools and education properties. The CMP is based upon Carbon Trust and DEFRA methodology and monitored via National Indicator 185 (carbon emissions from council activity), together with local targets for Council services, The Learning Trust and Hackney Homes (landlord emissions).

The CMP and associated programme of action will deliver reductions on emissions measures to help meet targets within the borough-wide Strategy. The CMP will be completed later in 2009-10 and will be integrated within this broader Strategy.

Hackney's commitment to delivery

The Council is committed to taking a proactive approach and is leading by example to deliver the CCS for the borough. The Council will:

- Manage natural resources efficiently and implement an action plan to reduce emissions from our own operations and stock, and work with innovative measures.
- Proactively communicate with all sectors to engage and involve stakeholders to ensure that all are able to participate.
- Work with our local and regional partners such as our neighbouring boroughs, The Learning Trust, Hackney Homes, Primary Care Trust, Transport for London, London Development Agency, Greater London Authority and the North London Waste Authority.

Hackney and Fuel Poverty

Hackney is challenged by being the most fuel poor borough in London (2008), which means that many residents are paying more than 10% of their household income towards fuel bills. There is an opportunity to tackle fuel poverty and reduce energy consumption by making improvements to the housing stock in terms of insulation, ventilation and efficient use of water. Reducing the need for space heating and cooling and hot water will lead to a reduction in fuel bills¹. Action within the CCS and that within the Affordable Warmth Strategy developed by Hackney Homes, together with action by other key partners will contribute to tackling fuel poverty. Progress is monitored via National Indicator 187.

Resource implications

A Climate Change Action Programme is being developed during the course of 2009-10 which will set timescales, identify responsible bodies, and identify financial implications for key carbon reduction projects and activities.

The delivery of key elements of the Strategy will require external funding for capital works projects such as the decentralised energy networks and energy efficiency programmes. Some of this work may be supported through Section 106 Planning Obligations and the Community Infrastructure Levy (CIL) but the amount will be determined by the size and type of development. The availability of financial resources is largely dependent on external factors, including the current financial climate in the UK. The economy is likely to continue to be in recession for 2009-10 and this may have an adverse impact on available funding sources and the resources of our partner organisations in the short to medium term.

Measuring our success

The Government measures the performance of local authorities through a set of National Indicators (NIs). NIs reflect national priorities and those related to climate change are listed below.

¹ Assuming that fuel prices remain constant.

Table 2 – National Indicators and Hackney targets:

Measurement tool	Target for Hackney
NI185 Percentage CO ₂ reduction from local authority operations	<p>Target Year and Reduction on a 4-year average baseline for 2008-09. (The total emissions for all Council services, Hackney Homes landlord services and The Learning Trust for 2008-09 were approximately 57,000 tonnes. This does not correspond with NI 185 as the indicator does not include council housing landlord services). The NI 185 baseline 2008-09 is being calculated and will be reported to DeFRA in August 2009.</p> <p>2009/10 - 6% 2010/11 - 8% 2011/12 - 4% 2012/13 - 4%</p>
NI186 Per capita reduction in the local authority area	Targets for NI186 (per capita carbon emissions) within the Corporate Plan and supporting the Sustainable Community Strategy are for reductions of 4%, 9% and 11% for 2009-10, 2010-11 and 2011-12.
NI187 Tackling fuel poverty (through improved energy efficiency of households inhabited by residents on income based benefits).	A commitment to a year on year reduction of the proportion of households living in low energy efficiency homes.
NI188 Planning to adapt to Climate Change	Achieve Level 1 by March 2010
NI192 % of household waste recycled	Increase the household recycling and composting rate from 22% in 07/08 to 34% in 2010/11 (equivalent to over 50% increase in recycling rate)
NI194 Air quality.	A commitment of year on year reduction in two of the more prevalent pollutants, nitrogen dioxide and particulate matter, in line with the Environment Act.
NI197 Improved local biodiversity - Link with Priority 6 (Biodiversity and Open Space).	A year on year commitment to improve the number of biodiversity sites which are being positively managed.
NI198 Children travelling to school (mode of transport usually used).	Reduce car use from 18.7% in 2007/08 to 15.7% in 2010/11 (equivalent to just under 20% reduction in the use of cars for schools journey)

Our Key Priorities for delivering carbon reduction

Priority 1: Raising Awareness and Involvement

Priority 2: Leading by example

Priority 3: Promoting and delivering energy efficiency in the built environment

Priority 4: Ensuring Sustainable Design and Construction

Priority 5: Promoting and delivering renewable energy and district heating schemes

Priority 6: Promoting Sustainable Travel

Where the priorities came from

The Council commissioned a carbon baseline assessment which provides the evidence base of how the Council can achieve the 80% CO₂ reduction target by 2050. Five key areas were identified where emissions reduction would be most effectively achieved, and with the challenges and opportunities the borough and its people face we have identified the priorities listed above.

Priority 1: Raising Awareness and Involvement

The Issue

Raising awareness of sustainability is an essential consideration if any significant carbon reduction is to be achieved and if we are all to change the way we live.

One of the key areas is to encourage behavioural change. A well designed building will still consume large amounts of energy if the occupants are wasteful in their own consumption, such as leaving electrical devices on standby, not using low energy light bulbs, or using appliances with low energy ratings. This equally applies if occupants live in homes which are poorly insulated.

It is important that individuals feel empowered to take action to reduce their energy use and to reduce their contribution to greenhouse gas emissions that cause climate change. Action can also be targeted to reduce fuel poverty as well as carbon emissions, and big changes can be made through collective action.

Raising awareness and supporting behavioural change on climate issues will also support other priorities for the health and well-being of our residents (e.g. increases in the numbers of residents walking and cycling will improve health and help tackle obesity).

What we aim to achieve

An empowered population leading sustainable lifestyles, with an awareness of the steps they can take to radically reduce their own energy consumption and make their contribution to the step change needed to tackle fuel poverty and climate change.

How will we achieve this?

Priority 1	Actions in hand and proposed
1.1 - Continue to work with partner organisations to promote positive climate change actions in the borough, raise awareness and encourage behaviour change	<ul style="list-style-type: none"> ○ We are continuing to work with key partners such as Hackney Homes, The Learning Trust, EST and TACEEAC on awareness raising campaigns and specific actions. ○ Team Hackney are developing a frameworks for future commissioning relating to supporting a Sustainable Environment in Hackney. ○ The council will continue to work with partner organisations through Team Hackney to provide a variety of awareness raising and energy efficiency programmes. ○ Work with the Learning Trust to ensure awareness of Climate Change is an integrated part of school programmes ○ Support local environmental groups such as Hackney Environmental Network and work with voluntary and community groups.
1.2 - Improve communication with	<ul style="list-style-type: none"> ○ We will, via the recently established Team

<p>the community activities taking place to promote sustainability and energy reduction</p>	<p>Hackney Sustainable Environment Sub-Group, provide support and encourage the establishment of local green and community groups</p> <ul style="list-style-type: none"> ○ We are working with our Team Hackney partners to commission work to engage with residents on how they can change their energy use
<p>1.3 - Work with local groups, partner organisations, SMEs and and businesses to raise awareness of energy efficiency and climate change</p>	<ul style="list-style-type: none"> ○ The Council will work in partnership with Team Hackney to develop actions on reducing carbon emissions from local businesses, SMEs and partner organisations.
<p>There are also sub-priorities and actions specifically relating to other key priorities within the Strategy and these are set out below:</p>	<p>actions for raising awareness and involvement</p>
<p>3.1 - Work in partnership with other key agencies to maximise awareness, encourage behavioural change and increase take up of exiting programmes in the borough</p>	<ul style="list-style-type: none"> ○ The Council will continue to work with Warm Zone, Hackney Homes, LEEL and other partners on existing programmes to raise awareness among residents. ○ The Council will review the new national Heat and Energy Strategy to ensure that we are working in partnership with central government to the benefit of our residents
<p>3.6 - Raise awareness and increase the promotion of energy efficiency</p>	<ul style="list-style-type: none"> ○ The Council, with key partners, will develop a communications plan to raise awareness including the development of guidance for residents on energy efficiency and energy assessments.
<p>5.4 – Increase uptake of small scale renewable technologies in new and existing developments by awareness raising and promoting behavioural change</p>	<ul style="list-style-type: none"> ○ Work supported and taken forward by Planning, Communications Team and Hackney Homes
<p>6.6 – Work with residents, schools and businesses to promote sustainable travel and significantly change the way in which journeys are undertaken in the borough.</p>	<ul style="list-style-type: none"> ○ Awareness raising and promotion of sustainable travel, via means of e.g. green travel plans, in partnership with relevant organisations. Over 70% of Hackney schools now have a travel plan.

Priority 2: Leading by Example

The Issue

Local authorities provide a range of services for the community and have large assets such as the corporate building stock, housing, leisure centres, libraries, schools and vehicle fleet, for which they are responsible. If significant CO₂ reductions are to be achieved in Hackney it is imperative that we are proactive and manage our own properties, vehicle fleet and services responsibly and sustainably, as well as building on our sustainable procurement principles.

What we aim to achieve

A clean and sustainable environment in Hackney where our natural resources are managed in a sustainable way.

Minimise the energy consumption from our Council operations and become a beacon of sustainability for our local community.

How will we achieve this?

Priority 2	Actions in hand and proposed
2.1 - Continue to work with partner organisations to promote positive climate change actions in the borough, raise awareness and encourage behaviour change	<ul style="list-style-type: none"> ○ The actions set out in Priority 1.1 also allow the Council to demonstrate leadership within the wider community to support the change in behaviour that will provide a substantial contribution to reducing the impact of climate change.
2.2 - Reduce rates of waste going to landfill and promote recycling	<ul style="list-style-type: none"> ○ The Council will continue to work in partnership with others as part of the North London Waste Authority. ○ The Council aims to increase recycling rates for household waste from 23% in 2008-09 to 35% in 2009/10. This stretch target is aligned with the National Waste Strategy and further longer term targets and actions will be established as the national strategy evolves further.
2.3 - Reduce water consumption	<ul style="list-style-type: none"> ○ The Council will work with Hackney Homes to increase resident awareness and behaviour, corporately in the council ○ The Council will promote the use of water efficient sanitary ware and the installation of living roofs and walls and rainwater harvesting in new developments through planning policies, the Council's sustainable building SPD and the Code for Sustainable Homes
2.4 - EMAS for council services	<ul style="list-style-type: none"> ○ The Council will develop a corporate Environmental Policy and an Environmental Management System as well as seeking EMAS accreditation (EMAS is the Eco-Management and Audit Scheme which is a voluntary initiative designed to improve organisational environmental performance.
2.5 – Hackney will be ready to trade carbon emissions from 2010	<ul style="list-style-type: none"> ○ In 2009-10, Hackney Council is taking part in a pilot project co-ordinated by the Local Government Information Unit (LGIU) for carbon

	emissions trading as part of the national Carbon Reduction Commitment trading scheme which will commence in 2010-11.
2.6 - Continue with climate change and energy reduction in all service areas and business planning	<ul style="list-style-type: none"> ○ Implement and monitor actions identified in the Carbon Trust Management Programme to reduce carbon emissions from council activities.
2.7 - Monitor and positively promote biodiversity in the borough's open space and parks	<ul style="list-style-type: none"> ○ The Parks Service is working towards developing a Biodiversity Strategy and Action Plan. ○ The Parks Service is continuing to work actively with local amenity groups and others to support better use of open space and parks.

Priority 3: Promoting and Delivering Energy Efficiency in Existing Building Stock

The Issue

Domestic energy from gas and electricity usage accounts for around 27% of the UK's CO₂ emissions, and this rises to over 40% within London. Domestic emissions in Hackney are the largest contributor to climate change accounting for 45% of all emissions in the borough. Approximately 70% of the current housing stock will still be around for the next 50 to 100 years.

It is estimated that around one in three Hackney households experience 'fuel poverty', defined as a household needing to spend more than 10% of its income on fuel to maintain the home at an adequate standard of warmth. The need to use energy can be reduced by insulating buildings to minimise space heating and using the most energy efficient electrical appliances and reducing hot water usage will further reduce emissions.

The majority of direct investment to improve the energy efficiency of the Council's housing stock has been through incorporation of energy measures within planned investment schemes undertaken by Hackney Homes, rather than stand-alone energy efficiency projects. This opportunistic work has had a significant impact upon the energy rating (SAP) score for Hackney's stock. Between 2003 and 2007 our SAP rating has improved from 50 to 72. The Hackney SAP rating is now in the top 25% for London. Improved energy efficiency not only reduces CO₂ but also helps tackle fuel poverty which is experienced by some residents. Hackney Homes have an Affordable Warmth Strategy with a focus upon developing decentralised energy and CHP as well as initiatives via London Energy Efficiency Ltd (LEEL) to raise awareness, signpost grants and support and encourage residents to develop action to tackle energy efficiency and fuel poverty.

The Council also deliver programmes and grants aimed at improving private sector energy efficiency for residents and landlords via our Private Housing service and with our partners such as Warm Zone. The Council will continue to work with private residents and landlords to support physical improvements to their properties and provide relevant guidance and information.

What we aim to achieve

A built environment where all existing buildings are energy efficient and well insulated and where those who use the buildings can minimise their energy usage and be lifted out of fuel poverty.

How will we achieve this?

Priority 3	Actions in hand and proposed
3.1 - Work in partnership with other key agencies to maximise awareness, encourage behavioural change and increase take up of existing programmes in the borough	<ul style="list-style-type: none"> ○ The Council will continue to work with Warm Zone, Hackney Homes, LEEL and other partners on existing programmes to raise awareness among residents. ○ The Council will review the new national Heat and Energy Strategy to ensure that we are working in partnership with central government to the benefit of our residents
3.2 – Provide support as required for improving	<ul style="list-style-type: none"> ○ The Council will continue to develop options to roll out a programme of advice to registered social

<p>energy performance of the private sector RSL housing in the borough</p>	<p>landlords (RSL's) and private landlords working in partnership with Hackney Homes</p>
<p>3.3 - Explore the potential for offering energy services to residents through ESCos</p>	<ul style="list-style-type: none"> ○ The Council, with Hackney Homes and other partners, will examine the feasibility of establishing an energy services company (ESCo) in the borough providing a broad range of comprehensive energy solutions including Combined Heat and Power (CHP) and decentralised energy networks with a view to establishing an ESCo.
<p>3.4 – Further develop a comprehensive cross tenure affordable warmth strategy that generates a toolkit of measures</p>	<ul style="list-style-type: none"> ○ The Council, with Hackney Homes will continue to develop the existing Affordable Warmth Strategy.
<p>3.5 - Undertake a feasibility study of retrofitting existing buildings and running pilot projects</p>	<ul style="list-style-type: none"> ○ The Council will work with neighbouring boroughs and partner organisations via networks such as the London Collaborative to produce a study into the feasibility of retrofitting energy efficiency measures in existing buildings. A pilot project on retrofitting a house will be explored as a demonstration of the range of measures that can be undertaken and to assess the impact on energy consumption and carbon emissions..
<p>3.6 - Raise awareness and increase the promotion of energy efficiency</p>	<ul style="list-style-type: none"> ○ The Council, with key partners, will develop a communications plan to raise awareness including the development of guidance for residents on energy efficiency and energy assessments. ○

Priority 4: Ensuring Sustainable Design and Construction

The Issue

New development provides an opportunity to design and construct buildings to a high standard of energy efficiency, and create environments that are adaptable to current and future effects of climate change. The UK government has set targets for all new residential construction to become zero carbon by 2016, measured by the Code for Sustainable Homes (CSH) rating standard. For non-residential development the current most up-to-date assessment method is BREEAM (Building Research Establishment Environment Assessment Method) as both CSH and BREEAM set minimum energy efficiency, carbon emissions and water use standards.

Climate change affects the distribution of plants and species and the types of plants and insects found in the UK. The incorporation of green and open spaces into development helps to enhance quality of life, support biodiversity, offset the urban heat island effect, and reduces pollution from air-borne and noise sources, as well as providing locations for recreational use and an opportunity for access to wildlife in an urban setting. The Olympic legacy is particularly an opportunity for Hackney to integrate environmental concerns in new developments due to the scale of regeneration of the Hackney Wick area and the provision of new housing and commercial space.

What we aim to achieve

All new buildings built to a high level of energy efficiency that minimise the need for heating and cooling, using construction methods that minimise the use of natural resources.

All new homes built in Hackney after 2016 to be carbon neutral and for commercial buildings to be built to the highest level of sustainable design and construction by 2016.

New and existing developments to incorporate high quality open space with, where possible, well established and thriving biodiversity

How will we achieve this?

Priority 4	Actions in hand and proposed
4.1 – The Council will set a requirement for buildings and landscape design to reduce the need for heating, cooling and waste water usage,	<ul style="list-style-type: none"> ○ A sustainable buildings SPD (Supplementary Planning Document) will be developed which will provide detail and clarification of the Council's objectives and requirements for new developments, such as solar shading, permeable surfaces, living roofs and appropriate natural vegetation to reduce flood risk and replenish ground water
4.2 – The Council will use the planning system to set increasingly stringent requirements and ensure that all new developments are zero carbon by 2016	<ul style="list-style-type: none"> ○ The LDF (Local Development Framework) for planning is currently under development, and incorporates the use of the Code for Sustainable Homes and BREEAM to provide a mechanism by which this aim can be achieved.

Priority 5: Promoting and Delivering Renewable Energy and District Heating Schemes

The Issue

Provision of local clean and green energy via Combined (Cooling) Heat and Power, decentralised energy/ district heating and renewable energy sources have been identified as key measures to tackle CO₂ emissions in Hackney and across London. Modern district heating schemes in particular are ideal for densely built environment. Renewable energy has less scope due to issues of space requirement, noise, vibrations and visual appearance. The London Plan outlines an energy hierarchy where energy efficiency, CHP and district heating and renewables are to be considered in that order. It also sets a requirement for CO₂ reduction by 20% for major developments. This measure is essential if Hackney is to achieve its 80% CO₂ reduction target by 2050. The Mayor for London also has a target to achieve 25% of energy from decentralised energy (DE) sources by 2025.

What we aim to achieve

A borough with several individual communal heating systems connected together to form one or more district heating networks.

Solar hot water and PV (photovoltaic) arrays designed into new developments and where feasible in existing developments.

Integration of suitable new renewable energy technologies as and when they become available.

How will we achieve this?

Priority 5	Actions in hand and proposed
<p>5.1 - Identify the potential for CHP/CCHP and district heating schemes and develop an energy masterplan for the borough</p>	<ul style="list-style-type: none"> ○ The Council is developing links with Greater London Authority, London Development Agency and neighbouring boroughs to progress development of an energy masterplan for the borough and has made an application for funding and support as part of a GLA programme. Part of this work involves identification of appropriate locations within the borough for CHP/ DE projects. ○ Hackney Homes and the Shoreditch Trust have developed a CHP/ DH scheme for 3 estates in the Shoreditch area and are seeking external funding to deliver the proposals. ○ Energy Assessments are being carried out for Area Action Plans and Masterplans at Dalston, Hackney Central and Hackney Wick and include CHP/ DE elements. ○ The Woodberry Down estate project includes DE elements as part of the overall aspirations for regeneration.
<p>5.2 – Identify potential from regeneration areas such as Hackney Central, Dalston Town Centre, Woodberry Down and Hackney Wick to incorporate district heating schemes. Working in partnership with utilities, developers and funding bodies to roll out district heating schemes for the borough and initiate</p>	

<p>renewable energy schemes.</p>	<ul style="list-style-type: none"> ○ The Council, with Hackney Homes and other partners, will examine the feasibility of establishing an energy services company (ESCo) in the borough providing a broad range of comprehensive energy solutions including Combined Heat and Power (CHP) and decentralised energy networks with a view to establishing an ESCo. ○ The Olympic legacy masterplan framework proposes localised energy generation from wind and solar energy.
<p>5.3 – Require energy supply from CHP and renewable energy in new developments.</p>	<ul style="list-style-type: none"> ○ Discussions initiated with developers on incorporating CHPs in proposed developments and effective management through Energy Services Companies.
<p>5.4 – Increase uptake of small scale renewable technologies in new and existing developments by awareness raising and promoting behavioural change</p>	<ul style="list-style-type: none"> ○ Work supported and taken forward by Planning, Communications Team and Hackney Homes

Priority 6: Promoting Sustainable Travel

The Issue

Road transport is a key contributor to CO₂ emissions in Hackney, accounting for 25% of total emissions. The emissions result from the burning of fossil fuels in motor vehicles.

Currently Hackney has a relatively low level of car ownership when compared to other London boroughs. However, research undertaken by TfL indicates that there are increasing aspirations for car ownership and use.² Much of the work undertaken by Council is a proactive response to this research. Investment is needed into walking, cycling and public networks and infrastructure, road safety, streetscapes and travel awareness initiatives designed to demonstrate the accessibility of Hackney by foot, cycle, bus and train. In addition, behavioural change will be necessary in order for people to change their mode of travel towards sustainable travel options.

The Council has a Transport Strategy for Hackney available at http://www.hackney.gov.uk/streetscene_hackney_transport_strategy.htm which contains targets for car use, and encouragement of walking and cycling and these are incorporated into the table below.

There is substantial investment currently being made in improving rail access via the East London Line project which will see 4 new stations opening shortly in Hackney as well as a programme of rebuilding and refurbishment for other stations.

What we aim to achieve

A transformation of the way in which travel is undertaken within and around the borough, with a focus on a significantly higher proportion of journeys being undertaken by walking, cycling or using public transport.

The Council's own fleet is using innovative solutions to reduce carbon emissions.

How will we achieve this?

Priority 6	Actions in hand and proposed
<p>6.1 – Continue to develop greater opportunities and facilities to support and encourage walking and cycling. Delivery of the Climate Change Strategy and other strategies and objectives for improving the health of residents of the borough and continuing to improve our parks and open spaces and increase access and use by residents requires a parallel shift in transport modes.</p>	<ul style="list-style-type: none"> ○ The Council actively promote Walking and Cycle Route Guides to encourage greater use of these travel modes. ○ The Council's Transport Strategy has targets for walking (10% increase between 2001 and 2015) and cycling (80% increase between 2001 and 2011). ○ The Council has secured funding contributions via the Olympic Delivery Authority (ODA) and TfL to provide high quality walking and cycling routes to move spectators to the Olympic Park during the London 2012 Olympics ○ The Council has identified the Hackney Parks Walking and Cycling route as the preferred "green corridor" through Hackney. This connects many of Hackney's green spaces and

² Car ownership in Hackney was 44 percent in 2001 with Inner London at 49.4 percent and Outer London at 63.5 percent (2001 Census).

	<p>town centres, and will bring legacy benefits by creating a much needed east-west travel route.</p> <ul style="list-style-type: none"> ○ The Council will continue to support and encourage cycling via provision of training for residents and those working and studying in the borough. ○ The Council aims to install secure cycle parking at the new East London Line stations, to encourage residents to travel to them by a sustainable manner.
<p>6.2 - Continue to support car free housing and the use of car clubs in planning developments.</p>	<ul style="list-style-type: none"> ○ The Hackney Car Club was launched in 2007, and by April of 2009 will have over 100 car club bays. This will be further expanded in the future to bring all residents within a five minute walk of a car club vehicle. There are now nearly 3000 car club members and the council will continue to develop membership across the borough. The Council will maximise the benefits available from funding available from TfL over 2009/10 – 2010/11 to support the development of car clubs. Car free residential developments in the vicinity of new East London line stations will be promoted and encouraged through the planning system.
<p>6.3 – Maximise opportunities for changes to travel modes offered by investment in new rail links and facilities</p>	<ul style="list-style-type: none"> ○ Four new East London Line stations in the borough will open by 2010 - New stations will be opened at Dalston Junction, Haggerston, Hoxton and Shoreditch High Street, followed by a link to Highbury & Islington in 2011. ○ Hackney Central and Homerton stations will be rebuilt while Dalston Kingsland and Hackney Wick are to be refurbished.
<p>6.4 - Seek innovative solutions to improve the Council's own transport fleet</p>	<ul style="list-style-type: none"> ○ The Council are piloting alternative fuelled vehicles (e.g. electric / hybrid) to establish their suitability for the provision of Council services. ○ The Council are seeking to increase the percentage blend of biodiesel in the fleet from 5% to 30%
<p>6.5 – Continue to use the planning mechanism to require transport related measures from developments and promote behavioural change towards sustainable modes of transport</p>	<ul style="list-style-type: none"> ○ The Council will draft a Sustainable Transport SPD to provide guidance in support of the London Plan and LDF Core Strategy.
<p>6.6 – Work with residents, schools and businesses to promote sustainable travel and significantly change the way in which travel is undertaken in the borough.</p>	<ul style="list-style-type: none"> ○ Awareness raising and promotion of sustainable travel, via means of e.g. green travel plans, in partnership with relevant organisations. Over 70% of Hackney schools now have a travel plan.

Next Steps

This initial Climate Change Strategy has a focus specifically on CO₂ emissions but climate change is closely linked with sustainability in its widest sense. The Council is aware that in specifically addressing climate change in this Strategy, the full sustainability agenda is supported in key areas, but cannot be fully addressed. The Strategy forms a key part of the overall policy framework set by the overarching Sustainable Community Strategy and the LDF and is part of a wider set of Council and partner policy documents and strategies that collectively address sustainability in the borough.

Priorities, objectives, projects and actions from the Strategy and Programme will be integrated within business plans for Council Directorates and service areas. Directorates will translate aspirational targets into quantifiable projects and actions integrated within their business plans. This will ensure that the Council's forward planning processes can take full account of the need to deliver the action programme.

Similarly, the Strategy reflects the contributory role of all partners involved in the overarching Sustainable Community Strategy (SCS) and, as it develops, will incorporate and reflect changes in the key strategies, action plans and future resource profiles of respective Team Hackney partners. Team Hackney has recently developed a Sustainable Environment sub-group aimed towards implementing the Nottingham Declaration and addressing wider environmental issues as highlighted in the Sustainable Communities Strategy. Through its activities, it will champion sustainable development within the wider partnership network and aim to foster a sense of responsibility and environmental awareness within the community.

The Strategy also embraces the Council's Carbon Management Plan which has a focus upon carbon emissions from the Council's own activities. The Strategy also includes elements from the Hackney Homes Asset Management Plan (AMP) and Affordable Warmth Strategy; The Learning Trust AMP and key TLT programmes for school investment and replacement.

The Council's key corporate policy documents, such as the Sustainable Communities Strategy (SCS) and the Local Development Framework (LDF) already embrace climate change issues and provide a policy framework. Initiatives are being collated and co-ordinated within a comprehensive Climate Change Action Plan Programme which includes actions for each directorate.

All of these actions and those of the Council's partners need to be co-ordinated and the whole process driven forward at the appropriate level. Effective co-ordination is also required to effectively manage the overall programme and dedicated leadership is vital to driving forward progress. Equally important it needs to be recognised that effective partnership working with central government, our key partners, notably Hackney Homes, The Learning Trust, Team Hackney partners and the local community is critical to achieving success.

The Council have a member champion and a Hackney Management Team lead for environmental sustainability. An interim Programme Manager has been appointed, reporting to the Corporate Director of Customer and Corporate Services with a brief to develop the initial Programme including a review of resources. The Environmental Sustainability Forum has been refreshed as a Board with a clearer remit and an initial focus on further developing and monitoring the Strategy.

Appendix 1 Glossary

Adaptation (to Climate change)

Changing the way buildings are construction and behaviours to respond to climate change and reduce the effect of global warming for example installing a living roof on an existing building.

Area Action Plan (AAP)

Area Action Plans are development plan documents, (Part of the LDF) which give the council plans for change / regeneration in an area for example Dalston Area Action Plan.

Building Regulations

Government codes which set out the criteria that new building projects and refurbishment work must conform to.

Carbon Baseline

Total amount of CO₂ emissions for a given time period e.g. a year, against which future emissions can be measured.

Carbon Budget

A carbon budget is an agreed limit of carbon that can be emitted in a given amount of time. The limit can be set over a population e.g. London or sub-population such as Hackney.

Carbon Dioxide (CO₂)

A colourless gas which is present in the atmosphere naturally and at amplified levels produced when fossil fuels are burnt. Increased levels of CO₂ in the atmosphere are causing recent significant changes in climate across the globe.

Carbon Emissions

Carbon dioxide produced by industrial process and burning of fossil fuels which are released to the atmosphere and form green house gases.

Carbon Neutral

Balance between the amount of CO₂ produced and the amount absorbed (for example by plants) or offset (for example through renewable technologies).

Communities and Local Government (CLG)

Government department responsible for building homes, reducing homelessness, improving local public services, regeneration, tackling anti-social behaviour and extremism and producing a sustainable environment.

Climate Change

A change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability over comparable time periods. Changes to temperature and weather patterns linked to human activity, including the burning of fossil fuels.

Climate Change Action Programme

A Climate Change Action Programme sets out the context for work over the next few years and gives details on some projects which will assist the Council in achieving its aims.

Mitigation (of climate change)

taking actions to reduce GHG emissions and to enhance sinks aimed at reducing the extent of global warming

Code for Sustainable Homes (CSH)

The Code for Sustainable Homes (CSH) measures the sustainability of a new home against categories of sustainable design.

Combined Cooling Heat and Power (CCHP)

Through the use of an absorption cooling cycle, trigeneration or Combined Cooling Heat and Power (CCHP) schemes can also be developed. CHP is a highly efficient way to use both fossil and renewable fuels.

Combined Heat and Power (CHP)

Combined Heat and Power (CHP) is the simultaneous generation of usable heat and power in a single process. In its simplest form, the heat produced during power production is recovered and can be used to raise steam or hot water.

Community Infrastructure Levy (CIL)

A new charge which local authorities in England and Wales will be empowered, but not required, to charge on most types of new development in their area. CIL charges will be based on a simple formula which relates the size of the charge to the size and character of the development paying it. The proceeds of the levy will be spent on local and sub-regional infrastructure to support the development of the area.

Core Strategy

A development plan document which sets out the vision, spatial strategy and core policies for the spatial development of the area.

Department of Energy and Climate change (DECC)

Government department responsible for energy and climate change.

Department for the Environment, Food and Rural Affairs (DEFRA)

Government department responsible for the environment, food and rural affairs.

Dwelling Emission Rate (DER)

CO₂ emission rate for a proposed dwelling.

Energy Efficiency

Energy efficiency is the percentage of total energy input to a piece of equipment that is consumed in useful work and not wasted as heat. An energy efficient light bulb is one with a higher conversion rate than standard.

Environmental Management System (EMAS) [what does the A stand for?]

A quality management assessment tool which considers the environmental impact of the products and services of a site within an organisation.

Greenhouse Gas (GHG)

An atmospheric gas that contributes to the greenhouse effect by absorbing infra-red radiation in the atmosphere. GHGs include carbon dioxide (CO₂), methane (CH₄) and water vapour.

Hackney Homes

Hackney Homes is responsible for managing (including repair and rental) council homes in Hackney.

Home Energy Conservation Act (HECA)

1995 Act which requires every UK local authority to prepare, publish and submit to the Secretary of State an energy conservation report showing how the authority will significantly improve the energy efficiency of residential accommodation in their area and to report on the progress made with implementing the measures.

Local Area Agreement (LAA)

set out the priorities for a local area agreed between central government and a local area (the local authority and Local Strategic Partnership(LSP)) and other key partners at the local level.

Local Development Framework (LDF)

A portfolio or folder of local development documents collectively setting out the spatial planning strategy for a local planning authority area. As a result of the Planning & Compulsory Purchase Act 2004, it replaces local plans and unitary development plans (part 2).

Microgeneration

The small-scale production of heat and/or power from low carbon sources.

National Indicators (NIs)

The framework through which the government measure the performance of local authorities.

Nottingham Declaration

recognises the central role of local authorities in leading society's response to the challenge of climate change. By signing the Declaration councils pledge to systematically address the causes of climate change and to prepare their community for its impacts.

Per annum

For the year

Per capita

For each person

Planning Policy Statement (PPS)

National planning policies that regional planning bodies and local planning authorities need to take into account when drawing up development plans and other documents and making decisions on planning applications. Government planning policy guidance is set out in a series of planning policy guidance notes (PPGs). These policies are produced by the Department for Communities and Local Government. As a result of the Government's planning green paper in 2001, many of the PPGs are being revised and renamed planning policy statements (PPSs). These focus on stating Government policy, whilst good practice guidance for local authorities is set out in separate documents accompanying the PPSs.

Regeneration Delivery Framework (RDF)

The plan which shows how and when physical regeneration (social economic and environmental improvements for example estate renewal) is going to take place in the borough.

Renewable Energy

Energy derived from a source that is continually replenished, such as wind, wave, solar, hydroelectric and energy from plant material, but not fossil fuels or nuclear energy. London Borough of Hackney includes geothermal in their definition of renewable energy

Standard Assessment Procedure (SAP) rating

An estimate of the yearly heating and hot water costs per square metre of a home or building. The SAP scale runs from 1 (worst) to 120 (best).

Planning Gain (Section 106)

The principle of a planning applicant agreeing to provide additional benefits or safeguards, often for the benefit of the community, usually in the form of related development. See also planning obligations and agreements and section 106.

Spatial Planning

An expression having to do with a more wider view of planning, which involves coordination and integration across sectors like transport and industry, as opposed to the traditional, relatively narrow land use planning.

Sustainable Community Strategy (SCS)

SCS should set out a vision for a local authority's area along with actions and commitments to further economic, social and environmental well-being. They are usually prepared by the Local Strategic Partnership (LSP), which is made up of representatives from local bodies and interest groups.

Sustainable Development

Development that meets present needs without comprising those of future generations.

Sustainable Design and Construction

reduce negative environmental impact completely through skilful, sensitive design construction techniques.

Sustainable Urban Drainage System (SUDS)

a range of techniques which can be adopted for most new and redevelopment sites to reduce detrimental environmental impact from surface water drainage e.g. permeable surfaces, the use of grass swales, and wet and dry ponds.

The Learning Trust

The Learning Trust is responsible for delivering educational services to adult learners and pupils in more schools, nurseries, and playcentres in the London Borough of Hackney.

Zero Carbon

Zero carbon developments have zero net carbon emissions. Government definition can be found at the CLG website

Appendix 2

Signposts, References and Partners

International

Kyoto Protocol

<http://www.berr.gov.uk/whatwedo/sectors/ccpo/kyotoprotocol/page20655.html>

European Union Emissions Trading Scheme

<http://www.defra.gov.uk/environment/climatechange/trading/eu/index.htm>

National

Building Regulations

<http://www.communities.gov.uk/planningandbuilding/buildingregulations/>

Building a Greener Future: Towards Zero Carbon Development

<http://www.communities.gov.uk/archived/publications/planningandbuilding/buildinggreener>

Climate Change Act 2008

http://www.opsi.gov.uk/acts/acts2008/pdf/ukpga_20080027_en.pdf

Decent Homes Standard

<http://www.decenthomesstandard.co.uk/>

Code for Sustainable Homes

<http://www.communities.gov.uk/planningandbuilding/buildingregulations/legislation/englandwales/codesustainable/>

National Performance Indicators

<http://www.audit-commission.gov.uk/performance/guidance.asp>

PPS 1: Delivering Sustainable Development

<http://www.communities.gov.uk/planningandbuilding/planning/planningpolicyguidance/planningpolicystatements/planningpolicystatements/>

Supplement to PPS 1: Planning and Climate Change

<http://www.communities.gov.uk/planningandbuilding/planning/planningpolicyguidance/planningpolicystatements/planningpolicystatements/>

PPS 22: Renewable Energy

<http://www.communities.gov.uk/planningandbuilding/planning/planningpolicyguidance/planningpolicystatements/planningpolicystatements/>

PPS 25 Development and Flood Risk

<http://www.communities.gov.uk/planningandbuilding/planning/planningpolicyguidance/planningpolicystatements/planningpolicystatements/>

UK Climate Impacts Programme (UKCIP)

<http://www.ukcip.org.uk/>

Regional

The London Plan

<http://www.london.gov.uk/thelondonplan/>

London's Urban Heat Island

<http://www.london.gov.uk/mayor/environment/climate-change/uhi.jsp>

The Mayor's Climate Change Action Plan: Action today to protect tomorrow

<http://www.london.gov.uk/mayor/environment/climate-change/ccap/index.jsp>

sustainable Design and Construction Supplementary Planning Guidance

http://www.london.gov.uk/mayor/strategies/sds/sustainable_design.jsp

London Tree and Woodland Framework

<http://www.london.gov.uk/mayor/environment/forest/index.jsp>

Living roofs and walls - Technical report: supporting London Plan policy
February 2008

http://www.london.gov.uk/mayor/strategies/sds/tech_rpts.jsp

Department of the Environment, Fisheries and Rural Affairs(DEFRA)

www.defra.gov.uk

Department of Energy and Climate Change (DECC)

www.decc.gov.uk

Communities and Local Government (CLG)

www.communities.gov.uk

Hackney

*Hackney Homes

<http://www.hackneyhomes.org.uk/>

*Hackney Local Strategic Partnership (LSP)

<http://www.teamhackney.org/>

Hackney Homes Asset Management Strategy

http://www.hackneyhomes.org.uk/asset_management_strategy_2008-2012.doc

Hackney Sustainable Community Strategy

<http://www.hackney.gov.uk/community-strategy.htm>

Hackney LDF

<http://www.hackney.gov.uk/ep-local-development-framework-856.htm>

Hackney Carbon Baseline

Hackney Local Area Agreement (LAA)

<http://www.idea.gov.uk/idk/aio/8516900>

<http://www.hackney.org/>

*The Learning Trust

<http://www.learningtrust.co.uk/>

*Team Hackney

<http://www.teamhackney.org/>

Other

BRE Environmental Assessment Method (BREEAM)

<http://www.breeam.org/>

Carbon Trust Management Programme

<http://www.carbontrust.co.uk/default.ct>

Energy Savings Trust

<http://www.energysavingtrust.org.uk/>

2001 Census

<http://www.statistics.gov.uk/>

Local Government Association

<http://www.lga.gov.uk/lga/core/page.do?pagelid=1>

*London Climate Change Partnership

<http://www.london.gov.uk/lccp/>

London Councils

<http://www.londoncouncils.gov.uk/>

North London Waste Strategy

<http://www.nlondon-waste.gov.uk/>

Nottingham Declaration

<http://www.energysavingtrust.org.uk/nottingham>

Town and Country Planning Association

<http://www.tcpa.org.uk/>

UK Climate Impacts Programme

<http://www.ukcip.org.uk/>

Anchor Staying Put

<http://www.stayingput.org.uk/>

London Warm Zone

Coldline Project

Appendix 3

Climate Change Policy Background

International/EU Policy

Under the Kyoto Protocol, the first ever legally binding treaty to reduce GHG emissions, the UK agreed to reduce its emissions by 12.5% by 2008- 2012, below 1990 levels. The EU agreed to reduce its emissions by 8% over the same period.

The EU has set new targets for 2020, binding all 27 countries to reduce carbon emissions, GHGs, energy consumption and increase energy from renewables by 20% below 1990 levels (EU Summit, December 2008).

National Policy

National Planning Policy Statement 22 – Renewable Energy and the PPS1 Supplement on Planning and Climate Change require the inclusion of climate change policies within the LDFs. These policies should promote renewable energy, low carbon and microgeneration technologies within new development. The UK government has set legally binding targets on GHG emission reductions through the 2008 Climate Change Act, which requires the UK to reduce CO₂ emissions by 80% from their 1990 levels by 2050, with a 26-32% reduction by 2020 against a 1990 baseline. A key method of achieving these objectives will be to increase the amount of power generated from renewable and decentralised sources.

A carbon budget is an agreed set amount of carbon that can be emitted in a given amount of time. A carbon budgeting system for Hackney has been put forward which caps emissions over five year periods, with three budgets set at a time, to set out our trajectory to 2050. The first three carbon budgets will run from 2008-12, 2013-17 and 2018-22, and must be set by 1 June 2009.

The Code for Sustainable Homes (CSH) measures the sustainability of a new home against categories of sustainable design. In May 2008 it became mandatory for all new homes to have a rating against the CSH. The Government has set a timetable for the progressive tightening of building regulations (Part L) in 2010 and 2013, with the aim of achieving zero carbon new homes by 2016. This will be supported by the Code for Sustainable Homes, Dwelling Emission Rate (DER), assessed under Part L of the Building Regulations. The 2008 Budget also confirmed the Government's intention that all new non-domestic buildings should be zero carbon from 2019.

Through the LDF planning policies are able to require that developers achieve a specific CSH level (which can be above the national minimum standards) as part of the criteria for gaining planning permission. This will help us to deliver against the SCS theme of Building a sense of citizenship and pride in Hackney and its environment, and working towards a carbon neutral borough.

Regional Policy

The Mayor of London's Spatial Development Strategy (The London Plan) sets out the strategic planning framework for the London Boroughs.

The London Plan consolidated with Alterations since 2004 is the most recent version of the plan. It contains a range of policies which support both mitigation and

adaptation to climate change. Boroughs are required to have policies which are in conformity with London Plan policies in their LDF. These include requiring all new developments to follow the energy hierarchy, promoting flood resilient development by use of sustainable drainage systems to manage surface water run-off, promotion of energy efficiency and decentralised energy networks. The London Plan requires 20% of CO₂ emissions where feasible in all new major developments to be offset via the use of on-site renewable technologies.

The Mayor has also produced an Climate Change Action Plan – Action today to protect tomorrow, which sets a further target of achieving a 60% reduction in CO₂ emissions by 2025 through a range of measures including the continual encouragement of modal shift from the private car to cycling, walking and public transport, the promotion of decentralised and renewable energy networks, retrofitting older properties to become more energy efficient and commitments for London to manage more of its household and commercial waste ‘in-house’ i.e. within London. There are a range of other documents produced by the GLA which support the climate change agenda including the Sustainable Design and Construction SPG, and London’s Urban Heat Island.

There is also a range of best practice guidance from bodies such as the London Climate Change Partnership the Town and Country Planning and Local Government Association on mitigating and adapting to the different impacts and predicted effects of climate change using case study examples, and discussion of how local strategy making must be flexible enough to respond to the challenges we will face.

Local Plans and Strategies

Climate change is a cross cutting theme for the borough and the CCS has been written in line with the council’s policies referencing other existing and future Hackney strategies, some of which are listed below:-

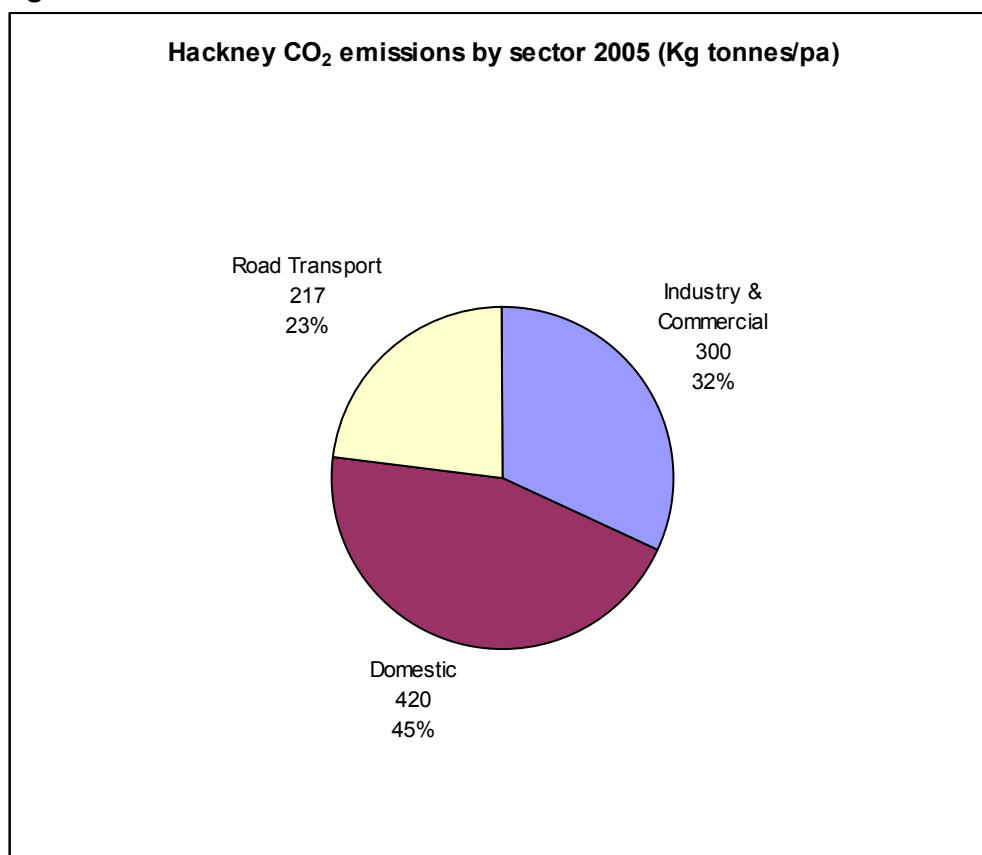
- State of the Historic Environment Report: Managing our Unique Heritage For our Community (2005)
- LB Hackney Air Quality Action Plan (2006)
- 15 MIND THE GAP: Hackney’s strategy to reduce inequalities and poverty Community Strategy 2005-15 Review and Update (2006)
- Home Energy Conservation Act 1995:Twelfth Progress Report for the Period 1 April 2007 to 31 March 2008
- Hackney State of the Environment report - draft (2008)
- Local Implementation Plan (2005)
- Hackney Transport Strategy (2006)
- Draft Sustainable Transport Planning for new Development SPD (2009)
- Hackney, A Good Place to Grow Up: draft strategy for children young people and families (2004)
- Hackney Waste and Recycling Strategy (2004)
- Draft Waste Strategy 2009 - 2020
- Draft Core Spatial Strategy, (2009)
- Draft Hackney Central Area Action Plan
- Draft Dalston Town Centre Area Action Plan
- ‘A Sense of Place’ Sustainable communities Strategy 2008 – 2018
- Hackney Open Space Strategy

Appendix 4

Hackney Carbon Baseline

The Strategy has been developed based on data published by the Department for Environment, Food and Rural Affairs (DEFRA) and a Hackney specific carbon baseline study. The baseline study provides existing CO₂ levels against which future data can be compared. The data was also used to create a computer model which assessed options and potential mixes of how Hackney can most realistically reach an 80% CO₂ reduction target by 2050.

Figure 1



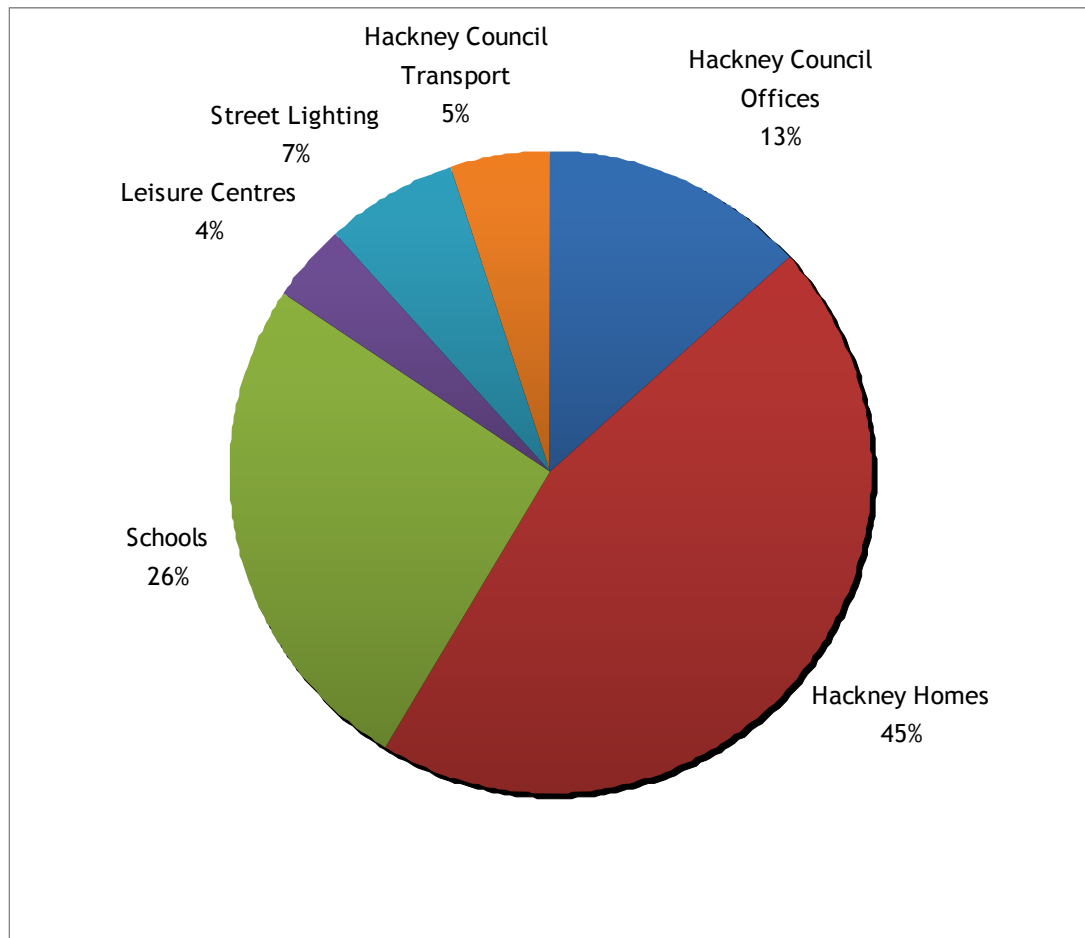
Source: DEFRA

Figure 1 shows the CO₂ emissions by sector which totals 937 kg tonnes pa of CO₂ in 2005. The domestic sector is the largest contributor of CO₂ in the borough, accounting for 45% of total emissions. This is primarily due to the lack of offices and industrial activity in the borough.

Road transport is the smallest contributor, which is underpinned by the fact that Hackney has one of the highest levels of bus usage and cycling in London.

Figure 2 shows Hackney Council's corporate emissions, which total 51,366 tonnes p.a. The results show that the majority of Hackney Council's emissions are from the housing stock and schools. The corporate carbon baseline information has been collated with the best available data to hand. We are seeking to refine and improve our data quality on a continuous basis, and may revise our carbon baseline in light of this exercise.

Figure 2 Corporate Emissions for 2007



Source: LBH data

The Hackney carbon baseline is available at: www.hackney.gov.uk

The largest contribution to Corporate emissions is the Council's Housing stock, despite significant investment in energy efficiency in recent years and a SAP score in the top quartile in London.

Hackney Homes manage these assets through an Asset Management Plan, which includes an Affordable Warmth Strategy with the following objectives:

Objective 1: To develop a comprehensive cross tenure affordable warmth strategy that generates a toolkit of measures that can offer assistance to all residents in the Borough.

Objective 2: To improve the energy efficiency of the Council's own stock

Objective 3: To support LBH as required in improving the energy performance of the private sector and Housing Association properties in the Borough.

Objective 4; to provide a comprehensive energy advice service to the residents of the borough.

Objective 5; To work in partnership with other key agencies to maximise benefit awareness and take up in the Borough

Objective 6; To explore the potential for offering Energy Services to residents through an Energy Service Company.

Objective 7; To raise the profile of energy awareness among Hackney staff and other key frontline staff working in the Borough

Projected growth in emissions

The projected population growth for Hackney of 13.3% by 2018 and 23.5% by 2030 (GLA, 2007) is likely to have an impact on total energy consumption and resources usages in the borough. New development that has been planned for the borough will increase emissions. Emissions growth due to new development has been estimated for domestic (24 ktpa), commercial and industrial property (60 ktpa) and Transport (47 ktpa) by 2050. This takes into consideration the fact that all new domestic buildings are required to be zero carbon by 2016. The government also has ambitions towards setting standards for Commercial and Industrial properties, which are required to be zero carbon by 2019.

There also exists the possibility of a growth in emissions resulting from increased prosperity (or reduced deprivation) in the borough due to influx of young professionals and a general gentrification. Therefore there might be a conflict between council objectives: improving prosperity on the one hand and reducing CO₂ emissions on the other.

Key areas of CO₂ reduction

The Hackney carbon baseline work identified the following key areas where CO₂ reduction should be focussed:

Combined heat and power (CHP) Combined cooling heat and power (CCHP) and district heating

Connecting residential blocks, offices, schools, leisure centres, libraries and retail outlets to a district heating system using CHP, focussed in town centres and regeneration areas. This is the largest contributor to the reduction strategy.

Renewable energy technologies

Ensure renewable energy technologies are installed in new developments and where feasible in existing developments. This is an integral component of the Climate Change Strategy. Initial quick wins are followed by a steady decline in the share of the reductions as the uptake in new and existing developments have been maximised, although absolute capacity continues to increase.

Energy efficiency

General energy efficiency improvements to existing domestic and non domestic buildings, including insulation and building fabric improvements and increased efficiency of lighting. A key element of this is improving insulation in housing, which will also contribute to meeting targets for reducing levels of fuel poverty.

Behavioural change

Minimise energy use by individuals living and working in the borough through education and raising awareness. The effects of behavioural change is likely to be counterbalanced to some extent by the projected increase in population and prosperity.

Transport

Modal shift through green travel plans for commercial sector, increasing access to public transport, and change of fuel. A substantial shift away from powered transport to walking and cycling wherever possible is an extremely important part of transport emissions reduction. This will have wider benefits for health, local traders and community cohesion. A rapid start can be made on this and with supportive long term strategic planning can have dramatic results.

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