Climate Change Strategy

2008 – 2015

THE ROYAL BOROUGH OF
KENSINGTON
AND CHELSEA

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List of Abbreviation

CAA	Comprehensive Area Assessment
CERT	Carbon Emissions Reduction Target
CH_4	Methane
CO_2	Carbon Dioxide
CRC	Carbon Reduction Commitment
DEFRA	Department of Environment, Food and Rural Affair
EEC	Energy Efficiency Commitment
EU	European Union
GDP	Gross Domestic Product
HFCs	Hydrofluorocarbons
IPCC	Intergovernmental Panel on Climate Change
LAA	Local Area Agreement
LACMP	Local Authority Carbon Management Programme
M&E	Mechanical and Electrical
MSP	Managing Successful Programmes
N_2O	Nitrous Oxide
NI(s)	National Indicator(s)
NIS	National Indicator Set
NHS	National Health Service
NOx	Nitrogen Oxides
PM_{10}	Particulate Matter
PPM	Parts per million
SF_6	Sulphur hexafluoride
TREND	The Resource Efficiency, Network & Discussion Club
UK	United Kingdom
UN	United Nation
USA	United States (of America)
WREF	Western Riverside Environmental Fund

1.0 Foreword

For some commentators, the politics of climate change has become the new political battleground. Participants cite evidence from the Working Group reports of the UN's Intergovernmental Panel on Climate Change (IPCC) to illustrate rising temperature trends, the occurrence of extreme weather events and incidence of Arctic ice melts. The majority of data analysts are clear that this is the result of anthropogenic activity which is trapping "greenhouse" gases in the world's atmosphere. A smaller number believe that warming is attributable to natural changes in the environment. There is an equally lively debate about the balance to be struck between adaptation to the consequences of a changing climate and the extent to which governments should seek to mitigate the projected rise in temperatures forecast by the IPCC.

All these debates are interesting, but there are other, more practical, considerations. The world has become a massive consumer of finite natural resources and forecast population growth over the next century will only exacerbate this. Some of these resources and fossil fuels in particular, are sourced from unstable parts of the world. The price of oil is proving to be extraordinarily volatile and the technology to generate and transmit heat and light can be inefficient and wasteful. The UK has some of Europe's least well insulated buildings. These leak heat from walls, roofs and chimneys, but because energy has traditionally been cheap, there has been little incentive for consumers or suppliers to become more energy-efficient.

It may seem that the role of an individual Council can be little more than bystander. However, local authorities consume large amounts of energy, dispose of huge volumes of waste, run significant transport fleets and are significant procurers of energy-consuming products. We can use our spending power and influence to save energy and money every day. And we can use our experience and expertise to help residents from wasting energy and losing money.

No matter what your view of climate change, the world will change over the lifetime of this strategy. The UK's national commitment to reduce carbon emissions by 80 per cent by 2050 has prompted a raft of new initiatives, including tougher Building Regulations, new requirements on the energy-efficiency of buildings and the forthcoming Carbon Reduction Commitment (CRC). Each of these will have an impact in Kensington & Chelsea. We want help the Royal Borough's residents and businesses live more easily with the effects of severe weather and the possibility of hot dry summers and warmer, wetter winters. This strategy sets out the Council's role in helping to adapt to climate change.

This Climate Change Strategy sets out the Council's objectives for the period 2008 to 2015. It advocates a range of measures for cutting emissions and reducing our energy bills. It seeks to encourage our partners in business and the public sector to do likewise. We are currently working with the Carbon Trust to develop a programme which will cut the Council's energy requirement thereby reducing our carbon emissions. An urgent priority is to calculate our 2008 "baseline" of emissions and we have agreed to reduce this figure by eight per cent by 2010 through prudent investment in low-carbon technology.

These are practical measures. The responses to our consultation on this strategy suggests that Royal Borough residents want good, practical advice from the Council and expect us to set an example in the management of our own resources. In

implementing our climate change strategy, we intend to point the way towards a low carbon future which not only poses less threat to the environment, but helps us all to reduce energy costs.

Councillor Nicholas Paget-Brown
Cabinet Member for Regeneration,
Environmental Management and Leisure

2.0 Executive Summary

2.1 The Council recognises the general scientific consensus that climate change is happening, that human activity is contributing to it significantly and that it has potentially damaging environmental, social and economic impacts.

2.2 This strategy shows how the Council will lead, locally, both in mitigating the causes of climate change and in adapting to the effects that are likely to occur. The strategy also takes account of new legislation, new national government performance indicators, and growing public interest.

2.3 Through this strategy the Council aims to make a difference over seven years, 2008 – 2015, on three levels:

- in the operation of its own estate;
- in delivering services, and;
  in stimulating behavioural change amongst businesses, residents and partner organisations in the community.

2.4 In delivering the strategy the Council will follow government advice and seek to catalyse behavioural change by enabling, encouraging, engaging and exemplifying.

2.5 Detailed plans on how we will make a difference need to be developed and reviewed over the coming years. We cannot yet present an action plan that will be guaranteed to solve all of the local problems associated with climate change. Much will rely on external factors, technology, behavioural change, investment, and perhaps, most crucially, the active engagement of us all.

2.6 This strategy doesn't, therefore, come with a detailed long-term action plan. Rather, it sets the direction of travel that the Council believes it should follow to achieve measurable change.

2.7 The Council recognises the need to lead by example. To do this the Council has joined Carbon Trust's Local Authority Carbon Management Programme (LACMP). This is a major commitment that commenced in May 2008 and will lead to a detailed 5-year action plan.

2.8 Tried and tested initiatives will be continued and new ideas evaluated. Our focus will be on implementation, measurement and review. New initiatives will be evaluated on merit and we recognise the need to put adequate resources in place to support these.

2.9 The strategy proposes that our progress will be guided and monitored by a Programme Board through a combination of established performance indicators set out in the strategy. The strategy also suggests that an annual report to show the overall impact of our actions and the effect of the strategy.

3.0 Introduction

3.1 This strategy is designed to guide the Council's response to global climate change and its effects on the Royal Borough. It focuses on how we can mitigate global warming by reducing the emission of greenhouse gases (including carbon dioxide (CO_2), water vapour, methane (CH_4) and nitrous oxides (N_2O)) and on what we can do, and help our residents to do to adapt to the impacts of climate change on our community. Climate change isn't an entirely new matter for the Council. For many years the Council has used a succession of environmental policy statements culminating in the Environment Strategy 2006-2011 to make improvements to, for instance, CO_2 emissions in the Royal Borough.

3.2 There is scientific consensus that climate change and global warming is happening and that human activity is contributing to it significantly. The effects of global warming have social, economic and environmental repercussions. In London, for example, we may have to help our residents adapt to increased frequency and intensity of heat waves – with the risk of more deaths, particularly amongst older people, from heat stress (hyperthermia), dehydration, food poisoning, and insect borne disease. On the other hand, warmer, wetter winters may bring benefits, with fewer cold related deaths in vulnerable groups of people.

3.3 This strategy is influenced by national policy, legislation and targets that stem from binding international protocols and European directives. For example, a mandatory cap and trade scheme, the 'Carbon Reduction Commitment', will apply to those organisations such as the Royal Borough with an electricity bill over £500,000. The strategy responds to public expectation and concern as voiced in the Kensington and Chelsea Community Strategy and in the ever increasing media coverage.

3.4 The strategy will be implemented by the Council in the operation of its own estate, in the delivery of its services and in its leadership role in the community.

3.5 The strategy takes stock of the Council's relevant achievements in recent years, describes the activities that are being worked on at present and makes some suggestions for areas to be evaluated for future consideration. Combating climate change and the effects of climate change is without doubt a substantial and complex challenge. Much is unknown, new technologies are developing, and many external factors will influence how and where the Council intervenes. Consequently, this strategy does not advocate a rigid action plan. This strategy is a statement of intent to set a direction from 2008-2015, the success of which will depend on innovation, behavioural change and the right resourcing. The strategy describes the Council's role as to engage across the whole of its organisation, to co-operate with its partners and contractors and with all parts of the community, to encourage change, and to lead by example. This is the approach the Council committed to when the Town Clerk and Chief Executive and the Leader signed the Nottingham Declaration in 2006.

3.6 To measure the effects of this strategy we need to set targets and establish baseline data. The Council is committed to meeting the targets that have been set in internal policies and those which flow from the national level (detailed in Appendix A). These targets, while sometimes challenging, are relatively short term in nature.

3.7 This strategy has a working life of seven years. The Government is currently working to a 2050 target with a long term policy goals. Making a discernable difference to climate change is both an urgent and a long term aim. This strategy concentrates on those things the Council can affect in the medium term.

3.8 The Council intends, to begin with, to use a suite of existing and emerging indicators. Four main new National Indicators (NIs) introduced by the Government in 2008 form the basis for this and cover all of the essential factors:

- carbon emissions from the Council's own estate, including schools and contractors
- carbon emissions of the borough's domestic, commercial and transport sectors
- Council's performance in adapting to climate change
- Nitrous oxides (NO_X) and primary particulate matter (PM_{10}) emissions from the Council's own estate.

3.9 We intend to supplement these basic targets with some existing internal performance indicators and targets, for example, those in the Council's Energy Policy, the Air Quality Action Plan and, the Affordable Warmth Strategy. The Air Quality Action plan sets out 25 actions designed to reduce air pollution through a combination of direct and indirect actions and measures. Progress is reported annually.

3.10 While these targets and indicators are relevant to the aims of this strategy it is less easy to demonstrate the effect of individual actions. Consequently, in judging the viability of new initiatives and actions we will need to rely on business case methodology. This will enable costs to be established and benefits to be predicted in a transparent and disciplined manner.

3.11 Being confident that our actions are delivering the outcomes we intend for them can be resource heavy. The Council may want to consider establishing a revolving fund, possibly in conjunction with an external partner, to pay for viable new initiatives on the basis that the outlay is repaid from future savings. Equally importantly, the engagement and participation of people will be vital to the success of this strategy - not just, for example, in retrospective carbon reduction initiatives but also in implementing best practice in developing new services, construction of new buildings, and in making procurement decisions. The Council's role in advising and informing will be vital in this context.

3.12 This strategy will, wherever possible, use existing mechanisms and reporting lines to deliver its outcomes. Nevertheless, the progression and implementation of the strategy will require coordination of all of the constituent parts and this strategy proposes a programme board to oversee the implementation of the strategy.

4.0 Background to Climate Change

4.1 Climate change may be defined as any change in average weather pattern that persists over an extended period of time, usually decades or longer. Changes have occurred many times during the Earth's history and global warming is one particular expression of climate change.

4.2 The Council acknowledges that the scientific consensus that warming of the climate system is happening, and is now evident from observations of increases in global average air and ocean temperatures, widespread melting of polar snow and ice and rising global average sea level.[1] The Council recognises that global average temperatures have risen by nearly 0.8 ºC since the late 19th century, and have risen by about 0.2 ºC/decade over the past 25 years.[2]

4.3 This warming results in part from the greenhouse effect, i.e. the result of the interaction of certain atmospheric gases with solar and terrestrial radiation. Those gases include CO_2, CH_4 and N_2O. Each of these has levels of varying potency in terms of global warming. For example CH_4 is reckoned to be 21 times more potent than CO_2. Without the greenhouse effect life on earth would not be possible because the average surface temperature would be about 18ºC, rather than the present average temperature of 15ºC. The balance between radiation gained and radiation lost through the atmosphere is mainly dependent on water vapour and CO_2. The total amount of water vapour in the atmosphere has been relatively constant for as long as scientists have been able to measure it, but the level of the main greenhouse gases (especially CO_2) has been increasing, mainly as a result of human activities, since pre-industrial times, with an increase of 70 per cent between 1970 and 2004.[3]

4.4 The Council recognises that a certain amount of climate warming and the potential impacts that come with that warming is inevitable. Reliable authorities predict, through a range of Special Report Emission Scenarios, that over the next 20 years the average global temperature will increase by about 0.2°C per decade. Even if the concentrations of all greenhouse gases and aerosols were kept constant at year 2000 levels, a further warming of about 0.1°C per decade could be expected. Afterwards, temperature projections increasingly depend on specific emissions scenarios.[4]

[1] Climate Change Synthesis Report, An assessment of the Intergovernmental Panel on Climate Change, 2007

[2] Jenkins, G.J., Perry, M.C., and Prior, M.J.0 (2007). The climate of the United Kingdom and recent trends. Met Office Hadley Centre, Exeter, UK.

[3] Climate Change Synthesis Report, An assessment of the Intergovernmental Panel on Climate Change, 2007

[4] Climate Change Synthesis Report, An assessment of the Intergovernmental Panel on Climate Change, 2007

5.0 Local Impact on the Royal Borough

5.1 The Council recognises that future climate changes will have global impacts on ecosystems, food, water, coasts, industry, health, settlements, and society.

5.2 In Europe climate change is expected to magnify regional differences in Europe's natural resources and assets. Europe will be at increased risk of inland flash floods and more frequent coastal flooding with increased erosion due to storms and sea level rise. Mountainous areas will face glacier retreat, reduced snow cover and loss of winter tourism, and extensive species losses (in some areas up to 60 per cent under high emissions scenarios by 2080). In southern Europe, climate change is projected to worsen conditions (high temperatures and drought) in a region already vulnerable to climate variability, and to reduce water availability, hydropower potential, summer tourism and, in general, crop productivity. Climate change is also projected to increase the health risks due to heat waves and the frequency of wildfires.

5.3 In the United Kingdom the picture is less clear, as the annual mean precipitation over England and Wales has not changed significantly since records began in 1766. Seasonal rainfall is highly variable, but appears to have decreased in summer and increased in winter, although with little change in the latter over the last 50 years. All regions of the UK have experienced an increase in the contribution to winter rainfall from heavy precipitation events. In summer all regions except NE England and N Scotland show rainfall decreases.[5]

Case study
Adaptation awareness building: the Council has specific information on flooding on its website, which includes a forum for residents that is updated every week, frequently asked questions and answers, and links to other relevant websites. Information has also been provided via leaflets giving advice on flood precautions and what to do in the event of flooding.

5.4 The Council believes that in the future the local impacts could be:

- more frequent flooding from torrential rain, excessive run-off and overflowing drains;
- droughts and more frequent water restrictions;
- storm damage to property;
- more variable temperatures, 2006 being the warmest year on record;
- higher average temperatures creating a greater need for cooling in offices and homes, and;
- impacts on health such as heat stress on the elderly and infirm.

Case Study
Air cooling has been recently fitted to the sitting rooms at Thamesbrook Nursing Home to provide an acceptable environment during hot weather for vulnerable service users. Three of the five main rooms are south facing rooms and in recent summers have been uncomfortably hot. The completed installation has already made a huge difference to the environment and is a great success.

[5] Jenkins, G.J., Perry, M.C., and Prior, M.J.0 (2007), The climate of the United Kingdom and recent trends, Met Office Hadley Centre, Exeter, UK

5.5 The Council recognises that this potential impact of climate change has significant ramifications in the Royal Borough when we consider the multiplier effect of the heat island in urban areas and the Borough's characteristics[6] such as:

- extremely high population density (131.01 persons/hectare);
- a high proportion of single person house holds (33.2 per cent);
- a high proportion of private rented households (30.29 per cent);
- some 29.5 per cent of households are overcrowded;
- 19.35 per cent of residents moved to the borough in the last year;
- 84 per cent of residents have no access to their own garden space, and;
- limited public open space.

5.6 Our residents have relatively limited access to green areas, whether these are their own private gardens or public open space, and may find it difficult to keep cool during heat waves or spikes in summer temperatures.

5.7 Almost one third of our residents in private rented households may be reluctant to invest in measures to mitigate and adapt to climate change.

5.8 Due to the relatively high turnover (one in five residents are new to the Borough) we are likely to have to re-iterate our messages more frequently than other areas of London.

Case study

Up to five roofs in North Kensington have been identified to be converted into green roofs. The roofs range from social housing to churches, community centres and local businesses. A funding bid to Western Riverside Environmental Fund (WREF) has been submitted in partnership with Groundwork. Green roofs are generally regarded as being more visually attractive, enhance the local biodiversity, and provide better insulation, keeping the buildings warmer in winter and cooler in summer.

Similarly, a green roof is already installed at Holy Trinity Primary School and plans are in place to create a biodiversity roof at St Joseph's school.

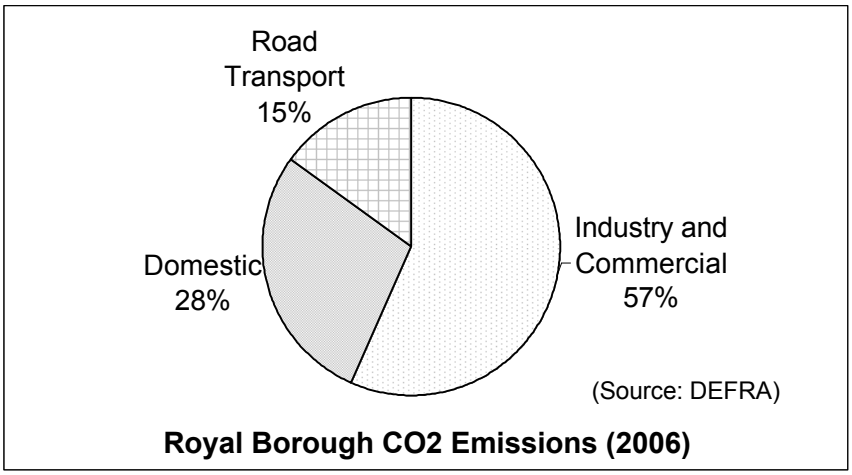
[6] A Picture of Our Community: Facts and Figures about the Royal Borough of Kensington and Chelsea 2005

6.0 Current Position

Local emissions

6.1 The latest data produced by Department of Food, Environment and Rural Affair (DEFRA) in conjunction with NI 186 (measurement of the whole borough emissions) was collected in 2006 and is set out in the table below. This shows that 57 per cent of the Royal Borough's CO_2 emissions stem from industry and commerce (such as shops, offices and hotels), 28 per cent from domestic sources, and 15 per cent from road transport. The data for industry and commerce and domestic emissions is based on actual end meter readings. The data for road transport is an estimate, modelled on road types and lengths taking into account residents' vehicles and through traffic alike. The data excludes emissions from major industry and air transportation.

6.2 Public sector emissions are included in industry and commerce and amounted to 22 Kt in 2006, roughly 2.7 per cent of the total for that sector and 1.5 per cent of the emissions for the whole borough. To make the greatest reduction in emissions we need our residents and businesses to reduce their emissions by using our influence and leadership. Though the Council's own emissions are relatively low, compared with those of the whole borough, we still need to lead the way in emission reductions to set a credible example.



Royal Borough CO2 Emissions (2006)

Our vision and goal

6.3 The Council is driven by global, national and local pressures and commitments. These include international protocols, European directives, government legislation, and not least by local expressions of concern and calls for action. In leading the community on climate change mitigation and adaptation the Council will seek opportunities to reduce waste and save money and achieve other secondary benefits wherever possible. The main legislative drivers and national targets are summarised below.

Global pressures and commitments

6.4 In 2005 the Kyoto Protocol came into force, seven years after it was agreed in 1997. The Kyoto Protocol is one of the most complex treaties ever negotiated, and committed some of the world's wealthiest nations, including the UK, to

legally binding targets to cut greenhouse gas emissions by 5.2 per cent by 2012 from 1990 levels. Kyoto was a 'cap and trade' system that committed countries to national caps on their greenhouse gas emissions. The Kyoto Protocol is concerned not only with CO_2 but a 'basket' of six greenhouse gases - CO_2, CH_4, N_2O, Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulphur hexafluoride (SF_6).

6.5 On average, the cap requires countries to reduce their emissions 5.2 per cent below their 1990 baseline between 2008 and 2012. The European Community (consisting of the 15 initial Member States [7]before 2004) is committed to an eight per cent reduction, and most of 10 new Member States also have the same target. While the burden of reduction is shared between member states the UK's commitment is to a reduction of 12.5 per cent below a baseline of 1990 emissions.

6.6 The 2007 United National (UN) Climate Change Conference in Bali drew over 10,000 participants from 187 countries, comprising government officials, representatives of UN bodies and agencies, intergovernmental organisations and non-governmental organisations, and members of the media.

6.7 The Bali negotiations were a starting point for the development of a two-year roadmap which will conclude in the agreement of a post-2012 regime at the UN Climate Change Conference in Copenhagen in 2009.

6.8 The outcomes from the Bali Conference included:

- a deadline of 2009 to agree a framework to address climate change when the Kyoto Agreement expires in 2012;
- acknowledgement that 'deep cuts in CO_2 emissions will be required to achieve the ultimate objective', although no targets were set;
- the United States (USA) agreed to play a role in developing the post-Kyoto regime;
- developing countries to take 'nationally appropriate mitigation actions', involving 'measurable, reportable and verifiable' steps;
- more emphasis on funding clean technology transfer;
- a scheme to finance the Adaptation Fund, which helps poorer countries cope with climate change impacts, via a two per cent levy on the value of carbon offsets obtained through the Clean Development Mechanism, and;
- willingness in principle to reward developing countries for protecting forests via a special fund, and/or by allocating tradable carbon credits to conservation activities.

6.9 Although opposed, the European Union (EU) and developing nations pushed the conference to sign off, on a tight framework, mandatory 25-40 per cent CO_2 cuts by developed countries by 2020. This was not agreed but does indicate, at least, the aspirations that EU nations have for future targets.

[7] 15 EU Countries include Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and United Kingdom.

National pressures and commitments

6.10 Through the Climate Change Bill 2007 the Government has taken account of relevant European Directives and the recommendations of the Royal Commission on Environmental Pollution.

6.11 In summary, the Bill:

- puts into statute the UK's domestic targets to reduce CO_2 emissions through domestic and international action by at least 60 per cent by 2050 and 26-32 per cent by 2020, against a 1990 baseline;
- requires the setting, in secondary legislation, of binding limits known as 'carbon budgets' on aggregate CO_2 emissions over five-year periods – with three budgets set ahead to help businesses plan and invest with increased confidence;
- creates a new independent body – the Committee on Climate Change – to advise on the setting of carbon budgets and the pathway to the 2050 target and to report annually on progress;
- contains enabling powers to introduce new trading schemes through secondary legislation, increasing the policy options which Government could use to stay within budgets and meet emissions targets;
- increases the transparency and accountability of UK action on climate change by introducing a new system of annual Government reporting to Parliament in response to the annual report by the Committee on Climate Change on the UK's progress, and;
- requires the Government to assess the risks that climate change poses to the UK, and to report to Parliament on these risks and on its programme to address them.

6.12 The Energy Bill 2008 was published in January 2008 and reinforced the government's commitment to tackling climate change and strengthening the security and affordability of energy supplies. This will update the legislative framework by:

- putting in place a mandatory cap and trade scheme for non-energy intensive industry, the 'Carbon Reduction Commitment', which will apply to those organisations using over 6000MWh or with an electricity bill of around £500,000. This is likely to apply to larger local authorities;
- renaming the Energy Efficiency Commitment (EEC) as the Carbon Emissions Reduction Target (CERT) from 2008 which will be set at double the level of the current round of EEC;
- setting an expectation that within the next ten years all domestic energy customers
  will have smart meters with visual displays of real-time information that allow communication between the meter, the energy supplier and the customer, and;
- expecting Local Authorities to take more of a role in alleviating fuel poverty, and to exceed the Decent Homes Standard.

6.13 With homes accounting for around 27 per cent of the UK's carbon emissions, it is clear that we need to change the way we build houses and developments.

6.14 The Planning White Paper, Planning for a Sustainable Future (2007), has emphasised the fundamental importance of planning in delivering sustainable development in a changing global context. It is central to the delivery of the

new homes that are needed; it supports the business development necessary to create jobs and prosperity; and, enables the delivery of the infrastructure which provides access for everyone to essential transport, energy and water and underpins sustainable communities. In making this contribution to a prosperous economy and to a high quality of life for all, planning has a key role in helping to tackle climate change. Used positively, it has a pivotal and significant role in helping to:

- secure enduring progress against the UK's emissions targets, by direct influence on energy use and emissions, and in bringing together and encouraging action by others;
- deliver the Government's ambition of zero carbon development;
- shape sustainable communities that are resilient to and appropriate for the climate change now accepted as inevitable;
- create an attractive environment for innovation and for the private sector to bring forward investment, including in renewable and low-carbon technologies and supporting infrastructure, and;
- capture local enthusiasm and give local communities real opportunities to
- influence, and take, action on climate change.

Local pressures and commitments

6.15 The Mayor of London in 2007 set a target across London for a 60 per cent cut in CO_2 emissions from 1990 levels by 2050, with a 30 per cent cut by 2025. This was set out by the Mayor in his Climate Change Action Plan, 'Action today to protect tomorrow' which was published in February 2007. The new Mayor launched his London Climate Change Adaptation Strategy for consultation in August 2008 setting out his proposals to tackle climate change in London.

The key findings of the report:

- Currently London is not very well adapted to our climate – the impacts of the heat wave of summer 2003 (in which 600 people died here and 15,000 in Paris) and the floods of summer 2007 highlight how vulnerable London is to extreme weather today.
- As the climate changes, London will experience warmer, wetter winters and hotter, drier summers, whilst 'extreme' weather events such as heat waves and tidal surges will become more frequent and intense.
- Londoners will face an increased risk of floods, droughts and heat waves that will endanger the prosperity of the city and the quality of life for all Londoners, but especially the most vulnerable in the city.
- The strategy proposes 'greening' the city by improving and increasing London's green spaces to keep the city cool in summer, managing flood risk coming from the tributaries to the Thames and surface water flooding from heavy rainfall, encouraging Londoners to use less water and raising public awareness to flood risk.
- London is well placed to help the world adapt to climate change: it has the skills and services to prepare for the predicted changes, and there is a clear economic opportunity to capitalise on this leading position.

Boris Johnson, the Mayor of London said: 'We need to concentrate efforts to slash carbon emissions and become more energy efficient in order to prevent

dangerous climate change. But we also need to prepare for how our climate is expected to change in the future".

6.16 Local authorities are expected to play an important role in national and regional programmes and set targets to help in the delivery of this agenda. NIs target to take effect in 2008 will form the basis, in part, for future local authority Comprehensive Area Assessment (CAA). Four main indicators directly relate to climate change:

- NI 185 – measures the carbon emissions from the Council's own estate, including schools and contractors;
- NI 186 – measures the carbon emissions of the borough's domestic, commercial and transport sectors;
- NI 188 – measures the Council's performance in adapting to climate change, and;
- NI 194 – measures the reduction in NO_X and primary PM_{10} emissions from the Council's own estate.

6.17 The Council is required by the Government to include either NI 185 or NI 186 as a stretch target in the 2009-2012 Local Area Agreement (LAA): the delivery mechanism for our Community Strategy. The most likely of these is National Indicator 185 because this is the clearest measure of the Council's intervention to make carbon reductions. This is aimed at measuring reductions in Council buildings, schools, and transportation and will also be extended to include key contractors that deliver Council services. All of these NI will have targets assigned to them and these are shown in Annex A.

6.18 The Kensington and Chelsea Partnership is an umbrella group that brings together small and large organisations in the borough, representing the public, voluntary, commercial, and residential sector. The partnership sets the priorities and aspirations of the community through the Community Strategy. Their priorities include a call for the borough to play its part in national and global efforts to protect the wider environment and the interests of future generations. The partnership aims to:

- promote energy efficiency, recycling, and;
- reduce pollution and to improve local transport management, services and networks.

6.19 The Council has been active in pursuing an environmental improvement agenda for many years. It has a long history of producing Environmental Policy Statements dating back to 1990. In 2006 we produced a five year Environment Strategy. This covers, thematically, a wide range of environmental concerns and demonstrates the Council's leadership in developing sustainable solutions to local, regional, and global environmental problems. While this work included climate change a single and separate climate change strategy is now needed under the overarching environment strategy to provide a clear focus for future Council activity.

6.20 As a sign of the Council's commitment to climate change reduction the Leader and Town Clerk endorsed the Nottingham Declaration in December 2006. Briefly, in signing the Nottingham Declaration the Council has:

- acknowledged the evidence that climate change is occurring and will continue to have far reaching effects on the UK's people and places, economy, society and environment;
- welcomed the benefits which come from combating climate change, the emissions targets agreed by central government, opportunity for local government to lead at a local level, and;
- committed to work with central government in delivering the UK Climate Change Programme, the Kyoto Protocol and its targets, to develop partnership plans to address the causes and the impacts of climate change, to reduce greenhouse gas emissions from its own operations, assess the risks presented in service delivery and adapt accordingly, encourage community participation, and report on progress.

7.0 What is Our Climate Change Strategy?

7.1 The Council's strategic approach is based on two main principles. Firstly the Council will help ourselves, our residents and businesses to mitigate and adapt to climate change on three levels. Details of mitigation and adaptation measures in each of these levels will be documented in the implementation programme.

Level 1 - Putting our house in order

7.2 The Council has a large portfolio of buildings and land holdings in the borough.

We can mitigate climate change, for example, in:

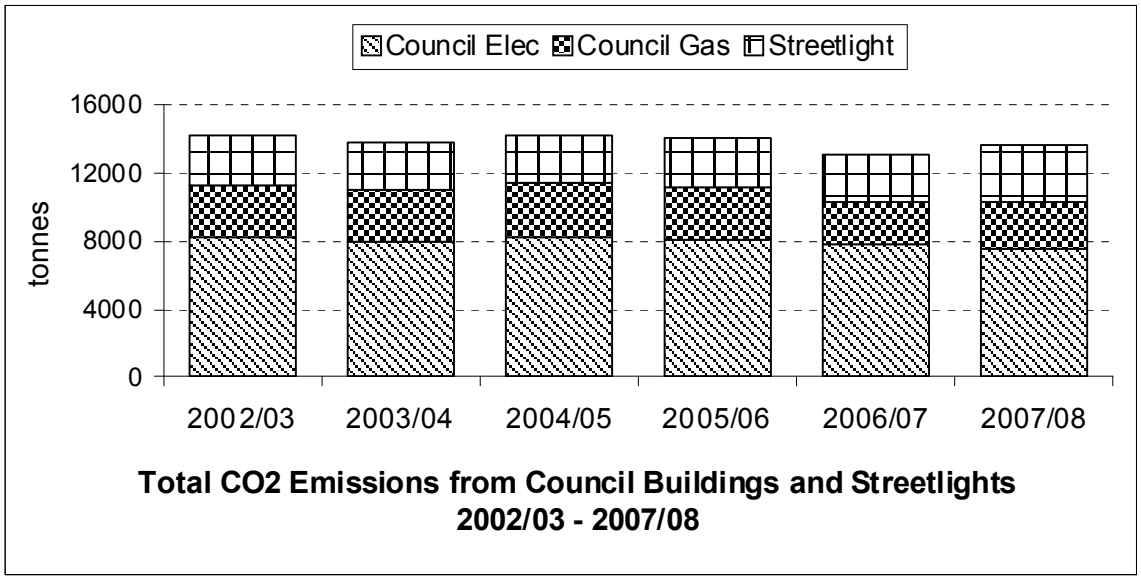
- estate management and energy consumption;
- vehicle fleets and travel planning, and;
- procurement.

We can adapt to climate change, for example, by:

- undertaking a comprehensive risk based assessment of vulnerabilities to weather and climate, identifying priority risks, and implementing a plan;
- ensuring that vital equipment and emergency response resources are not located in flood risk areas, and;
- ensuring that new buildings are resilient to future climate change scenarios.

Case study
Borough school travel plans developed in about two thirds of borough schools. Calculations were undertaken in 2007 to estimate the impact on emissions based on the five travel plan 'before and after' surveys that have been completed. Emissions of NOx and PM_{10} have been estimated to have been reduced by approximately 37 per cent and 36 per cent respectively (per km travelled by vehicles going to and from the schools). In addition more children and adults are walking and cycling to school thereby not only reducing pollutants and CO_2 emissions but reducing their personal exposure and increasing their fitness levels.

7.3 The Council is taking part in Phase six of the Carbon Trust LACMP which started in May 2008. This will be the main mechanism that the Council will use to reduce emission in its own estate and operations including buildings, vehicle fleets, street lighting and landfill sites. We already have a considerable amount of data to give us a baseline position so we can measure our future performance. The graph below shows a summary of the CO_2 data from the Council's buildings and streetlights between 2002/03 and 2007/08. CO_2 emission was quite uniform until 2005/06, and in 2006/07, which was comparatively mild, there was a noticeable drop. This was also partly attributable to two buildings being vacated.



Total CO2 Emissions from Council Buildings and Streetlights 2002/03 - 2007/08

7.4 The Council's will explore the feasibility of becoming carbon neutral for its own estate and in its service delivery. To be carbon neutral, the Council would need to reduce its carbon emission as far as possible and then offset the remainder to the point where the net emissions were zero overall. This would mean systematically minimising wastage, maximising efficiency, installing renewable energy supplies where viable and, as a last step, by offsetting the remaining unavoidable emissions in a responsible and legal way. While the Council will be rigorous in minimising waste and in maximising efficiency the cost effectiveness of installing renewable energy supplies and offsetting is less clear. The consequences for the Council of achieving carbon neutrality are therefore not yet fully understood but this is expected to become clearer during the lifetime of this strategy and will be informed, in particular, by the Council's final LACMP report in March 2009.

Level 2 - Delivering Services

7.5 The council is a service provider, both directly and through contractors and partners.

Case study
The Government has produced a Code for Sustainable Homes that is intended to drive a step change in sustainable home building. The Code works by assigning a star rating based on minimum standards across a range of issues. Critically this includes energy consumption/CO_2 emission and surface water run off both of which are key to climate change mitigation and adaptation respectively. The application of the code is mandatory for new housing from 1st May 2008 and is expected to benefit the environment, home builders, social housing providers and consumers. Although there is no actual link with Building Regulation approval initially, there is an expectation that future revisions of these will be aligned with the code and become increasingly stretching. Ultimately the aim is for all new housing to be 'zero carbon' by 2016

We can mitigate climate change, for example, by:

- developing new planning guidance that sets targets and higher standards for energy efficiency in residential developments and by advocating

adherence to the Building Research Establishment Environmental Assessment Method for new non domestic developments;
- promoting transportation policies that encourage lower overall carbon emissions, and;
- continuing to encourage and enable improved energy efficiency in the borough's housing stock.

We can adapt to climate change, for example, by:
- taking steps to ensure that there is suitable drainage infrastructure in place to deal with the nature of future predicted rainfall;
- moderating high summer temperatures associated with the urban heat island effect by thoughtful layout of urban open space, increasing shading from trees and installation of fountains. Climate change will exacerbate the temperature gradient that rises from the rural fringe and peaks in city centres. This is described as because the warmer urban air lies in a 'sea' of cooler rural air;
- installing air cooling systems in care homes for elderly people, and;
- ensuring that emergency response services are adequate for the increase in magnitude of unfavourable weather, e.g. heat waves.

Level 3 - Leadership

7.6 The Council can demonstrate leadership by:
- setting an example and sending the correct signals;
- working through partnership, particularly the Kensington and Chelsea Partnership and borough businesses;
- championing the longer term interests of residents, and;
- providing information to help residents make informed choices.

Case study
The refurbishment and replacement of the ageing mechanical and electrical (M&E) services installations that service the office accommodation at Kensington Town Hall is due to be phased over several years and will achieve a 20-25 per cent total energy saving in current consumption.

A comprehensive review of the Council's Renewable Energy Options (both on and off site) is due to be commissioned. The review will provide the Council with a strategic assessment of the long term renewable energy supply options in meeting building/estate energy demands.

7.7 The Council intends to meet and exceed the targets associated with NI 186.

7.8 To deliver this strategic approach, we need to consider its potential funding and communication requirements. While each of these issues is discussed in more detail, in Parts 8.0 and 9.0 of this strategy, the Council supports investment in efficiency measures that offer both carbon reduction and a viable financial return. It is important to build our capacity to understand the most appropriate and current technological solutions and to undertake reliable cost-benefit analysis. But, there are also measures that might be justified for other reasons: for instance exemplar projects that help understanding and influence behaviour. In such cases the projected benefits will be need to be evaluated on criteria other than strict financial return.

Case study
The Royal Borough is part of a joint local authority application for funding that has been submitted to Groundwork West London to provide businesses in the area with environmental business support to improve resource efficiency and sustain continued business growth. Groundwork West London has been running the 'TREND' (the resource efficiency, network & discussion club) in West London for the past two years. Through the club, businesses receive advice and participate in workshops on a wide range of environmental topics including resource efficiency, waste management, energy efficiency, water consumption, purchasing, environmental legislation and environmental management systems. Businesses attending the workshops share their knowledge and discuss common problems and solutions. These sessions supported by expert consultants who provide advice and guidance on the specific subject areas. Between the workshops, businesses are encouraged to take up support to implement what they have learnt in their own businesses

8.0 Communication Plan

8.1 The Council believes that the outcomes of this Climate Change Strategy cannot be achieved without appropriate and timely communication. Our aim is to change behaviour and attitudes and that cannot be done without effective communication.

8.2 To achieve the purpose of this strategy, the Council recognises that its audience needs to feel well informed and involved.

8.3 The Council considers our all of our residents, but especially those who are new to the borough, as the primary external audience. Staff and elected members are our primary internal audience. The secondary audience consists of key partners, voluntary sector, businesses and public agencies which impact on our work. The Council is aware that these existing audiences are bombarded to varying degrees with (sometimes conflicting) information on climate change. In order for the Climate Change Strategy to be a success, the communication plan will work to enable a genuine dialogue with our external and internal audience. The Council is especially keen to work with community groups in shaping communications – for example, one idea is to work with the Environment Round Table in producing a short summary of this strategy for wider dissemination amongst residents.

8.4 To stimulate behavioural change amongst these audiences the Council will have regard to the approach[8] recommended by DEFRA which is based on:

- **enabling**, for example in facilitating access to information, training and skills;
- **encouraging**, for example by looking at financial incentives such as charging, tax, and grant aid;
- **engaging**, for example as a relevant consideration in wider issues, such as procurement, and especially through face to face communications with the public at events like the annual 'Environment Days', and;
- **exemplifying**; to be convincing, the council's words must be consistently matched by its actions, for example by leading by example whether it be in new building development, the educational curricula of school children or in the implementation of energy efficiency measures.

8.5 In moving forward with a communication plan the Council will seek professional advice from the outset and will ensure that the approach taken is consistent with the Council's wider Communications Strategy[9].

[8] Changing Behaviour Through Policy Making (http://www.sustainable-development.gov.uk/what/priority/pdf/change-behaviour-model.pdf)

[9] The Royal Borough of Kensington and Chelsea draft Communications Strategy 2008/9 to 2011/12

9.0 Funding

9.1 A review of the economics of climate change was undertaken in 2005 by Sir Nicholas Stern for HM Treasury. This review, published in October 2006, concluded that the 'benefits of strong and early action far outweigh the economic costs of not acting' and that 'the costs of stabilising the climate are significant but manageable and that delay would be dangerous and much more costly'. However, the exact extent of the economic cost isn't so predictable and is dependent on technological development and policy choices. The Stern Review does indicate that the worst impacts of climate change, which require stabilising CO_2 emissions at between 450 and 550ppm, can be limited in investment terms to around one per cent of Gross Domestic Product (GDP) each year. The consequences of not taking strong and early action are projected at a cost of between five and twenty per cent of GDP each and every year into the foreseeable future. However, the methodology of the Stern review is highly contentious. Any assessment of future costs and benefits is crucially dependent on the rate of interest used to discount them to present values for comparative purposes. Lord Stern used a very low discount rate, in effect coming close to equating a pound spent in a hundred year's time with its value today. A commercially realistic discount rate (such as the government will, for example expect future operators of nuclear power stations to use in estimating the current disadvantage of decommissioning) would have very much more manageable current costs of climate change expected to occur in the future.

9.2 The Stern Review assessed the nature of the economic challenges of climate change and how they can be met, both in the UK and globally. While the review concerned the global and national picture it also has relevance for the approach proposed in this strategy. The Council will consider how and under what circumstances it will invest in mitigation and adaptation measures. No matter what funding mechanisms are put in place the Council will consider the anticipated benefits of investment in terms of emission reduction, public protection and payback through efficiency. In short, a business case assessment will be made for each significant proposal. A successful case will demonstrate the benefit of each of these three factors. As with other business cases, in carrying out such assessments, the Council will use discount rates that are realistic in its market circumstances at the time of the assessment.

9.3 Much of the Council's investment will be based on existing financial practices. Each year changes in service demands are matched with the financial planning of revenue budgets. Consequently, opportunities for sound investment in climate change measures can be assessed and bid for through existing processes. For example, installation of new energy efficiency technology could, to some extent, be met from existing maintenance budgets. Similarly, opportunities for investment in thoughtful design measures in new capital schemes could be incorporated in the Council's capital programme: investment in major improvements to the Borough's school buildings could include provision for technologically advanced energy efficiency.

9.4 Opportunities also exist for external funding and support. The Council is already working with the Carbon Trust in 2008/09 as part of the LACMP to reduce carbon emissions from the Council's own estate. The Council is

attracted by the idea of establishing a revolving fund to support this strategy. This could be achieved or enhanced by working formally with Salix Finance. Salix Finance is an independent, publicly funded company set up to accelerate public sector investment in energy efficiency technologies through invest to save schemes. Salix Finance has public funding from the Carbon Trust and is working across the public sector with Local Authorities, NHS Foundation Trusts, Higher and Further Education Institutions and Central Government. It aims to secure the delivery of practical carbon saving projects in the public sector, through suitable financial vehicles - primarily through interest-free, matched funding, structured so that the energy savings pay the total fund back over time. Working in partnership with Salix Finance also allows access to expert help and sound experience in undertaking disciplined business case analysis. The Council appreciates the potential value of this approach and will liaise with Salix Finance to make a researched proposal.

9.5 For 2008/09 the Council has agreed an annual budget of £50,000 for Climate Change Initiatives. The budget will be used to establish a strategy and fund a one year part time post to support the Council's participation in the Carbon Trust Local Authority Programme, promote mitigation and adaptation measures at the Environment Days event in June, and pay for production, launch and additional communication costs associated with the strategy.

9.6 The Council commissions new building work and new services each year. The impact of new services and new buildings on greenhouse gas emissions should be weighed up in the decision making process and evaluated alongside other considerations, such as cost, and how this compliments or compromises the overall targeted reduction programme of the Council.

9.7 This strategy will impact on all services in the Council. It may change the way existing budgets are spent to meet those objectives. Options which require major investment or resources changes will be part of individual Business Groups' future budget planning processes. Business cases will need to identify and present the financial and non financial criteria.

10.0 Implementation

10.1 It is intended that the implementation of the Climate Change Strategy will be sponsored by the Council's Management Board as a programme in line with the Government's Managing Successful Programmes (MSP) methodology.

10.2 To do this, the Council will need to undertake some preliminary work. Briefly this will mean establishing a Senior Responsible Owner, who will be a member of the Council's Management Board, and the appointment of a Programme Board. The Programme Board will comprise people with accountabilities for implementing actions and realising benefits. A further small team will be required to produce:

- the Programme Brief – this sets out the specific vision, goals, risks, benefits and costs, and;
- the Programme Preparation Plan – detailing the activities and the resources required.

10.3 These documents will then be independently reviewed and presented to the Management Board for approval to resource the programme and proceed. It is expected that this can be achieved within three months of the Climate Change Strategy being agreed.

Annex A - Performance indicators and targets

Ref	Title	Type of PI	Targets
NI185	CO_2 reduction from local authority operations	National Indicator Set (NIS), Local Area Agreement (LAA)	LAA target to reduce the 2008 baseline by 8% by 2010
NI186	Per capita reduction in CO_2 emissions in the LA area	NIS	LAA target to reduce the 2005 baseline by 17.3% by 2010 - we have not agreed to have this as a LAA target
NI188	Planning to adapt to climate change	NIS	
NI192	Percentage of household waste sent for reuse, recycled and composted	NIS, LAA, Community Strategy	28.2% (2008/09) 30.7% (2009/10) 33.2% (20010/11)
NI198	Children travelling to school – mode of travel usually used	NIS	
L6406	Car Club Membership in the borough	Local Indicator	
LI, LAA3ai, LAA3aii	Number of schools with a School travel plans - broken down by school type	Local Indicator, Old LAA, Community Strategy Indicator	100% (2008/09)
LAA2bi	Percentage of municipal waste recycled	Old LAA	19% (2008/09)
Aim 4	Improvement in energy efficiency of private sector housing stock in the Borough and reduction in carbon dioxide (CO2) emissions. (HECA return to DEFRA) (H&WB)	Community Strategy	
Aim 1	Develop a Royal Borough Green Development Guide	Community Strategy	
Aim 4	Visit and conduct audits of all schools in the borough and set recycling targets	Community Strategy	Mar-09
NI187	Tackling fuel poverty – % of people receiving income based benefits living in homes with a low energy efficiency rating	NIS	
NI 194	Air quality – % reduction in NOx and primary PM_{10} emissions through local authority's estate and operations	NIS	
BV63	Energy efficiency of housing stock	Keeping as a Local Indicator	73 (2008-09) 74 (2009/10) 75 (2010/11)

Annex B - Carbon Trust Local Authority Carbon Management Programme

The Carbon Trust is a private company set up by Government in response to the threat of climate change. Their mission is to accelerate the move to a low carbon economy by developing commercial low carbon technologies and working with business and the public sector to reduce carbon emissions.

Through the LACMP, the Carbon Trust provides councils with technical and change management support and guidance to help them realise carbon emissions savings. The primary focus of the work is to reduce emissions under the control of the local authority such as buildings, vehicle fleets, street lighting and landfill sites. The LACMP was launched in 2003 and has to date facilitated a total of 141 partnering Local Authorities.

Participating councils benefit from consultant support in the form of workshops and limited dedicated support tailored around the 'Five-Step' process. This process guides authorities through a systematic analysis of their carbon footprint, the value at stake and the opportunities available to help them manage carbon emissions in a strategic manner.

Under the LACMP the Carbon Trust consultants help participating local authorities with workshops, meetings and other support tailored around a five step process. The process guides the local authority through:

- a systematic analysis of our carbon footprint;
- a calculation of the value at stake and the case for taking action;
- an assessment of opportunities to help manage carbon emissions, and;
- development of structured action plans for realising carbon savings and embedding carbon management in the council's day to day business.

The Five Step process

The programme responds to key drivers within the local authority sector and gives significant benefits. It allows local authorities to:

- **save money** — by managing and reducing energy bills;
- **meet regulation** — preparing for incoming regulation and legislation;
- **raise their profile** — be amongst the top performing councils, and;
- **lead by example** — influencing business and the community.

The Council submitted an expression of interest to the Carbon Trust in June 2007 for assistance under the LACMP. The application was favourably considered and the project commenced in May 2008 and runs for a period of ten months.

The Council has been using the Carbon Trust's toolkit (a Microsoft Excel spreadsheet) to establish the amount of CO_2 emissions that the Council is responsible for – our baseline, so as to assist in targeting cost and emission savings.

The scope of the tool covers emissions from buildings, fleets or business travel, streetlights, waste and water consumed. It does not cover emissions from community activity.

In addition to compiling a baseline, this tool allows for:

- Graphical output showing total and per employee CO_2 emissions for buildings, transport and overall over a five year period;
- Target setting (five year or year-by-year targets) shown on graphs;
- Benchmark comparison: buildings above typical or good practice energy levels are highlighted automatically, and;
- Cost & emissions analysis: total energy costs & emissions are compiled and potential savings are calculated automatically relative to good practice in buildings and alternative transport options entered.