



**CENTRE FOR
SUSTAINABLE
ENERGY**

Islington Carbon Baseline Study

Report to Islington Strategic Partnership

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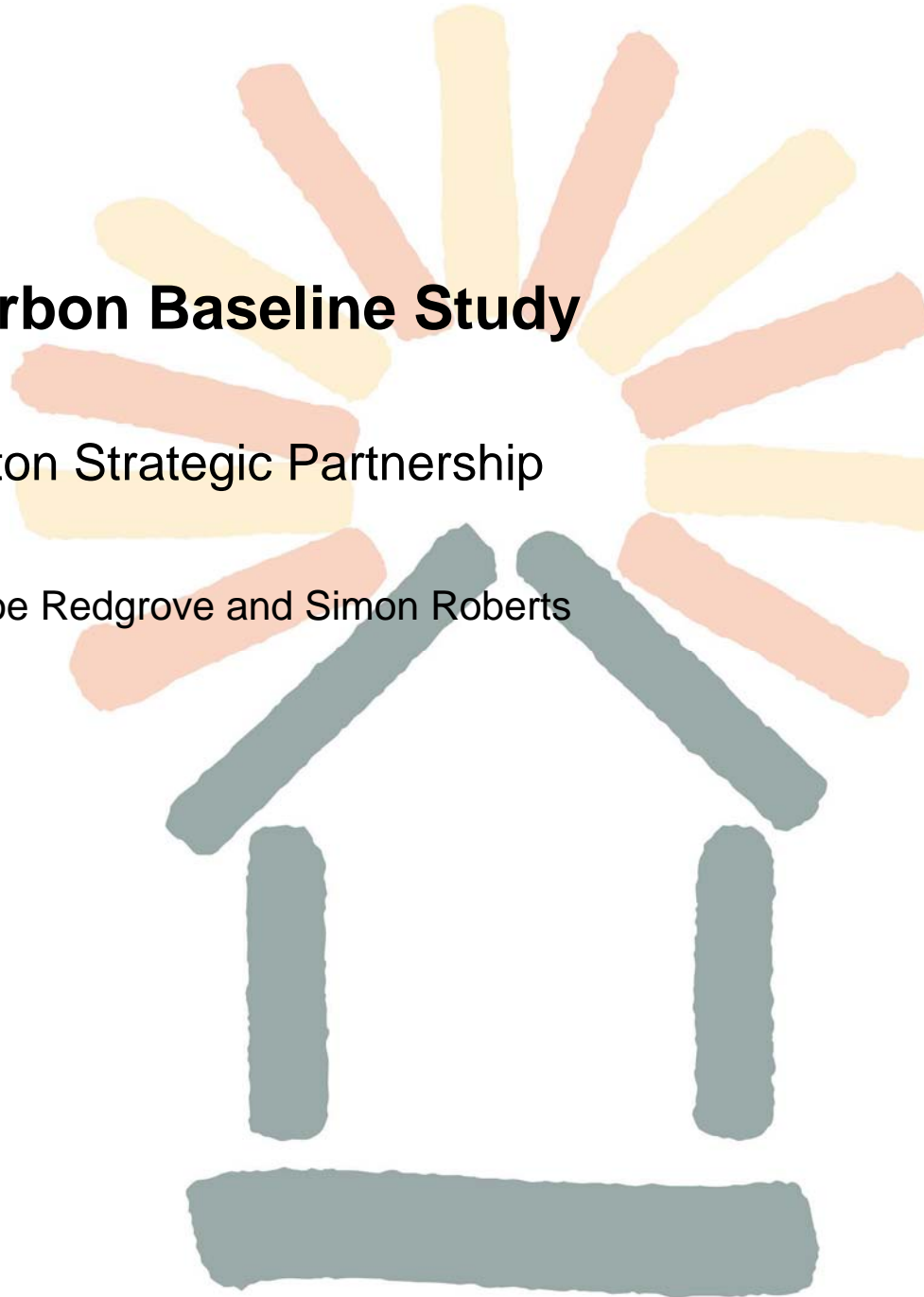
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1 Executive Summary

Introduction

Islington Strategic Partnership (ISP) has adopted a borough wide carbon reduction target of 5% by 2010, relative to 2005 emissions, as part of its Local Area Agreement with the Government. To achieve this target a unique local Climate Change Partnership has been established, currently representing 10% of the London Borough of Islington's (LBI's) emissions. The Partnership, which includes the Council, has adopted a 15% reduction target for its own emissions by 2010, relative to 2005. In parallel with this, the Council has made a detailed assessment of its overall approach to carbon management, and identified a number of improvements which will deliver additional carbon savings in the borough.

Background

Islington's Local Area Agreement (LAA) breaks new ground by committing the borough to achieving a reduction in carbon emissions during the LAA period 2006-9. To ensure that real action takes place in support of meeting the target, the ISP has established a unique cross-borough Climate Change Partnership. In 2006 the ISP appointed the Centre for Sustainable Energy (CSE) to carry out the Islington Carbon Baseline Study, aimed both at identifying an appropriate carbon reduction target, and facilitating the establishment of the Partnership.

Carbon baseline study

Starting from the assumption that deliberately or otherwise, local authorities are already affecting carbon emissions in their areas (positively and negatively), CSE developed a baseline methodology that:

- is compatible with national and regional carbon accounting and targets
- includes the effects of Islington Council's indirect carbon management performance
- incorporates the direct emissions reduction opportunities afforded by the creation of the Partnership

The first of these three elements combined use of the DTI 2005 figures for Islington-wide carbon emissions with a detailed analysis of the UK Climate Change Programme (UKCCP) as it affects Islington. The use of DTI figures means that the data is compatible with Greater London Authority (GLA) data.

The second element was the use of CSE's Local and Regional Carbon Management Matrix to assess the Council's performance across the range of roles it does or could play which influence local carbon emissions. This work reviewed current practice, the scope for improvement, and the likely effect these will have on borough emissions. The focus was on identifying realistic incremental adjustments to existing processes and practices in the Council.

The third element was the development of an emissions accounting tool for Partnership members, which allowed the use of benchmarking as a route to identifying an appropriate Partnership carbon target.

By combining these elements, CSE has identified an appropriate carbon emissions target for Islington as a whole.

Establishing the baseline and growth trend

The starting point chosen for identifying baseline emissions was the most recently available DTI local area energy statistics, giving 2005 emissions in Islington as 1.06 million tonnes CO₂.

To establish the underlying 'business as usual' trend in Islington's emissions consistent with the UK Climate Change Programme (UKCCP), CSE projected borough emissions to 2010, and removed the savings identified by the UKCCP. This gives an underlying growth in CO₂ emissions of 2.28% from 2005 to 2010, equivalent to an additional 24,236 tonnes in 2010.

Islington Council's carbon management

Building on work supporting Defra's 2006 Review of the UKCCP, CSE linked its Carbon Management Matrix (which assesses local authority performance on carbon management on a scale from 'Weak' to 'Excellent' across a range of activities) to the carbon reduction measures in the UKCCP. This allowed estimates to be made of the size and range of influence that Islington Council might have on local delivery of the measures in the Programme, for different levels of carbon management performance as assessed using the Matrix. The analysis suggested that (assuming the UKCCP is successfully implemented) some savings will occur in Islington regardless of the Council's performance, while others will be affected by it. By assessing Islington's actual performance, and identifying the scope for improvement, CSE could then gauge the potential emissions reductions which would result from targeted improvements in performance carried out by the Council.

The 'non locally-influenced' reduction from the UKCCP amounts to approximately 19,000 tonnes CO₂ of 2005 emissions. CSE's assessment of the UKCCP's assumptions regarding the average quality of carbon management by local authorities suggests that further savings of about 35,000 tonnes CO₂ should occur in the borough from the UKCCP if the Council's performance was in line with this average. However, Islington's current performance was assessed during the baseline study as exceeding those assumptions, leading to additional savings of approximately 1,400 tonnes CO₂, while further targeted improvements in performance could yield an additional 3,200 tonnes. Table A below summarises this information:

Table A: Elements of Islington's emissions trajectory

Element	Change in emissions (2005-2010) (1,000 tonnes CO ₂)	% of baseline emissions
Baseline growth	+ 24	+ 2.28
Non locally influenced UK CCP Savings	- 19	- 1.82
Effect of assumed LBI performance	- 35	- 3.25
Additional from actual performance	- 1.4	- 0.13
Potential additional from improved performance	- 3.2	- 0.30
Total (variation due to rounding)	- 34	- 3.23

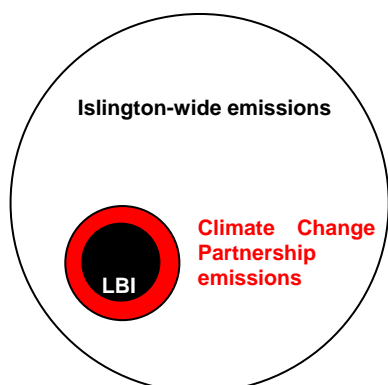
Islington is therefore expected to achieve savings of 34,000 tonnes CO₂ through the UK Climate Change Programme as influenced by Islington Council's improved carbon management performance. This equates to 3.23% of its 2005 baseline of 1.06 million tonnes.

Islington Climate Change Partnership

The establishment of a local climate change partnership focused specifically on emissions reductions is one of the most innovative and exciting features of the approach adopted by Islington Strategic Partnership to the challenge of setting and meeting a borough-wide carbon emissions target.

As part of the initiation of the Climate Change Partnership, CSE facilitated two workshops. The first was held at the Emirates Stadium on 9 November 2006. This event introduced partners to the process and secured their commitment to share their energy use and carbon emissions data.

During the period between this workshop and the next, CSE collected and analysed the Partners' data using a set of Chartered Institution of Building Services Engineers (CIBSE) benchmarks to identify likely areas for carbon reduction. Overall the Partnership captures many of the large carbon emitters in the borough. The data collected by CSE represents about 10% of all emissions from Islington, approximately half of which are related to energy used by the Council. The scale diagram below illustrates the relationship between the emissions of the borough as a whole and those of the Partnership.



At its inception, the Partnership therefore represents a sizeable proportion of total carbon emissions from the borough of Islington. This puts the Partnership in a position to make a real and significant contribution to the Islington-wide carbon reduction target, since every 10% reduction achieved by the Partnership will result in a 1% reduction in total borough emissions. As the Partnership grows, the potential reduction will be even greater.

The second Partnership event took place on 2 February 2007 at the London Art House, after CSE had analysed the partners' data. It focused on the types of carbon reduction measure available to partners, and the reductions achievable for different levels of investment and at different payback periods. The day also provided a valuable opportunity for Partners to share existing experience of managing carbon emissions, providing an early demonstration of one of the major advantages of partnership working.

The outcome of the second workshop was a decision by the Partnership Steering Group to adopt a Partnership emissions reduction target of 15% by 2010, along with a strategy to increase membership such that the Partnership would represent baseline emissions of 125,000 tonnes CO₂. Taken together, these measures mean that the Partnership's 15% target equates to 18,750 tonnes CO₂, or 1.76% of Islington emissions in 2005.

Bringing it all together: the Islington Target

The overall target for the Local Area Agreement can now be calculated as the sum of the reduction expected through the UK Climate Change Programme as influenced by Islington Council's improved carbon management performance (34,000 tonnes CO₂), and the reduction target agreed by the Islington Climate Change Partnership (18,750 tonnes CO₂). Taken together these result in an overall Islington carbon target of 5%, or 53,000 tonnes CO₂, (after rounding) by 2010. This is an ambitious target, particularly in light of the fact that the overall projected reduction on UK emissions as a result of the national Climate Change Programme

2005-2010 is around 2%.

Recommendations to Islington Council and the Strategic Partnership

The Islington Carbon Baseline Study has led to the development of a partnership with the potential to secure real reductions in carbon emissions from the borough. This would not have been possible without the support of the council and the wider Strategic Partnership. However, for these potential reductions to be realised, this support needs to be guaranteed for the long term. It is therefore important that both the council and the Strategic Partnership create certainty by making a clear long-term commitment to support the Islington Climate Change Partnership, including the provision of adequate staffing and project resources.

The results of LBI's self-assessment exercise using the Carbon Management Matrix point to a list of actions which the council can take to improve its carbon management. This list can be found in Appendices 1 and 2 of this document. It is recommended that LBI consult this list, prioritising the actions, and assigning an 'owner' within the council who is responsible for driving each action forward.

Recommendations to ICCP managers

Simplify energy consumption monitoring spreadsheet

There was some variation in the data that Partnership members were able to gather in order to complete their reporting spreadsheet. In order to simplify this process in the next monitoring review, the reporting spreadsheet should be slimmed down. In particular, members should be asked to enter their own consumption rather than entering meter readings.

Encourage and support members to draw up action plans

Partnership members should devise action plans for their own organisation, which aim to meet their emissions reduction target. The overall Partnership structure should actively support and encourage members to do this and help them to share experiences and to access sources of advice.

Formalise annual CCP reviews

Islington CCP will need to schedule annual reviews to update the Partners' Emissions Inventory and overall progress on targets. Adequate time and resources will need to be allocated to collate and analyse energy consumption data across the Partnership.

Consider establishing an Energy Manager network/forum

Key energy contacts at each site would greatly benefit from a network or forum where ideas and experiences could be shared across the Partnership. This could take the form of a web-hosted forum or regular meetings/seminars.

Recommendations to ICCP members

Formalise energy consumption data monitoring procedures

During the exercise to establish a members' Emissions Inventory for the Partnership it became apparent that many sites were not in a position to easily provide reliable historical energy consumption data. In order for the Partnership to effectively review progress towards the overall 15% emissions reduction target on a regular basis, and for members to monitor their own year-on-year progress, it is essential that organisations formalise their procedures

for collating and recording monthly meter readings, utility bill information and work-related travel data where appropriate.

Consult the list of low cost / no cost measures in Appendix 7

This list was presented at the second IPPC event. Some Partnership members may be able to start implementing these measures even before establishing a formal carbon reduction action plan (see below).

Develop a carbon reduction action plan

This would typically identify energy saving measures (for examples see Appendix 7), a timescale for implementation, delegated responsibilities and a schedule for review. It would also need to have full backing from senior management.

Engage the support of the Carbon Trust

Tailored advice on energy management and energy saving measures was not possible within the scope of this project. It is therefore recommended that Partnership members contact the Carbon Trust to check on eligibility for a free site survey and consult the Carbon Trust website for guidance publications specific to building/organisation types: www.carbontrust.co.uk

2 Background

2.1 Project Aims

2.1.1 ISP Terms of reference

The aims of the project, as specified by Islington Strategic Partnership in the Terms of Reference for this study, were:

- To establish a methodology for preparing a carbon baseline study in Islington;
- To establish Islington's carbon baseline;
- To explore options for a carbon reduction target.

2.1.2 Local Area Agreement

The London Borough of Islington's (LBI's) Local Area Agreement (LAA) commits the borough to achieving a reduction in carbon emissions during 2006-9. The Islington Strategic Partnership agreed with Government Office for London that a target would be set in the first year, following a carbon baseline study.

2.1.3 Islington Climate Change Partnership

In order to achieve the target, a cross-borough Climate Change Partnership (ICCP) has been established, consisting of organisations from the private, public, and voluntary and community sector. It is planned that the partnership will regularly measure and monitor carbon emissions, set out a common agenda for action across Partners, and raise the profile of action to mitigate climate change. The three main areas of work for the ICCP will be energy efficiency, renewable power generation, and resident and business engagement.

2.2 Objectives and Approach

In order to establish an emissions reduction target for Islington, the following objectives were set:

- Establish a baseline for the borough using DTI statistics;
- Identify the underlying 'business as usual' growth of emissions;
- Assess the Council's current and potential influence over emissions;
- Assess emissions reductions resulting from the UK Climate Change Programme (UKCCP) which are not influenced by the Council;
- Identify potential emissions reductions from the ICCP.

These elements were combined to establish a target. An overview of the approach is given below, but it is also described in more detail along with results and analysis in section 3.

2.2.1 Islington Emissions Baseline

Islington's emissions baseline was calculated using DTI local energy consumption statistics for 2005, the most recent year for which these statistics are available. Standard conversion factors were used to establish emissions from each energy source. In order to establish the likely 'business as usual' growth in emissions within the borough consistent with the predictions of the UKCCP, the underlying emissions growth trend in the UKCCP was applied

to Islington, pro-rata and on a sector-by-sector basis.

2.2.2 The Council's Influence

An important component of the Islington Carbon Baseline Study was to assess the Council's current performance (and scope for improvement) using the Carbon Management Matrix, a tool which identifies the roles and levers local authorities have which have an influence on carbon emissions and shows how they can be used more effectively. Representatives from the Council completed an electronic version of the Carbon Management Matrix. The results of this were analysed to assess Islington Council's current performance and to establish a scenario in which the Council's performance on each individual lever was improved by one rating.

The degree of local authority influence on the full range of measures in the UKCCP was then considered, in order to estimate the potential carbon reduction effects of the Council's current activities and any potential improvement in the Council's performance as measured by the Matrix. This was then applied to Islington's Matrix assessment, to assess UKCCP savings likely to occur in the borough regardless of the Council's performance, and the actual and potential additional savings available as a result of the Council's current and improved performance.

2.2.3 The Islington Climate Change Partnership

The establishment of a local climate change partnership focused specifically on emissions reductions is one of the most innovative and exciting features of the approach adopted by Islington Strategic Partnership to the challenge of setting and meeting a borough wide carbon emissions target. It integrates direct local action to reduce emissions, enabling the overall process to link national programmes and targets and local government and strategic partnership objectives, with "action on the ground".

As part of the establishment of the Partnership, CSE facilitated two workshops. The first secured partners' commitments to providing data on their energy use. Before the second workshop, this data was used to calculate carbon emissions from the Partnership members and to assess the energy performance of their buildings, with a view to identifying areas where emissions could most effectively be reduced. The purpose of the second workshop was to feed back this information to the partners and introduce them to potential energy efficiency measures.

2.2.4 The Partnership's Scope for Reductions

The energy performance of Partners' buildings was assessed by comparing the energy use data they had provided against standard benchmarks for their building type. This identified the magnitude of potential emissions reductions from the Partnership, which guided the Partnership Steering Group's decision as to what their reduction target should be. A target reduction of 15% of current emissions by 2010 was adopted, along with a target to increase the membership of the Partnership so that it represents 125,000 tonnes of CO₂. Therefore the expected emissions reduction resulting from the Partnership is 18,750 tonnes, equal to 1.76% of the borough's 2005 emissions.

3 Results and Analysis

3.1 Baseline Emissions

As discussed in Section 2.2, the first step in the process of identifying a borough-wide carbon reduction target for Islington is to assess current emissions and likely trends. Section 3.1.1 below sets out the way in which the DTI's Local Area Statistics have been used to establish a 2005 baseline. Section 3.1.2 then explains how national emissions projections implicit within the UK Climate Change Programme were unpicked and applied specifically to Islington.

3.1.1 DTI Local Area Statistics

The DTI releases emissions data at the Local Authority level (NUTS4) annually, for the previous calendar year but one: that is, the information is published two years out of date.

The quantitative work for the Islington Carbon Baseline Project was undertaken using 2005 DTI data for the consumption of electricity, gas and road transport fuel, which was made available by DTI in 2007. Road transport data was only available for 2004, but the use of this was considered to be acceptable as the borough's road transport emissions are stable (see section 3.1.2).

DTI provides the information in the form of consumption figures: GWh (gigawatt-hours) of electricity and gas, and toe (tonnes of oil equivalent) of road transport fuel. CSE used the factors set out in Table 1 to convert these figures into tonnes of CO₂. Table 2 gives the resulting borough-wide CO₂ emissions for 2005, and Table 3 shows the split between domestic, commercial and transport sector emissions.

Table 1: CO₂ conversion factors (Carbon Trust)

Fuel	kgCO ₂ /kWh	
Gas	0.190	
Electricity	0.430	
Petrol	0.24	(1,000 toe = 11.63 GWh)
Diesel	0.25	

Table 2: Islington Emissions, 2005 by fuel (DTI)

Fuel	Domestic	Commercial	Total
Electricity	139,611	394,477	534,088
Gas	238,205	135,695	373,899
Road (2004 data)	116,031	40,821	156,852
Totals	493,847	570,993	1,064,840

Table 3: Islington Emissions 2005 by sector

Sector	Tonnes CO₂	Proportion
commercial	530,172	50%
domestic	377,815	36%
transport	156,852	14%
Total	1,064,840	100%

The figure of 1.06 million tonnes CO₂ will be used as the baseline emissions figure for the Carbon Baseline Study. Note that this figure is assumed to cover all emissions within the borough, including those of the Council and the Partnership members. In reality this involves a slight simplification, since it excludes emissions from rail transport, and minority fuels such as coal, oil and LPG; however, these are not significant sources of CO₂ emissions in the borough.

3.1.2 Islington Emissions Trend

A second requirement for identifying a borough-wide emissions target for 2010 is an understanding of 'business as usual' emissions. When combined with predicted carbon savings, this will allow informed estimates of future emissions levels, in particular for the target date.

The aim here was to create an Islington-specific 'business as usual' scenario, consistent with the Government projections that underpin the UK Climate Change Programme. The solution chosen was to identify the underlying emissions trend in the UKCCP, and apply this to Islington, pro-rata and on a sector by sector basis. The only exception was that, following advice from experts within the Council, Islington road transport emissions were assumed to be stable at their 2004 levels.

The decision to hold road transport emissions constant was based on the following reasoning. Road transport emissions are influenced by two main factors: traffic volumes and the average emissions of each vehicle using Islington's streets. There is currently no feasible way to measure the average emissions of each vehicle in a particular area. In terms of traffic volumes, the council has set a traffic reduction target as part of its statutory Sustainable Transport Strategy (2006-2016). The target is to reduce traffic volumes in Islington by 3%, from 485 million vehicle kilometres travelled during 2001 to 470.5 million vehicle kilometres travelled in 2011. However, this 3% traffic reduction has already been achieved in Islington between 2001 and 2004, most likely as a result of the Central London congestion charge and the creation of many new controlled parking zones and 20mph zones throughout Islington during those years. The Council is now working to maintain these volume levels.

Although the average emissions per vehicle cannot currently be measured and is not being used to justify a target for reducing road transport emissions, the Council is still working hard to encourage the use of cleaner-fuel vehicles. Some examples of the measures the council has already implemented include the introduction of emission-based parking permit pricing as a result of a referendum, the greening of the council's fleet to provide a positive example for other Islington businesses to follow, installation of a pilot on-street electric vehicle charging point, and continued expansion of Islington's car club network to allow residents and businesses to replace older, less efficient cars with newer, cleaner cars that they are likely to use less often.

The UKCCP projects emissions (and reductions) in six areas: Energy Supply, Business, Transport, Domestic, Agriculture and Public Sector. Table 4 below sets out projected emissions and reductions in each of these areas. The final column shows the derived underlying trend in 2010 relative to 2005, if none of the projected savings were to take place.

Table 4: UKCCP projections with baseline trend exposed

Sector	2004 (actual)	2005 (CSE calc.)	2010 Projection (savings implicit)	Savings	2010 (Savings removed)	Baseline trend cf 2005
Energy supply	58.0	59.35	58.9	8.1	67	+13%
Business	60.5	61.35	56.4	5.1	61.5	no change
Transport	43.1	44.23	44.8	6.8	51.6	+17%
Domestic	41.7	42.52	36.5	4.9	41.4	-3%
Agriculture	1.5	1.52	0.7	0.1	0.8	-47%
Public Sector	5.7	5.78	5.9	0.5	6.4	+11%
All	210.5	214.8	203.2	25.5	228.7	+6%

These baseline increases were then applied to Islington's emissions to obtain an underlying emissions trend for the borough. This required mapping the six sectors of the UKCCP data on to the three sectors in Islington's baseline inventory, as shown in Table 5 below. Energy supply was assumed to be dominated by electricity generation, and was distributed between Islington's domestic and commercial emissions in the same proportion as 2005 electricity consumption in the borough. The only exception was that transport emissions were held constant, as described above.

Table 6 shows the effect of applying these underlying emissions increases to Islington's 2005 baseline, using the sector mappings shown in Table 5.

Table 5: Mapping UKCCP sectors on to the Islington Inventory

UKCCP Sector	Islington Sector Mapping
Energy supply	76% commercial 24% domestic
Business	Commercial
Transport	Transport
Domestic	Domestic
Agriculture	n/a
Public Sector	Commercial

Table 6: Underlying emissions increases applied to Islington (tonnes CO₂)

Sector	Baseline	trend	2010 no savings	Trend increase
commercial	530,172	+3.9%	551,008	20,836
domestic	377,815	+0.9%	381,216	3,400
transport	156,852	no change	156,852	0
Total	1,064,840	102%	1,089,076	24,236

Hence the underlying emissions trend in Islington for the period 2005-2010 is an increase of about 24,000 tonnes CO₂, or 2.28%. The following sections set out a range of emissions reduction opportunities for Islington which will offset this baseline increase. Some of these can be expected to occur independently of any specific local action, while others will be highly dependent upon it.

3.2 Carbon Management by LBI

3.2.1 Introduction to the Local and Regional Carbon Management Matrix

Research led by the Centre for Sustainable Energy (CSE) provided the evidence base in 2005 for the Government to commit to a much stronger drive to improve the performance of local authorities on climate change¹.

The research, undertaken by CSE with Impetus Consulting and QE2, exposed the huge range of existing opportunities available for local authorities and regional bodies, such as Regional Development Agencies and Regional Assemblies, to act to curb carbon emissions.

Local authorities are already expected to:

- manage their own buildings, housing stock and staff activities, and procure equipment and a wide range of services
- deliver a range of services to the public (housing, education, social services, waste, leisure/tourism, culture, etc)
- establish and control planning strategy
- co-ordinate local regeneration and economic development activity
- manage and/or influence public sector investment in local infrastructure
- enforce building regulations and trading standards
- provide civic leadership within their communities, encouraging behavioural change and leading by example (e.g. through Local Strategic Partnerships)
- create and support effective partnerships (with each other and across sectors) to meet defined objectives
- make nationally significant issues locally relevant and motivating
- promote community well-being
- showcase good practice.

With an overarching and fundamental cross-cutting issue like carbon emissions reduction (or 'carbon management'), it is highly likely that each of these accepted roles for local and regional bodies already has an influence on carbon emissions. This influence may be positive or negative, deliberate or not.

¹ Centre for Sustainable Energy with Impetus Consulting and Quantock Energy and Environment (2005), *Local and Regional Action to Cut Carbon: An appraisal of the scope for further CO₂ emission reductions from local and regional activity*. Available from <http://www.cse.org.uk/pdf/pub1057.pdf>

The question is how to ensure these roles and activities are, in future, shaped by and aligned with national carbon management priorities so that their influence is benign and positive.

The Carbon Management Matrix was designed to achieve this. It identifies the roles and levers local authorities have which have an influence on carbon emissions, and it shows how they can be used to better effect.

Why local action on climate change is important

There are three particular aspects of action to reduce carbon emissions which highlight the importance of effective local and regional action, alongside national and international action:

- implementation of carbon management is highly diffused – requiring a sustained change in behaviour and consumer choices by every householder, transport user, organisation and business;
- amongst the individuals and groups who need to implement these changes, the current levels of motivation to act and the understanding of required actions are still relatively limited;
- the tools and technologies, services and skills to enable action are not all widely available and are currently often found in smaller organisations (voluntary, business or academic) which can fall 'below the radar' of national bodies.

This emphasises the need for a focus on changing attitudes, building understanding and motivation to act, and enabling new partnerships and service developments to test and deliver the necessary changes.

In this context, local authorities particularly have:

- direct connections with individual households, community groups and businesses by virtue of existing service provision and electoral relationships;
- opportunities to identify, bring together and support local organisations and encourage businesses to provide services which reflect local need and circumstance;
- a potentially strong ability to establish and maintain a sense of local identity and civic pride which can make national and global issues seem locally relevant.

This does not mean that local authorities are currently applying these attributes to addressing climate change. But it is difficult to imagine an effective national effort to reduce carbon emissions in which they don't.

The Matrix: assessing performance and guiding improvement

The Carbon Management Matrix identifies the roles and levers which local authorities and regional bodies have available to them which have an influence on carbon emissions.

The Matrix is divided into five separate aspects of carbon management:

1. Domestic energy efficiency
2. Business energy efficiency
3. Public sector energy efficiency
4. Renewable and low carbon energy generation
5. Transport (corporate and community-wide)

This is to reflect the fact that carbon management is the end result of action on one of these aspects, with many actions potentially being delivered for a range of purposes and motivations (e.g. affordable warmth, economic development, road accident reduction, local air quality improvement etc.)

The Matrix details the conduct likely to secure a 'weak', 'fair', 'good' or 'excellent' rating for each potential role or lever. Performance can then be evaluated by assessing which of these four 'behavioural indicators' for each lever most closely resembles the activity currently being undertaken.

This 'behavioural indicator' approach is taken because many of the levers and actions have an indirect impact on carbon emissions; it would therefore be difficult to develop a purely quantitative measurement of performance.

By detailing behaviours at each level of performance, the Matrix provides a picture of the incremental steps involved in improving performance. It can therefore act as both a yardstick to measure performance and a guide to improve it.

For example, a local authority currently performing at 'fair' on a particular lever can see immediately what it would need to be doing in order to improve to 'good'.

The full Local Authority version of the Matrix, including the detail of all the levers and associated behaviour/rating combinations, is included as Appendix 1.

3.2.2 Self-assessment by LBI

As discussed in Section 2.2.2, an important component of the Islington Baseline Study was to assess the Council's current performance (and scope for improvement) using the Carbon Management Matrix.

To facilitate this, CSE created an electronic spreadsheet-based version, which was presented to a group of Islington Council officers with responsibilities across the range of activities covered by the Matrix. During a workshop session facilitated by CSE on 31 October 2006, officers worked through a rough assessment of the Council's performance on a selection of Matrix levers. In the period following the workshop the electronic matrix was distributed to a wider group for more detailed assessments of all levers. In order for the matrix process to work effectively, it must be completed honestly, and so all those who contributed to this process endeavoured to do so, and to be conservative in their assessment of performance. The completed matrices were then collated and returned to CSE for analysis.

The results for each aspect of carbon management were as follows:

Table 7: Results for Individual Aspects of Carbon Management

Matrix Section	Overall rating
Domestic Energy Efficiency	Fair – Good
Business Energy Efficiency	Fair – Weak
Public Sector Energy Efficiency	Fair – Good
Renewables and Low Carbon Technology	Fair
Transport (Corporate)	Fair – Good
Transport (Community)	Fair – Good
Average	Fair – Good

CSE then considered a scenario in which Islington Council's performance on each individual lever was improved by one rating, (e.g. levers rated "Weak" improved to "Fair", etc).

By examining the changes required to achieve these improvements, a list was created of the actions which the Council could take to improve its rating from the current "Fair – Good" to a target of "Good" overall.

Table 15 to Table 20 in Appendix 1 set out the current rating against each of the 53 levers which were assessed, along with the associated behaviour, the behaviour associated with the improved rating, and the actions that would have to take place in order to achieve the required behaviour.

The actions fall into ten categories, within each of which there are a number of actions which, if all taken, would improve Islington Council's rating to "Good" overall. The names in italics show how these categories are referenced against actions in Appendix 1. Appendix 2 lists all of the actions according to these categories.

Table 8: Categories of suggested actions

- 1. New approaches to funding energy efficiency** (*Funding*)
- 2. Increase the Councils' leadership role** (*Leadership*)
- 3. Monitoring**
- 4. Integrating energy into corporate strategies / creating a corporate energy strategy**
(*Corporate*)
- 5. Promoting energy efficiency to business** (*Business*)
- 6. Setting stretching targets** (*Targets*)
- 7. Building control**
- 8. London-wide networks** (*Regional*)
- 9. Community engagement** (*Community*)
- 10. Procurement**

3.2.3 Linking to the UK Climate Change Programme

The next step was to consider the relationship between the six aspects of the Carbon Management Matrix within Islington, and the UK Climate Change Programme. This was necessary to allow an estimate of the potential carbon reduction effects of i) the Council's current activities, and ii) any improvement in the Council's performance as measured by the Matrix.

The assumption behind the following analysis is that since the Local Area Agreement will be between the Islington Strategic Partnership on one hand, and the Government (via Government Office London) on the other, it makes sense to frame consideration of the Council's carbon management in the context of the UK Climate Change Programme.

The UKCCP 2006 overlays a set of carbon reduction measures in eight categories on an underlying CO₂ emissions trend for the UK. The results are projected emissions reductions from various sectors of the UK economy in 2010.

Many of the measures in the UKCCP rely to some extent on delivery by local authorities. It follows that the quality of carbon management practices employed by a local authority will influence the effectiveness of the UKCCP measures in that area.

CSE considered the degree of local authority influence on the full range of measures in the UKCCP, to arrive at an estimate of Islington Council's influence over the programme's implementation in Islington.

There were three stages to this analysis. Firstly, a number of measures simply would not be influenced by an English urban local authority such as Islington. These include the EU Emissions Trading Scheme, the UK Renewables Obligation, activities specific to the Devolved Administrations of Scotland, Wales and Northern Ireland, and any measures pertaining to rural areas or the agriculture sector. Such measures were excluded from the second stage of the analysis.

Next, where a measure was deemed to be subject to influence by the quality of local authority carbon management, it was necessary to estimate the degree of that influence. For each individual UKCCP measure, the degree of influence was expressed as a proportion of the total saving anticipated from that measure. In making this assessment, both the extent of the local authority role in delivery of the measure, and the difference made to CO₂ emissions by improved performance on that measure were taken into account. Some measures, for example Building Regulations enforcement, are entirely delivered by local authorities – however, the difference made to CO₂ emissions by improving enforcement is likely to be modest. Conversely there are other measures, in which local authorities play a smaller role, but which may be very influential in terms of emissions.

As a specific example, in the case of Warm Front (a government scheme which provides free insulation and heating improvements to people over 60 who receive particular state benefits) and other fuel poverty programmes the UKCCP assumes a saving of 0.4MtC nationally by 2010. We estimated that this was subject (on average, nationally) to a variation of 25%, or 0.1MtC. This is effectively the error margin on the carbon saving from the measure resulting from the variation in carbon management performance by local authorities.

This process was repeated for all of the measures within the eight categories of UKCCP measures,

allowing the calculation of an average % influence per UK CCP category. At this stage the link was made with CSE’s Carbon Management Matrix, as follows.

For each category of measure, CSE (drawing on our experience of developing the Matrix for Defra during its 2006 review of the UKCCP) estimated Defra’s optimism (or pessimism) on the quality of local authority carbon management, expressed in terms of the ratings used in the Matrix (e.g. from “Weak” to “Excellent”). We then used that process to link the UKCCP with the Matrix, by assuming that Defra’s effective rating of (national, average) local authority performance was implicit in the carbon savings it attributed to the various categories of measure in the UKCCP, and by mapping the categories in the Matrix to the categories of UKCCP measure, as shown in Table 9 below. Transport was omitted from this analysis because the borough’s transport emissions are forecast to remain constant.

Note that the implication of this is that local authorities performing worse than assumed by the Government would achieve lower carbon savings from UKCCP measures than assumed in the programme, and that conversely there is the scope for local authorities to achieve savings over and above those presented in the programme, by exceeding Defra’s implicit assumptions regarding the quality of local authority carbon management.

Table 9: Mapping Categories from the Matrix to the UKCCP

Matrix Category	Maps to UKCCP category	Current Rating	Target Rating
Domestic Energy Efficiency	Domestic	Fair-Good	Excellent
Business Energy Efficiency	Business	Fair-Weak	Good
Public Sector Energy Efficiency	Public Sector	Fair-Good	Excellent
Renewables & Low Carbon Technology	Energy Supply	Fair	Good
Combination of the above	Other Measures	Fair	Excellent
No link	Agriculture		n/a
No link	Devolved Administrations		n/a

Table 10 below summarises, for each category of UKCCP measure, CSE’s estimate of variability resulting from local authority carbon management performance, and our assumption regarding the Government’s optimism/pessimism with respect to the quality of that performance. Finally it shows the effect we attribute to the “Weak” and “Excellent” ends of the range of local authority carbon management performance. For a detailed version of this table showing the variability on a per measure (rather than per category) basis, please see Appendix 8.

Table 10: Influence of local authority performance on UKCCP Measures (nationally)				Range of effect	
Category of Measure	Saving (MtC)	Variability	Govt. assumes	“Weak”	“Excellent”
Energy Supply	2.6	15%	Fair-Weak	-2%	+13%
Emissions Trading	3.0	n/a			
Business	5.1	1.8%	Fair	-0.2%	+1.6%
Domestic	4.9	17%	Weak-Fair	-2%	+15%
Agriculture	0.8	n/a			
Public Sector	0.5	50%	Fair	-5%	+45%
Devolved	0.3	n/a			
Other	0.1	20%	Fair	-5%	+15%
Total	17.3				

3.2.4 Estimating the Council's Influence

These results were then used to investigate whether i) Islington Council's current carbon management performance (as assessed in Section 3.2.2 above) was likely to be leading to greater or lesser carbon savings than those assumed in the UKCCP, and ii) whether further savings could be available from an improvement in the Council's performance.

This required the above analysis to be repeated using Islington Council's current and target Matrix ratings. The carbon savings from UKCCP measures, expressed in the programme in terms of megatonnes of carbon nationally, also had to be scaled down to the level of Islington's emissions. This was done using the relationship between Islington and UK carbon emissions, but excluding UK emissions from sectors not existing in Islington (such as agriculture), just as savings from such sectors had been excluded from the other end of the calculation. In other words the carbon savings from relevant measures in the UKCCP were scaled down by the ratio of Islington's emissions relative to (relevant) national emissions:

Figure 1: Process for scaling national carbon savings to Islington

$$\frac{\text{Islington Emissions}}{\text{Relevant UK emissions}} \times \text{UKCCP Measure saving} = \text{UKCCP Measure saving in Islington}$$

Table 11 below shows for each category of UKCCP measure the savings arising in Islington. The first column of numbers totals for each category the savings from measures which are not affected by LBI performance (again, see Appendix 8 for a detailed breakdown of individual measures). The second column gives, for each category, the savings from measures which are affected by LBI performance, and the final three columns show the effect that LBI performance is assumed to have on the amount of (dependent) carbon saved within each category.

Table 11: Savings in Islington at different levels of performance

UKCCP Category	Saving per category in Islington (tCO ₂)		Performance dependent Savings		
	Non dependent	Dependent	Assumed	Actual	Target
Energy Supply	0	13,250	Effect is via UK elec/CO ₂ factor		
Emissions Trading	0	0	n/a		
Business	16,300	9,680	9,680	9,674	9,758
Domestic	3,060	21,910	21,910	23,141	25,194
Agriculture	0	0	n/a		
Public Sector	0	2,550	2,550	2,739	3,694
Devolved Administrations	0	0	n/a		
Other	0	510	510	510	586
Total	19,3600	47,900	34,650	36,062	39,234

Table 12 sets out the elements needed to calculate total emissions reductions in Islington, by adding the baseline growth to the data in Table 11. This shows projected baseline growth in emissions in Islington, UKCCP savings likely to occur in the borough regardless of the Council's performance, and the actual and potential additional savings available as a result of the Council's current and improved performance.

Table 12: Baseline emissions and the Council's influence (2005 to 2010)

Element	Change in emissions (2005-2010) (1,000 tonnes CO ₂)	% of baseline emissions
Baseline growth (see section 3.1.2)	+ 24	+ 2.28
Non influenced UK CCP Savings	- 19	- 1.82
Effect of Govt. assumed LBI performance	- 35	- 3.25
Additional from actual performance	- 1.4	- 0.13
Potential additional from improved performance	- 3.2	- 0.30
Total (variation due to rounding)	- 34	- 3.23

The table illustrates that although baseline emissions are expected to rise by 2.28% in the period 2005 – 2010, this should be more than offset by savings resulting from the UKCCP in Islington, which will be enhanced by the Council's current performance, and could be amplified by further improvements. The overall saving expected if the Council's performance remains as assessed in 2006 is 2.93%, rising to 3.23% if the Council improves its performance as outlined in Section 3.2.2.

3.3 The Climate Change Partnership

As part of the initiation of the Climate Change Partnership, CSE facilitated two workshops. The first was held at the Emirates Stadium on 9 November 2006. This event introduced partners to the process and secured their commitments to share their energy use and carbon emissions data. A list of attendees can be found in Appendix 3.

The event introduced potential Partnership members to the background to the establishment of the Partnership, and introduced the concept of the carbon baseline study. Two group work sessions gave partners a chance to consider how they contribute to carbon emissions within the borough, how they could reduce emissions in the borough, how they would benefit from being members of the Islington Climate Change Partnership, and what they could contribute to the Partnership.

Benefits of being a member of the Partnership that were raised during these group work sessions included:

- Good PR, a positive brand
- A chance to influence one's own organisation by using examples from others
- A source of advice and information sharing
- The opportunity to be a leader
- The opportunity for joint procurement, leveraging funding, and reducing bills
- The motivation of being part of a partnership
- Helping to 'save the planet'

Suggestions for how members could contribute to the Partnership included:

- Skills and experience, including:
 - technical expertise
 - communications experience
 - academic knowledge (from participating universities)
- Networking, introducing others to the partnership
- Leadership and influence
- Interaction with the local community, including:

- home visits (e.g. fire safety)
 - events
- Resources, including:
 - a venue for events
 - volunteers
 - time

3.3.1 Members' Emissions Inventory

During the period between the two workshops, CSE collected and analysed the partners' data using the inventory described below. Overall the Partnership represents 9.83% of all 2005 emissions from Islington, 45% of which are related to energy used by the Council. Figure 2 below is a scale diagram illustrating the relationship between the emissions of the borough as a whole and those of the Partnership.

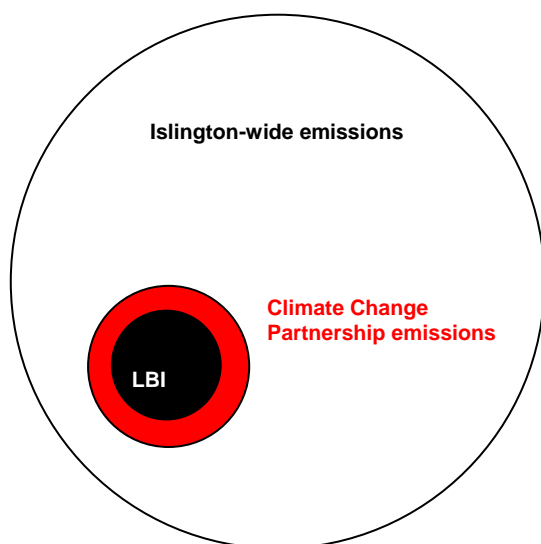


Figure 2: Emissions in Islington (to scale)

Partnership members were asked to provide data about their energy use. CSE provided an electronic spreadsheet to each Partnership member, in which they could record their energy use data. Screenshots of this 'emissions inventory' are shown in Figure 3 and Figure 4 below:

There was great variation in how much energy consumption data Partnership members were able to provide. Those who had much experience of energy management were able to provide detailed monthly information, while others were not, and so for the Partnership as a whole, only annual (rather than quarterly or monthly) carbon emissions could be calculated. Some members were not able to provide any data within the timescale. It is anticipated that in future years it will be easier for all Partnership members to collect their annual energy use data, as they will not have to recover previous bills, but can instead take regular meter readings or make a record of energy use every time that they receive a bill.

All of the separate spreadsheets returned to CSE were combined in a 'master inventory', arranged by site and energy source. Within the master inventory, CO₂ emissions were calculated and energy use was compared against benchmarks. This information was then transferred into a 'clean' spreadsheet to produce the finished inventory. This records energy use and associated CO₂ emissions for each site, given by individual energy source and by all energy sources combined. It also records each site's performance against a benchmark, for both electricity and fossil fuel use, and the CO₂ emissions associated with this. Figure 5 and Figure 6 show screen shots of the inventory. Site names and benchmark types have been removed to preserve confidentiality. (The entries in red show figures that were estimates at the time the screenshot was taken.)

Figure 5: Master inventory, showing 'CO₂ by site' tab

Site	kg CO2 - electricity	kg CO2 - gas / oil	kg CO2 - transport	Total CO2 (kg)	Total CO2 (tonnes)
3					
4	2,515,280	2,983,583		5,478,843	5,479
5	27,781	23,238		51,019	51
6	14,158			14,158	14
7	137,572	54,993		192,565	193
8	1,710,805	480,755		2,191,560	2,192
9	56,963	41,267		98,230	98
10	370,202	692,583		1,062,785	1,063
11	329,070	161,139		490,209	490
12	22,094	41,583		63,677	64
13	36,023	51,089		87,112	87
14	9,912	28,527		38,439	38
15	3,473,614	1,507,202		4,980,816	4,981
16	25,355	59,762		85,117	85
17	159,693	47,929		207,622	208
18	522,312	141,325		663,636	664
19	216,656	176,682		393,338	393
20	3,827			3,827	4
21	47,788	30,600		78,388	78
22	14,858	10,902		25,760	26
23	8,111	8,722		16,833	17
24	17,028			17,028	17
25	1,122,214	565,206		1,687,420	1,687
26	5,096,754	1,688,435		6,785,189	6,785
27	90,344	131,727		222,071	222
28	373,244	94,563		467,807	468
29	9,554,660	17,176,950		26,731,610	26,732
30	287,538	222,880		490,416	490

Figure 6: Master inventory, showing ‘Benchmarked sites’ tab

	Electricity benchmark rating	Electricity Emissions (Tonnes CO2)	Gas / oil benchmark rating	Gas / Oil Emissions (Tonnes CO2)	Overall Emissions (Tonnes CO2)	Benchmark Used
3						
4	Excellent	28	Excellent	23	51	
5	Weak	14	-	-	14	
6	Good	138	Good	55	193	
7	Good	1,711	Good	481	2,192	
8	Excellent	57	Good	41	98	
9	Fair	10	Weak	29	38	
10	Good	370	Fair	693	1,063	
11	Fair	329	Excellent	161	490	
12	Excellent	22	Fair	42	64	
13	Good	36	Weak	51	87	
14	Good	3,474	Good	1,507	4,981	
15	Fair	25	Weak	60	85	
16	Fair	160	Excellent	48	208	
17	Weak	522	Fair	141	664	
18	Good	217	Excellent	177	393	
19	Fair	48	Fair	31	76	
20	Good	8	-	-	8	
21	Fair	1,122	Excellent	565	1,687	
22	Excellent	29	Excellent	7	36	
23	Weak	50	Good	45	95	
24	Fair	56	Excellent	67	123	
25	Weak	176	Good	56	232	
26	Weak	48	Fair	15	63	
27	Good	2,438	Weak	1,475	3,912	
28	Good	252	Fair	268	540	
29	Excellent	506	Excellent	134	639	
30	Good	88	Weak	148	236	
31	Fair	272	Good	126	398	
32	Fair	6	Good	4	11	
33	Weak	77	Good	60	137	
34	Weak	109	Excellent	59	168	

Using the data provided by Partnership members, CSE calculated the Partnership’s emissions to be 104,637 tonnes CO₂, equivalent to 9.83% of the whole borough’s 2005 CO₂ emissions.

Most partners were not able to provide data on their transport emissions, but for the borough as a whole, transport contributes almost 15% of CO₂ emissions. In comparison the data on transport that the Partnership was able to provide equates to less than 1% of Partnership emissions. There is therefore potentially scope for the Partnership to increase its coverage by including more partner transport emissions data, although feedback suggests that it can be difficult for an organisation to collect this data in a meaningful way where a fleet is not exclusively travelling within Islington.

A selection of data from the emissions inventory can be found in Appendix 4. This includes a list of Partners who were able to provide data before the deadline for completion of their inventories and the sites that they provided data for; a breakdown of emissions between sources (electricity, gas, etc.), and a list showing the exact baseline year for which the data was available.

3.3.2 Benchmarking

A subset of the energy data collected was used to assess sites’ energy use against standard benchmarks. In order for a site to be benchmarked, information about the site area and the building use were required, in addition to details of annual energy consumption. Not all organisations were able to provide all of the information required for benchmarking, and so not all sites could be benchmarked. The sites that were benchmarked comprised 48% of the Partnership’s total calculated CO₂ emissions from buildings (that is, not including transport emissions).

45 sites belonging to 14 organisations were benchmarked. Most of these were benchmarked for both electricity and fossil fuel use, but some were only able to provide details of electricity use or fossil fuel use, and so in total 87 benchmarks were calculated (rather than the 90 expected if the 45

sites had each been benchmarked for both electricity and fossil fuel).

CIBSE (The Chartered Institute of Building Services Engineers) publishes ‘typical’ and ‘good’ benchmarks for a range of different types of building. These are based on case studies of energy use in real buildings, and are given in terms of annual kWh consumed per square metre. This can easily be converted into CO₂ emissions using standard emissions factors.

Benchmarking can be used as a way of identifying where to direct efforts to save energy. If a building is performing badly in comparison with other buildings of the same type, it will probably be more profitable to invest in energy efficiency measures in that building, compared to one that has average energy performance. However, it may be that on closer inspection the badly performing building cannot be improved as cost effectively as the average building, for example if it is old or if its high energy consumption is explained by higher than average occupancy hours. This kind of benchmarking can therefore only provide an initial indication of where the most cost effective energy savings might be.

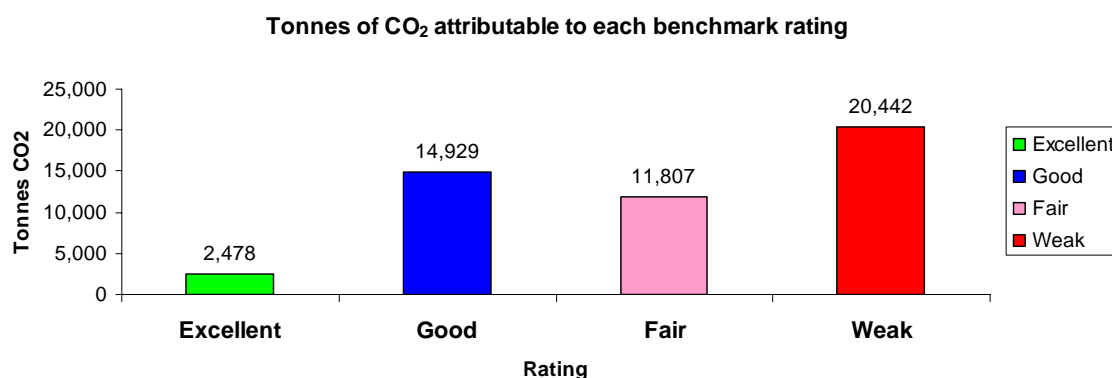
In the context of the Partnership, the benchmarking exercise is useful for two reasons. First, by giving an indication of room for improvement, it can help to set a realistic emissions reduction target. Second, when the Partnership starts to reduce its emissions, it points to areas where energy efficiency ‘quick wins’ could be made.

In order to give a more detailed picture of how the Partnership’s sites are performing relative to benchmarks, the two CIBSE benchmarks were split into four, by calculating each site’s energy use as a percentage of the CIBSE typical and good benchmarks. Ratings were allocated as follows:

Table 13: Definitions of Partners’ Benchmarks

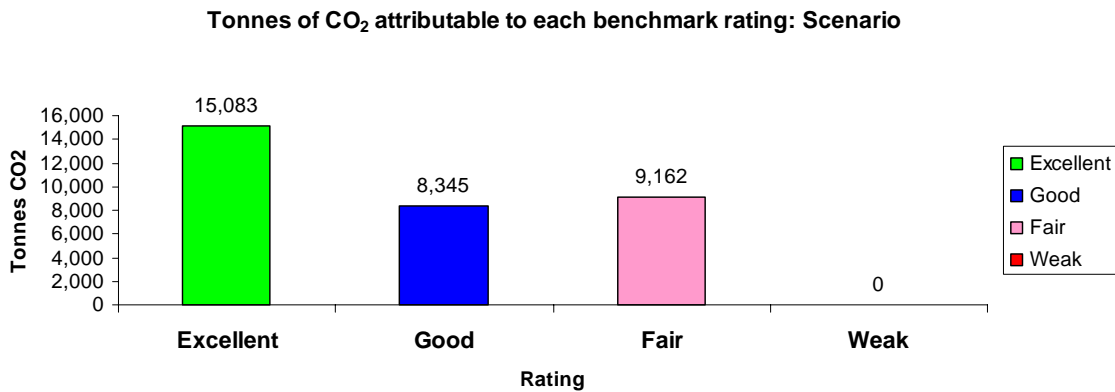
Rating	Criteria
Excellent	Less than 75% of CIBSE ‘Good’
Good	75% - 125% of CIBSE ‘Good’
Fair	75% - 125% of CIBSE ‘Typical’
Weak	More than 125% of CIBSE ‘Typical’

The distribution of CO₂ emissions allocated to each category was as follows:



It is likely that sites in the ‘weak’ category are those which could be most easily improved, so this is encouraging in terms of the ability of the Partnership to reduce its emissions.

CSE looked at possible emissions reductions scenarios, in order to ascertain the achievability of different targets. The scenario presented to the Partnership at the second event on 2 February 2007 showed a situation where all weak, fair and good sites move into the next benchmark category, while excellent sites reduce their emissions by 5%. In this scenario, annual emissions from the benchmarked buildings would fall to 32,590 tonnes CO₂, a reduction of 34%.



It is reasonable to assume that the same magnitude of reduction could be applied to the other sites belonging to the Partnership that have not been benchmarked in this exercise.

More information about sites' performance against benchmarks can be found in Appendix 5.

3.3.3 The Partnership's Target

As shown in Section 3.3.1, the Partnership represents a sizeable proportion of total carbon dioxide emissions from the borough of Islington. This puts the Partnership in a position to make a real and significant contribution to the Islington carbon reduction target, since every 10% reduction achieved by the Partnership would result in a 1% reduction in total borough emissions.

The second Partnership event took place on 2 February 2007 at The London Art House, after CSE had analysed the partners' data. A list of attendees can be found at Appendix 6. The results of the carbon baseline study were presented to Partnership members. The types of carbon reduction measures available to Partners and the reductions achievable, for different levels of investment and at different payback periods, were also presented and discussed. A summary of these measures can be found at Appendix 6

The event also provided a valuable opportunity for partners to share existing experience of managing carbon emissions, providing an early demonstration of one of the major advantages of partnership working. Presentations were given by three Partnership members:

- Stephen McKinnell, Energy Manager, Property & Facilities, City University. This presentation outlined the energy management achievements and associated financial savings made since City University recruited an Energy Manager;
- Lucy Padfield, Energy Manager, Islington Energy Centre. This presentation summarised Islington Council's experience of developing a Carbon Management Programme with the Carbon Trust and how they hope to build on it.
- Miranda Pennington, Sustainability Officer, London Borough of Islington. This presentation described the positive behavioural change achieved through the Green Liaison Officer's

'Switch it off' Campaign and explained the key lessons that can be applied to other organisations.

The outcome of the second workshop enabled the Partnership Steering Group to then adopt a Partnership emissions reduction target of 15% by 2010, along with a strategy to increase membership such that the Partnership would represent baseline emissions of 125,000 tonnes CO₂. Taken together, these measures mean that the Partnership's 15% target equates to 18,750 tonnes CO₂, or 1.76% of Islington emissions in 2005.

4 Bringing it all together

4.1 The Local Area Agreement Carbon Reduction Target

The overall target for the Local Area Agreement can now be calculated using all of the elements described in this report:

- 'Business as usual' growth in the borough, derived from the assumptions in the UKCCP, is predicted to be 2.28% between 2005 and 2010.
- UKCCP savings not influenced by Islington Borough Council are predicted to be 1.82% of 2005 emissions in 2010.
- UKCCP savings influenced by the Council, according to the government's assessment of average local authority performance, are predicted to be 3.25% of 2005 emissions by 2010.
- According to the Matrix assessment of Islington's current performance, savings additional to those of the average local authority will be 0.13% in 2010.
- Potential improvements in the Council's performance, as assessed using the Matrix, equate to 0.3% of 2005 emissions by 2010.
- Reductions resulting from the achievement of the Islington Climate Change Partnership's target will be equal to 1.76% of 2005 emissions.

Taken together, these elements give an overall possible carbon reduction of 5% of 2005 emissions by 2010 ('business as usual' growth minus all of the other elements equals -5%). Table 14 below shows these elements:

Table 14: Elements of the carbon reduction target

Element	% of baseline emissions
Baseline growth	+ 2.28
Non influenced UK CCP Savings	- 1.82
Effect of assumed LBI performance	- 3.25
Additional from actual performance	- 0.13
Potential additional from improved performance	- 0.30
Reductions from the ICCP	- 1.76
Total (variation due to rounding)	- 5%

4.2 Risks

The delivery of the 5% reduction target for 2010 relies on a number of factors. Some of these are external to Islington, both as a council and as a community – for example the ability of the Government to achieve its objectives as set out in the UKCCP, and the accuracy of the Government's population and underlying emissions trend projections.

There are also more local factors. These include the ability of the ICCP to deliver a 15% emissions reduction, and to increase its baseline coverage to 125,000 tonnes CO₂, and the success with which the Council improves its carbon management performance.

Potential risks are outlined below according to the elements of the target.

Baseline growth

If growth of emissions in Islington is higher than the UKCCP predicted increase of 2.8% between 2005 and 2010, then this will lower the overall possible reduction. This could be due to the UKCCP's predictions for growth being too low in the first place, or it may be due to unforeseen circumstances, such as a run of exceptionally cold winters and/or warm summers, resulting in extra heating and cooling demand. Another cause of baseline growth exceeding its expected level could be a change in the UK electricity generation mix. Higher than expected baseline growth is beyond Islington's control, as it is by definition what would be happening in the absence of any savings that do occur.

Non-Influenced UKCCP Savings

If the components of the UKCCP which are not influenced by Islington do not achieve the expected savings, this will make Islington's target harder to achieve. For example, if not as much renewable energy generation capacity is installed as expected, savings will be lower. Again, by definition this element cannot be influenced by LBI.

Effect of Assumed LBI Performance

Within this element, risks are that: the UKCCP may have overestimated what can be achieved by local authorities (although according to our analysis this is not the case in Islington); that central government does not put in place measures that allow councils to fulfil their role as effectively as predicted by the UKCCP; and that Islington does not perform as well as expected (again, our analysis has concluded that Islington is currently performing better than the average assumption for local authority performance in the UKCCP). Overall, the only one of these risks that has not been taken into account in our analysis is that the government does not put in place measures that allow councils to perform their role fully to 2010, as it has been assumed that the UKCCP will be successful.

Additional from Actual Performance

According to the Matrix analysis of Islington Council's performance, it is on track to contribute extra savings over and above the average UKCCP savings for local authorities. There is a risk, however, that this success will not continue, but this is a risk that Islington can control.

Potential Additional Savings from Improved Performance

There is a risk that Islington is not able to improve its carbon management performance to the level assumed. Again, this is a risk over which Islington has control.

Reductions from the ICCP

There are two risks here: first, that it is not possible to expand the Partnership to cover 125,000 tonnes of CO₂; and second, that a 15% reduction cannot be achieved within the Partnership. These risks are not fully within the Council's control, but they are within the control of Islington as a community. It is possible that the proposed emissions reduction within the Partnership can only be achieved by measures which decision-makers within the Partnership member organisations are not prepared to finance (for example, the higher-cost measures such as installing a biomass boiler).

4.3 Opportunities

There are a number of opportunities which could lead to greater carbon savings than those expressed in the LAA target. The first of these is the potential to increase the baseline size of the ICCP beyond the currently envisaged 125,000 tonnes CO₂. The Partnership Steering Group is in a position to develop a medium-term strategy for expanding the Partnership. One approach to doing this would be to identify a small number of large emitters in the borough, for example by searching the register of participants in the EU Emissions Trading Scheme for Islington based organisations. Another might be to invite community organisations to participate on behalf of Islington residents.

There is also potential for joint emissions reduction or low carbon procurement projects between ICCP members, which could result in the Partnership exceeding its 15% reduction target. Such activities could include negotiating as a group for discounts on energy efficient products or micro-renewable generation technology. Partnership members could even informally 'trade' emissions reductions; for example, if organisation A is keen to reduce its emissions but has taken all but the highest-cost measures, it could agree to fund lower-cost measures in organisation B, on the condition that part of the resulting emissions reduction recorded on the Partnership's inventory is attributed to organisation A rather than organisation B.

Finally, by initiating and playing a direct role in the ICCP, the Council has an opportunity to enhance its relationship with the borough, increasing its profile and potentially its indirect influence on emissions from Islington's businesses and households.

4.4 Conclusions

The establishment of a carbon baseline for Islington has enabled the borough to take a quantitative approach to managing its carbon emissions and allowed it to agree a target with Government Office London. According to the maxim 'you can't manage what you can't measure', Islington is now in a position to make real progress in managing its carbon emissions.

Islington's approach links national projections and targets, local government objectives, and 'action on the ground'. The creation of the Islington Climate Change Partnership has engaged, and secured the commitment of, large and small organisations based in the borough. It has provided a way for these organisations to learn how to manage their carbon emissions and share their experiences and expertise. The quantitative approach means that improvements are 'visible', and helps to engage organisations accustomed to managing their businesses according to quantitative indicators.

The publicity that Partnership members will receive is likely to be greater than one organisation alone could attract, and this is another incentive for members to join and to continue to participate. In addition, the publicity and status of the Partnership perhaps attract more support from senior decision makers within the Partner organisations, compared to the support they might give to internal energy efficiency initiatives. The process of collating an annual emissions inventory accustoms organisations to regular checking of bills or the taking of meter readings, something that is currently neglected in organisations which don't have well-resourced energy managers. This greater attention to energy bills may convince organisations that don't currently have energy managers that it is worth employing one, and may encourage those that already have energy managers to increase their budget. Partnership members can also feed back to the Council on what

they find easy and what is difficult, enabling support to be better targeted.

If the potential of this approach is to be realised, it must be a long-term process. The Carbon Baseline Study is the beginning of this process. Accurate annual emissions inventories must be maintained for both the Council and the Partnership. There should be regular and formalised arrangements for Partnership members to share experiences and lessons learnt. The Council should continue the process of integrating consideration of carbon impacts into all of its decision making. The current high (and ever-increasing) political profile of climate change means that there is now an unprecedented opportunity to achieve this.

4.5 Recommendations

4.5.1 Recommendations to LBI

Actions from the carbon management matrix

As described in section 3.2.2, a list of actions was derived from the results of LBI's self-assessment exercise, divided into ten categories. LBI should consult this list, prioritise these actions, and assign each action an owner within the council with responsibility for driving it forward. For more detail, please refer to Appendices 1 and 2.

4.5.2 Recommendations to ICCP managers

Simplify energy consumption monitoring spreadsheet

During the first Emissions Inventory exercise, several members had difficulty completing the reporting spreadsheet and it is suggested that a simplified version of the spreadsheet is used for the next annual review. In particular members found that they did not have the required information on water consumption and so this could be excluded for the time being, although the Partnership may want to consider whether in the future it would ask members to install water meters in order to be able to include electricity consumption from purification and pumping of water (however, it is unlikely that the associated CO₂ emissions would currently be included in the borough's CO₂ baseline).

The completion of meter readings also seemed to cause Partners some difficulty, in particular where there were several meters for one site. It is suggested that in future monitoring exercises, Members are asked to calculate their own energy use in terms of kWh, cubic feet of gas, or alternatives, rather than inputting meter readings.

Encourage and support members to draw up action plans

Partnership members have agreed an emissions reduction target, and it is recommended below that Partnership members should devise action plans which aim to meet this target. The overall Partnership structure should actively support and encourage members to do this and help them to share experiences and to access sources of advice.

Formalise annual CCP reviews

Islington CCP will need to schedule annual reviews to update the members' Emissions Inventory and overall progress on targets. Adequate time and resources will need to be allocated to collate and analyse energy consumption data across the partnership.

Consider establishing an Energy Manager network/forum

Key energy contacts at each site would greatly benefit from a network or forum where ideas and experiences could be shared across the Partnership. This could take the form of a web-hosted forum or regular meetings/seminars.

4.5.3 Recommendations to ICCP members***Formalise energy consumption data monitoring procedures***

During the exercise to establish a members' Emissions Inventory for the Partnership it became apparent that many sites were not in a position to easily provide reliable historical energy consumption data. In order for the Partnership to effectively review progress towards the overall 15% emissions reduction target on a regular basis, and for members to monitor their own year-on-year progress, it is essential that organisations formalise their procedures for collating and recording monthly meter readings, utility bill information and work-related travel data where appropriate.

Consult the list of low cost / no cost measures in Appendix 7

This list was presented at the second IPPC event. Some Partnership members may be able to start implementing these measures even before establishing a formal carbon reduction action plan (see below).

Develop a carbon reduction action plan

This would typically identify energy saving measures (for examples see Appendix 7), a timescale for implementation, delegated responsibilities and a schedule for review. It would also need to have full backing from senior management.

Engage the support of the Carbon Trust

Tailored advice on energy management and energy saving measures was not possible within the scope of this project. It is therefore recommended that Partnership members contact the Carbon Trust to check on eligibility for a free site survey and consult the Carbon Trust website for guidance publications specific to building/organisation types: www.carbontrust.co.uk

Appendix 1: Islington Council Carbon Management Self-Assessment Tables

Table 15 to Table 20 below show LBI's current self-assessment rating, target behaviour description, and suggested actions. Bullet points under each action suggest steps within these actions. As described in Section 3.2.2, the actions are split into ten categories, shown in italics after each action.

The column labelled 'Potential influence of lever' shows the strength of influence that this lever has. The symbols in the two columns to the right of the behaviour descriptions show the approximate level of human resources and funding needed for that behaviour. These symbols are shown for both the current behaviour description and the target behaviour, in order to give an idea of how much of a change in terms of human resources and funding would be needed to move to the target behaviour. The key is shown below. Where there are no human resources or direct cost icons shown for a behaviour description, this implies no additional resource requirement.

Potential influence of lever on local carbon emissions (muscle rather than environmental impact)

- ▶ Fair influence on local carbon emissions, relative to other influences
- ▶▶ Important influence on local carbon emissions, relative to other influences
- ▶▶▶ Significant influence on local carbon emissions, relative to other influences

Human resources

- † Requires a person to take issue seriously and do it (or get a third party to do it)
- †† Requires several people to become involved in delivery and some management time OR new and additional post
- ††† Requires significant cross-departmental engagement and senior buy-in OR several new and additional staff

Likely direct cost (taking account of cost savings)

- £ Likely to save costs within budget cycle
- ‘ ’ Essentially 'free' and deliverable by refocused existing staff
- £ Modest cost (< £25K) OR Investment required with rapid payback (>1 <3 years)
- ££ Additional capital & revenue resources required (£50 – 150K) OR Investment required with payback < 10 years
- £££ Significant additional capital & revenue resources required (> £250K) OR Investment required with payback > 10 years

Table 15 – Domestic Energy Efficiency Levers

1	DOMESTIC ENERGY EFFICIENCY	Potential influence of lever	Current Rating	Current Behaviour Description			Target Behaviour Description			Suggested Action
1.1	OVERALL APPROACH	▶▶▶	Good	Senior strategic engagement with domestic energy efficiency with resourcing and 'champion' with power to act	♂♂		Full engagement with effective cross-dept action, relevant strategic commitments, and several active staff	♂♂♂		Improve cross-department action on domestic energy efficiency (<i>Corporate</i>) <ul style="list-style-type: none"> • Through Sustainability Board • Appoint departmental Energy Champions • Formalise strategic commitments in corporate plans.
1.2	Strategic engagement and resourcefulness	▶▶	Good	Clear strategic focus (either as domestic energy efficiency or as part of climate change strategy). Feature of Community Strategy and LSP activity, with measurable targets for achievement. Understanding and use of range of powers (well-being, regulatory reform order, spend to save etc)	♂♂		As 'good' plus targets at or in excess of Energy White Paper with local authority taking responsibility for leading delivery within community	♂♂♂		Establish or strengthen targets to match/exceed the Energy White Paper (<i>Targets</i>) Take responsibility for leading delivery of domestic ENERGY EFFICIENCY in wider community (<i>Leadership</i>) <ul style="list-style-type: none"> • By leading LSP • By working with other partners • Ensure planned programme of work is followed through.
1.3	Own housing stock/social housing sector policies	▶▶	Fair	Planning to achieve Decent Homes	♂	£	Setting higher thermal standards than Decent Homes with clear programme for achievement	♂♂	££	Establish standards higher than Decent Homes for council's own housing stock (<i>Targets</i>) <ul style="list-style-type: none"> • Set programme for achievement of these standards, with a more strategic approach to implementation

1	DOMESTIC ENERGY EFFICIENCY	Potential influence of lever	Current Rating	Current Behaviour Description			Target Behaviour Description			Suggested Action
1.4	Private sector housing / HECA (Home Energy Conservation Act)	▶▶▶	Good	Specific programmes to improve private housing, with grant regimes reflecting energy efficiency priorities. Full time officer	♀	£	Strategic approach to private households with clear targets for improvement, partnerships for advice and delivery, and monitoring	♂♂	££	<p>Establish clear targets for energy efficiency improvement in the private housing sector (<i>Targets</i>)</p> <p>Approach potential advice and delivery partners for private sector energy efficiency (<i>Community</i>)</p> <p>Set up a results monitoring system for private sector energy efficiency (<i>Monitoring</i>)</p>
1.5	Planning policy and control	▶	Excellent	Local Development Framework sets targets for additional energy performance in new build housing (beyond building regulations)	♂♂		n/a			
1.6	Building regulations enforcement	▶▶	Fair	Part L assessment within building control but not high priority within enforcement			Part L assessment within building control a priority focus of enforcement activity	♂	£	<p>Encourage higher priority for enforcement of Part L of the building regulations (<i>Enforcement</i>)</p> <ul style="list-style-type: none"> Assign additional resource
1.7	Regeneration economic development schemes	▶▶	Weak	No recognition of potential role of home energy efficiency improvements in area renewal			Recognition of value of home energy efficiency improvements			<p>Engage regeneration bodies (<i>Leadership</i>)</p> <ul style="list-style-type: none"> Help them to realise the potential role of home energy efficiency improvements in area renewal Look for an Energy Champion in the regeneration sector

1	DOMESTIC ENERGY EFFICIENCY	Potential influence of lever	Current Rating	Current Behaviour Description			Target Behaviour Description			Suggested Action
1.8	Energy advice provision	▶▶	Excellent	As 'Good' ("Consistent support and engagement with local Energy Efficiency Advice Centre including funding, joint promotions, own staff training") plus clear policy of training and supporting front-line staff in energy efficiency advice and signposting	■■	£	n/a			
1.9	Project support	▶▶▶	Good	Active and funded support for energy saving initiatives	■■	££	Leadership or lead partner role within development of local energy efficiency exemplars and focused approach to securing funding (well-being powers, Public Service Agreement targets etc)	■■■	££	<p>Consider new approaches to funding for energy efficiency (<i>Funding</i>)</p> <ul style="list-style-type: none"> Including use of well-being powers and Public Service Agreements. <p>Increase LBI's leadership role in developing energy efficiency exemplars (<i>Leadership</i>)</p> <ul style="list-style-type: none"> Through the Local Strategic Partnership Through work with property developers With schools: install energy efficiency exemplars and proactively offer energy efficiency education
1.10	Grant and energy efficiency delivery schemes (Energy Efficiency Commitment, Warm Front etc)	▶▶▶	Good	Supporting/engaging with Energy Efficiency Commitment schemes and Warm Front to promote locally increased take-up, with own funding schemes to 'fill in gaps' and action to incentivise take-up (e.g. council tax reduction)	■	£	Co-ordinated effort with wide range of partners (health, suppliers, Energy Efficiency Advice Centre, other local authorities etc) to maximise take-up of available grants and schemes with 'one-stop-shop' approach to signposting and delivery	■■■	££	<p>Regarding grant and energy efficiency delivery schemes, increase work with existing partners and widen the range of partner organisations (<i>Community</i>)</p> <ul style="list-style-type: none"> For example, health services, suppliers, and other local authorities

1	DOMESTIC ENERGY EFFICIENCY	Potential influence of lever	Current Rating	Current Behaviour Description		Target Behaviour Description			Suggested Action
1.11	Monitoring and reporting	▶	Fair	HECA (Home Energy Conservation Act) monitoring with standard data management approach		As 'fair' with system for collecting data on measures installed	♂	£	Regarding monitoring and reporting, investigate whether there are ways to obtain more accurate data on measures installed in a cost effective manner (<i>Monitoring</i>) <ul style="list-style-type: none"> Consult Housing for Islington about improving data quality
1.12	Communications, education and leadership	▶▶	Fair	Strategic framework limited to standardised 'declarations' with occasional publicity on energy efficiency. Some engagement with sub-regional co-ordination		Clear and tailored corporate strategy with political buy-in to improve energy efficiency with regular publicity for activities	♂♂♂		Develop corporate strategy to improve energy efficiency with political support and regular publicity (<i>Corporate</i>) <ul style="list-style-type: none"> Seek Member / Executive support Involve council communications officers Develop regular programme of activities to attract publicity
1.13	Co-ordination of inter-borough/GLA activity and technical advice/support	▶	Good	Active engagement with Local Authority Support Programme/HECA (Home Energy Conservation Act) fora, with sharing of technical advice and support and joint development of schemes (Energy Efficiency Commitment, other grants) and strategies	♂	Strong engagement with pan-London partnership approach. Clear strategic goals and action plan to deliver them	♂	£	Set strategic goals for engagement with London-wide partnership approach and an action plan to deliver them (<i>Regional</i>)
1.14	Communications, education and leadership	▶▶	Fair	Occasional involvement on reactive basis to school energy education initiatives		Active encouragement for schools to engage with energy education	♂	£	Make engagement with schools more proactive (<i>Leadership</i>) <ul style="list-style-type: none"> Work with energy / environmental education initiatives, at national, regional or local level

Table 16: Business Energy Efficiency Levers

2	BUSINESS ENERGY EFFICIENCY	Potential influence of lever	Current Rating	Current Behaviour Description		Target Behaviour Description		Suggested Action
2.1	OVERALL APPROACH	▶▶	Fair	Limited signposting to schemes		Integration of potential role in encouraging business improvement into other business services		Engage business advice services within LBI and Islington Strategic Partnership (<i>Business</i>)
2.2	Strategic engagement and resourcefulness	▶	Weak	Minimal attention to energy efficiency within corporate plans and strategies		Broad commitment to importance of energy efficiency but no clear plan of action or resourced programme	♂	Develop a broad commitment to the importance of business energy efficiency (<i>Business</i>) <ul style="list-style-type: none"> • Within LBI engage Members and senior officers • Raise the profile of business energy efficiency within corporate plans • Seek senior level support in other Local Strategic Partnership organisations
2.3	Economic development and regeneration activities	▶▶	Weak	No acknowledgement of energy efficiency as a factor in business performance		Limited acknowledgement of energy efficiency as a factor in business performance		Raise awareness of energy efficiency as a factor in business performance (<i>Business</i>) <ul style="list-style-type: none"> • Promote energy efficiency to the chamber of commerce, business enterprise team, and other business development organisations and support services
2.4	Planning policy and control	▶	Good	LDF (Local Development Framework) encourages high energy efficiency standards (beyond building regulations) in new commercial developments (no targets)	♂	LDF sets targets for additional energy performance in new commercial developments (beyond building regulations)	♂♂	Set LDF energy performance targets (beyond building regulations) for smaller developments (<i>Business</i>)

2	BUSINESS ENERGY EFFICIENCY	Potential influence of lever	Current Rating	Current Behaviour Description		Target Behaviour Description			Suggested Action
2.5	Building regulations enforcement	▶▶	Fair	Part L assessment within building control but not high priority within enforcement		Part L assessment within building control a priority focus of enforcement activity	♂	£	Make Part L assessment a priority within enforcement (<i>Enforcement</i>) <ul style="list-style-type: none"> • Increase the resource allocated to follow-up of regulations
2.6	Business advice provision (either direct or through support for 3rd party)	▶	Fair	Limited reactive signposting to Carbon Trust and other sources of business energy efficiency advice and support	♂	Active promotion of business energy advice services and strong case made for action	♂	£	Make business advice provision more proactive (<i>Business</i>) <ul style="list-style-type: none"> • Promote advice services through Local Strategic Partnership, chamber of commerce, business enterprise team, and other business development organisations and support services • Consider developing a communication plan in order to make a strong case to these organisations
2.7	Procurement	▶▶	Fair	Procurement practices include energy efficiency as a selection criterion, but with no quantitative standards		Procurement practices include minimum energy performance standards for businesses providing relevant services	♂		Establish quantitative energy performance standards for businesses providing relevant services to LBI in the borough's green procurement code (<i>Business</i>)
2.8	Communications and leadership	▶▶	Fair	Limited promotion based on standard 'declarations'		Active engagement with business sector to encourage action	♂♂		Take a more proactive approach to engagement with the local business sector (<i>Business</i>) <ul style="list-style-type: none"> • For example, through LBI departments / external organisations providing support and services to the business sector • Devise a strategy for communications to business in co-operation with these departments / organisations

2	BUSINESS ENERGY EFFICIENCY	Potential influence of lever	Current Rating	Current Behaviour Description		Target Behaviour Description			Suggested Action
2.9	Co-ordination of inter-borough/GLA activity and technical advice/support	▶	Fair	Erratic engagement with London level co-ordination, mainly reactive to third party efforts (e.g. Local Authority Support Programme)		Co-ordinated engagement with London-wide business networks and advice services	♿		Increase engagement with London-wide business networks (<i>Business</i>)

Table 17: Public Sector Energy Efficiency Levers

3	PUBLIC SECTOR ENERGY EFFICIENCY	Potential influence of lever	Current Rating	Current Behaviour Description			Target Behaviour Description			Suggested Action
3.1	OVERALL APPROACH	▶▶▶	Good	Clear strategy across council with savings targets, resources planned, understanding and use of funding powers and clear procurement objectives	■■	-£	Strong energy management approach, taking advantage of national schemes, funding powers, with effective monitoring and prioritisation of energy efficiency improvements in building management and equipment procurement	■■■	-£	<p>Establish effective energy monitoring systems for own estate (<i>Monitoring</i>)</p> <p>Take advantage of national schemes to help support energy management in LBI (<i>Funding</i>)</p> <p>Prioritise energy efficiency improvements in building management and procurement (<i>Procurement</i>)</p>
3.2	Strategic engagement and resourcefulness	▶▶	Good	Energy strategy and action plan in place with progress towards CO ₂ reduction targets for own energy use and buildings being made	■■		Targets in excess of national targets with clear action plan to meet targets. (Long term ambition to become carbon neutral)	■■■		<p>Set CO₂ targets for own estate in excess of national targets (<i>Targets</i>)</p> <ul style="list-style-type: none"> Secure commitment for energy saving targets
3.3	Carbon management programme (Carbon Trust or equivalent)	▶▶▶	Good	Participation in Carbon Trust Local Authority Carbon Management Programme	■	-£	Followed through strategies and actions planned in Local Authority Carbon Management Programme, delivering savings and sustained programme of activity and monitoring	■■	-£	<p>Follow through strategies and actions from Local Authority Carbon Management Programme (<i>Corporate</i>)</p> <ul style="list-style-type: none"> Maintain momentum and political buy-in

3	PUBLIC SECTOR ENERGY EFFICIENCY	Potential influence of lever	Current Rating	Current Behaviour Description			Target Behaviour Description			Suggested Action
3.4	Staff motivation and involvement	▶▶	Good	Energy efficiency training included in induction and in refresher courses as part of coherent strategy	■■	-£	Departmental targets set and staff aware of their contribution towards the target. 'Energy champions' scheme in place with at least one champion per department. Incentives offered towards staff achieving targets	■■■	-£	Set departmental targets for energy efficiency (<i>Targets</i>) <ul style="list-style-type: none"> • Recruit energy champions from among senior officers in departments • Communicate targets to staff and keep them updated on progress • Devise incentives for staff to help meet targets
3.5	Dedicated resources	▶▶▶	Good	Ring fenced funding to spend on improving energy efficiency, but less than 10% of energy bill invested in improvements per annum. Ad hoc use of 'invest to save' and Carbon Trust schemes	■	-£	As 'good' with strategic approach to funding and at least 10% of the council's energy bill being invested in energy efficiency per annum and staffing of more than 1 full time equivalent per £1m spent on energy bills	■■■	-££	Invest at least 10% of the council's energy bill in energy efficiency improvements (<i>Funding</i>) Ensure that more than one Full Time Equivalent member of staff is working on energy management per £1 million spent on energy bills (<i>Funding</i>) Move from ad-hoc to strategic approach to funding (<i>Funding</i>)

3	PUBLIC SECTOR ENERGY EFFICIENCY	Potential influence of lever	Current Rating	Current Behaviour Description	Target Behaviour Description	Suggested Action
3.6	Own buildings energy management (incl. approach to Energy Performance in Buildings Directive)	▶▶▶	Weak	Ad hoc integration of energy efficiency improvements during refurbishment but no systematic approach	Systematic consideration given to energy efficiency improvement during refurbishment	Include energy efficiency improvements in refurbishment plans (<i>Corporate</i>) <ul style="list-style-type: none"> Establish communication links so that energy management staff are aware of refurbishment plans far enough in advance to incorporate energy efficiency improvements
3.7	Monitoring of energy use & carbon emissions	▶▶▶	Fair	Building-by-building energy use data available but not related to potential performance improvements in building and equipment	Detailed energy performance data held for each building and equipment uses, with clear reduction target monitoring and communication	Improve targeting and feedback for energy performance data (<i>Monitoring</i>)
3.8	Schools energy management	▶▶▶	Fair	Support and guidance on energy management provided to head teachers and/or bursars and/or caretakers	Clear energy management strategy and action plan for schools with prioritised funding support for improvements, training for key staff, and technical advice	Develop an energy management strategy and action plan for schools' energy efficiency (<i>Leadership</i>) <ul style="list-style-type: none"> Allocate funding for energy efficiency improvements Provide training for staff Provide a set number of days of technical advice per year, from council energy management staff or others

3	PUBLIC SECTOR ENERGY EFFICIENCY	Potential influence of lever	Current Rating	Current Behaviour Description		Target Behaviour Description		Suggested Action
3.9	Procurement (equipment, buildings and refurbishment)	▶▶	Fair	Basic energy efficiency standards set for procurement but no strategic consideration of life-time costs	♂	High energy efficiency standards set for all equipment and buildings procurement and active engagement with regional or sub-regional procurement activities to increase leverage and buying power	♂♂ -£	Aim for progressively higher energy efficiency standards in procurement (<i>Procurement</i>) Investigate the possibility of involvement in London-wide or inter-borough green procurement activities (<i>Regional</i>)
3.10	Sub-regional resource sharing and co-ordination	▶	Excellent	Leadership role in public sector energy management with strong joint approach to data management, procurement, engagement with funding schemes etc.	♂♂♂ £	n/a		
3.11	Co-ordination of procurement activity	▶▶	Weak	No effective co-ordination		Local buying consortium with basic energy efficiency standards	♂	In order to improve co-ordination of local procurement activity, establish an ISP-wide buying consortium with high energy efficiency standards (<i>Procurement</i>)

Table 18: Renewable Energy and Low Carbon Technology Levers

4	RENEWABLES AND LOW CARBON TECHNOLOGIES	Potential influence of lever	Rating	Current Behaviour Description		Target Behaviour Description		Suggested Action
4.1	OVERALL APPROACH	▶▶▶	Fair	Acknowledgement of benefits from renewables and low carbon technologies, but no strategic approach		Positive attitude towards renewable energy and low carbon technologies in new developments and new generating projects but lacking systematic practical follow-through		Increase political and ISP-wide support for renewables and low carbon techs (<i>Leadership</i>)
4.2	Planning policy and control (new build)	▶▶	Fair	Local Plan (LDF) encourages RE in new build (no target). Also encouragement for District Heating (DH) and Combined Heat and Power (CHP) but no target		LDF sets target (10% or less) of energy use from on-site renewables in new development but no assessment or enforcement procedures in place. Use of DH and CHP encouraged with targets where renewable energy not appropriate. Gas based DH seen as precursor to use of biomass	♀	Improve assessment and enforcement procedures to support LDF rule on building integrated renewables (<i>Enforcement</i>) Establish DH and CHP targets for energy use in new developments, with emphasis on use of biomass rather than gas in the future (<i>Targets</i>)
4.3	Planning policy and control (new generating capacity)	▶▶	Good	Positive planning policy consistent with Planning Policy Statement (PPS) 22 and consistent decisions based on material considerations and balanced assessment of local opinion. Clear expectations of community engagement	♂	As 'good' plus proactive community engagement in planning activity on renewable energy (e.g. South West Protocol) and low carbon technologies	♂♂	Proactively encourage community engagement in planning activity on renewable energy and low carbon technologies (<i>Community</i>)
4.4	Regeneration schemes and own buildings	▶▶▶	Weak	DH/CHP and renewable energy not on the radar		Encourages use of DH/CHP and renewable energy within own new build and within regeneration schemes		Raise the profile of renewable energy /DH/CHP in regeneration plans (<i>Business</i>)
4.5	Individual project support and technical expertise	▶▶	Fair	Officer training to familiarise with technologies	♂	Co-ordinated action with other authorities to enable delivery of renewable energy projects and DH and CHP. Signposting to national grants schemes	♂	Work within London Energy Partnership for co-ordinated action with other authorities (<i>Regional</i>) Increase signposting to national grant schemes (<i>Funding</i>)

4	RENEWABLES AND LOW CARBON TECHNOLOGIES	Potential influence of lever	Rating	Current Behaviour Description		Target Behaviour Description		Suggested Action
4.6	Co-ordination of policy and technical expertise/advice	▶▶	Good	Co-ordinated action on visual impacts assessment, Environmental Impact Assessment evaluation and planning policies. Active support for local authority 'champion' organisation (in house or agency)	♂ £	As 'good' plus co-ordinated provision of technical advice and support on buildings integrated renewable energy targets, and targets for DH and CHP	♂♂ £	Provide technical support and advice for developers (<i>Business</i>)
4.7	Planning policy & Strategy	▶▶	Fair	Local authority strategy but limited buy-in and no clear approach to delivery		Islington-wide strategy with target (from Regional Spatial Strategy), political buy-in and clear action plan to enable delivery	♂♂♂ £	Develop clear action plan for delivery of target, with political buy-in (<i>Corporate</i>)
4.8	Communications, education and leadership	▶	Fair	Occasional reference to renewable energy in public communications, no encouragement for schools to engage		Regular and positive local authority-level communications. Active encouragement for schools to do renewable energy projects	♂ £	Plan a programme of regular communications on renewable energy locally (<i>Leadership</i>) Actively encourage and support schools to have renewable energy technologies installed (<i>Leadership</i>)

Table 19: Transport (Corporate) Levers

5	TRANSPORT: LBI organisational travel activities	Potential influence of lever	Current Rating	Current Behaviour Description		Target Behaviour Description		Suggested Action
5.1	OVERALL APPROACH	▶▶▶	Fair	Effects of their own travel activities are being considered and basic measures are being put in place to manage		Pro-active approach to reducing carbon emissions from transport activities with reasonable reductions expected		See actions below
5.2	Travel Plans	▶▶▶	Good	Full travel plan looking at commuting and business travel. Working with public transport providers to adjust service. Car sharing schemes. Good facilities for walking and cycling. Target 10% reduction	☺☺ £	Broad travel plan including visitors. Considering financial incentives. Looking at the use of pool cars/car clubs and other innovative schemes. Full time travel co-ordinator for own sites. Target 15% reduction	☺☺☺ ££	Include visitors in LBI travel plan (<i>Targets</i>) Increase target to a 15% reduction in car use (<i>Targets</i>)
5.3	Fleet management	▶▶	Good	Wider fleet management policy covering fleet vehicles and company cars. Driver training given and incentives for improvements. Use of some techniques to reduce mileage	☺☺ -£	Strong green fleet management policy. Fuels policy looking at alternatives and CO ₂ limits on company cars. Consideration of policies to reduce fuel use in private fleet through mileage allowance and other policies.	☺☺☺ -£	Establish CO ₂ emission limits for new vehicles and tighten them progressively (<i>Targets</i>) Actively consider policies to reduce overall fuel use year-on-year (<i>Targets</i>)
5.4	Procurement of transport services	▶▶▶	Fair	Provision of advice and informal discussion with service providers to reduce carbon emissions		Soft targets for vehicle emissions and fuel use	☺	Set soft targets for contractors' fleets' emissions and fuel use (<i>Procurement</i>) Raise the profile of contractors' fleets' carbon impact in procurement policy (<i>Procurement</i>)

Table 20: Transport (Borough-Wide) Levers

6	TRANSPORT: all transport within the borough		Current Rating	Current Behaviour Description		Target Behaviour Description			Suggested Action
6.1	OVERALL APPROACH	▶▶	Good	Considered as a local issue and some pro-active measures to tackle carbon emissions	♂♂	Seen as an important local issue. Pro-active in schemes to reduce carbon emissions. Support national initiatives with local implementation	♂♂♂		Increase LBI's participation in London-wide and national initiatives to reduce transport emissions (<i>Regional</i>)
6.2	Local Transport Plan - covers local transport investment	▶	Good	Specific material on climate change and discussion on how other elements of the plan will effect carbon emissions. Indicator on carbon emissions	♂	Pro-active policies on reducing carbon emissions (perhaps alongside air quality). Resources allocated to tackling climate change. Target set for reducing emissions	♂♂♂	£	Develop a baseline for carbon emissions from transport within the borough and set emissions reduction targets for local transport (<i>Targets</i>) <ul style="list-style-type: none"> • Include CO₂ emissions within Air Quality Management inventory • Use DTI statistics on road fuels used in the borough • Alternatively consider proxies for carbon emissions reductions, such as changes in use of public transport, cycling and walking, taking into account what data is already available Allocate resources to reducing carbon emissions from traffic within the borough (<i>Funding</i>)
6.3	Local Air Quality Management	▶	Good	Carbon emissions in inventory, and in analysis of Air Quality Action Plan (AQAP) and AQS (Air Quality	♂	Specific measures to deal with climate change and carbon reduction in AQAP and AQS. Targets set and	♂♂		Include CO ₂ emissions in air quality inventory (<i>Monitoring</i>)

				Strategy)			budget allocated			Set targets and measures for CO ₂ reduction in AQAP and AQS (<i>Monitoring</i>)
6.4	Energy strategy		Fair	Energy statement as part of environmental/ sustainability strategy			Specific energy strategy that includes corporate transport		♂	Include transport energy in next version of energy action plan, with funding allocated (<i>Corporate</i>)
6.5	LSP/community strategy	▶▶	Weak	Energy issues not considered			Energy considered as part of wider sustainability agenda			Raise the profile of transport energy within LSP (<i>Leadership</i>)
6.6	Planning system	▶▶	Excellent	Strong policy position on transport and land use, rigorous linkage to transport hubs and new development. Reduce limits for car parking and promoting of low and zero car developments		♂♂♂	n/a			
6.7	Awareness campaigns/ communication strategies	▶▶▶	Good	Develop links with travel reduction and air quality and carbon benefits. Links across councils for programmes and with other agencies		♂♂	More detailed advice on reducing fuel use to businesses and residents and work on promoting alternative fuels and clean vehicles. Integration with travel reduction advice. Co-operation with energy agencies, channel for Energy Saving Trust and Carbon Trust schemes and advice.		♂♂♂	Widen the programme of transport advice services available to business and residents (<i>Procurement</i>) Include promotion of alternative fuels and clean vehicles within travel awareness campaigns (<i>Procurement</i>) Initiate / increase joint working with energy agencies (<i>Community</i>)
						♂♂	£		♂♂♂	££

Appendix 2: Actions listed by category

The number in brackets after each action refers to the Matrix lever from which it is derived.

Consider approach to funding

- Consider new approaches to funding for energy efficiency (1.9)
 - Including use of well-being powers and Public Service Agreements.
- Take advantage of national schemes to help support energy management in LBI (3.1)
- Invest at least 10% of the council's energy bill in energy efficiency improvements (3.5)
- Ensure that more than one full time equivalent member of staff is working on energy management per £1 million spent on energy bills (3.5)
- Move from ad-hoc to strategic approach to funding (3.5)
- Increase signposting to national grant schemes for renewable energy (RE) and Combined Heat and Power (CHP)(4.4)
- Allocate resources to reducing carbon emissions from traffic within the borough (6.2)

Increase LBI's leadership role

- Take responsibility for leading delivery of domestic energy efficiency in wider community (1.2)
 - By leading Local Strategic Partnership
 - By working with other partners
 - Ensure planned programme of work is followed through.
- Engage regeneration bodies (1.7)
 - Help them to realise the potential role of home energy efficiency improvements in area renewal
 - Look for an Energy Champion in the regeneration sector
- Increase LBI's leadership role in developing energy efficiency exemplars (1.9)
 - Through the Local Strategic Partnership
 - Through work with property developers
 - With schools: install energy efficiency exemplars and proactively offer energy efficiency education
- Make engagement with schools more proactive (1.14)
 - Work with energy / environmental education initiatives, at national, regional or local level
- Develop an energy management strategy and action plan for schools' energy efficiency (3.8)
 - Allocate funding for energy efficiency improvements
 - Provide training for staff
 - Provide a set number of days of technical advice per year, from council energy management staff or others
- Increase political and ISP-wide support for renewables and low carbon techs (4.1)
- Plan a programme of regular communications on renewable energy locally (4.8)
- Actively encourage and support schools to have renewable energy technologies installed
- Raise the profile of transport energy within ISP (6.5)

Improve monitoring systems

- Set up a results monitoring system for private sector energy efficiency (1.4)
- Investigate whether there are ways to obtain more accurate data on domestic energy efficiency measures installed in a cost effective manner (1.11)
 - Consult Housing for Islington about improving data quality
- Establish effective energy monitoring systems for own estate (3.1)
- Improve targeting and feedback for energy performance data (3.7)

- Include CO₂ emissions in air quality inventory (6.3)
- Set targets and measures for CO₂ reduction in AQAP and AQS (6.3)

Develop a corporate strategy with political support and publicity, or incorporate sustainable energy into existing corporate strategies

- Improve cross-department action on domestic energy efficiency (1.1)
 - Through Sustainability Board
 - Appoint departmental Energy Champions
 - Formalise strategic commitments in corporate plans.
- Develop corporate strategy to improve energy efficiency with political support and regular publicity (1.12)
 - Seek Member / Executive support
 - Involve council communications officers
 - Develop regular programme of activities to attract publicity
- Follow through strategies and actions from Local Authority Carbon Management Programme (3.3)
 - Maintain momentum and political buy-in
- Include energy efficiency improvements in refurbishment plans (3.6)
 - Establish communication links so that energy management staff are aware of refurbishment plans far enough in advance to incorporate energy efficiency improvements
- Develop clear action plan for delivery of renewable energy targets, with political buy-in (4.7)
- Include transport energy in next version of energy action plan, with funding allocated (6.4)

Promote energy efficiency to business development organisations and support services

- Engage business advice services within LBI and ISP (2.1)
- Develop a broad commitment to the importance of business energy efficiency (2.2)
 - Within LBI engage Members and senior officers
 - Raise the profile of business energy efficiency within corporate plans
 - Seek senior level support in other LSP organisations
- Raise awareness of energy efficiency as a factor in business performance (2.3)
 - Promote energy efficiency to the chamber of commerce, business enterprise team, and other business development organisations and support services
- Set Local Development Framework (LDF) energy performance targets (beyond building regulations) for smaller developments (2.4)
- Make business advice provision more proactive (2.6)
 - Promote advice services through LSP, chamber of commerce, business enterprise team, and other business development organisations and support services
 - Consider developing a communication plan in order to make a strong case to these organisations
- Establish quantitative energy performance standards for businesses providing relevant services to LBI in the borough's green procurement code (2.7)
- Take a more proactive approach to engagement with the local business sector (2.8)
 - For example, through LBI departments / external organisations providing support and services to the business sector
 - Devise a strategy for communications to business in co-operation with these departments / organisations
- Increase engagement with London-wide business networks (2.9)
- Raise the profile of RE/DH/CHP in regeneration plans (4.4)

- Provide technical support and advice for developers who need to meet RE/CHP/DH targets (4.6)

Set stretching targets and progressively improve standards

- Establish or strengthen targets to match/exceed the Energy White Paper (1.2)
- Establish standards higher than Decent Homes for council's own housing stock (1.3)
 - Set programme for achievement of these standards, with a more strategic approach to implementation
- Establish clear targets for energy efficiency improvement in the private housing sector (1.4)
- Set CO₂ targets for own estate in excess of national targets (3.2)
 - Secure commitment for energy saving targets
- Set departmental targets for energy efficiency (3.4)
 - Recruit energy champions from among senior officers in departments
 - Communicate targets to staff and keep them updated on progress
 - Devise incentives for staff to help meet targets
- Establish DH and CHP targets for energy use in new developments, with emphasis on use of biomass rather than gas in the future (4.2)
- Include visitors in LBI travel plan (5.2)
- Increase target to a 15% reduction in car use (5.2)
- Establish CO₂ emission limits for new vehicles and tighten them progressively (5.3)
- Actively consider policies to reduce overall fuel use in LBI fleet year-on-year (5.3)
- Develop a baseline for carbon emissions from transport within the borough and set emissions reduction targets for local transport (6.2)
 - Include CO₂ emissions within Air Quality Management inventory
 - Use DTI statistics on road fuels used in the borough
 - Alternatively consider proxies for carbon emissions reductions, such as changes in use of public transport, cycling and walking, taking into account what data is already available

Increase priority for sustainable energy within building control and enforcement

- Encourage higher priority for enforcement of Part L of the building regulations (1.6)
 - Assign additional resource
- Make Part L assessment a priority within enforcement (2.5)
 - Increase the resource allocated to follow-up of regulations
- Improve assessment and enforcement procedures to support LDF rule on building integrated renewables (4.2)

Step up involvement in London-wide / national networks

- Set strategic goals for engagement with London-wide partnership approach and an action plan to deliver them (1.13)
- Investigate the possibility of involvement in London-wide or inter-borough green procurement activities (3.9)
- Work within London Energy Partnership for co-ordinated action with other authorities (4.5)
- Increase LBI's participation in London-wide and national initiatives to reduce transport emissions (6.1)

Enhance community engagement

- Approach potential advice and delivery partners for private sector energy efficiency (1.4)
- Regarding grant and energy efficiency delivery schemes, increase work with existing partners and widen the range of partner organisations. (1.10)
 - For example, health services, suppliers, and other local authorities
- Proactively encourage community engagement in planning activity on renewable energy and low carbon technologies (4.3)
- Initiate / increase joint working on transport with energy agencies (6.7)

Integrate low carbon into procurement

- Aim for progressively higher energy efficiency standards in procurement (3.9)
- Prioritise energy efficiency improvements in building management and procurement (3.1)
- In order to improve co-ordination of local procurement activity, establish an ISP-wide buying consortium with high energy efficiency standards (3.11)
- Set soft targets for contractors' fleets' emissions and fuel use (5.4)
- Raise the profile of contractors' fleets' carbon impact in procurement policy (5.4)
- Widen the programme of transport advice services available to business and residents (6.7)
- Include promotion of alternative fuels and clean vehicles within travel awareness campaigns (6.7)

Appendix 3: List of Attendees, First ICCP Workshop, 9/11/2006**Attendees**

Name	Organisation
Andrew Bosi	The Islington Society
Ashley Hard	Sadler's Wells
Christine Kinnear	Energy Savings Trust
Christine Lovett	Angel Town Centre Management
Claudine Blamey	British Land
Cllr Anna Berent	Islington Council
Cllr Lucy Watt	Islington Council
David Ritter	Building Design Partnership
Diana James	Islington Council - Regeneration
Dr Nicholas Watts	London Metropolitan University
Gerry Metcalf	UK Climate Impacts Programme
Helen Mounsey	Centre for Sustainable Energy
Hong Ling Dyer	Islington Council - Resource Management
Iain Patten	Satellite Marketing Communications
Ian Sandford	Islington PCT - Public Health
James Littlewood	Groundwork Camden and Islington
Jan Tucker	Peabody Housing
Jeremy Hopgood	Arsenal Regeneration Team
John Ackers	Friends of the Earth
John Broughton	Moorfields Eye Hospital
Jonathan Gibbs	Aquaterra
Joyce Pollaya	Islington Council - Nag's Head Area
Katie Steele	Islington Council - Public Protection
Kevin Lloyd	Islington Council - Greenspace and Leisure
Laura Hales	Islington Council - Sustainability Unit
Liz Prowse	Islington Council - Sustainability Unit
Lucy Padfield	Islington Council - Energy Centre
Matt Bradshaw	Fire Service
Maxine Holdsworth	Islington Council - Sustainability Unit
Mick Daniels	HMP Holloway
Miles Duckworth	Islington Council - Planning
Patrick Dankwa	Guinness Trust

Paul Davey	Homes for Islington (HFI)
Peter Eyres	Satellite Marketing Communications
Quinton Pop	Nicholas Hare Architects
Rose Rooney	Islington Council - Street Management
Sam Hoskins	Business Design Centre
Simon Francis	Royal Mail
Simon Goldsmith	London Metropolitan University
Simon Roberts	Centre for Sustainable Energy
Stephen Henn	Islington Council - Energy Centre
Stephen McKinnell	City University
Stephen Taylor	Friends of the Earth
Susan Morgan	BT
Tim McCormick	Islington Council - Resource Management
Trevor Butler	Building Design Partnership
Victoria Kemp	Linklaters
Will Lochhead	Government Office for London

Apologies

Name	Organisation
Joshua Thumim	Centre for Sustainable Energy
Allan Perry	The Whittington Hospital
Andrew Stokes	The Metropolitan Police
David Asquith	CEA@islington
Eamon McGoldrick	Homes for Islington (HFI)
Geanna Bray	Islington and Shoreditch Housing Association
Helen Fallon	Islington Council – Street Management
Martin Hesketh	City and Islington College
Matthew Harris	Thames Water
Matthew Humphries	EC1 New Deal for Communities
Michael Lloyd	Arsenal
Steve Collard	N1 Centre
Tony Upson	Slaughter and May
Ben Stewart	Slaughter and May
Warren Smith	The Guardian

Appendix 4: Data from Emissions Inventory**Table 21: List of Partnership Members who provided data and the sites/ services the data covered.**

Organisation	Site / Services
Aquaterra	Leisure Centres / Aquaterra
BDP	Main
BDP	Piazza
City University	Bath Street
City University	Cass Business School
City University	City Innovation Centre
City University	Finsbury Hall, Heyworth Hall and Saddlers Sports Centre
City University	Francis Rowley Court
City University	Gloucester Building
City University	Goswell Place and Myddleton Building
City University	Health Centre
City University	Northampton Square main campus
City University	Parkes Building
City University	Pear Tree Court
City University	Social Sciences Building
City University	Walter Sickett Hall
Ecoigo	Angel Gate
EnlightenNext	Events Centre
Ethiopian Development Organisation	Finspace
Groundwork Islington	Baron Street
Guinness Trust	Guinness Court
HM Prison Service	Holloway Prison
Islington Borough Council	Administration / Operational Buildings
Islington Borough Council	Children's services
Islington Borough Council	Greenspace
Islington Borough Council	Housing
Islington Borough Council	Libraries
Islington Borough Council	Nurseries and Under 5's
Islington Borough Council	Schools

Islington Borough Council	Social Services
James Selby	James Selby Department Store
Kier Islington	33-37 Brewery Road
Kier Islington	40-60 Brewery Road
Kier Islington	64 Brewery Road
Kier Islington	72 Brewery Road
Kier Islington	25-29 Vale Royal
Kier Islington	Various
London Fire Brigade	Clerkenwell Fire Station
London Fire Brigade	Holloway Fire Station
London Fire Brigade	Islington Fire Station
London Metropolitan University	Eden Grove
London Metropolitan University	Harglenis Building
London Metropolitan University	Holloway Road Complex
London Metropolitan University	Ladbroke House
London Metropolitan University	Learning Centre
London Metropolitan University	Spring House
London Metropolitan University	Stapleton House
Metropolitan Police	Copenhagen Street
Metropolitan Police	Highbury Vale Police Station
Metropolitan Police	Holloway Police Station
Metropolitan Police	Holloway Road
Metropolitan Police	Islington Police Station
Metropolitan Police	Kings Cross Road Police Station
NHS - Moorfields	Moorfields Eye Hospital
NHS - Whittington	Whittington Hospital
Nicholas Hare Architects	3 Barnsbury Square
Royal Mail	130 Old Street
Royal Mail	148 Old Street
Royal Mail	80 Old Street
Royal Mail	Islington Delivery Office
Royal Mail	Mount Pleasant Mail Centre
Royal Mail	Old Street Branch Office
Sadler's Wells Theatre	Sadler's Wells Theatre
Slaughter and May	One Bunhill Row

Total Emissions

The table shows emissions by source for data received before the deadline, with an adjustment for data received after the deadline. The report calculations are based on data received *before* the deadline.

Table 22: Total CO₂ emissions in tonnes by source

Source	Tonnes CO₂
Electricity	56,639
Gas / Oil	47,825
Transport	173
Total	104,637
<i>Emissions from additional data provided after the deadline</i>	<i>854</i>
<i>Current total</i>	<i>105,491</i>

Baseline year for data for each site / service, by source

There was a great deal of variability in the data that was available for each site / service. An ideal data set would have covered January to December 2005, but this was only available for a very small sub-set of sites. The decision was therefore taken to include any year-long period between January 2004 and December 2006.

The table below shows, for each site, what period the data covers. Either the year or the date when the year ended is shown. Some common situations which arose are listed below and the code for each of these is shown in the last column where it is relevant to a particular site:

- A. More than a year's data was provided, which was pro-rated to obtain exactly one year's data. For example, if electricity consumption in two periods was provided, covering 1st January-30th June and 1st July-31st January, the second period was pro-rated to obtain an estimate of consumption to 31st December.
- B. Less than a year's data was provided, which was pro-rated to obtain an estimate of one year's data. Where the data was provided in several periods, the most appropriate one was pro-rated. For example, if information was available for January-March, and March-October, but not November or December, the January-March period would be pro-rated to obtain an estimate for November-December, as the weather conditions are more likely to be similar in these periods.
- C. Energy consumption data was not available, but details of the site were provided, and so an estimate of energy use was made by using standard benchmarks.
- D. A year's energy consumption data was provided but dates were not given.

Table 23: Base year for data from each site, by source

Organisation	Site / Service	Source	Year / Date ended	Notes / code
Aquaterra	Leisure Centres / Aquaterra	Electricity	27/06/2005	
		Gas	27/06/2005	
BDP	Main	Electricity	30/06/2006	
		Gas	19/06/2006	A
	Piazza	Electricity	21/11/2006	B
City University	Bath Street	Electricity	31/10/2006	
		Gas	01/12/2006	
	Cass Business School	Electricity	31/10/2006	
		Gas	01/12/2006	
	City Innovation Centre	Electricity	30/11/2006	A
		Gas	27/10/2006	A
	Finsbury Hall, Heyworth Hall and Saddlers Sports Centre	Electricity	31/10/2006	
		Gas	26/10/2006	B
	Francis Rowley Court	Electricity	30/09/2006	B
		Gas	30/11/2006	
	Gloucester Building	Electricity	30/11/2006	A
		Gas	26/10/2006	
	Goswell Place and Myddleton Building	Electricity	30/11/2006	A
		Gas	12/10/2006	A
	Health Centre	Electricity	30/11/2006	A
		Gas	01/11/2006	A
	Northampton Square main campus	Electricity	31/10/2006	
		Gas	30/11/2006	
	Parkes Building	Electricity	30/10/2006	A
		Gas	28/07/2006	B
Pear Tree Court	Electricity	31/10/2006		
	Gas	02/11/2006	A	
Social Sciences Building	Electricity	31/10/2006		

Organisation	Site / Service	Source	Year / Date ended	Notes / code
		Gas	01/12/2006	
	Walter Sickett Hall	Electricity	31/10/2006	
		Gas	09/11/2006	B
Ecoigo	Angel Gate	Electricity		C
EnlightenNext	Events Centre	Electricity	31/10/2006	
		Gas	29/09/2006	
Ethiopian Development Organisation	Finspace	Electricity		C
		Gas		C
Groundwork Islington	Baron Street	Electricity	01/12/2006	A
		Gas		C
Guinness Trust	Guinness Court	Electricity		C
HM Prison Service	Holloway Prison	Electricity	30/09/2006	B
		Gas	31/12/2006	B
Islington Borough Council	Administration / Operational Buildings	Electricity	27/06/2005	
		Gas	27/06/2005	
	Children's services	Electricity	27/06/2005	
		Gas	27/06/2005	
	Greenspace	Electricity	27/06/2005	
		Gas	27/06/2005	
	Housing	Electricity	27/06/2005	
		Gas	27/06/2005	
	Libraries	Electricity	27/06/2005	
		Gas	27/06/2005	
	Nurseries and Under 5's	Electricity	27/06/2005	
		Gas	27/06/2005	
	Schools	Electricity	27/06/2005	
		Gas	27/06/2005	
	Social Services	Electricity	27/06/2005	
		Gas	27/06/2005	

Organisation	Site / Service	Source	Year / Date ended	Notes / code
James Selby	James Selby Department Store	Electricity	31/01/2006	
		Gas	30/12/2006	A
Kier Islington	33-37 Brewery Road	Electricity		C
	40-60 Brewery Road	Electricity		C
	64 Brewery Road	Electricity		C
	72 Brewery Road	Electricity		C
	25-29 Vale Royal	Electricity		C
	Various	Transport	31/03/2006	
London Fire Brigade	Clerkenwell Fire Station	Electricity	11/10/2006	A
		Gas	25/10/2005	A
	Holloway Fire Station	Electricity	20/06/2006	A
		Gas	30/11/2006	B
	Islington Fire Station	Electricity	24/11/2006	B
		Gas	31/10/2006	A
London Metropolitan University	Eden Grove	Electricity	Unknown	D
		Gas	Unknown	D
	Harglenis Building	Electricity	Unknown	D
		Gas	Unknown	D
	Holloway Road Complex	Electricity	Unknown	D
		Gas	Unknown	D
	Ladbroke House	Electricity	Unknown	D
		Gas	Unknown	D
	Learning Centre	Electricity	Unknown	D
		Gas	Unknown	D
	Spring House	Electricity	Unknown	D
		Gas	Unknown	D
	Stapleton House	Electricity	Unknown	D
		Gas	Unknown	D
Metropolitan Police	Copenhagen Street	Electricity	30/10/2006	
		Gas	30/10/2006	

Organisation	Site / Service	Source	Year / Date ended	Notes / code	
	Highbury Vale Police Station	Electricity	30/10/2006		
		Gas	30/10/2006		
	Holloway Police Station	Electricity	30/10/2006		
		Gas	30/10/2006		
	Holloway Road	Electricity	30/10/2006		
		Gas	30/10/2006		
	Islington Police Station	Electricity	30/10/2006		
		Gas	30/10/2006		
	Kings Cross Road Police Station	Electricity	30/10/2006		
		Oil	30/10/2006		
	NHS	Moorfields Eye Hospital	Electricity	30/11/2006	
			Gas	31/12/2006	
Whittington Hospital		Electricity	31/03/2006		
		Gas	31/03/2006		
Nicholas Hare Architects	3 Barnsbury Square	Electricity	27/09/2006		
		Gas	06/06/2006		
		Transport			
Royal Mail	130 Old Street	Electricity	31/03/2006		
		Gas	31/03/2006		
	148 Old Street	Electricity	31/03/2006		
		Gas	31/03/2006		
	80 Old Street	Electricity	31/03/2006		
		Gas	31/03/2006		
	Islington Delivery Office	Electricity	31/03/2006		
		Gas	31/03/2006		
	Mount Pleasant Mail Centre	Electricity	31/03/2006		
		Gas	31/03/2006		
	Old Street Branch Office	Electricity	31/03/2006		
		Gas	31/03/2006		

Organisation	Site / Service	Source	Year / Date ended	Notes / code
Sadler's Wells Theatre	Sadler's Wells Theatre	Electricity		C
		Gas	24/11/2006	B
Slaughter and May	One Bunhill Row	Electricity	31/12/2006	
		Gas	31/12/2006	A

Appendix 5: Benchmarking results

The following pie charts show the number of sites receiving weak, fair, good or excellent benchmark ratings. In total 44 sites were benchmarked for electricity use and 43 were benchmarked for gas or oil use.

Figure 7: Benchmarking results: electricity use

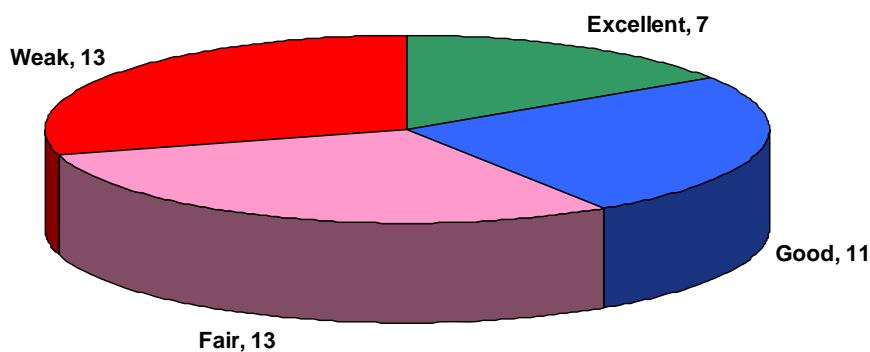


Figure 8: Benchmarking results: gas / oil use

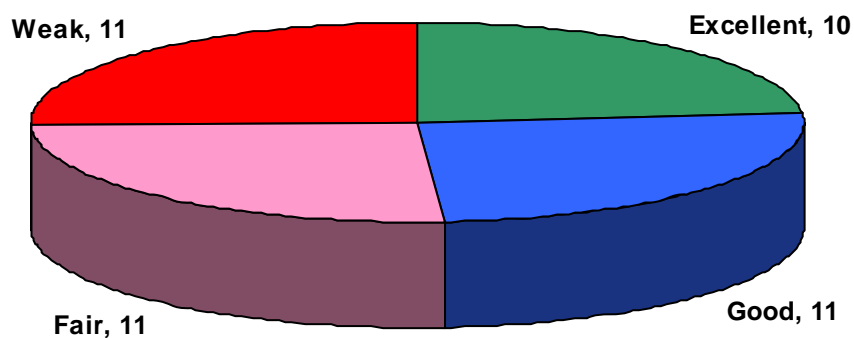


Figure 9: Sites' electricity use as a percentage of the 'typical' benchmark

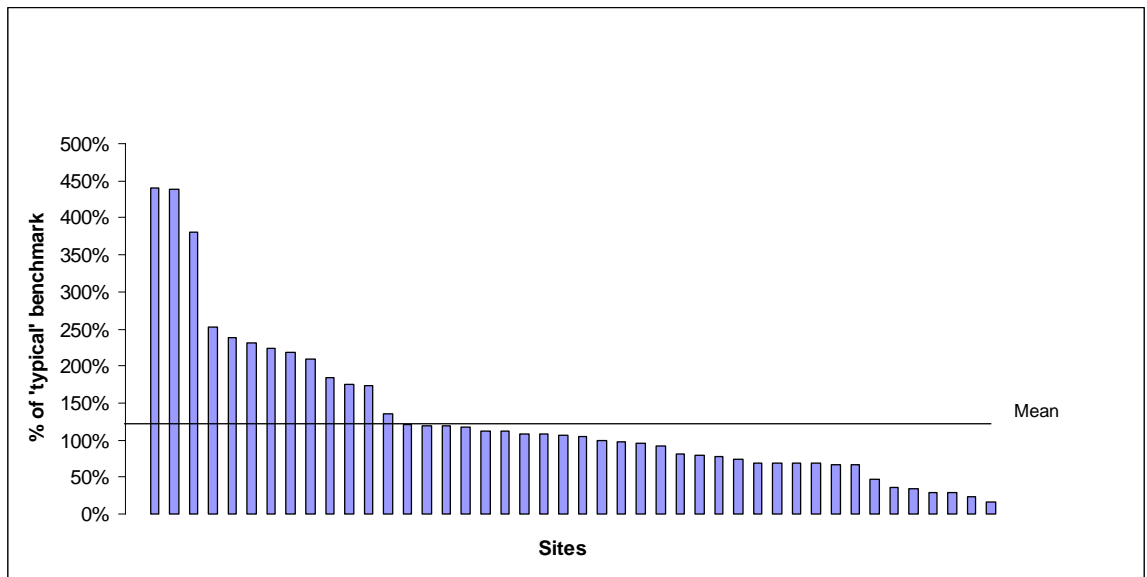
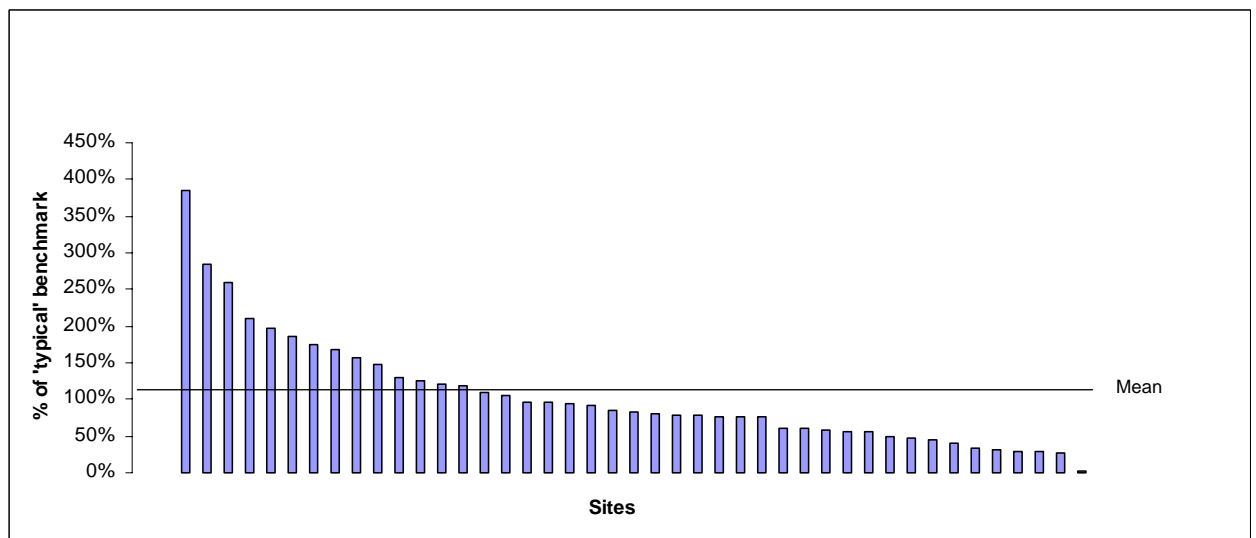


Figure 10: Sites' gas and oil use as a percentage of 'typical' benchmark



Appendix 6: List of Attendees, Second ICCP Workshop, 2/2/2007**Attendees**

Name	Organisation
Andrew Bosi	Islington Society
Andrew Stokes	Metropolitan Police
Bob Gilbert	Islington Council
Christine Kinnear	Energy Saving Trust
Chloe Brown	London Metropolitan University
Cllr Anna Berent	Islington Council
Cllr Lucy Watt	Islington Council
Daniel Todary *	Ecoigo
David Ritter	Building Design Partnership
Daush Amar	EDA UK
Fizle Sagar	Currell Estate Agents and Chartered Surveyors
Joshua Thumim	Centre for Sustainable Energy
Helen Mounsey	Centre for Sustainable Energy
Ian Shaw	London Fire Brigade
Jeremy Hopgood	Newlon Housing Trust
Katie Steele	Islington Council
Lucy Padfield	Islington Council
Matthew Harris	Thames Water
Martin Holley	Centre for Sustainable Energy
Maxine Holdsworth	Islington Council
Mick Daniels	Holloway Prison
Miranda Pennington	Islington Council
Miles Duckworth	Islington Council
Phil Rulter*	Linklaters
Sarah Leckenby	EnlightenNext
Simon Goldsmith*	London Metropolitan University
Simon Roberts	Centre for Sustainable Energy
Stephen McKinnell*	City University
Steve Henn	Islington Council
Steve Talevski	Starbucks
Tony Upson*	Slaughter and May
Wendy Baverstock	Groundwork Camden and Islington

Apologies

Name	Organisation
Allan Perry	Whittington Hospital
Ashley Hard	Sadler's Wells
Christine Lovett	Angel TCM
John Broughton	Moorfields Eye Hospital
Jonathan Gibbs*	Aquaterra
Julie Gunnell	Barclays
Ken Sharkey*	Kier Islington
Patrick Dankwa	Guinness Housing Trust
Matt Bradshaw	Fire Service
Michael Lloyd	Arsenal
Quinton Pop	Nicholas Hare
Sam Hoskins	Business Design Centre
Simon Francis*	Royal Mail
Stephen Taylor	Friends of the Earth
Vicky Kemp*	Linklaters
Wendy Widdecombe	James Selby
Will Lochhead	GOL

* Steering Group

Appendix 7: Summary of Measures Presented in Second ICCP Event**No Cost Measures**

<i>Example measures to reduce CO₂ emissions</i>	<i>Typical payback (years)</i>	<i>Approx. saving in CO₂ emissions as % of total</i>
Switch off all non-essential lighting out of business hours	0	2%
Switch off all non-essential office equipment out of business hours	0	9%
Ensure thermostats are set correctly e.g. reduce by 1degC	0	3%
Enable standby facility on PCs & monitors	0	3%
Optimise switch-on and switch-off times for heating and air conditioning and switch off before the end of the working day	0	10%
Total		28%

Low / Medium Cost Measures

<i>Example measures to reduce CO₂ emissions</i>	<i>Typical payback (years)</i>	<i>Approx. saving in CO₂ emissions as % of total</i>
Install automatic lighting controls	2-10	5-12%
Replace 38 mm diameter fluorescent tubes on failure with 26 mm tubes	2-3	2%
Install time controls on drinks machines, photocopiers and office equipment	0.5-3	0.5%-2%
Install draught stripping	1-3	4%-6%
Upgrade heating control systems (e.g. optimisers, compensators, zone controls)	1-5	2%-11%
Total		13.5%-33%

Higher Cost Measures

<i>Example measures to reduce CO₂ emissions</i>	<i>Typical payback (years)</i>	<i>Approx. saving in CO₂ emissions as % of total</i>
Flat roof insulation	20-30	4%-6%
New condensing boiler	3-4	6%-9%
Installation of building energy management system	3-6	4%-8%
Solar water heating	10-20	2%-3%
Biomass boiler	5-15	30%-40%
Photovoltaics	>30	0.5%-1%
Small-scale wind	10-20	0.5%-1%
CHP (small scale)	5-10	
Total		46%-66%

Appendix 8: Detailed Analysis of Measures in the Climate Change Programme 2006 (including existing and 'additional' measures)

Sector/Measure	National Saving from Measure by 2010 (MtC)	LA Influencable	Size of error bar in % [Influence of quality of LA performance (%)]	Weak rating effect	Excellent rating effect	Assumed Rating of LA performance in CCP2006 (=zero-effect point)
Energy supply						
Renewables Obligation	2.5	✓	15%	2.00%	-13.00%	Fair-Weak
Subsidy for biomass heat	0.1	✓	15%			
Energy supply Total	2.6		15.0%			
Emissions trading						
Second phase of EU emissions trading scheme	3.0-8.0			0.00%	0.00%	Not applicable
ETS Total	3		0%			
Business						
Climate change levy ¹	0			0.20%	-1.60%	Fair
UK emissions trading scheme	0.3					
Carbon Trust	1.1	✓ (LSP)	5%			
Building Regulations 2002	0.4	✓	15%			
Building Regulations 2005	0.2	✓	15%			
Climate change agreements	2.9					
Carbon Trust support for investment in energy efficiency in SMEs	0.1	✓	5%			
Measures to encourage or assist SMEs to take up energy saving opportunities	0.1	✓	5%			
Business Total	5.1		3.0%			
Transport						
Voluntary Agreements package, inc. reform of company car taxation and graduated VED	2.3			1.00%	-2.00%	Fair
Wider transport measures ²	0.8	✓	20%			
Sustainable distribution in Scotland and Wales	0.1	⊖	⊖			
Fuel duty escalator	1.9					
Renewable Transport Fuel Obligation (RTFO)	1.6					
Future voluntary agreement with car manufacturers to reduce CO ₂ emissions from new cars	0.1					
Transport Total	6.8		2%			
Domestic						
Energy Efficiency Commitment (EEC) (2002-05)	0.4	✓	0%	1.00%	-2.00%	Fair
Energy Efficiency Commitment (EEC) (2005-08)	0.6	✓	20%			
Energy Efficiency Commitment (EEC) (2008-11)	0.6	✓	20%			
Building Regulations 2002	0.7	✓	20%			
Building Regulations 2006 including 2005 condensing boilers update	0.8	✓	20%			
Warm Front and fuel poverty programmes	0.4	✓	25%			

Sector/Measure	National Saving from Measure by 2010 (MtC)	LA Influencable	Size of error bar in % [Influence of quality of LA performance (%)]	Weak rating effect	Excellent rating effect	Assumed Rating of LA performance in CCP2006 (=zero-effect point)
Market Transformation including appliance standards and labelling	0.2					
Increased activity in Energy Efficiency Commitment (EEC) (2008-11)	0.5	✓	25%			
Provision of advice to stimulate early replacement of inefficient boilers and implementation of the Energy Performance of Buildings Directive	0.2	✓	25%			
Package of measures to improve energy efficiency in buildings	0.1	✓	25%			
Better billing and metering	0.2					
Products Policy: consumer information and standards for lights and other energy-using products (EUPs)	0.2					
Domestic Total	4.9		17.1%	2.00%	-15.00%	Weak-Fair
Agriculture						
Woodlands Grants Scheme (England)	0.2	⊖	⊖			
Woodland planting since 1990 (Scotland)	0.5	⊖	⊖			
Strategy for non-food crops	0.1	⊖	⊖			
Agriculture Total	0.8		0%			Not applicable
Public Sector						
Central Government, NHS, UK universities and English schools including Carbon Trust activities	0.2	✓	15%			
Additional effort by local authorities	0.2	✓	100%			
Revolving loan fund for the public sector	0.1	✓	20%			
Public sector Total	0.5		50%	5.00%	-45.00%	Fair
Actions by devolved administrations	Total		0.3	0%		Not applicable
Other measures³	0.1	✓	20%	5.00%	-15.00%	Fair
TOTAL⁴	24.1-29.1		6.1-7.4%			

Key	
✓	Influencable by urban local authorities
⊖	Not relevant to urban local authorities
	Relevant to but not influencable by urban local authorities

Notes
1 An independent evaluation by Cambridge Econometrics (CE) concluded that CCL would deliver annual carbon savings of 3.7MtC by 2010, from an announcement effect and price effect of the levy. This figure assumes CCL rates are increased in line with inflation
2 As set out in 'Transport 2010: The 10 Year Plan for Transport' and built upon in 'The Future of Transport: A network for 2030'
3 These include the Green Landlord Scheme, increased funding for Warm Front, an Energy Report in the Home Condition Report, improved enforcement of Building Regulations, enhanced capital allowances for cleanest biofuels processing plants, reduced VAT for wood fuelled plants, funding for demonstration of Carbon Abatement Technologies and for the Low Carbon Building Programme. These policies together could deliver carbon savings of about 0.1MtC in 2010.
4 Total does not include carbon savings from climate change levy, and may differ slightly from figures for total carbon savings shown in Chapters 3 to 8 due to rounding

