

AMBITIONS AND REALITIES OF ADDRESSING CLIMATE CHANGE BY LOCAL TRANSPORT

Fiona Wilford
DfT
Steven Fraser
Atkins

1. CONTEXT

1.1 Purpose of the Study

The DfT wanted to better understand how local authorities in England were reducing emissions through their delivery of transport services and how they were adapting to a changing climate.

Local authorities have the difficult job of translating ambitious carbon reduction targets into demonstrable reductions on the ground. To do this they must develop sustainable transport schemes with often limited resources, and in an environment where spending on transport is increasingly constrained.

The Climate Change Act 2008 establishes an interim target for 2020 of at least 42 per cent reductions in emissions, and allows Ministers, by order, to vary the reduction figure for the interim target based on expert advice from the advisory body. Progress towards these targets will be driven by a framework of annual targets.

The research has two main aims:

- 1) To provide recommendations to the DfT as to how best they can support local authorities - What further guidance do authorities need? Do they know the types of schemes which will be most effective? Are they able to effectively estimate measure and monitor the carbon emissions in their local area?
- 2) To act as a reference document for local authorities. The research report has compiled examples of existing best practice by local authorities in areas such as partnership working, target setting, scheme development and carbon tools - examples which can be copied and reproduced throughout the UK. One of the main difficulties experienced by local authorities at present is to calculate with any degree of certainty how much carbon has actually been saved as a result of their transport initiatives. The quantification of carbon emissions and reductions is a relatively recent and specialised field, and one in which transport officers from local authorities are not necessarily familiar with. By drawing together experts from throughout the UK and presenting the latest carbon tools and research in this area, the study aimed to disseminate practical advice to authorities in this area.

To undertake this research the DfT appointed Atkins along with AEA, TRL, MVA Consultancy, and ITS Leeds in February 2010.

1.2 Background

The Climate Change Act 2008 sets a UK target of an 80% cut in carbon emissions across all sectors in the UK by 2050 (on 1990 levels). A shorter term carbon budget has also been adopted, which sets a target cut of at least 34% (on 1990 levels) by 2022.

The previous Government set out a roadmap to achieve these targets in July 2009, “Low Carbon Transport Strategy: A Greener Future”. The three main objectives of the Strategy were to support a shift to new technologies and fuels, promote lower carbon choices, and make use of market mechanisms to encourage a shift to lower carbon transport.

It confirmed that regions and local authorities were particularly important partners in influencing the pattern of journeys and development. This is because most journeys are short, and almost all take place at least in part on infrastructure or services which are the responsibility of local authorities.

2. STUDY METHODOLOGY

The key research elements of the study consisted of a desktop review, in-depth interviews with local authorities, and an expert carbon tools workshop. Table 1 lists the local authorities that were involved at each stage of the study.

2.2 Desktop review

The aim of the desktop review was to produce a broad evidence base of climate change activity, commitments and monitoring for a sample of 20 local (non-London) authorities. The review focused upon authorities who were perceived to be progressing well in the fields of climate change adaptation and carbon emissions reduction, and also included authorities at random to ensure a fair and proportionate assessment.

The 20 authorities were selected considering:

1. the need for varied geographical coverage;
2. a range of different types of authorities (urban / rural / integrated authorities); and
3. performance in the climate change / carbon emission reduction fields.

Each of the Government Offices was contacted, and asked to suggest suitable local authorities in their area. Responses were received from the majority of Government Offices, and combined with local knowledge held within the team to develop the agreed list. At least two local authorities were selected from each of the Government Offices, and eight Shire Counties and twelve Unitary Authorities.

The team reviewed Local Transport Plan 2 (LTP2) documents, Local (or Multi) Area Agreements (LAA, MAA), available Local Transport Plan 3 (LTP3) information, Climate Change Strategies (CCS), Adaptation Plans and other documents uncovered during the review.

Local Transport Plans set out the overall strategy, objectives and targets for the authority's programme of transport improvements which will be implemented over the lifetime of the plan. LTP2 refers to the second round of Local Transport Plans.

Adaptation Plans set out Local Authorities' plans to mitigate the effects of climate change (increased risk of flooding, more extreme weather events etcetera) as opposed to Climate Change Strategies, which aim to address the causes of climate change.

2.3 Local authority interviews

The next stage of the study involved interviewing eleven selected unitary and shire authorities to explore in more detail the themes and issues which emerged from the desktop review. Authorities were selected using the

information obtained from the desktop review, again bearing in mind the need for a geographical spread and the requirement for a mix of progress towards carbon reduction.

The Director of Transportation at each of the authorities was contacted by the DfT, and asked to nominate individuals to interview. In most cases interviews were conducted with several people within the authority, with interviewees typically drawn from transport planning, strategy and sustainability teams.

Discussions explored the commitments, actions and monitoring/evaluation process adopted by each local authority to reduce carbon emissions in their area. The interviews were semi-structured to create a fluid, conversational tone, but this format also ensured that certain key questions were posed to all authorities.

2.4 Expert carbon tools workshop

The emphasis of the expert carbon tools workshop was on the practical application of carbon tools, and the existing barriers that local authorities face in their development and use. Attendees included a range of local and regional authorities, transport consultancies and the DfT, who hosted the event.

2.5 Study analysis

The study findings are presented in the following five sections:

1. Goals, commitments and targets as adopted by local authorities;
2. Who is in charge of climate change issues?
3. Acting on climate change;
4. Challenges, drivers and barriers; and
5. Review of tools and methodology.

The results for each of these sections are set out below.

3. GOALS, COMMITMENTS, AND TARGETS AS ADOPTED BY LOCAL AUTHORITIES

3.1 Area wide cross-sector commitments

Each local authority tended to have several cross-sector commitments related to climate change. These included:

- LAA targets (mainly National Indicator 186). National Indicators were means by which local authorities could monitor their performance across different sectors such as education, crime and transport. NI 186 relates to CO₂ emissions per capita;
- Climate Change Action Plans;
- The Nottingham Declaration. The Declaration is a voluntary document that can be signed by any organization. Signatories pledge to recognize climate change and to produce a systematic action plan to tackle it;
- The Covenant of Mayors. The Covenant of Mayors is a commitment that can be made by towns and cities to exceed the objectives of EU energy policy in terms of reduction in CO₂ emissions through increased energy efficiency and more efficient energy production and use.; and
- emerging Local Carbon Framework pilots.

The research found that there were a large number of different approaches, strategies and plans relating to climate change but a lack of any real coherence between them.

3.2 Transport specific commitments

Authorities which had adopted NI186 within their LAA had generally set targets for an overall per capita carbon emission reduction within their area. However the majority did not set separate targets for CO₂ reductions from transport.

Only three local authorities, Norfolk, Cambridgeshire and Worcestershire had set separate targets for CO₂ reduction from transport within LTP2 documents, but most LTP2 did include air quality targets.

More emphasis on carbon and climate change was evident in draft LTP3 objectives compared to LTP2 objectives, reflecting the change of emphasis in the guidance issued by DfT, but detailed information was yet to be made publicly available in terms of targets and evidence. Nearly all of the published LTP3s included an objective to reduce carbon.

3.3 Target setting

Most local authorities had set ambitious targets for their area through NI186, aiming for a 9%-13.8% reduction in per capita CO₂ emissions by 2011. A large number of authorities also aimed to reach Level 3 of NI188 (adapting to climate change) with a comprehensive action plan adopted for their area by 2011.

Target setting for CO₂ reduction for transport was found to be problematic for a number of reasons:

- establishing a local baseline for CO₂ emissions from transport was not always straight-forward;
- procedures to predict the impact of local initiatives (as opposed to national initiatives and national initiatives with a local influence) were at early stages of development;
- quantification of carbon reduction from transport was a relatively new field for local authority transport planning practitioners, and there was no precedence to aid target setting; and
- targets which are set require monitoring and reporting - local authorities were not always sure how to go about monitoring CO₂ emissions from transport.

Many of the strategies reviewed for the desktop research included high level objectives and commitments without agreed CO₂ reduction targets for the area, particularly in the case for transport. There were some exceptions - Lancashire for example has targeted transport to account for 15% of the 30% overall emissions reduction target within their Climate Change Strategy (CCS).

4. WHO IS IN CHARGE OF CLIMATE CHANGE ISSUES?

The different roles and responsibilities within authorities were reviewed along with the wider partnership arrangements that exist across authority areas.

4.1 Roles within local authorities

The research established that responsibility for transport and climate change within local authorities resided mainly in the following areas of expertise:

- sustainability, climate change and carbon emission reduction;
 - for the area, with roles such as Sustainability Officer, Climate Change Officer, Environment Officer, Strategy and Policy Manager,
 - or for the authority's own operations and buildings, with roles such as Carbon Reduction Manager, Property Services Manager;
- transportation, with roles including Transport/Transportation Manager, Local Transport Plan Manager, Head of Transport Strategy, Travel Plan Co-ordinator; and
- air quality, including roles such as Air Quality/Environmental Protection Manager.

A few authorities also mentioned the role of the emergency planning teams in relation to climate change adaptation. Some authorities had a dedicated Climate Change Adaptation Officer.

The above staff were required to work together to produce various cross-cutting strategies and documents (such as Climate Change Strategies, Carbon Reduction Strategies and Local Development Frameworks). On the whole current arrangements were deemed to be satisfactory, regardless of whether staff sat within the same directorates or departments.

Local authority staff were however generally working within much wider partnership arrangements established through Local Strategic Partnerships (LSP) for the development and implementation of Local Area Agreements (LAA) and community strategies. LAA partners typically included local authority elected members as well as representatives from the Police Authority, Fire and Rescue, National Health Service (NHS), the voluntary and community sectors and business.

4.2 Regions and city regions

Partnership arrangements for Local/Multi Area Agreements, Climate Change Strategies or Local Transport Plans covered areas across local (transport) authority boundaries in some cases.

Examples include the Poole, Bournemouth and Dorset MAA, or Bristol as a member of the West of England MAA, as well as the participation of Northumberland or York in city regional structures.

The research found that the MAA approach in itself potentially offered some benefits in terms of both delivering carbon reduction and adapting to climate change, particularly where the MAA corresponded to a Passenger Transport Executive, such as in Greater Manchester. PTEs are local government organisations which are responsible for public transport across several local authority areas, tending to cover major city regions.

These benefits related to adopting a consistent approach to transport and carbon planning across several authority areas and efficiencies in pooling resources to achieve economies of scale, for example in model development.

Climate Change Strategies (CCS) and associated action plans had been adopted at the regional level across the country. This work tended to be led by regional climate change partnerships (or equivalent groups) which included representatives from local authorities as well as a wide range of sectors.

5. ACTING ON CLIMATE CHANGE

The research found here that local authorities were using a range of policies and interventions to act on climate change. The priority however was not on transport, with housing and renewable energy often being more of a focus. Examples ranged from strategy development, coordination, and partnership working through to specific interventions which were delivering quantifiable cuts in transport emissions.

5.1 Strategy development and delivery

The research found that developing the evidence base for areas in which the local authority plans to act is an important first step in formulating a strategy and developing targets.

Some local authorities were making the link between land-use planning and transport, and also taking steps to incorporate renewable energy into future developments. For example, both Worcester and Poole are working with developers to ensure that sustainability is incorporated in development briefs.

Most authorities were working in partnership to develop their strategies and targets. Examples of partnership working included cross-authority working as well as cooperation with external agencies such as sustainable transport charities, local businesses and the NHS. For example, Plymouth City Council and Plymouth Hospitals NHS Trust developed a joint Accessibility Strategy for the 2006-2011 period and Durham Primary Care Trust (PCT) contributed £500,000 per annum to the council's gritting costs for two winters, to cover 35 miles of bus routes.

Reflecting the importance of climate change adaptation and mitigation at the local level, some authorities, such as Kent, had set up dedicated governance structures for elected members to discuss climate change policies and decide on priorities for the area.

5.2 Delivering cuts in transport emissions

Various examples of local initiatives aimed at reducing CO₂ emissions from the transport sector were identified. This was however only a snapshot of activity in local areas, identified through the sample local authorities. The main 'themes' within these initiatives were:

- Six local authorities (including Middlesbrough, Woking and Worcestershire) were awarded "Beacon Council" status for tackling climate change. Authorities were chosen for the impact and breadth of their work across different sectors, for example the City of London's award was linked to their achievements in greening the construction sector, developing sustainable procurement policies (including energy purchasing) and the council's vehicle fleet management system.
- In some areas, community initiatives (such as the Shropshire Low Carbon Network) were being set up by residents, sometimes with the

help and support of the local authority but also fully independently in some cases;

- Many authorities plan to promote the take up of low carbon vehicles and fuels by providing electric vehicle charging facilities, purchasing or leasing low carbon vehicles for the Council's fleet and encouraging operators to use low carbon buses. For example Norfolk undertook alternative fuel trials for buses as part of the European Civitas project. However, in most cases these plans are at an early stage;
- Many authorities aimed to provide improved public transport, walking and cycling infrastructure and services in their LTP3. Promotion of these modes was also being undertaken in conjunction with other complementary initiatives such as the 'Sustainable Travel Towns' project (which include Darlington, Worcestershire and Peterborough) and the nominated 'Cycling Demonstration Towns' / Cities which include Darlington and Bristol) In terms of monitoring, most LTP2 Progress Reports for shire and unitary authorities had showed positive progress against public transport, walking and cycling indicators, but these were not linked to carbon savings;
- Some local authorities were considering establishing links between transport and land use planning frameworks to ensure that the need to travel is minimised where possible;
- Some authorities were also actively considering the potential to reduce the need to travel from the use of communication technologies. For example, Manchester has developed a city-wide digital strategy, which includes the roll-out of the next generation of super-fast broadband;
- Some local authorities were committed to reducing their own carbon footprint to act as a role model within the community but also to reap the financial benefits of more energy efficient practices. Essex County Council were winners of the 'Public Sector Fleet of the Year' at the Green Fleet Awards in 2009. They predicted overall CO2 savings of 7% between 2008 and 2010 through initiatives targeted at minimising the need to travel, and through greening essential fleet use;
- Carbon offsets were found to be a controversial subject when considering ways to reduce a local authority (or an individual's footprint) - nevertheless they represented an attractive way for authorities to balance increased CO2 levels from their activities. Norfolk County Council had planted over 16,000 trees to attempt to offset increased carbon emissions from transport schemes over the LTP2 period; and
- Where authorities had already produced an adaptation plan, such as under NI88, transport was likely to be mentioned as a key sector where there was a need to adapt - actions proposed ranged from responding to the risks of extreme weather events, via emergency planning and responding to the gradual changes expected via building adaptation

responses into routine maintenance, capital programmes, service provision and risk assessment processes.

6. CHALLENGES, DRIVERS, AND BARRIERS

The discussions with local authorities were used to identify challenges and opportunities they were facing in relation to climate change mitigation and adaptation.

6.1 Drivers

Local authorities cited a range of drivers behind their actions on climate change. These included:

- strong political leadership and senior management support providing high-level impetus;
- working towards high level commitments or transport specific targets;
- commitment from council officers was particularly important within local authorities, with the presence of motivated individuals often key in driving initiatives forward;
- community support, as evidenced in developing initiatives and environmental groups;
- the financial savings which could be achieved from reductions in energy use (and carbon emissions) from authority operations; and
- to mitigate against (and plan for) the impact of climate change within the local area.

6.2 Challenges and barriers

Inevitably there were also a variety of challenges and barriers which were also identified:

- climate change scepticism amongst the local community, elected members or local authority officers. Recent evidence from York's LTP3 public consultation showed that supporting the economy and contributing to an improved quality of life were thought to be the two most important key goals for transport, with climate change, equality and safety and health being equal third;
- conflicting priorities being promoted by central government - climate change, economic development and growth, social and other environmental priorities can sometimes conflict. Within Dorset, conflicting Government strategies were deemed to be problematic, with the centralisation of schools and hospital services in the area felt to be increasing trip lengths;
- difficulties linked to the nature of the area covered by individual local authorities - the mix of urban and rural areas or the variation in population and economic indicators within their boundaries. Both Northumberland and Poole pointed to the need to be able to adopt very

different measures to tackle climate change in rural and urban areas and the difficulty in monitoring performance through NI186 when the indicator covers the whole of the local authority area;

- resource shortages as a barrier to tackling climate change at the local authority level:
 - a focus on maintaining existing networks ensuring continuity of service rather than long term issues such as climate change,
 - the prioritisation of limited resources to other issues,
 - a lack of specialist staff available to work on climate change issues and in addition the prospect of significant cuts in the coming years as a barrier to expanding capacity,
 - future climate change mitigation actions would require additional revenue funding rather than capital investment,
- a lack of understanding of adaptation issues, for example the thresholds that impacts on infrastructure may occur and the difficulty in quantifying and communicating risks involved; and
- the cross-cutting nature of the issue - the need to involve officers from across the authority and a wide range of partners.

7. REVIEW OF TOOLS AND METHODOLOGY

The review identified approaches currently being employed by authorities to report against the targets and indicators they had adopted. This included the tools which were being used to evaluate the impact of policies and interventions, along with the issues and limitations associated with the range of different approaches.

7.1 Local authority findings

The research found that there were three broad approaches to estimating greenhouse gas emissions within a particular local authority area:

1. Relying on statistics published by others (e.g. Department of Energy and Climate Change (DECC) /AEA Consultants/ Department for Environment, Food and Rural Affairs (Defra)). However there were some limitations to this approach:
 - delays in data release meant that interventions to reduce emissions would need to take place two years earlier to be part of the data released in any given year;
 - the methodology used to calculate transport emissions used national averages, which resulted in very high transport emission per head in rural areas; and
 - the data failed to reflect results achieved through local interventions and could sometimes be misleading if the wider context was not fully understood;
2. Monitoring relevant local indicator(s) directly - however none of the authorities studied were measuring the emissions of transport related CO₂ directly. Instead reliance was made on the use of 'carbon calculators' calibrated to local conditions using monitoring from:
 - person trip-making (e.g. via a household surveys);
 - vehicle kilometres (via household surveys and/or traffic counts); and
 - fuel sales;
3. Predicting future emissions (including assessing the impacts of relevant interventions) using a variety of modelling and forecasting approaches and tools which can be distinguished in their ability to:
 - test alternative land-use scenarios;
 - predict the effects of future car ownership;
 - predict the effects of interventions which affect mode choice;

- predict network speeds and incorporate into the carbon calculation;
- include public transport modes in the calculation; and
- take account of future changes in the distributions of engine types, fuel efficiency and fuel mix.

7.2 Current weaknesses in local authority approaches

The informal appraisal of the current local authority approaches to carbon monitoring and appraisal in the research suggests the following potential weaknesses:

- the inaccuracy in the estimation of total annual vehicle kilometres for the full road network from the sample of traffic count data;
- the tendency to use UK 'default' assumptions regarding average speeds (by link type) (unless a well-calibrated local traffic model is available);
- simplifying assumptions used to estimate fuel consumption and emissions based on a single estimate of average speed, with no ability to reflect the variation caused by different amounts of acceleration/deceleration and/or differences in driving styles;
- the tendency to use 'UK average' fleet mix proportions, making it difficult to identify benefits of local schemes which encourage greater use of vehicles with a lower CO₂/km emissions performance (smaller/more-efficient/hybrid/alternative fuels etc);
- the exclusion of alternative-powered vehicles and/or converted vehicle stock from standard emission datasets and from readily available national government fleet models;
- an inability to distinguish between residents and non-residents in the observed traffic-based greenhouse gas estimates. This is potentially important as non-residents trips are usually outside an authority's control - an extreme example would be where a motorway passes through a local authority area without an access junction ; and
- an inability in already defined study or model areas to readily reflect the influence of transfer trips on apparent changes from a particular intervention (how much is genuinely 'induced' traffic for example).

7.3 What are local authorities looking for?

Local authorities asked for clear guidance on the balance between comparability from the national perspective (for example through WebTAG guidance) and the strong benefits in using more local data to better reflect the bottom-up impacts of local measures.

The research identified that the availability of robust carbon tools would be of great assistance to local authorities in developing strategies and interventions, setting targets and monitoring and appraisal.

The key points to emerge were:

- The tool should be:
 - clear and easy to use (ability to be operated in-house),
 - provide unambiguous outputs which are easily interpreted and which provide an answer to questions on climate policy in the area,
 - the effort and cost in developing and applying the tool is proportionate to the importance of local carbon reduction interventions,
- That the tool should allow the evaluation of the potential impact of proposed measures in local strategies and plans - as well as sift / rank options;
- That access to disaggregated national forecasts by region would allow authorities to understand the impact of strategies such as the Carbon Reduction Strategy in their area and separate the impact of national, regional, and local interventions;
- That any carbon tool should provide a consistent style and quality of output across different areas and regions to allow comparison and benchmarking across areas;
- That a suggested standard methodology to monitor the impact of specific interventions (such as travel planning) would be useful to allow results to be benchmarked;
- That authorities would prefer a methodology which incorporates basic transport data (such as national / local traffic flows, fleet /fuel mix and speed data) that is available to all - this would result in lower costs and would not require a bespoke transport/traffic model (which can be costly to build, maintain and operate);
- That there was a call for a set of consistent assumptions and a consistent approach to forecasting and guidance on wider assumptions (such as the future energy mix and vehicle mix would also be useful, although it was noted that there some assumptions available in WebTAG) as well the ability to take account of future changes in land-use;
- That as well as a set of standard inputs, the tool should incorporate the ability to suitably modify model inputs to reflect local variables and available models;

- That being able to demonstrate how the measures implemented would help the area to save money through efficiencies and other benefits as well as build the business case for schemes was important; and
- That a cap scheme or carbon trading between local authorities (on a wider scale than the Carbon Reduction Commitment) could help to focus the minds on reducing carbon emissions.

8. RECOMMENDATIONS

The recommendations which emerged from the study were categorised into three areas, which together might form a 'stepped' process for the DfT to consider for action:

1. Making best use of existing information;
2. Improving data sources; and
3. Considering the creation of a DfT carbon tool.

The recommendations focus on issues related to land based transport sector emissions and did not consider emissions from the shipping and aviation sectors (which require monitoring, appraisal and interventions implemented at the national and international level).

8.1 Making best use of existing information

Local authorities were aware of different sources of information relating to monitoring data and methodologies for the evaluation of possible transport interventions. The large number of potential sources and methodologies was however leading to a lack of consistency and coordination in the approaches being adopted for CO₂ monitoring or appraisal.

To help develop more consistent and coordinated approaches, the recommendation is that DfT could provide guidance on the data and methodologies to be used when monitoring transport sector emissions and evaluating the potential impact of transport interventions.

Local authorities would also benefit from a forum to exchange information and best practice and discuss on-going work in this area. This could consist of representatives from local and regional authorities, the DfT and be supplemented by academics and other outside specialists as required.

8.2 Improving data sources

Although many data sources exist, some sources are not currently easily accessible and others might not provide the data local authorities actually require for their monitoring or appraisal activities. There is therefore a need to improve the data made available to local authorities, with standard sets of data provided at the local level for authorities to use.

Particular types of data which could be made available might include:

- Local fuel sales data for estimating greenhouse gases;
- The National Travel Survey to monitor and predict the amount of car vehicle kilometres driven per annum in different areas;

- Local household surveys (containing questions regarding travel behaviour, particularly car-driving) to boost the availability of information to monitor changes in car use by their local residents over time;
- Network-wide traffic speed data could/should be used to inform greenhouse gas emissions monitoring tools;
- Regional or local authority fleet-mix data covering the characteristics which are most-relevant for forecasting current greenhouse gas emissions;
- Use of micro-simulation models to allow a better reflection of behavioural response when looking to change the way people use, rather than whether they use, a particular travel option; and
- The collection of local data across a number of local authorities to ensure a consistent approach to data gathering.

8.3 Considering the creation of a DfT carbon tool

To further support the adoption of a consistent approach to carbon appraisal across local authorities, the recommendation is that DfT could consider the development of a basic carbon tool which would provide a consistent means for local authorities to appraise the potential impact of transport interventions on emissions.

The tool could for example be used by all local authorities and Integrated Transport Authorities (ITAs) developing an LTP3, and the DfT could provide suggestions as to how the tool could be further refined with the addition of local data, should this be required.

9. WHAT HAPPENS NEXT

Acting on the recommendations from the research and to complement the Local Transport White Paper 'Creating Growth, Cutting Carbon', the DfT has been working on a basic carbon tool for Local Authorities to assist them in demonstrating the carbon benefits of transport interventions in their local areas.

The Parliamentary Under-Secretary of State, Norman Baker MP, was pleased to announce the publication of the draft basic carbon tool on the DfT's website on 16th February.

The tool builds on the recommendations of the research by fully supporting Local Authorities in making their own decisions about the carbon benefits of small scale interventions, whilst enabling them to input their own assumptions and data from best estimates of take-up and effects in their local areas.

It also brings together in one place central research on local transport and carbon and improves access to national transport data which can impact on emissions, such as speed curve data, average speed data from the National Transport Model, emissions data for electric vehicles and electric trains, and fleet mix data.

Alongside the tool, there is an accompanying user guide, including simplified guidance on carbon appraisal of transport schemes for Local Authorities, together with an 'assessing your intervention' help-sheet, which is intended to help local authorities record the likely impacts of interventions. This includes consideration of the direct and indirect consequences of interventions and recording the evidence used in making assumptions and calculations.

The tool can assist authorities in demonstrating the carbon benefits of bids to the Local Sustainable Transport Fund, but it is for authorities to decide what tools and evidence best meet the criteria and objectives of the Fund in the context of their overall bids.

A number of authorities have already been involved in the user testing of the tool, but the DfT is currently inviting wider views on the draft tool before 30th April to ensure the tool is as accessible and user-friendly as possible, and to inform how best to take forward future versions of the tool in the context of available resources.

A short consultation document can be found alongside the tool at:
<http://www.dft.gov.uk/pgr/regional/policy/carbon-tool/>.

Bibliography

Atkins and University of Aberdeen on behalf of East of England Development Agency (EEDA). East of England Transport and Carbon Study (TraCS) (2009).

Cambridgeshire's County Council's CCS. Tackling Climate Change in Cambridgeshire (2005).

Committee on Climate Change. Meeting Carbon Budgets - The Need for a Step Change (2009). First Progress Report to Parliament.

Denham J. Local action on climate change will drive down fuel bills and generate new income for councils (2010).

Department for Transport. Full guidance on Local Transport Plans (2006).

Department for Transport. Long Term Process and Impact Evaluation of the Local Transport Plan Policy (2007).

Department for Transport. Low Carbon Transport: A Greener Future - A Carbon Reduction Strategy for Transport (2009).

Environment Agency, Northern Ireland Environment Agency, Scottish Environment Protection Agency. The CRC Energy Efficiency Scheme User Guide (2009).

4NW. Assessment of Potential Carbon Savings Achievable in the North West Region (2009).

JMP and Stockholm Environment Institute on behalf of Yorkshire and Humber Assembly. Stepping off the gas, Achieving low carbon and sustainable transport systems in Yorkshire and Humber (2008).

Local and Regional Partnership Board, 2008. Adapting to Climate Change, Guidance notes for NI188 (2008).