City of Bradford Metropolitan District Council

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Scrutiny of Bradford Council's Carbon Management

Report of the Environment & Waste Management Improvement Committee

November 2009

Members of the Environment & Waste Management Improvement Committee

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Contents

1. Executive Summary and Recommendations

Summary

This Link Member Report has been commissioned by Bradford Council's Environment and Waste Management Improvement Committee during a crucial period in the Council's response to climate change. Internationally, the December 2009 Copenhagen summit will be a vital staging post in the effort to forge a consensus about limiting global greenhouse gas emissions. Nationally, the 2008 Climate Change Act marked a step change in the UK's management of its own emissions. And here in Bradford, the Council is setting up an Environment and Climate Change Unit that will, for the first time, provide an organisational focus for cutting the Council's carbon dioxide emissions and help to reduce these emissions across the District as a whole. The Unit's role, in turn, will be underpinned from mid-2010 onwards by a comprehensive Climate Change Strategy and Action Plan that is now being developed by senior officers.

This report is not an exhaustive analysis of every aspect of the Council's efforts to deal with climate change. Nor does it offer a comprehensive range of possible improvements that would enhance the Council's carbon management actions. Instead, it is a timely snapshot of the key areas of Council activity that are central to carbon management, with many specific recommendations that will help the new Environment and Climate Change Unit develop its valuable role in 2010. It builds on the eight recommendations that emerged from the one-day conference on 'Regeneration, Environmental Sustainability and Climate Change' that was held at City Hall on 20 November 2007 under the aegis of the Environment and Waste Management Improvement Committee.[1]

The 'Background Information' section of this Report summarises the climate change crisis and the scale of the carbon reduction challenge facing Bradford Council. It also outlines the policy frameworks governing Bradford's current approach to carbon management. Lastly, it assesses the carbon emissions attributable to the Council's activities and the District as a whole.

[1] The eight recommendations from the Environment and Waste Management Improvement Committee are listed in Appendix 2 of this report.

The 'Findings and Recommendations' section of the Report fall into two categories.

- First, there are the areas of policy that the Council has direct responsibility for. These include strategy and policy development, including target-setting; capacity-building; energy use and facilities management; and passenger transport, travel planning and fleet management.

- Second, there are the areas where the Council is working in partnership with other organisations to make progress. These include the District's schools' emissions; planning, development and regeneration; and the activities of the Environment Partnership (the forum through which the Council is working to reduce carbon emissions across the Bradford District).

This report makes many recommendations, twenty-eight in all. They are all urgent in the sense that each one needs to be addressed within the next eighteen months, and much sooner if possible. In fact, the majority of the recommendations require sustained attention over the next four months in order to enable the Council to deal with its carbon emissions in the 2010-2011 financial year. The challenge of managing the carbon dioxide emissions of a vast organisation like Bradford Council is complex; the challenge of reducing these emissions year-on-year is even more demanding. It will require a transformation in the way that the Council manages its energy use and thinks about the future, and that work needs to accelerate immediately.

Bradford Council has already invested several million pounds in measures that are yielding thousands of tonnes of carbon dioxide reductions in some areas of its activities. Yet the Council's carbon dioxide emissions overall are going up, not down. The political and financial pressures to achieve real, substantial carbon cuts are growing and the environment clock is ticking. The Council should therefore be applauded for the ambitious way that it has begun to review its carbon management and for contemplating radical changes in its response to climate change. This report is a positive contribution to that vital review.

Recommendations

There are 28 recommendations altogether, listed below in the order that they appear in the report. Appendix 3 provides a snapshot summary of the strategy and policy-making, capacity-building and financial implications of each recommendation.

This report makes sixteen recommendations relating to strategy development, target-setting, capacity-building and carbon management financing.

- **Recommendation 1 (Climate Change Strategy and Action Plan):** That preparation of the Climate Change Strategy and Action Plan is prioritised and accelerated in order to ensure that it is approved and ready for implementation by the end of June 2010. This will enable the new Environment and Climate Change Unit to achieve its goals more effectively in 2010.

- **Recommendation 2 (Targets):** That Bradford Council's forthcoming Carbon Management Strategy and Action Plan incorporates long-term 'headline targets' for carbon reduction for 2020, 2030 and 2050 that are either consistent with, or more ambitious than, the UK's national policy objectives; that Bradford Council also establishes annual carbon reduction targets starting in the 2010-2011 financial year that are consistent with achieving the headline targets and are linked to specific actions wherever possible; and that Bradford Council establishes targets for obtaining a growing proportion of its energy from renewable sources.

- **Recommendation 3 (Covenant of Mayors):** That Bradford Council becomes the first council in West Yorkshire to sign the European Commission's 'Covenant of Mayors', and develops a Sustainable Energy Action Plan by the end of June 2010 as part of the Action Plan linked to the Council's new Climate Change Strategy.

- **Recommendation 4 (the ECCU):** That the appointment of the Environment and Climate Change Manager is accelerated, and that subsequent ECCU staffing and governance arrangements are finalised by April 2010, as matters of top corporate priority.

- **Recommendation 5 (Capital investment in carbon management):** That officers immediately review any investment opportunities that might be suitable for utilising the one-off revenue allocation that was earmarked for carbon management and action planning during the current financial year by Council in February 2009, with a view to also securing early match funding from external sources such as Salix Funding.

- **Recommendation 6 (the ECCU schools posts):** That the Council immediately reviews the funding arrangements for the two ECCU schools carbon reduction posts, as well as their limited remit, with a view to (a) better securing their funding for the 2010-2011 financial year, and (b) providing additional support to deal with the schools dimension of the Council's overall carbon dioxide emissions.

- **Recommendation 7 (the ECCU and the Third Sector):** That the Environment and Climate Change Unit works closely with relevant Third Sector organisations such as those involved in the Bradford Environment Forum to: (a) draw on their invaluable expertise in general relating to carbon management; (b) establish formal protocols by April 2010 for working with these organisations in delivering carbon management initiatives of mutual benefit; and (c) establish formal protocols by April 2010 to help these organisations secure the funding they need for their activities in order to help the Council, in turn, meet its own carbon reduction goals.

- **Recommendation 8 (Annual Carbon Management Reporting):** That the Leader of Council and/or the Environment and Neighbourhoods Portfolio Holder, supported by the Strategic Director for Environment and Neighbourhoods and the Assistant Director for Facilities Management, submits an annual Carbon Management Report (including financing information) to full Council at the beginning of each financial year; and briefs an annual joint meeting of the Corporate Improvement Committee and the Environment and Waste Management Improvement Committee.

- **Recommendation 9 (Multi-annual funding for the ECCU):** That the new Environment and Climate Change Manager works closely with the Assistant Director for Facilities Management, the Chair of the CERM Board and the Portfolio Holder for Environment and Neighbourhoods to establish a multi-annual funding framework by end of June 2010

for the Environment and Climate Change Unit that incorporates sustained up-front capital investment in low-carbon initiatives.

- **Recommendation 10 (NPower meters):** That senior officers work closely with NPower to ensure that an automatic meter reading system is installed throughout the Council estate as early as possible in 2010.

- **Recommendation 11 (Carbon Star Chambers):** That Bradford Council institutes twice yearly 'Carbon Star Chambers', early in each financial year and again in late autumn, in which the Strategic Directors account for the carbon management of their directorates and the progress they have achieved in addressing climate change. This process could be managed jointly by the Corporate Improvement Committee and the Environment and Waste Management Improvement Committee, and should begin in June 2010.

- **Recommendation 12 (Carbon budgeting):** That Bradford Council integrates carbon budgeting into the annual budget process, beginning in the 2010-2011 financial year, as an explicit consideration for all Strategic Directors.

- **Recommendation 13 (Carbon networking):** That Bradford Council establish inter-departmental 'footprint groups' in 2010 along the lines pioneered by the Environment Agency, and other 'grassroots' networking and awareness-raising arrangements along the lines pioneered in Kirklees, to encourage and enable frontline staff to reduce their use of energy and contribute to reducing the organisation's carbon dioxide emissions.

- **Recommendation 14 (Carbon Management Fund):** That Bradford Council immediately establishes a ring-fenced Carbon Management Fund that will provide a source of continuing investment in low carbon projects across the Council's operations, preferably in conjunction with additional Salix funding, on the basis that all of the revenue savings accruing from these projects will be recycled back into the fund to (a) sustain further low carbon investments and (b) repay the original Salix loans.

- **Recommendation 15 (Long-term investment in renewables):** That Bradford Council immediately relaxes its policy that investments in low carbon initiatives should have a pay-back period of less than five years, in order to facilitate investment in a wider range of renewable energy projects.

- **Recommendation 16 (Green energy procurement):** That Bradford Council reviews its electricity procurement policy by April 2010 with a view to: (a) procuring at least 40% of its imported power via renewable tariffs by 2020; (b) establishing contractual arrangements with recognised leading green energy providers such as Good Energy or Ecotricity where possible in the interim period; (c) working with major energy providers like British Gas or NPower to achieve immediate progress in procuring green energy for the Council's estate by April 2012; and (d) liaising with other councils including Bristol and Kirklees to see if their 'greener' street lighting can be replicated in Bradford.

This report makes five recommendations relating to the Council's passenger transport, travel planning and fleet management arrangements.

- **Recommendation 17 (SAFED training):** That Bradford Council launches a comprehensive roll-out of SAFED training for all employees who use fleet vehicles by the end of 2012.
- **Recommendation 18 (Passenger transport fleet):** That Bradford Council completes a review of its passenger fleet management arrangements by April 2010 with a view to: (a) creating its own pool of vehicles at the earliest opportunity; and (b) assessing the 'sustainability' dimension of all fleet contracts to ensure that these are as consistent as possible with the forthcoming Climate Change Strategy and Action Plan and that the vehicles in use maximise any opportunities for utilising hybrid and electric technologies and biodiesel fuels.
- **Recommendation 19 (Sustainable vehicle procurement):** That Bradford Council completes a review of its vehicle procurement arrangements by April 2010 with a view to investing in hybrid and electric vehicles and using 'B30' biofuels at the earliest opportunity.
- **Recommendation 20 (Corporate Travel Plan):** That Bradford Council develops a comprehensive Corporate Travel Plan as a matter of urgency, in conjunction with the Climate Change Strategy and Action Plan, with a view to adopting it in the financial year 2010/2011.

- **Recommendation 21 (Sustainable fleet management):** That Bradford Council completes a formal review of its Fleet Management arrangements by April 2010 with a view to: rolling out SAFED driver training; acquiring biomethane waste collection vehicles as soon as practicable; boosting the use of biodiesel; and assessing the need for an Integrated Transport Unit.

This report makes two recommendations relating to the Council's Primary Capital Programme and schools services management.

- **Recommendation 22 (Primary Capital Programme):** That Bradford Council reviews the operation of the Primary Capital Programme by the end of June 2010 to ensure that (a) climate change is a core consideration at every stage of its assessment, design and implementation phases and that (b) the PCP exploits every opportunity to draw in outside funding (ie the Low Carbon Buildings Programme Phase 2).

- **Recommendation 23 (Sustainable contracting):** That Bradford Council completes a review of its Service Level contracts and relations with contractors by the end of June 2010, to ensure that these arrangements (a) reflect the Council's carbon management goals and (b) incorporate BREEAM assessments whenever it is technically appropriate to do so.

This report makes three recommendations relating to the Council's Planning, Development and Regeneration strategies.

- **Recommendation 24 (new Sustainable Design Guide):** That Bradford Council immediately reviews its Sustainable Design Guide SPD (2006) with a view to upgrading its guidance in relation to climate change and low carbon/carbon neutral developments by April 2010.

- **Recommendation 25 (Supplementary Planning Document):** That Bradford Council develops and adopts a Supplementary Planning Document by April 2010 that translates Policy EN5, Section B, paragraph 3 into a format suitable for application across the District, with a view to ensuring that all new developments of more than 10 dwellings or 500m^2 of non-residential floorspace secure at least 10% of their energy from renewable or low-carbon sources.

- **Recommendation 26 (new Sustainable Buildings Policy):** That Bradford Council develops a new Corporate Sustainable Buildings Policy by the end of June 2010 that: (a) ensures that all new corporate buildings and, where appropriate, corporate refurbishments are completed and operated to achieve an 80% reduction in carbon emissions (compared with current standards); (b) ensures that all new corporate buildings secure at least 30% of their energy from on-site renewable or low-carbon sources; and (c) assesses the potential for developing climate-neutral Council facilities from April 2010 onwards.

Finally, this report makes two recommendations relating to the Environment Partnership.

- **Recommendation 27 (Environment Partnership):** That Bradford Council, working with its partner organisations, completes a review of the organisational capacity of the Environment Partnership by April 2010 with a view to (a) developing sub-group activity that is explicitly 'action-oriented', and (b) assessing the potential for creating an energy and environment company modelled on the Thamesway Limited company (established by Woking Borough Council in 1999) or the Kent-based Creative Environmental Networks organisation founded in 1997.

- **Recommendation 28 (ReCharge scheme):** That Bradford Council, working with the Environment Partnership, completes an assessment by the end of June 2010 of the options for introducing a District-wide 'ReCharge' scheme that would deliver sustained investment in renewable energy technologies.

2. Background Information

2.1 The case for carbon management.

Why should Bradford Council go to the considerable effort, expense and political pain of responding to climate change? After all, there are critics - including councillors - who think that action is not necessary. They argue that the science of climate change is so uncertain that there is no scientific imperative to act; or that the environmental and social impacts of climate change will only affect other countries; or that the Council's emissions are such a miniscule part of the global picture that any reduction in our carbon is futile and that climate change is the responsibility of the main polluter nations like the US or China to deal with; or that responding will incur excessive financial costs and risks for Bradford Council at a time when the local government resources are already stretched and likely to be squeezed further in the years ahead.

These are superficially persuasive concerns that must be addressed in order to ensure that Council actions in this policy area are strongly supported by councillors and officers, partner organisations, the private sector and – crucially - the public. This report argues that climate change is everyone's problem and that support from all these groups will be a vital component of Bradford Council's efforts to cut carbon.

First, it is clear that the science of climate change is robust and justifies ambitious action by public bodies like Bradford Council. This has been the case for a number of years, thanks largely to the work of the United Nations Framework Convention on Climate Change since 1992.[2] The public policy debate has now moved on, from being about whether or not

[2] The United Nations Framework Convention on Climate Change (UNFCCC) was launched 17 years ago at the 'Earth summit' of world leaders in Brazil in June 1992. The UNFCCC provided a basis for a series of follow-up conferences and summits to develop strategies for dealing with climate change – the next major summit of 192 governments in Copenhagen in December 2009 is the fifteenth in the series. The Kyoto Protocol of 1997 was part of this process. The United Nations has also overseen the work of the Intergovernmental Panel on Climate Change (IPCC) since 1988; the IPCC published its fourth report in 2007 and is beginning work on its fifth Assessment Report. The IPCC process has therefore been underway for 21 years, has involved over 2,500 scientists from 130 countries, its findings are endorsed by nearly all UN member states, and no authoritative

climate change is a phenomenon that we should be concerned with, to an acceptance that climate change is a serious global emergency that we must deal with quickly in order to mitigate its worst consequences and adapt to a low carbon future.[3] As one Link Member interviewee confirmed, *"there is a strong scientific consensus on the need for urgent and transformation actions to move towards a low carbon society"*.[4]

Second, the political reality is that all the major political parties endorse the need to deal with climate change. The five parties represented on Bradford Council agree that climate change requires a strong national response from the UK and, by extension, from Bradford Council as well.[5] The UK Independence Party is the only exception to this national consensus, but has no councillors in Bradford.[6] It is therefore certain that Bradford Council will be developing policy on climate change for years to come in national and local political arenas where this environmental crisis is accepted as a key challenge that requires immediate action and where local government will come under growing political pressure to respond appropriately.

Third, as Cllr Anne Hawkesworth (Portfolio Holder, Environment and Neighbourhoods) acknowledged in her speech to full council in October 2009, Bradford Council faces financial pressures to cut carbon in the same way that mounting fiscal penalties have forced the Council to reduce the amount of household waste sent to landfill. The Carbon Reduction Commitment, established by the 2008 Climate Change Act, goes live in April 2010 and the likelihood is that its financial pressures (and its potential rewards for low-carbon councils)

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national or international scientific body has challenged its fundamental conclusions since 2007. Examples of the many reputable scientific organisations that support the IPCC's findings include the national science academies of all the G8 countries, the European Academy of Sciences and Arts and the American Association for the Advancement of Science. The IPCC was awarded the Nobel Peace Prize in 2007, jointly with former US Vice President Al Gore: www.ipcc.ch.

[3] For an excellent, concise review of the debates surrounding climate change, visit the climate change section of the 'Frequently Asked Questions' pages of the website of the Earth System Research Laboratory of the US National Oceanic and Atmospheric Administration: www.esrl.noaa.gov/gmd/education/faq_cat-1.html.

[4] Link Member interview, Sept/Oct 2009.

[5] The Third Reading of the Climate Change Bill in the House of Commons on 28 October 2008, for example, was supported by 463 MPs, with only 5 Conservative rebels voting against. The British National Party also recognises that "climate change is a threat to Britain" and is committed to trying to "minimise the emission of Greenhouse gases" (BNP Summary manifesto, pp.15-16): http://bnp.org.uk/pdf_files/minimanifesto2007.pdf.

[6] UKIP issued a climate sceptical policy statement on energy security and the environment in 2008 which stated that "until the results of more and better climate research have led to agreement between scientists who are fully independent of political or commercial sponsors, UKIP will remain sceptical of apocalyptic claims" (Secure Energy, Better Environment: an Energy and Environment Policy for an Independent Britain, UKIP Policy Statement, p.10): www.ukip.org/media/pdf/energy%20final.pdf.

will intensify over the next decade as part of a national and, indeed, EU-wide effort to deal with carbon dioxide emissions.

Fourth, Bradford Council is going to have to develop adaptation strategies to deal with the possible environmental effects of climate change. The UK will thankfully avoid the kind of catastrophic impacts that will probably be experienced by low-lying coastal communities in countries such as Bangladesh (where, for example, scientists estimate that wheat yields could fall by 50% by 2050).[7] Nonetheless, the Council will need to anticipate and adapt to probable localised impacts such as the increased risk of flooding in the winter months and reduced rainfall in the summer.[8] Indeed, the challenge of adaptation is already occupying the attention of Council officers.[9]

Fifth, it is clear that central government does not have the organisational capacity or financial muscle to deal with climate change by itself – though it will, of course, have to take the lead role regardless of the outcome of the next general election. This will remain the case for many years to come as central government struggles to reduce its budget deficit. Local government will therefore have to show leadership, in partnership with actions by local businesses, community organisations such as schools and hospitals and the hundreds of thousands of residents who live across the District. The scale and complexity of this challenge means that everyone will have to assume responsibility for cutting their carbon 'footprint' regardless of the extent to which they are encouraged or obliged to do so by government. The fact that our carbon dioxide emissions are embedded in our twenty-first century lifestyles means that reducing carbon is a transformational process in which everyone adapts to a low carbon future. This is a challenge that has been recognised by a number of key Council officers.[10]

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[7] Climate Change and Bangladesh, Report of the Climate Change Cell, Department of Environment, Government of the People's republic of Bangladesh, published in September 2007, p.10 – their estimate of the fall in wheat yields was based on the conclusions of Working Group II of the UN Intergovernmental Panel on Climate Change in 2007: www.climatechangecell-bd.org/publications/13ccbd.pdf.

[8] The Yorkshire and Humber Climate Change Adaptation Study, Local Area Report, Bradford Metropolitan District, published in 2009, identified a number of climate changes likely to affect the District by 2050, including hotter and drier summers with average temperatures increasing by 2.4^{O}C and a 23% reduction in rainfall, and warmer, wetter winters with a 15% increase in rainfall. Full details online at: www.adaptyh.co.uk/Download/pdf/Bradford%20Local%20Area%20Report.pdf.

[9] Link Member interview, Sept/Oct 2009.

[10] Link Member interviews, Sept/Oct 2009.

Sixth, the implications of 'Peak Oil' mean that cutting our reliance on high carbon fossil fuels is essential in any case in order to improve our energy security.[11] The UK Energy Research Centre published a major synthesis report in October 2009 which concluded that *"a peak in conventional oil production before 2030 appears likely and there is a significant risk of a peak before 2020. Given the lead times required to both develop substitute fuels and improve energy efficiency, this risk needs to be given serious consideration"*.[12] The underlying cost of oil products will probably increase over the next 20-30 years as the world's remaining reserves become more expensive to extract and demand for oil rises from countries like China, India and Brazil. It therefore makes sense for Bradford Council to improve its energy security by investing in energy efficient buildings and transport systems and in local sources of renewable energy. This investment, in turn, will cut carbon and deliver year-on-year revenue savings from reduced energy bills for the Council that can be used for other purposes.[13]

Finally, it is important to acknowledge that there are many potential social and economic benefits associated with the transition to a low-carbon, post peak oil economy and society. In other words, dealing with climate change can be viewed as a more positive policy journey than some people fear. There are the compelling financial opportunities mentioned in the previous paragraph, and new 'green jobs' will be created by sustainable investment in better waste management, in more energy efficient homes and in the local 'microgeneration' of electricity in workplaces and homes. Better public transport and better provision for walking and cycling will ease road congestion and create less polluted, quieter

[11] It is becoming clearer that world oil production is peaking and that it is likely to steadily decline over the next few decades. In a Report commissioned by the US Department of Energy and published in 2005, for example, Dr Robert Hirsch argued that "the peaking of world oil production presents the US and the world with an unprecedented risk management problem" (Peaking of World Oil Production: Impacts, Mitigation and Risk Management, February 2005, Dr Robert L. Hirsch et al, p.4: www.netl.doe.gov/publications/others/pdf/Oil_Peaking_NETL.pdf). Dr Hirsch's conclusions are supported by many other organisations including the Association for the Study of Peak Oil and Gas (www.peakoil.net) and the German research group Energy Watch Group (www.energywatchgroup.org/). The challenge of peak oil was recognised by Bradford Council during its meeting on 16 October 2007 when the Councilpassed a motion which requested that the Executive revise the Bradford District Economic Strategy to "develop a detailed, robust response to the overriding economic challenges of Climate Change and Peak Oil": www.bradford.gov.uk.

[12] UK Energy Research Centre Global Oil Depletion Report, launched 8 October 2009: www.ukerc.ac.uk/support/Global%20Oil%20Depletion.

[13] In 2007, the Council estimated that the Strategy and Implementation Plan delivering its Carbon Management Programme though to 2012 offered potential financial savings to the Council of £6.4 million (Carbon Management Programme, Strategy and Implementation Plan, 2007-2012, p.5 - Appendix to Document 'AF' submitted to the meeting of the Executive on 9 October 2007: www.bradford.gov.uk.

and safer neighbourhoods and safer routes to school that will deliver tangible health benefits such as reduced childhood obesity.[14] And, as more people walk or cycle or take the bus and generally lead more localised lifestyles, local shops and trading networks will also benefit economically.[15]

2.2 The challenge of cutting carbon.[16]

One participant in this Link Member process very candidly admitted that it is difficult to envision what *"low carbon living will look like"*.[17] Indeed, it is hard to imagine what a 'low carbon Bradford Council' or a 'low carbon Bradford District' that has achieved 80% reductions in carbon dioxide emissions will look like because very few other councils have so far been able to cut their emissions by more than 20%. The fact is that, in stating its intention to reduce its carbon dioxide emissions, Bradford Council has embarked on a hugely ambitious project that will take many years to achieve and we should be applauded for doing so. The scale of this challenge can be broken down as follows.

First, the UK government has accepted that huge cuts in carbon are essential. The 2008 Climate Change Act accepted that the UK will have to cut its carbon dioxide emissions by at least 80% by 2050.

Second, the scientific consensus suggests that significant interim cuts need to be achieved quickly in order to mitigate the impact of our carbon dioxide emissions on the environment and keep the rise in global temperatures as close to a maximum of $2^{O}C$ as possible. Hence the growing political pressure on the UK government to go beyond the 34% cuts in UK

[14] One of Bradford Council's Local Area Agreement Priorities is to cut the proportion of children who travel to school by car (NI198).
[15] The UK government's Low Carbon Transition Plan published earlier this year spells out some of the benefits of a 'transition' economy and society. By 2020, it envisages that the 1.2 million people in the UK will be employed in green jobs; that 7 million homes will have benefited from 'whole house makeovers' to cut their energy consumption and bills; and that another 1.5 million homes will have been helped to generate some or all of their electricity through microgeneration: www.decc.gov.uk.
[16] This refers to fossil-fuel sourced carbon rather than 'climate neutral' energy sources like biogas.
[17] Link Member interview, Sept/Oct 2009.

carbon dioxide emissions currently envisaged by 2020.[18] Campaign organisations like Friends of the Earth argue that councils need to cut their local emissions by at least 40% by 2020.[19]

Third, in order to achieve swift cuts in carbon dioxide emissions of such magnitude, Bradford Council will have to adapt virtually every aspect of its operations. The Council will have to gather and monitor a complex range of information about its own carbon dioxide emissions (the first impressive raft of this data is already in place). The Council will have to radically improve the energy efficiency and energy consumption of the 600+ buildings in the Council's estate and invest in onsite renewable energy microgeneration. The Council will have to review and change the way it manages its vehicle fleets and the way its thousands of staff travel to and from work and travel around during their working days. The Council will also have to enable staff to adapt their working practices to minimise the energy consumption of office lighting, heating and air conditioning systems and of electronic devices such as computers and printers. In addition, the Council will have to work with our two hundred schools to ensure that they make equally radical improvements (bearing in mind that their carbon dioxide emissions are over half of the Council's carbon footprint).

But all that is just the beginning of the climate challenge, because the Council's own emissions (including the schools) account for barely 3% of the carbon dioxide emissions of Bradford District as a whole. The Council will therefore have to work closely with dozens of partner organisations such as Bradford University, Yorkshire Water and Incommunities to cut carbon dioxide emissions across the District - and each of those organisations face the same transformational challenges that the Council is grappling with.

The Council will therefore have to show organisational and political leadership in order to encourage and enable private sector organisations and members of the public to reduce their own carbon footprints. Such leadership is essential because this process will involve difficult policy decisions. Some aspects of reducing carbon will not be universally welcomed

[18] For example, the Committee on Climate Change headed by Lord Turner, established by the Climate Change Act 2008, published its latest report in October 2009; the committee suggested that cuts of 3% per annum will be needed from 2010 onwards - roughly three times the annual reductions achieved to date ('Meeting Carbon Budgets – the Need for a Step Change', Progress report to Parliament, Committee on Climate Change, Executive Summary, p.8): http://hmccc.s3.amazonaws.com/docs/21667%20CCC%20Executive%20Summary%20AW%20v4.pdf.

[19] www.foe.co.uk/campaigns/climate/get_serious/index.html.

by Council staff or the public. For example, higher car parking charges for Council staff and the public, to discourage car use and raise revenue for investment in alternative modes of transport, will not be warmly embraced by all car users and will be fiercely resisted by some local businesses.

It will be hard, politically, for Bradford Council to take a lead role of this sort in circumstances where national governments are struggling to deal with climate change (as shown by the pre-Copenhagen summit negotiations). The worst future environmental risks of climate change lurk well beyond the range of present electoral cycles and, in many respects, will have their worst impacts far beyond the District's borders. This means that party groups on Bradford Council who support bold low carbon measures risk eroding their support in the short term in order to achieve more long term, relatively intangible environmental benefits for our community and for communities elsewhere in the world. The fact that these measures will often incur significant up-front capital costs and, in some cases, additional revenue requirements heightens the political and economic pressures.

Nonetheless, Bradford Council has arguably made the right choice in terms of accepting the need for ambitious goals for tackling climate change. The scientific imperatives are clear, and the great strides that a few other councils in the UK have made in cutting their carbon dioxide emissions show that progress can be made without alienating public support or bankrupting local government. On the contrary, investment in low carbon technologies and working practices can yield significant revenue savings for large public sector organisations like Bradford Council.[20]

It could also be said that history is on the side of this city. Bradford councillors have overcome huge environmental and social challenges in past years. The Council has built housing, dealt with sewage and provided clean water, generated light and power, established and run our schools, developed public transport networks and created wonderful recreational space across our District for decades. These have all been practical challenges with a moral dimension, just as climate change is today. Former US Vice

[20] For a very useful indication of the payback periods of the low carbon measures already introduced by Bradford Council, see Bradford Council Carbon Management Programme 2007-2012: Strategy and Implementation Plan, Appendix to Document 'AF' submitted to the meeting of the Executive on 9 October 2007, p.27-31: www.bradford.gov.uk.

President Al Gore stated during testimony before Congress in 2007 that *"our planet faces a true planetary emergency…a challenge to the moral imagination"*.[21] The current Leader of Bradford Council, Cllr Kris Hopkins, similarly accepts that climate change is a *"moral issue as well as an economic one"*.[22] Ultimately, the way that generations of Bradfordians have overcome their own environmental challenges suggests that we can deal with climate change in our time as well.

2.3 The science of climate change

The science of climate change is now widely understood, but perhaps bears refreshing for the purposes of this report. Climate change describes long-term changes in the patterns of average weather in either a specific region or the earth as a whole. It is also described as 'global warming', a more specific term that refers to the increase in the average temperature of the Earth's near-surface air and oceans since the mid-20th century and its projected continuation. The term 'climate change', though, is more valuable in so far as it encompasses all the changes in weather patterns rather than just the overall increase in temperature of the earth's climate.[23]

In a political sense, climate change now specifically means the changes in the earth's climate that are thought to be primarily linked to humanity's activities over the past two centuries. The key link is our reliance on burning fossil fuels like oil, coal and gas to power our industrialised societies. The anthropogenic 'greenhouse gas' emissions produced by burning fossil fuels accumulate in the atmosphere and prevent the sun's heat from escaping back into space (hence, global warming). This warming effect triggers other climatic changes that

[21] 'Message in Hand: Gore returns in triumph to Congress', The Guardian, 22 March 2007: www.guardian.co.uk/environment/2007/mar/22/usnews.climatechange.
[22] Minutes of the meeting of the Executive held on Tuesday 9th October 2007 at City Hall Bradford, p.39.
[23] There is, obviously, a huge amount of information about climate change available online from international organisations such as the UN Intergovernmental Panel on Climate Change, national governments, scientific organisations and non-governmental campaign organisations. The UK government's Department of Energy and Climate Change provides extensive information about the science of climate change: www.decc.gov.uk. The UK Met Office website also offers concise and detailed summaries of this environmental crisis: www.metoffice.gov.uk/climatechange.

could potentially have an enormous impact on our way of life in terms of rising sea levels, more drought, more extreme weather events like flooding and changing crop yields.

Carbon dioxide is the major greenhouse gas produced by human activity. Its concentrations in the atmosphere have risen from 280 parts per million (ppm) before the industrial revolution to 388ppm at the time of writing in late 2009. The rate of increase is 2ppm per year and is accelerating.[24] Ice core data shows that these concentrations are higher than at any time in the past 650,000 years. Three-quarters of the increase in anthropogenic greenhouse gases in the atmosphere is the result of burning fossil fuels; other causes include deforestation and the methane emitted by domesticated livestock and modern farming practices.

There is a huge amount of information available about climate change, but the main challenges facing policy-makers can be summarised as follows.

- Global surface temperatures have increased by nearly 1°C in the past century.
- Climate models predict that global surface temperatures will rise by between 1-6°C by 2100.
- There are widespread concerns that rises in global temperature in excess of 2°C could take the earth's climate past 'tipping points' that could trigger accelerated environmental changes (for example, the melting of permafrost across Siberia would release huge quantities of methane into the atmosphere).
- The global warming that is happening already is raising sea levels and changing the amount and patterns of global rainfall.
- The incidence of extreme weather events is increasing.
- Subtropical deserts are expanding.
- Glaciers, permafrost and sea ice are in retreat.
- Deforestation is accelerating, as is the rate of species extinction.

[24] The Earth Science Research Laboratory provides highly accurate data about the growing concentrations of greenhouse gases in the earth's atmosphere: www.esrl.noaa.gov/gmd/ccgg/trends.

- Agricultural yields are changing.
- To keep temperatures from rising by more than 2°C, it will be necessary to stop the growth in global carbon dioxide emissions within 5-10 years and then reduce these emissions as fast as possible.

Obviously, there is no absolute scientific certainty about (a) the causes of climate change or (b) the severity of future climate change or (c) the extent to which climate change will have an impact on human societies around the world. But, it is important to acknowledge that the overwhelming weight of scientific research findings for the past twenty years confirm the following three developments.

- Climate change is taking place.
- Anthropogenic greenhouse gas emissions are almost certainly the main cause of climate change.
- Climate change is already having a social, economic and environmental impact on many human societies. Humanity's increasing greenhouse gas emissions have the potential to destabilise the world's climate in ways that threaten the world economy and the lives of hundreds of millions of people worldwide.[25]

2.4 UK carbon management policy framework

The 1997 Kyoto Protocol commits the UK to cutting its 1990 level of greenhouse gas emissions by 12.5% by 2012. The Labour government has also set an 'aspirational' target of a 20% cut in its carbon dioxide emissions by the end of next year. The government's efforts to cut UK-wide greenhouse gas emissions, above all carbon dioxide, prompted three Acts of Parliament between 2003 and 2008: the Sustainable Energy Act 2003; the Climate Change and Sustainable Energy Act 2006; and the Climate Change Act 2008.

[25] These are the conclusions of the Stern Review, published in 2007: www.hm-treasury.gov.uk/stern_review_report.htm.

The Sustainable Energy Act 2003 aimed to improve energy efficiency and to encourage renewable energy generation in the UK. The Climate Change and Sustainable Energy Act 2006 aimed to encourage the microgeneration of power across the UK and obliged the government to issue annual reports to Parliament on the UK's greenhouse gas emissions and the measures taken to reduce them. The Climate Change Act 2008 committed the UK to cut its greenhouse gas emissions by 80% by 2050 to create a low carbon economy. The Act also set up an independent Committee on Climate Change headed by Lord Turner to advise the government.

The Committee on Climate Change published its first report in December 2008. The Committee endorses the government's aim to reduce carbon dioxide emissions by 80% by 2050, but suggests that more rapid cuts of 21 - 42 % are essential by 2020. These could be achieved by making homes far more energy efficient and able to produce more of their own power, by obtaining far more of our energy from non-fossil fuel sources like renewables and nuclear, and by investing in low carbon transport. The cost would be 1-2% of UK GDP.

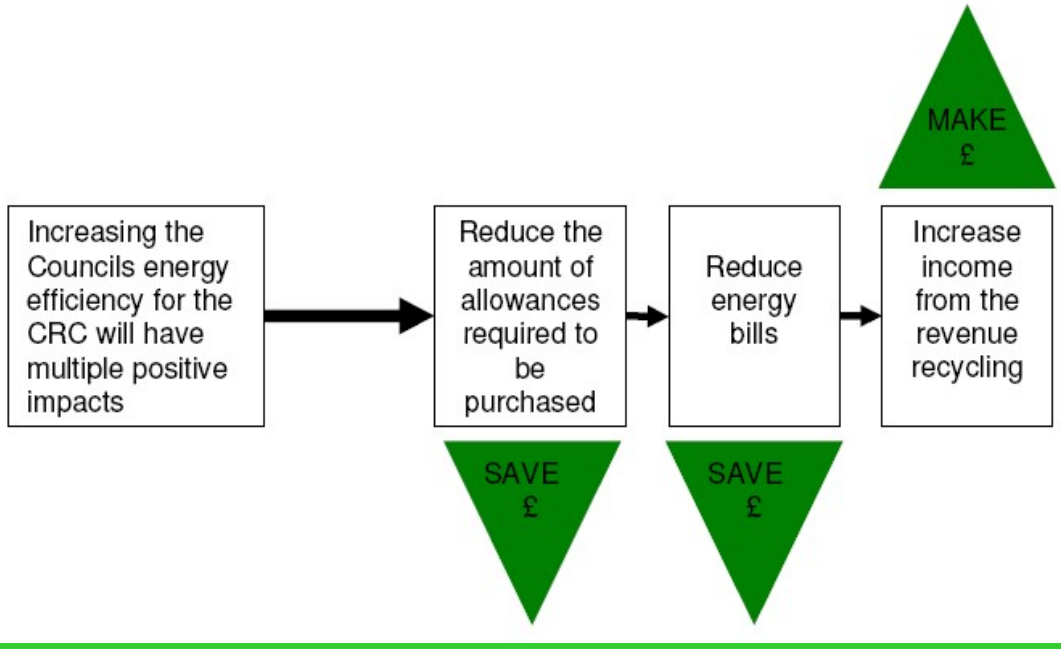
This estimated cost, of 1-2% of GDP, is based on an earlier 700 page report about the economics of climate change by Lord Stern that was commissioned by the Treasury and published in late 2007. Lord Stern warned of catastrophic economic consequences if governments continue to allow climate change to worsen, but argued that it would be possible to stabilise the world's climate by investing around 1% of world GDP in carbon reduction measures such as renewable energy, carbon neutral housing and low carbon transport networks.[26]

In April 2009, the government responded to the Climate Change Committee's recommendations by agreeing to establish a series of three legally binding carbon 'budgets' that will reduce the UK's greenhouse gas emissions by 34% by 2020. The Committee welcomed this, but reiterated its call for a commitment to a 42% reduction by 2020 if a global deal is secured in Copenhagen in December 2009 (this is looking doubtful at the time of writing). The government has also said that all new homes built after 2016 will have to be

[26] Lord Stern estimated that "the costs of action – reducing greenhouse gas emissions to avoid the worst impacts of climate change – can be limited to around 1% of global GDP each year" (Stern Review: The Economics of Climate Change, Summary of Conclusions, p.vi): www.hm-treasury.gov.uk/stern_review_report.htm.

carbon neutral because the 21 million homes in Britain account for over a quarter of UK carbon dioxide emissions.

As mentioned earlier, the Climate Change Act also introduced the Carbon Reduction Commitment (CRC), a mandatory 'cap and trade' scheme that will apply to the 5,000 larger organisations in the UK, including Bradford Council, that are not covered by the European Union's Emissions Trading Scheme. These organisations account for around 10% of the UK's carbon dioxide emissions. The CRC will go live in April 2010, promises rewards and penalties for the target organisations depending on how well they reduce their carbon dioxide emissions, and is a key driver for the Council in terms of investing in carbon reduction measures and establishing the new Environment and Climate Change Unit.[27] In the words of one Link Member interviewee, the CRC will *"get more and more stringent in future"* and will *"pose a challenge"* for the Council.[28] Equally, as the following diagram indicates, the CRC offers opportunities for substantial revenue savings as well.



Potential financial benefits for Bradford Council of the CRC process.

[27] See Appendix 6 for a timeline showing the likely impact of the CRC.
[28] Link Member interview, Sept/Oct 2009.

2.5 Bradford Council's carbon management policy framework

Different, overlapping policy frameworks guide Bradford Council's carbon management efforts. Taken together, they add up to a very clear acceptance by the Council of the seriousness of anthropogenic climate change and a firm commitment *in principle* to take action to deal with it. The Council deserves enormous credit for this.

(a) Nottingham Declaration on Climate Change

The Council signed the 'Nottingham Declaration on Climate Change' for the first time in 2000; Cllr Hawkesworth subsequently reaffirmed the Council's commitment to the Declaration on 26 June 2006.[29] The Declaration acknowledges that "climate change will continue to have far reaching effects on the UK's people and places, economy, society and environment". By signing, the Council declared that it would "within the next two years [i.e. by July 2008] develop plans…to progressively address the causes and impacts of climate change" and that these plans would commit the Council to achieving *"a significant reduction of greenhouse gas emissions from our own authority's operations"*. Cllr Hawkesworth is reported to have said at the time that:

> *"Bradford Council is determined to take a lead in the district in tackling climate change and is introducing a number of new initiatives to reduce its carbon dioxide emissions. With the recent increases in energy prices, now is a great time for us all to look again at the fuel we use and reap the financial rewards from efficiencies"*.[30]

[29] The Nottingham Declaration on Climate Change was launched in October 2000 and has since been signed by over 300 English councils. The Declaration can be downloaded from the website of the Energy Saving Trust: www.energysavingtrust.org.uk/nottingham.

[30] Bradford Telegraph and Argus, "Why we'll tackle climate change", 27 June 2006.

(b) Bradford Council Corporate Plan 2007-2010

The Council's Corporate Plan 2007-2010, adopted in June 2007, stated:

> *"The Council has a duty to safeguard the environmental well being of the district, working with partners to address sustainability issues of climate change; reviewing how resources are managed and how emissions can be reduced and air quality improved at a local level. We are determined to play our full part in addressing this challenge. We will lead by example, put our own house in order and encourage other organisations to play their part…"*.[31]

The 2007-2010 plan stated that the Council had now developed a Strategy and Implementation Plan (SIP) for a Carbon Management Programme running from 2007 to 2012. The SIP was formally adopted by the Executive on 9th October 2007. The programme and the plan were the result of a partnership with the Carbon Trust's Local Authority Carbon Management Programme – rather impressively, the Trust stated at the time that Bradford was *"one of the most proactive councils in the UK in responding to the risks that climate change presents"*.[32]

The SIP stated that the Council would *"address climate change through far reaching and practical action to urgently reduce carbon dioxide emissions across its use of transport, street lighting and the energy used in buildings"* and that it would *"demonstrate leadership on climate change within the District"*.[33]

The SIP, which remains active, aims to achieve a '20%' reduction in the Council's carbon dioxide emissions by 2011-2012 compared to the levels of 2005-2006. The 20% target, though, assumes that carbon dioxide emissions would normally be increasing in a 'Business

[31] Bradford Council Corporate Plan 2007-2010, p.20.
[32] Statement by Richard Rugg, Head of the Carbon Trust Local Authority Management Programme, in his foreward to the SIP (p.5).
[33] Bradford Council Carbon Management Programme 2007-2012: Strategy and Implementation Plan, p.11 - Appendix to Document 'AF' submitted to the meeting of the Executive on 9 October 2007: www.bradford.gov.uk.

As Usual' scenario. This is, to be fair, a realistic assumption based on growth trends since 2002; but it is also crucial to note that the target therefore represents only a 14.25% cut in the Council's actual emissions of 2005-2006 rather than the 20% headline figure that is widely quoted by the Council. It is also significant that the target excludes the carbon dioxide emissions from the district's 200 schools that account for over half of the Council's overall emissions.

The SIP focuses on achieving carbon savings through a range of initiatives focused on the main 68 buildings in the Council's estate whose energy use accounts for around 80% of overall Council energy expenditure. It does not, therefore, address the carbon dioxide emissions of Bradford District as a whole; and the council's own emissions, including schools, represent just 3% of these district-wide emissions.

(c) The Council's Big Plan and the Statement on Sustainability

Bradford Council adopted its Sustainable Community Strategy - the 'Big Plan' – in July 2008.[34] The Plan is the overarching strategy for the District as a whole, links with the Local Area Agreement or LAA (see below), and has been agreed with central government and the council's partner organisations. The Council's new Corporate Plan, in turn, is meant to be consistent with the Big Plan (see below). The Big Plan recognises that *"climate change is one of the biggest threats to our communities and way of life"*. It states that, as well as *"minimising energy and water use"*, one of the Council's aims is *"expanding the use of renewable energy and locally sourced fuels"*.[35]

[34] The Big Plan is the means by which Bradford Council will deliver on Sustainability for the Bradford District Partnership (the Local Strategic Partnership for the District). The Bradford District Partnership replaced Bradford Vision in April 2008.
[35] The Big Plan for the Bradford District 2008-2011 – A Summary, p.12.

The Big Plan identifies two priorities relevant to tackling climate change: first, *"a greener environment which makes the best use of natural resources"*; and, second, *"a more sustainable environment which has a positive effect on climate change"*.[36]

The Big Plan is linked to the Council's Local Area Agreement. This incorporates 35 action priorities (National Indicators, or NIs), with specific targets that the Council is committed to achieving. The key carbon target here is NI186, cutting per capita carbon dioxide emissions across the District as a whole. The Council, along with the other partner organisations of the 'Environment Partnership', is committed to achieving an 11.4% cut in the District's 2005 emissions per capita by April 2011.

The Big Plan has been supplemented by a Statement on Sustainability – 'Bradford Together' – published by the Council in 2008. 'Sustainability' is identified as one of the 'Shared Outcomes' of the Big Plan. This Statement says the following in relation to climate change:

> *"We have to safeguard the environment for future generations by changing our habits now – there is no choice. With climate change being the biggest problem the world faces today, we must act locally to make an impact globally, otherwise we will all pay a much higher price not just environmentally, but also socially and economically…climate change is our number one priority"*.[37]

(d) Bradford Council Corporate Plan 2009-2012

Bradford Council adopted a new Corporate Plan for 2009-2012 in July 2009. The plan includes twenty Strategic Delivery Priorities (SDPs), of which the key carbon-related Priority is SDP14: 'Contributing to a more Sustainable Environment'.

[36] The Big Plan for the Bradford District 2008-2011, Our Sustainable Community Strategy (full version), published in 2008, pp.56-57.
[37] Bradford Together: working with Bradford Council to deliver sustainability in the District, published in 2008, p.13.

SDP14 links with the two Big Plan Priorities mentioned above (a greener environment which makes the best use of natural resources and a more sustainable environment which has a positive effect on climate change). SDP14 is therefore worth quoting at length. It states:

> *"The Council has a duty to safeguard the environmental well being of the district, working with partners to address sustainability issues of climate change; reviewing how resources are managed and how emissions can be reduced, and air quality improved at a local level. We are determined to play our full part in addressing this challenge, working through the Environment Partnership, and leading by example"*.[38]

SDP14 goes on to commit the Council to deliver the following actions over the next three years:

> *"14.1 We will agree and implement the District Environment Strategy with our partners. The strategy and action plan will encompass a wide range of environmental issues, including improvements to the visible environment, efficient use and management of natural resources, reducing emissions, efficient waste management, delivery of community environment initiatives and improved local biodiversity.*
>
> *14.2 We will also agree and implement the Climate Change Strategy and action plan with our partners, including short, medium and long-term targets for reducing CO2 emissions.*
>
> *14.3 Implement the Community Warmth programme by 2011 in partnership with NPower, to implement home energy efficiency measures and tackle fuel poverty. This will ensure all 170,000 private sector households are offered access to free or subsidised insulation measures.*
>
> *14.4 Implement the Carbon Management Programme to reduce the council's own carbon footprint, through improved energy efficiency in buildings, and reduced emissions from Council operations. Key elements include improved insulation, boiler*

[38] Corporate Plan 2009-2012, p.28.

replacement programme, more efficient lighting. Efficiencies to fleet services and street lighting are other key areas.

14.5 Implement the Council Travel Plan to encourage appropriate car usage and the switch to other modes including walking, cycling and public transport".[39]

(e) West Yorkshire Leaders Joint Statement on Climate Change

In September 2009, Cllr Kris Hopkins joined with the other West Yorkshire council leaders in issuing a West Yorkshire Leaders Joint Statement on Climate Change. The leaders stated:

> *"We need to take urgent action now to reduce greenhouse gas emissions if we are to avoid the most serious global consequences of climate change, including rising sea levels, more extreme weather events and irreversible damage to ecosystems...it is clear that if we do not transform our economy and investment priorities, we will not be able to compete in the new world of challenging emissions targets and increasing customer demand for green practices"*.[40]

The measures promised in the statement included *"developing sustainable buildings and procurement policies; … investing in low-carbon energy sources; reducing emissions from our fleet vehicles; …and encouraging and supporting our staff to change habitual behaviour"*. The leaders stated their commitment to *"achieving key performance indicators on climate change through our Local Area Agreements"*.

[39] Corporate Plan 2009-2012, pp.28-29.
[40] West Yorkshire Leaders Joint Statement on Climate Change, September 2009, published by the Association of West Yorkshire Authorities.

(f) 10:10 Campaign

On 13 October 2009, Bradford Council supported a motion on climate change that included these two commitments relating to the 10:10 campaign.[41]

> *"This Council supports the aims and ambitions of the 10:10 Campaign and commits itself to making every effort to meet its objectives.*
>
> *This Council therefore resolves to sign Bradford Council up for the 10:10 Campaign and to use this as a platform to encourage Bradford citizens and businesses to do the same"*.[42]

2.6 Carbon dioxide emissions in Bradford District

(a) Bradford Council's carbon dioxide emissions

As stated above, the Council is committed to cutting its own carbon dioxide emissions by:

- 10% by the end of 2010 (the target linked to the 10:10 campaign that does not explicitly include schools);
- 14.25% by April 2012 (a target that excludes schools and is usually presented as the 20% cut).

It is not easy to assess how successful the Council has been in addressing these targets due to the changing way in which the council's carbon dioxide emissions have been measured in recent years. The data available for 2008 is much more detailed than the data available for

[41] The 10:10 campaign was launched in spring 2009 with the aim of persuading individuals, businesses and other organisations to commit to reducing their carbon dioxide emissions by 10% by the end of 2010. At the time of writing, in October 2009, around 40,000 individuals and organisations had signed up to the campaign: www.1010uk.org.

[42] Decisions of the Council held on Tuesday 13 October 2009, p.4.

earlier years, for example, and also shows higher emissions. The picture is further complicated by the inclusion or exclusion of the district's schools in the data – school emissions represent 57% of the Council's overall emissions.

- According to the earliest set of figures provided by officers, the council's carbon dioxide emissions - excluding schools - in 2006-2007 were 44,599 tonnes. These remained virtually unchanged at 44,526 tonnes by 2008-2009, a tiny difference of -0.16%. During the same period, however, the emissions from the District's 200 schools increased from 38,102 tonnes to 40,453 tonnes, a rise of 6.2% over the three years.

- According to a subsequent set of figures provided by officers, this time including the emissions from schools, the Council's carbon dioxide emissions rose from 76,156 tonnes in 2007-2008 to 81,868 tonnes in 2008-2009. This is an increase of 7.5%.

- According to the most recent and by far the most comprehensive set of figures provided by officers, the Council's total emissions - including schools - for the year 2007-2008 were just over 88,056 tonnes. For this figure, there is no comparable set of data from the preceding year to establish a trend. It is important to note that this is the key data as far as officers are concerned.

- Finally, the last two published 'Outturn Performance Summaries' associated with the 2007-2010 Corporate Plan's performance indicators provide the following data relating to the percentage change in the Council's own carbon dioxide emissions (using 2005-2006 as a baseline year). This measure is linked to Performance Indicator EMAS001 (similar to NI185) and is the means by which the Strategy and Implementation Plan has been measured in terms of its impact on the Council's carbon dioxide emissions (the documentation, though, does not make it clear whether or not these performance summaries include the schools' emissions as well).

    - The 2007-2008 outturn position indicated that the council's emissions had risen by 2.48% - the target for this year was a cut of 4%.[43]

    - The 2008-2009 outturn position indicated that the council's emissions had risen by 3.72% - the target for this year was a cut of 6%.[44]

[43] Citizens First Corporate Plan Performance Indicators 2007/8, Table 1, p.14.

Overall, in terms of trends, the figures indicate that Bradford Council's emissions are almost certainly increasing, even if schools are excluded from the data. And the carbon dioxide emissions of the schools themselves have undoubtedly increased in recent years. In fact, the 2008-2009 outturn position suggested that the Council is almost 10% adrift of the EMAS 001 related targets in the Strategy and Implementation Plan adopted in 2007.

These trends show that it is virtually certain that the Council will miss its own corporate carbon reduction targets of a 10% cut by the end of 2010 and a 14.25% cut by April 2012. If this is the case, of course, it will be even more difficult for the Council to meet any subsequent carbon reduction targets based on a 2005-2006 baseline that are yet to be set for future years such as 2020.

It must be stressed, to be clear, that the increase in the Council's carbon dioxide emissions would have been even more marked in the absence of the substantial investment made by Bradford Council in dozens of energy saving projects since 2007.[45] The fact that the Council's carbon dioxide emissions are still rising despite this investment indicates how challenging it is in practice to achieve meaningful cuts in these emissions.

(b) District-wide carbon dioxide emissions

In 2005, carbon dioxide emissions per capita in the District were 6.1 tonnes (the lowest in West Yorkshire).[46] As stated above, the Council and its environmental partners are committed to cutting this by 11.4% by April 2011 (with interim targets of 2% by April 2009 and 5% by April 2010).

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[44] The data is found in Appendix 2 - Corporate Plan 2007/10 – Outturn Performance Summary, attached to the Report of the Chief Executive to the meeting of the Executive to be held of 23 June 2009, p.22.
[45] These are outlined in detail in the Strategy and Implementation Plan (Bradford Council Carbon Management Programme 2007-2012: Strategy and Implementation Plan - Appendix to Document 'AF' submitted to the meeting of the Executive on 9 October 2007): www.bradford.gov.uk.
[46] West Yorkshire Leadership Academy on Climate Change, Report on Session 1, Community Leadership, October 2008, p.9: www.awya.gov.uk/NR/rdonlyres/5CD3B2D2-6949-4409-AEC7-5A52EF217904/0/WestYorkshireClimateChangeAcademyCommunityLeadershipReport.pdf.

Measuring progress against this NI186 target – and therefore adopting and implementing the necessary measures to meet it - is extremely difficult due to the two-year time lag in publishing the relevant data.

- Data published in late 2008 shows a 1.4% reduction in 2005-2006.
- Data published in late 2009 shows a 3.3% reduction in 2006-2007. This means that an overall reduction of 4.8% was recorded in 2005-2007.

These carbon reductions per capita were the result of a combination of (a) a slight decrease in overall carbon dioxide emissions across the three sectors of Industry & Commercial, Domestic and Road Transport, and (b) a rise in the District's population.

These figures suggest that the District is well on course to meet its interim target of a 5% reduction by April 2010 - especially bearing in mind that the economic recession will involve lower energy and transport usage and therefore lower carbon dioxide emissions than would otherwise have been the case.

3. Findings and Recommendations

3.1 Overview

The following findings and recommendations relate to two aspects of the Council's carbon management work. First, there are areas of policy that the Council has direct responsibility for: policy development (including target-setting); capacity-building; energy use and facilities management; and passenger transport, travel planning and fleet management. Second, there are areas where the Council is working in partnership with other organisations to make progress: schools' emissions; planning, development and regeneration; and the activities of the Environment Partnership itself.

3.2 Policy Development

(a) Setting the policy framework

As mentioned above, Bradford Council developed a fairly comprehensive Strategy and Implementation Plan (SIP) with the help of the Carbon Trust in 2007 in order to implement a Carbon Management Programme as part of the 2007-2010 Corporate Plan. Many of the initiatives launched via the SIP are still underway and delivering valuable carbon savings for the authority.[47] If all the carbon reduction measures envisaged in the plan are funded and implemented by 2012, the resulting carbon savings could amount to a cumulative 24,000

[47] For a summary of these measures, see Bradford Council Carbon Management Programme 2007-2012: Strategy and Implementation Plan, p.27-31 - Appendix to Document 'AF' submitted to the meeting of the Executive on 9 October 2007: www.bradford.gov.uk. To take one example from the Plan, the replacement of the old steam boilers at City Hall with new high efficiency boilers, including a 500kW biomass boiler fuelled by woodchips from the Council's woodlands, was expected to save nearly 500 tonnes of carbon dioxide per year and cut the Council's energy bill by £104,000 per year – this meant that the initial capital investment of £350,000 would be recouped in revenue savings in just 3.3 years.

tonnes of carbon dioxide savings and reach around 8,000 tonnes per year by the end of the plan's lifetime.[48] The delivery of these savings will be a significant achievement for the Council if all the measures envisaged are fully funded (this was not guaranteed at the time the SIP was adopted in October 2007, but funding may have been secured in the intervening period).

The Council's adoption of the new Corporate Plan in 2009, though, and the budget agreement in February 2009 that secured funding for a new Environment and Climate Change Unit, has spurred renewed interest in strategy and action planning. As indicated earlier, SDP 14.2 of the Corporate Plan states that the Council "will also agree and implement the Climate Change Strategy and action plan with our partners, including short, medium and long-term targets for reducing CO^2 emissions".[49] Overall lead responsibility for delivering SDP14.2 rests with the Assistant Director for Facilities Management, though other senior officers will also be closely involved in developing the strategy and action plan. The plan that emerges will therefore have the following elements:

- an evidence base and strategic assessment;
- policy development and impact assessment;
- a delivery programme;
- political approval;
- arrangements for implementation, monitoring and performance management;
- and arrangements for evaluating and reviewing the strategy.[50]

This Link Member scrutiny found an impressive degree of officer determination that this process will be robust, transformative, and *"intelligence led, systematic and strategic"*. There is a clear recognition that a highly structured, far-reaching approach is essential in order to ensure that the Strategy succeeds; that it minimises the risk of 're-bound effects' and unintended consequences; and that mitigating the Council's carbon dioxide emissions needs to be tackled in tandem with adapting to a low carbon future. There is a

[48] Bradford Council Carbon Management Programme 2007-2012: Strategy and Implementation Plan, p.26 - Appendix to Document 'AF' submitted to the meeting of the Executive on 9 October 2007: www.bradford.gov.uk.
[49] Corporate Plan 2009-2012, p.29.
[50] Link Member interviews, Sept/Oct 2009.

determination to construct a genuinely sustainable carbon management strategy that moves beyond short-term problem-solving to incorporate real 'organisational change'. Indeed, according to one officer, the Audit Commission has praised Bradford for *"a strategic approach that … is potentially fundamentally different from any response that we have had from any other council, not just in the region…"*.[51] To sum up the Council's new approach:

> *"This is about data, this is about intelligence, this is about measuring, it is first and foremost about making the invisible visible. So in good sustainability design, most of what we are designing for are the intangible things, the invisible things, and nothing is more invisible than CO^2. And what we are trying to help our colleagues to do is see the invisible... From a systemic point of view, we will not create a more sustainable District just by managing our carbon… What we have got to do is look at how we invest in creating a more sustainable District, more sustainable lifestyles, more sustainable neighbourhoods, not just invest in fixing short term problems".*[52]

Council officers have now begun preparing the Climate Change Strategy and Action Plan – consideration of the brief for preparing this strategy began in late September. Officers anticipate that this process will take up to nine months, with adoption and final political approval of the full strategy expected in June 2010. This lengthy timescale, to some extent, reflects the sheer complexity of the challenges of cutting carbon for a large organisation like Bradford Council. Moreover, officers are establishing 'interim arrangements' that are intended to ensure that carbon management and, hopefully, carbon reduction continues between now and next June based on the Council's existing SIP.

Nonetheless, this means that the new Strategy – no matter how excellent it is - will not be in place as the new Environment and Climate Change Unit begins its work in early 2010; and it will not be available at the start of the 2010-2011 financial year to guide any investment in low carbon initiatives that may be authorised by Council during the spring budget settlement. This is arguably unsatisfactory given (a) the overriding environmental urgency of reducing the carbon footprint of Bradford Council and (b) the extent to which this strategy is

[51] Link Member interview, Sept/Oct 2009.
[52] Link Member interview, Sept/Oct 2009.

intended to be a much more transformative approach that will enable the Council to become a *"much more sustainable organisation"* in which all staff take much more responsibility for the carbon dioxide emissions associated with their activities. It is also urgently needed so that officers can exploit the *"huge opportunities"* that exist for energy reduction and lower fuel bills at a time when the Council's financial climate is worsening by the month.

Recommendation 1

That preparation of the Climate Change Strategy and Action Plan is prioritised and accelerated in order to ensure that it is approved and ready for implementation by the end of June 2010. This will enable the new Environment and Climate Change Unit to achieve its goals more effectively in 2010.

(b) Setting carbon reduction targets

As mentioned earlier, Bradford Council is committed to cutting its own (non schools) carbon dioxide emissions by 14.25% by April 2012 (taking 2005-2006 as a baseline year). The Council also recently endorsed the '10:10 Campaign', so is therefore committed to "making every effort" to meet the objective of achieving a 10% cut in carbon dioxide emissions by the end of 2010. In addition, the Council is also committed to achieving an 11.4% cut in the District's 2005 emissions per capita by April 2011.

At present, though, the Council has no agreed targets for reducing its carbon dioxide emissions beyond 2012. Officers have, in the past, indicated that fresh carbon reduction targets would be agreed before the end of the 2007-2012 period covered by the Carbon Management Strategy and Implementation Plan. Cllr Anne Hawkesworth suggests that, "aspirationally", the Council supports a 10% reduction by 2010 and a 40% reduction by 2020.[53] This would certainly be positive from a carbon management perspective and would, in fact, take the Council beyond the national targets currently adopted by the UK

[53] Written submission, Oct 2009.

government and almost match the campaign goals of organisations like Friends of the Earth. It would therefore be an ambitious goal. But it is important to reiterate that no targets have yet been formally agreed or planned for beyond 2012.

There are a range of options for target-setting that Bradford Council could consider immediately in relation to its carbon dioxide emissions. These targets would be based on the scientific consensus that, ultimately, we need to cut our carbon dioxide emissions by at least 80% by 2050 to avert more extreme climate change scenarios; and that early cuts in carbon are far better than later cuts in carbon. Targets would, arguably, also provide a robust context and motivational tool for the transformational changes that Bradford Council is considering as part of its carbon management strategy and action planning. The model suggested here is: (1) start with the science; (2) adopt relevant targets; (3) develop strategies and action plans to meet those targets; and (4) ensure that the necessary financing and other support is in place to deliver the plans.

- First, the Council could establish robust targets for 'headline years' such as 2020, 2030 and 2050. The UK government has set such targets for the UK as a whole for 2020 and 2050. Other councils have done likewise. Leeds City Council has matched the government's target of an 80% carbon dioxide emissions cut by 2050.[54] Kent County Council's 'Climate Change Action Plan' includes a 10% carbon reduction target for 2010, a 15% target for 2015 and states that the Council is *"working towards"* the government's overall target for 2050.[55] Oxford City Council's 'Carbon Management Programme', adopted in April 2008, commits the Council to cutting its carbon dioxide emissions by 25% by 2011 – short term, yes, but nearly twice as ambitious as Bradford's Council's existing target of a 14.25% reduction of its 2005-2006 emissions by 2012.[56] Finally, Kirklees Council's 2025 'Environment Vision' adopted in January 2007 aims to reduce its corporate carbon dioxide emissions by more than 30% by 2020.[57]

[54] Leeds Climate Change Strategy: Vision for Action, p.10: www.leeds.gov.uk/Environment_and_planning/Sustainability/Climate_Change_Strategy.aspx.
[55] Kent County Council Climate Change Action Plan: www.kent.gov.uk/environment/our-environment/climate-change/council-action/action-plan.htm.
[56] Oxford City Council Carbon Management Programme: Strategy and Implementation Plan 2008-2011, p.2: www.oxford.gov.uk/environment/city-climate.cfm.
[57] 2025 Kirklees Environment Vision: www.kirklees.gov.uk/you-kmc/kmc-policies/environmentvision.pdf.

- Second, the Council could establish annual targets that are geared to meeting the longer-term targets. The Climate Change Committee has recommended that the UK government adopt annual carbon reduction targets from 2011 onwards. Oxford City Council is committed to reducing its carbon dioxide emissions by 3% per year after 2011. Norwich City Council incorporated annual targets of 6% reductions in carbon dioxide into its 2007-2012 'Environmental Strategy'.[58] Kirklees Council aims to cut its corporate carbon dioxide emissions by 3% per annum.[59] Bristol City Council's 'Carbon Reduction Strategy' aims to reduce its carbon dioxide emissions by 3% each year between now and 2020.[60] Finally, the Environment Agency's 'Internal Environment Strategy for 2007-2012' aims to reduce the organisation's 2005-2006 carbon dioxide emissions by 15% by 2010 and 30% by March 2012 – not quite annual targets, but close enough.[61]

- Third, the Council could establish specific targets relating to renewable energy. Woking Borough Council's '2008-2013 Climate Change Strategy', adopted in April 2008, has a target to generate at least 20% of the Council's electricity requirements from renewables by 2011 (this would double the proportion of Woking Council's energy use that was obtained from renewables as recently as 2007).[62] The government has also set a target of sourcing 15% of UK energy from renewables by 2021.[63]

Recommendation 2

That Bradford Council's forthcoming Carbon Management Strategy and Action Plan incorporates long-term 'headline targets' for carbon reduction for 2020, 2030 and 2050 that are either consistent with, or more ambitious than, the UK's national policy objectives; that Bradford Council also establishes annual carbon reduction targets starting in the 2010-2011 financial year that are consistent with achieving the headline targets and

[58] Norwich City Council Environmental Strategy 2008-2010, p.5: www.norwich.gov.uk/intranet_docs/A-Z/Strategies/Environmental_strategy.pdf.
[59] Kirklees Environment Unit Project Handbook, published in February 2009, p.9.
[60] www.bristol.gov.uk/ccm/content/Environment-Planning/sustainability/energy-management.en.
[61] Environment Agency Internal Environment Strategy 2007-2012, paragraph 2.3: www.sheffieldfirst.net/our-partnerships/environment-partnership/meetings/low-carbon-group.
[62] Woking Borough Council Climate Change Strategy 2008-2013, p.15: www.woking.gov.uk/environment/climate/Greeninitiatives/climatechangestrategy.
[63] Link Member interview, Sept/Oct 2009.

are linked to specific actions wherever possible; and that Bradford Council establishes targets for obtaining a growing proportion of its energy from renewable sources.

Targets in themselves, of course, are no panacea to the problems of climate change. Ultimately, carbon will only be cut if the Council supports its targets with strategies and plans and translates those strategies and plans into real capacity building, real project development, real investment and a real commitment from councillors and officers to low carbon actions throughout the Council's operations. The 'best laid plans' count for nothing unless they lead to real action on the ground. And part of the key to achieving the latter is building the capacity to deliver.

'Delivery' is something that has been incorporated into the 'Covenant of Mayors' process that was launched by the European Commission in 2006.[64] By June 2009, over 500 European towns and cities were participating in the Covenant.[65] These participants include 23 British towns and cities, notably London, Manchester and Nottingham. The signatory authorities commit themselves to local action that goes beyond the EU's target of achieving a 20% reduction in the carbon dioxide emissions of its member states by 2020, and a key element of this is the development of local 'Sustainable Energy Action Plans' within a year of signing the Covenant.[66] The geographical remit of these action plans includes the entire district of the town or city and envisages contributions from both the public and private sectors. The Covenant is therefore perfectly tailored to the district-wide focus of the Council's LAA target NI186, and would link in well with the action-planning element of the Council's new Climate Change Strategy. Moreover, no town or city in West Yorkshire has yet signed the Covenant, so this presents a perfect political opportunity for Bradford Council to show regional as well as district-wide leadership.

[64] For full information, see Covenant of Mayors website: www.eumayors.eu.
[65] Covenant of Mayors Communication, Issue 1, June 2009: www.eumayors.eu/mm/staging/newsletter/com_newsletter01.pdf.
[66] The Sustainable Energy Action Plans of the Covenant of Mayors are expected to include actions in the following areas: the built environment, including new buildings and major refurbishment; municipal infrastructure (district heating, public lighting, smart grids, etc); land use and urban planning; decentralised renewable energy sources; public and private transport policies and urban mobility; citizen and, in general, civil society participation; and intelligent energy behaviour by citizens, consumers and businesses.

Recommendation 3

That Bradford Council becomes the first council in West Yorkshire to sign the European Commission's 'Covenant of Mayors', and develops a Sustainable Energy Action Plan by the end of June 2010 as part of the Action Plan linked to the Council's new Climate Change Strategy.

3.3 Capacity Building

Bradford Council's budget settlement agreed in February 2009 included £300,000 in additional revenue to establish a new Environment and Climate Change Unit (ECCU). The budget also authorised £500,000 in new capital investment in low carbon projects that would be available in addition to any capital provision for carbon reduction that remained unspent from previous budgets (this is estimated to be just over £102,000 at the time of writing).[67] The Council's instruction was for officers to use all of this money during the current financial year (2009-2010).

Bradford's ECCU will be modelled on the successful Environment Unit that was set up by Kirklees Council several years ago and which now manages projects worth £6 million across the Kirklees District. The Kirklees unit focuses on developing the Council's environment strategies and policies, on managing the environmental management system for all the Council's operations, on energy and water conservation, renewable energy, biodiversity, on developing a green network for Kirklees and supporting the Kirklees Environment Partnership.[68]

According to a recent report from Bradford's Strategic Director for Environment and Neighbourhoods, the ECCU will take on many of the features of the Kirklees unit.[69] The unit

[67] Written submission, Oct 2009.
[68] www.kirklees.gov.uk/you-kmc/kmc-services/department/environment.shtml.
[69] Report of the Strategic Director of Environment and Neighbourhoods to the meeting of the Environment and Waste Management Improvement Committee to be held on 29 September 2009, listed as 'Document E' on Bradford Council's agendas/minutes page for the EWM Committee: http://councilminutes.bradford.gov.uk/wps/PA_1_0_V9/CallDisplayDocServlet?docID=env29septDocE.pdf.

will be located in Facilities Management and be headed by a new Environment and Climate Manager. This post will be responsible for overseeing the work of: (a) an Energy Management Team of five officers; (b) a Climate Change Team of five officers; and (c) an Environment Team of five officers. These three teams will receive intelligence, data control and performance management support from a dedicated team of officers located separately in the Facilities Management Business Unit. Appendix 4 shows the proposed organogram for the ECCU.

The ECCU will tackle a range of areas that will help to reduce the Council's own carbon dioxide emissions, as its stated remit clearly demonstrates:

- *"To provide a Corporate focus on environmental impact and use of natural resources;*
- *To develop a deeper and systemic understanding of the natural, physical and energy resources the Council needs, and how it uses them in order to radically improve the efficiency, effectiveness and sustainability of the organisation;*
- *To manage organisational impacts of climate change;*
- *To coordinate and facilitate managed reduction and increased efficiency in the use of natural resources, with a focus in the short term on energy, water, fuel management, organisational waste and $C0^2$ emissions;*
- *To create a centre of excellence for the authority and a hub for a network of related expertise across the organisation;*
- *To contribute to the corporate achievement of National Indicators 185, 186, 188, 194 and 197;*
- *To provide a link with and contribute to the work of the Environment Partnership of the LSP".*[70]

As mentioned above, direct overall responsibility for the ECCU will rest with the Assistant Director for Facilities Management. The Assistant Director, in turn, will be accountable to a new Corporate Environment Resource Management (CERM) Board chaired by the Strategic Director for Environment and Neighbourhoods. The Board will have a range of

[70] Report of the Strategic Director of Environment and Neighbourhoods to the meeting of the Environment and Waste Management Improvement Committee to be held on 29 September 2009, listed as 'Document E' on Bradford Council's agendas/minutes page for the EWM Committee, p.2: http://councilminutes.bradford.gov.uk/wps/PA_1_0_V9/CallDisplayDocServlet?docID=env29septDocE.pdf.

responsibilities, including to *"develop intervention strategies aimed at reducing the Council's use of natural, physical and energy resources"*; to *"manage the Council's position in respect of Carbon Reduction Commitment"*; and to *"recommend key decisions to the Corporate Management Team and the Executive linked to carbon commitment"*. The Board will include representatives from a wide array of Council directorates, and will link with other key bodies including the Corporate Improvement Committee, the Environment and Waste Management Improvement Committee and the Environment Partnership. The Board will be directly accountable to the Corporate Management Team and, ultimately, to the Executive.[71] An organogram of this structure is provided in Appendix 5.

The ECCU will therefore deliver much-needed additional capacity to Bradford Council's environmental and carbon management efforts. Most of the staff will be drawn from existing posts, but several new posts will substantially enhance their collective ability to implement the Council's new Climate Change Strategy and Action Plan once the latter is finalised. The unit's pivotal position in Facilities Management, and the overarching role of the CERM Board, suggest that the Council will finally have the capacity to coordinate its carbon management efforts across all departments. The value of this new unit simply cannot be overstated, and the Council deserves real credit for resolving to set it up and for allocating significant first year revenue and capital funding.

In that context, therefore, it is vital that the new unit is quickly established and that its new Environment and Climate Change Manager is appointed as soon as possible. This process is, perhaps, taking longer than might have been expected earlier this year, even bearing in mind that the role and organisational design of the ECCU and its governance arrangements needed to be clarified before recruitment could begin. A formal consultation process at Level 1 about this key managerial post was not launched until late July, a full five months after the budget for the new unit was originally agreed in February, and the post was therefore not advertised externally until late September. Since none of the other staffing and governance arrangements can be finalised until this manager is appointed, it now

[71] Report of the Strategic Director of Environment and Neighbourhoods to the meeting of the Environment and Waste Management Improvement Committee to be held on 29 September 2009, listed as 'Document E' on Bradford Council's agendas/minutes page for the EWM Committee, p.12: http://councilminutes.bradford.gov.uk/wps/PA_1_0_V9/CallDisplayDocServlet?docID=env29septDocE.pdf.

appears that the ECCU will not function properly until March 2010 – a full year since its budget was agreed.

Recommendation 4

That the appointment of the Environment and Climate Change Manager is accelerated, and that subsequent ECCU staffing and governance arrangements are finalised by April 2010, as matters of top corporate priority.

In the meantime, the revenue and capital finance allocated for the new unit in the current financial year remains unspent. This is investment that Council clearly intended to be used to fund carbon management and reduction projects before April 2010. The delay in recruiting the ECCU manager has given rise to an expectation among officers that this finance will be automatically rolled over into the next financial year.[72] There is also a view that the capital money should be held back in any case until the Climate Change Strategy and Action Plan is finalised in June 2010 in order to ensure that it is invested in ways that maximise carbon reduction and any revenue savings for the Council.[73] Support for a delay of this sort has been further reinforced by a perception among officers that, because the Carbon Reduction Commitment does not go live until April 2010, it would be counter-productive to launch new carbon reduction projects before then. The perceived risk is that any 'quick-win' carbon cuts achieved by Bradford Council before April 2010 will make it more difficult to make further quick cuts in the following year and, therefore, leave Bradford at risk of performing poorly in comparison to the other 5,000 organisations captured by the CRC. This, in turn, heightens the risk of financial penalties for the Council farther downstream the CRC process.

This widely held view does not necessarily withstand close scrutiny, though, given the likelihood that any projects initiated with this money over the next six months will have a negligible impact on the Council's carbon dioxide emissions this year due to the lead times

[72] Link Member interviews, Sept/Oct 2009.
[73] Link Member interview, Sept/Oct 2009.

involved.[74] Further delays in identifying carbon reduction investment opportunities will also mean that the Council will miss the next closing date for 'Salix Applications' from local authorities (1 December 2009), even though Salix apparently still has £53 million available until the end of this financial year for loans to assist with carbon dioxide savings and revenue benefits.[75] Although the Salix programme will presumably continue beyond April 2010, there are no guarantees that this funding stream will remain in place given (a) the current recession, (b) the government budget deficit and (c) the imminent general election result.[76] Furthermore, it could also be argued that rolling the capital finance over into the next financial year raises important questions of democratic legitimacy and accountability, since this investment was clearly earmarked by full Council for use during this year and neither the Portfolio Holder nor officers presumably have the authority to alter the investment time-frame. Finally, rolling the finance over into another financial year will inevitably reduce the likelihood that next February's budget settlement will include fresh capital provision for investment in low carbon projects, thereby slowing the Council's overall investment in this vital area of policy.

Recommendation 5

That officers immediately review any investment opportunities that might be suitable for utilising the one-off revenue allocation that was earmarked for carbon management and action planning during the current financial year by Council in February 2009, with a view to also securing early match funding from external sources such as Salix Funding.

There is also the question of whether or not the ECCU will have adequate capacity to work with the District's schools to cut their carbon dioxide emissions and help them to adapt to climate change (this is a concern that is also discussed below in Section 3.6). The ECCU Climate Change team will include four carbon reduction officers: one pair will focus on the

[74] Link Member interview, Sept/Oct 2009.
[75] Link Member interview, Sept/Oct 2009.
[76] Salix is an "independent, publicly funded company, set up in 2004, to accelerate public sector investment in energy efficient technologies through invest to save schemes": www.salixfinance.co.uk.

Council's carbon dioxide emissions; the other pair will focus on the schools' carbon dioxide emissions. This means that each of the latter will, in effect, have to work with a hundred schools each. This will inhibit them from managing specific carbon reduction projects and limit their role to essentially providing advice to the schools as the latter manage their own carbon reduction efforts. Moreover, the funding for these two posts is currently dependent on schools 'buying in' to a service provided by the Council. This, of course, may well become sustainable as the schools themselves recognise that they face financial penalties in future if they do not cut their carbon footprints and therefore seek help from the Council. But this is not guaranteed and, moreover, these two posts will not necessarily be in place at the start of the next financial year if their establishment is dependent on prior 'buy-in' to a Service Level Agreement from the schools.[77]

Of course, it is rightly argued by officers that the schools have their own resources and reserves and need to take pro-active responsibility for dealing with their own carbon dioxide emissions. It is also true that the Council has much more control over its own emissions than over those of the schools and should therefore concentrate on its own energy use.[78] Nonetheless, given the CRC imperative of making early inroads into the Council's overall carbon dioxide emissions in 2010-2011, and the fact that the schools generate over half of the Council's emissions, the Council could consider using some of the unspent ECCU revenue funding from this year's budget to secure the two schools' carbon reduction posts for the next financial year at least and, perhaps, to recruit additional support in this area. After all, it appears somewhat anomalous that nearly all of the ECCU posts currently proposed will focus on the Council's non-school carbon dioxide emissions when (to repeat) the schools' carbon dioxide emissions account for 57% of the Council's overall emissions;

There is, in fact, credible evidence that Bradford's schools are going to struggle to reduce their carbon emissions without substantial assistance from the Council. In 2008, Bradford University surveyed 208 schools to find out more about their *"levels of awareness, involvement and engagement with the sustainable schools agenda"*. Of the 108 schools who responded to the survey, only 17% had an energy policy. Almost half of these schools wanted more external support in managing their energy and water use. The survey also

[77] Link Member interviews, Sept/Oct 2009.
[78] Link Member interviews, Sept/Oct 2009.

found that *"the main barriers to progress with the agenda in schools are staff time (84%); need for expertise (64%); limited resources (54%) and lack of information (50%)"*. According to the University, the survey concluded that:

> *"…a significant number of Bradford schools are engaging with aspects of the sustainable schools agenda, although few are doing so in a comprehensive way. As expected, staff time and resources are critical to progress. The overall picture is one of growing levels of activity but some schools not yet engaged with sustainable schools at all - although they are participants in healthy and extended schools programmes. Energy, water, waste and school grounds appear particularly important topics which require support"*.[79]

Recommendation 6

That the Council immediately reviews the funding arrangements for the two ECCU schools carbon reduction posts, as well as their limited remit, with a view to (a) better securing their funding for the 2010-2011 financial year, and (b) providing additional support to deal with the schools dimension of the Council's overall carbon dioxide emissions.

There are, in addition, many 'Third Sector' organisations that already work closely with schools and other organisations on a wide range of environmental projects. Some of these will be directly related to climate change. The expertise of these groups is absolutely invaluable and their ability to leverage in huge amounts of external funding for their work is another admirable feature of their role for Bradford. It would therefore be highly desirable for the ECCU to establish a close, formalised working relationship with these groups from the outset – in addition to liaising with these groups via the Environment Partnership - that (a) secures their input in terms of policy-making and project delivery and (b) also enables them to secure the funding that they need to continue their activities and support the Council's carbon management efforts.

[79] 'Bradford Ecoversity – Bradford Sustainable Schools Network' Newsletter No.2, March 2009, p.2: www.brad.ac.uk/ecoversity/projects/esdschools-sustainable_schools_network_newsletter2.doc.

Recommendation 7

That the Environment and Climate Change Unit works closely with relevant Third Sector organisations such as those involved in the Bradford Environment Forum to: (a) draw on their invaluable expertise in general relating to carbon management; (b) establish formal protocols by April 2010 for working with these organisations in delivering carbon management initiatives of mutual benefit; and (c) establish formal protocols by April 2010 to help these organisations secure the funding they need for their activities in order to help the Council, in turn, meet its own carbon reduction goals.

A number of Link Member interviewees acknowledged that the sheer complexity of the carbon management challenges facing the ECCU will require clear political and organisational leadership to ensure that Bradford Council cuts its own carbon dioxide emissions and those of the schools.[80] The leadership role of the new Environment and Climate Change Manager will be pivotal in terms of driving the day to day activities of the unit. The leadership role of the Assistant Director for Facilities Management will also be important: the AD will oversee the ECCU directly and need to ensure a close linkage between (a) the unit and the intelligence/data control/performance management posts that will be located separately in the Facilities Management Business Unit and (b) the CERM Board. The leadership role of the Chair of the CERM Board, in turn, is absolutely central to the success of the Council's Climate Change Strategy and Action Plan because the Chair will link the ECCU with the other strategic directorates as well as with the Corporate Management Team and the Executive. The ECCU structure is very promising; but the need for these officers to be highly determined 'Climate Change Champions' will remain a vital driver of change throughout the Council organisation.

Ultimately, of course, these excellent officers will need strong, sustained and ambitious political support from the Executive if they are to fulfil the far-reaching carbon management goals being set by the Council. During a recent meeting of the Council's Environment and Waste Management Improvement Committee at Bradford University, top-level leadership was cited as a key factor in the award-winning success of the University's 'Ecoversity'

[80] Link Member interviews, Sept/Oct 2009.

project.[81] This is an imperative that has also been recognised by pioneering local authorities. Eastleigh Borough Council, which has already cut its carbon dioxide emissions by 30% since 2003 and is one of the Improvement and Development Agency's 'beacon authorities' on climate change, specifically identifies top level leadership as a key factor in its success in developing a carbon management strategy:

> *"Gain commitment from the top of the organisation by ensuring that your vision, key policies and strategies are endorsed by the Leadership".*[82]

It is therefore vital that the Council's Leadership is involved, and is seen to be involved, in the Council's carbon management efforts. Officers at all levels need to know that this is an environmental crisis that is at the forefront of the Council's corporate thinking and that the Council as a whole is organisationally and politically committed to the kind of transformational change that will be required to make the transition to a low-carbon future. One effective means of achieving this could be via an annual 'Carbon Management Report' to full Council outlining progress made towards achieving the goals laid out in the Council's Climate Change Strategy and Action Plan.

Recommendation 8

That the Leader of Council and/or the Environment and Neighbourhoods Portfolio Holder, supported by the Strategic Director for Environment and Neighbourhoods and the Assistant Director for Facilities Management, submits an annual Carbon Management Report (including financing information) to full Council at the beginning of each financial year; and briefs an annual joint meeting of the Corporate Improvement Committee and the Environment and Waste Management Improvement Committee.

[81] The Environment and Waste Management Improvement Committee met with the Vice Chancellor of the University on campus on 20 October 2009 to review the work of the Environment Partnership.
[82] Tackling Climate Change, Improvement and Development Agency Beacon Scheme Report, p.17: http://beacons.idea.gov.uk/idk/aio/8680960.

At the end of the day, the Council's carbon management actions require a secure revenue stream and a substantial funding stream for capital projects. The delivery capacity of the ECCU will rely on sustained investment of this kind. This, of course, is ultimately a matter for Council and the next budget settlement to resolve. Nonetheless, as mentioned earlier, the Stern Review of 2007 concluded that the cost of dealing with climate change would amount to around 1% of global GDP each year.[83] The Council should therefore avoid the understandable temptation to regard this year's (so far unspent) £500,000 capital fund as the sum total of its commitment to investing in low carbon projects at this time, particularly when (a) the cost of prudential borrowing is presumably at an all-time low with collapsed interest rates, and (b) the underlying price of energy is likely to continue to increase in the years ahead. It will also be important to establish sustainable funding arrangements that create a 'virtuous circle' whereby revenue savings accruing from investment in low carbon projects are explicitly recycled back into further carbon-busting investments (see the next section, on Energy and Facilities Management, for more information on this). This reinvestment process will be crucial to developing a sustainable funding stream for reducing the Council's carbon dioxide emissions - especially considering that approximately 90% of the investment made so far in cutting the Council's carbon footprint has, apparently, come from the Council's own resources.[84]

Recommendation 9

That the new Environment and Climate Change Manager works closely with the Assistant Director for Facilities Management, the Chair of the CERM Board and the Portfolio Holder for Environment and Neighbourhoods to establish a multi-annual funding framework by the end of June 2010 for the Environment and Climate Change Unit that incorporates sustained up-front capital investment in low-carbon initiatives.

[83] Stern Review: The Economics of Climate Change, Summary of Conclusions, p.vi: www.hm-treasury.gov.uk/stern_review_report.htm.
[84] Link Member interview, Sept/Oct 2009.

3.4 Energy and Facilities Management.

Energy use is the heart of Bradford Council's response to climate change. In 2007-2008, the Council's buildings and streetlights consumed 255,223,310 kilowatt hours (kWh) of energy and generated just over 78,000 tonnes of carbon dioxide emissions. This amount of gas would, incidentally, fill approximately 2.8 billion party balloons.[85] If the Council is to reduce its emissions by at least 80% by 2050 in line with national targets, it will have to adapt its operations over the next four decades so that its buildings and streetlights consume no more than 51,044,662 kWh of energy a year. This is a hugely ambitious challenge, especially given the size of the Council estate and the number of staff involved – the Council's emissions are eleven times greater than those of Oxford City Council, for example.[86]

Fortunately, Bradford Council already has an impressive, award-winning record of driving energy efficiencies via its highly successful ISO 14001 Environmental Management Systems (EMS) programme. The wealth of experience that has been built up in this area will be an invaluable help in reducing energy use and carbon dioxide emissions and in enabling the Council to adapt to the risks and impacts of climate change (NI188). Indeed, adaptation will need to be an additional key focus for the Council's forthcoming Climate Change Strategy in so far as plans for this need to be in place by 2011.[87] In addition to the officers who have worked directly on developing EMS throughout the Council, there are other outstanding officers in place who are gathering data about the Council's energy requirements, thinking ahead on efficiency savings and who are also highly motivated to cut the Council's energy use, energy bills and carbon dioxide emissions.[88] Their presence is worth acknowledging because they are the first of the many 'Climate Change Champions' that this Council will rely on to overcome this environmental challenge.

To be clear, it is impossible to overestimate the importance of these 'champions' for driving forward policy change and organisational transformation. This is illustrated by a report on

[85] This calculation is based on Oxford City Council's data about its own corporate emissions: www.oxford.gov.uk/files/seealsodocs/77813/Getting%20Our%20House%20in%20Order%20Summary.pdf.
[86] Oxford City Council's carbon dioxide emissions in 2005-2006 were 6731 tonnes: www.oxford.gov.uk/files/seealsodocs/77813/Getting%20Our%20House%20in%20Order%20Summary.pdf.
[87] Link Member interview, Sept/Oct 2009.
[88] Link Member interviews, Sept/Oct 2009.

the procurement of green energy by local authorities in the UK that was compiled a decade ago on behalf of the Department for Trade and Industry. The report investigated the experiences of three local authorities who were green energy pioneers at that time – Glasgow City Council, Halton Borough Council and Plymouth City Council – and found that the *"key influencer"* in all three cases was an individual officer, backed by member support.[89] More recently, according to Link Member interviewee, Woking Borough Council's tremendous carbon management successes are also partly attributable to the influence of a single senior officer (whose singular reputation led to him being headhunted by another organisation).[90]

The Council has recently assembled an incredibly detailed and comprehensive database that shows the energy and carbon footprints of all its operations. Councillors will be fascinated to learn, for example, that CCTV camera 155 on the Manchester Road consumes 202kWh of electricity per year and is therefore responsible for 106kg of the Council's carbon dioxide emissions.[91] Precise information of this sort will enable the ECCU to analysis the carbon footprint of each part of the Council's organisation and establish corporate-wide transparency, responsibility and accountability for reducing the organisation's carbon dioxide emissions for the first time. This process is being aided by the installation of an automated meter reading system throughout the Council estate by NPower, which has until 2012 to complete this process for Bradford Council. An initial list of 250 locations is currently being dealt with, and officers are pressing for full installation of all these meters by early 2010. This will be a vital support for the ECCU once it is launched, and it is important that the Council ensures that NPower (with whom officers have excellent relations) completes the installation early in 2010. This will be a crucial support for the Council as it broadens the scope of the current Carbon Management Programme (this only includes 68 of the 600 buildings on the corporate estate and does not include the schools at all, though it should be stressed that these 68 buildings account for 80% of the energy use of the estate).[92]

[89] Establishing a Local Authority Market for Green Power, A Turnbull and N Evans (ESD Ltd), a report carried out under contract as part of the New and Renewable Energy Programme, managed by the Energy Technology Support Unit (ETSU) on behalf of the Department for Trade and Industry, published in 1999, p.12: www.berr.gov.uk/files/file15115.pdf.
[90] Link Member interview, Sept/Oct 2009.
[91] For hundreds of 'carbon nuggets' of this sort, contact Jim Pringle on 432045.
[92] Link Member interviews, Sept/Oct 2009.

Recommendation 10

That senior officers work closely with NPower to ensure that an automatic meter reading system is installed throughout the Council estate as early as possible in 2010.

Gathering and monitoring the necessary data is a vital first step to cutting carbon dioxide emissions, and the ECCU will benefit from the dedicated intelligence support within Facilities Management that was mentioned earlier. The next step is to ensure that the Council's new Climate Change Strategy and Action Plan applies this information in an integrated way across the Council. At a strategic level, this means that the Council's performance management and business planning arrangements need to pay real attention to climate change, and individual directorates need to take real responsibility for their emissions. According to the City of London Authority, another of the Improvement and Development Agency's climate change beacon authorities:

> *"…we have found that integrating climate change within our performance management framework has resulted in effective cross-departmental delivery. Climate change is no longer the responsibility of one officer, it has been integrated within the business plans of all departments"*.[93]

Worcestershire County Council – another climate change beacon authority - learned the same lesson:

> *"Being able to quantify the Council's carbon dioxide emissions was crucial to gaining corporate agreement to taking measures to reduce them. Allocating carbon dioxide emissions to directorates helped to encourage action within each directorate"*.[94]

[93] Tackling Climate Change, Improvement and Development Agency Beacon Scheme Report, p.9: http://beacons.idea.gov.uk/idk/aio/8680960.
[94] Tackling Climate Change, Improvement and Development Agency Beacon Scheme Report, p.29: http://beacons.idea.gov.uk/idk/aio/8680960.

The City of London Authority also cites the importance of 'ownership':

> *"Climate change adaptation is a fundamental duty of care for the public sector. Don't treat it as a "green issue" but as basic risk management - your strategy should be based on UKCIP impact predictions and internal and external stakeholders must be involved in strategy preparation - ownership is essential if it is to be effectively delivered…we have found that integrating climate change within our performance management framework has resulted in effective cross-departmental delivery- climate change is no longer the responsibility of one officer, it has been integrated within the business plans of all departments"*.[95]

For years, a small number of dedicated officers have spearheaded Bradford Council's carbon reduction efforts. It is to the Council's credit that a more transformative approach is now being developed that will make climate change everyone's problem and everyone's responsibility to solve. Strategic Directors will be responsible for managing their directorate's emissions; departmental managers will be responsible for ensuring that each office plays its part as well; and individual officers will be expected to take responsibility and will be supported positively in cutting their energy use. Several Link Member interviewees cited evidence that everyday changes in behaviour and office management can reduce energy consumption by 15-20% and thereby make a significant, early and affordable difference to the Council's carbon footprint.[96]

The key is ownership and accountability, beginning with the Strategic Directors. Kirklees Council has established carbon budgets that break down the overall corporate target to the level of individual services and incorporate carbon dioxide emissions into service level decision-making. Kirklees has also held regular 'Carbon Star Chambers' since June 2008 in which senior officers are asked to review the carbon performance of their directorates in a transparent setting.[97] Here in Bradford, officers intend to establish a similarly radical system as part of an impressive transformation in the way the Council manages its carbon, so there

[95] Tackling Climate Change, Improvement and Development Agency Beacon Scheme Report, p.9: http://beacons.idea.gov.uk/idk/aio/8680960.
[96] Link Member interviews, Sept/Oct 2009.
[97] Kirklees Council Environment Unit Handbook, published in February 2009, p.9.

is no reason why the Council could not also instigate a 'Carbon Star Chamber' arrangement as soon as the ECCU and the Climate Change Strategy and Action Plan are in place in 2010. This degree of accountability is obviously a good means of encouraging carbon reduction, but it is worth noting that it is also a way of making genuine obstacles to carbon reduction more *"explicit"* – in other words, some areas of the Council's operations will be harder to change than others for perfectly good reasons, indeed change may not even be possible at times; but this will not always be apparent ahead of time in the carbon management process and needs to be identified openly so that alternative solutions can be found.[98]

Recommendation 11

That Bradford Council institutes twice yearly 'Carbon Star Chambers', early in each financial year and again in late autumn, in which the Strategic Directors account for the carbon management of their directorates and the progress they have achieved in addressing climate change. This process could be managed jointly by the Corporate Improvement Committee and the Environment and Waste Management Improvement Committee, and should begin in June 2010.

In addition, Bradford Council could also ensure that these annual carbon budgets are integrated into the annual financial budget-setting process as an explicit consideration for the Strategic Directors. This is also the case in Kirklees, where services have to justify their carbon budgets at the same 'star chamber' sessions where they justify their financial budgets and are under pressure to deliver annual carbon reductions of at least 3%. It is worth stressing, as well, that the cost savings of a process like this can be huge. Kirklees Council estimates that it will have saved £52 million by 2020 – or £3.5 million per year - as a direct result of its carbon budgeting and ongoing low carbon investments (an impressive achievement, and good news for local taxpayers, especially considering that Kirklees' overall budget of £400 million is far lower than Bradford's).[99]

[98] Link Member interview, Sept/Oct 2009.
[99] Presentation by Helena Tinker, Environment Programme Manager, Kirklees Council Environment Unit, to the two day 'Tackling Climate Change' conference held in Huddersfield in June 2009:

Recommendation 12

That Bradford Council integrates carbon budgeting into the annual budget process, beginning in the 2010-2011 financial year, as an explicit consideration for all Strategic Directors.

Within each directorate, departmental heads could be encouraged to manage their responsibilities in ways that bear down on carbon dioxide emissions. This is already the case in the Environment Agency, for example, where managers monitor the carbon footprints of their staff's work habits and where carbon dioxide emissions per employee were cut by 15% between 2002 and 2007.[100] This requires managers at this level to have access to the detailed data about energy use, travel claims and associated carbon footprints that is now becoming available in Bradford, to have explicit departmental energy targets – or carbon budgets - to work with, and to take responsibility for sitting down with their team members for regular progress reviews. This will require a radical transformation in the way that Bradford Council operates, but this change is essential in order to achieve the radical cuts in carbon dioxide emissions that the organisation is likely to have to achieve by 2020.

The Council's thousands of individual staff also have a huge role to play in changing their working practices and contributing to carbon reduction more generally with ideas based on their everyday experiences. Environment Agency staff join inter-departmental 'footprint groups' that share information, help to *"win hearts and minds"* and explore solutions to the organisation's carbon challenges. Their ideas are passed 'up the line' for consideration. The

www.kirklees.gov.uk/community/environment/green/pdf/KirkleesCouncilTacklingClimateChangeConference.pdf.

[100] Link Member interview, Sept/Oct 2009. It is also worth noting for the record that the Environment Agency procures 95% of its electricity from renewable sources and achieves BREEAM excellent ratings on all new builds and refurbishments to its estate (Environment Agency Internal Environmental Strategy 2007-2012, Appendix 1).

result in that organisation has been a *"cultural shift"* in the way that carbon management is handled, with the people who understand their working lives most intimately taking a lead in cutting their carbon footprints.[101] Kirklees Council has adopted a similar pro-active approach to engaging staff in carbon management, using a range of inspirational initiatives including 'Green Employee Networks', 'Environmental Cascade Officers', 'Theme Months' and competitions.[102] This battle for hearts and minds has already started in Bradford and should undoubtedly be a key element of the Climate Change Strategy and Action Plan.[103]

Recommendation 13

That Bradford Council establish inter-departmental 'footprint groups' in 2010 along the lines pioneered by the Environment Agency, and other 'grassroots' networking and awareness-raising arrangements along the lines pioneered in Kirklees, to encourage and enable frontline staff to reduce their use of energy and contribute to reducing the organisation's carbon dioxide emissions.

As mentioned in the previous section on capacity-building, it is also vital that investment in low energy and low carbon projects is sustained for years to come. It is therefore essential that the revenue savings that accrue from the Council's carbon reduction investments are 'recycled' into a Council fund that provides fresh investment that produces further carbon reductions and energy savings, and so on indefinitely. A number of other councils have shown that initial capital investment in energy efficiencies or renewable microgeneration projects in this way can yield ongoing financial returns that eventually create a more or less self-sustaining fund.

Oxford City Council has established such a fund using £400K of Salix/Carbon Reduction Investment budget funds secured in Jan 2008 to implement a range of energy efficiency/low carbon technologies across the Council over the coming years. The fund is made up of £200k

[101] Link Member interview, Sept/Oct 2009.
[102] These were outlined by officers from the Kirklees Council Environment Unit during the two day 'Tackling Climate Change' conference held in Huddersfield in June 2009: www.kirklees.gov.uk/community/environment/green/pdf/Engagingwithyourstaff.pdf.
[103] Link Member interview, Sept/Oct 2009.

from Oxford City Council and £200K from Salix for a ring-fenced recycled fund. The total fund of £400K is owned and managed by the Council and topped up each year from budget neutral loan repayments made back into the scheme from energy savings made.[104]

Woking Borough Council also set up a fund of this kind back in 1990 when they provided £250,000 of ring-fenced funds for energy efficiency work on Council buildings and ploughed the resulting savings back into new projects. The investments yielded efficiencies worth £4 million over the following decade, most of which was reinvested in new initiatives. The Council then went even further in 1999 when it set up an energy and environmental services company called Thamesway Limited. This has enabled the Council to engage in joint energy projects in and beyond the Borough to cut its own local carbon dioxide emissions and generate profits that are reinvested in fresh low carbon projects (including a combined heat and power station in Woking town centre).[105]

Recommendation 14

That Bradford Council immediately establishes a ring-fenced Carbon Management Fund that will provide a source of continuing investment in low carbon projects across the Council's operations, preferably in conjunction with additional Salix funding, on the basis that all of the revenue savings accruing from these projects will be recycled back into the fund to (a) sustain further low carbon investments and (b) repay the original Salix loans.

It is also important that the Council relaxes its current insistence that investments in carbon reduction projects *"are expected to be recouped in around five years"*.[106] This restriction means that projects whose payback periods are longer than five years are nearly always ruled out on cost grounds – though it is important to note that the Salix loans at present

[104] Oxford City Council Carbon Management Programme Strategy and Implementation Plan, p.6: www.oxford.gov.uk/files/seealsodocs/77813/Getting%20Our%20House%20in%20Order%20Summary.pdf.
[105] Councillor, Summer 2006, pp.16-17. Woking Borough Council's website provides further details: www.woking.gov.uk/environment/climate/Greeninitiatives/sustainablewoking.
[106] Bradford Council's Strategy and Implementation Plan, Report of the Strategic Director of Environment and Neighbourhoods to the meeting of the Executive to be held on 9 October 2007 (document AF), Paragraph 5.1, p.5: www.bradford.gov.uk.

effectively impose the same time-limit as a condition for their use as they have to be paid back within five years.[107] Investment in renewable energy is particularly adversely affected by this rule due to the due to the longer payback periods of many renewable energy technologies, and this may help to explain why the Council has been so slow to use the £500K earmarked for capital investment for this financial year. Of course, it is perfectly reasonable for the Council to prioritise investments with an early return; indeed, it makes sense to do so in order to ensure that a Carbon Management Fund of the kind mentioned above becomes viable as soon as possible. But, as several officers confirmed during the Link Member interviews, renewable energy will need to be *"part of the mix"* if Bradford Council is to meet its longer-term carbon reduction and adaptation obligations. As one observed, there is *"no shortage of opportunities"* for investments of this kind.[108] Moreover, the introduction of Feed-In Tariffs by the Department for Energy and Climate Change for renewables installed since July 2009 will massively reduce the payback times for renewable energy investments, quite apart from the immediate year-on-year carbon emissions savings that these technologies also deliver.[109]

Recommendation 15

That Bradford Council immediately relaxes its policy that investments in low carbon initiatives should have a pay-back period of less than five years, in order to facilitate investment in a wider range of renewable energy projects.

[107] The major exception to this rule was the installation of a main 250kW biomass boiler at Ilkley Town Hall, costing £150,000, whose estimated payback period is 8.6 years (Carbon Management Programme, Strategy and Implementation Plan, 2007-2012, p.47 - Appendix to Document 'AF' submitted to the meeting of the Executive on 9 October 2007): www.bradford.gov.uk.

[108] Link Member interviews, Sept/Oct 2009.

[109] By way of illustration, Kirklees Council's Environment Unit manages a range of renewable energy installations. These include the 'Civic Centre 3' 17.6kWp solar PV installation that was completed in February 2005. This technology cost £95,000 to install, generates 13,200kWh of electricity each year and saves around 10 tonnes of carbon dioxide emissions annually. If it were installed today, and therefore qualified for the new DECC Feed-in Tariff arrangements, its payback time for the Council would be 15-20 years depending on how quickly energy prices increase during this period.

Finally, Bradford Council could also review its energy procurement arrangements with a view to 'buying in' more 'green electricity' than is currently the case.[110] At present, the Council procures only 3% of its total electricity via a green tariff, powering several key buildings including Jacob's Well in effect as demonstration projects. The Council has not gone further than this, so far, due to cost considerations and the limited availability of green electricity tariffs for large corporate users like local authorities.[111] Nonetheless, other councils have been able to make considerable progress in this area. Bristol City Council has an 'Energy Policy' that aims to buy 15% of its power from renewable sources by 2010; it currently buys in 14% of its power in this way, useful evidence of the value of a targeted approach to carbon management. Properties are added incrementally to Bristol's green electricity tariff as supplies become available and opportunities for new energy contracts crop up. Interestingly, Bristol has also powered its 34,000 street lighting lanterns with green electricity since January 2007.[112] This is highly relevant to Bradford as one of the reasons for Bradford Council's rising carbon dioxide emissions in recent years has been the installation of additional street lighting and the attendant rise in energy use.[113]

Recommendation 16

That Bradford Council reviews its electricity procurement policy by April 2010 with a view to: (a) procuring at least 40% of its imported power via renewable tariffs by 2020; (b) establishing contractual arrangements with recognised leading green energy providers such as Good Energy or Ecotricity where possible in the interim period; (c) working with major energy providers like British Gas or NPower to achieve immediate progress in procuring green energy for the Council's estate by April 2012; and (d) liaising with other

[110] The phrase 'green electricity', of course, incorporates a wide range of green electricity tariffs, some of which are 'greener' than others. For the purposes of this report, however, 'green electricity' may be defined as electricity that has been generated from renewable sources including wind, solar, hydro, wave, tidal or geothermal. At present, 5.9% of UK electricity generation comes from renewables. Companies offering green energy will typically source a far higher proportion of their energy from renewables, if not all of it. NPower only get 5% of their power from renewables, whereas Good Energy get all of theirs from renewables. For fascinating information on the different fuel mixes of the electricity supply companies, visit the tariffs page of the Green Electricity Marketplace website: www.greenelectricity.org/tariffs.php.

[111] Link Member interview, Sept/Oct 2009.

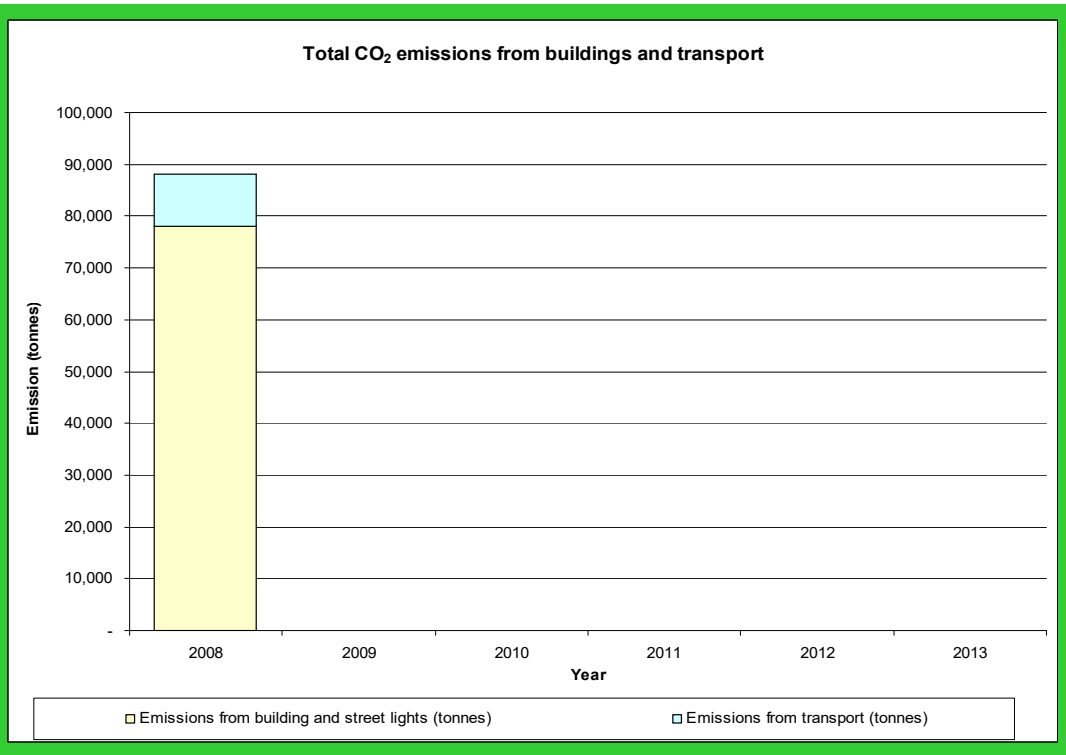
[112] www.bristol.gov.uk/ccm/content/Environment-Planning/sustainability/energy-renewable.en?#internalSection1.

[113] Link Member interview, Sept/Oct 2009.

councils including Bristol and Kirklees to see if their 'greener' street lighting can be replicated in Bradford.

3.5 Passenger Transport, Travel Planning and Fleet Management

The Council's fleet management and transport/travel arrangements also offer plenty of potential for carbon dioxide emissions reductions. In 2007-2008, the Council's vehicle fleet and business travel journeys produced almost exactly 10,000 tonnes of carbon dioxide, representing just over 11% of the Council's overall carbon footprint (see diagram below).



Breakdown of the Council's carbon dioxide emissions, 2008

The lead officers involved in the Council's transport arrangements, on both the 'passenger transport' side and the 'fleet management' side, have an impressive grasp of the issues associated with carbon management and are very willing to contribute to cutting the Council's carbon dioxide emissions.[114] Officers are keen to *"seriously"* engage with this challenge and feel that there is much that can be done in the future. To take just one example of what can be achieved, the Environment Agency's management of its 'grey fleet' (corporate mileage in employee-owned vehicles) has cut the business-related journey distances of its 1,000 staff nationally by one million miles over the past five years.[115] The fact that investments in lower carbon transport and new ways of working would also yield substantial revenue savings is an added attraction. The Council's total fuel consumption per year is approximately 3 million litres, at a cost of £1 per litre; therefore every 5% reduction in fuel used will save the Council around £150,000.[116]

(a) Passenger Transport and Travel Planning

On the passenger transport side, the Council leases a fleet of around 150 passenger vehicles (cars, minivans) on a three year contract. These vehicles are used mainly for social services for children with Special Educational Needs and for NHS-related journeys. 63 of the vehicles are specifically used for the Home Care Service. The Council also manages a taxi contract with 43 providers that involves around 7,000 taxi journeys a month (yes, each month). Officers suggest that there are a range of ways in which these arrangements could be reviewed and possibly improved in terms of reducing their carbon footprint.

- Fuel usage could be monitored and managed in a more precise, *"select"* way than at present, bearing in mind that fuel accounts for 23% of the running costs of the vehicles. More accurate, real-time information is needed for each vehicle and its users, using

[114] Link Member interviews, Sept/Oct 2009.
[115] Link Member interview, Sept/Oct 2009.
[116] Link Member interview, Sept/Oct 2009.

more sophisticated data monitoring kit of a kind that is apparently already in use in Oxford and Birmingham.[117]

- To support the above point, staff training in the 'Safe And Fuel Efficient Driving' (SAFED) programme could be stepped up and has the potential to yield 10-15% savings in fuel use. Potentially, this equates to very 'quick win' revenue savings of between £300,000 and £450,000 per annum for the Council.[118] This would combine well with the Council-wide effort to involve staff in monitoring and managing their carbon footprints in the ways outlined earlier in Section 3.4.

Recommendation 17

That Bradford Council launches a comprehensive roll-out of SAFED training for all employees who use fleet vehicles by the end of 2012.

- The Council could review the option of establishing its own pool of passenger vehicles instead of renewing the current leasing arrangements. Edinburgh City Council is a major Council that has already gone down this road; the Environment Agency also manages a pool of vehicles at its main centres. A corporate-owned pool of vehicles could enable the Council to monitor the use of its vehicles much more closely than at present, and would also allow the Council to invest in more environmentally-friendly vehicles.[119] In the meantime, the sustainability aspects of the Council's existing fleet contracts could be reviewed and, where possible, improved. For example, many Peugeot/Citroen/Renault vehicles can be readily powered by a 'B30' biodiesel blend in which 30% of the fuel is carbon-neutral biodiesel (i.e. waste vegetable oil) and the remainder conventional diesel.

[117] Link Member interview, Sept/Oct 2009.
[118] Link Member interview, Sept/Oct 2009.
[119] Link Member interviews, Sept/Oct 2009.

Recommendation 18

That Bradford Council completes a review of its passenger fleet management arrangements by April 2010 with a view to: (a) creating its own pool of vehicles at the earliest opportunity; and (b) assessing the 'sustainability' dimension of all fleet contracts to ensure that these are as consistent as possible with the forthcoming Climate Change Strategy and Action Plan and that the vehicles in use maximise any opportunities for utilising hybrid and electric technologies and biodiesel fuels.

- In relation to the above point, it is important to note that two of the Council's passenger fleet contracts are due to end and/or be renewed in July 2011: the taxi contracts are due for renewal; and the SERCO/WYTS contract for transporting children with special educational needs and adult services clients, using around 100 minibuses, is likely to return 'in house' at that date. July 2011 therefore presents two major opportunities to review the way that Bradford Council manages its transport arrangements with a view to improving sustainability and cutting carbon.

- Building on the two previous points, the Council could review the opportunities for investing in 'hybrid' vehicles. The single Toyota Prius run by the Council at present costs *"around the same price"* as the other cars in use (approximately £16,000), it would be suitable for many of the Council's passenger transport needs and the latest Prius apparently performs even better than the current model. Electric cars could also be considered, for example, as replacements for approximately 50 of the 63 Home Care vehicles run by the Council due to Home Care's relatively low mileage requirements. A new electric car has recently been imported from China and has already been considered as a possible option for Bradford. It is in use in London, where the Mayor's Electric Vehicle Delivery Plan anticipates that the Greater London Authority fleet will be running 1,000 electric vehicles by 2015.[120] These type of vehicles could certainly be trialled by Bradford Council with a view to developing the necessary infrastructure and introducing them in the near future. Similarly, the newest electric vans have also been

[120] An Electric Vehicle Delivery Plan for London, May 2009, p.3: www.london.gov.uk/mayor/publications/2009/docs/electric-vehicles-plan.pdf.

trialled by the Council and would probably be suitable for the Council's mail delivery service once the latest battery technology is in place - Bradford College already runs an electric van, though their mileage requirements are lower than the Council's. [121] It is also significant that the Department of Transport is offering increasing levels of financial assistance relating to electric vehicle procurement, and it is possible that some of this finance would be available to councils like Bradford.[122]

Recommendation 19

That Bradford Council completes a review of its vehicle procurement arrangements by April 2010 with a view to investing in hybrid and electric vehicles and using 'B30' biofuels at the earliest opportunity.

- The development of a comprehensive Bradford Council Travel Plan would presumably make a big difference to the success of these kind of measures in relation to Council passenger transport arrangements and 'grey fleet travel'.[123] According to the Department for Transport, a *"well designed plan"* can deliver a 15% reduction in car driver trips to work over a three year period (and many organisations achieve even better results).[124] To date, although the Council provides encourages other organisations in the District to develop their own travel plans, it has not yet acquired one of its own – very much a case of 'do as I say, not as I do'. Other Yorkshire councils, including Sheffield and Calderdale, have adopted successful travel plans; so has Bradford University, so has the Environment Agency; and there are many features of travel planning that would

[121] Link Member interview, Sept/Oct 2009.
[122] www.dft.gov.uk/pgr/scienceresearch/technology/lowcarbonelecvehicles.
[123] According to data provided by the Office of Government Commerce (OGC), grey fleet travel across the UK is responsible for 400,000 tons of carbon dioxide emissions each year: www.ogc.gov.uk/documents/Grey_Fleet_Best_Practice.pdf.
[124] The Essential Guide to Travel Planning, Department for Transport, March 2008, p.19: www.dft.gov.uk/pgr/sustainable/travelplans/work/essentialguide.pdf.

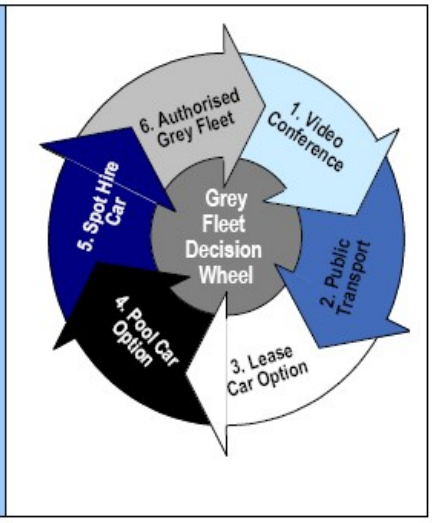
enhance the success of the passenger transport low carbon opportunities mentioned above.[125] Here are some examples.

- Mileage and fuel targets for staff driving in the course of their professional duties could be monitored by departmental managers as part of the carbon budgeting process outlined earlier.

- A 'travel hierarchy' could be created governing the travel modes of Council staff (with individual car use discouraged in favour of other modes of travel such as public transport). Such hierarchies are already in use in other organisations such as the Environment Agency, as shown in this diagram.[126]

Case Study - Environment Agency

- Policy set requiring employees to review alternatives to using their own vehicle, and justify the transport choices they make.
- Starting with the option of not making the journey in the first place (and using video- or audio-conferencing), the employee is then prompted to consider the options of public transport, lease car, pool car or spot hire car in each case.
- Line managers are responsible for challenging employees on their travel choices to ensure the hierarchy is observed in practice.



- Corporate metrocards could be made available to staff for use during their working days when needed, whereby staff could simply sign out a metrocard when heading off for a meeting and return it later. This option is available at the Environment Agency, where staff can (amazingly) also purchase travel

[125] See: www.brad.ac.uk/admin/estates/downloads/TravelPlan0405.pdf, www.sheffield.gov.uk/roads-and-transport/policies-plans-performances/travel-plans/council-travel-plan, www.calderdale.gov.uk/environment/sustainability/environmental-projects/travelplan.html.

[126] Link Member interview, Sept/Oct 2009. For more information about the diagram, see the OGC document 'Grey Fleet Best Practice', June 2008: www.ogc.gov.uk/documents/Grey_Fleet_Best_Practice.pdf.

tickets in advance from a vending machine in their main offices to make it even easier to access public transport.[127]

- More flexible working practices could be adopted, enabling staff to work more from home or to vary their journey times to and from work to accommodate family needs (such as walking their children to school in the mornings and then travelling into work by public transport rather than combining both journeys by car in order to get to work earlier). This, in turn, will reduce the proportion of children travelling to school by car and help the Council make progress in relation to its NI198 target (Mode of Travel to School – see Section 3.6a on schools below).

Recommendation 20

That Bradford Council develops a comprehensive Corporate Travel Plan as a matter of urgency, in conjunction with the Climate Change Strategy and Action Plan, with a view to adopting it by April 2010.

(b) Fleet Management

Waste management vehicles, provided by Fleet Management, account for around two-thirds of the three million litres of fuel consumed by the Council's vehicles. Fleet Management's operating budget of around £12 million is three times larger than the £4 million passenger transport budget. As with passenger transport, the service is keenly aware of its environmental responsibilities. In recent years, for example, the environmental performance of the Council's heavier vehicles has improved significantly – European Emission Standard Euro 3 became standard five years ago and the Council is now actively

[127] Link Member interview, Sept/Oct 2009.

"working towards Euro 5". All drivers are SAFED assessed and route optimisation is regarded as "absolutely critical" to minimising fuel use.[128]

The fleet management side of Bradford Council's transport arrangements offers a range of opportunities for cutting energy use and reducing carbon dioxide emissions.

- SAFED assessment is currently provided for all drivers. SAFED training to improve driver techniques, though, is not yet available, but could be provided for all staff in order to achieve rapid the 10-15% reductions in fuel consumption and associated carbon dioxide emissions that were mentioned earlier in relation to passenger transport. This could be combined with the "tighter" management of fuel usage/budgets mentioned above in relation to passenger transport.

- The use of electric vehicles has been ruled out as disproportionately expensive by the Council. However, the Council could review the options for switching to monofuel biomethane waste collection vehicles in future, perhaps in conjunction with Yorkshire Water's Esholt facility and Leeds Council (Leeds have already trialled two biomethane vehicles). This is proven technology and can be regarded as climate neutral. Mercedes apparently sell 600 of these vehicles to Europe each year.[129] Biomethane powered vehicles are widely used in France and Germany, incredibly popular in Argentina and Pakistan, but have not yet caught on in the UK.[130] The environmental benefits of this type of fuel are huge, since its use can cut carbon dioxide emissions by between 75% and 200% (yes, 200%) compared with fossil fuels. The fuel costs are 40% cheaper than diesel and 55% cheaper than petrol, a massive saving considering that the bin wagons average only 1-2 miles per gallon. The downside is that the adapted vehicle chassis costs £27,000 more to buy with the extra biomethane gas tanks; officers estimate, in fact, that the extra cost to the Council would increase their overall price from £115,000 to

[128] Link Member interview, Sept/Oct 2009.
[129] An excellent review of the advantages of biomethane can be downloaded from the renowned International Association for Natural Gas Vehicles: www.iangv.org/tools-resources/reports.html?func=fileinfo&id=337.
[130] There are around 10,000 biomethane vehicles on the road in France and almost 65,000 in Germany. Pakistan, though, tops the global table with two million vehicles in use: www.iangv.org/tools-resources/statistics.html.

£142,000. Most or all of this extra capital cost, though, would subsequently be offset by reduced revenue costs, assuming that the vehicle operated for at least 4-5 years.[131]

- The Council could consider establishing an Integrated Transport Unit (ITU) that would enable all of its passenger and fleet operations to better coordinate their management arrangements and carbon reduction initiatives.
- The Council could also assess the availability of fleet vehicles capable of using diesel/biodiesel blends with much higher proportions of biodiesel than the 5% biodiesel blend currently used by Bradford Council's vehicles – it is worth noting that new vans are already available that can run on the 70-30 diesel/biodiesel B30 fuel mix mentioned earlier.

Recommendation 21

That Bradford Council completes a formal review of its Fleet Management arrangements by April 2010 with a view to: rolling out SAFED driver training; acquiring biomethane waste collection vehicles as soon as practicable; boosting the use of biodiesel; and assessing the need for an Integrated Transport Unit.

3.6 District-wide carbon management

(a) Schools

As indicated earlier, Bradford's 200 schools account for 57% of the Council's carbon dioxide emissions. Their emissions are increasing, from an estimated 38,102 tonnes in 2006-2007 to an estimated 40,453 tonnes in 2008-2009. Moreover, their projected emissions under a 'business as usual' scenario will be 53,078 tonnes by 2020 and a mind-boggling 111,336

[131] Biogas as a Road Transport Fuel: National Society for Clean Air and Environmental Protection, June 2006, p.1: www.environmental-protection.org.uk/assets/library/documents/biogas_as_transport_fuel_june06.pdf.

tonnes by 2050 - more than the Council's total current emissions. The schools will therefore need to be a key feature of the Council's forthcoming Climate Change Strategy and Action Plan.[132]

Officers insist that the Council has been *"very clear"* with schools that they will be responsible for their carbon dioxide emissions and for the allowances that will be purchased on their behalf by the Council as part of the Carbon Reduction Commitment starting next year. Schools have also been informed that they will be rewarded if they cut carbon and penalised if they do not. The Council is determined to ensure that any incentives and fines associated with the CRC are shared by the schools. It is felt that school managers *"worry"* about relatively small amounts of money in their budgets and that this will help to ensure that due regard is paid to carbon management. This is just as well, because delegated budgets and a degree of school 'resistance' to central direction mean that the Council has limited powers to ensure that schools develop their own ambitious carbon management plans.[133]

The Building Schools for the Future (BSF) programme has been a very positive process from an environmental standpoint in so far as the new schools are much more energy efficient than the buildings they are replacing and will therefore deliver early carbon reductions for the District (these will help the Council meet its NI186 targets, though not its own 10:10 campaign or NI185 corporate target as the new school buildings are PFI-managed and therefore do not count as part of the Council's carbon footprint). The electricity consumption of the three new-build Phase 1 schools - Buttershaw, Titus Salt and Tong – is just 57-75% of their predecessors, and their 'Very Good' BREEAM rating should result in 60% overall carbon savings provided that their environmental potential is utilised. BSF Phase 2 includes four new-build secondaries and three new-build special schools, all with 'Very Good' BREEAM assessments and due for completion by March 2011. BSF Phase 3 includes three new-build secondaries and one new-build special school. One of the new-build secondaries, Ilkley Grammar School, will achieve an 'Excellent' BREEAM rating (the others are 'Very Good') and is likely to incorporate some renewables in order to achieve an 80%

[132] Link Member interview, Sept/Oct 2009.
[133] Link Member interview, Sept/Oct 2009.

reduction in its carbon dioxide emissions.[134] It should be noted, by the way, that the decision to create an 'Excellent' BREEAM rated school as part of the BSF programme followed a specific recommendation from the Council's Environment and Waste Management Improvement Committee in November 2008 that the BSF project should *"endeavour to incorporate alternative technologies and environmental improvements"* and to ensure that one of the new schools achieved the 'Excellent' rating.[135]

Of course, the environmental quality of a school building does not necessarily mean that its staff and students will use it in a 'low carbon' way. School Travel Planning is an area that shows that, although it is possible to change mindsets and behaviour along more sustainable lines, success can be very patchy. The Council's 'School Travel Booklet' that provides information about different transport options for getting to and from school has apparently received a *"good response from parents"*, and Bikeability on-road cycle training has also had a *"good take up from schools"*. And girls travelling to Belle Vue Girls school are using the new single sex, re-routed buses. Unfortunately, it is important to note that the proportion of pupils travelling to school by car has gone up in the past two years.[136] So far, efforts to encourage travel sustainability have usually been welcomed by their target audience, but have not yet translated into changed travel habits or behaviours for a range of reasons. And the same record of partial success (to put it positively) can apply to the way that the buildings themselves are used.

There are several areas where the Council could usefully review carbon management in relation to the District's schools.

- The Council needs to ensure that carbon reduction is integrated into all aspects of the school maintenance, refurbishment and new build procurement processes. The schools are subject to a 3-5 year rolling programme of infrastructural maintenance and improvements. Asset Management manages an 'assessment matrix' that reviews the

[134] Link Member interviews, Sept/Oct 2009.
[135] Minutes of the meeting of the Environment and Waste Management Improvement Committee held on Thursday 20 November 2008 at City Hall, Bradford, p.25: http://councilminutes.bradford.gov.uk/wps/PA_1_0_V9/CallDisplayDocServlet?docID=3327.
[136] Although 1.5% fewer 5-10 year olds are being driven to school compared to the 2006-2007 school year, an extra 3.6% of 11-15 year olds are. Overall, therefore, the proportion has gone up. In total, 19,089 children were driven to school in the 2008-2009 school year, 3,247 more shared cars, 34,882 walked, and only 125 cycled. But at least nobody travelled by air (Link Member interviews, Sept/Oct 2009).

needs of all the schools and recommends successive batches of schools requiring urgent attention for inclusion in the Council's 'Primary Capital Programme'. The carbon performance of the schools is not currently an explicit feature of the assessment matrix, but it could be; and this will require a conscious adjustment to the 'mindset' of the Asset Management process in relation to schools. Learning Services then looks at each batch of schools and designs briefs that provide a detailed 'vision' for each school outlining how their redevelopment should proceed. This stage, too, needs to consciously consider the carbon dioxide emissions of the schools and how these can be substantially reduced. The 'brief' then passes into the hands of the Facilities Management team for revising and implementing. Here, too, climate considerations need to be paramount in order to secure the best possible reductions in carbon dioxide emissions. This focus on carbon reduction will also ensure that any opportunities to access external funding streams (such as the Low Carbon Buildings Programme Phase 2) are fully exploited.[137]

Recommendation 22

That Bradford Council reviews the operation of the Primary Capital Programme by the end of June 2010 to ensure that (a) climate change is a core consideration at every stage of its assessment, design and implementation phases and that (b) the PCP exploits every opportunity to draw in outside funding (ie the Low Carbon Buildings Programme Phase 2).

- The Council needs to ensure that 'sustainability' is also built into its Service Level Contracts and relations with contractors, incorporating BREEAM assessments wherever it is possible to do so.

Recommendation 23

That Bradford Council completes a review of its Service Level contracts and relations with contractors by the end of June 2010, to ensure that these arrangements (a) reflect the

[137] www.lowcarbonbuildingsphase2.org.uk/index.jsp.

Council's carbon management goals and (b) incorporate BREEAM assessments whenever it is technically appropriate to do so.

- It is likely that the District's 200 schools, especially the smaller primaries, are going to need substantial help to enable them to begin the process of cutting their carbon footprints. As mentioned earlier in relation to 'capacity-building' in Section 3.3 and Recommendation 6 (hence, no recommendation here), the Council needs to give serious consideration as to (a) whether the two Schools Carbon Reduction Posts that will be created as part of the ECCU will provide sufficient support for schools and (b) whether these two posts should be centrally funded by the Council from the outset. This may be important in so far as there is a view in the Council that (a) school managers tend to look for *"visible"* results from environmental investment (i.e. the sight of a low wattage wind turbine spinning in the bracing Yorkshire air) rather than less obvious improvements such as better insulation that would actually deliver far greater carbon savings; and (b) school managers tend to focus on short-term impacts rather than improvements that would instead deliver more sustained, longer-term carbon benefits. The schools – whose staff are, beyond dispute, hard-pressed education professionals – arguably need strategic, informed advice from the Council on sustainability, good information about where they can get the finance they need to make the necessary investments and a degree of 'hand-holding' to ensure that projects are carried through successfully. The very limited 'success' that has been achieved by the Council to date in terms of altering the travel habits of parents and children is a notable indication that schools require sustained help in order for progress to be achieved (though, as mentioned earlier, officers rightly point out that the schools' senior managers need to shoulder their fair share of the responsibility for carbon reduction as well).[138]

(b) Planning, Development and Regeneration

[138] 92% of schools have Travel Plans on paper, but changing travel habits beyond the school gates is far harder to achieve (Link Member interviews, Sept/Oct 2009).

The government has stated that all new housing in the UK will be carbon neutral by 2016. In the meantime, Council officers – all the way up to the strategic management level - are keenly aware of the need to incorporate low carbon thinking into planning, development and regeneration strategies and to create *"modern places with modern ideas"*.[139] The difficulty for the Council with major regeneration, as was also the case with the BSF design and tendering phases, lies in how far officers can push for a maximum degree of sustainability during the negotiations with 'the market' that are a core element of the tendering process without jeopardising the entire project. In practice, compromises are inevitable in the relatively deregulated planning waters that the Council has to navigate.

The Council, nonetheless, has three potential opportunities to translate the kind of impressive forward thinking found among officers into more concrete forward planning and actions.

- First, Bradford Council currently works with the 'Sustainable Design Guide Supplementary Planning Document' (SPD) that was adopted in February 2006 in order to amplify some of the policies of the District's 'Replacement Unitary Development Plan', and its underlying ideas apparently date back to the early 2000s.[140] This is the planning document that is, literally, placed in the hands of developers when they get in touch with the Council. Unfortunately, planning policies from this recent era are viewed by officers as *"fairly light in their approach"* to climate change, with planning goals expressed in general terms and tending to avoid imposing specific targets for developers for low carbon buildings or on-site renewable energy. The Sustainable Design Guide, in fact, only mentions climate change once in its forty pages (though, admittedly, it refers to many climate-friendly approaches including renewables and pioneering design ideas such as green roofs).[141] The Council could, therefore, review this document in order to develop it in much more detail as an interim measure ahead of the new Local Development Framework that is currently being prepared.

[139] Link Member interviews, Sept/Oct 2009.
[140] www.bradford.gov.uk/NR/rdonlyres/BAD3E13E-2CC7-4C67-8930-341222BE78BA/0/SustainableDesignGuide.pdf.
[141] Indeed, the main push on energy efficiency in recent years has apparently come from the evolving character of buildings regulations which have begun to shift away from a sole concentration on health and safety to a more pronounced focus on climate change (Link member interview, Sept/Oct 2009).

Recommendation 24

That Bradford Council immediately reviews its Sustainable Design Guide SPD (2006) with a view to upgrading its guidance in relation to climate change and low carbon/carbon neutral developments by April 2010.

- Second, Bradford Council could more pro-actively insist that housing developments incorporate onsite renewables, though its powers in this area are limited. The overarching planning framework governing the Council's planning responsibilities is the 'Yorkshire and Humber Regional Spatial Strategy', finalised in May 2008.[142] Policy EN5 of the Strategy deals with Energy, and Section B therein focuses on maximising renewable energy capacity. It states that *"new developments of more than 10 dwellings or 1000m^2 of non-residential floorspace should secure at least 10% of their energy from decentralised and renewable or low-carbon sources, unless, having regard to the type of development involved and its design, this is not feasible or viable"*.[143] This provision is, apparently, difficult to apply directly in its present form; but it could be translated into a Supplementary Planning Document by Bradford Council for use with prospective housebuilders and other developers. Indeed, with only seven years to go before the government's deadline for carbon-neutral housing and with a new, and hopefully more climate-friendly, local development framework scheduled for completion within three years, Bradford Council may well find that it is pushing against an open door in this particular area of policy. After all, other councils have shown that progress of this kind can be made. Kirklees Council already have policies which stipulate that all new buildings have to achieve a BREEAM rating of either 'Very Good' or 'Excellent', and that all residential and non-residential developments larger than 500m^2 have to incorporate renewable energy generation.[144]

[142] www.goyh.gov.uk/497763/docs/199734/199799/689582/1_Y_H_Published_RSS_May_2008.pdf.
[143] The Yorkshire and Humber Plan: Regional Spatial Strategy to 2026, published by the Government Office for Yorkshire and Humber, May 2008, p.101.
[144] 2025 Kirklees Environment Vision: www.kirklees.gov.uk/you-kmc/kmc-policies/environmentvision.pdf.

Recommendation 25

That Bradford Council develops and adopts a Supplementary Planning Document by April 2010 that translates Policy EN5, Section B, paragraph 3 into a format suitable for application across the District, with a view to ensuring that all new developments of more than 10 dwellings or 500m^2 of non-residential floorspace secure at least 10% of their energy from renewable or low-carbon sources.

- Third, Bradford Council could review its approach to all new Council buildings and refurbishments. The Council could ensure that BREEAM 'Excellent' standards are achieved for all of its new buildings, as the Environment Agency has done. The Council could also ensure that all new Council buildings generate at least 30% of their energy from on-site renewables. An even more radical move, bearing in mind that the Council is a high profile public organisation whose investments attract significant community attention, would be to only consider constructing 'climate neutral' Council buildings from now on in order to showcase these pioneering building designs and encourage other organisations to follow suite across the District.[145]

Recommendation 26

That Bradford Council develops a new Corporate Sustainable Buildings Policy by the end of June 2010 that: (a) ensures that all new corporate buildings and, where appropriate, corporate refurbishments are completed and operated to achieve an 80% reduction in carbon emissions (compared with current standards); (b) ensures that all new corporate buildings secure at least 30% of their energy from on-site renewable or low-carbon sources; and (c) assesses the potential for developing climate-neutral Council facilities from April 2010 onwards.

[145] 2025 Kirklees Environment Vision: www.kirklees.gov.uk/you-kmc/kmc-policies/environmentvision.pdf.

(c) Environment Partnership arrangements

The Environment Partnership is one of the Bradford District Partnership's Strategic Delivery Partnerships (these bring together public, private and Third Sector organisations to tackle key issues in the District). The Partnership is responsible for leading on delivery of the Big Plan chapter on Improving the Environment and the environmental targets signed up to in the Local Area Agreement. On of the Partnership's key areas of work, therefore, is to reduce carbon emissions per capita across Bradford District (NI186).[146] The Council is a key player in this process and designed the Delivery Plan that was recently approved by the Partnership. The Council was also the lead organisation in the very successful DEFRA-funded awareness-raising campaign "Tomorrow's Climate, Today's Challenge" of 2007-2008 and is leading on the Bradford Community Warmth programme (see below). These are substantial initial achievements that deserve recognition.

As mentioned earlier, the Partnership is on course to meet its interim target of a 5% reduction in carbon dioxide emissions per capita by next April from a baseline taken in 2005. These emissions fell by 4.8% per capita by April 2007, the most recent date for which data is available, and will have fallen further since then as a result of the economic recession. In addition, the Bradford Community Warmth programme of home thermal efficiency and energy improvements that is being managed by Bradford Council will deliver further cuts in carbon dioxide emissions (the District's 200,000 homes are responsible for 38% of the District's 3 million tonnes of emissions per year). The Community Warmth programme is similar in scope to Kirklees Council's Warm Zone programme, the key difference being that Bradford's scheme does not include social housing (Kirklees still manages its social housing stock). It is a huge investment, it will make a major long-term contribution to the District's carbon profile, and the Council officers who are working on this deserve enormous credit for their efforts.

There are two areas where the Council could possibly enhance its partnership-related carbon management efforts.

[146] www.bradford.gov.uk/bmdc/BDP/Partnerships/Environment/.

- First, it is clear that the Environment Partnership is receiving excellent, very committed support from Council officers and that programmes like Community Warmth are beginning to deliver genuine reductions in the District's carbon dioxide emissions. The Council, though, may wish to review the management arrangements for the Partnership to ensure that it is pro-actively exploring as many action-oriented avenues as possible for additional carbon reductions across the District. This could, for example, take the form of establishing more sub-groups that could meet more regularly than the quarterly meetings of the Environment Partnership Board. The Council could also seek to work more pro-actively with Incommunities via the Partnership to improve the energy efficiency of the social housing stock and encourage Incommunities to ensure that their new-build plans incorporate the highest possible environmental standards. The Council could also seek to engage more pro-actively with the Third Sector organisations involved in the Partnership, though this should also be accomplished via the Council's Environment and Climate Change Unit as recommended earlier. The Council could also explore opportunities via the Partnership to establish a Creative Energy Network that could run low carbon and renewable energy projects with a city-wide or District-wide impact or a more broadly focused environment network along the lines of the Creative Environmental Networks organisation based in Kent.[147]

Recommendation 27

That Bradford Council, working with its partner organisations, completes a review of the organisational capacity of the Environment Partnership by April 2010 with a view to (a) developing sub-group activity that is explicitly 'action-oriented', and (b) assessing the potential for creating an energy and environment company modelled on the Thamesway Limited company (established by Woking Borough Council in 1999) or the Kent-based Creative Environmental Networks organisation founded in 1997.

[147] www.cen.org.uk/default.asp.

- Second, the Council could work with the Partnership to fund the installation of renewable energy in the District's homes in order to fuel interest in this technology among other householders and businesses, cut carbon emissions and create hundreds of 'green' jobs.[148] It could, for example, consider introducing a 'ReCharge' scheme along the lines piloted by Kirklees Council since April 2008. This scheme provides householders with a £10,000 interest-free loan to install specific renewable technologies in their homes (the interest is paid by the Council). The loans are secured against the property and must be re-paid when the property is sold. Since homes are sold, on average, every seven years in the UK, the scheme becomes more self-sustaining after that period. Kirklees is investing £3 million in this scheme over three years, 10% of which is ring-fenced to help households in fuel poverty, and expects at least 330 properties to be improved.[149] Bradford Council could, of course, initiate this project by itself. But the district-wide scope of this kind of scheme would make it a suitable candidate for Partnership action and such an initiative could well attract financial help from other organisations in the Partnership.

Recommendation 28

That Bradford Council, working with the Environment Partnership, completes an assessment by the end of June 2010 of the options for introducing a District-wide 'ReCharge' scheme that would deliver sustained investment in renewable energy technologies.

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[148] The Department for Energy and Climate Change estimates that there is the potential to create half a million new jobs in the UK renewables sector in future years.

[149] See Kirklees Council's submission to the House of Commons Environment, Food and Rural Affairs Committee in January 2009: www.publications.parliament.uk/pa/cm200809/cmselect/cmenvfru/37/9011412.htm.

4. Looking ahead - possible future scrutiny.

There are a number of areas relating to carbon management that were either (a) not covered in this Link Member report or (b) would benefit from further scrutiny in the near future. Some of this scrutiny would, of course, be best carried out in conjunction with other improvement committees.

- **Waste management.** This was touched on indirectly in this report in the context of Fleet Management, but could be examined in much greater depth in terms of the carbon management dimension of different future waste management options for the Council. A future scrutiny process could, for example, review the possible the possible introduction of fortnightly 'alternate waste collection' (AWC) as a means of quickly boosting recycling rates while also controlling fuel use.[150] The more urban areas of the District might not be suitable for this approach, but a partial roll-out for more rural areas could be feasible. In Kirklees, for example, 103,000 of the 170,000 households have alternate weekly collections, the remainder still have weekly waste collections.[151] AWC would probably have to be developed in conjunction with kitchen waste collection and the introduction of kerbside plastics recycling, but these are schemes that have worked for hundreds of other councils. Officers have repeatedly indicated to the Environment and Waste Management Improvement Committee that AWC could be rolled out across the Bradford District if the political groups on the Council agreed to do so, despite the difficulty of providing a comprehensive service in some urban centres. This would certainly be a brave political move, but it could offer a sure way of improving recycling rates without driving up fuel use or the Council's £3 million fuel bill. AWC would thereby

[150] A 2007 survey Local Government Association survey of 144 councils who had adopted alternative weekly collections showed that their average recycling rate of 30% was higher than other councils still collecting waste weekly (23%): www.guardian.co.uk/uk/2007/apr/26/localgovernment.localgovernment. Kitchen waste collection would also be part of this mix. According to Friends of the Earth, Bristol Council rolled out food waste collections to 150,000 households in 2006. The Council provided a kitchen caddy and a 25 litre brown bin for food. At the same time, it introduced a weekly collection of card, a paid-for green waste service and fortnightly residual waste collections. A black box recycling service also collected paper, glass, cans, foil, textiles, batteries and aerosols. In the first year after the scheme was introduced, the recycling rate increased from 18% to 37%: www.foe.co.uk/resource/briefings/food_waste.pdf.

[151] www.recycleforkirklees.org.uk/recyclingPlan.html.

enable the Council to make progress on waste management without increasing its carbon dioxide emissions.

- **Schools.** The schools account for 57% of the Council's carbon dioxide emissions, so their success in cutting carbon will be a vital element of the Council's drive to meet its NI185 corporate and NI186 LAA targets. This in itself could be the subject of future scrutiny.

- **Street Lighting.** Street lighting is a major and growing contributor to the Council's energy bills and carbon footprint. This could be scrutinised with a view to (a) exploring the options for exploiting renewable energy, as Kirklees are doing; and (b) exploring the options for reducing the amount and duration of lighting that is currently available to save energy. In relation to the latter point, it is worth mentioning that a review of Exeter City Council's 'Climate Change Strategy' recently carried out by the University of Exeter found that extinguishing the streetlights that currently operate from dusk to dawn between 2am and 5am would instantly reduce the Council's overall lighting energy use by a remarkable 24%.[152]

- **The work of the Environment Partnership**. It looks as if the Council and its partner organisations are well on course to meet the NI186 target of an 11.4% in carbon dioxide emissions per capita across the District by April 2011. The Partnership is examined to some extent in this report as an element of the Council's efforts to cut its own carbon. It could usefully be the focus of future scrutiny in its own right, given the fact that 97% of the District's carbon dioxide emissions are not primarily the Council's responsibility.

- **Housing.** The District's 200,000 homes are a key element in the fight to cut carbon. The challenge of developing sustainable housing could be scrutinised as part of a scrutiny of the Environment Partnership or, indeed, as an area for scrutiny in its own right.

- **Planning, Development and Regeneration.** Like housing, these are aspects of the Council's own carbon management that overlap with district-wide efforts to cut carbon. Tens of thousands of new homes are on the way; new retail developments and refurbishments are a continual feature of the commercial life of the District; and a number of major regeneration projects in Bradford worth hundreds of millions of

[152] Exeter Climate Change Strategy and Analysis, S.F.S. Hunt et all, Centre for Energy and the Environment, University of Exeter, published 2007, p.17: www.exeter.gov.uk/CHttpHandler.ashx?id=9189&p=0.

pounds are either underway or in the pipeline. All of these developments will affect the carbon footprint of the District for decades to come and therefore merit far greater environmental scrutiny by councillors. The challenge of building sustainability into building design and the use of our buildings is one that Bradford Council has arguably not yet fully embraced, despite the pioneering low carbon development designs that are proliferating across Europe.

- **Transport.** This report has focused on the Council's own fleet and passenger transport and staff travel arrangements. But the transport networks of the District as a whole also deserve further scrutiny in so far as Bradford Council is in an important position to influence their development in future years. Moreover, as far as Bradford Council itself is concerned, its forthcoming Travel Plan could also be a focus for in-depth scrutiny.

Appendix 1

Terms of Reference

Environment and Waste Management Improvement Committee

Scrutiny of City of Bradford Metropolitan District Council's Carbon Management

Terms of Reference

See Part 3E paragraphs 2.1 to 2.11 of the Constitution of the Council.

Background and context

The District's Big Plan (Sustainable Community Strategy) states that 'the Council will be an exemplar of good practice, and will provide leadership to support organisations and communities to reduce consumption of carbon-based fuels'.

The Council's Corporate Plan 2009-2012 states that 'the Council has a duty to safeguard the environmental well being of the district, working with partners to address sustainability issues of climate change; reviewing how resources are managed and how emission can be reduced'.

The Corporate Plan 2009-20012 sets out the Council's Strategic Delivery Priority: 'a more sustainable environment'; a key action is to 'Implement the Carbon Management Programme to reduce the Council's own footprint, through improved energy efficiency in buildings, and reduced emissions from Council operations. Key elements include improved insulation, boiler replacement programme, more efficient lighting. Efficiencies to fleet services and street lighting are other key areas'.

The Council published its outturn performance report 2008/09 on 23 June 2009. It was reported that the Council's performance against the indicator 'percentage change in Bradford MDC's carbon emissions footprint from a 2005/06 baseline' was at + 3.72%. This is against a target of -6%. This means that performance is currently missing the target by approximately 10 percentage points (PI code EMAS001).

The Corporate Plan 2009-12 also contains a key performance indicator 'CO_2 reduction from LA operations' by which performance with regard to the strategic delivery priority will be measured. Targets will be set up to 2011-12 (currently to be confirmed).

The Council has agreed a Local Area Agreement performance indicator (NI 186) to reduce the per capita CO_2 emissions in the local authority area. The target is to reduce emissions by 11.4% by 2010/11.

Key Lines of Enquiry

1. Policy framework(s).
2. Current emissions.
3. Emissions trends.
4. Emissions targets.
5. Carbon management and reduction measures.
6. The District-wide context.
7. How are other Councils doing?
8. 'Blue Skies' thoughts.

Methodology

At its meeting of 10 June 2009 the Committee appointed 3 climate change link members and one carbon management link member (the carbon management link member is also a climate change link member).

The link member for carbon management will consider a variety of evidence in a number of formats which may include:

- Relevant documents such as current strategies, performance data etc.;
- Written submissions from, or meetings with, interested parties;
- Relevant site visits.

The link member will update the Committee on progress as / when appropriate and produce a report for consideration and adoption by the Committee at a formal meeting.

Indicative list of interested parties

City of Bradford Metropolitan District Council: Portfolio Holder(s), Strategic Director(s), Relevant officers in Department of Environment and Neighbourhoods, Department of Performance and Commissioning, Chief Executive's office, Department of Corporate Services.

Indicative Timetable

29 September 2009	Terms of Reference presented to Committee.
27 October 2009	Verbal update to the Committee.
24 November 2009	Draft report presented to the Committee for consideration / adoption.
7 – 18 December 2009	Report launched to coincide with the United Nations Climate Change conference in Copenhagen.[153]

[153] These Terms of Reference were adopted at the meeting of the Environment and Waste Management Improvement Committee held on 29 September 2009.

Appendix 2

Recommendations of the Environment and Waste Management Improvement Committee Conference Report on Regeneration, Environmental Sustainability and Climate Change, November 2007

As a result of our investigation, we have concluded that there is a great deal to do at district level to address climate change, and that this requires strong and active leadership by the Council. We also believe that if the Council works together with its partners, even more can be achieved.

1. The Council, working with its partners, should take a lead on action to adapt to, and mitigate climate change in Bradford District.

2. The Council and the Local Strategic Partnership should undertake regular and transparent monitoring of the environmental sustainability of regeneration and development taking place in the district.

3. The Council should ensure that it is robustly employing all its existing planning powers and fully exploits the opportunities presented by the development of the Local Development Framework in order to ensure that the regeneration of the district is environmentally sustainable.

4. All proposals for new developments in the District should be required to take account of the environmental and quality of life impacts of transport.

5. The Council and its partners must urgently seek ways in which to address the energy efficiency of existing privately owned and privately rented housing.

6. Accessible and practical advice and support on sustainability should be made available and promoted to local businesses.

7. The Council, when carrying out its economic development function, should actively encourage, and also promote, the opportunities presented by 'green' enterprise and the 'green' economy.

8. The Council and its partners should proactively campaign and lobby for the powers needed to enable the District to adapt to and mitigate climate change.[154]

[154] For further details of the scrutiny process that preceded these recommendations, see the Report of the Assistant Director, Strategy and Performance, to the meeting of the Environment and Waste Management Improvement Committee held on 5 March 2008, Document T: www.bradford.gov.uk

Appendix 3

Report Recommendations: implications for strategy, capacity and finance[155]

No.	Recommendations	**Recommendations with strategy and policy-making implications.[156]**	Recommendations with organisational capacity-building implications[157]	Recommendations with major financial implications[158]
1	That preparation of the Climate Change Strategy and Action Plan is prioritised and accelerated in order to ensure that it is approved and ready for implementation at the start of the new financial year in April 2010. This will enable the new Environment and Climate Change Unit to achieve its goals more effectively in 2010.			
2	That Bradford Council's forthcoming Carbon Management Strategy and Action Plan incorporates long-term 'headline targets' for carbon reduction for 2020, 2030 and 2050 that are either consistent with, or more ambitious than, the UK's national policy objectives; that Bradford Council also establishes annual carbon reduction targets starting in the 2010-2011 financial year that are consistent with achieving the headline targets and are linked to specific actions wherever possible; and that Bradford Council establishes targets for obtaining a growing proportion of its energy from renewable sources.			

[155] This table is intended to provide a very basic overview of the wide-ranging nature of the Recommendations.
[156] These recommendations involve a varying degree of strategic and policy-making adjustment for the Council, and include carbon reduction target-setting.
[157] These recommendations involve a degree of capacity-building to enhance the organisational ability of the Council to respond to the challenges of Climate change.
[158] Obviously, all 28 recommendations will have financial implications to some extent; however, these particular recommendations present significant opportunities for financial savings, or have major investment implications, or perhaps both (i.e. they might involve major capital investment that also offers the potential to deliver longer-term revenue savings for the Council).

No.	Recommendations	**Recommendations with strategy and policy-making implications.**	Recommendations with organisational capacity-building implications	Recommendations with major financial implications
3	That Bradford Council becomes the first council in West Yorkshire to sign the European Commission's 'Covenant of Mayors', and develops a Sustainable Energy Action Plan by April 2010 as part of the Action Plan linked to the Council's new Climate Change Strategy.			
4	That the appointment of the Environment and Climate Change Manager is accelerated, and that subsequent ECCU staffing and governance arrangements are finalised by April 2010, as matters of top corporate priority.			
5	That officers immediately review any investment opportunities that might be suitable for utilising the capital finance that was earmarked for carbon management during the current financial year by Council in February 2009, with a view to also securing early match funding from external sources such as Salix Funding.			
6	That the Council immediately reviews the funding arrangements for the two ECCU schools carbon reduction posts, as well as their limited remit, with a view to (a) better securing their funding for the 2010-2011 financial year, and (b) providing additional support to deal with the schools dimension of the Council's overall carbon dioxide emissions.			
7	That the Environment and Climate Change Unit works closely with relevant Third Sector organisations such as those involved in the Bradford Environment Forum to: (a) draw on their invaluable expertise in general relating to carbon management; (b) establish formal protocols by April 2010 for working with these organisations in delivering carbon management initiatives of mutual benefit; and (c) establish formal protocols by April 2010 to help these organisations secure the funding they need for their activities in order to help the Council, in turn, meet its own carbon reduction goals.			

No.	Recommendations	**Recommendations with strategy and policy-making implications.**	Recommendations with organisational capacity-building implications	Recommendations with major financial implications
8	That the Leader of Council and/or the Environment and Neighbourhoods Portfolio Holder, supported by the Strategic Director for Environment and Neighbourhoods and the Assistant Director for Facilities Management, submits an annual Carbon Management Report (including financing information) to full Council at the beginning of each financial year; and briefs an annual joint meeting of the Corporate Improvement Committee and the Environment and Waste Management Improvement Committee.			
9	That the new Environment and Climate Change Manager works closely with the Assistant Director for Facilities Management, the Chair of the CERM Board and the Portfolio Holder for Environment and Neighbourhoods to establish a multi-annual funding framework by April 2010 for the Environment and Climate Change Unit that incorporates sustained up-front capital investment in low-carbon initiatives.			
10	That senior officers work closely with NPower to ensure that an automatic meter reading system is installed throughout the Council estate as early as possible in 2010.			
11	That Bradford Council institutes twice yearly 'Carbon Star Chambers', early in each financial year and again in late autumn, in which the Strategic Directors account for the carbon management of their directorates and the progress they have achieved in addressing climate change. This process could be managed jointly by the Corporate Improvement Committee and the Environment and Waste Management Improvement Committee, and should begin in June 2010.			
12	That Bradford Council integrates carbon budgeting into the annual budget process, beginning in the 2010-2011 financial year, as an explicit consideration for all Strategic Directors.			

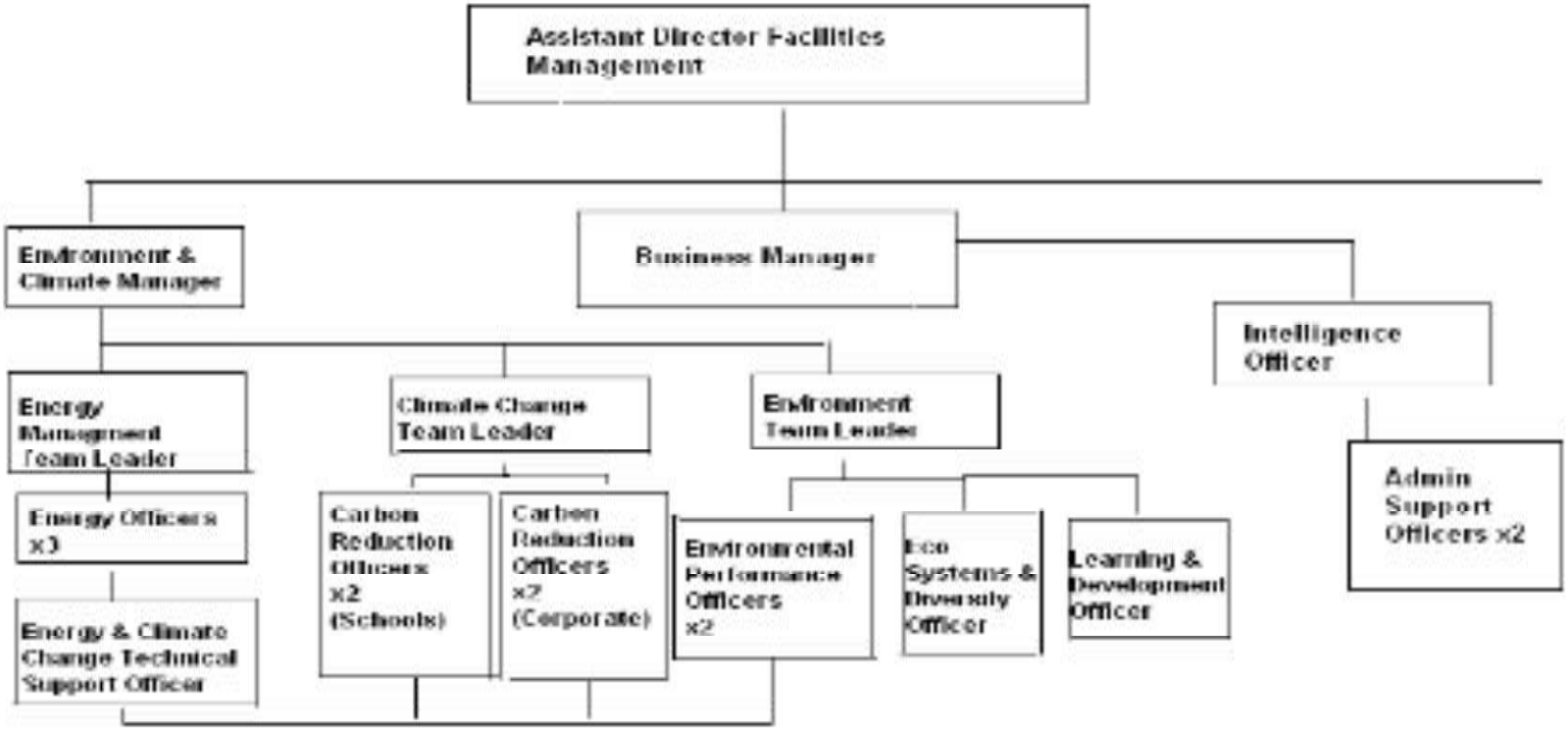
No.	Recommendations	**Recommendations with strategy and policy-making implications.**	Recommendations with organisational capacity-building implications	Recommendations with major financial implications
13	That Bradford Council establish inter-departmental 'footprint groups' in 2010 along the lines pioneered by the Environment Agency, and other 'grassroots' networking and awareness-raising arrangements along the lines pioneered in Kirklees, to encourage and enable frontline staff to reduce their use of energy and contribute to reducing the organisation's carbon dioxide emissions.			
14	That Bradford Council immediately establishes a ring-fenced Carbon Management Fund that will provide a source of continuing investment in low carbon projects across the Council's operations, preferably in conjunction with additional Salix funding, on the basis that all of the revenue savings accruing from these projects will be recycled back into the fund to (a) sustain further low carbon investments and (b) repay the original Salix loans.			
15	That Bradford Council immediately relaxes its policy that investments in low carbon initiatives should have a pay-back period of less than five years, in order to facilitate investment in a wider range of renewable energy projects.			
16	That Bradford Council reviews its electricity procurement policy by April 2010 with a view to: (a) procuring at least 40% of its imported power via renewable tariffs by 2020; (b) establishing contractual arrangements with recognised leading green energy providers such as Good Energy or Ecotricity where possible in the interim period; (c) working with major energy providers like British Gas or NPower to achieve immediate progress in procuring green energy for the Council's estate by April 2012; and (d) liaising with other councils including Bristol and Kirklees to see if their 'greener' street lighting can be replicated in Bradford.			
17	That Bradford Council launches a comprehensive roll-out of SAFED training for all employees who use fleet vehicles in the 2010-2011 financial year.			

No.	Recommendations	Recommendations with strategy and policy-making implications.	Recommendations with organisational capacity-building implications	Recommendations with major financial implications
18	That Bradford Council completes a review of its passenger fleet management arrangements by April 2010 with a view to: (a) creating its own pool of vehicles at the earliest opportunity; and (b) assessing the 'sustainability' dimension of all fleet contracts to ensure that these are as consistent as possible with the forthcoming Climate Change Strategy and Action Plan and that the vehicles in use maximise any opportunities for utilising hybrid and electric technologies and biodiesel fuels.			
19	That Bradford Council completes a review of its vehicle procurement arrangements by April 2010 with a view to investing in hybrid and electric vehicles and using 'B30' biofuels at the earliest opportunity.			
20	That Bradford Council develops a comprehensive Corporate Travel Plan as a matter of urgency, in conjunction with the Climate Change Strategy and Action Plan, with a view to adopting it by April 2010.			
21	That Bradford Council completes a formal review of its Fleet Management arrangements by April 2010 with a view to: rolling out SAFED driver training; acquiring biomethane waste collection vehicles as soon as practicable; boosting the use of biodiesel; and assessing the need for an Integrated Transport Unit.			
22	That Bradford Council reviews the operation of the Primary Capital Programme by April 2010 to ensure that (a) climate change is a core consideration at every stage of its assessment, design and implementation phases and that (b) the PCP exploits every opportunity to draw in outside funding (ie the Low Carbon Buildings Programme Phase 2).			
23	That Bradford Council completes a review of its Service Level contracts and relations with contractors by April 2010, to ensure that these arrangements (a) reflect the Council's carbon management goals and (b) incorporate BREEAM assessments whenever it is technically appropriate to do so.			

No.	Recommendations	Recommendations with strategy and policy-making implications.	Recommendations with organisational capacity-building implications	Recommendations with major financial implications
24	That Bradford Council immediately reviews its Sustainable Design Guide SPD (2006) with a view to upgrading its guidance in relation to climate change and low carbon/carbon neutral developments by April 2010.			
25	That Bradford Council develops and adopts a Supplementary Planning Document by April 2010 that translates Policy EN5, Section B, paragraph 3 into a format suitable for application across the District, with a view to ensuring that all new developments of more than 10 dwellings or 500m^2 of non-residential floorspace secure at least 10% of their energy from renewable or low-carbon sources.			
26	That Bradford Council develops a new Corporate Sustainable Buildings Policy by April 2010 that: (a) ensures that all new corporate buildings and, where appropriate, corporate refurbishments are completed and operated to achieve an 'Excellent' BREEAM rating; (b) ensures that all new corporate buildings secure at least 30% of their energy from on-site renewable or low-carbon sources; and (c) assesses the potential for developing climate-neutral Council facilities from April 2010 onwards.			
27	That Bradford Council, working with its partner organisations, completes a review of the organisational capacity of the Environment Partnership by April 2010 with a view to (a) developing sub-group activity that is explicitly 'action-oriented', and (b) assessing the potential for creating an energy and environment company modelled on the Thamesway Limited company (established by Woking Borough Council in 1999) or the Kent-based Creative Environmental Networks organisation founded in 1997.			
28	That Bradford Council, working with the Environment Partnership, completes an assessment by April 2010 of the options for introducing a District-wide 'ReCharge' scheme that would deliver sustained investment in renewable energy technologies.			

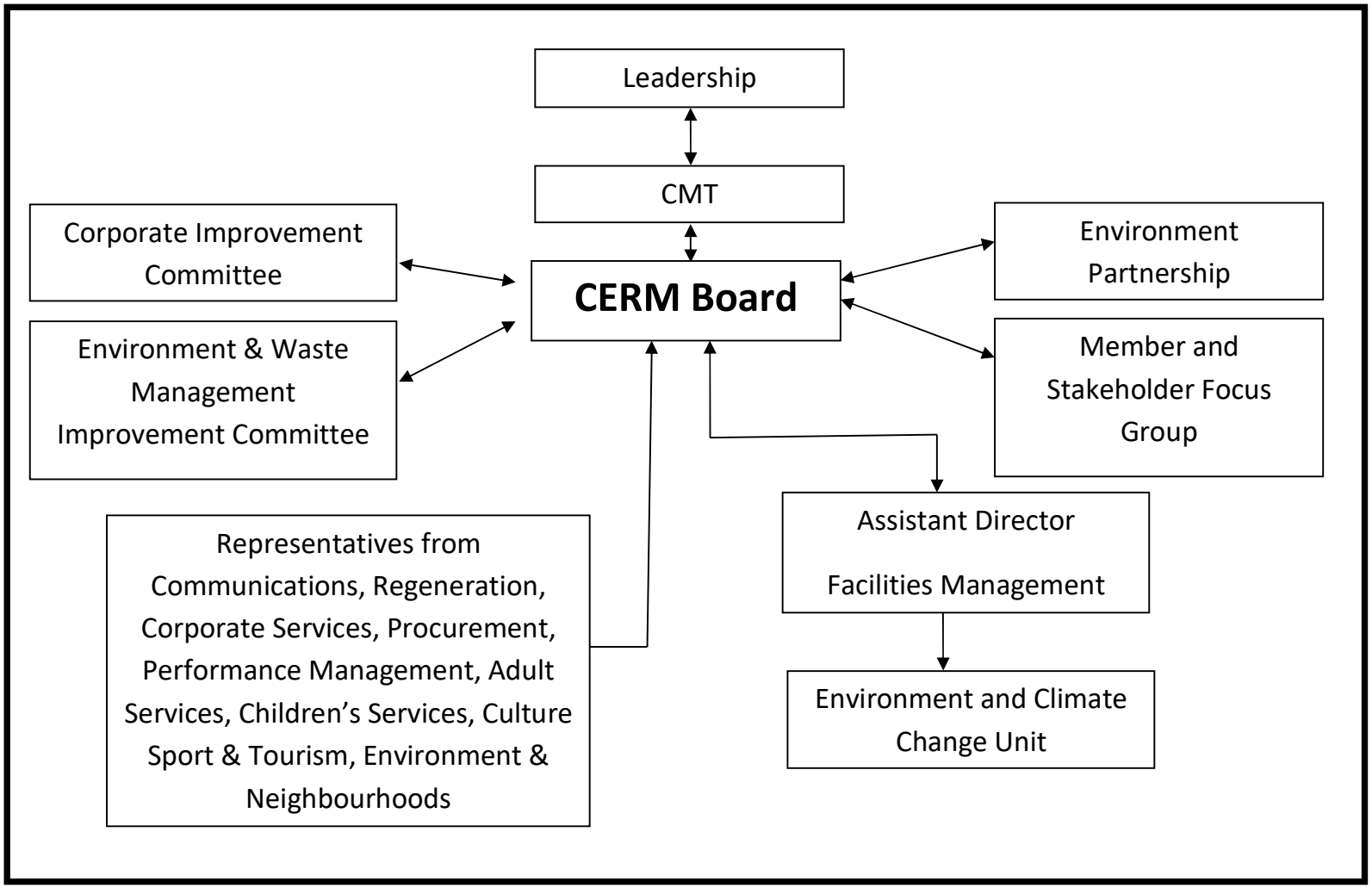
Appendix 4

Proposed structure of the new Environment and Climate Change Unit



CBMDC Corporate Environment Resource Management

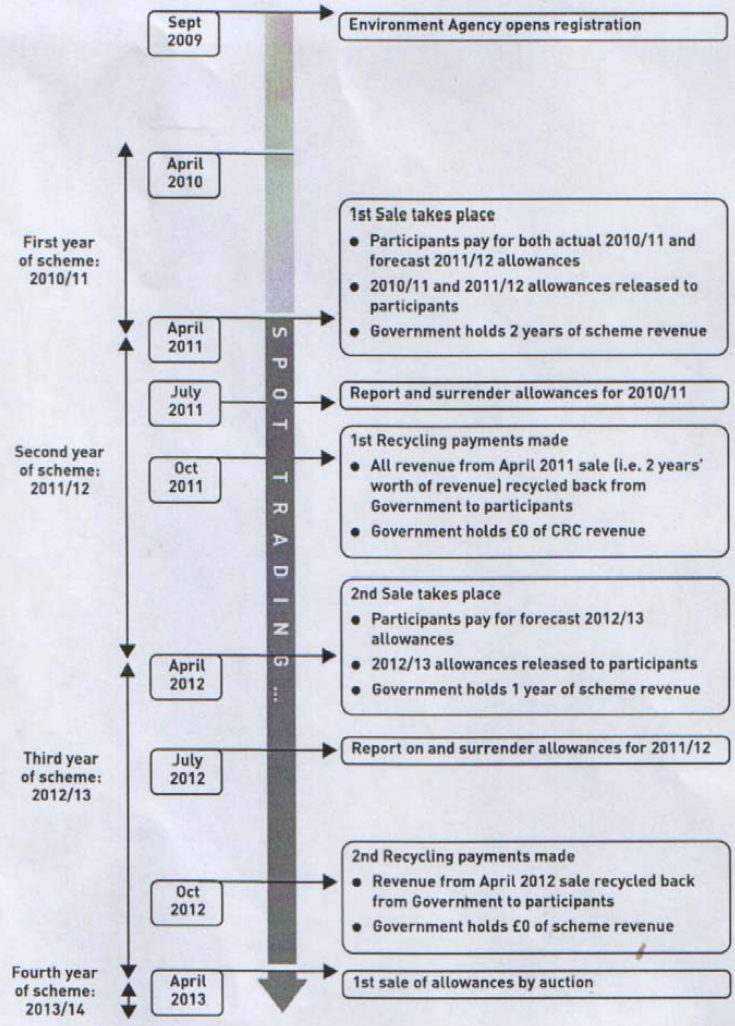
Appendix 5



Appendix 6

Carbon Reduction Commitment Timetable

Figure 1: Carbon Reduction Commitment: Timetable



Appendix 7

Hearings, Witnesses and Written Submissions

Tuesday 15 September	John Bibby, Policy Lead, Health, Environment and Rural Affairs, Department of Performance.
	Jim Pringle, Performance Officer, Strategy and Performance.
Wednesday 30 September	John Bibby, Policy Lead, Health, Environment and Rural Affairs, Department of Performance.
	Ian Bairstow, Strategic Director, Environment and Neighbourhoods.
	Lucy Ashall, Partnership Lead (Environment), Performance Management.
	Jamie Saunders, Strategy Co-ordinator – Sustainability, Chief Executive's Office.
Tuesday 6 October	Errol Guest, Department Transport Manager, Environment and Neighbourhoods.
Wednesday 7 October	Christophe Hamard, BSF Project Manager (Phase 3) , Children and Young People Services.
	Ian Smart, BSF Project Manager (Phase 2) , Children and Young People Services.
Tuesday 13 October	Martin Hamer, Principal Officer Fleet Management, Environment and Neighbourhoods.
	Andrew Marshall, Group Planning Manager (Development Plans and Policies), Department of Regeneration.
	Joe Grint, Transport Planning Manager, Department of Regeneration.
	Fiona Limb, Senior Transport Manager, Department of Regeneration.
	Paul Hart, Sustainable School Travel Co-ordinator, Children and Young People Services.
	Alex Russell, School Travel Plan Officer, Department of Regeneration.
	Richard Isaac, Policy Officer (EMAS), Department of Performance.
Wednesday 14 October	Louis Harvey, Environment Management Team Leader, Environment Agency, Leeds.
	Julia Pearson, Coordinator, Bradford Environmental Education Service.
	Emma Hill, WhyWaste Manager, Bradford.
	Carlton Smith, CEO, Bradford Community Environment Partnership.
	Barra Mac Ruairi, Strategic Director, Regeneration.
	Roosje Barr, Assistant Director, Facilities Management.
Tuesday 20 October	Simon Tao, Energy Help/KES, Department of Regeneration.
	Pete Betts, Acting Senior Housing Strategy Office, Department of Regeneration.
	Ken Jarvis, Energy Conservation Unit, Facilities Management Service.
	Steven Jenks, Provision and Capital Lead Officer, Learning Services, Children and Young People Services
	Cindy Peek, Deputy Director, Children and Young People Services.
Written submissions	Cllr Anne Hawkesworth, Portfolio Holder, Environment and Neighbourhoods.
	Sandra Lomax, Assistant Director Major Projects, Procurement, Department of Performance.