

Taunton Deane Borough Council

Executive – 28 April 2010

Carbon Management Plan 2010-2011

Joint report of the Strategy Officer (Climate Change) and Strategy Lead

(This matter is the responsibility of the Leader of the Council, Councillor Ross Henley)

Executive Summary

This Carbon Management Plan (CMP) provides a clear breakdown of carbon emissions from Taunton Deane Borough Council's direct and indirect operations and contains an Implementation Plan that presents practical actions for reducing these emissions. The CMP covers the period 2008/09 to 2010/11 and will be reviewed annually to assess progress and if necessary, reprioritised.

The Borough Council has established a baseline figure for carbon emissions from its direct operations (ie Council business) and indirect operations (ie through associated partners such as Tone Leisure) for the Year 2006/07. This baseline figure for carbon emissions totals 4,774 tonnes, of which 3,952 tonnes came from Council buildings. This equated to 12,759,192 kWh. The financial cost for this energy in Council buildings was £658,479. Fuel costs through vehicle use were not recorded.

Under the National Indicator (NI) 185: 'CO₂ reduction from local authority operations', the Council has to report on its progress in reducing its own CO₂ emissions to the Government Office annually. For 2010/11, a 7.5% reduction of emissions from the Council's direct and indirect operations is anticipated against the Council's 2006/07 baseline figure.

The Council has also committed itself to reduce carbon emissions from its core business by 10% during 2010 through signing up to the '10:10 Challenge'. The 10:10 Challenge will exclude emissions from associated partners such as Tone Leisure. The Council '10:10 year' will run in line with the financial year from 1 April 2010 to 31 March 2011. Actions on the Implementation Plan (Appendix 1) in place so far are expected to produce a 4.5% reduction in CO₂ towards the 10% target for this year; with a reduction of 18% of carbon emissions to be achieved at Deane House. There are a number of significant projects planned where the saving figures are not yet available. During the course of the year further actions will need to be found in order to meet our 10:10 commitment and the Carbon Management Steering Group will continue to oversee this.

1. Introduction

The former Prime Minister, Tony Blair, stated in the foreword to “Climate Change, The UK Programme 2006” that “Climate change is probably the greatest long term challenge facing the human race”. The Climate Change Programme states that “Action by local authorities is likely to be critical to the achievement of Government’s climate change objectives.”

Taunton Deane Borough Council firmly believes that it should provide strong community leadership in reducing carbon emissions and other measures that are contributing towards climate change and also identify and address actions to assist in adapting to a changing climate.

This Carbon Management Plan (CMP) provides a clear breakdown of carbon emissions from Taunton Deane Borough Council’s direct and indirect operations and contains an Implementation Plan that presents practical actions for reducing these emissions. The CMP covers the period 2008/09 to 2010/11 and will be reviewed annually to assess progress and if necessary, reprioritised.

This CMP is not an end in itself but will form part of an emerging and ongoing Climate Change Strategy to address both the issues of climate change within the Borough Council’s own business organisation and within the wider Taunton Deane community.

2. Why Produce a Carbon Management Plan

The Climate Change Act (Nov 2008) sets the Government’s long-term goal of reducing carbon dioxide emissions by 80% by 2050. The Council has already made an initial commitment to playing its part by signing the Nottingham Declaration on Climate Change in 2006. Reducing greenhouse gas emissions from the Council’s operations is a requirement of signing this Declaration.

The Council’s Corporate Strategy 2010 -2013 makes climate change one of its four key aims with the Council setting itself the objective to reduce the carbon emissions from its own operations by 10% by the end of the financial year 2010/11 and to secure annual reductions thereafter. The Council is also committed to becoming carbon neutral. This Plan sets out the actions which should deliver on the 10:10 commitment and begin to address the longer term aim of carbon neutrality.

Taunton Deane Borough Council is one of the area’s largest energy users. The increased use of energy, and in particular fossil fuels, is the largest cause of climate change. It is essential that the Council sets a behavioural and strategic example in the operation of its functions to the private sector and the communities it serves, by reducing its energy use in a structured and coordinated way, and contributing towards reducing the global and localised impacts of climate change.

As part of the Local Area Agreement (LAA), Taunton Deane Borough Council has signed up to National Indicator 185 “CO2 reduction from local authority operations” which will be reported annually to the Government Office. The aim of this indicator is to measure the progress of local authorities to reduce CO2 emissions from the relevant buildings and transport used to deliver its functions. The indicator is assessed by measuring the year on year reduction of CO2 emissions. The preparation of a CMP should be viewed as an implementation plan by which the authority ensures that it achieves year on year carbon reductions.

‘Tackling Climate Change’ is also a stated priority (11) in the ‘Sustainable Community Strategy 2007-2017’ a document outlining how local organisations and agencies will work together to improve the social, economic and environmental well-being of their area.

In summer 2008, the Carbon Trust took out a survey of the Council’s buildings in order to identify carbon saving opportunities. The Carbon Trust made a range of recommendations which have gone into the Carbon Management Action Plan (Appendix 1).

In a period of rapidly rising energy prices and limited budgets, reducing energy usage also makes sound fiscal sense.

3. Vision Statement and Energy Policy

The Carbon Management Plan is driven by the Councils commitment to providing a cleaner and healthier environment for staff and the Taunton Deane community as set out in the following Vision Statement and Energy Policy.

Vision Statement

Taunton Deane Borough Council is committed to:

1. Reducing our energy consumption and consequent carbon dioxide (CO2) emissions by at least 3% year on year until 2013;
2. Incorporating renewables in the Councils public buildings and facilities and purchasing energy from renewable sources to total at least Y% of the Borough Councils electricity use by 2013¹;
3. Providing leadership and support in promoting sustainability and addressing the issue of climate change across the Taunton Deane community.

Energy Policy

Within operations controlled by this Council we will commit organisational resources to manage energy demand to contain increasing procurement costs and meet the commitments set out in the Vision Statement by:

- Developing Council practices in adopting carbon management reduction as a key objective for the Borough Council;

¹ The proportion (percentage figure) for the incorporation of renewables and the purchase of energy from renewable sources has yet to be set. It will be established for the next CMP for Year 2011/12.

- Adopting an integrated and coordinated approach with other Council plans and strategies to reduce energy use and carbon emissions;
- Regular monitoring of energy use;
- Promotion of energy conservation and awareness amongst staff;
- Purchasing a proportion of energy generated from renewable sources;
- Investing in energy saving technologies;
- Purchasing energy saving plant, including office equipment;
- Modifications to existing plant and fixtures to improve efficiency where practical;
- Reducing emissions associated with travel;
- Thorough consideration of alternative measures prior to procurement of vehicles, plant or equipment that would increase emissions from Council operations;
- Requiring new Council buildings to be designed to high standards of energy efficiency and incorporating renewable energy technology;
- Regular monitoring of the Councils success in reducing its environmental impact and ongoing investigation of further energy reduction measures.

The Management of energy use within Council premises will require:

- Definition of roles and responsibilities for energy use, including ‘green champions’ within each service centre;
- Establishment of clear reporting procedures;
- The purchase energy at the most competitive price;
- Consideration of the life cycle costs when procuring new projects;
- Setting of air temperatures in buildings will not be heated to exceed 21° C and cooling will only be permitted at air temperatures of at least 24° C;
- At least a 200mm space between radiators and furniture wherever possible;
- The use of ‘powerdown’ measures on Council equipment;
- The use of heating systems to commence in October and end at Easter unless otherwise agreed by the appropriate Director;
- Review of the use and energy efficiency of private electrical equipment in Council premises (eg kettles, fridges);
- No personal or other electrical heating appliances;
- The setting and publication of energy performance targets;

All staff and Members are required to:

- Consider their use of energy within Council buildings;
- Turn off equipment when not in use and at the end of the day;
- Turn off lights when leaving a room vacant;
- Pull blinds closed in evenings and overnight to lessen heat loss.

Signed:

Authority:

Signed:

Authority:

Date:

4. Emissions Baseline

The Borough Council has established a baseline figure for carbon emissions from its direct operations (ie Council business) and indirect operations (ie through associated partners such as Tone Leisure) for the Year 2006/07. Later carbon emissions will get measured both against the baseline and year on year figures.

The scope of the Council's total carbon emissions will be reviewed annually in the light of any changes in responsibility or the construction and acquisition of new buildings.

Due to availability of information the baseline for data collection was as follows:

- Energy use within Council property where the Council is responsible for paying the bills: 1 April 2006 – 31 March 2007;
- Tone Leisure operations: 1 April 2006 – 31 March 2007 except Blackbrook Sports Centre which was 1 September 2006 – 31 August 2007;
- DLO Vehicle fleet (fuel consumption): 1 April 2008 – 31 March 2009;
- Private vehicle miles on Council business: 1 April 2007 – 31 March 2008;

The data was input in to the template on the Defra website, formulated for addressing National Indicator (NI) 185. An earlier baseline figure was formulated under the Carbon Trust template. The results are broadly similar.

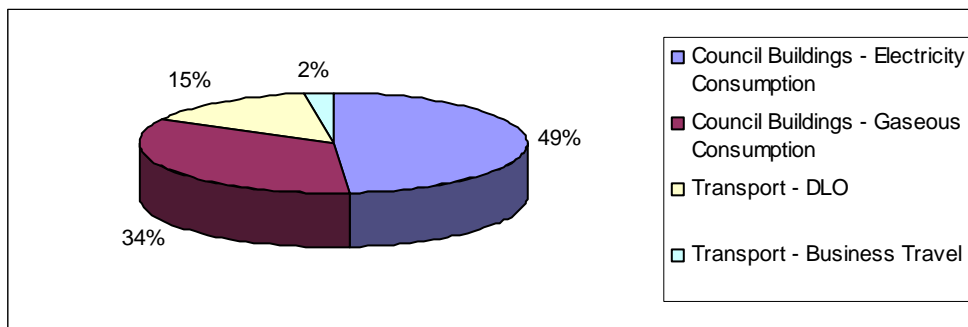
The scope of the project excluded the following:

- Council housing (other than communal lighting areas within stairwells etc). Reducing energy costs for householders will be addressed through a range of other measures such as reducing the levels of fuel poverty and increasing energy efficiency in dwellings.
- Shop units
- Open air public car parks. As adopted areas, lighting is paid by the highway authority. All parking meters are solar powered.
- Procurement of energy generated from renewable sources, which will be addressed through the Council's Energy Policy
- Staff commuting to work. This would be very hard to measure and is not regarded as 'Council business'. However, reductions are being sought through other initiatives included in the Councils Green Travel Plan.
- Waste collection and disposal. As a split responsibility, this is included within the County Councils Plans and therefore omitted by the Borough Council in order to avoid duplication.

In total, the Council's baseline figure for carbon emissions totals 4,774 tonnes, of which 3,952 tonnes came from Council buildings. This equated to 12,759,192 kWh. The financial cost for this energy in Council buildings was £658,479. Fuel costs through vehicle use were not recorded.

Council buildings: Electricity consumption	2,319.353 tonnes	4,434,729 kWh
Council buildings: Gaseous use	1,632.908 tonnes	8,827,952 kWh
Transport DLO	709.396 tonnes	
Transport Business travel	112.842 tonnes	
Total	4,774.499 tonnes	

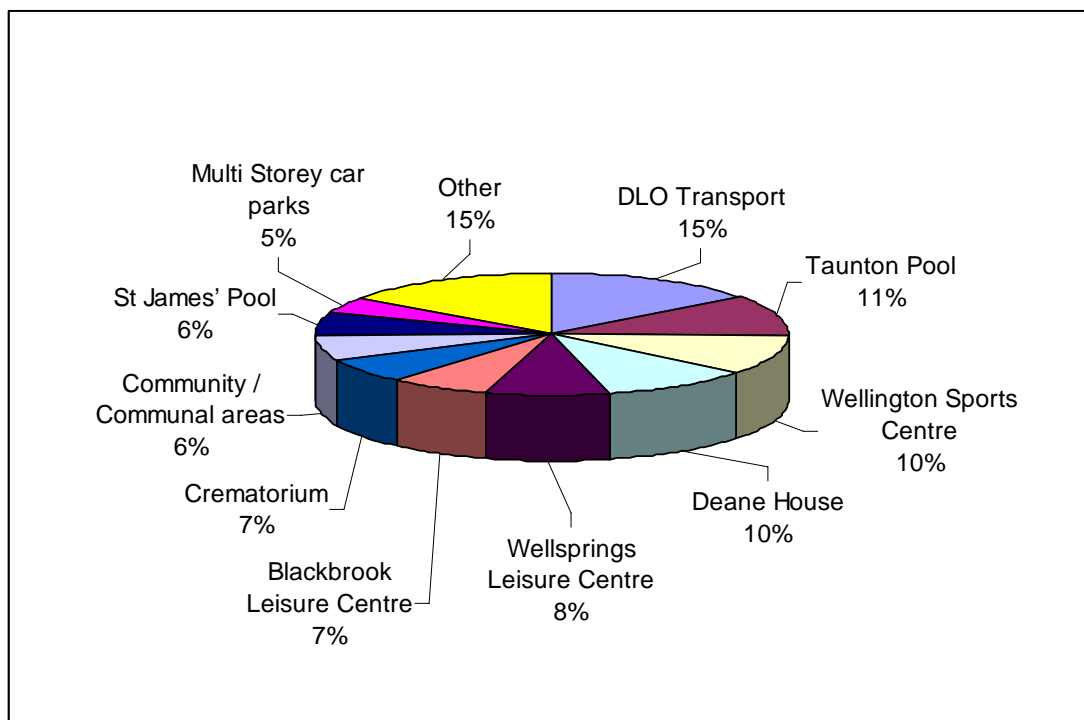
The pie chart below provides a percentage breakdown and gives a good visual interpretation of the Councils high electrical consumption, demonstrating the need to prioritise targeting of electrical use in Council buildings.



The table below provides a more detailed breakdown of carbon emissions by site which can also be expressed as a pie chart (see next page):

Site	Carbon emissions	% of TDBC's total emissions
DLO Transport	709.396 tonnes	15
Taunton Pool	510.199 tonnes	11
Wellington Sports Centre	494.148 tonnes	10
Deane House	483.791 tonnes	10
Wellsprings Leisure Centre	402.455 tonnes	8
Blackbrook Leisure Centre	328.144 tonnes	7
Crematorium	321.351 tonnes	7
Community / Communal areas	304.363 tonnes	6
St James' Pool	290.547 tonnes	6
Multi Storey car parks	215.431 tonnes	5
Others ²	714.674 tonnes	15

² 'Others' covers a large number of estates / areas such as Flook House; The Old Municipal Building, The Tourist Information Centre; The Link Centre; Wellington Community Office; Taunton Market Stalls; the bandstand in Vivary Park; public conveniences; playing fields; the stairwell lighting in Council owned properties; Sewage Works; Pumping Stations; and more.



5. Key Points

The major single source of CO2 emissions are produced from DLO Transport vehicles (15% of total emissions). Addressing working practices, fuel usage and alternatives should be a key priority area for reducing emissions arising from the Council's operations.

Nearly 50% of the Borough Councils total emissions come from just five buildings: Taunton Pool, Wellington Sports Centre, Deane House, Wellsprings and Blackbrook Leisure Centre. All except Deane House are part of Tone Leisure. Actions in Appendix 1 of this Plan include measures to reduce carbon emissions from Tone Leisure and are included within the overall carbon reduction targets sought from the Borough Council. Focussed action on these five buildings will best enable the Borough Councils carbon reduction targets to be met.

The potential for notable improvements of the Crematorium (currently 7% of carbon emissions) is considered to be limited due to the nature of the operation and the fact that more efficient equipment has already recently been installed. Also, the Crematorium is a listed building which makes improvements to the building's structure more difficult to deliver.

Perhaps surprisingly, emissions from private vehicle use on Council business are not within the top 10 carbon users. This should not however be seen as a reason for not addressing 'grey vehicle fleet' use as there may be other valid reasons for targeting this area including reducing the cost of vehicle mileage payments or congestion.

The table below splits carbon emissions into that emanating from electrical and gaseous sources. Apart from the Crematorium, high gas use is associated with swimming space (Taunton Pool, Wellington Leisure centre and St. James Pool). Electrical usage is highest in Deane House, which would be expected considering the large number of workers and associated electrical equipment. In relation to Deane House gas usage, the Carbon Trust assessment indicated that performance (94 kWh/sq.m.) was reasonable, compared with national office benchmark Good Practice (70) and Typical (151).

In terms of overall expenditure, Deane House was the third most expensive building to run (over £80,000 pa), behind Taunton Pool (over £90,000) and Wellington Sports Centre (over £85,000). Opportunities to link energy saving and carbon reduction measures between Deane House and Taunton pool should be explored as they form adjoining sites, thus providing linked opportunities.

Carbon emissions from electrical usage:

Site	Carbon emissions
Deane House	362.126 tonnes
Wellsprings Leisure Centre	326.262 tonnes
Blackbrook Leisure Centre	258.160 tonnes
Wellington Leisure Centre	238.168 tonnes
Multi Storey car parks	215.431 tonnes
Community / Communal areas	194.537 tonnes
Taunton Pool	172.776 tonnes
Estates (staircase lighting)	98,112 tonnes
St James' Pool	77.745 tonnes
Public toilets	74.532 tonnes

Carbon emissions from gas usage:

Site	Carbon emissions
Taunton Pool	337.423 tonnes
Crematorium	260.563 tonnes
Wellington Leisure Centre	255.980 tonnes
St James' Pool	212.802 tonnes
Deane House	121.665 tonnes
Community / Communal areas	109.826 tonnes
Priory Depot	76.766 tonnes
Wellsprings Leisure Centre	76.193 tonnes
Blackbrook Leisure Centre	69.984 tonnes
Ellis Field Nursery (Mount St)	49.652 tonnes

6. Trends

Energy bills over previous years are somewhat incomplete, although Taunton Pool, Wellington Sports Centre and Deane House appear to have remained

the highest energy users throughout recent years. Despite the lack of regular information some interesting points emerge:

The total carbon emissions from gas and electricity in Deane House rose by nearly 7% (from 453 to 483 tonnes of CO₂) over the period 2001/02(03 electricity) to 2006/07. Over this period, the electricity consumption increased by 20% (from 576,632 kWh to 692,405 kWh) and emissions from electricity rose from 301 to 362 tonnes of CO₂. The consumption of gas decreased by 20% (from 821,071 kWh to 657,756 kWh) and emissions from gas decreased from 152 to 121 tonnes of CO₂.

It is likely that the increased use of electricity in Deane House since the 2002/03 reading is a combination of an ongoing increase in the use of electrical equipment (some sections for examples now have two active computers on their desk) and careless usage of electrical equipment; an autumn 2008 survey by Facilities staff for example found that over 100 computers, monitors, photocopiers etc were left on over the weekend.

The decline in gas usage over the same period is attributed to better programming of the boilers, in part attributable to the purchase of the 'Jelnet' control system, making it easier to avoid weekend and holiday heating and overrunning the heating system during evening meetings.

In contrast, overall energy consumption at Taunton Pool actually fell. The combined CO₂ emissions from electricity and gas dropped by 22% from 658 tonnes in 2001/02(03 electricity) to 510 tonnes in the 2006/07 base year.

Between 2002/03 and 2006/07, the electricity consumption fell by 10.8% from 371,055 kWh (194 tonnes CO₂) to 330,356 kWh (173 tonnes). The use of gas decreased by 27% from 2,509,608 kWh (464 tonnes) to 1,824,204 kWh (337 tonnes) between 2001/02 and 2006/07.

The decline in electricity use is probably due to reduced opening hours at Taunton Pool. The considerable decline in gas is believed to result from the removal of the CHP system after 2002. This system was purchased second hand, was extremely inefficient and there were difficulties in getting qualified service engineers and spares for the plant. The pool is now heated by a mains gas system.

The same picture emerges from gas usage at Wellington Sports Centre where the CHP plant was also replaced, falling from 390 tonnes of carbon emitted in 2001/02 to 256 tonnes in 2006/07, a fall of 34%. A new thermal pool cover, reprogramming of boilers to restrain overnight heating and a more efficient shower system have also contributed to the falling gas use. No comparable electricity figures are available although as Taunton Pool, opening hours have been reduced over recent years.

The 22% reduction in overall carbon emissions at Taunton Pool and 7% increase at Deane House over a c5 year period is particularly interesting since Defra projections of carbon usage from local authority operations assumes as

a starting point a 7% per annum 'Business As Usual' (BAU) increase from local authority buildings (prior to projected target reductions).

Future monitoring will reveal whether existing energy saving practices provide continual ongoing carbon savings under a BAU scenario or whether the easier 'hits' have now been exhausted. What is apparent though is that complete historic data could have provided an earlier baseline figure and thus greater opportunities for percentage CO2 reductions from that base.

7. Year-on-year emissions data: Comparison of 2006/07 with 2008/09 data

Carbon emission data from the Council's operations are available for the years 2006/07 and 2008/9. The data for Year 2009/10 will be available from May 2010.

There is no data available for the Year 2007/08. Whilst the baseline (for 2006/07) was prepared in expectation of the National Indicators coming into force the following year (2007/2008), they did not become a requirement until 2008/09 and thus were not collected for the 2007/08 period.

The Council's total carbon emissions for 2006/07 were 4,774 tonnes and 4,806 tonnes for 2008/09. This equates to an increase in emissions of 0.7% or 32 tonnes over the period. However, the Council's total carbon emissions of 4,806 tonnes for 2008/09 still include the energy consumed by the SouthWest One Contact Centre that will get deducted once a full year of meter readings for the Centre is available (see: Section 8). Once this usage has been deducted, the Council's emissions for 2008/09 will definitely be lower than 4,806 tonnes. The 0.7% increase stated above should therefore be treated as a provisional figure that will change in due course.

The table below provides a breakdown of changes in emissions for the Council's main sites for the period between 2006/07 and 2008/09:

Site	Carbon emissions 2006/07 (tonnes)	Carbon emissions 2008/09 (tonnes)	Changes in carbon emissions in %
Taunton Pool	510.199	568.417	+10%
Wellington Sports Centre	494.148	553.485	+11%
Deane House	483.791	479.849	-0.8%
Wellsprings Leisure Centre	402.455	397.737	-1%
Blackbrook Leisure Centre	328.144	352.148	+7%
Crematorium	321.351	335.254	+4%
St James' Pool	290.547	250.240	-13%
DLO Priory Depot	143.794	164.105	+12%

This section of the Carbon Management Plan will get updated annually with the latest emission figures. The Carbon Management Plan for 2011/12 will show the figures for 2009/10 and so forth. This way we will build a record of the year-on-year changes in the Council's carbon emissions.

8. Finance

Whilst the need to combat climate change and initiate best practice to the wider community is the key driver in the Council's actions to reduce carbon emissions, energy cost is also an important factor.

Rates seem to be negotiated on a site-by-site basis and through changes in supply companies but the overall trend over recent years has been one of significant price increase. As oil and fossil fuel production peaks and commences to decline, economic and domestic demand grows and issues of security of supply become more important, prices are likely to continue to increase.

An example of the recent extent of price increases can be gauged within Deane House. In 2002 cost of daytime electrical costs stood at 4.967p per unit. By the 2006/07 baseline year cost had increased 83% to 9.08p. The night rate for electrical use rose by 94%. The cost of gas use increased to an even greater extent over this period, rising 146%, from 1.1894p – 2.926p per kWh. Seen in this context, managing energy demand within Council operations may not actually reduce energy bills but should assist in containing procurement costs.

9. 2010/11 update on TDBC's NI185 responsibilities

Under National Indicator 185 the Council has a duty to establish the total emissions from its direct and indirect carbon emissions. However, due to changes in responsibility or the construction and acquisition of new buildings, the areas that need to be considered in the total emission figure can vary over the years. Section 4 of this document therefore recommends an annual update of what goes into the Council's total emissions figure.

The areas that will be considered in the Council's total emissions figure for the Year 2010/11 are the same that were included in the 2006/07 baseline figure (details in Section 4). The same applies to areas that were "excluded" from the baseline figure. These will also be excluded from the 2010/11 figure.

The significant difference for 2010/11 is that the electricity consumed by the SouthWest One Contact Centre that operates from the third floor of Deane House will be removed from TDBC's total emissions figure from November 2008 onwards, when the Centre started its operation. The reason behind this is that although TDBC pays the Centre's energy bills, it has no means to influence the Centre's energy consumption. The Call Centre also provides a service for two other organisations: Somerset County Council and Avon & Somerset Police. Therefore, the Contact Centre should start to report its NI185 independently from the three partners.

10. 2010/11 Implementation Plan

Appendix 1 of this document contains the Borough Councils proposed action plan for reducing its carbon emissions during Year 2010/11. These actions were established through the work of the Carbon Management Steering Group that consists of interested Members and representatives from the various TDBC service areas (Section 10).

The actions included in the Plan for 2010/11 focus on the Crematorium, Deane House, the DLO, and Tone Leisure. The Plan also contains actions that marked as 'Corporate', because they will have an impact across all service areas. All actions in the Plan will be funded either through the relevant service area budgets or the central climate change budget.

The action plan is the result of a sieving exercise. A number of actions have been discussed, but finally discounted for cost/benefit and/or feasibility reasons, such as the replacement of windows and installation of louvred solar shading at Deane House.

Where ever possible, actions have been quantified in terms of their estimated carbon savings and cost savings. This was not possible for all actions, but the carbon savings will ultimately show in TDBC's total emissions figure for the Year 2010/11 that will be established from the Council's energy bills at the end of the year.

As it has not been possible to quantify the impact of all actions upfront, it is difficult to establish an accurate carbon reduction target figure for the Year 2010/11. However, a carbon reduction of 7.5% from the Council's 2006/07 baseline figure is anticipated to be achieved in 2010/11. This is well above the 3% cross-county reduction target that was agreed between the five local authorities in Somerset and Somerset County Council in March 2010.

Several actions have already been earmarked for the next action plan (Year 2011/12). These include:

- Review of the insulation at the Crematorium
- Replacement of existing fluorescent lighting with high frequency tubes at Deane House
- Driver training (rolling programme of 100 drivers each year across all areas)

Also, a number of emerging policies are likely to result in actions that will reduce the Council's emissions in 2011/12. These policies are:

- SouthWest One: Procurement Strategy
- TDBC Information Systems (IS) Strategy
- TDBC Travel Plan (update)

A number of 'trials' are underway that if successful will result in carbon saving projects. These trials include a fuel saving device that is currently being tested on two DLO vehicles. The DLO will also test an electric van that is on the

market from June 2010. DLO Housing Services are experimenting with PIR (Passive InfraRed) motion detector floodlights that could provide total savings of up to 7.5 tonnes CO2 over the next years.

During 2010/11, also research will be undertaken into out-of hour electricity consumption at Deane House and potential carbon savings that could be made by reducing the opening hours of the building during the heating period (though not the public opening hours).

11. TDBC’s commitment to the “10:10 Challenge”

In October 2009, the Borough Council signed up to the “10:10 Challenge”. Individuals and organisations that sign up to this national campaign commit themselves to an aspirational 10% reduction of their carbon emissions during 2010.

TDBC will apply this goal to the buildings and operations at the core of its business, which are: Deane House, the DLO, the Crematorium, Community and Communal areas and those listed under ‘Others’ in Section 4. As the “10:10 Challenge” can be started at any point between 1 January 2010 and 30 June 2010, we have chosen to start our ‘10:10 year’ on 1 April 2010, so that investments into carbon reductions projects can be made in line with the Council’s financial year.

Plans in place so far are expected to produce a 4.5% reduction in CO2 towards our 10% target for this year. There are a number of significant projects planned where the saving figures are not yet available. During the course of the year further actions will need to be found in order to meet our 10:10 commitment and the Carbon Management Steering Group will continue to oversee this.

12. Governance/Ownership/Management

Effective and ongoing ownership of the Carbon Management Plan is essential to its success. The key people and groups responsible for the ongoing management of the CMP and its implementation are as follows.

Role	Name	Position
Lead Member	Cllr. Ross Henley	Leader of the Council
Champion for carbon management	Cllr. Catherine Herbert	Chair of Renewable Energy and Energy Efficiency Task and Finish Group
CMP Sponsor	Kevin Toller	Strategic Director
CMP Project Lead Officer	Torsten Daniel	Strategy Officer (Climate Change)
	Roger Mitchinson	Strategy Lead
Carbon Management Steering Group	Kevin Toller	Strategic Director (chair)

	Chris Mulcahy	Parks Manager
	Brian Gibbs	Highways and Cleansing Manager
	Phil Webb	Housing Manager – Property Services
	Paul Rayson	Crematorium Manager
	Angela Hill	Facilities Manager
	Debbie Rundle	Media and PR Officer
	Theresa England	Tone Leisure Operations Director
	Mark Washington	Sports Centre Manager
	Rob Erskine	Surveyor
	Roger Mitchinson	Strategy Lead
	Torsten Daniel	Strategy Officer (Climate Change)
	Cllr Herbert	Task and Finish Chair
	Cllr. Hayward	Ward Norton Fitzwarren
	Cllr. McMahon	Ward Milverton & North Deane
	Cllr. Stock-Williams	Ward Wellington Rockwell Green and West
	Cllr. Wedderkopp	Ward Comeytrowe
South West One liaison	Fiona Kirkham	Information Systems Manager

13. Communications

The programme and its success will be promoted through press releases and displays at public buildings in order to demonstrate the actions the Council is taking to address climate change. This will be coordinated by the Borough Council's Media and Public Relations Officer.

A Climate Change website is under development in the Strategy Unit. The CMP and other associated literature will be hosted on this site.

Associated actions through other plans and strategies will be similarly promoted to encourage residents and businesses to reduce their carbon emissions.

Internally, each Service Centre will nominate a 'green champion' to promote and monitor energy efficiency and savings within their area. Progress in meeting carbon reduction targets will be reported via the Weekly Bulletin and Intranet site.

The Steering Group will report to the Council Forum every six months on comparative carbon emissions and savings made through initiatives outlined in the Implementation Plan.

The Climate Change Steering Group will annually monitor progress and performance against the Implementation Plan, together with proposed works over the next two years. This will be reported to Overview and Scrutiny Board prior to consideration by Executive.

14. Monitoring

Overall management of monitoring will be undertaken by the Carbon Management Steering Group, set out in Section 9. Close monitoring of the implementation of established Priority Actions and the approach outlined in the Communications Strategy will be central to identifying the overall success of the Carbon Management Plan.

The key monitoring issues will be:

- The setting of a targeted reduction of year on year energy use from Council operations, to be used as part of the monitoring process for NI185;
- An annual rolling reassessment of the Action Plan to include assessment of actual energy savings through the published data and prioritised actions;
- Regular monitoring of 30 minute data for maximum demand sites (including individual monitoring areas in Deane House, where possible);
- Appoint and train Green Champions to promote and monitor energy efficiency and savings within their area
- Prepare and implement an Energy Awareness Programme;
- Publication of energy monitoring results on notice boards and intranet site.

15. Recommendation

The Executive is recommended to approve and adopt the Carbon Management Plan 2010/2011.

Contact

Torsten Daniel, Strategy Officer (Climate Change), Strategy Unit, Ext: 2458

Roger Mitchinson, Strategy Lead, Strategy Unit, Ext: 2418

Appendix 1: Implementation Plan

Proposed Action Plan Items									
When?	What?	Brief explanation of action (if necessary)	Where?	Person in charge	Estimated costs	Funded by: S (Service Area); C (centrally)	Estimated carbon savings (tonnes of CO2) per annum	Estimated cost savings per annum	When implemented?
Year 2008/09									
2008/09	Stairwell lighting	removal of 4 x 75W 'overgenerous' light bulbs in main stair case	Deane House	Rob Erskine	£0		0.1	£29	Jun-08
2008/09	Insulate primary heat circuit and secondary plant room valves		Deane House	Rob Erskine	£1,700		0.3		Feb-09
2008/09	Automatic thermal screens to prevent heat loss in cold periods, also reflects sunlight in hot weather		Taunton Deane Nursery	Chris Mulcahy	Part of construction cost			£2,000	Implemented
TOTALS					£1,700		0.4	£2,029	
Year 2009/10									
2009/10	Grey fleet	10% reduction in all travel budgets	Corporate	Kevin Toller	£0		11.3		Implemented

2009/10	Fridge replacement	10 new A-rated fridges to replace old, less energy efficient fridges	Deane House	Steve Lovell	£3,000		0.8	£1,600	Mar-10
2009/10	Insulating ductwork		Deane House	Rob Erskine	£4,000		2.3		Feb-09
2009/10	Heat harvester		Deane House	Rob Erskine	£1,500		1		Dec-09
2009/10	Reduction of light tubes (Rolling programme)	Taking out 40 x 35W light tubes	Deane House	Rob Erskine	£0		0.9	£261	2009
2009/10	Insulation of poor insulated building and replacing of windows with double glazing		DLO Depot	Phil Webb	£3,000		1.1	£300	2010
2009/10	Improve energy management and awareness policy etc Depot	E.g. includes improving the operation and management of IT equipment and office equipment	DLO Depot	Phil Webb	Minimal		1.2	£195	Apr-09
2009/10	Install fuelstreicher device		Taunton Pool	Theresa England	£6,200		55	£2,500	Implemented
2009/10	Revise BMS control, Wellsprings		Wellsprings	Theresa England	£500		61.8	£9,544	Implemented
2009/10	Revise AHU operational times on BMS, Wellsprings		Wellsprings	Theresa England	£500		17.3	£2,662	Implemented
2009/10	Improve energy management and awareness policy etc Tone	Staff awareness, better housekeeping	All Tone sites	Theresa England	Minimal		49	£5,748	Implemented

TOTALS					£18,700		201.7	£22,810	
Year 2010/11									
2010/11	Asset rationalisation	TDBC staff will move from Flook House to Deane House	Corporate	Kevin Toller	£0	-	23		
2010/11	Smarter Driver Training (Rolling programme)	100 drivers initially	Corporate	Torsten Daniel	£1,500	C	6		
2010/11	Sustainable Procurement Policy	Includes: ceiling of 140gCO2/km for lease cars	Corporate	Stuart Busfield (SW1)					
2010/11	Replacement of lighting (fluorescent)	Replacement of broken tubes with more energy efficient, high frequency tubes	Crematorium	Paul Rayson	£350	S	0.3	£40	
2010/11	Replacement of lighting (halogen)	Replace small halogen spotlights by LED equivalents	Crematorium	Paul Rayson	£150	S	0.5	£80	
2010/11	Replacement of cremators	3 new cremators and mercury filtration equipment	Crematorium	Paul Rayson		S			

2010/11	Power perceptor	voltage optimisation, reduces electricity usage by 10%	Deane House	Rob Erskine	£22,863	C	38	£9,192	
2010/11	Reduction of light tubes (Rolling programme)	Removal of another 40 x 35W light tubes	Deane House	Rob Erskine	£0	-	0.9	£261	
2010/11	Explore potential for specific rewiring of lights	e.g. Staff entrance; Room 249	Deane House	Rob Erskine	£1,000	S	0.4	£116	
2010/11	Explore potential for PIR (Passive InfraRed) motion detectors	e.g. Staircase 5	Deane House, Crematorium	Rob Erskine		S			
2010/11	Investigate and address high out-of-hour electricity consumption	high overnight electricity consumption, and morning and evening peaks on weekends and bank holidays during heating season	Deane House	Rob Erskine	-				
2010/11	Insulation of north wing		Deane House	Rob Erskine	£900	S			
2010/11	Additional insulation of loft	Plus 150mm	Deane House	Rob Erskine	£4,000	S			
2010/11	Replacement of boilers		Deane House	Rob Erskine	£55,000	C	24	£4,100	

2010/11	Partial zoning of heating system	Zoning of the building into 2-3 heating circuits and changing of pumps	Deane House	Rob Erskine	£9,000	C	6	£1,000	
2010/11	Committee room air conditioning	repair case, put lock on it and reset heat and cooling point to 21 and 24oC	Deane House	Steve Lovell		S			
2010/11	Solar shading	Film to be applied to windows in Development Management Room	Deane House	Rob Erskine	£1,800	S	0.2	£58	
2010/11	Improve energy management and awareness policy etc Deane House	This includes: awareness training staff (lights, equipment), cleaners	Deane House	Debbie Rundle / Green Champions	Minimal	-	17.9	£2,800	
2010/11	Investigate potential for reducing opening and closing times of Deane House		Deane House	Torsten Daniel		-			
2010/11	Computer shutdown system		Deane House	Fiona Kirkham	Minimal				
2010/11	Set the cooling point for the server room air conditioning to 24/25oC		Deane House	Fiona Kirkham					

2010/11	Improve control of heat appliances	This includes installing time controls on space heaters	DLO Depot	Phil Webb	£200	S	5.4	£900	
2010/11	Reduction of light tubes (Rolling programme)		DLO Depot	Phil Webb		-			
2010/11	Trial of PIR floodlights	conversion of 9x150w PIR fittings to low energy type	Enmore Road and Cheddon Road flats	Phil Webb	£450	S	0.8	£143	May-10
2010/11	Replacement of 16W 2D with HF fittings as they fail		All housing flat blocks	Phil Webb	£30 per fitting	S	4.5kg per fitting	£0.83 pa per fitting	
2010/11	Investigation of 18 'Piper lifeline' supplies	believed to be being decomissioned	Various locations	Phil Webb	£250	S	4.3	£796	
2010/11	Trailing fuel saving device on Deane DLO vehicles being developed by local company		Deane DLO vehicles	Brian Gibbs	Ongoing trial to start in March - no cost known at this stage	S	0.3		
2010/11	In-house driver training	30 drivers	Deane DLO vehicles	Brian Gibbs	£1,500	S	5.8	£624	Jun-10
2010/11	Successful implementation of the facility opening hours project		TL - All sites	Theresa England	£0	-	20	£4,000	May-10

2010/11	Installation of variable speed drives		TL - Station Rd Pool	Theresa England	£21,000	?			
2010/11	Installation of fuel stretcher		TL - Wellington Sports Centre	Theresa England	£5,400	S	38	£5,000	Apr-10
2010/11	Use of smart meters		TL - Wellington Sports Centre	Theresa England	£2,200	S			Apr-10
2010/11	Wellington Sports Centre Free Swimming bid	£350,000 bid with Sport England. If successful used to make plant more energy efficient.	TL - Wellington Sports Centre	Theresa England		Bid			
TOTALS					£127,563		191.8	£29,110	
Year 2011/12									
2011/12	Review of insulation	E.g. draught proofing, roof insulation	Crematorium	Paul Rayson		S			
2011/12	More efficient use of cremators	New law allows to keep corpses for 24h	Crematorium	Paul Rayson	£0	-			
2011/12	Replacement of lighting	Replacement of all tubes with high frequency T5 tubes	Deane House	Rob Erskine	£30,000	C			

2011/12	Replacement of lighting	Convert 1.2m long and above fluorescent tubes at Priory Depot to high frequency	DLO Depot	Phil Webb	£4,300	S	3.3	£530	
TOTALS					£34,300		3.3	£530	
Potential Actions Year 2011/12									
	Thin Client computers		Corporate	Fiona Kirkham					
	Replacement of boilers with wood fuel burners	Would not work for Deane House but can be considered for smaller offices, residential care homes, etc	Corporate	Rob Erskine					
	Reclaiming heat from server room		Deane House	Rob Erskine / consultant					
	Solar thermal water heating	installation on roof of Deane House	Deane House	Rob Erskine					
	Investigate the practicality of 100% fresh air ventilation in summer	Recommended by Carbon Trust 2008	Deane House	Rob Erskine					

	Energy efficient hand dryers			Torsten Daniel					
	Reduce lighting and opening hours	At 13:00 all lights on, of which half unnecessary because enough daylight was available. Smaller car park opened 24/7	Multi-storey car parks	John Lewis					
	11kW Wind turbine		? Taunton Deane Nursery, Blackbrook LC, Longrun Farm	Rob Erskine/ Chris Mulcahy / Torsten Daniel	£50,000		15.7	£10,000	