



Torrige District Council

Carbon Management Programme



Date: November 2009
Version Number: V2
Owner: Andrew Champion BSc (Hons) MRICS
Approval:

Forward

Cutting carbon emissions as part of the fight against climate change should be a key priority for all local authorities. The UK Government has identified the local authority sector as key to delivering carbon reduction across the UK, inline with its Kyoto commitments, the Local Authority Carbon Management programme is designed in response to this. It assists council's like Torridge in saving money on energy and outing it to good use in other areas, whilst making a positive contribution to the environment by lowering their carbon emissions.

This Carbon Management Strategy and Implementation Plan commits Torridge District Council to a target of reducing CO₂ by 12.5% by 2014 and underpins potential financial savings to the council of £314,105 overall. If all proposals / recommendations are fully implemented.

Torridge District Council recognise that local authorities can contribute significantly to reducing CO₂ emissions. This document has been compiled following guidelines and procedures recommended by the Carbon Trust.

Contents.

	Strategy
1.	Executive Summary
2.	Introduction to the main report
2.1	Background to the Carbon Management Programme
3.	Carbon Management Strategy.
3.1	Context And Drivers
3.2	Vision
3.3	Objectives and Targets
3.3.1	Objectives
3.3.2	Targets
3.4	Strategy
4.	Emissions Baseline and Projections
4.1	Scope
4.2	Baseline
4.3	Projections
4.3.1	Business As Usual Scenario (BAU)
4.3.2	Reduced Emissions Scenario (RES)
4.4	Past Actions and Achievements
	Implementation Plan
5.	Carbon Management Implementation Plan
5.1	Short Listed Actions and Emission Reduction
6.	Implementation Plan Financing
7.	Stakeholder Management And Communications
7.1	Stakeholder Management
7.2	Communication Plan
8.	SIP Governance, Ownership and Management
8.1	Main Roles and Responsibilities
8.2	Risk and Issues Management
8.3	Benefits Management
	Appendix A : Carbon Management Projects

1. Executive Summary

Introduction:

Torrige District Council has compiled a Local Authority Carbon Management Programme following the guidelines set out by the Carbon Trust. The main aim of this is to provide a comprehensive process for measuring and managing the carbon emissions produced through the Council's operational processes through a Strategic Implementation Plan, (SIP). This sets out a programme of actions to be taken for cost effective reduction over the next five years. The programme forms one of the actions required to meet the needs of the Council's Corporate Climate Change Strategy.

Carbon Management Strategy:

The Carbon Management Strategy has been developed to address a number of external and internal drivers, which are identified in the main report.

Torrige District Council recognises the need to tackle climate change at a local level. Our Vision is to reduce the amount of carbon emissions produced through working practices and operations within our control to the minimum that is realistically possible. This will be achieved by firstly reducing our power usage and introducing the most efficient solutions and working practices before we seek more sustainable and innovative power sources or operational solutions to further reduce our emissions.

Targets:

To achieve the Council's aims a set of targets has been agreed.

- To reduce CO₂ emissions for council operations and functions by at least 12.5% below 2008/2009 levels by 2014
- To reduce energy consumption by 3% annually over the next five years.
- To generate 5% of the Council's electrical energy from renewable sources by 2014 and 20% by 2050.
- To achieve the highest possible Energy performance rating within the constraints of physical and financial practicalities of adapting existing buildings, for all the Council's operated buildings with the highest energy usage. The minimum target is a "C rating" for all existing buildings and an "A rating" for all new buildings.

Strategy:

Whilst emission savings will be sought from areas of the council's operations it is recognised that buildings and transport are potentially able to deliver the largest savings, as they are the main source of our emissions. Another area where it may be possible to make significant reductions in emissions is staff commuting. A Green Travel Plan is being introduced, part of which will encourage staff to use more sustainable forms of travel to work. However as the public transport opportunities are limited at the present time and as the area is predominantly rural it may take some time before the benefits are realised.

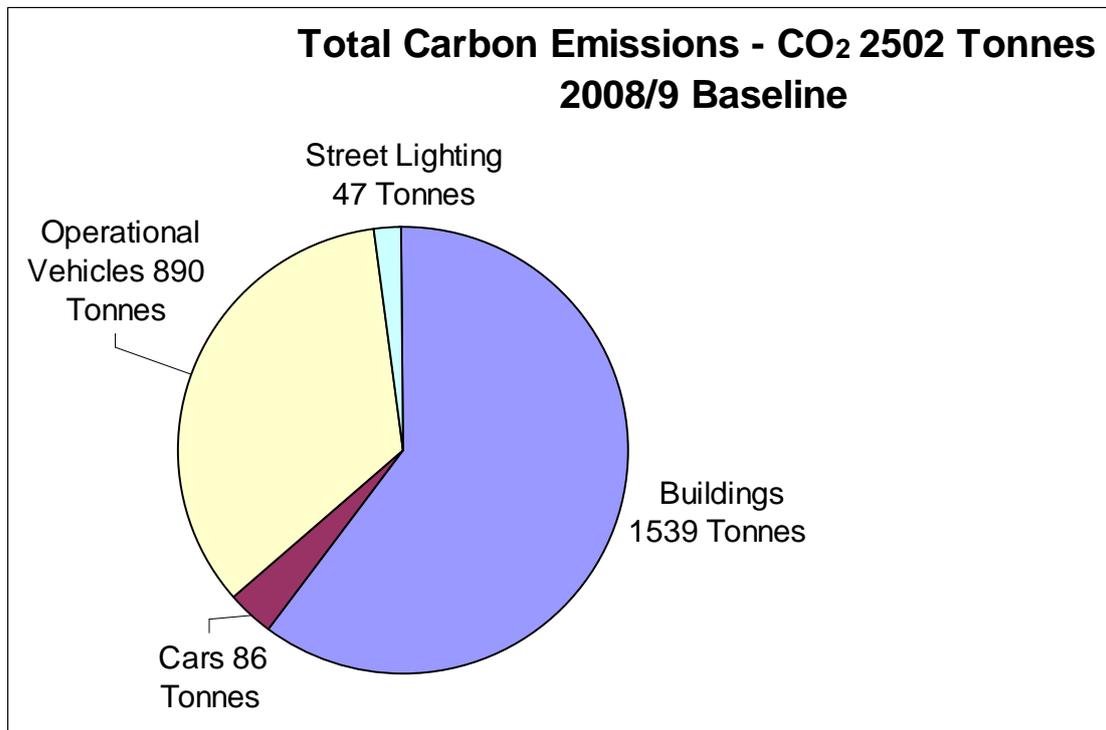
Emissions Baseline and Projections:

The scope of the emissions baseline includes

- All Torridge owned and managed properties, but will exclude any properties which are leased to others and over which the council has no management control.
- Fleet Transport including vehicles operated by Torridge staff (leased vehicles to officers), Operational Services, Countryside Warden, Car Park Wardens, Caretakers and Pilot Boat, Quayside Crane.
- Car Parks
- Staff Commuting
- Decorative Lighting
- Leisure and Sports Centres

Torridge Carbon Emissions:

The total CO₂ emissions produced by the Council's operations are 2,505 tonnes (2008 /2009). The chart below shows the breakdown of the overall carbon emissions for the base year 2008/09.



Projections:

Projected CO₂ emissions for the Business as Usual scenario (BAU) have been calculated with the aid of a spreadsheet tool and show the expected emissions up to 2012. The BAU scenario assumes we do nothing to reduce the existing trends in energy use within the Council and reflects the effects of actions already taken or underway to reduce emissions. This indicates an increase by 2012 of CO₂ emissions by 7% per annum. 1,978 tonnes (buildings) and 1,305 tonnes (transport), to a total of 3,283 tonnes pa.

The total potential saving in financial terms for a six-year period up to 2008/2014 is £314,105. It maybe in reality that these figures are not fully achievable, as the implementation of some measures may not be financially viable. However, we are confident that significant cost effect savings could be achieved, with relevant investment.

Short Listed Actions And Emission Reduction Opportunities:

A list of actions and measures has been identified in Appendix A of this report. The total CO₂ saving identified is 2,036 tonnes however the high cost options are the highest risk due to technical feasibility and funding available so may not be implemented within the plan period.

The table below shows annual savings for the five years that the programme covers.

Summary of predicted costs and savings

Total Estimated Capital Expenditure = £1,426,339		Total Estimated Revenue Expenditure = £20,000			
Total Annual Cost Savings = £75,596 in year 5					
Total Cost Saving over 5 year period of the Implementation Plan (SIP) = £314,105					
	09/10	10/11	11/12	12/13	12/14
Cumulative Annual Savings	£21,209	£66,108	£75,596	£75,596	£75,596
Annual Operational Costs	£5,000	£5,000	£5,000	£5,000	£5,000
Annual Capital Investment Including Fees	£242,000	£464,339	£240,000	£240,000	£240,000

Total Carbon Reduction over 5 year period of Implementation Plan (SIP)					
	09/10 Savings	10/11 Savings	11/12 Savings	12/13 Savings	13/14 Savings
Cumulative Carbon Reduction (Tonnes)	124.56	420.56	484.56	500.56	506.56

Stakeholder management and communications:

The key stakeholders for this project have been identified as: -

- Council Members
- Chief Executive, Strategic Directors, Head of Service
- Service Managers
- All Staff

SIP Governance, Ownership and Management:

Ownership of the Carbon Management Implementation Plan is key to its success. The key people and groups within the authority and their roles are set out below. Over the five-year period that this plan covers the individuals involved will inevitably change. Part of the six monthly review of the implementation plan will cover the personnel involved and their roles and any amendment will be recorded.

- Lead Member: Cllr Miranda Cox
- Strategic Manager: Jenny Wallace
- Project Manager: Andrew Waite / Doug Jenkin
- Carbon Management Group: A Member / Officer cross service group.
- Member Asset Management Group

Risks and Issues Management:

The individual projects have had initial risk assessments undertaken before inclusion in this report. As each measure is developed for implementation additional assessments will be undertaken by the individual project managers for each of the measures for approval by the Service Lead Officers and Service Managers for the areas of operation affected.

The main risk to delivering all the measures identified in the implementation plan is the availability of funding and appropriate staff resources. The plan can likely only be fully completed if the Council is successful in obtaining external funding from the Low Carbon Buildings Programme, Phase 2 (LCBP2), "Invest to save" funding is made available or if a substantiated proportion of capital receipts is allocated and prioritised to this programme. If these forms of external funding are not available then the implementation period will need to be extended to accommodate the Council's capital programme or the

higher cost/risk measures will not be implemented unless new technology is available which will reduce the associated costs and risks.

2. Introduction To Main Report

Torrige District Council has compiled a Local Authority Carbon Management Programme following the guidelines set out by the Carbon Trust. The main aim of this is to provide a comprehensive process for measuring and managing the carbon emissions produced through the Council's operational processes.

The Strategic Implementation Plan is the first step towards a systematic approach to reducing the emission of greenhouse gasses through Council activities. It sets out a programme of actions to be taken for reduction over the next five years.

The programme forms one of the actions required to meet the needs of the Council's Corporate Climate Change Strategy.

2.1 Background to the Carbon Management Programme:

Torrige District Council are at present a partner in the Devon Local Area Agreement 2008 – 2011 and has already signed up to the Northern Devon Sustainable Community Strategy (SCS). An aim of each initiative is the reduction in emissions of green house gasses. This council is fully committed to reducing the emissions from its own operations in-line with the SCS theme of 'A word Class Environment and Tackle Climate Change', set out within the Sustainable Community Strategy. It is also intended that the lessons learned and experience gained will be shared with local residents and local businesses to assist them to make significant reductions in their energy use and emissions of green house gases.

The aims and objectives of the Council's overall Climate Change Strategy are: -

- To work with Central Government and contribute at a local level in the delivery of the UK Climate Change Programme
- To reduce the Council's current power usage, particularly that which is produced from fossil fuels.
- To work with local communities to address the causes and effects of climate change within our district.
- To work with local residents and businesses and help them to identify their own carbon footprint and measures to achieve reductions.
- To investigate the opportunities to develop renewable energy to service elements of our operations.
- To promote and deliver sustainable design and construction in new build (Part L of the Building Regulations 2006).

- To monitor and publicise the progress of the Council's Carbon Management Plans.
- To introduce policies and measures to reduce the power usage and carbon emissions produced in all elements of the Council's operations.
- To reduce the number of car journeys (particularly single occupancy trips) by staff, both in their commute to work and whilst on official business (Green Travel Plan).
- To set an example of best practice for others to follow, including Torridge residents, local businesses and other local authorities and statutory bodies.
- To investigate and evaluate alternative sources of energy.
- To improve and publicise the thermal efficiency of all Torridge owned and operated buildings.
- To investigate and develop alternative working practices that will help reduce staff commuting and business travel.
- To consider whole life costs and carbon emissions in the procurement of new goods, services and vehicles.
- To embed carbon management in all of the Council's policies, strategies and service business plans.

3. Carbon Management Strategy:

The Carbon Management Strategy has been developed to address a number of external and internal drivers.

3.1 Context and Drivers

External Drivers:

A) Rising Energy Costs:

The overall trend is for increases in energy costs for the future, although there may be some levelling off and reductions during this period. This is due to a combination of dwindling fossil fuels and a reliance on the import of supplies from unstable regions of the world.

B) Directive on Energy Performance in Buildings:

Around 40% of energy consumption in the European Community is in the building sector. Research has indicated that by improving energy efficiency, carbon emissions from buildings could be reduced by 22%. This will help the UK to meet its climate change objectives under the Kyoto Protocol commitments as well as improve the energy

performance of new and existing buildings (over 1000m²). The EU Energy Performance in Buildings Directive requires all public buildings to be labelled in accordance to their level of efficiency against a national benchmark level. This has been implemented in 2009.

C) Climate Change & Sustainable Energy Act 2006:

This new act requires local authorities to adopt measures for the improvement of energy efficiency, reduction of greenhouse gases, the alleviation of fuel poverty together with the promotion of micro generation and other low emission technologies.

D) UK 2008 Climate Act:

The UK 2008 Climate Act sets legally binding targets on the UK to reduce GHG emissions by at least 80% by 2050, and by at least 26% by 2020, against a 1990 baseline. To meet these targets, the UK Government plans to set carbon budgets to cap emissions over a 5-year period. The first three budgets will be set this year. DEFRA is publishing voluntary guidelines on how to measure and report emissions. This new legislation means that pressure from customers and government to address carbon emissions is going to increase, not decrease.

E) Part L of the Building Regulations 2006:

The new regulations require more stringent energy conservation measures to be applied to all new buildings and energy savings of up to 27% where existing public buildings are extended or altered.

F) Torridge Local Development Framework:

The Development Control element of the new LDF for the district requires all new buildings and developments (above set criteria), to incorporate measures to provide over 10% of energy through renewable generation or demonstrate equivalent energy saving through efficiency measures.

G) Local Authority Carbon Trading Scheme:

A carbon trading scheme is to be introduced in the near future where all authorities over a threshold of power consumption, possibly set at an energy spend exceeding £250,000 per year, will be set for carbon emission targets. If these are exceeded, then carbon allowances will have to be purchased on the open market to cover the difference. Alternatively any saving of allowance can be sold. **This does not currently apply to the Council.**

The definitive threshold either in terms of cost or baseline year, has not yet been set, but the Council's current energy spend is in the region of £135,000 so there is potential that the Council would not be part of this scheme.

H) Devon Local Area Agreement 2008 –2018 (Devon Strategic Partnership):

The UK Climate Change Bill proposes a statutory target to reduce UK emissions of Carbon Dioxide and other greenhouse gases by between 26% and 32% by 2020. The

Energy White Paper (2007) and a range of other Government initiatives propose a number of national initiatives to help meet this target. DEFRA consider that national initiatives alone will not meet the emissions reduction target and that local actions and initiatives will also be required.

The Devon Sustainable Energy Network, working for Devon, Plymouth and Torbay Strategic Partnerships, has produced a Devon Carbon Reduction Analysis (Centre for Energy and Environment, University of Exeter, 2007) that identifies the priority areas for action and the theoretical maximum % emissions that could be reduced through each action area. The proposed areas of action are:

- Business energy efficiency
- Domestic energy efficiency
- Renewable energy installations
- Transport
- New development

The move to a low carbon economy, including business resource efficiency and renewable energy sector development, are priorities of the Devon Economic Partnership (Devon Economic Strategy, 2008)

l) Regional Spatial Strategy for the South West (not adopted).

“Local Development Documents will include positive policies to enable achievement of the following targets”:

Policy RE1: Renewable Energy Targets: 2010 and 2020, By 2010 a minimum target of 509 to 611 MWe installed capacity, from a range of onshore renewable electricity technologies. Devon’ target for distribution is 151MWe. By 2020 a minimum cumulative target of 850MWe installed capacity from a range of onshore renewable electricity technologies.

Policy RE2: Coastal Zones and Offshore Energy: “when defining the Coastal Zone, coastal Local Authorities with landfalls in their areas will identify opportunities to enable appropriate development to occur. This will facilitate connections of offshore energy production units to the national grid to enable the region to meet its targets for offshore capacity of 56MWe by 2010 and 400MWe by 2020.

Policy RE3: Renewable Heat Targets.

“LDD’s will include positive policies to enable the achievement of the following targets by the use of appropriate resources and technologies,
2010 - 100MWth
2020 - 500MWth

Policy RE5: Decentralised Energy to Supply New Development:

“Local planning authorities should set up targets in their DPDs for energy to be used in new development to come from decentralised and renewable low-carbon energy sources where it is feasible and viable, and the development thresholds to which such targets would apply. In the interim, before targets are set in DPDs, at least 10% of the energy to be used on new development of 10 dwellings or 1000m² of non –

residential floor space should come from decentralised and renewable carbon low-carbon sources, unless, having regard to the type of development involved and its design, this is not feasible or viable”.

This policy is likely to change to: -

“Larger scale developments of more than 10 dwellings or 1000m² of non – residential floor space will be required to supply energy equivalent to at least 15 –20% of the total predicted carbon dioxide emissions (based on the predicted carbon dioxide emissions from operational use) from decentralised and renewable carbon low-carbon sources, unless, having regard to the type of development involved and its design, this is not feasible or viable”.

J) Government Heat and Energy Saving Strategy

The Government has produced a Heat & Energy Saving Strategy (HESS). There are two other accompanying documents; one extending the Carbon Emission Reduction Target (CERT) obligation on suppliers and on establishing a Community Energy Saving Programme (CESP), which aims to deliver energy efficiency measures specifically to low-income households. This new Government strategy sets out a number of roles for local authorities in improving the energy efficiency of homes including: -

- Partnering with energy suppliers to identify households most in need of energy saving improvements through the CERT and CESP programmes.
- Devising energy plans for their local areas that aim to reduce CO₂ emissions.
- Producing heat maps of the local area, which show the main sources of heat and areas with high demand.

The key points are: -

- The aim of the Strategy is to achieve an ambitious 15.5% reduction in the UK’s electricity and heat demand by 2020.
- This will be achieved through a “whole house approach” tackling energy efficiency on a property-by-property basis rather than measure by measure, effectively a full ‘Energy Audit’ for each house.
- The HESS seeks views on new delivery mechanisms and funding processes for energy efficiency, including a key partnership role for local authorities.
- An extension of the CERT programme to December 2012 is proposed.
- A new three year Community Energy Saving Programme to Focus energy efficiency measures in low-income areas are also proposed.

The Policy Context in brief.

In October 2008, the Government set a new goal of cutting UK greenhouse gas emissions by 80% by 2050, a step up from the previous target of 60%. The UK is also signed up to a legally binding EU target of producing 15% of its energy from renewable sources by 2020.

The Carbon Emissions Reduction Target (CERT) programme took over from the Energy Efficiency Commitment in 2008. It obliges energy suppliers to provide households with reduced cost / free energy efficiency measures. Each supplier is set a carbon saving target to work to in installing energy efficiency measures, 40% of installations must go to vulnerable and low-income households. CERT was previously scheduled to come to an end in March 2011.

The Energy Act 2008 set out the legal framework for the Government to introduce a Feed in tariff to offer financial support for the generation of low carbon electricity from projects up to 5MW and, similarly, a Renewable Heat Incentive to support renewable heat, from large industrial sites down to the household level, though payments per kWh of heat produced. The Government plans to issue consultations on the details of the Feed Tariff and Renewable Heat Incentive in the summer.

Internal Drivers

A) Improving the Environment:

It is an aim of the Council to introduce measures and strategies, which will improve the environment for local residents and visitors to the area. The carbon Management Programme is one of the measures proposed to achieve this.

B) Community Leadership:

In participating in the local Authority Carbon Management Programme our aim is to lead by example and share with the local community and local businesses our experiences and successes, so that they can benefit from similar carbon reduction and financial savings.

C) Efficiency Measures:

The savings that this project has the potential to deliver will assist the Council in delivering its Value for Money targets and deliver the efficiency savings expected of it.

D) North Devon & Torrington District Council's Core Strategy Development Plan:

PPS1: Sustainable development is about ensuring a better quality of life for everyone, now and for the future generations.

The four aims of sustainable development are: -

1. Social progress, which recognises the needs of everyone.
2. Effective protection of the environment
3. Prudent use of natural resources
4. Maintaining high and stable levels of economic growth and employment

Planning should facilitate and promote sustainable and inclusive patterns of urban and rural development by: -

- Making suitable land available for development in line with economic, social and environmental objectives to improve people's quality of life.

- Contributing to sustainable economic development.
- Protecting and enhancing the natural and historic environment, the quality and character of the countryside and existing communities.
- Ensuring high quality development through good and inclusive design and efficient use of resources.
- Ensuring that development supports existing communities and contributes to the creation of safe, sustainable, liveable and mixed communities with good access to jobs and key services for all members of the community
- Planning Authorities should address the causes and impacts of climate change, the management of pollution and natural hazards, the safeguarding of natural resources and minimisation of impacts from the management and use of resources.

Holistic renewable energy development Strategy to promote exemplar sustainable development. To incorporate:

- Commercial scale renewable energy developments will be supported in the case that it can be demonstrated that there is likely to be no significant cumulative impacts on the landscape, environment, biodiversity or the community.
- Identification of areas to discern potential suitable localities for renewable energy installations (supported by Regional Renewable Energy Atlas?).
- Developments to produce energy from biomass, bio-fuel or Energy from Waste should be in appropriate sustainable locations in proximity to appropriate fuels supplies.
- Renewable energy development will be supported by the achievement of National, Regional and sub regional targets for heat and energy production (both on and off- shore).
- Major new developments to provide 15% - 20% reduction in carbon emissions (regulated and unregulated) through the provision of decentralised and renewable or low carbon technologies.
- New development to meet or exceeds national requirements for carbon reduction (national commitment to achieve zero – carbon requirement for new homes by 2016 and non – residential development by 2019)
- Support (the allocation of sites if appropriate) for landfall development to facilitate offshore renewable energy installation (including Atlantic Array)
- New developments to provide contributions to fund the reduction of carbon emissions from existing building stock (mitigate impacts of new development) or to support community renewable energy installations.

Policy Content:

- Make North Devon and Torridge a world-class exemplar for sustainable development.
- Maximise opportunities to reduce carbon emissions in new developments through sustainable design, including the achievement of enhanced design and construction standards (based on Code for Sustainable Homes)
- Set targets based upon innovation and energy and resource performance criteria.

- Maximise the proportion of dwellings that achieve Lifetime Homes Standards based upon composition of new housing to reflect HMA identified need and targeting identified needs most vulnerable groups.
- Promote new development opportunities, such as urban extensions, that could deliver low resource use, higher levels of building sustainability in advance of the national programme and achieve a significant proportion of Lifetime Homes.
- Reduce opportunities for crime and anti-social behaviour with reference to Secure by Design.
- Set targets of 'good design' for major developments as measured by 'Building for Life' criteria.
- Clear and comprehensive inclusive access to meet people's diverse needs including mobility needs.
- Minimise vulnerability and provide resilience to climate change.

E) Sustainable Communities Strategy.

This strategy sets out the Council's approach to sustainability. It sets out the basic elements of the Council's approach to promoting sustainability in the Council's own activities and in the wider community.

Sustainability is identified in the Council's refreshed Strategic Plan as a principle underpinning everything that we do. Within the Sustainable Community Strategy a Core Value is identified to "increase sustainability, work to address the challenges and seize the opportunities of climate change, and reduce our impact on the environment"

The Strategy is presented against a background of an increasing focus by central Government on the measurement of environmental impact. Within the 198 measures in the National Outcome and indicator Set introduced in April 2008, 14 relate to Environmental Sustainability, although not all of these relate to District Council responsibilities. New indicators, which are relevant to Districts, include NI185 (CO2 reduction from Local Authority operations), NI194 (NOX & PM10 emissions), NI188 (Adapting to Climate Change), and NI197 (Improved local biodiversity – active management of local sites).

Key Actions: -

- Reduce per capita carbon dioxide emissions and reduction of carbon footprints
- Develop mitigation projects, Produce Sustainable Design & Construction SPD 2009, Undertake energy assessment of Council buildings and activities, A Green Travel Plan, Cycle to Work Scheme and changes to car lease scheme have now been successfully introduced.
- Provide practical cost-effective energy conservation measures as part of the private sector renewal.
- Deliver climate change education and communication programmes, Establish TDC'S 'Green Team' involving officers and members.
- Provide evidence and information about climate change
- Manage and reduce the risk and impact of flooding and erosion.
- Deliver Sustainable Energy Action Plan
- Promote and deliver sustainable building design and construction.

F) Making A Corporate Commitment (MACC2):

The Authority has adopted a Corporate Commitment (MACC2) with a target of reduction of 20% in CO₂ emissions by 2010 from 1990 levels and year on year water reduction.

3.2 Vision

Torrige District Council recognises the need to tackle climate change at a local level. Our vision is to reduce the amount of carbon emissions produced through working practices and operations. This will be achieved by firstly reducing our power and vehicle usage and introducing the most efficient solutions and working practices before the Council seeks more sustainable and innovative power sources or operational solutions to further reduce our emissions. The Council also aim to use their knowledge and experience to lead the local community to achieve similar emission savings.

3.3 Objectives and Targets

3.3.1 Objectives:

- To produce sustainable development policies.
- To improve data collection and monitoring of all energy and water usage.
- To deliver long term cost savings from managing carbon emissions.
- Procurement to consider whole life costs as part of the tender acceptance procedure.
- To develop a sustainable green travel plan to reduce both business and commuter travel.
- To raise awareness and importance of energy efficiency amongst our staff and encourage good housekeeping to reduce demand.
- To reduce the amount of waste generated by various options and increase the amount of recycling of such waste.
- To work with other authorities (North Devon Council), local businesses and the wider local community to raise awareness of carbon management and share experiences so that the district as a whole can make a contribution to reducing the effects of climate change.

3.3.2 Targets:

- To reduce CO₂ emissions for the Council's operations and functions by at least 12.5% below 2008/2009 levels by 2014.

- To reduce energy consumption by 3% annually over the next 5 years.
- To generate 5% of the Council's electrical energy from renewable sources by 2014 and 20% by 2050.
- To achieve the highest possible Energy performance rating within the constraints of physical and financial practicalities of adapting existing buildings, for all the council operated buildings with the highest energy usage. The minimum target is a "C rating" for existing buildings and "A rating" for all new buildings.

3.4 Strategy

Whilst emission savings will be sought from all areas of the Councils operations, it is recognised that buildings and transport are potentially able to deliver the largest savings, as they are the main source of our emissions. Another area where it may be possible to make significant reductions in emissions is staff commuting. A green travel plan has been introduced, part of which encourages staff to use more sustainable forms of travel to and from work. However as the public transport opportunities are limited at the present time and as the area is predominantly rural it may take some time before the benefits are realised.

It is the Council's intention to share its experiences and successes with the local residential and business community through targeted literature, community meetings, web site, officer support and leadership of target groups and workshops to enable them to achieve significant carbon emission and financial savings.

All relevant policies and procedures will be reviewed to ensure the effect of carbon emissions is taken into account in all-new and existing aspects of our core business. In particular the whole life cost of all operations and purchases will be a key consideration in the acceptance criteria.

In taking this project forward the Corporate Property Manager will continue to monitor our carbon footprint and progress the implementation plan. The officer /member Carbon Management Group will be responsible for the overall monitoring and the reporting of this project.

At the present time under the existing financial constraints funding will be from reallocation of existing budgets, capital investment, where savings can be guaranteed or from grant funding or "invest to save" funding opportunities.

A communication plan is to be implemented to initially advise members and staff of the actions to be implemented and the progress made with other offices. The second stage of the communication plan will be advise and support individuals and communities of the actions taken and the results achieved in order to encourage them to undertake similar measures and reduce their own energy usage.

4. Emissions baseline and projections:

4.1 Scope

The scope of the emissions baseline included:

- All Torridge owned and managed properties, but will exclude any properties which are leased to others and over which we have no managerial control.
- Fleet Transport including vehicles operated by Torridge staff (leased vehicles to officers), operational services, Countryside Warden, Car Park Wardens, Caretakers and the Pilot Boat and Quayside Crane.
- Car Parks
- Staff Commuting (not currently included)
- Decorative Lighting
- Leisure and Sports Centres
- Resort Facilities

4.2 Baseline

The year 2008/2009 has been chosen for the baseline, as this is the latest year that the data is of a consistent quality and verifiable for power consumption and fleet travel although other data is not centrally collated or recorded at all so certain assumptions have been made. All property data is held within the Council's 'Dynaplan' Monitoring and targeting energy management software back to the mid 1990's. The Council also has baseline CO₂ emissions for 1990, for its Make a Corporate Commitment 'Target'.

Electricity:

The buildings, which consume the most energy are on half hourly direct read meters and are therefore accurate. However, whilst a recent review of our energy accounts has led to improved record keeping and additional readings being taken there are still a number of estimated readings and with some of the supplies being only seasonal use. It has been necessary to back calculate some of the figures used in the baseline to address the estimated reading issue. The Council are still using a proportion of power on green tariffs, but this is no longer counted as CO₂ neutral since June 2008, when DEFRA announced that with effect from the current financial year (2008/9), Green Electricity is to be treated the same as other grid supplied electricity.

Gas:

The buildings, which have high gas consumption are regularly read by staff and are therefore accurate. However, there are still a number of estimated readings and with some of the supplies being only seasonal use. It has been necessary to back calculate some of the figures used in the baseline to address the estimated reading issue.

Water:

All Torridge's buildings have their water usage recorded and are therefore accurate. However, there are still a number of estimated readings and with some of the supplies being only seasonal use. It has been necessary to back calculate some of the figures used in the baseline to address the estimated reading issue.

Commuting:

There are no records of commuting distances of staff and this information is not being collected for this report.

Business Travel:

The records for fuel use in fleet vehicles are accurate and are collated by the property and procurement team. The staff business miles are currently centrally recorded and accurate against each vehicle. Where private vehicles are used efforts have been made to obtain full data and a default vehicle has been used, where data is missing (e.g. Medium sized petrol car)

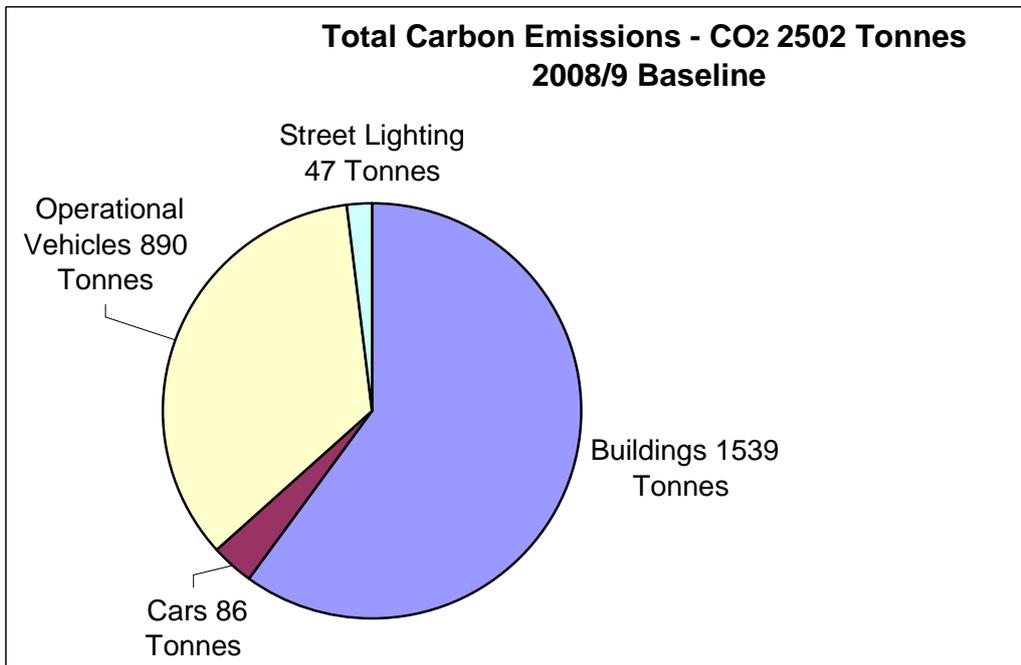
Waste:

Currently a significant proportion of the waste produced through the Council's operations is recycled although there are no records of quantities.

Torridge Carbon Emissions

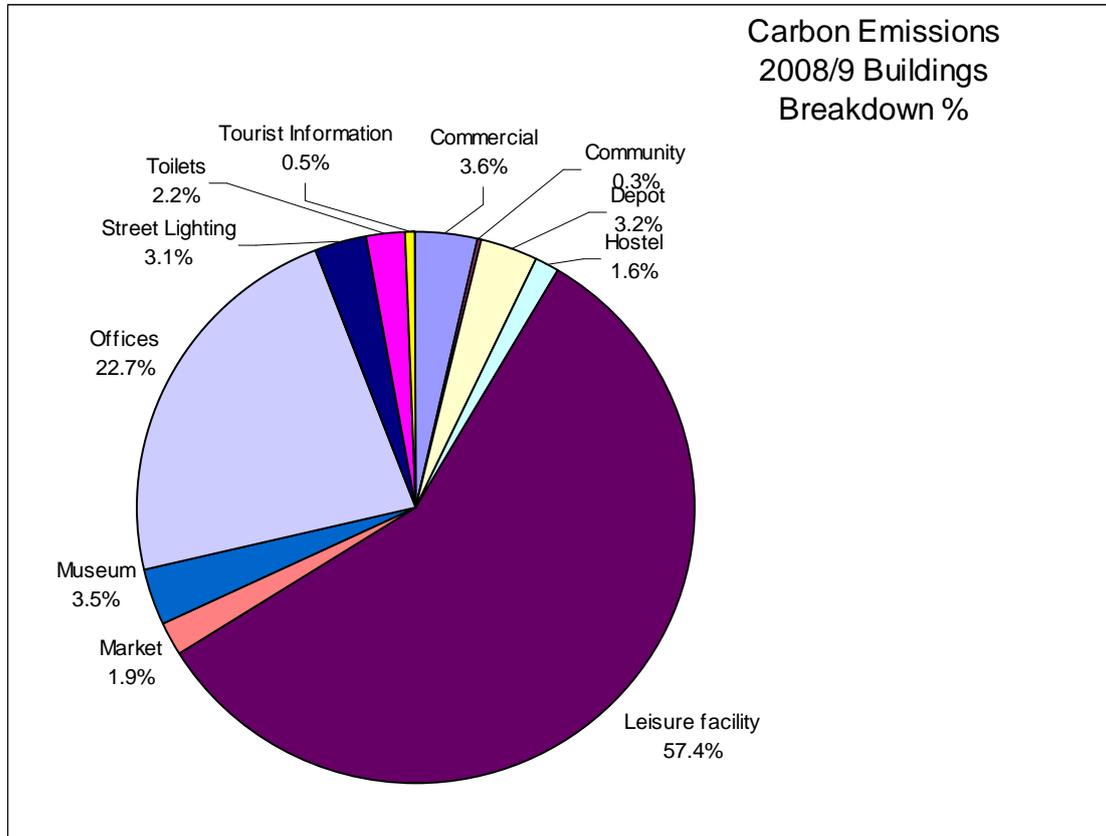
The total CO₂ emissions produced by the Council's operations are 2505 tonnes (208/09 baseline).

The chart below shows the breakdown of the overall carbon emissions for the base year 2008/09.



From the total CO₂ emissions chart it can be seen that buildings produce the highest carbon emissions and from the chart below, which shows the breakdown of the building

emissions it can be seen that the leisure related buildings produce 63% of total CO₂ for buildings and that offices produce 20%. Therefore these are two key areas for the implementation of measures to reduce our overall emissions.



4.3 Projections:

4.3.1 Business as Usual Scenario (BAU):

Projected CO₂ emissions for the Business as Usual scenario (BAU) have been calculated with the aid of a spreadsheet tool and show the expected emissions up to 2012. The BAU scenario assumes we do nothing to reduce the existing trends in energy use within the Council and reflects the effects of actions already taken or underway to reduce emissions. This indicates an increase by 2012 of CO₂ emissions by 7% per annum. 1978 tonnes (buildings) and 1305 tonnes (transport), totalling 3283 tonnes in 2012.

4.3.2 Reduced Emissions Scenario (RES):

The reduced Emissions Scenario (RES) is the potential savings that can be made if effective measures are introduced.

The total potential saving in financial terms for a six-year period up to 2008/2014 is £314,105. It may be in reality that these figures are not fully achievable, as the

implementation of some measures may not be financially viable. However, we are confident that significant cost savings could be achieved.

4.4 Past actions and achievements:

Climate Change Strategy:

At the Council's Asset Management Group meeting in April 2009 it was recognized that the Local Authority Carbon Management Programme and Strategy and Implementation Plan (SIP) be established. Following this meeting a Chartered Surveyor from the Property and Procurement section was assigned to develop the action plan and monitor its progress.

The Council has also Signed up to the "Nottingham Declaration" which acknowledges the impact that climate change will have on our community during the 21st century and commits to tackling the causes and effects of a changing climate on our district.

Corporate Commitment (MACC2), with a target of reduction of 20% in CO2 emissions by 2010, and a year on year water reduction has been developed along with the development of the Sustainable Communities Strategy, which is currently at a final draft stage, to meet this commitment. It is an intention that a Climate Change Strategy will be developed based around the Climate Change Action plan and Carbon Management Strategic Implementation Report.

Energy Management in Buildings:

For a number of years, energy saving measures have been incrementally introduced as part of the ongoing building maintenance programme to existing buildings and also newly developed buildings. In terms of existing buildings these have included; the implementation of increased thermal insulation (roofs, windows and pipe work especially), conversion from electric heating to gas boilers (Bridge Buildings), the introduction of water saving devices to a number of main buildings and Public Conveniences and the introduction to a number of main buildings of energy efficient lighting and lighting controls. In terms of new build, the Council has constructed several new sites such as Caddstown, a business support centre. This incorporated a number of energy saving technologies including, Photo Voltaic Cells providing electricity, water saving devices, Solar Thermal Cells for water heating, "Bio" (Woodchip) Boiler for central heating, and a rainwater harvesting system. The new Appledore Fish processing building incorporates a computerised 'Building Management System' (BMS) so that the real time environmental conditions can be monitored and changes can automatically be made to the control systems in order to maintain the optimum conditions for the buildings operation and reduce waste energy. In addition to this the building also has heat recover units, Solar Thermal Cells and water saving devices all, which has resulted in the building receiving a BREEAM "Excellent" rating. Caddstown has been awarded a number of environmental awards including; RICS South West Sustainability Award, RegenSW, Green Energy Award (2005). Runner up in the Michelmores / Western Morning News, commercial property award, and runner up in the Devon Environment Business awards.

Staff and Business Travel (Green Travel Plan)

Measures have been put into place to reduce the amount of business travel by car and encourage use of other alternatives, including a cycle scheme for employees.

We commissioned a 'Green Fleet Review' by the Energy Saving Trust. As a consequence we have introduced a new 'Green Travel Lease Scheme' for which we have set a maximum CO₂ limit of 120 g/km and a single employers contribution, thus avoiding any incentive for staff to increase mileage. The scheme is based on four year leases and we are using the National Health Service PASA scheme to source vehicles. For owner drivers we've introduced a 'Regular User' category (as an optional alternative to 'essential user') whereby drivers may benefit from an increased fixed contribution (currently £2,000) but only receive a nominal rate per mile (currently 15.24p) subject to vehicles being less than six years old and that they produce less than 150 g/km CO₂. We are also publishing guidance on a travel hierarchy and managing grey fleet more closely. It is anticipated that further progress can also be made in reducing business travel.

Procurement:

Torrige District Council is committed to the protection of the environment. We consider the environmental impacts of the products we buy and use and look to extend the range of "green" goods and services that are available where practicable.

Since 2005 TDC has utilised eTendering as its preferred method of competitive procurement. Environmental benefits include significantly reduced use of paper and printing, greatly reduced waste and entirely eliminated postage costs.



Don't let Torrige go to waste

Our 'Pre-Qualification Questionnaires' seek to identify the environmental and sustainable qualities of businesses that apply to work with TDC.

The introduction of eProcurement as part of our CedAr electronic financial management system has significantly reduced the volume of paperwork associated with the Authorities purchases. It enables both ordering and invoicing to be undertaken electronically and greatly improves data storage and retrieval.

An internal catalogue forms an integral part of our eProcurement system. Through this catalogue the procurement team are able (to some extent) to control the range and quality of a variety of products and services available. Purchases are selected and ordered electronically.

Through consolidated billing TDC has significantly reduced the number of paper invoices received and the use of online billing management has both reduced paperwork and increased our efficiency. Electronic ordering of repairs and maintenance is also undertaken with our partners Tarka Homes.

The introduction of pCards for administrative staff has increased speed and efficiency. It has also enabled online purchasing which was not previously an option.

A number of electronic forms have been produced by the property and procurement team, each of which reduces paperwork and speeds data processing.

Our environmental policy is an active one, being an integral part of our business plan and we have made the following commitments:

- To help the customer make an informed choice.
- To work with customers and suppliers to increase the range of "green" products.
- To prevent pollution and reduce waste where possible.
- To continually improve our own environmental performance.

Our Environmental Policy:

The Property and Procurement Team provide a central procurement service for Torridge District Council including contracting and supply chain management. Our Environmental Policy is an active one and by following this we contribute to making Torridge a greener place to live and in communicating this to our customers, contractors and suppliers we encourage others to think in a sustainable way. As an example, products in our internal CedAr catalogue are labelled to identify if they are recycled - we do however recognise that customer's choice may be based on other factors and that in some cases this may not be the most environmentally friendly option.

Our key commitments from the Environmental Policy are:

- To comply with any environmental legislation, corporate policy or other requirements relevant to our activities.
- To ensure that our staff are adequately informed and act in accordance with this policy.
- To continually improve our environmental performance by setting realistic objectives and targets and to regularly review our progress.
- To minimise the detrimental environmental impacts associated with our activities and increase the positive environmental impacts where possible.
- To prevent pollution and mitigate any actual incidents of pollution as far as possible.
- To follow the principles of waste minimisation – reduce / re-use / recycle.
- To communicate our Environmental Policy to contractors working on our properties and encourage environmental best practice.
- To consider sustainability as an important criterion in any procurement.

- To look for new processes and alternative products to lessen our environmental impact.
- To develop our services, systems & processes in line with the national e-government initiative to reduce our reliance on paper.
- To make this policy available to any member of the public who requests it.

The Policy is reviewed on an annual basis, for relevance and effectiveness by the Council's Procurement Board

Waste:

Currently a significant proportion of the waste produced through the Council's operations is recycled although there are no records of quantities.

Fleet Transport:

The Operational Services section of Torridge District Council is largely responsible for the procurement, running and maintenance of all of the Council owned commercial fleet. At the present time the Council operates 12 refuse compaction vehicles ranging in size from 17 tonnes to 26 tonnes gross, 2 single engine mechanical sweepers, 3 precinct sweepers and approximately 25 light commercial vans including tipper trucks.

An established vehicle renewals programme has been in operation for several years with vehicles being renewed year on year. In the past two years the authority has invested in three new refuse collection vehicles, all with the latest specification engines conforming to the current (at the time) EURO standards for emission control.

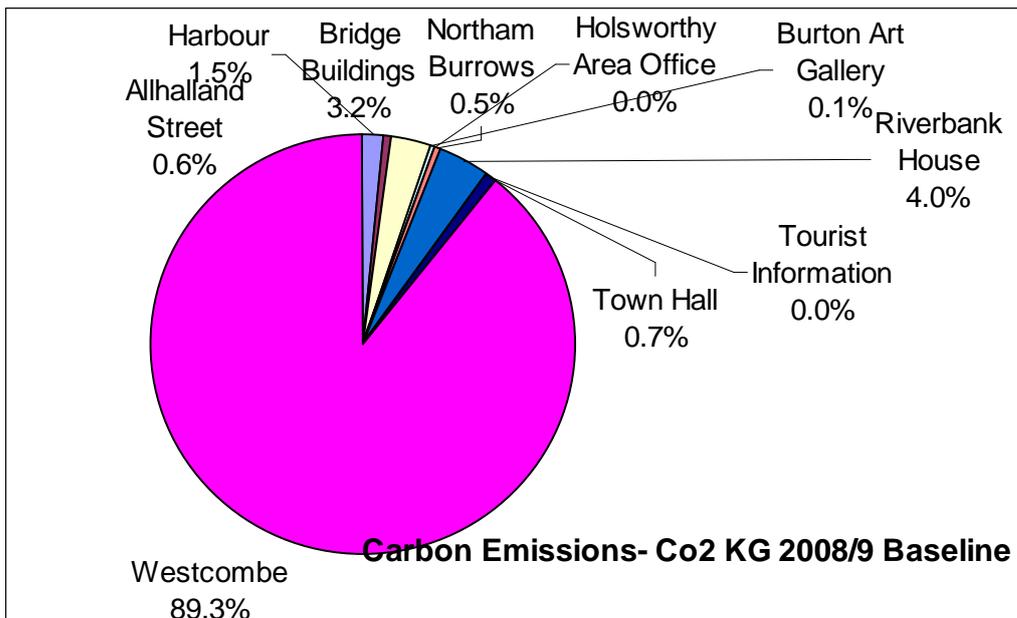
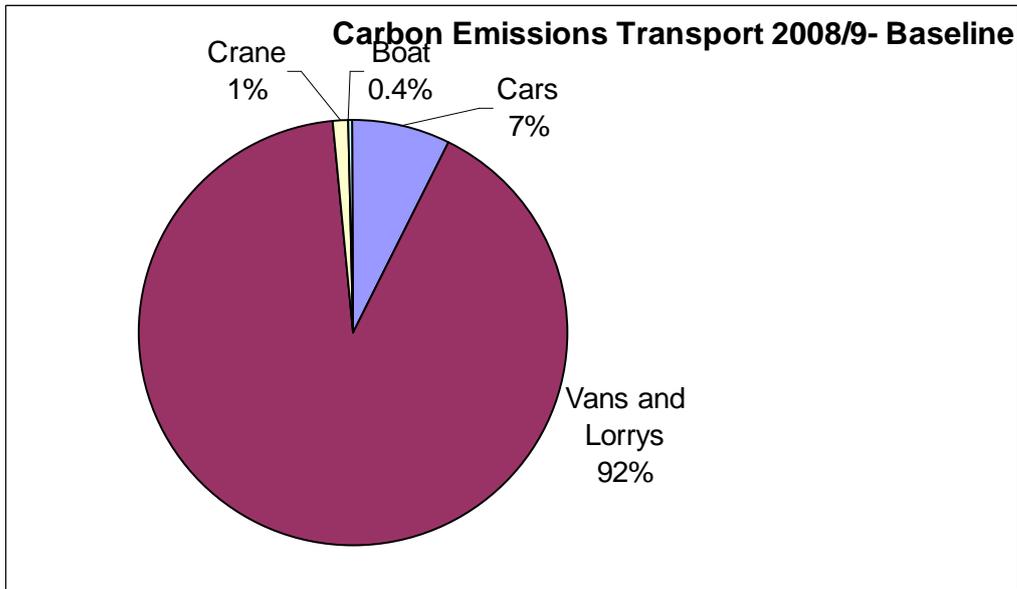
All new vehicles are now purchased with "hold to run" compaction units, which remove the continuous cycle system that required the engine to operate at a higher rev range requiring more fuel to be burnt.

Driver training is key to good fleet management and all drivers are fully trained with regard to good driving and fuel management techniques such as switching vehicles off when waiting to tip at land fill or during traffic congestion etc...

Collection routes are continuously under review to ensure travel miles are minimised and "overlap" is removed.

All mechanical sweepers are single engine vehicles not twin, to reduce both emissions and fuel used.

Torridge will continue to develop and improve driver skills, collection routes and the type and size of collection vehicles used.



Information Technology:

The Council's IT department is considering a number of options in tackling it's carbon foot print reduction.

Starting in 2005 all Old CRT monitors were phased out. In the data centre new 'virtual' servers reduce the presence of physical servers and power consumption. This generates less heat and reduces the amount of air conditioning required. The Council has a policy that all toner cartridges are all recycled and old ICT equipment is either recycled or sent to third world countries via a local contractor. More reports are generated

electronically reducing the use of paper and main network printers are programmed to go into sleep mode when idle.

5. Carbon Management Implementation Plan:

The following sections set out the actions and projects identified during the programme and which have been selected to deliver the reduced emissions targets and associated financial savings. More detail on each project is included in section 9 including costs, benefits, ownership and programmed delivery.

5.1 short listed actions and emission reduction

Embedded Actions:

- Green Travel Plan
- Solar Powered Parking Meters
- Improve Efficiency of Refuse Vehicles in New Lease Arrangements
- Replacement of T8 Light fittings with T5 Light Fittings
- Server Virtualisation to Bridge Buildings.

No Cost Actions:

- Introduction of carbon Management in Job Descriptions and Staff Appraisals
- Introduction of Environmental Champions in all Departments
- General Staff Awareness Programme.
- To consider each of the Council's owned properties against the Carbon Trust's checklist on an annual basis.
- Enforce energy saving mode on all standard desktop PC's and peripheral I.T. equipment.

Low Cost Actions:

- SAVA Plugs on Fridges
- Reduced Hours of Operation for Car Park Lighting and Decorative Lighting.

Medium Cost Actions:

- Installation of Thermal Heating Panels on Riverbank House
- Use of Solar LED for all the Council's Amenity Lighting
- Installation of BMS Systems in Riverbank House and Bridge Buildings.

High Cost / Risk Actions:

- Replacement of the Existing Boiler in Riverbank house, with a Bio-Mass boiler and storage facility or high Efficiency gas boiler.
- Fit variable speed drivers to ventilation and filtration units at Leisure Centres and

Outdoor Swimming Pools.

- Installation of Voltage Optimisers for 100kW Sites.
- Installation of a Wind Turbine at the Burrows Centre.

The total CO₂ saving identified is 2036 tonnes however the high cost options are the highest risk due to technical feasibility and funding availability so may not be implemented within the plan period.

Other Measures:

There are a number of other measures such as further provision of spray taps and water saving devices in water cisterns as well as replacement of kettles with instant hot water units all of which have a limited impact on carbon emissions but which offer significant financial savings. All these measures will be routinely incorporated in any refurbishment or new build schemes and there will also be an overall review to identify any sites where there is a cost benefit in implementing these works ahead of programme.

In addition the monthly monitoring of power and fuel usage together with the other elements of the Council's carbon baseline will not only help to monitor progress, it will also identify wastage much quicker than it is currently possible to do, especially where the wastage is due to mechanical or system failure.

The proposed improvements to the recycling of waste production through the Council's own operations will reduce the amount currently being sent to landfill and will make a small saving in carbon emissions.

6. Implementation Plan Financing:

The financial benefits to the Council of implementing the Carbon Management programme are beneficial, as energy costs have risen significantly over the past few years and although they have levelled off for the 2008/09 contract renewal. The general predictions are that costs will continue to rise.

A number of the investment measures have a pay back period of less than 5 years, this will allow for savings to be re-invested to help deliver those projects with a longer pay back period and accelerate reduction of carbon emissions. The funding required will be through year on year budgetary capital investment, however, a few of the measures are only viable if external grant funding becomes available or the Council is successful in obtaining funding through 'invest to save' funding initiative or the Low Carbon Buildings Programme, Phase 2 (LCBP2)

There is a rapidly developing market in energy efficiency measures and renewable energy opportunities therefore the implementation plan will be reviewed annually to assess if any measures can be brought forward due to cost reductions and to ascertain if any additional measures which were originally thought to be uneconomic, can be introduced into the programme.

Summary of predicted costs and savings

Total Estimated Capital Expenditure = £1,426,339		Total Estimated Revenue Expenditure = £20,000			
Total Annual Cost Savings = £75,595 in year 5					
Total Cost Saving over 5 year period of the Implementation Plan (SIP) = £314,105					
	09/10	10/11	11/12	12/13	12/14
Cumulative Annual Savings	£21,209	£66,108	£75,596	£75,596	£75,596
Annual Operational Costs	£5,000	£5,000	£5,000	£5,000	£5,000
Annual Capital Investment Including Fees	£242,000	£464,339	£240,000	£240,000	£240,000

Total Carbon Reduction over 5 year period of Implementation Plan (SIP)					
	09/10 Savings	10/11 Savings	11/12 Savings	12/13 Savings	13/14 Savings
Cumulative Carbon Reduction (Tonnes)	124.56	420.56	484.56	500.56	506.56

Where we do not currently have a budget. A capital or revenue bid will be made in due course for relevant items.

7. Stakeholder management and communications:

7.1 Stakeholder Management

The key stakeholders for this project have been identified as: -

- Council Members
- Chief Executive, Strategic Directors and Heads of Service.
- Service Managers
- All Staff

7.2 Communication Plan

The Local Authority Carbon Management programme is fully supported by Members and Corporate Management Team as well as Council's staff. Progress of the Implementation plan will be comprehensively reported to all levels.

The Council's Member Asset Management Group, will monitor the progress of the implementation plan and the Carbon Management Group which is a member /officer cross service group which will develop and lead the actions identified in the implementation plan, which will lead the actions identified in the implementation plan. The Carbon Management Group meets quarterly and the Carbon Management Implementation Plan will be a standard agenda item. Progress will be reported to the Member Asset Management Group on a six monthly basis and staff will be advised on the performance of energy saving measures through regular items prepared by the Carbon Management Group for inclusion in the monthly staff bulletins. The public will be advised on the progress of the Council's Carbon Management Programme and wider climate change issues through Torridge View, which is a free publication produced in - house and delivered to every residence in the district on a quarterly basis. In addition to which information will be also available on the Council's Web site

8. SIP Governance, Ownership and Management

8.1 Main role and responsibilities:

Ownership of the Carbon Management Implementation Plan is key to its success. The key people and groups within the authority and their roles are set out below. Over the five-year period that this plan covers the individual's involved will inevitably change. Part of the six monthly review of the implementation plan will cover the personnel involved and their roles and any amendment will be recorded.

Lead Member -

Clr. Miranda Cox

Terms of Reference:

- Environmental Polices, which includes delivery of climate change, related issues.

Strategic Manager –

Jenny Wallace

- To be a principal advisor to the Council on matters relating to all community services, which include environmental services and initiatives.
- To be the lead officer on addressing the impacts of climate change
- To be responsible for co-ordinating policy advice to the Council, Executive and Committees.
- To advise the Council of the resources required to deliver the Carbon Management Programme.

Project Manager –

Andrew Waite / Doug Jenkin

- Manage the Climate Change Programme
- Monitor the action plan
- Promote Climate Change
- Liase with the Lead Member on Climate Change issues.
- Consider resources to deliver the Climate Change agenda and action plan.

Carbon Management Group – Which is a Member / Officer cross service group

Terms of Reference:

- Recommend policies and approaches
- Advise on energy efficiency measures
- Develop renewable energy initiatives
- Advise customer and community on measures to address climate change
- To monitor and report on the progress of the Carbon Management Programme.

Member Asset Management Group –

Terms of Reference:

- To review the Council's Climate Change Action Plan.
- To review progress on the Local Authority Carbon Management Programme
- To evaluate how the Council is raising awareness of the Climate Change issue within the Authority, and with residents and businesses and, if necessary, suggest additional measures.
- To evaluate progress against the Council's commitment contained in the "Nottingham Declaration on Climate Change"
- To identify further action that can be taken and make recommendations.

Carbon Management Implementation Plan: Responsibility Table.

Activity	Member Representation	Project Manager	Others
Carbon Management Implementation Plan - Set objectives - Manage Implementation Plan - Monitor and Review Progress - Manage risk and issues - Manage Stakeholders and communication - report	Cll Cox	Andrew Waite / Doug Jenkin	Andy Champion
Financing of Carbon Management Activities		Jenny Wallace	Steve Harding
Carbon Management In buildings.		Andrew Waite	Andy Champion

Carbon Management In Transport. (Lease Cars)		Doug Jenkin	Gill Tallamy
Purchasing /Procurement.		Doug Jenkin	Gill Tallamy Luan Thomas
Waste Management.		Ricky McCormack	
Communications and Community Relations		Kathy McCormack	Ian Hater
Carbon Management In Transport. (Refuse Vehicles)		Ricky McCormack	Doug Jenkin
I.T. Services		Sue Soutter	
Green Travel Plan		John Edwards	Doug Jenkin

8.2 Risk and issues management:

The Individual projects have had initial risk assessments undertaken before inclusion in this report. As each measure is developed for implementation additional assessments will be undertaken by the individual project managers for each of the measures for approval by the Service Officers and the Strategic Managers for the areas of operation affected.

The main risk to delivering the whole of the implementation plan is the availability of funding and appropriate staff resources. The plan can only be fully completed if the Council is successful in obtaining external funding. If these forms of external funding are not available then the implementation period will need to be extended to accommodate the Council's capital programme or higher cost/risk measures will not be implemented unless new technology is available which will reduce the associated costs and risks.

8.3 Benefits Management:

With the implementation of a corporate monitoring system the benefits of the programme both in terms of financial and carbon emission savings will be easily identifiable, particularly the later scheme with higher capital cost and longer pay backs as the baseline data will be more reliable due to the improved monitoring.

Monitoring and Reporting Plan		
Output	Presented to	Date
Half yearly Review	Member Asset Management Group	To Be Agreed
Annual Review	Member Asset Management Group And Policy Performance and Resources Committee	To Be Agreed

Appendix A Carbon Management Projects

Ref 1	Include Carbon Management in Job Descriptions and Staff appraisals.	
Description and Notes	The aim is to make each member of staff aware of their personal responsibility for carbon management and the positive contribution that they can have on reducing the Council's carbon footprint. By including carbon management in the annual staff appraisals with the aim of keeping up the initiative and gaining feedback from staff on both the existing regimes and proposals for further savings. Training and advice will also be included in the induction for new staff.	
Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£- £- 15 tonnes £2,648 0
Resources	Funding – source Management Resources Funding availability	N/A Minimal N/A
Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	HR Department/ Carbon Management Group John Edwards Carbon Management Group Lead Member–
Ensuring Success	Principal risks Mitigation Risks	Poor Support or Engagement Provision of guidance notes
Performance /Success measure	Measure become embedded in process and documentation	
Timing	From 2010 Onwards	
Sources of Information and Guidance	Carbon Trust Literature North Devon & Torridge District Council's Core Strategy Development Plan	

Ref 2	Introduction of Environmental Champions in all Departments.	
Description and Notes	The introduction of Environmental Champions in each service whose role is to encourage their colleagues to reduce energy waste, to recycle efficiency and canvas ideas from staff for other saving ideas.	
Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£- £- 15 tonnes £2,648 0
Resources	Funding – source Management Resources Funding availability	N/A Minimal N/A
Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	Carbon Management Group Service Managers and Team Leaders Unison and Staff Representatives Lead Member –
Ensuring Success	Principal risks Mitigation Risks	Poor Support or Engagement Provision of Appropriate training
Performance /Success measure	Measures become embedded in day - to -day operations and staff habits.	
Timing	From Jan 1 st 2010 and ongoing	
Sources of Information and Guidance	Carbon Trust Literature North Devon & Torridge District Council's Core Strategy Development Plan	

Ref 3	General Staff Awareness Programme.	
Description and Notes	The introduction of a general staff programme to be rolled out across all departments of the Local Authority.	
Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£- £- 15 tonnes £2,648
Resources	Funding – source Management Resources Funding availability	N/A Minimal N/A

Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	Property & Procurement Corporate property manager and Parkwood Unison and Staff Representatives Lead Member –
Ensuring Success	Principal risks Mitigation Risks	Poor Support or Engagement Provision of Appropriate training
Performance /Success measure	Measure becomes embedded in day-to-day operations and staff habits.	
Timing	From 2009, operation commenced.	
Sources of Information and Guidance	Carbon Trust Literature North Devon & Torridge District Council's Core Strategy Development Plan	

Ref 4	To consider each of the Council owned properties against the Carbon Trust's checklist on an annual basis.	
Description and Notes	To review each of the Council's properties against the Carbon Trusts Checklist on an annual basis.	
Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£- £- 30 tonnes £5,296 0
Resources	Funding – source Management Resources Funding availability	N/A Moderate N/A
Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	Property and Procurement / Parkwood, Carbon Management Group Property Manager Procurement Manager, Unison and Staff Representatives Lead Member –
Ensuring Success	Principal risks Mitigation Risks	Poor Support or Engagement Senior Management Involvement and Support.
Performance /Success measure	Reduction in energy consumption assessed through monthly monitoring.	

Timing	From 2010 and then a rolling programme starting with office buildings and then leisure centres, followed by the remaining council buildings.
Sources of Information and Guidance	Carbon Trust Literature, in – house surveys

Ref 5	Green Travel Plan.	
Description and Notes	Development of a green travel plan to reduce both business related travel and staff commute mileage.	
Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£- £- Yr1 16, Yr2 32, Yr3 48 Yr1 £3,136, Yr 2 £6,272, Yr 3 £9,408 3 years
Resources	Funding – source Management Resources Funding availability	N/A Moderate N/A
Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	HR Department /Carbon Management Group John Edwards Procurement Manager, Unison and Staff Representatives Lead Member –
Ensuring Success	Principal risks Mitigation Risks	Poor Support or Engagement Senior Management Involvement and Support.
Performance /Success measure	Measure become embedded in day-to-day operations and staff travel choices.	
Timing	From 2010 and ongoing (Stepped for 3 years) Comes into effect as the lease cars and private cars are replaced.	
Sources of Information and Guidance	Carbon Trust Literature, Unison Guidance Documents and examination of good practice from similar organisations.	

Ref 6	Enforce energy saving mode on all standard desktops PC'S and peripheral IT equipment.	
Description and Notes	IT equipment is a high consumer of the energy requirement of the Council, therefore a significant saving will be possible if monitors etc are switched off after 10mins of inactivity and all IT equipment and photo copiers are set sleep or hibernation mode when not in use for >30 minutes.	
Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£- £- 5 tonnes £718 0
Resources	Funding – source Management Resources Funding availability	N/A Minimal IT managerial time as it can be introduced as part of a single server programme N/A
Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	IT Department IT Manager Service Leads & key staff Strategic Managers
Ensuring Success	Principal risks Mitigation Risks	Interruption of some software operations Prior consultation with service Leads and key Staff.
Performance /Success measure	Reduction in energy consumption assessed through monthly monitoring.	
Timing	From 2010 and ongoing	
Sources of Information and Guidance		

Ref 7	Replacement of boiler in Riverbank House.	
Description and Notes	Replace the standard gas boiler (85% efficiency) in Riverbank house with new Bio-Mass Boiler and storage facility or High Efficiency Gas Boilers	
Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£60,000 £4,500 44 tonnes £0 No Pay back

Resources	Funding – source Management Resources Funding availability	External Grant? Minimal To be investigated
Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	Property & Procurement Property Manager Service Leads Strategic Managers
Ensuring Success	Principal risks Mitigation Risks	Supply of Bio-mass fuel Agree supply, prior to installation with local supply
Performance /Success measure	Reduction in energy consumption assessed through monthly monitoring.	
Timing	From 2011	
Sources of Information and Guidance	Carbon Trust Literature, Manufacturers operating instructions.	

Ref 8	Solar Powered Parking Meters.	
Description and Notes	Replacement of remaining mains powered parking meters with Solar powered equipment where appropriate.	
Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£ £ X £
Resources	Funding – source Management Resources Funding availability	Internal Minimal TBC
Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	Property & Procurement Simon Toon Service Leads Strategic Managers
Ensuring Success	Principal risks Mitigation Risks	Suitability of equipment in specific locations. Detailed survey and assessment of individual sites prior to ordering equipment.
Performance /Success measure	Reduction in energy consumption assessed through monthly monitoring.	
Timing	From 2009, replacement of existing types ongoing.	

Sources of Information and Guidance	
-------------------------------------	--

Ref 9	Improve Efficiency of Refuse Vehicles in New Lease Arrangements.	
Description and Notes	Alteration of specification in new vehicle procurement arrangement for replacements of Refuse Vehicles to include additional efficiency measures.	
Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£240,000 £ 8 tonnes pa (ESTIMATED) £
Resources	Funding – source Management Resources Funding availability	internal Moderate Capital Funding
Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	Operational Services Ricky McCormack Service Lead Strategic Managers
Ensuring Success	Principal risks Mitigation Risks	Drivers not utilising new measures to full effect. Driver training.
Performance /Success measure	Reduction in energy consumption assessed through monthly monitoring.	
Timing	From 2009, in accordance with the Council Vehicle replacement renewal programme.	
Sources of Information and Guidance		

Ref 10	Fit variable speed drives to ventilation and filtration units at Leisure Centres and Outdoor Swimming Pools.	
Description and Notes	Fitting of variable speed drives to the air handling units and filtration pumps can offer up to 50% savings in some applications and is an industry wide recognised method of reducing costs and emissions.	
Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£60,839 £- 109 tonnes £23,430 2.6 years

Resources	Funding – source Management Resources Funding availability	Internal & External Minimal TBC
Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	Leisure Services Leisure Manager and Parkwood Service Lead Strategic Managers
Ensuring Success	Principal risks Mitigation Risks	Suitability of older equipment for conversation. Detailed survey prior to placing of orders and consideration of replacement of older equipment
Performance /Success measure	Reduction in Energy Costs and improved environmental conditions monitored via the BMS system.	
Timing	From 2011 Any investment made by TDC would need to be agreed with the leisure management company prior to any work, as savings are incurred by Parkwood, not TDC.	
Sources of Information and Guidance		

Ref 11	Reduce Hours of Operation for Car Park Lighting and Decorative Lighting.	
Description and Notes		
Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£1,500 £- 5.2 tonnes £1,200 P.A. 1.25 Years
Resources	Funding – source Management Resources Funding availability	Internal Minimal TBC
Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	Parking Services and Property & Procurement Simon Toon & Property Manager Crime and Disorder Team Strategic Managers

Ensuring Success	Principal risks Mitigation Risks	Concerns over public safety and criminal activity. Full Consultation with all parties identified as being affected by this proposal.
Performance /Success measure	Reduction in energy consumption assessed through monthly monitoring.	
Timing	From 2010. Proposal based on 1-hour reduction per day on all lights.	
Sources of Information and Guidance		

Ref 12	SAVA Plugs on Fridges.	
Description and Notes	SAVA plugs can save up to 20% of energy consumption, there are up to 16 refrigeration units spread throughout the Council's properties.	
Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£500 £ 0.36 tonnes £267 1.9 years
Resources	Funding – source Management Resources Funding availability	Internal Minimal input from Property Services Revenue
Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	Property & Procurement Services Property and Procurement Managers TDC Caretakers
Ensuring Success	Principal risks Mitigation Risks	Possible Incompatibility with older equipment. Carry out compatibility checks prior to installation. Introduction of SAVA plugs as units are replaced
Performance /Success measure	Reduction in energy consumption assessed through monthly monitoring.	
Timing	From 2010	

Sources of Information and Guidance	Manufacturers operating instructions for both appliances and SAVA devices
-------------------------------------	---

Ref 13	Installation of Solar Thermal Panels on Riverbank House.	
Description and Notes	Riverbank house would lend itself, due to the nature of the roof construction to the installation of a number of Solar thermal panels.	
Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£4,500 £100 per annum 5 tonnes £756.00 8 – 10yrs
Resources	Funding – source Management Resources Funding availability	External Grants? Property & Procurement Services TBC
Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	Property & Procurement Services Procurement Manager Property Manager. Carbon Management Group Lead Member –
Ensuring Success	Principal risks Mitigation Risks	Suitability of equipment in specific locations. Detailed survey and assessment of individual sites prior to ordering equipment.
Performance /Success measure	Reduction in energy consumption assessed through monthly monitoring.	
Timing	From 2011 / 2012 depending on external grant success.	
Sources of Information and Guidance	Manufacturers operating instructions for panel devices	

Ref 14	Check Efficiency of All Heating, Ventilation and Pool Equipment and Produce Settings Manuals.	
Description and Notes	The introduction of equipment settings manuals for all TDC owned buildings will allow regular audits of settings to ensure that authorised changes have been made. Any changes to the settings will be recorded in the manuals and signed off by the unit manager.	

Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£2,000 £- 10.5 tonnes £1,555 1.29 years
Resources	Funding – source Management Resources Funding availability	Internal Moderate TBC
Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	Leisure Services Vikki Braddick Property Manager Strategic Managers
Ensuring Success	Principal risks Mitigation Risks	None
Performance /Success measure	Reduction of Energy Costs and improved environmental conditions monitored via the BMS system.	
Timing	From 2011 / 2012	
Sources of Information and Guidance		

Ref 15	Voltage Optimiser for 100kW+ Sites.	
Description and Notes	Installation of voltage optimisers on key TDC buildings. A voltage optimiser can reduce electricity consumption by up to 13% by stepping down the incoming voltage to 220v. It is anticipated that this technology will be suitable for the six highest electricity-consuming buildings at a programmed installation of 2 per annum. To include, Riverbank House, Bridge Buildings, Caddsdawn, Burton Art Gallery and swimming pools. Note: Figures produced are likely to be spread over a 3-year period.	
Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£45,000 £- 83 tonnes £11,440 3.9 years

Resources	Funding – source Management Resources Funding availability	Internal Moderate TBC
Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	Property & Procurement Services Property Manager Service Leads Strategic Managers
Ensuring Success	Principal risks Mitigation Risks	Voltage sensitive equipment e.g. IT servers Sensitive equipment to be identified and protected in each building
Performance /Success measure	Reduction of Energy consumption through monthly monitoring	
Timing	From 2011 – rolling programme	
Sources of Information and Guidance	Environmental Technology Centre Report	

Ref 16	Install BMS Systems in Riverbank House and Bridge Buildings.	
Description and Notes	Install Building Management System (BMS) to both Council buildings to include automatic real time control of environmental conditions.	
Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£22,000 £- 9.5 tonnes £1,700 12 years
Resources	Funding – source Management Resources Funding availability	Internal Moderate TBC
Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	Property & Procurement Services Property Manager Service Leads Strategic Managers

Ensuring Success	Principal risks Mitigation Risks	None
Performance /Success measure	Reduction of Energy Costs and improved environmental conditions monitored via the BMS system.	
Timing	From 2011	
Sources of Information and Guidance	Environmental Technology Centre Report	

Ref 17	Installation of Wind turbine to the Burrows Centre.	
Description and Notes	The existing site of the Burrows Centre in its exposed location adjacent to the sea lends itself to unimpeded winds from the ocean and surrounding area. The installation of a 2m diameter wind turbine would reduce energy costs for the building/	
Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£30,000 £500 per Annum 10 tonnes £2,400 9.6 years
Resources	Funding – source Management Resources Funding availability	External grant + match or top up internally Moderate TBC
Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	Property & Procurement Services Property & Procurement Managers Service Leads Strategic Managers
Ensuring Success	Principal risks Mitigation Risks	Possible Planning issues as the burrows park is designated a SSSI. Pre Consultation with the Planning department prior to purchase
Performance /Success measure	Reduction in energy consumption assessed through monthly monitoring	
Timing	From 2011 / 2012	

Sources of Information and Guidance	Manufacturers literature.
-------------------------------------	---------------------------

Ref 18	Replacement of T8 Light Fittings with T5 Light Fittings.	
Description and Notes	General replacement of all T8 light fittings with energy efficient T5's, throughout out the Council's buildings. Only to be considered when necessary.	
Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£ £ x £
Resources	Funding – source Management Resources Funding availability	Internal Moderate TBC
Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	Property & Procurement Services Andrew Waite Service Leads Strategic Managers
Ensuring Success	Principal risks Mitigation Risks	None
Performance /Success measure	Reduction in energy consumption assessed through monthly monitoring	
Timing	Ongoing from 2009	
Sources of Information and Guidance	Manufacturers literature.	

Ref 19	Use of Solar LED for all the Council's Amenity Lighting.	
Description and Notes	Replace all the Council's existing amenity lighting with new Solar LED Lighting.	
Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£ £- 0.1 tonnes per street light £40 per annum 0
Resources	Funding – source Management Resources Funding availability	Internal Moderate TBC
Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	Property & Procurement Services Property Manager Service Leads Strategic Managers
Ensuring Success	Principal risks Mitigation Risks	None None
Performance /Success measure	Reduction in energy consumption assessed through monthly monitoring of utility bills.	
Timing	From 2011	
Sources of Information and Guidance	Manufacturers literature.	

Ref 20	Server Virtualisation to bridge buildings.	
Description and Notes	Replacement of existing servers throughout the Council, with virtual ones. This will allow for the same amount of work to be achieved, but with a reduced number of servers. Works being already undertaken.	
Quantifiable Costs and Benefits	Financial Capital Investment, Operational Costs, Emissions reduction (tonnes CO2), Annual Financial savings, Pay back period,	£- £- 5 tonnes £1,000 0
Resources	Funding – source Management Resources Funding availability	Internal Moderate TBC

Local Authority Carbon Management Programme

Ownership and accountability	Department Responsible Individual Responsible Who is to be consulted Who is to be informed of the progress?	I.T. Department Services IT Manager Service Leads Strategic Managers
Ensuring Success	Principal risks	None
Performance /Success measure	Mitigation Risks	
Timing	Reduction in energy consumption assessed through monthly monitoring of utility bills.	
Sources of Information and Guidance	From 2009, process underway.	
	Manufacturers literature.	