Lancashire County Council

Carbon Management Programme

Strategy & Implementation Plan (SIP)

CARBON TRUST

Lancashire County Council

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Contents

Foreword

Energy is fundamental to the way we live our lives; how we heat our offices, turn on the lights when it is dark and power our cars and machinery. Reducing energy use and carbon emissions from our estate is one of the major challenges facing both Lancashire County Council and society as a whole. It is about getting our own house in order and leading by example.

The council is committed to developing the opportunities that come with reducing our carbon emissions and ensuring that these are captured for the benefit of the authority, the local economy and the communities of Lancashire. The council has set it self challenging and ambitious targets but is confident it can be achieved with the support of elected members, staff and service users.

We recognise that staff at all levels will be required to play their part by incorporating carbon management into their work planning and decision making as well as their everyday activities. In this way they are the people who can make the greatest contribution of all through changing attitudes and assuming personal responsibility for their energy usage.

We know there is much work to be done before we can claim to be a genuine exemplar of carbon management but the launch of the programme is a significant step in the right direction. We hope that you will not only read the plan but also work with us as we take it forward.

We would also like to sincerely thank the Carbon Trust for their assistance and expert guidance in the preparation of this plan, and look forward to their continued support as it is implemented.

Ged Fitzgerald
Chief Executive

Councillor Matthew Tomlinson
Cabinet Member for Sustainable Development

Foreword from the Carbon Trust

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

Lancashire County Council was selected in 2008, amidst strong competition, to take part in this ambitious programme. Lancashire County Council partnered with the Carbon Trust on this programme in order to realise vast carbon and cost savings. This Carbon Management Plan commits the council to carbon reductions. There are those that can and those that do. Local authorities can contribute significantly to reducing CO_2 emissions. The Carbon Trust is very proud to support Lancashire County Council in their ongoing implementation of carbon management.

Richard Rugg
Head of Public Sector, Carbon Trust

CARBON TRUST

Management Summary

1. Human activity is now widely accepted as accelerating climate change, particularly the burning of fossil fuels which releases greenhouse gases into the atmosphere. It is one of the most serious issues facing the world today. Governments world-wide have set targets to reduce emissions, with the focus being on carbon dioxide. The UK is no exception and local authorities are expected to take the lead.

2. Lancashire County Council has recognised its responsibility for taking the lead in managing, reducing and coordinating actions for the reduction of carbon dioxide emissions across the authority. The council has been working for a long time to minimise its carbon emissions since the introduction of its energy team over 40 years ago. The implementation of this carbon management plan will take these measures a step further. Through formalising a corporate commitment, target setting, planning and communication, we have set up a programme of work that will deliver measured carbon and financial savings over the next 5-10 years.

3. The programme is designed to deliver improved energy management and reduce emissions under the direct control of local authorities. For the council, this comprises buildings such as offices, schools, libraries, museums, and care homes as well as fleet vehicles, business mileage and street-lighting.
This plan:

- Summarises the overall strategic direction for the council for carbon management
- Details the initial identified projects for achieving the carbon reduction target over the next 5 years for non schools activity, and over the next 10 years for schools.
- Confirms how, and by whom, the projects and strategy will be organised, managed, reported and governed in the future.
- Details how communication with key/all staff will be carried out.
- Explains what financial options are being explored to fund aspects of the programme

4. The council currently has baseline carbon emissions of 146,168 tonnes of CO_2 per annum. The baseline has been taken as the financial year of 2007.

5. A target has been set to reduce carbon dioxide emissions by 30% by 2014. We have also set another target for schools activity to reduce emissions by 30% by 2019.

6. The current projects registered at this early stage of the plan are anticipated to give a carbon emissions reduced of 17,958 tonnes. This is 41% of the 43,850 tonnes of CO_2 that we hope to save in the next five years. This can be further broken down to:

- Activity that does not include schools = 21% reduction from baseline
- Activity in schools = < 4% reduction from baseline

7. It is clear that schools activity is an area that needs addressing. A working group has been established that will act as a platform for better collaborative working in several areas. These areas including:

- NI 185
- Carbon Reduction Commitment
- Building Schools for Future

- National Framework for Sustainable Schools
- Carbon Management Plan

8. Ongoing work over the next five years to introduce new projects and plans will bring us closer to our 30% target. The plan will not be a standing document and will need to be continually updated with new projects, plans and strategies throughout its lifetime if goals are to be reached.

9. The programme will continue to be supported by the carbon management board. This carbon management plan will be updated through quarterly meetings of the project team. It will be reviewed by the council committees and the corporate officer group and annually by the Carbon Trust.

10. The issue of carbon management will obviously not draw to a close when this plan is adopted. Although the target is challenging there is still a long way to go to meet the target set by government to achieve an 80% reduction in emissions by 2050. New programmes will be created to help the council to continue working towards this long term aim.
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1 Introduction

Lancashire

Lancashire County Council is the fourth largest local authority in England and Wales. It covers an area of 2,903 sq km and has a population of nearly 1.5m. It is a two-tier local authority area comprising our council and 12 district councils.

Lancashire is a very special place. It is marked by outstanding and varied landscapes and heritage. It is proud of and welcomes the diversity of all its communities. Our landscape, people and politics have shaped the place that Lancashire is today with benefits and opportunities for many but also a number of challenges that need to be addressed.

Overall the carbon footprint of the whole of Lancashire is approximately 12,201 KT/CO_2 which equates to 8.42 tonnes per person.

The Carbon Management Plan

The Carbon Management Plan (CMP) is a programme of projects to deliver the targets for reduction of carbon emissions from council 'estates'. The plan is designed to deliver improved energy management and reduce emissions under the direct control of local authorities. For the council this comprises buildings such as offices, schools, libraries, museums, care homes etc as well as fleet vehicles, business mileage and street-lighting.

This plan is also the formal deliverable part of the Local Authority Carbon Management Programme, and has been developed by the council under the guidance of the Carbon Trust. It is intended that the plan will provide the basis for all carbon management activity with the council and will be updated annually with the collection of data and the addition of new projects.

The plan:

- Summarises the overall strategic direction for the council for carbon management
- Details the initial identified projects for achieving the carbon reduction target over the next 5 years for non schools activity, and over the next 10 years for schools.
- Confirms how, and by whom, the projects and strategy will be organised, managed, reported and governed in the future.
- Details how communication with key/all staff will be carried out.
- Explains what financial options are being explored to fund aspects of the programme

Timescale

The plan will be run over a 5 year period. The implementation of the various projects that make up the programme has already begun and will continue throughout the 5-10 years and beyond.

2 Carbon Management Strategy

Strategy objectives

- To minimise and make efficient use of energy in all the council's activities and reduce carbon dioxide emissions
- To reduce the use of natural resources in council buildings, vehicles and in all activities;
- To review performance to ensure continuous efficiency improvement.
- To raise the awareness of carbon management issues within the council, partners and the people of Lancashire.
- To reduce staff business mileage and encourage the use of public transport, cycling and walking.
- To consider environmental factors in council decisions and activities
- To monitor, manage and minimize the council's use of energy
- To support the development and use of renewable energy technologies and energy efficiency technologies
- To educate and train employees and members to conduct their activities in an environmentally responsible manner
- To continually develop environmental objectives and targets and introduce best practice to reduce environmental impacts

2.1 Context and drivers for Carbon Management

The council has a number of drivers for change (both internal and external), which are focused towards a reduction in carbon emissions. A reduction in energy consumption and associated CO_2 emissions form an important part of a number of international, European and UK wide strategies and targets. The following targets provide a framework against which the council should be setting its own targets for energy efficiency.

The key drivers behind the carbon management plan are both internal and external

External:

- **Climate change**: CO_2 emissions have to be reduced if climate change is to be avoided. It is widely accepted by scientists across the world that the activity of humans burning fossil fuels is contributing to climate change.
- **The Kyoto Protocol**: The UK Government pledged to reduce greenhouse gas emissions by 12.5% by 2010. Domestic targets of a 20% emissions reduction by 2020 and 60% reduction by 2050 have since been set. Repeated in the Energy White Papers and UK Climate Change Programme the targets are now also being incorporated into relevant guidance and policy documentation, for example, planning policy guidance and building regulations. The Local Government White Paper expects local authorities to provide a leadership role to their communities on climate change issues. These targets may become statutory if the Climate Change Bill is passed;
- **Building Regulation**: in particular Part L2, and the E.U. Building Regulation Directives both require the local authority to address the carbon performance of its buildings.
- **Carbon Reduction Commitment**: The Carbon Reduction Commitment, announced in the Energy White Paper 2007, is a mandatory "cap & trade" emissions trading scheme for

organisations whose total electricity consumption is greater than 6,000MWh or approximately £500k. If an organisation falls within the CRC scheme **all** electricity and fuel emissions are covered. From 2010 poorly performing Local Authorities will be penalised depending on their position in a CRC league table. The scheme aims to reduce CO_2 emissions by 1.1 MtCO2 / year by 2020

- The Government's **Energy White Paper** – "Our Energy Future – Creating a Low Carbon Economy" sets out long-term goals with specific reference to carbon dioxide emissions reduction, as set out below:
  • To put the UK on a path to cut its carbon dioxide emissions by some 80% by 2050, with real progress by 2020
- **UK Climate change act 2008**: Green house gas emission reductions through action in the UK and abroad of at least 80% by 2050, and reductions in CO_2 emissions of at least 26% by 2020, against a 1990 baseline. The 2020 target will be reviewed soon after Royal Assent to reflect the move to all greenhouse gases and the increase in the 2050 target to 80%
- **Display Energy Certificates**: From 1 October 2008 there is a legal requirement for all public sector buildings with a total useful floor area of over 1,000m^2, to show a Display Energy Certificate (DEC) in a prominent place, clearly visible to the public.
- With the recent signing of the **Nottingham Declaration** and **North West Climate Change Charter**, the council has publicly confirmed its commitment to putting climate change at the heart of its decision-making processes and taking all practical steps to limit carbon dioxide emissions.

Internal:

- **Lead by example:** We would like to show the local community that we are committed to reducing our CO_2 output and show that it is possible to make large reductions and save money in the progress.
- **Corporate performance**:The new Performance Framework: NI185 requires a CO_2 reduction from Local Authority operations whilst NI 186 will measure per capita CO_2 emissions in the local authority area.
- **Rising Energy Prices:** Energy prices have proven volatile in recent years and this trend is forecast to continue particularly in the short term. Energy prices have more than doubled in 10 years, putting budget pressures on the council and others local authorities and added incentive to implement energy saving opportunities.
- **NI185 – percentage CO_2 reduction from LA operations:** the public sector is in a key position to lead on efforts to reduce CO_2 emissions by setting a behavioural and strategic example to the private sector and the communities they serve. Measurement against this indicator requires each local authority to calculate its CO_2 emissions from analysis of the energy and fuel use in their relevant buildings and transport, including where these services have been outsourced.
- **NI186 – per capita CO_2 emissions in the LA area**: Local authorities are uniquely placed to provide vision and leadership to local communities by raising awareness and to influence behavioral change. The percentage reduction in CO_2 per capita in each LA will be reported annually. This will be produced by Central Government based on CO_2 emissions in the Local Area from business and Public Sector, domestic housing, and road transport.

2.2 Our low carbon vision

Lancashire County Council – A low carbon council

One of Lancashire County Councils corporate objectives is to provide a high quality environment for the people of Lancashire to enjoy. It illustrates that the council is committed to leading by example on reducing carbon emissions. This in turn should help to slow the effects of climate change and preserve our environment as best we can for generations to come.

2.3 Strategic themes

The Council's work on carbon management can be split into sections

Buildings Portfolio
- Reduce CO_2 emissions from council buildings
- Rationalise the buildings portfolio
- Establish a mechanism in which the council can directly help schools buildings to become more efficient and reduce their carbon output

Technology
- Introduce new technologies where appropriate to reduce the carbon output of our activities

Street Lighting
- Reduce CO_2 emissions from Street lighting by 30% by 2014.
- Improve the energy efficiency performance of Lancashire County Council's street lighting.

Vehicle Fleet and Transport
- Reduce emissions from journeys made through procurement of 'greener' vehicles
- Reduce the total number of miles travelled through the introduction of a fuel management system

Business Travel

- Reduce emissions from journeys made where possible
- Reduce the total number of miles travelled on council business where possible
- Encourage the use of sustainable modes of transport as a viable alternative to cars
- Reduce air and rail travel when possible

Policy Changes & working practices

- Introduce policy and culture change initiatives to aid the carbon management programme
- To ensure that all future policy changes consider the effect on the carbon output of the council through the corporate impact assessment.
- To embed carbon management into everyday decision making of council staff
- Create more efficient working practices where appropriate to minimise the carbon output of council activities.

2.4 Targets and objectives

The Board has recommended that we set 2 targets. The first target is for reducing our emissions from all non-schools activity, and the second target is for reducing emissions from schools. The two aspirational targets are:

Lancashire County Council will reduce CO_2 emissions from non-schools operations by 30% by April 2014 from the baseline level.

Lancashire County Council will work with schools to reduce CO_2 emissions from schools operations by 30% by April 2019 from the baseline level.

Variables that will affect the target

It should be noted that there are many outside variables that can affect our baseline positively and negatively. When reporting CO_2 savings in future years we will endeavor to present our figures as accurately as possible and put forward any reasoning behind unexpected falls or rises in the figures.

- The weather – Can affect emissions massively. The winter of 2008 was far colder than that taken in our baseline year of 2007. When reporting our figures we may use 'degree days' to take the severity of the recent winter into account.

- Business Growth – This can affect the figures through an increase in business mileage and potentially through an increased or decreased buildings portfolio. We have included our plans for building rationalisation under our carbon saving initiatives but this could be offset by new activity in other areas.

- Partnership working – Due to our increased partnership working business mileage could increase if teleconferencing facilities aren't created and utilised.

Previous work on energy efficiency

The Energy Team in Property Services provides a comprehensive service covering all aspects of energy related matters including electricity, fuel and water, to all LCC establishments and external clients. Energy conservation management achieves the reduction of energy and water consumption, the reduction of harmful CO_2.emissions and the conservation of our natural resources.

Lancashire County Council established the first local authority 'Energy Team' in 1967.Since this date savings in excess of £30 million pounds have been achieved. The council has taken on green electricity from renewable energy sources from our power suppliers for all major office buildings since 2003. All new buildings are being constructed with green energy and efficient technologies in mind to comply with BREEAM (Building Research Establishment's Environmental Assessment Method). we have also done work to reduce the carbon footprint in other areas as well as buildings such as ICT, green procurement strategies and travel plans.

As a result of this good work, many of the 'quick wins' in reducing carbon output have already been realised, therefore making our target that bit more challenging. However, with our continued commitment and enthusiasm towards reducing carbon output we are hopeful of reaching this stretching target.

3 Emissions Baseline and Projections

3.1 Scope

The baseline is to include all CO_2 emissions from the delivery of local authority functions and includes:

- Council owned buildings energy use (including schools)
- Building energy use for outsourced council functions (including schools)
- Street lighting energy consumption
- Council owned fleet fuel use
- Council owned business travel

There are a number of additional scope areas will be included in future years for a complete baseline:

- Council employees commuting was not included as there is currently no comprehensive data in this area. It is an area that will be explored in the future.
- Waste produced by council buildings and operations – Waste is collected by the City and district councils. Data is not currently available on the volume of waste produced by the council.
- Water used in Council buildings and operations –will be included in future years.
- The data collection exercise will be revised in future and hopefully this will lead to a completely inclusive approach of all council assets as required by the new National Indicator 185. Whilst our baseline was noted as one of the most complete seen by the Carbon Trust, there are still areas of service that have yet to be included that we hope to address in the next year.

3.2 Baseline

The council currently has baseline carbon emissions of 146,168 tonnes of CO_2 per annum. The baseline has been taken as the financial year of 2007.

The average baseline for a local authority has been approximated at 35,000 tonnes. At 146,168 tonnes Lancashire's significantly bigger. This is easily explained by the size of the area that we cover and the number of staff we employed which currently stands at 30,000 full time employees. Councils of equivalent size such as Hampshire and Kent have figures per capita similar to that of Lancashire County Council Lancashire is the 4^{th} largest local authority in the country and thus has a great opportunity to make a significant contribution to reducing the county's carbon footprint.

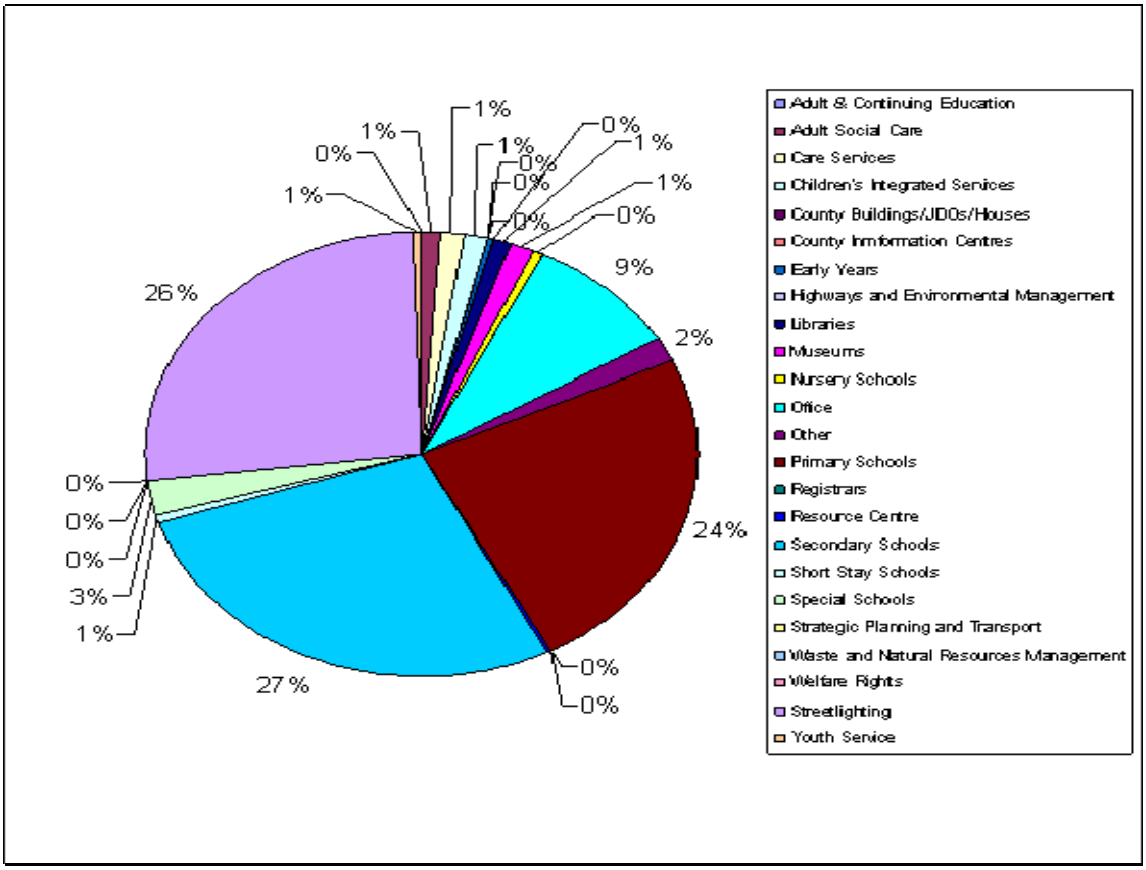
Guidance notes – please delete from final document

.Table 3.1 – Summary table of emissions for baseline year 2007

	Total	Buildings and street lights	Transport	Waste and Water
Baseline CO_2 emissions (tonnes)	146,200	130,429	15,770	0
Baseline Cost (£)	£ 22,266,152	£ 19,362,353	£ 2,903,799	£0

Waste and water not included as part of our baseline

Figure 3.1 Summary of emissions for baseline year 2007



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4 Carbon Management Projects

4.1 Buildings Projects

The table below show the projects planned for building services. The buildings projects revenue will be raised through recharging service areas so the table below shows that no money is currently committed for this program of work. There is an energy and water fund that is used to supplement this work or fund other energy efficiency projects.

The work on schools is all estimated at present. An experienced guess at the number of boilers that will be replaced over the next 5 years has been made.(the figures are based on a 25 year replacement cycle that we would aim to do 1/5th of over 5 years). There could obviously be far more/less than planned but the figures provided are seen as a reasonable estimate.

Ref	Project	Lead	Cost in £		Annual Saving		Year
			Committed	Un Committed	Fin	CO_2	
	Lighting replacement Schools	**MT**	**0**	**1,500,000**	**116,910**	**1395**	**2014**
	Lighting replacement non schools	**MT**	**0**	**300,000**	**34,290**	**409**	**2014**
	Boiler replacement schools	**MT**	**0**	**3.5m/year**	**83,750**	**1539**	**2014**
	Boiler replacement non schools	**MT**	**0**	**920,000**	**16,580**	**307**	**2014**
	Children's Centre Enhancements	**MT**	**0**	**2,310,000**			**2014**

4.2 Fleet services

Fleet services are introducing a number of projects over the next 2-3 years to lower their emissions. The introduction of a fuel management system will be used to establish fuel consumption data and then output can be targeted.

Ref	Project	Lead	Cost in £		Annual Saving		Year
			Committed	Un Committed	Fin	CO_2	
	Fuel Management System	JC	50,000	0	109,352	250	2009
	Driver Training	JC	0	1,500	109,352	250	2010
	Route Optimisation	JC	0	Not known	218,708	500	2011
	Fleet Rationalisation	JC	NA	NA	12,483	29	Not known

4.3 Street Lighting

The Street Lighting Team has introduced a programme of work under a Central Management System. The figures below show projections for 2014.

Ref	Project	Lead	Cost in £		Annual Saving		Year
			Committed	Un Committed	Fin	TCO_2	
	Introduction of a CMS	MD	23,500,000 CHECK	0	2.8m	11,103	2014
	Replacement bulbs	MD	1,400,000	0	0.79/unit	707	2014
	Decommissioning of lit bollards	MD	NA	NA	10/unit	37	2014
	Turning off motorway lights on M65	MD	NA	NA	65,000	300	2010

4.4 ICT and technology related projected

There are a number of projects relating to ICT. Some saving are difficult to quantify, for example virtual printers. As the ICT industry has rapid technological growth there continue to be a number of potential future projects that emerge.

Ref	Project	Lead	Cost in £		Annual Saving		Year
			Committed	Un Committed	Fin £	TCO_2	
	Printer Rationalisation	JH	?	0	20,000	107	2009
	Virtual servers	CG	30,000	0	25,000		2009
	Air Conditioning for data centre	CG	300,000	0	15,000	89	2009

4.5 Policy and Working Practices

Carbon reduction can be influenced by changing policy and working practices. One example includes lowering the thermostats by 2 degrees from 21 to 19. The council is also adding carbon management elements to job descriptions and the e-induction over the next year. This will hopefully raise staff awareness of their responsibility towards the cause and raise the profile of the Carbon Management Programme. These will be crucial to good housekeeping savings.

Ref	Project	Lead	Cost in £		Annual Saving		Year
			Committed	Un Committed	Fin	TCO_2	
	Carbon Management in job descriptions/induction	SR	NA	NA	NA	NA	2010
	Lowering thermostats	MT	NA	NA	37,406	446	2010
	Green Champions	AC	1000	NA	37,406	446	2010
	Switch off Campaign	FC	700	NA	2,693	32	2009

4.6 Future proposals

The below schemes are at a very early stage of feasibility checking, and therefore have no quantified costs and benefits. These projects will be reviewed periodically, as will new ideas, by the Carbon Team in their quarterly meetings.

Ref	Project	Lead	Cost		Annual Saving		Year
			Committed	Un Committed	Fin	CO_2	
	Teleconferencing	SP		Not known			
	Voltage Optimisation	MT		Not known			
	Sub metering of sights	MT		Not known	NA	NA	
	SAVA plugs on fridges	MT		Not known			
	Team travel plans	JS		Not known			
	Blade PCs	CG		Not known			
	Buildings rationalisation	SC		Not known			
	Various schools activity	Various		Not known			

4.7 Current projected achievement towards target

At present the combined total of committed and uncommitted quantified projects totals about 17,695 TCO_2/year which is 41% of our 43,200TCO_2/year target.

Department	**TCO_2/year**
Street Lighting	12,111
Buildings (Schools)	2,944
Buildings	1,162
Fleet	1,000
ICT	478
Total	**17,695**

Non Schools

Non schools quantified total =	14751 TCO_2/year
Non schools baseline =	68620 TCO_2/year (47% of total baseline)
Non schools % reduction =	**21% reduction from baseline**

Schools

Schools quantified total =	2944 TCO_2/year
Schools baseline =	77380 TCO_2/year (53% of total baseline)
Schools % reduction =	**< 4% reduction from baseline**

4.8 Schools Projects

Many carbon saving projects from schools remain un-quantified which is obviously an area we would like to address. A group is to be set up that will act as a communications platform between schools and the council for better collaborative working in several areas. These areas include:

- NI 185
- Carbon Reduction Commitment
- Building Schools for Future
- National Framework for Sustainable Schools
- Carbon Management Plan

The group would also collaborate over other associated areas such as sharing best practice, existing energy saving measures, data collection/analysis and the schools Energy Club.

The group will include:

Area	Contact	Title	Nominated person	Title
CYP directorate	Helen Denton	Executive Director of CYP	Not identified	NA
Property Group	Stephen Costello	Director of Property	Not identified	NA
Finance	Helen Denton	Executive Director of CYP	Phil Maynard/Dave Ainscough/Mike Hart	Corp Finance/CYP Finance
Governor Services	Joy Bellis	Head of Governor Services	Not identified	NA
Schools Forum	Not identified	NA	Not identified	NA
Environment Policy	Andy Mullaney	Head of Environment and Communities	Fiona Cruchley	Principal Environment Policy Officer
Schools Curriculum	Julian Simms		Julian Simms	

5 Carbon Management Plan Financing

5.1 Present Funding

The financing of the council's Carbon Management Plan takes many forms reflecting the diverse nature of services and activities that we carry out. At present most of the projects that will be run in the opening years of the programme will be funded from the individual services budgets. In many cases they have channelled money from existing projects and used it to fund carbon management activity.

5.2 Potential future funding proposals

The financing of carbon management projects needs to be reviewed. Options are being explored including an ‘invest to save’ fund

6 Actions to embed carbon management in the organisation

6.1 Corporate Strategy – embedding CO_2 saving across the organisation

Key factors in ensuring the ongoing and long term embedding of carbon management within the Council include:

- The proposal of a change to our Corporate Impact Assessment to "minimise and make efficient use of energy in all the council's activities, reduce CO_2 emissions and minimise the impact on global climate change" and "reduce the use of natural resources in council buildings, vehicles and in all activities where possible" further details in 6.5.

- Carbon management is a key component of the council's Green Travel Plan

- The council's Cabinet Committee for Climate Change and the Climate Change - Environment Officer Group for the Environment will both require regular reports on progress on delivery of various Carbon Management Programme actions.

- A Green Fleet Review has been conducted with the Carbon Trust to identify areas where savings can be made across Fleet Services.

- Sustainable Procurement Strategy ensures that items centrally procured through the Oracle system will be purchased from sustainable sources where possible.

- Introduction of a carbon management element to job specifications will ensure staff start their employment with LCC knowing their responsibilities.

- E-Induction courses are mandatory for new starters and we have put forward a proposal to have a carbon management element entered into this so new staff start off knowing their responsibility.

- Climate change website updates will help update staff and give them energy saving tips for the office as well as inform them of carbon management activity the council is carrying out.

- Communication plan, see point 6.4 in the CMP.

6.2 Responsibility – being clear that saving CO_2 is everyone's job

The council is introducing 'Green Champions' across all the directorates.

The introduction of a carbon management element into our Corporate Impact Assessment as detailed in 6.5.

One of the longer-term proposals is to introduce carbon-reducing targets directly into business plans where appropriate. This would ensure that carbon management is targeted at all levels of the council therefore enabling further reductions.

6.3 Data Management – measuring the difference, measuring the benefit

Data collection is an issue that the council is looking at as part of NI 185 as well as for this plan. From 2010 the council will also be required to monitor similar data sets for the Carbon Reduction Commitment. As well as being required to report our year on year comparison for NI 185, we aim to collect and review the data more frequently. Analysis will identify any trends and changes from previous years and then appropriate action will be taken by adjusting the forecast, re-running campaigns, looking into new areas of potential savings or communicating with policy makers over potential changes.

6.4 Communication and Training – ensuring everyone is aware

The success of the Carbon Management Plan will rely in part on a successful communication plan. Communication with staff, and increasing their awareness of the issues, will be necessary for our targets to be realised. A 'Switch Off' campaign that rewarded those who had turned off their computers has been launched. A 'Green Champions' campaign will also be launched.

The Carbon Management Plan will be comprehensively reported to all levels of council employees including members, corporate directors, chief officers and all other staff as well as the wider community in time. Specifically it will be reported to the:

• Chief executive	• Cabinet Committee for Climate Change
• Overview & Scrutiny Panel	• Corporate directors and chief officers
• The Schools Forum	• The Green Champions

In addition, progress on the CMP will be reported on a regular basis in the council's staff newsletter, press releases to local media when appropriate and on the council's website.

6.4.1 Communications Plan

The following is an outline of the communications strategy for the Carbon Management Plan. The plan will be reviewed and revised annually to ensure it remains fresh and fit for purpose

Section	Comment
Background	The council's Carbon Management Plan is a positive step in addressing the climate change agenda on a local level. Its objective is to achieve an overall reduction in carbon emissions arising from the day to day operation of the council; its buildings (including schools), business travel, grey fleet and street lights. The plan will assess where and how energy is consumed and present options to improve efficiency and make savings over time. A costed and timetabled Carbon Management Plan is the key deliverable and will inform budget decisions by senior managers and members in future budget cycles.
Purpose of the Communications Strategy	1. To ensure all stakeholders are kept informed and involved, as necessary, in the implementation of the CMP. 2. To communicate the reason for carbon emission reduction and efficiency to staff, members and the general public; 3. To raise the profile of carbon management and demonstrate local leadership 4. To encourage involvement by staff
Objectives of the Communication Strategy	• To demonstrate clear lines of communication • To identify key milestones in the process that need to be publicised when appropriate; • To achieve carbon reduction • To get buy-in from staff and members • To celebrate achievements
Approach to Stakeholder Communication	Internal - Chief executives Intranet messages, Team Talk, Fast Forward, intranet, staff notices, Environment Policy web pages, team meetings, decision-making meetings, work groups, Cabinet Committee External - Press releases, News items, Radio
Challenges	Maintaining momentum – The activity within this plan has to be updated regulated and communicated Resources – additional revenue is required and staff time needs to be allocated to the programme

7 Programme Management of the Carbon Management Programme

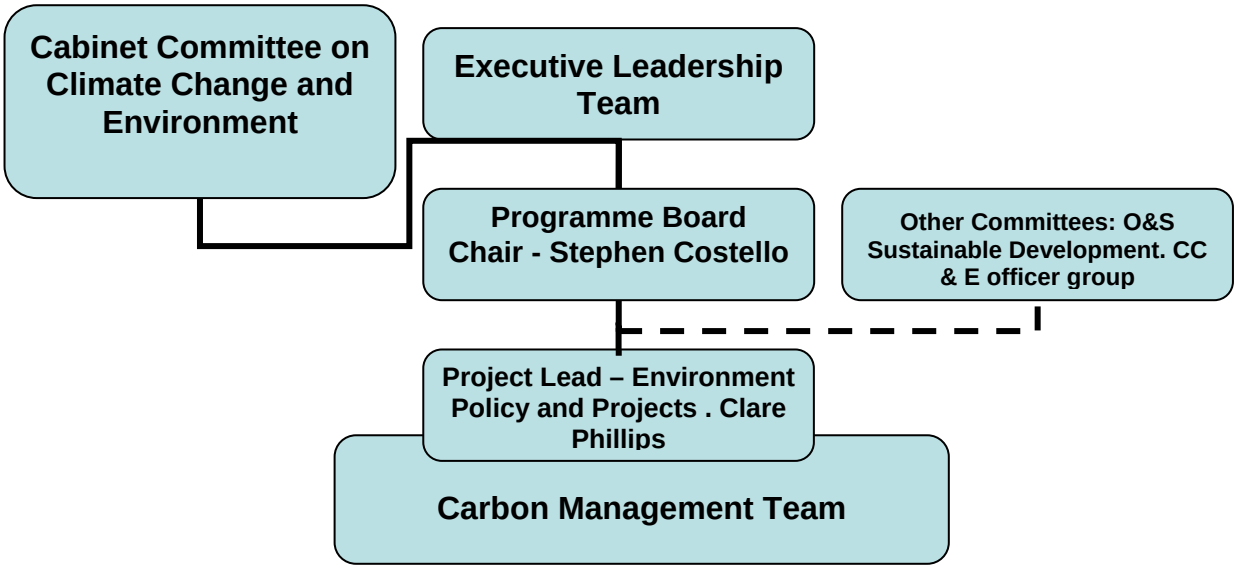
The Carbon Management Programme involves many groups and areas and thus requires a comprehensive management programme to ensure that all stakeholders and decision makers are aware of their responsibilities.

The reporting of this work is tasked to the Environment Policy Team through the project leader and the deputy project leader. They will monitor the implementation of projects, and any subsequent changes in CO_2 production and associated costs. These findings are then reported back to the Project Board. These findings will be taken to the Cabinet Committee for Climate Change where final decisions will be made.

7.1 The Programme Board – strategic ownership and oversight

- The project lead will speak at least quarterly with members of the CM Team to review progress on activities and projects, identifying any blockages that need to be raised with the Programme Board.
- The project lead will speak with the project sponsor to discuss progress at key points throughout the planning. Throughout implementation the project sponsor will be updated on progress at least half yearly or more frequently if required.
- The Programme Board will meet every 2 months during the planning of the programme. The board will review project resource and budget issues that arise from meeting with the CM team members. The board will also review any inherent risks from the projects brought up at CMT meetings. The board will meet quarterly through implementation.
- The deputy Project leader will take the board's findings and recommendations to the Cabinet Committee for Climate Change. The Cabinet Committee meet approximately every 6-8 weeks at present. The deputy project leader will also update Overview & Scrutiny and the Executive Leadership Team (also known ELT) as and when required.
- The Programme Board will comprise:

    - Chair*: Stephen Costello - Director of Property*
    - *Councillor Matthew Tomlinson*
    - *David Ainscough - Head of Combined Finance*
    - *Clare Phillips - Environmental Policy Group Leader*
    - *Fiona Cruchley - Carbon Management Project Leader*


Cabinet Committee on Climate Change and Environment
Executive Leadership Team
Programme Board Chair - Stephen Costello
Other Committees: O&S Sustainable Development. CC & E officer group
Project Lead – Environment Policy and Projects . Clare Phillips
Carbon Management Team

7.2 The Carbon Management Team – delivering the projects

Role	Name and position in the LA	Contact details
Project Leader	*Fiona Cruchley*	*01772 533906*
Deputy Project Leader	*Clare Phillips* • *Environmental Policy and Projects*	*[01772 534188]* *[clare.phillips@lancashire.gov.uk]*
Carbon Management Team members	*Mike Rigby* *Matthew Tidmarsh* • *Estates / Buildings maintenance*	*[01772 533134]* *[Michael.Rigby@property.lancscc.gov.uk]* *[01772 533243]* *Matthew.Tidmarsh@property.lancscc.gov.uk*
	Kate Hunter • *Internal communications*	*[01772 536003]* *[Kate.hunter@lancashire.gov.uk]*
	Jane Swindlehurst • *Green Travel Planning*	*[01772 532415]* *[Jane.swindlehurst@lancashire.gov.uk]*
	John Carr • *Fleet management*	*[01772 532304]* *[John.Carr@lancashire.gov.uk]*
	Martin Dunwell, *Keith Postlewaite* • *Street lighting*	*[01772 534589]* *[Martin.dunwell@lancashire.gov.uk[* *[01772 534602]* *[Keith.postlethwaite@lancashire.gov.uk[*
	Andrew Curtis • *Waste management*	*[01772 533254]*
	• *Schools liaison*	*[Not yet known]*
	Fiona Jackson • *Sustainable procurement*	*[01772 530883]* *[fiona.jackson@lancashire.gov.uk]*
	Colin Gibson • *IT services*	*[01772 532006]* *[Colin.gibson@its.lancscc.gov.uk]*

7.3 Ongoing stakeholder management

The management of key stakeholders are fundamental to ensuring that Carbon Management becomes part of the council's culture and day-to-day business.

Below are listed the internal and external stakeholders that will be involved either directly or indirectly by the Carbon Management Plan

Internal Stakeholders

- Project Sponsors
- Project Leader and Core Team
- Council Members
- Overview & Scrutiny Committee
- Cabinet Committee on Climate Change
- District Partnership Officers
- ELT – Executive Leadership Team
- Corporate Communications
- Climate Change - Environment Officer Group
- Chief Officers, in particular those for;
- Financial Services, Information and Communication Technology, Corporate Procurement and Strategic Planning & Environment
- Operational Managers
- Key officers e.g. those associated with building design, maintenance & refurbishment, facilities management, vehicle fleet management, street lighting, sustainable development and procurement
- Green Champions
- Estate Managers
- All Council Staff
- Schools: Head teachers, Governors, Estate Managers, Caretakers, Finance
- Officers, Pupils

External Stakeholders

- Contractors/consultants: those associated with building design, maintenance & refurbishment, facilities management, vehicle fleet management, street lighting, sustainable development and procurement. E.g. electrical contractors
- Carbon Trust
- Local businesses
- Local Media
- Lancashire Citizens

The table below lists some of the stakeholders that have a more direct involvement in the project as well as a brief description of what their involvement is and how they communicate.

Individual or Group	Their interest or issues	Means of Communication
Carbon Trust	Reducing carbon footprints of local authorities. Reviewing the work we do and helping us achieve our targets.	Through the programme director
Dave Ainscough Corp. Finance	Cost/Budgets	Project board meetings
Stephen Costello	Corporate strategy lead and programme sponsor	Project board meetings
Councillor Matthew Tomlinson	Councillor for the environment/ environment champion and political sponsor	To attend board meetings & chair the Cabinet Committee on Climate Change
Cabinet Committee for Climate Change	They head the Council on all environment issues	Cabinet Committee meetings - These meetings are broadcast on the web and the minutes are made public
Overview & Scrutiny	To oversee and scrutinise cabinet decisions	Overview and Scrutiny meetings
Andrew Cairns	Provides data on staff travel	Data reports
Property Group Buildings Team	Provide data on tariffs and energy consumption/costs	Data reports and CMT meetings
Corporate Climate Change & Environment Officer Group	A group of senior officers that should help push through projects in their directorates.	Meetings
Lancashire Climate Change Partnership	Updates on other related National Indicators from District Councils and other public bodies.	Meetings

7.4 Annual progress review

With the introduction of NI 185 the data collection is being formalised to conform to the new criteria. As part of this the data will be collected and reviewed on a quarterly basis. When this has been in place for a year we will be able to use it for comparable quarter on quarter analysis. This should aid in the process of reviewing the work the council is doing and point out areas available for improvement.

The Carbon Management Team will meet when the reviews are done to discuss the progress made and any new courses of action if appropriate. This should enable the council to keep up to date with progress and ensure we do not fall behind schedule to hit our target. The Project Board will meet after each review to discuss any changes that are proposed and put together any papers that go to cabinet as a consequence of the review. The board will be arranged by the Fiona Cruchley from the Environment Policy team through implementation.

By the nature of some of the projects it will be extremely difficult and in some cases impossible to quantify and review the exact effect they have on our emissions. In some cases the review could be made easier by increasing the monitoring of various sites across the council. This would also make data collection and comparison easier.

Month	Activity
April 2009	CMP to go to Cabinet Committee for Climate change on 20th
	Press release to be made before perdour starts on the 28th
	Data collection to begin for NI 185 and to inform the CMP
	Section co-ordinator appointed by the Carbon Trust should contact us and provide support
	Stephen Costello to take funding proposal for schools activity to Resources board
	Stephen Costello to take CMP to ELT
May 2009	Continued work on Schools funding initiatives
	Communications plan to be launched and monitored
June 2009	Carbon Team to meet to discuss projects, implementation timetables, future projects etc.
	Quarterly data collected and analysed for first quarter
July 2009	Data for NI 185 to be sent to Government
	Senior Officers Working group – Update on Carbon Management Plan implementation
	20th - Cabinet Committee for Climate Change – To be given an update
August 2009	
September 2009	Quarterly data collected and analysed for first quarter
	22nd - September Cabinet Committee for Climate Change – To be given an update
November 2009	Carbon Team to meet
	13th - Cabinet Committee for Climate Change – To be given an update
December 2009	Senior Officers Working group – Update on Carbon Management Plan implementation
January 2010	Carbon Trust to contact the Environment Policy Team for an update
	Quarterly data collected and analysed for first quarter
February 2010	Carbon Team to meet
	8th - Cabinet Committee for Climate Change – To be given an update
March 2010	Senior Officers Working group – Update on Carbon Management Plan implementation
April 2010	Quarterly data collected and analysed for first quarter
	19th - Cabinet Committee for Climate Change – To be given an update

Appendix A: Carbon Management Matrix - Embedding

	CORPORATE STRATEGY	PROGRAMME MANAGEMENT	RESPONSIBILITY	DATA MANAGEMENT	COMMUNICATION & TRAINING	FINANCE & INVESTMENT	POLICY ALIGNMENT *
BEST 5	• Top level target allocated across organisation • CO_2 reduction targets in Directorate Business Plans	• Cabinet / SMT review progress against targets on quarterly basis • Quarterly diagnostic reports provided to Directorates • Progress against target published externally	• CM integrated in responsibilities of senior managers • CM part of all job descriptions • Central CO_2 reduction advice available • Green Champions leading local action groups	• Quarterly collation of CO_2 emissions for all sources • Data externally verified • M&T in place for: o buildings o street lighting o waste	• All staff given formalised CO_2 reduction: o induction and training o communications • Joint CM communications with key partners • Staff awareness tested through surveys	• Finance committed for 2+yrs of Programme • External funding being routinely obtained • Ring-fenced fund for carbon reduction initiatives	• CO_2 friendly operating procedure in place • Central team provide advice and review, when requested • Barriers to CO_2 reduction routinely considered and removed
4	• CO_2 reduction commitment in Corporate Strategy • Top level targets set for CO_2 reduction • Climate Change Strategy reviewed annually	• Sponsor reviews progress and removes blockages through regular Programme Boards • Progress against targets routinely reported to Senior Mgt Team	• CM integrated in to responsibilities of department heads • Cabinet / SMT regularly updated • Staff engaged though Green Champion network	• Annual collation of CO_2 emissions for: o buildings o street lighting o transport o waste • Data internally reviewed	• All staff given CO_2 reduction: o induction o communications o CM matters communicated to external community	• Coordinated financing for CO_2 reduction projects via Programme Board • Finances committed 1yr ahead • Some external financing	• Comprehensive review of policies complete • Lower level policies reviewed locally • Unpopular changes being considered
3	• CO_2 reduction vision clearly stated and published • Climate Change Strategy endorsed by Cabinet and publicised with staff	• Core team regularly review CM progress: o actions o profile & targets o new opportunities	• An individual provides full time focus for CO_2 reduction and coordination across the organisation • Senior Sponsor actively engaged	• Collation of CO_2 emissions for limited scope i.e. buildings only	• Environmental / energy group(s) given ad hoc: o training o communications	• A view of the cost of CO_2 reduction is developing, but finance remains ad-hoc • Some centralised resource allocated • Finance representation on CM Team	• All high level and some mid level policies reviewed, irregularly • Substantial changes made, showing CO_2 savings
2	• Draft Climate Change Policy • Climate Change references in other strategies	• Ad hoc reviews of CM actions progress	• CO_2 reduction a part-time responsibility of a few department champions	• No CO_2 emissions data compiled • Energy data compiled on a regular basis	• Regular awareness campaigns • Staff given CM information on ad-hoc basis	• Ad hoc financing for CO_2 reduction projects	• Partial review of key, high level policies • Some financial quick wins made
1 **Worst**	• No policy • No Climate Change reference	• No CM monitoring	• No recognised CO_2 reduction responsibility	• No CO_2 emissions data compiled • Estimated billing	• No communication or training	• No specific funding for CO_2 reduction projects	• No alignment of policies for CO_2 reduction

* Major operational policies and procedures, e.g. Capital Projects, Procurement, HR, Business Travel

Appendix B: Communications Plan

Carbon Management (LACM) programme PR strategy – 2007/08

Objective: To further develop the Council's programme of energy efficiency savings and reduce its carbon emissions

Target Audience	Medium	Message	Mechanism	Frequency & Timing	Co-ordinator	Requirements
Members, Senior Officers	**Meetings**	Briefings Monitoring reports Recommendations for determination Information on how to get involved	Carbon Management Project Board ELT Cabinet Committee on Climate Change	Quarterly As appropriate Every 6-8 weeks As appropriate	Project Leader: Fiona Cruchley Project Sponsor: Steven Costello	Papers presented by Project Leader or Sponsor; Opportunity for members/senior staff to ask questions Requires lead-in time to get on agendas
Team Leaders and Managers	**Meetings**	Briefings Carbon reduction targets Monitoring reports?	Departmental Management Team meetings	Quarterly As appropriate	PL: Fiona Cruchley PS: Steven Costello	Targeted information Feedback on achievement of targets
Green Champions	**Meetings.** **Specific newsletter created.** **Training**	How to engage staff Messages to disseminate How to overcome obstacles Feedback	Network meetings	Quarterly As appropriate	Andrew Coombe PL: Fiona Cruchley DPL: Stacy Gorstridge	Needs development of a campaign of action Management of expectations and limitations needed
Staff	**Team meetings (Team Talk)** **Fast Forward**	Corporate support for programme Response to queries	Staff suggestion scheme		?	PL or DPL to follow up on questions raised

Target Audience	Medium	Message	Mechanism	Frequency & Timing	Co-ordinator	Requirements
Members, Staff	**Intranet**	What's going on Why get involved Hints and tips? Progress, Contacts; Corporate support for the programme	Pages dedicated to the programme Chief Executive's Intranet message e.g. Ged's blog	On-line; updated as required	Andrew Coombe, Corporate Communication	Easy point of information; No way of knowing what people do with the information
Staff and members	**Promotional materials**	Where energy is used and wasted; Why take action; How to take action; Who should take action	e.g. Posters, bookmarks, instructions on fittings Rewards for 'good behaviour' available for free from Carbon Trust or could create our own	At regular intervals throughout programme Revised and refreshed as necessary	PL: Fiona Cruchley DPL: Stacy Gorstridge	Key messages; Needs follow up to find out impact; Need to be updated regularly to keep message 'fresh' Can be produced in-house Needs a budget?
General	**Energy Performance Certificates**	How well the Council is doing in maintaining energy efficient buildings	Energy Performance Certificates displayed in all buildings over 1000 sq metres	Permanent Only publicise once we can demonstrate improvements	Individual Building Managers Property Group	Awareness of buildings affected and implications for programme Needs feedback on perceptions of ratings?
All staff; Community	**Newsletters**	Updates on progress; Good housekeeping; Contacts	Team Talk	Monthly and on intranet Quarterly?	PL: Fiona Cruchley DPL: Stacy Gorstridge Corp Communication	General information; maintains awareness about campaign; Needs lead-in time of several weeks
General	**Web Site** **Intranet**	What's, why and Who Progress Contacts; What to do at home;	Pages dedicated to the programme	Updated as required. To be done before other promotions work	PL: Fiona Cruchley DPL: Stacy Gorstridge Andrew Coombe Pauline McCarthy	Easy point of information; No way of knowing what people do with the information

Target Audience	Medium	Message	Mechanism	Frequency & Timing	Co-ordinator	Requirements
General	**Radio**	Purpose, progress, benefits; What you can do at home/workplace	Rock fm Radio Lancashire	Periodic Not starting for at least 12 months	Andrew Coombe	General information; actions home/ workplace No feedback on impact Established connection with launch of the Climate Change Strategy
Schools	**Energy Champion**	Value of carbon management Why do it How to do it How to tie it in to lessons How to save money/energy	Identified co-ordinator within Children's Services or Environment Policy?	Regular contact needed, especially at outset	Property Group Helen Denton, Jo Turton and Steven Costello	Needs dedicated person(s) Feedback to programme dependent on personality involved. Engagement with schools dependent finance plans for schools.

Appendix C: Definition of Projects

8 Projects

8.1.1 ICT / Technology projects

Project: **Reference:**	***Air Conditioning Upgrade for T101 (data centre)***
Owner (person)	*Data centre manager – Steve Purvor*
Department	*ICT Services*
Description	*The existing air conditioning plant is a direct expansion (d-x) system utilising refrigerant R22 which is shortly to be phased out completely in line with the Montreal Protocol to reduce ozone depleting substances.*
Benefits	• Financial savings: £15,000 per year based on 9p/kwh (estimated) • Capital cost = £300,000 • Energy savings: 163,000kwh per year (estimated) • CO_2 Emissions reduction: 85.5 tonnes of CO_2 per year (estimated)
Funding	• *From ICT budget*
Resources	• *ICT budget*
Ensuring Success	• *Air con has to be upgraded at some point in accordance with the Montreal Protocol*
Measuring Success	• *Success will only be accurately measured through the introduction of smart metering*
Timing	• *Upgrade to take place over the Easter 2009 bank Holiday*
Notes	

Project: **Reference:**	***Printer Rationalisation***
Owner (person)	*Steve Purvor / Jan Harper*
Department	*ICT Services*
Description	*Replacement of desktop printers with Multi-Functional Products (that offer printing, scanning, fax, photocopying)*
Benefits	• Energy savings: approx. 200,000kwh per annum (figure from June '08) • Printing reduction: approx. 39% less printing (figure from Aug '07) • Yearly rental of MFPs = £? • CO_2 Emissions reduction: 105 tonnes of CO_2
Funding	• *MFP rollout was an LEI project*
Resources	• *Contract awarded to Danwood to supply the MFPs*
Ensuring Success	• *Make sure staff are onboard and understand why the desktop printers are being removed and replaced with MFPs instead*
Measuring Success	• *Measure success by:* o *amount of prints made compared to how many there used to be* o *power savings when comparing the power use of the desktop printers with the new MFPs*
Timing	• *Project implementation is almost complete*
Notes	• *Still waiting for financial detail from Jan Harper.*

Project: **Reference:**	***CRT Monitors***
Owner (person)	
Department	*ICT Services*
Description	*Replacement of CRT monitors with TFT screens*

Benefits	• Energy use (On / Standby / Off):
	  o TFT screen – 35W / ~0W / 0W
	  o CRT monitor – 75W / 9W / 0W
	• Financial savings: £ Unknown
	• TFT monitors cost £85 on average
	• CO_2 Emissions reduction: Unknown at present

Funding	• *Replace any remaining CRT monitors with TFT screens. Some departments are reluctant to replace monitors owing to budget constraints and so only replace PCs because they need to be upgraded whereas monitors only get replaced if/when they break* • *Source of funding: Teams individual budgets*
Resources	• *Delivered within current resources. Team budgets take ICT equipment lifetime cost into consideration*
Ensuring Success	• *The departments that will probably need their monitors upgrading are likely to be the ones without spare capacity in their budgets to pay for them.*
Measuring Success	• *There are no managed records of monitors across the authority. All new monitors that are ordered are TFT so eventually all CRT monitors will be phased out*
Timing	• *As the number of CRT monitors isn't known at this time and end date isn't possible at present.*
Notes	• *I'm not sure if there are any records of which users still have CRT monitors. It's a gradual process that is not being enforced or monitored*

Project: **Reference:**	***Server Virtualisation***
Owner (person)	*Steve Purvor*
Department	*ICT Services*
Description	*Virtualisation of servers in the data centre.*
Benefits	• Financial savings: If all servers had to be replaced with hardware rather than virtual servers it would have cost £25,000 more • Savings would be in the ratio of 14/3 as a very simplistic calculation. Still not quantifiable as the original servers output is not known. • Capital Costs £ 30,000 • CO_2 Emissions reduction: ? tonnes of CO_2 (very difficult to calculate due to nature of technology)
Funding	• *Internal funding* • *Funding has already been agreed*
Resources	• *No extra staff required. Work fit in between other work.*
Ensuring Success	• *70+ servers have been done already. However, staff are taken from their virtualisation duties when other more pressing matters arise in their role working with the data centre (issues, failures, etc).* • *Since no costs before and after are being calculated then the benefit of virtualisation may get lost along the way and interest in the project may begin to falter.*
Measuring Success	• *No parameters have been set for how and when any savings will be measured.*
Timing	• *Server virtualisation is being done as a side project by data centre staff. No dates have been set.*

Notes	• *The fact that no dates have been set and that the project gets side-lined in between other data centre work means that energy savings are being pushed back because the servers are not being virtualised as quick as they could be if there was a dedicated resource.*
	• *Breakdown*
	  o *3 Physical Servers running VMWare (3 x HP BL380)*
	  o *69 Virtual Servers*
	  ▪ *21 from old servers*
	  • *8 x Fujitsu G Series*
	  • *4 x Dell 1750*
	  • *1 x Stone PC*
	  • *8 x Old Compaq servers of various kinds*
	  ▪ *48 new servers that would otherwise have been on HP DL360's*

Project: **Reference:**	***Blade PCs***
Owner (person)	*Carol Groom / Paul Wickstead*
Department	*ICT Services*
Description	*Replace PCs with Blade PCs connected to a virtual instance held on the server*
Benefits	• Financial savings: Not known at present due to it still being piloted. Areas where it could be employed haven't been explored as of yet. • CO_2 Emissions reduction: Would depend on the number involved
Funding	• *Still in R&D but hoping to launch for service centre next year*
Resources	• *ICT R&D project*
Ensuring Success	• *There are many sources on the internet that state the savings of using Blade PC's* • *Several options for blade PCs have been looked into (HP Blade PCs, Parellels, VMWare). We are piloting blade pc's* • *One of the restraining factors is the fact that true virtual environments like VMWare offers requires a full Windows licence whereas installing Windows on a piece of hardware only requires an OEM licence. However, the fact that blade PCs last more than twice as long as PCs, the licence doesn't "die" with the PC as with an OEM licence and the extra productivity available with a blade pc should more than account for the extra expense of the Windows licence.*
Measuring Success	• *No success measurements have been set*
Timing	• *No milestones / key dates set*
Notes	• *Blade PCs provide both direct and indirect savings (figures taken from HP website):* o *80% less maintenance per year* o *25% capital cost savings* o *34% less in maintenance* o *23% less to operate* o *25% productivity increase* o *Direct saving examples* ▪ *Cheaper than PCs* ▪ *Require less electricity* o *Indirect saving examples* ▪ *Easier to provide support to ICT staff*

Project: **Reference:**	***Webpage printing***
Owner (person)	
Department	*ICT Services*
Description	*Improve the print css used by web pages.*
Benefits	• At present the webpage print css hasn't been optimised for printing. By optimising this it would reduce the amount of ink used when printing owing to unnecessary webpage elements being printed. By using the space more efficiently on prints it would also use less paper on some occasions where 3 pages could have fit onto 2 for example. • Financial savings for LCC: £ 0 • CO_2 Emissions reduction - No direct savings of CO_2
Funding	• *Development time required to enhance the current print css*
Resources	• *Delivered by current ICT staff but would require development time to be made available*
Ensuring Success	• *Someone spending time developing the print css*
Measuring Success	• *Success = reduction in paper purchases as well as fewer toner cartridge replacements*
Timing	• *No timing set*
Notes	• *A report was run in mid '08 to check webpage printing.* • *The "printer friendly version" for web pages was used 787 times compared to users simply clicking File > Print which was used 9402 times.* • *The "printer friendly version" hasn't been optimised so this is still using more paper than is necessary.* • *As well as improving the print css we could also do to advise users to get into the habit of checking the Print Preview first to make sure they are not printing pages that they don't need. As part of this advice users may need to be told how to adjust the pages that they are printing (ie. Print pages 2-5 rather than just All)* • *All savings on paper and printing will be saved by Danwood rather than us due to the current contract arrangement*

8.1.2 Behaviour and Policy projects

Project: **Reference:**	***Green Champions***
Owner (person)	*Andrew Coombe/Fiona Cruchley*
Department	*Environment Policy Team*
Description	*Recruiting people in all different business areas to help aid and monitor the green cause in their locality, called 'Green Champions'.*
Benefits	• Financial savings: £ 74,811/annum (based on 9p/kwh) • CO_2 Emissions reduction: All Offices – 13,582,000 kwh / 0.523 = 25969407kwh for offices (9% of baseline) Targeted offices to start with - 8,312,346kwh for grid electric = 4347.5 TCO_2 10% of which = 435 TCO_2 saving per annum. On average heating bills go up by 7% in winter that can be attributed to unauthorised heaters. 65 TCO_2 could be saved from this at a conservative estimate from case studies. Overall 500 TCO_2 saved
Funding	• *None required initially. Will depend on the full scope of activities planned for the Green Champions. Funding will come from the Environment Policy Team*
Resources	• *Willing and able volunteers with line manager approval* • *Corporate communications championing the cause* • *Environment Policy to co-ordinate and drive the project*
Ensuring Success	• *Line manager approval for the green champions* • *A measure of authority to take action or at least report problems to someone who can take action* • *Sufficient volunteers with the right drive to make a difference.* • *A sufficient programme of work for them to do to maintain interest.*
Measuring Success	• *Reduced energy bills in area of operation* • *Increased buy in off staff (could be reflected in extra requests to be a green champion, a reduction in reported misdemeanours etc)*
Timing	• *Milestones / key dates e.g.* o *Should be launched in April 2009. Savings should be immediate but won't be measurable for at least 6 months.* o *Communication of the plan and it's aims should be repeated, stories to go in 'Vision', further recruitment, expansion of activities, ideas sharing groups or staff suggestion scheme specifically for environment initiatives.*
Notes	*Done by North Yorks. Estimated at 61.5 tonnes a year saving from removing personal heaters which would be part of the Green champions role*

Project: **Reference:**	***'Switch off' Campaign***
Owner (person)	*Fiona Cruchley*
Department	*Environment Policy Team*
Description	*The campaign aims to make people more aware of their impact on our energy costs and the environment through rewarding good behaviour (those who switch off their PCs). It has been trialled to great success in some of the main Preston Offices. Through the Green Champions we are hoping to expand this further to cover a wider area of offices.*
Benefits	• Financial savings: £ [x] • Carbon saving: *Offices = 8,312,346kwh X 15%(IT equipment) X 60% PCs X 8% saving* *= a saving of 59,849kwh = 37 TCO2/annum*
Funding	• *Initially funded through the Environment Policy Team budget*
Resources	• *Volunteers to help deliver the rewards* • *ICT to monitor the number of PCs left switched on* • *Currently no viable method of looking at monitors that are left on*
Ensuring Success	• *Continued budget for providing incentives to people who switch off* • *Continued support from the Environment Policy and Corporate Communications teams until the 'Green Champions' can take over.* • *To be re-run until culture change is adequately established.*
Measuring Success	• *ICT can measure the number of PCs left on compared with the number that should be left on over night* • *Ad hoc at present. Should be built into a monitoring framework by the 'Green Champions'*
Timing	• *Milestones / key dates e.g.* o *Budget decisions for future Climate Change funds* o *Commenced November 2008* o *Through positive reinforcement savings should be realised within 6 months.* o *Exercise to be repeated for long term success*
Notes	*(10000 PCs, 1000 left on, approximately 200 have to be left on) so 800 left on unnecessarily = 8% saving*

Project: **Reference:**	***Introduction of Carbon Management to HR & Policy documents***
Owner (person)	*Steph Rhodes (Job descriptions), Fiona Cruchley, Cathy Wignall (E-learning), Kieran Curran (Policy)*
Department	*Various – Environment and OCE mainly*
Description	*E-learning, corporate impact assessment, job descriptions, business plans?*
Benefits	• Embedding Carbon Management into staff thinking.
Funding	• *None*
Resources	• *Proposals have to be taken to and passed by the right people*
Ensuring Success	• *Putting forward a good case for their inclusion which will be the Environment Policy Team's responsibility*
Measuring Success	• *Staff surveys* • *Energy bills could be reduced but will be difficult to capture the information*
Timing	o *As proposals are written they can be forwarded to the relevant staff for their consideration*
Notes	

Project: **Reference:**	***Procurement projects***
Owner (person)	*Fiona Jackson*
Department	*Corporate Procurement*
Description	*The Procurement Team have made a variety of changes that should positively impact on reducing waste and increasing efficiency of service and resources. These include* *1. Online tendering* *2. Government Purchase cards* *3. Mandatory procurement training* *4. Oracle roll out* *5. Sustainable food procurement*
Benefits	• *Streamlined services, vastly reduced paper consumption, tighter controls on purchasing of green or environmentally friendly products from preferred suppliers* • *All of the procurement benefits that are created are not measurable in terms of reducing the LCC baseline total*
Funding	• *All funded from original in house budget*
Resources	• *Existing resources*
Ensuring Success	• *Most projects are already implemented and entering roll out across LCC activities*
Measuring Success	• *Due to the nature of the benefits they can not be directly attributed or measured*
Timing	o *Happening now*
Notes	

8.1.3 Fleet Services projects

Project: **Reference:**	***Fuel management system***
Owner (person)	*John Carr*
Department	*Fleet services*
Description	*An accurate electronic measurement of fuel consumption for all Fleet vehicles*
Benefits	• Capital outlay of £56,000 • Yearly upkeep of £13,500 • CO_2 Emissions reduction: 250 Tonnes *5% savings estimated from cutting out unauthorised use of fuel*
Funding	• *Funding has been acquired for this through LCCG funds*
Resources	• *Existing staff to implement and interpret*
Ensuring Success	• *Accurate calibration, Review of results and appropriate action taken to ensure that all fuel is used on official council business.*
Measuring Success	• *Results will be measured against the amount of fuel bought in the baseline year.*
Timing	• *Tender awarded and currently being installed in Highways Depots*
Notes	*This will provide accurate information against which to measure future projects to reduce fuel consumption*

Project: **Reference:**	***Fleet driver efficiency training***
Owner (person)	*John Carr*
Department	*Fleet services*
Description	*1 day of driver training per year for all drivers within LCCG to be done with varying topics including fuel efficiency, safety aspects and maintenance.*
Benefits	• Financial savings: £ 114,800 (Estimated at 5% of fuel use) • CO_2 Emissions reduction: 250 tonnes of CO_2 /annum *Savings estimated at 5% of fuel consumption (case studies have shown initial reductions as high as 15% savings but these decline over time, a year on year figure of 5% is seen as sustainable)*
Funding	• *To be decided possibly from LCCG internal sources* • *Decision is expected from LCCG SMT*
Resources	• *Training will be managed in house provided and delivered by a mix of internal and external trainers* •
Ensuring Success	• *Ongoing funding required to maintain the training* • *Fuel management project needs installing first so any results will be measurable* •
Measuring Success	• *Results will be measured through the fuel management scheme*
Timing	*Business case has been submitted to LCCG Operations Group and awaiting decision*
Notes	

Project: **Reference:**	***Fleet rationalisation***
Owner (person)	*John Carr*
Department	*Fleet services*
Description	*Pool cars and chauffeur cars being reviewed.* *General review of vehicle replacement programmes with a view to extending the replacement cycle*
Benefits	• Financial savings: to be defined • CO_2 Emissions reduction dependant on the outcome of the review but each vehicle not replaced will save approximately 3 tonnes of CO_2:
Funding	• *No funding required if passed*
Resources	• *Provisions already made and in place*
Ensuring Success	• *Delivering the same service while at the same time making the vehicles last longer*
Measuring Success	• *Results will be measured by the increased life of the vehicles*
Timing	• *Review to be completed by September 2009*
Notes	

Project: **Reference:**	***Speed limiting devices***
Owner (person)	*John Carr*
Department	*Fleet services*
Description	*Speed limiting devices fitted to all vehicles above 3.5 tonnes limiting them to 60mph.*
Benefits	• Financial savings - Savings accounted for through Driver training scheme • Paid for through existing budget • CO_2 Emissions reduction: 0 tonnes of CO_2 (As these savings are linked with driver training we're including the benefits of both in the driver training project)
Funding	• *Funded from Fleet capital budget* •
Resources	• *Provisions already made and in place*
Ensuring Success	• *Limiters to be fitted to new vehicles procured* •
Measuring Success	• *Results will be measured through the fuel management scheme*
Timing	• *Project already in place*
Notes	As these savings are linked with driver training we're including the benefits of both in the driver training project

Project: **Reference:**	***Route optimisation and vehicle monitoring software***
Owner (person)	*John Carr*
Department	*Fleet services*
Description	*Saves fuel by monitoring and optimising vehicle use*
Benefits	• Financial savings: £ 228,000 in fuel (based on previous years fuel prices) • Payback period and capital cost – Not confirmed due to infancy of project • CO_2 Emissions reduction: 500 tonnes of CO_2 (10% of consumption based on case studies from various other councils)
Funding	• *Funding will be applied for when the fuel management system is implemented. Otherwise savings will not be measurable.*
Resources	• *Either from Fleet budget or climate change fund/match funding if appropriate*
Ensuring Success	• *The implementation of the fuel management project* • *Accurate calibration, continuous updating of routes*
Measuring Success	• *Results will be measured against the amount of fuel bought in the baseline year and the expected increase in activity deducted.*
Timing	• *Waiting for implementation of the fuel management system. Funding will then be applied for through the cabinet committee or Engineering services*
Notes	*May prove to be a very contentious issue with staff*

8.1.4 Staff travel reduction projects

Project: **Reference:**	***Shared Wheels extension***
Owner (person)	*Jayne Swindlehurst*
Department	*Travel planning*
Description	*Reduce the number of business miles through car sharing to meetings whenever possible.* *Extend the shared wheels scheme to cover short term journeys between LCC offices.*
Benefits	• None quantified yet. Should be set up through Travel Planning Team pilot based on staff travel survey feedback
Funding	• *Not known what support would be required to set it up or maintain the site. Pilot needs to be agreed*
Resources	• *It would require help from the people at Shared wheels to see if it's feasible* • *Staff will need to be made aware of it and possibly have to add incentive to begin with.*
Ensuring Success	• *Funding created for the extra work to be done on the website.* • *An adequate campaign run to get staff buy in*
Measuring Success	• *Through the website* • *Through the payment of business mileage if the online form was amended to include a shared car tick box* • *Reduced business mileage*
Timing	o *Feasibility check to be done*
Notes	

Project: **Reference:**	***Team Travel plans***
Owner (person)	*The internal travel planning co-ordinator*
Department	*Travel Planning Team*
Description	*Produce team travel plans to help look at ways they can cut down on their business mileage*
Benefits	• Financial savings: Not known • CO_2 Emissions reduction: Not known
Funding	• *New post cleared but not gone to vacancy panel yet* • *Funding is tight so team budgets may be cut, this will mean savings have to be made and business mileage could be an area of quick wins with more efficient travel planning*
Resources	• *The post holder* • *Buy in from Team heads to invest time in exploring alternative options*
Ensuring Success	• *New post to be continuously funded*
Measuring Success	• *Reduced business mileage claims*
Timing	o *Waiting for post to be advertised*
Notes	

Project: **Reference:**	***Teleconferencing facilities***
Owner (person)	Stephen Pierrie
Department	*ICT Services*
Description	*Provide teleconferencing facilities so that staff aren't required to travel as much. This could help when working with long distance partners who have compatible equipment and for meetings between County Employees based at different sites.*
Benefits	• Financial savings: £? • CO_2 Emissions reduction: ?
Funding	• *Still waiting for information about what stage the project is up to and where it's being funded from*
Resources	• *Training for staff to use it. Advertising of the facility so staff are aware.*
Ensuring Success	• *That equipment is made available to the staff that need it and is updated as appropriate*
Measuring Success	• *Business mileage figures should show a reduction when the facilities are being used*
Timing	o *Waiting for information*
Notes	*Waiting for a response from Stephen Pierre*

8.1.5 Street lighting projects

Project: **Reference:**	**Install a Street Lighting Central Management system**
Owner (person)	*Martin Dunwell*
Department	*Environment Street Lighting*
Description	Install a Lancashire Street Lighting Central Management System to remotely control and manage switching times
Benefits	• Average financial savings: per unit £ 34 (approx 30,000 units over 5 years to be included) • Payback period: 4 years • 68,916,941 kwh annual at present • CO_2 Emissions reduction: 11,700 tonnes/year approx by the end of the project equating to a 30% overall reduction. • Carbon Reduction Commitment – potential benefits of up to £2.8m/annum • Reduced night inspection patrol to monitor street lights that aren't working as the system does it for you (see later project for details)
Funding	• Capital funding to the value of £130 per unit would be required to implement such a system. 30,000 units would be put on the system over 5 years. There is scope to expand the project given the necessary investment after the initial 5 year plan.
Resources	• *Additional resource (e.g. people) requirements to enable delivery and where these will come from* • *If this project will be delivered within current resources, say so*
Ensuring Success	• Will only be achieved county wide if specific funding is given for this project. Awaiting cabinet approval on further money and the redirection of budget allocation to this project. Also awaiting a decision based on the re investment of savings made from previous years installation
Measuring Success	• *Due to the way that street lights consumption is recorded the savings should be constant and realised as soon as the 'codes' are negotiated with the suppliers. The new equipment will be pseudo metered meaning that we only pay for what we use whereas now we pay for all lights whether they're working or not due to the current 'codes' that are in place*
Timing	o Trials are currently ongoing – savings will be realised as and when equipment is installed. The savings will be realised gradually over a 5 year period. Roughly saving 6%/year from current baseline
Notes	Not only will this allow the LCC greater scope to introduce variable lighting levels but will also enable CO_2 emissions to be reduced from other activities such as the driven Night Inspections.

Project: **Reference:**	**Decommission Signs and Bollards that no longer need to be lit**
Owner (person)	*Martin Dunwell*
Department	*Environment Street Lighting*
Description	Remove electrical supply from traffic signs that no longer need to be lit. There are approximately 2000 such signs and bollards across Lancashire that will be replaced with reflective signs/bollards as and when maintenance is required
Benefits	• Average financial savings: per unit = £ 10 (this is just to switch it off with no replacement factored in) • Payback period: 15 years • CO_2 Emissions reduction: 37 tonnes of CO_2/year when completed
Funding	• To be funded from within the current street lighting revenue budget. Cost of approx £1000 for each non illuminated replacement
Resources	• *New reflective bollard will need to be purchased and fitted.* • *Will be factored into routine maintenance cycle*
Ensuring Success	• Will only be achieved if street lighting revenue funding remains at existing levels
Measuring Success	• *Pseudo metering*
Timing	o Ongoing - savings will be realised as units are decommissioned.
Notes	Signs to be decommissioned due to change in road regulations.

Project: **Reference:**	**Turning off the M65 lights other than junctions**
Owner (person)	*Martin Dunwell*
Department	*Environment Street lighting*
Description	Many sections of motorway aren't lit and studies have shown it has little or no bearing on accident rates. As there is no street safety aspect of street lights on motorways we have looked at switching off the lights on the M65 other than at the junctions
Benefits	• Reduced operating hours • Reduced maintenance requirements • Financial savings of £65k/annum • CO_2 savings of 300 T/annum
Funding	• *As it is switching off lights the associated costs are low. There will be associated costs from the removal of the old street lights and the setting up of new codes for the lights at the junctions.*
Resources	• *None at present* • *Decommissioning work would eventually have to be carried out but would probably just be factored in with the routine maintenance cycle*
Ensuring Success	This has yet to be passed by cabinet. Has gone to consultation and the results are to be presented in February 09. • There is local opposition to the scheme being built from a local newspaper campaign that could stop the proposal. • The CMS system to be installed.
Measuring Success	• *From pseudo metering*
Timing	o *If passed by cabinet work would commence within the next financial year.*
Notes	

Project: Reference:	**Upgrade All Lighting Controls –to reduce burning hours**
Owner (person)	*Martin Dunwell*
Department	*Environment Street Lighting*
Description	Replace all existing time switches and photocells with 55/28 lux photocells.
Benefits	• Average financial savings: per unit = 79p • Payback period: 12 years • CO_2 Emissions reduction: 706 tonnes of CO_2 /year Reduced operating hours: 4,799,864
Funding	• Cost of conversion – approx £1,4m to be funded from within the current street lighting revenue budget.
Resources	• *Additional resource (e.g. people) requirements to enable delivery and where these will come from* • *If this project will be delivered within current resources, say so*
Ensuring Success	• Savings will only be achieved if street lighting revenue funding remains at existing levels.
Measuring Success	• *Pseudo metering*
Timing	o Ongoing programme that commenced September 2004. Savings will be realised as units are upgraded. Units will be upgraded alongside the 4 year maintenance cycle
Notes	

Project: **Reference:**	**Night inspection of street lights reduced requirement**
Owner (person)	*Martin Dunwell*
Department	*Environment Street Lights*
Description	This service is outsourced and there are 6 vehicles for inspecting street lights that are currently used. This would not need to be done for any lights on the CMS system as faults are reported by the system. Therefore a reduction in mileage equating to roughly 20% (from number of units on CMS out of the total number of units (30,000/145,000)) and potentially a reduction in vehicle numbers. 169,650km done at present = 22 TCO_2/annum if the route can be optimised for maximum savings.
Benefits	• Reduced operating hours of the service • Reduced vehicle numbers when replacements are needed • Reduced maintenance requirements when there are fewer vehicles • Financial savings of £??k/annum • CO_2 savings of 4.4 TCO_2/annum (22T/CO_2 X 20%)
Funding	• *This project requires less finance than the current arrangement and therefore needs no extra funding.*
Resources	• *This project will be delivered within existing resource levels*
Ensuring Success	• *The successful implementation of the CMS system*
Measuring Success	• *Fuel bill reduction when much of 1st stage of the CMS project has been completed*
Timing	o *This will only start saving diesel and therefore CO_2 when the project is 3-4 years in. After this the saving should keep increasing as more of the street lighting gets put onto the CMS*
Notes	*We are currently in a contract with Ewood PLI that does our night inspection for us. There is 18 months left on the current contract. They are not required to provide us with data currently and due to their other contracts can't supply us with a number of miles done for our street lights. This will have to be negotiated when the contract is renewed or re-tendered as we are now required to provide this information. Chris Hampshire – 01254 677545*

Project: **Reference:**	**Replacement of traditional lighting units with LED units**
Owner (person)	*Martin Dunwell*
Department	*Environment Street lighting*
Description	The LED units use 29 Watts rather than the 59 Watts that are currently used. A saving of almost 50% is associated with the change from each old unit to LED.
Benefits	• Running costs could be effectively halved if the dimming technology arrives in time to implement both technologies • The CO_2 output could also be halved • Payback period – Until costs of installation are known this can not be calculated
Funding	*From existing street light budget*
Resources	• *The project would be implemented through existing staff. Probably in line with the maintenance cycle*
Ensuring Success	• Trial period being a success
Measuring Success	• *Reduction in pseudo metering off affected area*
Timing	o *Trial to be launched April 09*
Notes	*Can't be used with dimming devices at moment. Technology is thought to be underway for this problem to be solved in the near future.*

8.1.6 Buildings projects

Project: **Reference:**	***5 yr Boiler Replacement Programme – (Non Schools)***
Owner (person)	*Director of Property*
Department	*Property Group*
Description	*Accelerated Replacement of Conventional boilers with modern High Efficiency and Condensing Boilers and Upgrading of Controls Installations*
Benefits	Financial savings will vary with individual schemes. Assume an average 10% saving for each on energy bill. i.e. combined effect is to reduce energy consumed for heating of non school buildings by 19%. Payback period: 2-4 years, based on the overcost compared to standard boiler. CO2 Emissions Reduction: 1.5% of the current Total Carbon Emissions due to buildings = 307TCO$_2$/annum
Funding	*The total investment required is estimated to be £ 920,000/year. Likely funding streams include;* *Additional funding to accelerate the number of schemes undertaken annually through the Retained Revenue & Maintenance Programme.* *Additional Climate Change Initiative funding contribution.* *Investment criteria to be met etc. KgCO2yr/£ invested of CCI money, over the lifecycle of the technology.*
Resources	*Additional resource (e.g. people) requirements to enable delivery and where these will come from. It is expected that the programme will be identified through Carbon Trust Style 'Energy Surveys' and 'Condition Surveys' , targeted at buildings which are either top of the carbon emissions spreadsheet or poorly performing under the DEC scheme. (So, next years programme will be formulated from this years' surveys). The implementation will be within existing resources of the M&E Team and Area Engineers* *If this project will be delivered within current resources, say so: Yes. Additional use may be made of Contract Staff or External Design Partners under the M&E Partnering Framework Agreement as appropriate.*
Ensuring Success	*Key to success is increasing the number of schemes undertaken each year to address 20% of the Non Schools building stock over 5 years.* *Principal risks: technical, financial (e.g. what happens if the project is insufficiently resourced), etc .Lack of funding.* *The projected savings are not achieved in practice. An installation may be considerably more efficient, however the building may now become adequately heated in areas previously under heated, hence an increase in energy use occurs rather than a reduction. The demand has increased but is now met more efficiently. This is not reflected in Carbon Reduction*
Measuring Success	*Metrics for displaying performance or achievement Annual Carbon Emissions* *When success will be measured / evaluated Annually, through NI185*
Timing	o *decision points: Annual budgetary cycles* o *when it will deliver savings Implementation Year +1*
Notes	

Project: **Reference:**	***Children's Centre Enhancements***
Owner (person)	*Director of Property*
Department	*Property Group*
Description	*Improvements to Energy Efficiency in the refurbishment and extension of existing non school buildings to provide Children's Centre Accommodation*
Benefits	• Financial savings: will vary with individual schemes and may actually increase the energy bill due to extended occupancy periods. • Payback period: All schemes aim for payback within 10 years • Anticipated overall reduction in the carbon emissions from the Children's Centres buildings of 15%.
Funding	• *Committed £2.1m Children's Centre program for Non School Buildings* • *Additional 10% committed from Climate Change Initiative funding = £210,000.* • *Investment criteria to be met etc. KgCO2yr/£ invested of CCI money, over the lifecycle of the technology.*
Resources	• *Additional resource (e.g. people) requirements to enable delivery and where these will come from. The programme will be delivered through the External Consultants employed to implement the Children's Centre Programme,* • *If this project will be delivered within current resources, say so: Yes. CCI Investment Manager will oversee individual project investments.*
Ensuring Success	• *Key to success - Appropriate technologies employed.* • *Principal risks: technical, financial (e.g. what happens if the project is insufficiently resourced), etc. Removal of CCI funding*
Measuring Success	• *Metrics for displaying performance or achievement Annual Carbon Emissions from each building* • *When success will be measured / evaluated Annually, through NI185*
Timing	• *Milestones / key dates* o *start of implementation: Year 1* o *when it will deliver savings Implementation Year +1*
Notes	

Project: **Reference:**	***5 yr Lighting Replacement Programme – (Schools)***
Owner (person)	*Director of Property*
Department	*Property Group*
Description	*Accelerated Replacement of low efficiency Lighting installations and upgrading of controls and sub metering.*
Benefits	Financial savings: will vary with individual schemes. Assume average 20% saving each on each bill i.e. combined effect improves efficiency by 36%. Payback period: 2-10 years. CO_2 Emissions Reduction: 8% of the current Carbon Emissions due to lighting from School buildings = 1395 TCO_2
Funding	*The total investment required is estimated to be £ 1,500,000/year. Likely funding streams include;* *Additional Capitalised Revenue funding from CYP to accelerate the number of schemes undertaken annually from the Retained Revenue Programme. Estimated £1,500,000* *Interest free 'Invest to Save' loans available for schools paid back over a ten year period.* *Investment criteria to be met etc. KgCO2yr/£ invested, over the lifecycle of the technology.*
Resources	*Additional resource (e.g. people) requirements to enable delivery and where these will come from. It is expected that the programme will be identified through Carbon Trust Style 'Energy Surveys' and 'Condition Surveys' , targeted at buildings which are either top of the carbon emissions spreadsheet or poorly performing under the DEC scheme. (So, next years programme will be formulated from this years surveys). The implementation will be within existing resources of the M&E Team and Area Engineers* *If this project will be delivered within current resources, say so: Yes. Additional use may be made of Contract Staff or External Design Partners under the M&E Partnering Framework Agreement as appropriate.*
Ensuring Success	*Key to success is increasing the number of schemes undertaken each year to address 16% of the Non Schools building stock over 5 years.* *Principal risks: technical, financial (e..g what happens if the project is insufficiently resourced), etc. Non take up of loan funding.* *The projected savings are not achieved in practice. An installation may be considerably more efficient, however the building may now become adequately illuminated in areas previously under lit, hence an increase in energy use occurs rather than a reduction. The demand has increased but is now met more efficiently. This is not reflected in Carbon Reduction*
Measuring Success	*Metrics for displaying performance or achievement Annual Carbon Emissions. Monitoring of actual energy use through sub-metering.* *When success will be measured / evaluated Annually, through NI185*
Timing	*decision points: Annual budgetary cycles* *when it will deliver savings Implementation Year +1*
Notes	

Project: **Reference:**	***5 yr Lighting Replacement Programme – (Non Schools)***
Owner (person)	*Director of Property*
Department	*Property Group*
Description	*Accelerated Replacement of low efficiency Lighting installations and upgrading of controls and sub metering.*
Benefits	Financial savings: will vary with individual schemes. Assume average 20% saving each on energy bill. Payback period: 2-10 years depending on site specific technologies employed. CO_2 Emissions Reduction: 2% of the Total Carbon Emissions of buildings = 409 TCO_2/annum
Funding	• *The total investment required is estimated to be £ 300,000/year for non schools, potentially funded from;* • *Revenue funding to increase the number of schemes undertaken annually from the Retained Revenue Programme.* • *Additional Climate Change Initiative funding contribution.* • *Investment criteria to be met etc. KgCO2yr/£ invested of CCI money, over the lifecycle of the technology.*
Resources	*Additional resource (e.g. people) requirements to enable delivery and where these will come from. It is expected that the programme will be identified through Carbon Trust Style 'Energy Surveys' and 'Condition Surveys. The implementation will be contained within existing resources of the M&E Team and Area Office Engineers.* *If this project will be delivered within current resources, say so: Yes. Additional use may be made of Contract Staff or External Design Partners under the M&E Partnering Framework Agreement as appropriate.*
Ensuring Success	*Key to success is increasing the number of schemes undertaken each year to address 16% of the Non Schools building stock over 5 years.* *Principal risks: technical, financial (e.g. what happens if the project is insufficiently resourced), etc.Lack of funding, unable to identify schemes.* *The projected savings are not achieved in practice. An installation may be considerably more efficient, however the building may now become adequately illuminated in areas previously under lit, hence an increase in energy use occurs rather than a reduction. The demand has increased but is now met more efficiently. This is not reflected in Carbon Reduction*
Measuring Success	*Metrics for displaying performance or achievement Annual Carbon Emissions. Monitoring of actual energy use through sub-metering.* *When success will be measured / evaluated Annually, through NI185*
Timing	o *decision points: Annual budgetary cycles* o *when it will deliver savings Implementation Year +1*
Notes	

Project: **Reference:**	***5 yr Boiler Replacement Programme – (Schools)***
Owner (person)	*Director of Property*
Department	*Property Group*
Description	*Accelerated Replacement of Conventional boilers with modern High Efficiency and Condensing Boilers and upgrading of controls installations*
Benefits	Financial savings: will vary with individual schemes. Assume average 10% saving each on energy bill, i.e. combined effect is to reduce energy consumed for heating of school buildings by 19%. Payback period: 2-4 years. CO2 Emissions Reduction: 2% of the current Total Carbon Emissions due to buildings. = 1549 TCO_2/annum
Funding	*The total investment required is estimated to be £ 3.5m/year. Likely funding streams include;* *Additional Capitalised Revenue funding to accelerate the number of schemes undertaken annually through the Revenue Programme.* *Interest free 'Invest to save' loans made available to schools paid back over a ten year period.* *Investment criteria to be met etc. KgCO2yr/£ invested over the lifecycle of the technology.*
Resources	*Additional resource (e.g. people) requirements to enable delivery and where these will come from. It is expected that the programme will be identified through Carbon Trust Style 'Energy Surveys' and Condition Surveys, targeted at buildings which are either top of the carbon emissions spreadsheet or poorly performing under the DEC scheme. (So, next years programme will be formulated from this years' surveys). The implementation will be within existing resources of the M&E Team and Area Office Engineers.* *This project will be delivered with existing resources. Additional use may be made of Contract Staff or External Design Partners under the M&E Partnering Framework Agreement as appropriate.*
Ensuring Success	*Key to success: Increasing the number of schemes undertaken each year to address 20% of the Schools building stock over 5 years.* *Principal risks: technical, financial (e.g. what happens if the project is insufficiently resourced), etc Non take up of loan funding.* *The projected savings are not achieved in practice. An installation may be considerably more efficient, however the building may now become adequately heated in areas previously under heated, hence an increase in energy use occurs rather than a reduction. The demand has increased but is now met more efficiently. This is not reflected in Carbon Reduction*
Measuring Success	*Metrics for displaying performance or achievement Annual Carbon Emissions and the Carbon Reduction Commitment* *When success will be measured / evaluated Annually, through NI185*
Timing	*decision points: Annual budgetary cycles* *when it will deliver savings Implementation Year +1*
Notes	

Project: **Reference:**	***Schools Energy Club***
Owner (person)	*Matthew Tidmarsh*
Department	*Property Group*
Description	*The club currently has 355 member schools which pay an annual fee to join and are then given advice on how to save energy. Obviously it is then up to the schools as to whether the carry out the recommended work.* *The scheme also offers other services such as energy surveys and carrying out the work itself but this is paid for on top of the subscription by the schools.*
Benefits	• As work can be carried out by the schools without going through the Property Group it is impossible to quantify the benefits this scheme brings directly. Due to the nature of the work estimates can't be made for future years work. This also applies to the potential CO_2 savings
Funding	• *The scheme funds itself through an annual subscription paid by the schools.* • *Any work the schools then choose to do can either be arranged privately or again through the energy club but the work is done at cost*
Resources	• *The scheme is run through existing Property Group staff. Any additional work required that can not be dealt with by council engineers is subcontracted* • *The scheme brings in a total £98,000/year at present*
Ensuring Success	• *The project can not ensure success as it only provides advice at present. However the energy advice can be used as a guide of where needs work most urgently needs doing.*
Measuring Success	• *The spending and savings that result from this work are monitored as long as the recommended work is done through consultation with the energy club*
Timing	• *Energy advice is given around the end of April every year*
Notes	

Project: **Reference:**	***Thermostat control***
Owner (person)	*Matthew Tidmarsh / Stephen Costello*
Department	*Property Group*
Description	*Turning thermostats down from 21 degrees to 19 degrees in all buildings other than care homes and centres. 12% reduction in heating costs estimated.*
Benefits	• Financial savings: £ 37,406/year • CO_2 Emissions reduction: 446 tonnes of CO_2 *This calculation is based on just offices being changed. We are now aiming to implement this across more of our buildings. Care homes and other similar facilities will not be altered.*
Funding	• *No extra funding required*
Resources	• *Green Champions will be required to ensure that local arrangements aren't changed and thermostats aren't altered.*
Ensuring Success	• *Has to be passed by Cabinet Committee* • *Has to be accepted by senior managers and properly advertised to staff so it's expected.*
Measuring Success	• *Reduced energy bills*
Timing	• *Paper to be taken to cabinet in mid 2009.* o *Savings will be delivered from when boilers are fired up for the winter*
Notes	

Project: **Reference:**	***Buildings rationalisation programme***
Owner (person)	*Stephen Costello*
Department	*Property Group*
Description	*There are a number of projects the Council is running that will result in fewer buildings being occupied or owned by the Council. This should result in savings being made.*
Benefits	• Financial savings: Not yet quantified due to relocation plans not being formalised • CO_2 Emissions reduction: Will be known when relocation plans are formalised
Funding	• *Rationalisation programme is currently underway. All financial aspects are being dealt with by Property Group* • *Due to the associated implications it is very difficult to work out what costs are directly attributable to these projects*
Resources	• *Land or building required for south Ribble project to be advanced* •
Ensuring Success	• *Contracts to be negotiated. Buildings to be sold*
Measuring Success	• *Fewer buildings means fewer bills. Most buildings that we are departing would have a worse carbon footprint than the ones we should be moving too*
Timing	• *Milestones / key dates e.g.* o *Waiting for new buildings to be acquired and old ones to be sold*
Notes	

8.1.7 Project ideas that have not been explored fully

Project: **Reference:**	***Sava plugs on fridges***
Owner (person)	*None at present*
Department	*N/A*
Description	*A typical fridge uses 725 kwh/annum. SAVA plugs can reduce power consumption by 20%.*
Benefits	• Financial savings: Not calculated (14,500kwh from 100 fridges would save £653/year • CO_2 Emissions reduction: 8 tonnes would be saved per 100 fridges it was applied to.
Funding	• *If bought in bulk SAVA plugs can be acquired for approx £11.50 rather than the retail price of £25-30. Typical payback is under 4 years*
Resources	• *Would require fitting and maintenance*
Ensuring Success	• *Proper maintenance and installation* • *Fridges identified*
Measuring Success	• *Unless smart metering is introduced we'll be relying on manufactures guidelines for working out savings made.* • *No. installed on fridges*
Timing	o *To be approved for funding*
Notes	

Project: **Reference:**	***Sub metering of sights***
Owner (person)	*Stephen Costello*
Department	*Property Group*
Description	*The implementation of sub metering would inform the council of what energy was being used from what area with far more accuracy therefore allowing us to target savings more effectively. LCC have yet to formally decide the frequency of data collection for NI 185. This decision will decide whether sub metering is a valid cost effective solution or whether the existing manual approach is continued for the foreseeable future.*
Benefits	• Some authorities have estimated savings from introducing this technology. LCC would be looking to use the increased information to target savings in key areas which would then be measured as savings, rather than being attributed to this software.
Funding	• *The capital cost of implementing a project of this size would be rather large. However, the benefits from the knowledge gained should pay back the capital cost over time.*
Resources	• *A budget would need to be allocated for this as it could not be funded from the existing Property Groups budget.*
Ensuring Success	• *A decision being made on the data collection frequency as this will inform the necessity of the project.* • *A successful pilot* • *A cost benefit analysis needs to be completed.*
Measuring Success	• *The sub meters* • *Using the data to realise savings that would not otherwise have been identified*
Timing	• *Milestones / key dates e.g.* o *Climate Change - Environment Officer Group meeting in June '09 – A decision should be made by then on the frequency of data collection*
Notes	*Cost benefit ratio needs to be analysed. Pilot to be set up and results analysed*

Project: **Reference:**	***Voltage optimisation***
Owner (person)	*Stephen Costello / Matthew Tidmarsh*
Department	*Property Group*
Description	*Voltage optimisation can reduce electricity consumption by up to 11.5% by stepping down the voltage to 220v. Application and savings depend on the age of the building and it's position on the distribution network. Only worth using on sites over 100kw + sites*
Benefits	• Financial savings: £ ? • Payback period: Approx 4 years from case studies • CO_2 Emissions reduction: Would depend on the number of sites operated
Funding	• *From case studies sites can be fitted for around £10,000* • *Not identified*
Resources	• *Would require a feasibility study and cost benefit ratio analysis*
Ensuring Success	• *Project needs to be assessed by engineers*
Measuring Success	• *Energy bills*
Timing	• *Milestones / key dates e.g.* o *None at present*
Notes	

Project: Reference:	***Use of auto set power use from ICT and Removal of screensavers***
Owner (person)	*No owner yet – Colin Gibson is the contact*
Department	*ICT Services*
Description	*Screensavers use power when the PC isn't actually being used. Lower the time taken for monitors to go onto standby.*
Benefits	• For my PC the power use by the PC tower (box only, not the monitor) when displaying a screensaver increased by 10% compared to simply showing a static screen. A screensaver probably would not affect power use by monitors to a great extent. • Putting the monitors onto standby sooner would greatly reduce the monitors' power use when not required. • CO_2 Emissions reduction: *Offices = 8,312,346kwh X 15%(IT equipment) X 60% PC's X 40% saving = a saving of 59,849kwh = 37 TCO2*
Funding	• *No funding required if created by in house staff*
Resources	• *Delivered within current resources if developed by in house staff*
Ensuring Success	• *The easiest way to assign power settings to users is using Active Directory (AD). All users should be on AD by April '09.*
Measuring Success	• *Success = complete removal of screensavers for all users*
Timing	• *No timing set*
Notes	• *Any suggestions made to instigate this have been greeted with the suggestion to wait until users are on AD. At present the AD screensaver settings are actually worse than the NT ones meaning that the screensaver comes on after 60mins (according to Control Panel) but the monitor goes into standby after 20mins.* • *ICT currently don't want to adopt this as they believe it would create lots more support work from employees turning their PC's off and on panicking when they're screen has turned off*