



**CPR.12 16/17**

**Corporate Policy and  
Resources Committee**

**Date 28 July 2016**

**Subject: Carbon Management Plan 2016-2021**

Report by:

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Purpose / Summary:

For members to receive the updated Carbon Management Plan and approve.  
The Carbon Management Plan sets out strategically how the Council can reduce its Carbon Dioxide emissions over the next 5 years and embed carbon management across the council.

**RECOMMENDATION(S):**

- 1. That members agree and endorse West Lindsey's Carbon Management Plan**
- 2. That Members approve the Capital budget and release of £130,000 from Carbon Reduction Earmarked Reserve for the identified Carbon Management Projects over a 5 year period.**
- 3. FITS receipts will contribute towards the corporate savings target from 2018/19 onwards (once £130K is achieved in Carbon Reduction Earmarked Reserve).**

## IMPLICATIONS

**Legal:** none

### **Financial : FIN/33/17**

A capital budget of £50k is included in the current 2016/17 capital programme, however, upon approval of these proposals, the programme will be updated to include £130k over the next 5 years, and revenue budgets provided as detailed at paragraph 5. These costs will be met from the Carbon Reduction Earmarked Reserve.

Previous carbon reduction measures, have resulted in revenue savings within the utilities budgets and have generated an ongoing income stream of circa. £22k per annum from solar panel electricity which is sold back to the grid. This income has been set-aside each year to support further carbon reduction measures, however, due to the significant savings target required by 2020/21, this income will be utilised to support the revenue budget from 2018/19 onwards.

The plan identifies savings of £7,815 as a result of carbon reduction measures.

Any future carbon reduction projects after 2020/21 will be subject of Capital Bids in accordance with the Capital Strategy.

**Staffing :**

**Equality and Diversity including Human Rights :**

**Risk Assessment :**

**Climate Related Risks and Opportunities :** This plan supports our commitment to reduce carbon emissions from our own estate and put measures in place to mitigate future rises, therefore supporting and assisting with our progress to addressing and adapting to climate change.

**Title and Location of any Background Papers used in the preparation of this report:**

West Lindsey's District Council Carbon Management Plan – 11/1/10  
<https://www.west-lindsey.gov.uk/my-services/refuse-recycling-and-your-environment/energy-and-sustainability/carbon-management/carbon-management-plan/>

## Call in and Urgency:

### Is the decision one which Rule 14.7 of the Scrutiny Procedure Rules apply?

i.e. is the report exempt from being called in due to urgency (in consultation with C&I chairman)

Yes

No

### Key Decision:

A matter which affects two or more wards, or has significant financial implications

Yes

No

## 1 Background

- 1.1 In 2010 West Lindsey District Council approved our first Carbon Management Plan (ref:CW33 09/10); this plan was for five years and ran out in 2014. The council still considers reducing energy usage and carbon as important and an updated Carbon management plan will help us to continue to monitor energy usage and consider ways we can reduce this.
- 1.2 The Updated Carbon Management Plan shows our current emissions and a planned route on how to reduce our carbon emissions for the next five years. Within the plan are carbon reducing projects and timed action plans. To ensure that carbon management is embedded into the Council the plan details how it will be managed, reviewed and updated. The updated Carbon Management Plan is attached as Appendix A.

## 2. Baseline CO<sub>2e</sub>

- 2.1 In 2008/2009 (our baseline year) West Lindsey District Council emitted 2036 tonnes of CO<sub>2e</sub>, two thirds of these emissions were from our buildings and one third was from our transport. In 2014/15 we emitted 1671t of CO<sub>2e</sub> with the split between buildings and transport now being nearly half and half.
- 2.2 If we put no plans in place to reduce the Council's energy consumption then emissions of CO<sub>2</sub> will rise year on year and whilst energy prices are currently relatively low they may rise again in the future and adversely impact on our ever reducing and limited budgets.
- 2.3 Greenhouse gas emissions is the industry standard for measuring CO<sub>2e</sub> and we have measured, recorded and reported our emissions in this format since the withdrawal of Local Area agreements and NI185.

## 3. Target

- 3.1 No target relating to CO<sub>2</sub> is currently in place: this plan updates the expired Carbon Management Plan and sets new targets.
- 3.2 The council has achieved a total reduction in its CO<sub>2e</sub> emissions since 2008/09 of 365t which is 18%: we originally set a target to reduce our

emissions by 25% over 5 years from the baseline year of 2008/2009. In 2021 we want our emissions to be 35% less than our baseline year of 2008/09, which means we need to achieve an additional 17% on top of the 18% that has been achieved so far.

- 3.3 West Lindsey continues to have a low carbon footprint compared to similar councils in Lincolnshire and nationally; which means further reductions will again be challenging. To achieve this will require a strategic approach to carbon management across the authority.

**Target: To reduce the Council's CO<sub>2</sub>e emissions by 35% from the baseline year of 2008/2009**

- 3.4 If we achieve this target we will:-
- make further reductions of our Greenhouse Gas emissions
  - reduce our energy consumption
  - contribute to Theme 6 of the Corporate Plan
  - show a positive lead to the community
  - be mitigating against the risks of climate change
  - manage and limit the effects of future potential rises in energy costs on the Council

#### 4. Carbon Projects Identified

- 4.1 Possible projects were selected based on their carbon and financial savings. The final, substantiated target is in the Carbon Management Plan (CMP) for your approval.

Identified projects include:-

- Effective Office Space Utilization (Guildhall)
- Voltage Optimisation (TAC)
- Replacement energy efficient lighting (Leisure Centre)

For a full list of projects see Definition of Projects – Appendix A of Carbon Management Programme, page 25.

#### 5. Finance

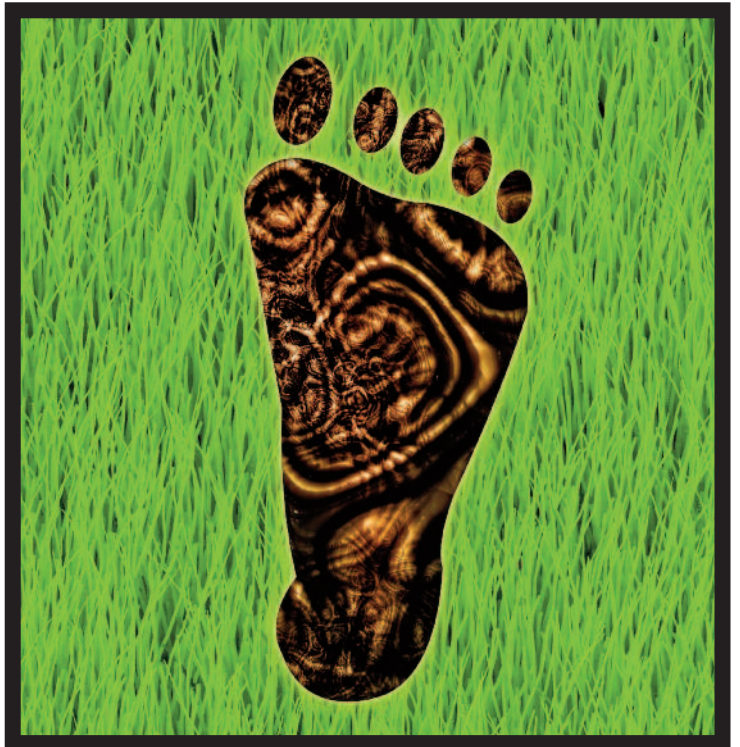
	1.4.2016	2016/17	2017/18	2018/19	2019/20	2020/21	Total
Carbon reduction EMR at year end	£104,415	£82,915	£85,415	£92,175	£96,175	£84,415	£84,415
Capital Investment		£20,000	£19,500	£9,240	£18,000	£33,760	£100,500
Revenue investment		£23,500	£0	£6,000	£0	£0	£29,500
Total Investment		£43,500	£19,500	£15,240	£18,000	£33,760	£130,000
Estimated Revenue Savings (p.a)		£5,765	£5,765	£7,815	£7,815	£7,815	£34,975

- 5.1 In financial terms, the energy market is somewhat volatile and predictions in future energy costs are uncertain: some reliable sources predict a fall in energy prices and others predict a rise over the next five years. With such uncertainty it is sensible to take a cautious approach based on the assumption there may be modest rises in energy over the next five years and therefore by reducing our energy consumption we can limit or reduce our energy costs.
- 5.2 Value at Stake projections; if we continue with business as usual (i.e. take no planned action to reduce our energy consumption and cut carbon) it is predicted our energy consumption and carbon emissions would rise and dependant on the energy market there may be an increase in cost to the council. We are unable to make any accurate predictions on financial savings that could be achieved from carbon savings due to the current volatility of the energy market.
- 5.3 To fund the Carbon Projects identified in the Carbon Management Plan (see Appendix A of Carbon Management Plan) a budget of £130,000 (taken from remaining Carbon pot and FITS payments accrued now and in the future) over the five years has been proposed: potential savings from reductions in energy usage will be a saving to the council. Please note some projects identified are already funded, this is stated clearly in the appropriate Project Definition of the Carbon Management Plan.

## **6. Conclusion**

- 6.1 The updated West Lindsey Carbon Management Plan will assist the Council to reduce our CO<sub>2e</sub> emissions by a further 17% to achieve a total reduction of 35% since our baseline year and could reduce or limit our future energy costs. The Carbon Management Plan will be reviewed and reported on annually.

# Carbon Management Plan 2016-2021





**West Lindsey District Council  
Carbon Management Plan  
2016-2021**

WLDC Carbon Management Plan  
Version: Final  
Dated: 29<sup>th</sup> April 2016  
Report Author: Karen Lond



## Forward

In these times of austerity, it is vital that WLDC continues to consider ways to reduce its energy consumption across all its estate. This carbon management plan takes a strategic approach to understanding our carbon emissions corporately and prioritizing the most effective actions.

This second Carbon Management Plan updates our previous one and sets new ambitious carbon reduction targets for the next five years; new Carbon Management projects have been identified that will need to be implemented to achieve our target reduction. Progress towards our target will be measured and reported on annually.

All West Lindsey employees need to take reducing energy seriously and should understand this plan supports theme 6 of the Corporate Plan.

We are committed to reducing our carbon emissions as an authority and look forward to the challenges ahead.



**Chief Executive**  
**Manjeet Gill**



**Leader of the Council**  
**Jeff Summers**



## Contents

### 1. Executive Summary

Overview of the main document highlighting the key messages

### 2. Introduction

Why the Council has developed this carbon management plan and its significance for change

### 3. Where are we now?

Current carbon emissions and reductions achieved

### 4. Where do we want to be?

Targets, scope and summary of relevant national and local strategies and plans

### 5. Carbon management projects

Planned projects and predicted potential savings.

### 6. Carbon Management plan finance

Summary of benefits, resources required

### 7. Embedding Carbon Management

Actions to embed carbon management

### 8. Governance

Arrangements for overseeing and managing the delivery

## Appendices

### A. Carbon projects

More detailed explanation of each proposed carbon project

## 1. Executive Summary

### Background

It is vital that the Council manages the risks and opportunities related to Climate change for example by controlling carbon emissions from our own operations.

West Lindsey District Council signed the Nottingham Declaration in January 2007 which set out the Council's acknowledgment of the impacts that Climate Change has and the commitment to tackle the causes and effects on the District; (the Nottingham Declaration has been superseded by Climate Local which as yet we have not signed up to). We subsequently committed to drawing up a Carbon Management Plan through the East Midlands Carbon Action Programme supported by the Carbon Trust in 2009 and launched this plan on 11<sup>th</sup> January 2010. This was a five year plan which committed the council to a target of reducing CO<sub>2</sub> by 25% by 2014 and underpinned potential financial savings to the council of around £0.2 million. This plan has now expired so a new updated carbon management plan has been developed that details achievements in carbon reduction to date and plans how to achieve further reductions.

### Vision

***WLDC Corporate Plan – Theme Six – Excellent, Value for Money services***  
*we are conscious of our social and environmental responsibilities and therefore will endeavour to conduct our business while simultaneously looking to reduce our carbon footprint.*

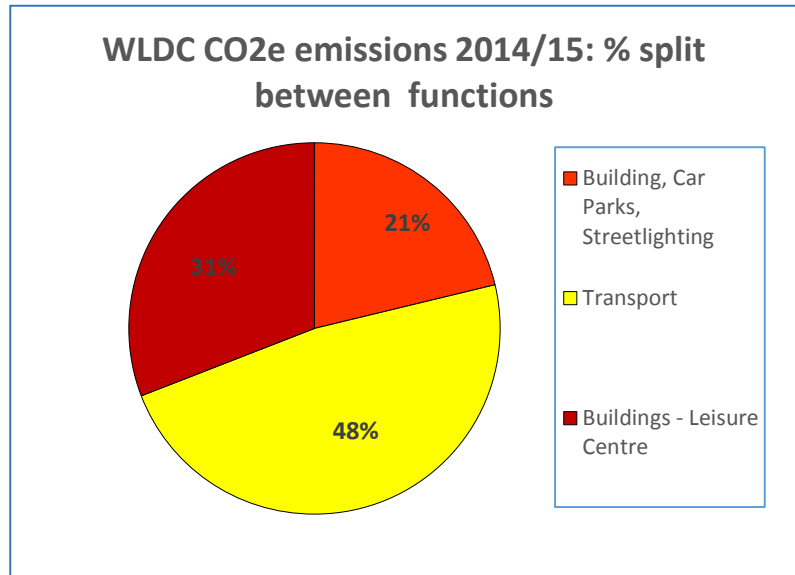
This plan supports our corporate plan to reduce our carbon footprint and maps out how we can reduce the Council's CO<sub>2e</sub> emissions and reduce our carbon footprint. Despite our modest CO<sub>2e</sub> emissions we have set an ambitious target of reducing our emissions by **35%** from our baseline year of 2008/2009 which means we need to achieve an additional **17%** on top of the 18% that has been achieved so far. This shows our determination as a council to lead on addressing climate change. This plan supports our commitment through Greenhouse Gas emissions to reduce our CO<sub>2e</sub> emissions and assist with our progress to addressing and adapting to climate change.

**To achieve the 35% target from our baseline we will need to reduce carbon emissions by a further 346 Tonnes by March 31<sup>st</sup> 2021.**

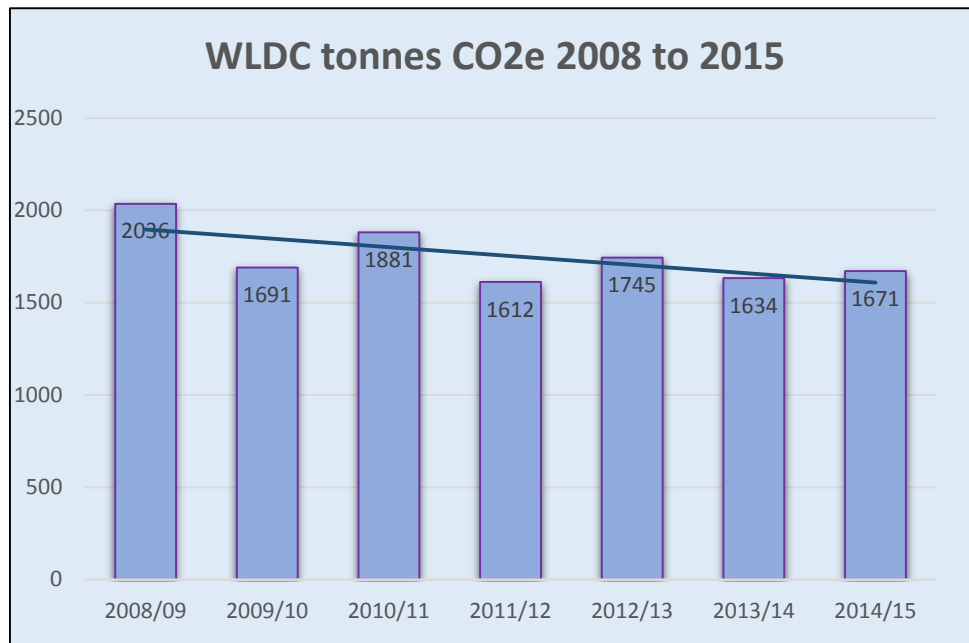
We have set a target in this carbon management plan to reduce our emissions by 35% by 2021 at a cost of approximately £130,000.

### Baseline

Our current CO<sub>2</sub>e emissions are **1671t** for 2014/15; the pie graph opposite shows the split between emissions emitted from our buildings (includes car parks and lighting) Leisure Centre and transport (fleet and grey fleet). The split is now nearly half and half compared to our baseline year of 2008/09 when roughly two thirds of our emissions were from buildings and just one third from transport and reflects the considerable reductions in energy use in our buildings we've made since 2008/09.

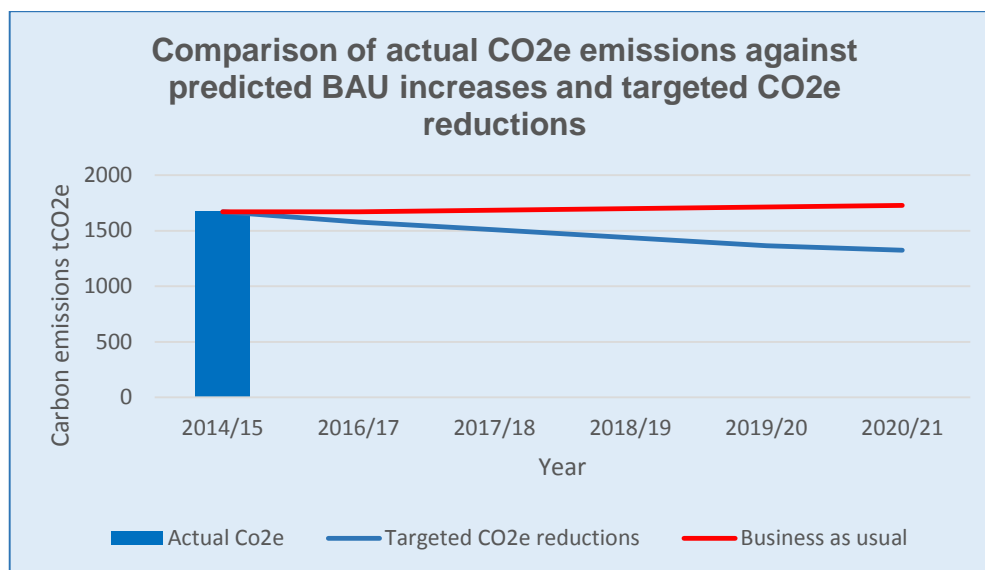


The graph below shows actual WLDC Greenhouse gas emissions from the baseline year of 2008/09 to 2014/15 measured in tonnes of CO<sub>2</sub>e with the trend line demonstrating reductions achieved so far.



If we don't invest in further carbon reduction projects then this trend would gradually start to increase again as we use more energy and emit more Greenhouse gas emissions.

The business as usual line (BAU) on the graph below shows that if we do nothing over the next 5 years emissions would start to rise again by an estimated 0.7% a year. The target line shows the emissions based on achieving a further 17% reduction over the next 5 years.



In financial terms, the energy market is somewhat volatile and predictions in future energy costs are uncertain: some reliable sources predict a fall in energy prices and others predict rises over the next five years. With such uncertainty it is sensible to take a cautious approach based on the assumption there may be modest rises in energy over the next five years and therefore by reducing our energy consumption we can limit or reduce our energy costs.

We are proposing a budget of £130,000 to form the Carbon pot for the next 5 years this will be taken from the balance and accrued payments received from our FITs payments (as solar PV at the Leisure Centre and Festival Hall was originally paid for out of the original £200K carbon pot) to finance the carbon saving projects identified in this plan. So far we have identified projects that could produce about half of the carbon savings needed to achieve our 17% target. Some of the identified projects have yet to be developed to show costs and potential CO<sub>2</sub>e savings. The Carbon Management Programme is a rolling programme, so as projects are developed the figures will be added towards our target. Some of the identified projects may not be progressed as the cost benefit or other factors may make them unviable. In order to address the shortfall members of the Carbon Management Team will be tasked with bringing forward new projects to be evaluated and included in the programme. Careful consideration will need to be given to any future purchases and projects that could potentially increase our carbon emissions above our 2008/2009 baseline: such projects will need to include mitigation measures from the outset in order for us to achieve our target.

Identified projects include:-

- Roof insulation, replacement energy efficient lighting, replacement energy efficient convector heaters (Trinity Arts Centre)
- Replacement LED energy efficient lamps and dimming street lighting
- Replacement energy efficient lighting (Leisure Centre)

(For all identified projects see Appendix A page 25.)

To achieve this ambitious target will require senior management buy in and the whole council getting behind the saving energy ethos; the principles will need to be embedded across all departments.

## 2. Introduction

### Why does West Lindsey District Council need a Carbon Management Plan?

It is vital that the council manages the risks and opportunities related to climate change for example by controlling carbon emissions from our own operations; cutting carbon emissions is part of the fight against climate change and a priority for the council, it's about getting our own house in order and leading by example. If the council does not monitor and manage its energy usage and subsequent carbon emissions then both are likely to increase year on year subjecting the council to potentially increasing fuel costs and carbon taxes. By reducing our energy consumption we also reduce our carbon emissions making a positive contribution to the environment and limiting the council's vulnerability to future increases in fuel costs.

If we don't continue to reduce our energy consumption we could incur additional costs that will need to be met out of existing budgets.

No target relating to CO<sub>2</sub>e is currently in place: this plan updates the Carbon Management Plan and sets new targets. West Lindsey continues to have a low carbon footprint compared to similar councils in Lincolnshire and nationally; which means further reductions will be challenging. The council has achieved a total reduction in its CO<sub>2</sub>e emissions since 2008/09 of **365t** which is **18%**.

This plan sets out how we will achieve a total **35%** reduction in CO<sub>2</sub>e by 2021, since our baseline year of 2008/09.

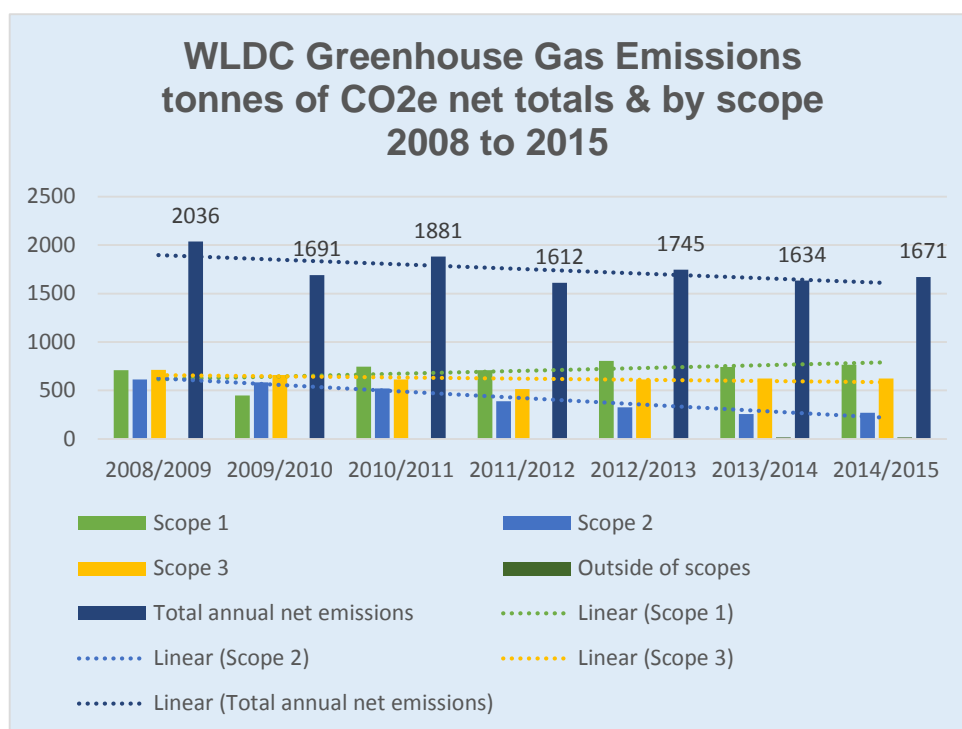
To achieve this the plan identifies potential carbon saving projects which can achieve a further CO<sub>2</sub>e reduction of **346t** which is **17%**.

There are those that can and those that do; Local authorities can contribute significantly to reducing CO<sub>2</sub> emissions.

This carbon management plan update takes a strategic approach to understanding our carbon emissions corporately and prioritizing the most effective actions to achieve further savings. Whilst this is initially a 5 year programme this plan will be updated and reviewed annually and is expected to carry on delivering carbon and financial savings beyond the initial 5 years.

### 3. Where are we now?

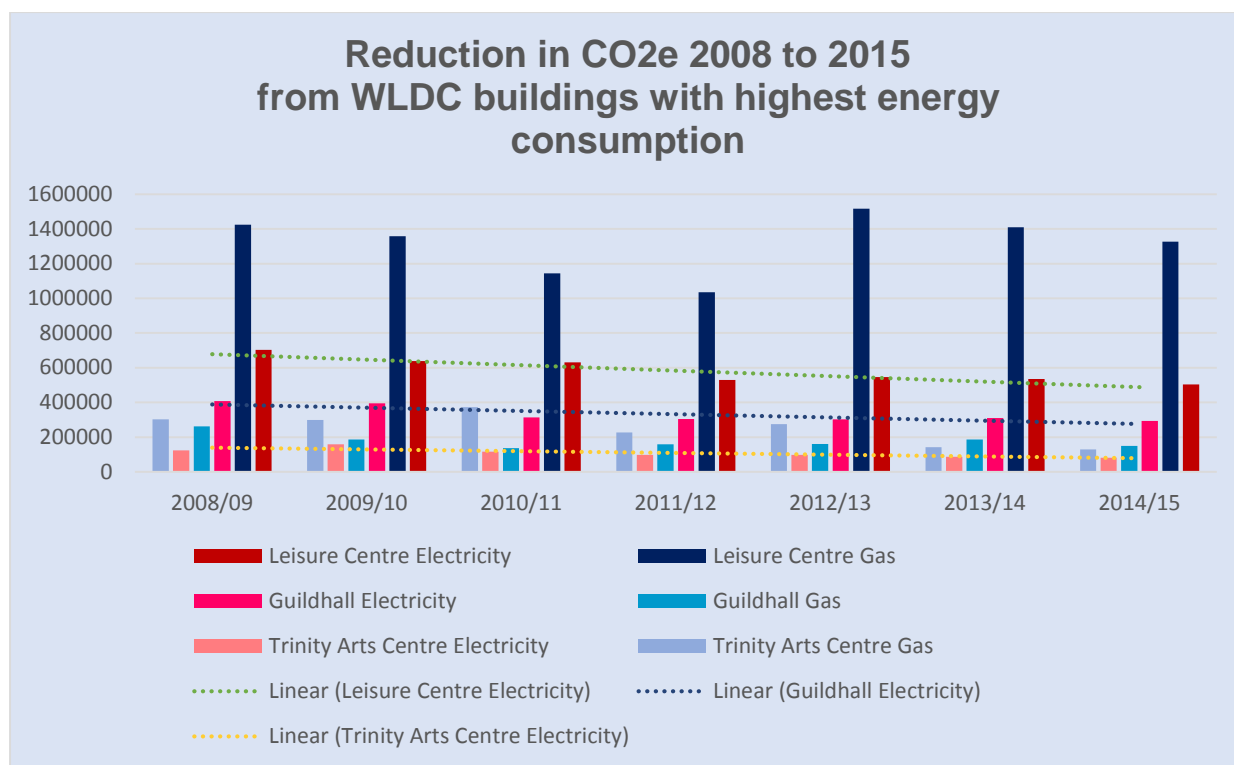
The graph below shows our total Greenhouse gas emissions in tonnes of CO<sub>2</sub>e from our baseline year of 2008/2009 up till 2014/2015; it also shows this per scope and the linear trend of emissions reducing since our baseline year. CO<sub>2</sub>e for 2014/2015 is 1671 tonnes this is 365t less than our baseline of 2008/2009 and means we have achieved an 18% reduction in emissions to date. All our Greenhouse Gas Emissions report can be viewed online by following this link <http://www.west-lindsey.gov.uk/residents/refuse-recycling-and-your-environment/energy-and-sustainability/greenhouse-gas-emissions/>



- 3.1 Since the first Carbon Management Plan was formulated in 2009 the reporting criteria for carbon emissions has changed vastly. NI 185 was one of the main drivers for the original plan: NI185 was withdrawn in 2011 when the National Indicator set was reviewed and the Local Area Agreements withdrawn. Since then we have reported annually on our Greenhouse Gas emissions following the DEFRA guidelines <https://www.gov.uk/government/publications/environmental-reporting-guidelines-including-mandatory-greenhouse-gas-emissions-reporting-guidance>
- 3.2 We converted all our previous NI185 emissions to GHG emissions using the conversion factors supplied annually from DECC. In 2013 DECC modified the calculation for GHG reporting so we again recalculated right back to the baseline year of 2008/2009. We now have the most accurate data on our corporate emissions we have ever had.
- 3.3 Greenhouse Gas emissions are environmental KPIs so: by setting targets to reduce our GHG emissions and measuring and reporting on these, we will not only reduce our energy consumption and associated costs, we can capture the link between environmental and financial performance, gaining a better understanding of our exposure to climate change, demonstrating leadership and strengthening our green credentials.



3.4 Significant reductions in emissions have been achieved from our buildings. The graph below shows the buildings with the largest energy requirements: from 2008 to 2015 there has been a reduction of 247tonnes of carbon in these three buildings this equates to a significant 12% of our total emission reductions. The linear trend lines demonstrate how all three buildings have reduced their electricity and that the trend is downwards, see graph below; you can also see that gas consumption has reduced at both TAC and Guildhall.

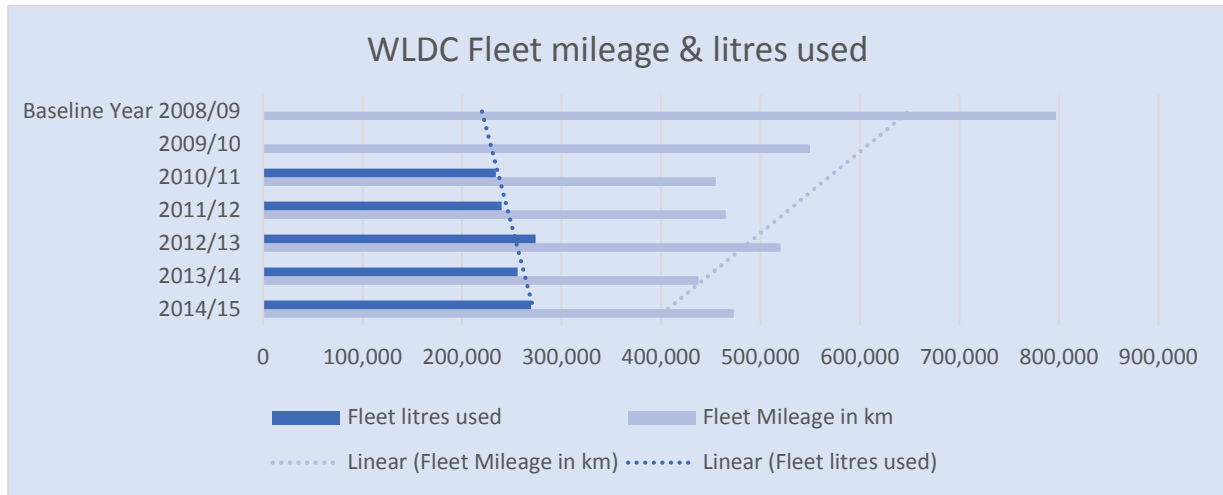


3.5 In the original Carbon Management Plan projects were not identified for Trinity Arts Centre as at the time its future ownership was uncertain: since then with its future secured we have identified energy efficiency measures at TAC following an energy audit of the building. Projects completed have included draught proofing its many exterior doors, new gas central heating boiler and new controls. We also identified the need for insulation in the roof voids to be installed when the roof was replaced: this will now be occurring in May 2016.

3.6 Numerous projects were identified for the Leisure Centre which have all been completed these included cavity wall insulation to two of the pool hall walls, lagging of CH pipes in boiler house, voltage optimisation, bowls hall refurbishment which included roof insulation, upgraded heating and energy efficient lighting.

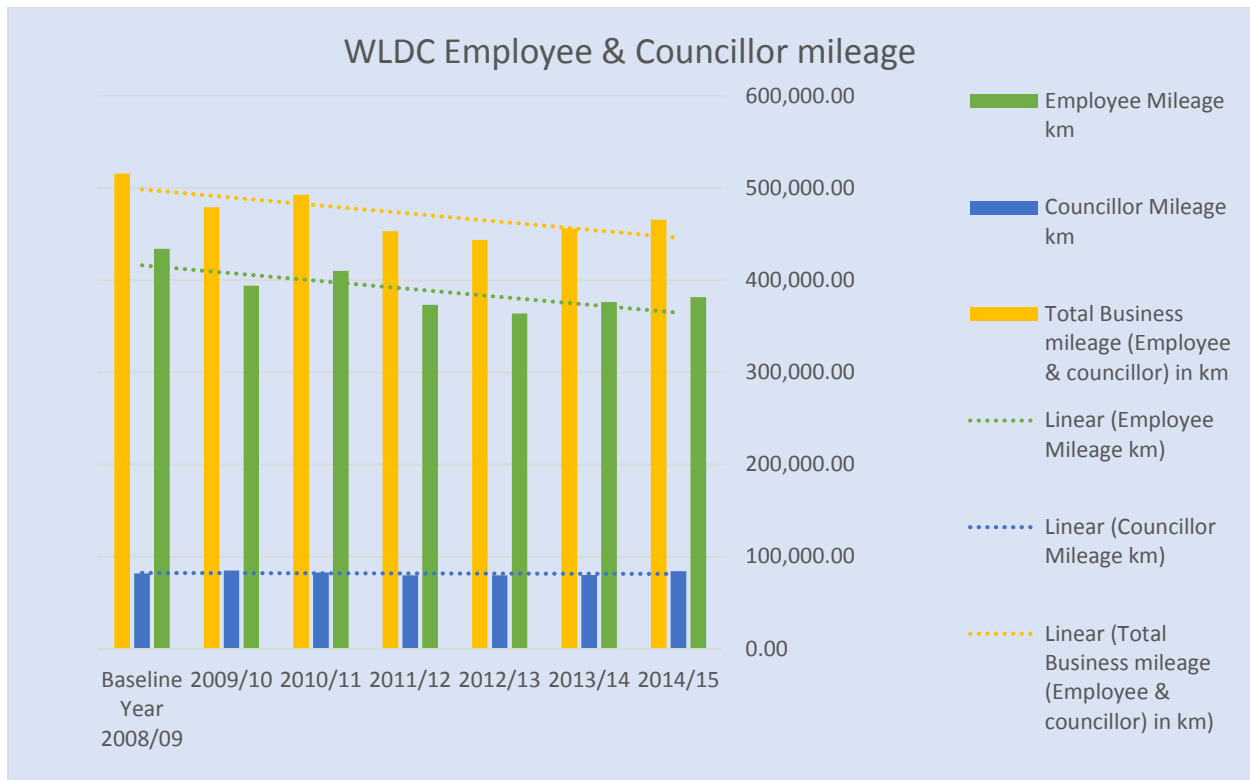
3.7 In 2011 we saw the opportunity to install photovoltaic solar panels to our council buildings; after survey and financial approval two sites were found suitable: a 49kWp system was installed on the Leisure Centre, Gainsborough and a 4kWp system on West Lindsey's Area Office at Festival Hall, Market Rasen: both of these systems have benefitted from FITs payments. Payments so far have totalled over £60,000.

3.8 Fleet mileage has reduced overall by a significant 40.6% since 2008/09. Graph below shows fleet mileage and litres of fuel used since our baseline year; the trend lines show that whilst mileage has reduced substantially there has been an increase of 35270litres of fuel used which is an increase of 97.6t CO<sub>2</sub>e since 2010/11 (when litres were first measured). It should be noted litres used is a more accurate measure.



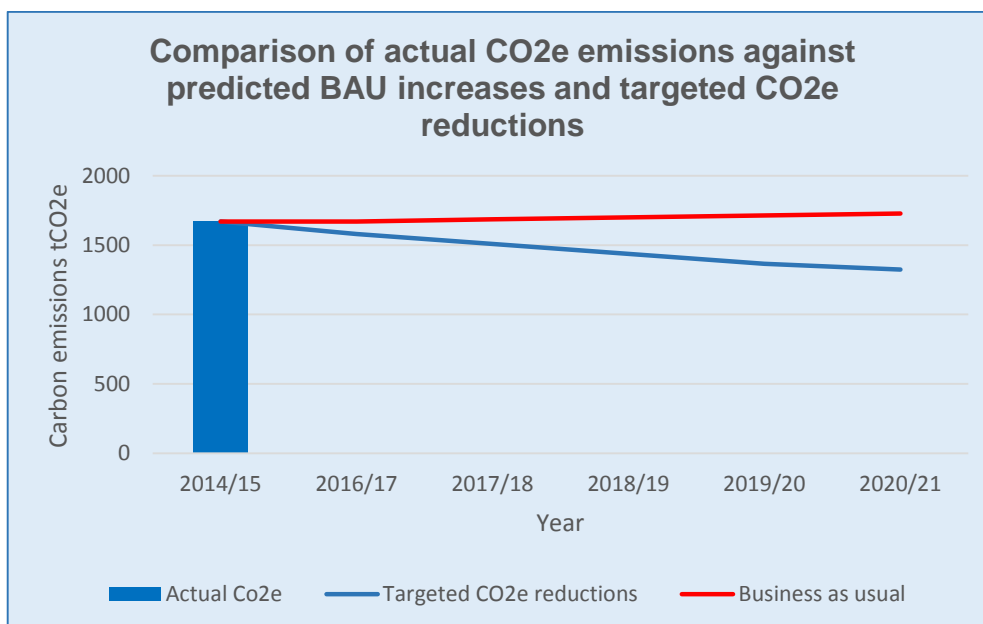
3.9 Employee mileage has reduced by 12.1% and there has been a reduction in CO<sub>2</sub>e of 17.4t from 2008/09 to 2014/15 (this is a scope 3 emission). Graph below shows the trend downwards of employee mileage.

3.10 Councillor mileage from 2008/09 to 2014/15 has increased by 3% however the CO<sub>2</sub>e has reduced by 1.8t since the baseline year of 2008/09. (This is a scope 3 emission)



### 3.11 Projections

The business as usual line (BAU) on the graph below shows that if we do nothing over the next 5 years emissions would start to rise again by an estimated 0.7% a year. The target line shows the emissions based on achieving a further 17% reduction over the next 5 years.



In financial terms, the energy market is somewhat volatile and predictions in future energy costs are uncertain: some reliable sources predict a fall in energy prices and others predict rises over the next five years. With such uncertainty it is sensible to take a cautious approach based on the assumption there may be modest rises in energy over the next five years and therefore by reducing our energy consumption we can limit or reduce our energy costs.

#### 4. Where do we want to be?

We want to be an exemplar council in terms of carbon management, we aspire to be carbon neutral. We want to ensure our energy costs don't increase and ideally reduce them; (although the latter is dependent on energy prices not rising significantly which we have no control over). We want to significantly reduce our carbon emissions. We want to mitigate some of our vulnerabilities to climate change. It is important we minimise our energy costs through energy efficiency so that we're not diverting money from our customer focused services.

##### 4.1 Targets and Objectives

In 2021 we want our emissions to be 35% less than our baseline year of 2008/09, which means we need to achieve an additional 17% on top of the 18% that has been achieved so far: for a small rural district council this is an ambitious but achievable target.

West Lindsey District Council is committed to reducing its carbon emissions and will reduce the CO<sub>2e</sub> emissions from its activities by 35% from the 2008/2009 baseline by the end of March 2021.

**Table 4.1 – Shows CO<sub>2e</sub> targeted annual savings to achieve 35% target reduction**

Targeted savings 2016-21				
	Year	Annual tCO <sub>2e</sub> target	Targeted Annual total tCO <sub>2e</sub>	Annual % reduction
Baseline Year	2008/09		2036	
Achieved so far	2014/15	365	1671	18%
	2016/17	91.6	1579.4	4.50%
	2017/18	71.3	1508.1	3.50%
	2018/19	71.3	1436.8	3.50%
	2019/20	71.3	1365.5	3.50%
	2020/21	40.7	1324.8	2.00%
		346.2		17%
<b>Total targeted savings 2008-2021</b>		<b>711</b>	<b>1325</b>	<b>35%</b>

##### 4.2 Scope

The operational scope mirrors our Greenhouse gas reporting scope and includes all CO<sub>2</sub> emissions from the delivery of our local authority functions and includes our own operations and outsourced services, i.e. energy used in our buildings, car parks, street lighting and transport used for delivering the functions of a local authority, but not the embedded emissions in the goods procured by the authority.

- Council owned buildings energy use
- Building energy use for outsourced council functions
- Council owned fleet fuel use

- Fleet fuel use for outsourced council functions
- Council owned business travel
- Business travel for outsourced council functions

The above includes mileage claimed by councillors whilst on West Lindsey District Council business.

There are a number of additional scope areas that could have been included for a more complete baseline, as detailed below. They have been excluded as data is currently unavailable or the cost of collecting the data outweighs any potential savings.

- Council employees commuting – no data available currently. May consider adding this to the scope in the future when more data becomes available.
- Waste produced by council buildings and operations – no data available. May consider adding this to the scope in the future when a method of capturing this data is devised.
- Water used in council buildings and operations – only data for Guildhall readily available. May capture this data in the future.
- Refrigerant gas loss, if applicable (e.g. for air conditioning systems) – No data currently available but will consider capturing in the future.

#### 4.3 Current Local Drivers

***WLDC Corporate Plan – Theme Six – Excellent, Value for Money services***

*Additionally we are conscious of our social and environmental responsibilities and therefore will endeavour to conduct our business while simultaneously looking to reduce our carbon footprint.*

- ***Carbon reduction will be reported in Scorecard 16-17***

***WLDC Property and Land Management Strategy*** – Energy efficiency of buildings and saving carbon is an asset management objective and therefore objectives and actions of the Carbon Management Plan feed into the Property and Land Management Strategy.

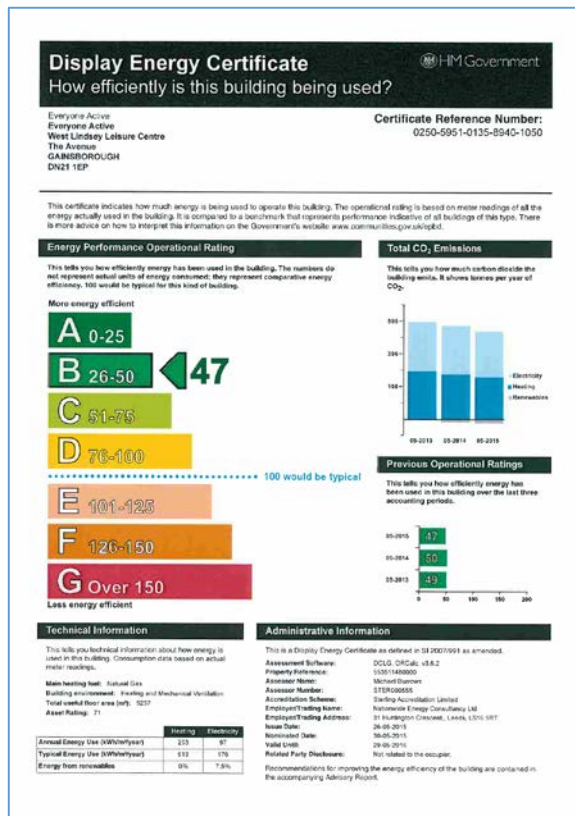
*Promote Sustainability – There is a strong national drive to reduce carbon emissions. This is an imperative for the Council both in terms of supporting sustainability and in reducing future liabilities under the carbon trading regime. The number, type and location of buildings as well as use of energy within buildings can help to reduce the Council's carbon footprint and act as an exemplar to other organisations to do the same.*

*Asset Management Objective – To embed sustainability principles and deliver enhanced performance from property to meet Energy Performance and Carbon*

***WLDC Commercial Plan*** – *Commercial Plan objective is to be financially self-sufficient by maximising incomes and minimising costs; the Carbon Management Plan supports this ethos by considering our current energy usage and ways we can reduce this so as to minimise costs now and in future years.*

#### 4.4 Current National Drivers

- **2008 Climate Change Act** – UK aims to reduce GHG emissions by at least 80% from the baseline year of 1990 by 2050 and by at least 34% by 2020.
- **Energy Act 2013** – government currently reviewing some energy policies within this act.
- **Greenhouse Gas Emissions** – Local authorities were requested to report on GHG emissions annually to DECC instead of its predecessor NI185.
- **Climate Local** – (succeeded Nottingham Declaration) - voluntary commitment by councils – signing up shows commitment to taking action on climate change. By signing councils set locally owned and determined commitments, publish these commitments and progress towards them, share their experiences with other councils, review and update commitments and actions.
- **CRC Energy Efficiency Scheme** - WLDC currently does **not** need to report on this as our electricity consumption is below the qualifying amount of 6000MWh or more of qualifying electricity, supplied through settled half hourly meters. **This scheme is now being phased out and will close in 2019.**
- **Climate Change Levy** – CCL is an energy tax which aims to increase energy efficiency by incentivising big energy users with the greatest potential to save energy. This is set to increase from 2017 to 2020 as the CRC Energy Efficiency Scheme is phased out; whilst we were exempt from CRC we are not from CCL and this will impact on some of our energy bills.
- **EU Directive Energy Performance of Buildings**
  - Display Energy Certificates (DEC) – required on all corporate buildings with a useful floor area above 500m<sup>2</sup> that are frequently visited by the public.
  - Energy Performance Certificates (EPC) – required on all our corporate and commercial properties.



- **ESOS – Energy Savings Opportunity Scheme** – we are **not** required to participate in ESOS as our organisation is defined as a contracting authority by regulation 3 of The Public Contracts Regulations 2006 in England, Wales and Northern Ireland. Public sector organisations are not covered by this new scheme as other parts of the EU Energy Efficiency Directive require public sector action on energy efficiency.

#### 4.5 Current Global Drivers

**Paris Agreement** - new Climate Change Agreement adopted by 195 countries in Paris December 2015 and signed by the EU in New York on 22<sup>nd</sup> April 2016 – expected to be ratified by EU in the summer of 2016. Commitment to reduce carbon emissions in an attempt to prevent climate change below 2°C and ideally to keep below 1.5°C.

#### **EU – Energy Union Strategy**

The Energy Union is a forward-looking climate policy based on the Commission's framework strategy; there are five main strands which are closely interrelated and mutually reinforcing, these are energy security; a fully integrated European energy market; energy efficiency contributing to moderation of demand; decarbonising the economy; and research, innovation and competitiveness. Progress towards the Energy Union is at its early stages.



## 5. Carbon Management Projects

In order to achieve our ambitious carbon reduction target we need to identify potential carbon projects: the carbon projects identified in the tables below are taken from some existing projects that will make carbon savings, planned projects and future projects. Staff have been consulted so that we identify all future energy saving projects and future energy consuming projects: it is imperative that we capture all these to ensure we set an achievable target that takes account of all our services and activities, now and in the future.

### 5.1 Existing projects

These are projects that had already started or been planned prior to or since we started to update our current plan in autumn 2015; some of these projects may not have been specifically about carbon management but have been included as they reduce our carbon emissions significantly.

Ref	Project	Lead	Cost £			Annual Saving		Pay back (yrs)	% of Target	Year
			Cap'l	Rev'ue	Oper'	Fin £	CO <sub>2</sub> Tonnes			
WL1	Insulating all the roofs - TAC	DK	£0	£5,957	£0	£778	4.8t	7.6	1.4%	2016
WL 2	Double Glazing, Entrance Lobby – TAC	KL	£0	£7,000	£0	£117	0.7t	-	0.2%	2016
WL 3	Energy Awareness Campaign for staff – Offices and Depot	KL	£0	£0	£0	£860	5.6t	0	1.6%	2016
WL 11	Effective Office Space Utilization	GR	£0	£0	£0	£2906	12.6t	0	3.6%	Ongoing
<b>Totals</b>			£0	£7000		£4661	23.7t		6.8%	

Boxes highlighted in yellow above and below denote actual costs and predicted savings provided by suppliers or manufacturers; boxes marked in pink indicate funded from another source. All other are estimated costs and CO<sub>2</sub> savings: as projects are worked up these estimates will be replaced with actual costs.

### 5.2 Planned / funded projects

These are planned projects that have funding identified or approved.

Ref	Project	Lead	Cost £			Annual Saving		Pay back	% of Target	Year
			Cap'l	Rev'ue	Res'ce	Fin £	CO <sub>2</sub> Tonnes			
WL 4	Lighting - TAC	KL	£tbc			TBC	0	-	0	2016
WL 15	Effective data collection fleet		£tbc			£0	-	-	0%	2016
<b>Totals</b>			£tbc			£0	0t		%	

### 5.3 Near term projects

Ref	Project	Lead	Cost £			Annual Saving		Pay back	% of Target	Year
			Cap'l	Rev'ue	Res'ce	Fin £	CO <sub>2</sub> Tonnes			
WL 5	Voltage Optimisation – TAC	KL	£0	£7337		£1104	6t	6.65	1.73%	2016
WL 8	Street lighting – LED energy efficient replacement bulbs		£27000	£0		TBC	TBC	-	TBC	2016/2021
WL 9	Street lighting – switch off/dimming		£19200	£0		TBC	TBC		TBC	2016/2021
WL 12	Replacement convector radiator heaters - TAC		£0	£8892		TBC	TBC	-	TBC	2016/17
WL 14	Replacement energy efficient lighting and sensors – Leisure Centre (except Pool Hall)		£tbc	£tbc		£		-	%	2016
Totals			£46200	£16229		£1104	6t		1.73%	

### 5.4 Medium to long term projects

Ref	Project	Lead	Cost £			Annual Saving		Pay back	% of Target	Year
			Cap'l	Rev'ue	Res'ce	Fin £	CO <sub>2</sub> Tonnes			
WL 7	Travel Plan	?	£0	£2190		£2050	4.6	1.1	1.3%	TBC
WL 6	Round optimisation – fleet	AS	£0	£3000		TBC	-	-	-	TBC
WL 10	Electric Vehicle & Charging Station – fleet	KL	£tbc	£tbc		TBC	TBC	-	%	TBC
WL 13	Replacement energy efficient lighting – Pool Hall, Leisure Centre		£25000	£0		TBC	TBC	-	TBC	2018
WL16	Replacement energy efficient LED lighting - Depot		TBC			TBC	TBC			
Totals			£25000	£5190		£2050	4.6t		1.3%	

### 5.5

We will need to identify further carbon saving projects on top of these and resource and complete them if we are to achieve our target. We particularly need to identify more projects that look at reducing the carbon from our fleet as this currently accounts for 42% of our emissions and is also a scope 1 emission. (All WLDC fleet vehicles, which include HGV and vans used as refuse collection vehicles, both owned and leased, are classed in Scope 1 as their emissions are direct.) It is also anticipated that now that carbon is identified in business plans this might help to identify more potential carbon saving projects.

## 6. Carbon Management Plan Financing

6.1 ***The sum of £130,000 will be ringfenced specifically to fund carbon management projects over a five year period.*** This fund will be re-plenished with the monies accrued from FITs payments for solar pv installed previously: financial savings from carbon projects will be taken as a saving for the council. We will access applicable grant funding when opportunities arise, for specific carbon projects. Finance will send regular updates of the budget to the Lead officer.

### 6.2 Assumptions

The cost of gas is calculated at 3p/kWh, the cost of electricity is calculated at 12p/kWh, and the estimated costs for medium and long term projects will need further more accurate assessments as the projects are progressed.

Table 6.2 shows the planned Carbon Reduction Earmarked Reserve budget

	1.4.2016	2016/17	2017/18	2018/19	2019/20	2020/21	Total
Carbon reduction EMR at year end	£104,415	£82,915	£85,415	£92,175	£96,175	£84,415	£84,415
Capital Investment		£20,000	£19,500	£9,240	£18,000	£33,760	£100,500
Revenue investment		£23,500	£0	£6,000	£0	£0	£29,500
Total Investment		£43,500	£19,500	£15,240	£18,000	£33,760	£130,000
Estimated Revenue Savings (p.a)		£5,765	£5,765	£7,815	£7,815	£7,815	£34,975

### 6.3 Unquantified benefits:

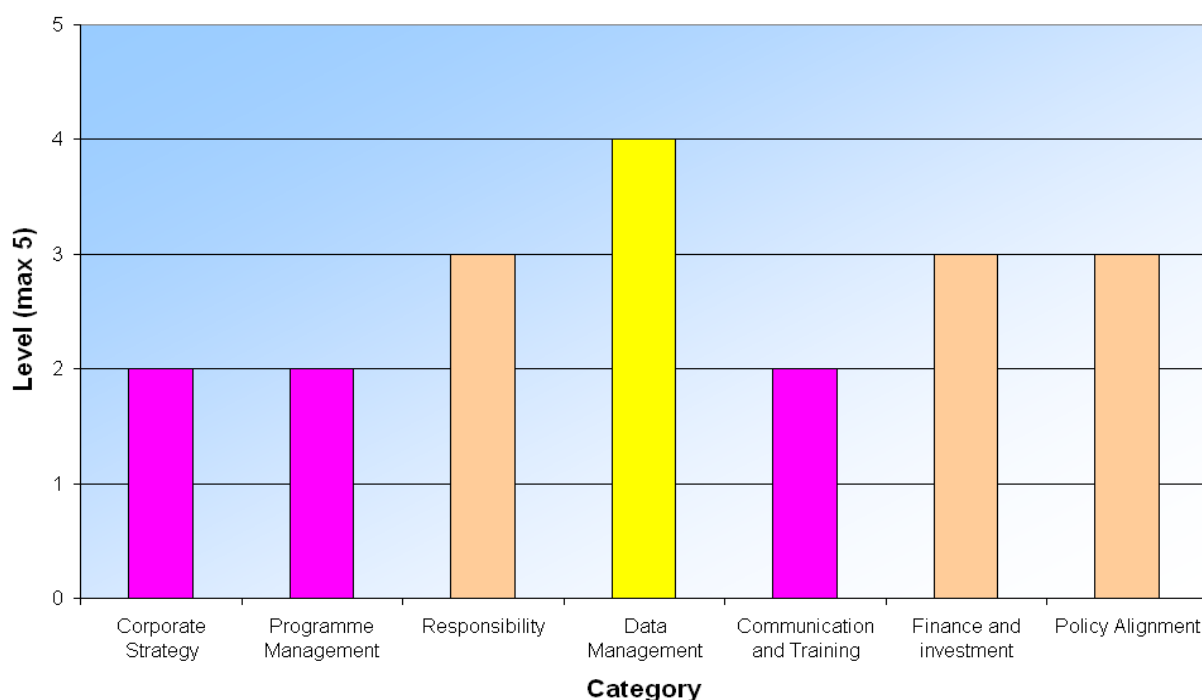
The bullet points below detail some of the additional benefits of carrying out these projects that have not already been quantified.

- Enhanced value of asset
- Improved longevity of electrical equipment
- Improved efficiency in collecting waste
- Reduction in ongoing revenue for repair/replacement of equipment
- Improved performance against GHG emissions
- Provides opportunity for council good news stories
- Better council profile
- Improved comfort in some of our buildings, benefitting customers and staff
- Improved council reputation locally at county and regional level
- Employee energy awareness raising campaign may have a knock on positive effect to staff, whereby they take on board some of the energy saving ideas and use these in their own homes which will assist with reducing domestic carbon emissions.

## 7. Actions to Embed Carbon Management

Figure below illustrates where we were in 2010 in terms of embedding carbon management into our organisation. (The Carbon Management Embedding Matrix is included in full at Appendix A). This was broadly similar to the other Lincolnshire and Leicestershire councils participated in the East Midlands Carbon Management Programme. This will need to be updated to see where we are now. **We aspire to achieve level 5 in all areas.**

**Figure Self-assessment of WLDC status**



### 7.1 Corporate Strategy – embedding CO<sub>2</sub> saving across our organisation

This Carbon Management Plan has been endorsed by West Lindsey’s Chief Executive and the Council Leader and will be published on West Lindsey’s website.

Carbon reduction and addressing climate change is identified as a priority for the Council in the Corporate Plan. We have introduced the Updated Carbon Management Plan to the Strategic Leaders Team and invited them to input possible carbon projects and consider how their current service or future projects may impact on our carbon footprint both positively and negatively. We plan to follow this up with some training for managers which will consider possible future projects for carbon reduction and also climate change adaptation commencing June 2016 onwards.

We plan to introduce a section in business plans that will consider the energy usage and carbon footprint of projects.

We plan to write an Energy and Climate Change strategy for West Lindsey District Council; this strategy will sit above the Carbon Management Plan.

We are also considering setting specific targets for carbon reduction to service areas but at the moment the data collection necessary to action this may outweigh the benefit.

### 7.2 Programme Management – bringing it all together effectively

This factor of embedding Carbon Management is covered in section seven of this Plan.

### **7.3 Responsibility – being clear that saving CO<sub>2</sub> is everyone's job**

Managers will be responsible for considering carbon management in their service developments and projects. Since April 2010 Climate Change risks and opportunities have been considered as part of our committee reports: we will highlight this again to Area Team Managers as it is still rarely considered. It is planned to have carbon management as a standing item for all team meetings commencing June 2016. It is proposed that all Business Plans will include a section addressing possible impacts on carbon reduction.

We could include reducing carbon into new employment contracts for all staff to address reducing their environmental impact whilst carrying out of their duties. We may formulate some carbon questions to be asked at interview. We will also investigate the potential for embedding saving carbon into the existing staff appraisal system.

The council's commitment to Carbon Management will be announced to all staff via Minerva. We plan to run an Energy Awareness Campaign and we will be seeking Carbon/Energy Champions in each service area and will initially seek to recruit these by producing another article for Minerva and through service team meetings. These Champions will be an integral part of present and future Energy Awareness Campaigns.

### **7.4 Data Management – measuring the difference, measuring the benefit**

Currently baseline data has only been measured in its entirety for Greenhouse Gas Emissions reporting on an annual basis. Our main office (Guildhall) has half hourly metering and a Building Management System (BMS) which enables us to analyse and manage our energy use on a zoned basis. We have AMRs at The Depot and Trinity Arts Centre, other buildings have monthly meter reads for gas and electric. Solar meters are read quarterly in line with FITs reporting requirement.

Business mileage forms are completed monthly by employees but CO<sub>2e</sub> from mileage is currently only calculated annually.

Fleet mileage and litres of fuel used is calculated annually; recording methods are currently under review.

### **7.5 Communication and Training – ensuring everyone is aware**

Plan to include environmental issues into corporate updates in 2016 for all staff.

Considering recruiting energy champions who could be recruited and trained commencing in June 2016 and will pass on energy saving ideas and advice to staff in their areas.

An Energy Awareness campaign is planned using Carbon/Energy Champions, newsletters, intranet and team meetings; initially we have publicised our update of the carbon management plan and the potential for our carbon savings corporately on Minerva news pages.

The updated Carbon Management Plan will be published on West Lindsey's website as the previous one is. <http://www.west-lindsey.gov.uk/residents/refuse-recycling-and-your-environment/energy-and-sustainability/carbon-management/carbon-management-plan/>

We could also ask some questions relating to climate change and carbon savings in the next staff survey and analyse the results to ascertain our progress in embedding climate change and carbon savings into our council.

Further Carbon Management Plan successes and milestones will be released to the press.

#### **7.6 Finance and Investment – the money to match the commitment**

There is earmarked budget to deliver Carbon Management Projects for the next 5 years.

#### **7.7 Policy Alignment – saving CO<sub>2</sub> across our operations**

Pending the Carbon Management Plan being agreed by Corporate Policy and Resources Committee, then the process of policy alignment will begin.

Any measurement of our carbon footprint will be included in the 'corporate' scorecard to be drawn together for 2016/17.

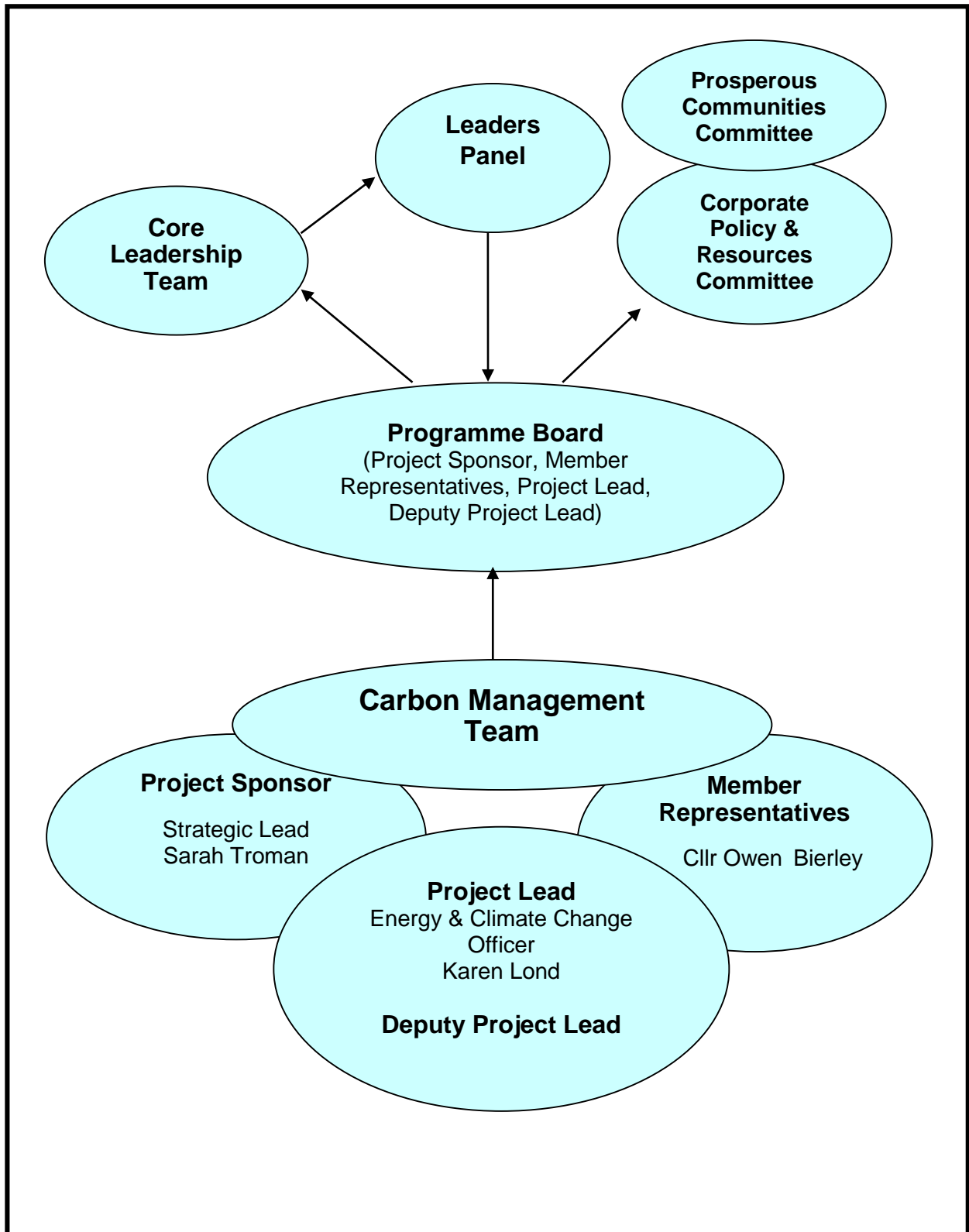
The Carbon Management Plan supports theme 6 of the Corporate Plan. The action of reducing the Councils CO<sub>2</sub> emissions and reducing our carbon footprint supports Property and Land Management Strategy objective.

#### **7.8 Engagement of your Suppliers – working with suppliers to reduce our carbon footprint**

All purchases above £75,000 have to go through Procurement Lincolnshire (a shared service for Lincolnshire). Procurement Lincolnshire has a sustainability policy in place. Procurement Lincolnshire also has a banned list of products/materials that are not permitted for environmental reasons.

In any procurement exercise that is being conducted sustainability will be taken into consideration (dependent on requirements). Consideration should be given to carbon reduction when specifying.

8. Governance





### **8.1 The Carbon Management Team – delivering the projects**

The team is a virtual team, comprising of staff who can take accountability for the delivery of actions. Initially officers have been asked to join the team where their service area has a direct impact on the corporate emissions (Property Services, Waste) or where their input will be necessary (such as Finance and Human Resources) to ensure the programme is financed and embedded. Members of the team will be responsible for gathering information and championing projects. The team will meet regularly, report progress against actions, discuss the mitigation of risks and most importantly take ownership and accountability for projects in their areas. The team will meet at least 4 times a year. A Terms of Reference will be drawn up and agreed by the Carbon Management Team.

### **8.2 Succession planning for key roles**

#### ***Project Lead***

The Project Lead is the Energy & Climate Change officer if this officer leaves or is on long term sick then the Deputy Lead the Technical & Contract Services Manager would lead this project to ensure the Programme runs smoothly. On recruiting a new or temporary replacement The Project Lead role will be taken up by the Energy & Climate Change Officer.

#### ***Project Sponsor***

The role of Project Sponsor is currently a Strategic Lead, should this post become vacant another Project Sponsor would be sought from senior management ideally at Director level.

#### ***Member Representative***

The role of member representative provides an important link to the committee process so it is essential that there is always member representation. Currently we have one member representative; if they leave or stand down we would request that a successor is recruited.

#### ***Carbon Management Team***

The success of this programme relies on a functioning Carbon Management Team; where members of this team leave or roles change it will be the responsibility of their service manager to ensure a suitable substitute or replacement attends who is able to represent their service area.

### **8.3 Ongoing stakeholder management**

Progress towards our carbon reduction targets will be measured annually following the GHG emissions protocol and reported annually to DECC and published on our website.

We will report our GHG emissions annually through WLDC progress and delivery reports. Progress towards our Carbon reduction target will be reported to Members annually.

Residents will be informed of progress towards our Carbon reduction target through press releases, an up to date web page and through articles on our pages of the County News.

### **8.4 Annual progress review**

The plan will be reviewed annually after data has been collected for purpose of reporting to DECC on GHG.

The annual progress review will show carbon and financial savings for the year: progress towards the target will be reviewed and new projects will be included and there potential impact on our targeted carbon savings.

## Appendix A: Definition of Projects

<b>Project: Reference:</b>	<b>Insulation to roofs (Trinity Arts Centre)</b> <b>WL 1</b> <b>Carbon Project – existing</b>
<b>Owner</b>	David Kirkup
<b>Department</b>	Property and Asset team
<b>Description</b>	Installation of insulation to all the roof voids at Trinity Arts Centre.
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Annual savings £778</li> <li>• Payback 7.6 years</li> <li>• Reduction in energy usage – CO<sub>2</sub> saving 4.8t annually</li> <li>• % of CO<sub>2</sub> target = 1.4%</li> <li>• Improved comfort for staff and customers</li> <li>• Improves asset</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>• Project cost = £5957 +VAT</li> <li>• Funded through WREN funding</li> </ul>
<b>Resources</b>	Property Services Team to deliver
<b>Ensuring Success</b>	<ul style="list-style-type: none"> <li>• Secure funding – funding secured through WREN</li> <li>• Accurate assessment pre-installation</li> <li>• No dramatic increase in future peak load</li> </ul>
<b>Measuring Success</b>	<ul style="list-style-type: none"> <li>• Carbon emissions from gas use at the TAC</li> <li>• Measured via AMR and reported on annually</li> </ul>
<b>Timing</b>	Planned for May 2016 as part of roof replacement
<b>Notes</b>	Actual costs and projected savings provided by surveyor. Insulation is being installed as part of the roof replacement project at TAC with grant funding secured from WREN.

<b>Project: Reference:</b>	<b>Replacement Double Glazing (Trinity Arts Centre) WL 2 Carbon Project – near term project</b>
<b>Owner</b>	Gary Reevell
<b>Department</b>	Technical and Contract Services
<b>Description</b>	Install double glazing to entrance lobby at TAC; to include plastisol panels to single glazed entrance doors (lower panels only).
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Cost = £7000</li> <li>• Annual savings = £117</li> <li>• Reduction in energy usage at Trinity Arts Centre – CO<sub>2</sub> saving 0.7t annually</li> <li>• % of CO<sub>2</sub> target = 0.2%</li> <li>• Reduction in draughts and condensation</li> <li>• More comfortable for paying customers on arrival</li> <li>• Addition of plastisol panels to entrance doors will have a security benefit.</li> <li>• Improves asset</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>• Funding through WLDC Carbon Pot</li> </ul>
<b>Resources</b>	Property and Asset Team to deliver
<b>Ensuring Success</b>	<ul style="list-style-type: none"> <li>• Secure funding</li> <li>• Accurate assessment pre-installation</li> <li>• Approval from Conservation Officer as TAC is grade 2 listed building</li> </ul>
<b>Measuring Success</b>	<ul style="list-style-type: none"> <li>• Carbon emissions from gas use at TAC</li> <li>• Measured and reported on annually</li> </ul>
<b>Timing</b>	July 2016: after roof works have been completed as no one will be allowed on site during roof project and also to avoid accidental damage to new glazing.
<b>Notes</b>	Projected costs are taken from contractors written quotes. Savings are estimated using the Carbon Trust's RAP tool.

<b>Project: Reference:</b>	<b>Energy saving awareness campaign for WLDC staff WL 3 Carbon Saving - Existing</b>
<b>Owner</b>	Karen Lond
<b>Department</b>	
<b>Description</b>	Organisation wide campaign to save energy and reduce our Carbon Dioxide emissions, using a network of energy champions, posters, email, Minerva, newsletters etc.
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Annual savings = £860</li> <li>• Reduced energy use in our offices – CO<sub>2</sub> savings 5.6t annually</li> <li>• % of CO<sub>2</sub> target = 1.6%</li> <li>• Reduced electricity and gas consumption in our buildings</li> <li>• Will assist with embedding Carbon Management corporately and could trigger some more potential carbon saving projects</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>• Project cost = unknown</li> <li>• Within existing service budget</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• Energy &amp; Climate Change Officer to organise campaign and events</li> <li>• Staff time for Energy Champions</li> </ul>
<b>Ensuring Success</b>	<ul style="list-style-type: none"> <li>• Project requires support from senior managers</li> <li>• Project requires buy-in from employees</li> <li>• Will need Energy Champion in each service area</li> <li>• Project will need to be maintained to ensure it continues to deliver carbon reductions</li> </ul>
<b>Measuring Success</b>	<ul style="list-style-type: none"> <li>• Should contribute to corporate annual reductions in carbon dioxide</li> <li>• GHG measured and reported on annually</li> </ul>
<b>Timing</b>	<ul style="list-style-type: none"> <li>• Commenced December 2015</li> <li>• Ongoing</li> </ul>
<b>Notes</b>	Projected savings were estimated using the Carbon Trust's RAP tool. Could piggy back onto Lincolnshire County Councils SAGE scheme (if this is still live) and participate/contribute to SAGE newsletter.

<b>Project: Reference:</b>	<b>Lighting- Trinity Arts Centre WL 4 Carbon Saving – near term</b>
<b>Owner</b>	Karen Lond
<b>Department</b>	
<b>Description</b>	Replacement and upgrade of existing lamps to energy efficient in auditorium i.e. bulkhead lighting and lighting up the stairs in auditorium. Replacement lamps to T5 and sensors throughout rest of Trinity Arts Centre where practical, subject to survey.
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Reduction in electricity used</li> <li>• More efficient use of lighting</li> <li>• Improved access to change lighting in auditorium</li> <li>• Safer lighting in auditorium for both public and staff</li> <li>• Improved lighting levels</li> <li>• Increased longevity of lamps</li> <li>• Reduced maintenance (lamps should require less frequent changing)</li> <li>• Improves asset</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>• Potential funding from WLDC Carbon Pot</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• Property and Asset Team to deliver</li> </ul>
<b>Ensuring Success</b>	<ul style="list-style-type: none"> <li>• Secure funding</li> <li>• Careful assessment of appropriate lighting; specification to be agreed with TAC, property services and contractor</li> </ul>
<b>Measuring Success</b>	<ul style="list-style-type: none"> <li>• Carbon emissions from electricity use at TAC</li> <li>• Measured and reported on annually</li> </ul>
<b>Timing</b>	<ul style="list-style-type: none"> <li>• 6-12months</li> </ul>
<b>Notes</b>	<p>Changing bulkhead lighting in auditorium is quite difficult so changing fittings and installing longer lasting lamps could be a solution; installing motion sensitive lighting in parts of the building could limit lights being left on accidentally. Full lighting survey to be carried out to include consideration of most practical and energy efficient way to light this mixed use building.</p> <p>Costings and potential energy savings will be included once lighting survey has been completed.</p>

<b>Project: Reference:</b>	<b>Voltage Optimisation (TAC) WL 5 Carbon Project – new</b>
<b>Owner</b>	
<b>Department</b>	Property and Asset team
<b>Description</b>	Installation of a voltage optimisation device to the Trinity Arts Centre, Gainsborough.
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Annual savings £1,104</li> <li>• Payback 6.67 years</li> <li>• Reduction in energy usage – CO<sub>2</sub> saving 6t annually</li> <li>• % of CO<sub>2</sub> target = 1.73%</li> <li>• Annual kWh saving = 10,425kWh</li> <li>• Increased longevity of electrical equipment and reduced maintenance</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>• Project cost = £7,337</li> <li>• Funded through existing Carbon Pot</li> </ul>
<b>Resources</b>	Property Services Team to deliver
<b>Ensuring Success</b>	<ul style="list-style-type: none"> <li>• Accurate assessment pre-installation</li> <li>• No dramatic increase in future peak load</li> </ul>
<b>Measuring Success</b>	<ul style="list-style-type: none"> <li>• Carbon emissions from electricity use at TAC</li> <li>• Measured and reported on annually</li> </ul>
<b>Timing</b>	Proposed for 2016
<b>Notes</b>	Actual costs and projected savings provided by supplier Power Perfector 13/6/2012

<b>Project: Reference:</b>	<b>Round Optimisation WL 6 Not Carbon Saving – near term</b>
<b>Owner</b>	<b>Adrian Selby</b>
<b>Department</b>	<b>Operational Services</b>
<b>Description</b>	Reduce operational services fleet travel mileage: reduce the travel distance on vehicles to the optimum minimum level by re-evaluating refuse rounds and EPA routes such that fuel use is minimised and therefore carbon emissions are reduced.
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Potential reduction in fleet mileage</li> <li>• Reduced fuel costs</li> <li>• More efficient service</li> </ul>
<b>Funding</b>	There will be a cost of publicising new refuse and recycling rounds and in managing the change process, cost and funding are yet to be determined.
<b>Resources</b>	<ul style="list-style-type: none"> <li>• Use of round management tool and staff time in modelling the rounds.</li> <li>• Existing service team with some assistance from Business Improvement.</li> </ul>
<b>Ensuring Success</b>	<ul style="list-style-type: none"> <li>• Secure funding</li> <li>• Effective communication</li> <li>• Customer Services Support</li> <li>• Publicity and Promotion</li> </ul>
<b>Measuring Success</b>	<ul style="list-style-type: none"> <li>• Reduction of fleet mileage</li> <li>• Measured and reported on annually</li> <li>• Reduction of number of fleet vehicles</li> </ul>
<b>Timing</b>	<ul style="list-style-type: none"> <li>• ?</li> </ul>
<b>Notes</b>	Success will be achieved by the monitoring of existing rounds and identifying spare capacity within the existing rounds. A decision will have to be taken on how such issues as missed bins, properties not able to have wheeled bins and service provision to isolated properties are handled.

<b>Project: Reference:</b>	<b>Travel Plan WL 7 Carbon Project – medium to long term project</b>
<b>Owner</b>	Karen Lond
<b>Department</b>	To be confirmed
<b>Description</b>	Devise travel plan for West Lindsey District Council
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Annual savings = £2,050</li> <li>• Payback 1.1 years</li> <li>• Reduction in business and fleet mileage – CO2 savings 4.6t annually</li> <li>• % of target = 1.3%</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>• Project costs = £2,190</li> <li>• Potential funding through ring fenced Invest to Save scheme</li> </ul>
<b>Resources</b>	To be confirmed
<b>Ensuring Success</b>	<ul style="list-style-type: none"> <li>• Secure funding</li> <li>• Effective communication with staff</li> </ul>
<b>Measuring Success</b>	<ul style="list-style-type: none"> <li>• Reduction in Carbon emissions from transport</li> <li>• Measured and reported on annually</li> </ul>
<b>Timing</b>	To be confirmed
<b>Notes</b>	Projected costs and savings are estimated using the Carbon Trust's RAP tool.



<b>Project: Reference:</b>	<b>Replacement LED energy efficient bulbs for Street-lighting WL 8 Carbon Project – medium to long term project</b>
<b>Owner</b>	Sarah Troman
<b>Department</b>	????
<b>Description</b>	<ul style="list-style-type: none"> <li>• Installation of LED energy efficient replacement bulbs to street-lighting at 90w or above subject to survey</li> </ul>
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Annual savings = £tbc</li> <li>• Payback years - tbc</li> <li>• Reduction in energy usage – CO2 savings annually - tbc</li> <li>• % of target = tbc</li> <li>• Increased longevity of lamps and reduced maintenance</li> <li>• Reduction in electricity used for street lighting</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>• Project costs = £27,000 (based on 108 x £250 capital costs and assumes all are suitable)</li> <li>• Potential funding through WLDC Carbon Pot</li> </ul>
<b>Resources</b>	Which team delivering?
<b>Ensuring Success</b>	<ul style="list-style-type: none"> <li>• Secure funding</li> <li>• Confirm ownership?</li> <li>• Up to date records of current status of WLDC street lighting</li> <li>• Accurate assessment pre-installation</li> </ul>
<b>Measuring Success</b>	<ul style="list-style-type: none"> <li>• Reduction in Carbon emissions from street-lighting</li> <li>• Measured and reported on annually</li> </ul>
<b>Timing</b>	To be confirmed
<b>Notes</b>	<p>To investigate jointly tendering and procuring with other Lincolnshire Councils LCC has only used LED technology where the lamps were 90w or above as the LED units cost £200-£300 each – LED lamps could be dimmed after midnight. WLDC has 1068 street lights and 108 of these are 90w or above. Fully survey of street lighting would need to be carried out to assess suitability and potential savings.</p>

<b>Project: Reference:</b>	<b>Switching off or dimming Street-lighting WL 9 Carbon Project – medium to long term project</b>
<b>Owner</b>	Sarah Troman
<b>Department</b>	???
<b>Description</b>	<ul style="list-style-type: none"> <li>Investigate potential for switching off Parish street lighting after midnight or switching off alternate lights or dimming them</li> </ul>
<b>Benefits</b>	<ul style="list-style-type: none"> <li>Annual savings = £tbc</li> <li>Payback years - tbc</li> <li>Reduction in energy usage – CO2 savings t annually - tbc</li> <li>% of target = tbc</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>Project costs = £19,200 (based on 960 x 20 capital costs and assumes all are suitable)</li> <li>Part night lighting - Photo sensors £20 per unit (can be used to switch off at midnight)</li> <li>Potential funding through carbon pot</li> </ul>
<b>Resources</b>	Public Protection Team to deliver?
<b>Ensuring Success</b>	<ul style="list-style-type: none"> <li>Survey to assess the need for street lighting</li> <li>Secure resource to investigate</li> <li>Communicate intentions to public</li> <li>Get the community on board</li> </ul>
<b>Measuring Success</b>	<ul style="list-style-type: none"> <li>Reduction in Carbon emissions from street-lighting</li> <li>Measured and reported on annually</li> </ul>
<b>Timing</b>	To be confirmed
<b>Notes</b>	<p>LCC has already commenced a programme of dimming and switching off street lighting it is responsible; following a survey that assessed the need for lighting in these areas. It has communicated its intentions to the public.</p> <p>WLDC has 1068 street lights (based on 2011 data); installing part night lighting photo sensors to some of our street lighting would enable lighting to be switched off at midnight. Fully survey of street lighting would need to be carried out to assess suitability and potential savings.</p> <p>To investigate jointly tendering and procuring with other Lincolnshire Councils</p>

<b>Project: Reference:</b>	<b>Electric Vehicle and Charging Station WL 10 Carbon Project – medium to long term</b>
<b>Owner</b>	Karen Lond
<b>Department</b>	?
<b>Description</b>	Electric car/ city van/pick up type for local waste collections and charging unit. Each vehicle could be branded with district logos and carbon message (to be agreed).
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Reduction in energy use of fleet</li> <li>• Positive publicity for green vehicles</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>• ? Any grant funding?</li> <li>• Could match fund from existing WLDC budget so that we can procure additional electric vehicle</li> </ul>
<b>Resources</b>	
<b>Ensuring Success</b>	<ul style="list-style-type: none"> <li>• Secure funding</li> </ul>
<b>Measuring Success</b>	<ul style="list-style-type: none"> <li>• Carbon emissions from fuel use by fleet</li> <li>• Measured and reported on annually</li> <li>• Annual cost of fuel</li> </ul>
<b>Timing</b>	
<b>Notes</b>	Project costs and savings to be established from supplier.

<b>Project: Reference:</b>	<b>Effective Office Space Utilization WL 11 Carbon Project – existing</b>
<b>Owner</b>	?
<b>Department</b>	Property and Asset team
<b>Description</b>	Optimise space occupied by West Lindsey District Council in main Guildhall to enable collaborative working with other partners.
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Annual savings = £2906</li> <li>• Payback years - tbc</li> <li>• Reduction in energy usage – CO2 savings 12.6t annually</li> <li>• % of target = 3.6%</li> <li>• Reduction in WLDC energy usage of gas and electricity at Guildhall</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>• From existing service revenue budget</li> </ul>
<b>Resources</b>	Property and Asset Team to deliver
<b>Ensuring Success</b>	<ul style="list-style-type: none"> <li>• Effective communication with staff managers and partners</li> <li>• Effective partnership working</li> </ul>
<b>Measuring Success</b>	<ul style="list-style-type: none"> <li>• Carbon emissions from electricity use at the Guildhall</li> <li>• Measured and reported on annually</li> </ul>
<b>Timing</b>	Ongoing
<b>Notes</b>	Currently 1722ft <sup>2</sup> of Guildhall floor space is available for let; the costs and savings above are based on this.

<b>Project: Reference:</b>	<b>Replacement Convactor radiator heaters - Trinity Arts Centre WL 12 Carbon Saving – near term</b>
<b>Owner</b>	Karen Lond
<b>Department</b>	
<b>Description</b>	Replacement of 7 existing convactor radiators that are part of the existing wet central heating system. The existing 7 convactor radiators were highlighted on a recent condition survey as being inefficient and in need of replacing.
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Reduction in gas and electricity used</li> <li>• More controlled and efficient use of central heating</li> <li>• Improved comfort for staff and users of TAC</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>• Project costs = £8892 (includes installation costs)</li> <li>• Potential funding from WLDC Carbon Pot</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• Property and Asset Team to deliver</li> </ul>
<b>Ensuring Success</b>	<ul style="list-style-type: none"> <li>• Secure funding</li> <li>• Careful assessment of appropriate replacement energy efficient convactor radiators that will fit best with the existing controls; specification to be agreed with TAC, property services and contractor</li> </ul>
<b>Measuring Success</b>	<ul style="list-style-type: none"> <li>• Carbon emissions from gas and electricity use at TAC</li> <li>• Measured and reported on annually</li> </ul>
<b>Timing</b>	<ul style="list-style-type: none"> <li>• 6-12months</li> </ul>
<b>Notes</b>	Condition survey of TAC on 13/8/15 noted that the existing 7 convactor radiators were inefficient and in need of replacement. An estimated price has been obtained from a supplier; energy efficiency savings have not been calculated yet.

<b>Project: Reference:</b>	<b>Replacement energy efficient lighting in Pool Hall - Leisure Centre WL 13 Carbon Saving – medium to long term</b>
<b>Owner</b>	Karen Lond
<b>Department</b>	
<b>Description</b>	Replace pool hall lighting with an energy efficient lighting installation using T5 or LED technology as recommended in 2012 Condition Survey.
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Reduction in electricity used for lighting</li> <li>• Improved energy efficiency of lighting</li> <li>• Improved lighting for users of Pool hall</li> <li>• Less maintenance due to increased longevity of bulbs.</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>• To be secured in part/or full through Leisure Centre contract – to be confirmed</li> <li>• Potential match funding from WLDC Carbon Pot – to be confirmed</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• Property and Asset team to deliver or oversee Leisure Centre contractor</li> </ul>
<b>Ensuring Success</b>	<ul style="list-style-type: none"> <li>• Secure funding</li> <li>• Careful assessment of appropriate replacement energy efficient lighting that will fit best with the use and maintenance; specification to be agreed with Leisure Centre contractor, property services and lighting contractor</li> </ul>
<b>Measuring Success</b>	<ul style="list-style-type: none"> <li>• Carbon emissions from electricity use at leisure centre</li> <li>• Measured and reported on annually</li> </ul>
<b>Timing</b>	<ul style="list-style-type: none"> <li>• 6-12months</li> </ul>
<b>Notes</b>	<p>Condition survey of Leisure Centre in 2012 noted lighting in the pool hall in a bad condition and in need of replacement. The recommendation was to replace with an energy efficient lighting installation using T5 or LED technology.</p> <p>The financial onus for this project could be placed on the Leisure centre winning contractor; this could be stipulated as a condition in the contract when it goes out for procurement?</p>

<b>Project: Reference:</b>	<b>Replacement energy efficient lighting (excluding Pool Hall) and automated lighting controls - Leisure Centre WL 14 Carbon Saving – near term</b>
<b>Owner</b>	Karen Lond
<b>Department</b>	
<b>Description</b>	Install energy efficient lighting throughout Leisure Centre (except pool hall area, as covered in separate project) and automated lighting controls where practical.
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Reduction in electricity used for lighting</li> <li>• More energy efficient lighting</li> <li>• Improved lighting for users of leisure centre</li> <li>• Less wastage from unnecessary lighting of unused areas</li> <li>• Reduced maintenance?</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>• Potential funding from WLDC Carbon Pot</li> <li>• Potential match funding from Contractor?</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• Property and Asset team to deliver or oversee Leisure Centre contractor</li> </ul>
<b>Ensuring Success</b>	<ul style="list-style-type: none"> <li>• Secure funding</li> <li>• Careful assessment of appropriate replacement energy efficient lighting that will fit best with the use and maintenance; specification to be agreed with Leisure Centre, property services and contractor</li> </ul>
<b>Measuring Success</b>	<ul style="list-style-type: none"> <li>• Carbon emissions from electricity use at leisure centre</li> <li>• Measured and reported on annually</li> </ul>
<b>Timing</b>	<ul style="list-style-type: none"> <li>• 6-12months</li> </ul>
<b>Notes</b>	Condition survey of Leisure Centre in 2012 noted, lighting in various parts of the Leisure Centre was not the most energy efficient and recommended replacing with energy efficient lighting system; it was also recommended that installing automated lighting controls where practical could make significant energy saving. This project picks up all these areas identified on the condition survey excepting Pool Hall area which will be picked up in another project.

<b>Project: Reference:</b>	<b>Improved data collection of litres of fuel and mileage - fleet WL 15 Carbon Saving – existing</b>
<b>Owner</b>	Karen Lond
<b>Department</b>	Operational services
<b>Description</b>	Current measuring and recording system for litres of fuel used by the fleet is able to be circumvented by users and therefore there is uncertainty on the current recorded and reported figures. Work with depot staff to ensure there is an accurate system in place that is impossible to circumvent.
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Accurate record of litres of fuel used by fleet.</li> <li>• Can measure accurately GHG emissions from this sector.</li> <li>• An accurate record of fuel used by the fleet, will enable us to work up projects that target a reduction in litres of fuel used by the fleet.</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>• Resourced by Depot</li> <li>• Potential funding from WLDC Carbon Pot</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• Depot staff</li> </ul>
<b>Ensuring Success</b>	<ul style="list-style-type: none"> <li>• Buy in from all staff operating at the Depot.</li> <li>• Training provided to staff to ensure compliance with recording requirements.</li> <li>• Careful assessment of appropriate way to measure and record litres of fuel used by each fleet vehicle and there mileage.</li> </ul>
<b>Measuring Success</b>	<ul style="list-style-type: none"> <li>• Accurate fleet data for litres of fuel and mileage</li> <li>• Measured and reported on annually</li> </ul>
<b>Timing</b>	<ul style="list-style-type: none"> <li>• 6-12months</li> </ul>
<b>Notes</b>	Based on currently recorded fleet data of litres of fuel used the fleet accounts for 42% of our greenhouse gas emissions. Last year saw a rise in emissions from this sector an enquiry as to reasons for this flagged up uncertainty about the accuracy of the data previously supplied. Additional data subsequently supplied is incomplete mileage only records of the fleet. The most accurate way to measure emissions from the fleet is by the litres of fuel used by each vehicle. Fleet vehicles fill up at the Depot from our own pump and this should be recorded at this point. Need to understand why this doesn't always happen and how it is possible to circumvent the existing system.



<b>Project: Reference:</b>	<b>LED Lighting- Depot WL 16 Carbon Saving – near term</b>
<b>Owner</b>	Karen Lond
<b>Department</b>	
<b>Description</b>	Replacement and upgrade of existing lamps to energy efficient LED on depot site and buildings. Replacement lamps to T5 and sensors throughout Depot buildings where practical, subject to survey.
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Reduction in electricity used</li> <li>• More efficient use of lighting</li> <li>• Safer lighting on site for staff</li> <li>• Improved lighting levels</li> <li>• Reduced maintenance (bulbs should require less frequent changing)</li> <li>• Improves asset</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>• Potential funding from WLDC Carbon Pot</li> <li>• Potential match funding from maintenance pot</li> </ul>
<b>Resources</b>	<ul style="list-style-type: none"> <li>• Property and Asset team to deliver</li> </ul>
<b>Ensuring Success</b>	<ul style="list-style-type: none"> <li>• Secure funding</li> <li>• Careful assessment of appropriate lighting; specification to be agreed with Depot, Property and Asset team and contractor</li> </ul>
<b>Measuring Success</b>	<ul style="list-style-type: none"> <li>• Carbon emissions from electricity use at Depot</li> <li>• Measured and reported on annually</li> </ul>
<b>Timing</b>	<ul style="list-style-type: none"> <li>• 6-12months</li> </ul>
<b>Notes</b>	

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