

**Report To: Safe Sustainable Communities Committee**      **Date: 6<sup>th</sup> March 2012**

**Report By: Corporate Director – Regeneration and Environment**      **Report No: SSC/12/03/01**

**Contact Officer: Karen Barclay**      **Contact No:01475 712065**

**Subject: Carbon Management Plan 2011-16**

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## **1.0 PURPOSE**

- 1.1 The purpose of this report is to seek Committee approval of the Council's Carbon Management Plan 2011-16.

## **2.0 SUMMARY**

- 2.1 In January 2007, the Council signed Scotland's Climate Change Declaration which committed the Council to tackling the causes and effects of a changing climate within the Inverclyde area. All 32 of Scotland's local authorities have signed the Climate Change Declaration. By signing the 'Declaration', Councils have committed to the above actions including reporting on their progress in developing Climate Change Action Plans.
- 2.2 In February 2009 the Sustainability Sub-Committee approved the Carbon Management Plan 2008-13. Para 120
- 2.3 The purpose of the Carbon Management Plan 2011-16, which was produced in partnership with the Carbon Trust and is contained in Appendix 1, is to outline how the Council can meet the strategic objective of reducing the carbon emissions and energy costs of the Council operational activities. It outlines the many challenges the Council faces in trying to reduce emissions to adapt to a future low carbon economy. Proposed actions outlined in the plan, include enhancements to the Council's capacity to undertake carbon management, such as the establishment of a Carbon Management Group to oversee the implementation of the Inverclyde Carbon Management Plan 2011-16.

## **3.0 RECOMMENDATIONS**

- 3.1 It is recommended that the Committee:-
- (a) approve the Carbon Management Plan 2011-16.
  - (b) instruct the Corporate Director, Regeneration and Environment to establish a Carbon Management Group to oversee the Carbon Management Plan's implementation
  - (c) agree to receive a 6 monthly progress update from the Corporate Director – Regeneration and Environment on the implementation of the Carbon Management Plan.

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## **4.0 BACKGROUND**

- 4.1 Inverclyde Council fully participated in the Carbon Trusts – Revisited Programme. The main output of this work is contained in Appendix 1
- 4.2 The purpose of the Carbon Management Plan 2011-16, is to outline how the Council can meet the strategic objective of reducing the carbon emissions and energy costs of the Council operational activities. It outlines the many challenges the Council faces in trying to reduce emissions to adapt to a future low carbon economy. Proposed actions outlined in the plan, include enhancements to the Council's capacity to undertake carbon management, such as a Carbon Management Group to oversee the implementation of the Inverclyde Carbon Management Plan 2011-16.

## **5.0 FINANCIAL IMPLICATIONS**

- 5.1 There are no direct financial implications in the production of this plan.

## **6.0 CONSULTATION**

- 6.1 Officers from a number of different services were involved in the Carbon Trust workshops

# Inverclyde Council

## Carbon Management Plan 2011/16



Image: Mile End Burn, Ashton, Gourrock

**Date:** *February 2012*

**Version number:** *4*

**Owner:** *Karen Barclay*

**Approval route:** *Corporate Management Team; Safe, Sustainable Communities Committee; Full Council*

**Approval status:** *Draft*

## **Contents**

	<b>Page</b>
<b>Foreword from Councillor David Wilson</b>	<b>3</b>
<b>Foreword from the Chief Executive</b>	<b>3</b>
<b>Foreword from the Carbon Trust</b>	<b>4</b>
<b>Management Summary</b>	<b>5</b>
<b>Background Information</b>	<b>7</b>
<b>Introduction to the Carbon Management Plan 2011/16</b>	<b>9</b>
<b>Major Achievements since 2009</b>	<b>12</b>
<b>Carbon Management Strategy 2011/16</b>	<b>14</b>
<b>Emissions Baseline and Projections</b>	<b>21</b>
<b>Carbon Management Projects 2011/16</b>	<b>24</b>
<b>Implementation of the Carbon Management Plan 2011/16</b>	<b>29</b>
<b>Appendix: Definition of Projects</b>	

## Foreword from Councillor David Wilson

I am delighted to present the Council's Carbon Management Plan 2011/16. The Plan outlines how the Council aims to reduce its carbon emissions and help achieve the outcomes of the Community Plan, Corporate Plan, Organisational Improvement Plan and the Single Outcome Agreement during the next five years.

Climate change is the single greatest environmental challenge facing us today. An increase in global temperatures is resulting in changing weather patterns: sea levels are rising and we are experiencing more and frequent intense weather events such as storms and high temperatures. Inverclyde Council recognises its role in taking the lead locally in tackling climate change. We took part in the Carbon Trust's *Carbon Management Programme* and in April 2009 launched our original Carbon Management Plan, setting a five year target to reduce our carbon footprint by 15% by 2012/13 from a 2007/08 baseline. I would like to thank everyone from across the Council for their input in reducing our carbon emissions.

Having made good progress, however, we now need to focus on delivering further carbon reductions during the next five years. It is our duty to lead by example and encourage the wider community to join us in taking action.

### Councillor David Wilson

**Vice-Convener of the Safe, Sustainable Communities Committee and  
Chair of the Green Charter and Environment Group**



## Foreword from the Chief Executive

Almost daily, news bulletins contain items about climate change. Climate change is a reality and a serious threat to the world's population. It will affect the basic elements of life for people around the world including access to water, food production, health and the environment.

The Council recognises the seriousness of this threat and is committed to taking measures to reduce our impact on climate change. We publicly demonstrated our commitment to the environment when we became one of the first Councils to sign Scotland's Climate Change Declaration.

In 2009, the Council prepared its original Carbon Management Plan with support from the Carbon Trust. We were pleased to work with them again on their *Revisited Programme* which assisted us to produce a new Carbon Management Plan for the next five years.

By taking the lead on carbon reduction, the Council hopes to deliver the long term vision of reducing its carbon footprint and play our part in mitigating our impact on the climate and protecting it for future generations.

### John W. Mundell Chief Executive



### **Foreword from the Carbon Trust**

Cutting carbon emissions as part of the fight against climate change should be a key priority for the public sector – it is all about getting your own house in order and leading by example. The UK government has identified the public sector as key to delivering carbon reduction across the UK in line with its Kyoto commitments and the *Carbon Trust Revisited Programme* is designed in response to this. It assists organisations 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.

Inverclyde Council was selected in 2010, amidst strong competition, to take part in this ambitious programme. Inverclyde Council partnered with the Carbon Trust on this programme in order to realise vast carbon and cost savings. This Carbon Management Plan commits the organisation to a target of reducing CO<sub>2</sub> by 12% by 2016 and underpins potential financial savings to the organisation of around £947,484.

There are those that can and those that do. Public sector organisations can contribute significantly to reducing CO<sub>2</sub> emissions. The Carbon Trust is very proud to support Inverclyde Council in their on-going implementation of carbon management.

**Paul Wedgwood**  
**Manager, Carbon Trust Scotland**



## Management Summary

Inverclyde Council is one of 25 organisations in Scotland who graduated from the sixth phase of the Carbon Trust's *Carbon Management Programme* in 2009. The Programme helps organisations develop a targeted framework to deliver carbon reduction practices by establishing their current baseline emissions, assessing the risks and opportunities posed by climate change and developing a robust strategy to reduce carbon footprints over a five year period.

When the Council's original Carbon Management Plan was launched in April 2009, it included a challenging target of a 15% reduction in carbon emissions by 2012 and the creation of the Plan was a step towards the Council meeting its obligations under the Scottish Climate Change Declaration.

Having successfully graduated from the *Carbon Management Programme*, the Council was pleased to work with the Carbon Trust again in 2010/11 on their *Carbon Management Revisited Programme*. The initiative assisted us to review and revise our existing Carbon Management Plan, taking into account developments in policy and legislation since the original Plan was launched. In particular, we considered our commitments under the Climate Change (Scotland) Act 2009.

### Emission Baselines 2007/08 and 2009/10

The baseline in our original Carbon Management Plan was for 2007/08. We updated it for 2010/11 for inclusion in our new Carbon Management Plan 2011/16. Water and waste were not included in the original list of emission sources. However, as the Council's understanding of carbon management improves, there has also been an improvement in data collection and management which has enabled us to include water and waste in the 2010/11 baseline, together with heating oil. To allow comparison on a like-for-like basis, we have retrospectively added water and waste to our original 2007/08 baseline.

Source	2007/08 baseline in original Carbon Management Plan		2010/11 baseline in revised Carbon Management Plan	
	CO <sub>2</sub> Tonnes	% Total CO <sub>2</sub>	CO <sub>2</sub> Tonnes	% Total CO <sub>2</sub>
Energy use in buildings	9,947*	66.3*	15,057	44.7%
Street lighting	2,975*	19.8*	2,866	8.5%
Fleet transport	1,555	10.4	1,024	3%
Business travel	526	3.5	457	1.4%
Water	85		36	0.1%
Waste	18,115		14,225	42.3%
<b>TOTAL</b>	<b>33,203</b>	<b>100</b>	<b>33,666</b>	

\* Includes accruals from previously unbilled consumption

As can be seen from the above figures, energy use in buildings has increased from the baseline included in the original Plan. This can partially be explained by the severe winter weather conditions experienced in Scotland during 2010/11 when the country experienced some of most severe weather in many decades.

Additionally, the implementation of our Schools Estate Management Programme - the objective of which is 'to rationalise the provision of primary and secondary schools in line with current rolls and future roll projections' – has also impacted on the amount of energy used in buildings. The Programme requires decant schools to be established to house staff and pupils until their new accommodation is available and unwanted education properties can be demolished.

A particularly successful project in our strive to reduce our carbon emissions is waste. Between 2007/08 and 2010/11, we recycled 43,112 tonnes of material, together with a 8,702 tonne drop in the amount of waste sent to landfill for disposal. The net result of our Waste Strategy Initiative is that we have saved 3,890 tonnes of carbon during the last three years.



### Carbon Management Plan 2011/16

The Carbon Management Plan 2011/16 has been developed to address a number of drivers which are outlined on Pages 14-16.

The Council has set an ambitious target of 12% for carbon reduction for the next five years. Between now and 2016, we will strive to reduce the environmental impact of the goods and services we provide for the citizens of Inverclyde. Projects which will contribute to the reduction target are outlined in the Appendix.

<b>We aim to reduce our emissions by 12% by 2016 from our 2009/10 baseline, split by source as follows:</b>		
	<b>%</b>	<b>CO<sub>2</sub> Tonnes</b>
▪ <b>Energy use in buildings</b>	<b>15%</b>	<b>2,259</b>
▪ <b>Street lighting</b>	<b>0%</b>	<b>0</b>
▪ <b>Fleet transport</b>	<b>15%</b>	<b>154</b>
▪ <b>Business travel</b>	<b>25%</b>	<b>114</b>
▪ <b>Water</b>	<b>15%</b>	<b>5</b>
▪ <b>Waste</b>	<b>11%</b>	<b>1,565</b>
<b>TOTAL</b>	<b>12%</b>	<b>4,097</b>

### Year on year targets

Our year on year targets for 2011/16 are:

▪ <b>Energy use in buildings</b>	<b>3%</b>
▪ <b>Street lighting</b>	<b>0%</b>
▪ <b>Fleet transport</b>	<b>3%</b>
▪ <b>Business travel</b>	<b>5%</b>
▪ <b>Water</b>	<b>3%</b>
▪ <b>Waste</b>	<b>2.2%</b>

## Background Information

### Financial commitment

Against a backdrop of difficult economic times, the Council approved its second, innovative two-year Budget on 10 February 2011, confirming its continued investment to benefit the residents of Inverclyde.

The Council reinforced its commitment to develop a Budget based on the organisational priorities of the Council, the Corporate Plan, Community Plan and the Single Outcome Agreement.

The Chief Executive said: "It is important that we deliver a balanced budget for Inverclyde. We must make sure that we continue to deliver high quality services with the resources we have available to us. Our allocation from the Scottish Government was lower than we originally anticipated but we took this in our stride and this Budget demonstrates that due to our robust and prudent financial management we were able to react quickly. It is vitally important that we continue to invest in Inverclyde to ensure that when the economic environment changes we are a Council best placed to react."

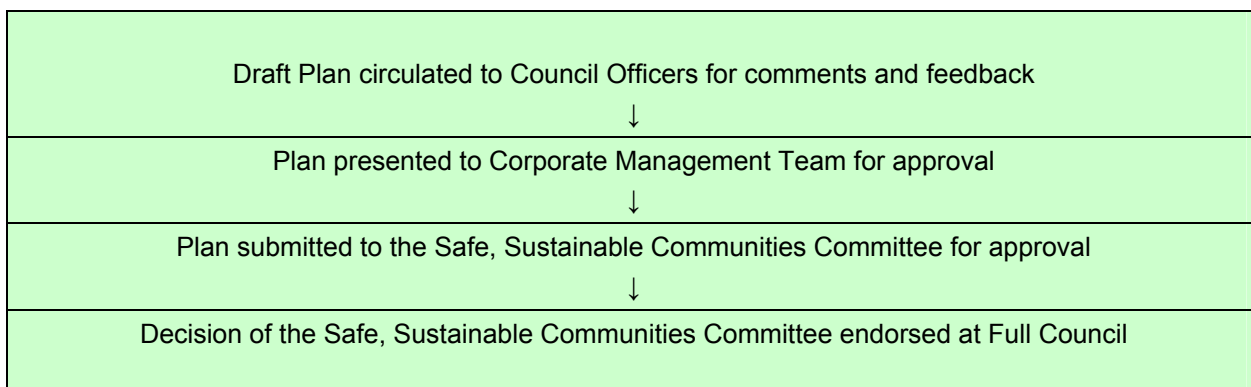
### Embedding carbon management

Officers from a number of Council Services and disciplines are involved in the *Carbon Trust Revisited Programme* and provide information for inclusion in this Plan. In March 2011, visits were made to a number of Directorate Management Team meetings to raise awareness of carbon management at senior staff level. This Plan 2011/16 is being circulated to relevant staff throughout the Council, including those who participated in the *Revisited Programme*, for their comments and feedback.

The Council recognises the importance of engaging with others to raise awareness of carbon management throughout the Local Authority. We have therefore began to involve our staff in the Carbon Management Plan through the implementation of our Carbon Management Awareness Campaign which include the specific projects of the creation of a Green Charter Champions network and the roll-out of targeted training for catering supervisors and janitorial staff.

### Reviewing the Carbon Management Plan

The Plan approval route:



A quarterly review of progress against the Plan will be reported to the Head of Regeneration and Planning. Bi-annual reports on progress against actions will be submitted to the Safe, Sustainable Communities Committee. A full reporting/governance structure is outlined in Section 6.3.4 on Page 29.

### Ownership and responsibilities

The Head of Regeneration and Planning is the Project Sponsor and the Green Charter Unit Co-ordinator is the Project Lead. Operational responsibility for the projects listed in the Appendix rests with a number of Council Officers representing Council Services including Property Services and Facilities Management, Finance and Environmental and Commercial Services.

In order to demonstrate effective and ongoing ownership of the Plan, a Carbon Management Team is being set up whose responsibility it will be to provide input to the development, implementation, monitoring and evaluation of the Plan during its five year lifespan.

### Brief overview of progress made, projects implemented to date etc.

This is included in the Major Achievements section on Pages 12 and 13.

### Carbon Management Team

The proposed Carbon Management Team is:

Role	Name	Position	E-mail address
Project Sponsor	Stuart Jamieson	Head of Regeneration and Planning	stuart.jamieson@inverclyde.gov.uk
Project Lead	Karen Barclay	Green Charter Unit Co-ordinator	<a href="mailto:karen.barclay@inverclyde.gov.uk">karen.barclay@inverclyde.gov.uk</a>

## 1. Introduction to the Carbon Management Plan 2011/16

The Carbon Management Plan sets out a systematic methodology to reducing the Council's emissions during the next five years. It details the sources of the Council's emissions and establishes a baseline against which progress can be measured. The Plan sets out the Council's approach to carbon management and identifies a series of key projects that will be implemented in order to achieve the reduction target of 12% by 2016.

### 1.1 Review of Original Carbon Management Plan

The Council, in partnership with the Carbon Trust, launched its Carbon Management Plan in 2009, setting a five year target to reduce our carbon footprint by 15% by 2013. A recent review of our 2009/10 footprint shows that, between 2007/08 and 2010/11, emissions from street lighting, transport and business travel all decreased. However, we saw an overall increase of 1.4% in CO<sub>2</sub> emissions which is mainly attributable to energy use in buildings.

Source	2007/08 CO <sub>2</sub> Tonnes	2010/11 CO <sub>2</sub> Tonnes	Difference %
Energy use in buildings	9,947*	15,057	+51%
Street lighting	2,975*	2,866	-3.7%
Fleet transport	1,555	1,024	-34.1%
Business travel	526	457	-13.1
Water	85	36	-57.6%
Waste	18,115	14,225	-21.5%
<b>Total</b>	<b>33,203</b>	<b>33,666</b>	<b>+1.4%</b>

During the life of the Plan, progress against our reduction target will be measured against our 2010/11 baseline.

### 1.2 New Carbon Management Plan 2011/16

The Council has completed many of the actions in its first Plan and, having made good progress, we now need to focus on delivering further carbon reductions during the next five years. To help us achieve this, we secured a place on the Carbon Trust's *Carbon Management Revisited Programme*. The initiative is assisting us to review our original Carbon Management Plan and revise it, taking into consideration developments in policy and legislation since the Plan was launched. In particular, we are considering our commitments under the Climate Change (Scotland) Act 2009.

The *Revisited Programme* comprises five stages:

<p><b>Step 1 – Mobilise</b></p>	<ul style="list-style-type: none"> <li>▪ Mobilise the organisation – determine key individuals, create a team, determine scope and ambition of the organisation and set a timetable for the carbon management strategy and implementation plan.</li> </ul> <p style="text-align: center;">↓</p>
<p><b>Step 2 – Baseline and Forecast</b></p>	<ul style="list-style-type: none"> <li>▪ Set a baseline, forecast and targets – this stage asks “<i>where are we?</i>” and “<i>where do we want to be?</i>” This requires collecting energy consumption data and completing a baseline tool which establishes the carbon footprint of the organisation.</li> </ul> <p style="text-align: center;">↓</p>
<p><b>Step 3 – Identify and Quantify</b></p>	<ul style="list-style-type: none"> <li>▪ Identify and quantify options – compile options, prioritise and produce a shortlist of products following cost benefit analysis. This involves meeting with key staff to identify projects and works that will reduce energy usage.</li> </ul> <p style="text-align: center;">↓</p>
<p><b>Step 4 – Approve Plan</b></p>	<ul style="list-style-type: none"> <li>▪ Finalise strategy and implementation plan. Review, confirm and complete the strategy development. Gain approvals from key stakeholders and communicate the strategy and plan at all levels of the organisation.</li> </ul> <p style="text-align: center;">↓</p>
<p><b>Step 5 – Implement the Plan</b></p>	<ul style="list-style-type: none"> <li>▪ Implement the plan. Action the opportunities identified in the implementation plan, monitor progress and communicate success to stakeholders.</li> </ul>

## 2. Major Achievements since 2009 *Review and update*

Our original Carbon Management Plan was launched in 2009. Since that time, our major achievements include:

- the devising of our flagship environmental policy – Green Charter – in 2009 with the aims of reducing energy and waste and promoting the sustainable use of resources in the Council and across the community: <http://www.inverclyde.gov.uk/planning-and-the-environment/green-charter>. A Green Charter Officer/Member Working Group was set up to oversee the implementation of the Charter. The Group subsequently agreed to also act as the Delivery Group for Single Outcome Agreement 8: Environment and, in recognition of this dual role, was renamed the Green Charter and Environment Group. As well as Council Officers, the Group includes representatives from Strathclyde Fire and Rescue, Strathclyde Police and the Inverclyde Community Health Partnership. In September 2010, a copy of the Council's corporate Green Charter leaflet was distributed to every pupil in Inverclyde from Primary 4 upwards.
- the hosting of a sustainability conference by our Education Service in May 2010. Supported by Learning and Teaching Scotland, the aim of the event was to broker support for the three pilot 'environmental schools' which were charged with developing and disseminating good practice in relation to environmental sustainability and the Schools Green Charter initiative.
- as part of our corporate Green Charter initiative, by June 2010, every educational establishment in Inverclyde (43 in total) developed a Green Charter and three-year action plan to promote environmental sustainability at school (local) level. Components for establishment Green Charters include action on energy saving, action on recycling, water conservation and the journey to school. We believe we are the first Council in Scotland to adopt this approach to education for sustainable development.
- the dramatic increase in our waste performance in the very short space of time since our Waste Strategy Initiative was introduced. During 2010/11, we achieved our highest ever recycling rate of 31.5%, together with an 806 tonne reduction in the amount of waste sent to landfill. At our Materials Recycling Facility, adjustments to working practices, coupled with the introduction of a training programme, have led to improved productivity and higher output of materials sent for recycling. To further encourage recycling in Inverclyde, our communication campaign continued throughout 2010/11 when we engaged with more than 4,100 local residents at 142 presentations and public information sessions on recycling.
- the commitment, as part of our School Estate Management Plan (through the briefing process), to procuring new or refurbished school buildings that are appraised against current sustainability best practice, legislation and policy to ensure that we are reducing buildings' emissions as far as possible and in line with any whole life emissions management plan. Our PPP project, which is currently in progress with two primary schools operational from February 2010 and two secondary schools opened in 2011, was supported by the Carbon Trust which resulted in the building designs significantly improving on building regulations.
- continuing to rationalise our operational property estate, reduce the number of old, energy-inefficient buildings and consolidating into a much reduced number of modern or refurbished, more energy-efficient buildings.
- during the last two years, our vehicle procurement evaluation process has taken account of environmental impact and both CO<sub>2</sub> emissions and fuel economy play a key part in the

evaluation matrix. We took advantage of the opportunity our Fleet Replacement Programme provided and now have a number of £0 tax band rated vehicles on fleet, which help us to reduce our emissions and operating costs. All heavy commercial vehicles purchased since the start of the Fleet Replacement comply with the latest stringent EURO 5 emissions regulations.

- the introduction, in partnership with Strathclyde Partnership for Transport, of 'Journeyshare' to our staff to help them match their trips with others travelling on the same journey, calculate the financial and CO<sub>2</sub> saving for each member of staff, compared with making that journey by car on their own.
- the promotion of Energy Saving Week 2009, in partnership with the Energy Saving Trust and LESS (Local Energy Saving Scheme) Inverclyde. We held an information session in each town in Inverclyde and engaged with one person every six minutes, complemented by the arrangement of 16 follow-up visits to customers' homes.
- an improved performance in our Energy Performance Certificates Programme – in May 2010, only 15% of the buildings surveyed attained a "C rating" while no buildings achieved an "A" or "B" rating. By April 2011, however, almost 20% of the buildings surveyed attained one of the top three ratings.

### **3. Carbon Management Strategy 2011/16**

#### **3.1 Context and internal and external drivers for carbon management**

There are a number of drivers to reduce the Council's carbon emissions during the next five years. The implementation of our Carbon Management Plan will contribute to the delivery of the following key plans and strategies:

##### Energy and Other Costs

Improving energy efficiency and reducing energy bills is essential, particularly in the current challenging economic climate. The Council's combined spend on electricity, gas, oil and street lighting during 2010/11 was £2,905,161. Transport costs for fleet vehicles were approximately £594,835 and £522,563 was expended on staff business miles.

##### Climate Change (Scotland) Act 2009

From 1 January 2011, as set out in the Climate Change (Scotland) Act 2009, public bodies are expected to act:

- in the way best calculated to contribute to delivery of the Act's emissions reduction targets;
- in the way best calculated to deliver any statutory adaptation programme; and
- in a way that it considers most sustainable.

The Council is a public body, as defined by the Freedom of Information (Scotland) Act 2002 (as amended) and is therefore required to ensure it meets the requirements of the Public Bodies Duties of the Act which could potentially impact on every aspect of the Council's business from planning applications to grants to voluntary organisations. The Guidance issued by the Scottish Government on 4 February 2011 states: "Taking action to strengthen a public body's governance, leadership and commitment in regard to climate change will significantly contribute to the successful implementation of the climate change duties". The Council is therefore expected to lead by example.

The Act "sets clear and ambitious targets for emissions reduction, including a 42% reduction by 2020" and the Guidance says public bodies should think about "how they mainstream climate change action into their strategic and corporate processes". An extensive awareness-raising exercise regarding the Duties will therefore be required throughout the Council.

Implementation of the Public Bodies Duties is expected to generate interest from the media and environmental pressure groups. Failure to meet the requirements of the Duties could therefore result in adverse publicity for the Council.

A report on the Duties was considered by the Policy and Resources Committee on 24 May 2011: <http://www.inverclyde.gov.uk/committees/details/1463/> (Item 12).

##### Scotland's Climate Change Declaration

Scotland's Climate Change Declaration acknowledges that Councils have a key role to play in their collective response to the challenge of climate change and, by signing the document, Inverclyde Council publicly demonstrated its commitment to action.



The Council also committed to producing an annual statement, detailing its progress in mitigating, and adapting to, climate change. Our 2010 annual report on activity regarding the Declaration was considered by the Safe, Sustainable Communities Committee on 26 October 2010: <http://www.inverclyde.gov.uk/committees/details/1406/> (Item 12).

Implementing the actions within our Carbon Management Plan 2011/16 will help reduce our area-wide emissions and expand the work being done to meet our obligations under the Declaration.

#### Zero Waste Plan 2011/15

The Scottish Government has stated a commitment to moving towards the concept of a 'zero waste Scotland'. It set out its strategy in the launch of *Scotland's Zero Waste Plan* in June 2010. Notably, the Plan has proposed long term targets to:

- recycle 70% of all Scotland's waste by 2025
- only have 5% of waste sent to landfill by 2025.

The Council has adopted these targets. The Plan has also specified a number of new measures to help achieve the targets and objectives of the Plan including developing a Waste Prevention Programme for all wastes and landfill bans for specific types of waste, for example, food waste, with the aim of reducing greenhouse gas emissions from landfill sites.

#### Sustainable Procurement Action Plan

The Scottish Government says sustainable procurement can be defined as: "A process whereby organisations meet their needs for goods, services, works and utilities in a way that achieves value for money on a whole life basis and generates benefits not only to the organisation, but also to society, the economy and the environment".

#### Green Charter

In 2009, the Council devised its flagship environmental policy – Green Charter - with the aims of reducing energy and waste and promoting the sustainable use of resources in the Council and across the community. Implementation of the Carbon Management Plan adheres to the principles of the Green Charter, with particular reference to the following Key Action:

"Working towards meeting the obligations of Scotland's Climate Change Declaration by devising and implementing a Council-wide Carbon Management Plan with the aims of:

- mitigating climate change by reducing the Council's carbon footprint;
- understanding the impact of climate change on the Council;
- undertaking climate change adaptation by reducing the vulnerability or increasing the resilience of the Council's buildings, facilities and infrastructure;
- communicating the impact of climate change and the related Council activities throughout Inverclyde and promoting what can be done to help tackle the issue; and
- investigating how we can work towards meeting the Carbon Reduction Commitment."

#### Single Outcome Agreement 2009/11

The Single Outcome Agreement 2009/11<sup>1</sup> refers to carbon management under Outcome 8: Environment - Inverclyde is a sustainable and pleasant place where people want to live now whilst at the same time safeguarding the environment for future generations The indicators included as part of Outcome 8 are:

- ecological footprint (the ecological footprint in global hectares per capita)
- number of greenspace sites managed for biodiversity
- % of journeys to work made by public or active transport
- levels of waste sent to landfill
- % of waste being recycled or composted
- reduce the Council's carbon dioxide emissions.

#### Community Plan 2008/18

Environmental challenges are mentioned in the Inverclyde Alliance Community Plan 2008/18<sup>2</sup> at Outcome 5: Inverclyde's environment is protected and enhanced for future generations

#### Corporate Plan 2007/11

Taking action to reduce our carbon footprint is one of the ways we will achieve the Corporate Plan 2007/11 Strategic Outcome 3: Safe, Sustainable Communities<sup>3</sup>.

#### Performance Indicators

The Council's suite of Performance Indicators includes environmental actions. Progress is reported annually to the Council's Policy and Resources Committee, including progress with reducing Inverclyde's ecological footprint and reducing the Council's carbon emissions.

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<sup>1</sup> (<http://www.inverclyde.gov.uk/community-life-and-leisure/community-planning/inverclyde-alliance-single-outcome-agreement-2009-2011/> [Page 96])

<sup>2</sup> (<http://www.inverclyde.gov.uk/council-and-government/community-planning/inverclyde-alliance-community-plan/> [Page 47])

<sup>3</sup> (<http://www.inverclyde.gov.uk/council-and-government/about-our-organisation/> [Page 22])

### 3.2 Our low carbon vision

The Council's vision for carbon management is:

- to aim to embed carbon management across all aspects of the Council's business during the next five years
- to strive to reduce our emissions by 2016 from our 2010/11 baseline
- to continue to meet our commitments regarding Scotland's Climate Change Declaration
- to fulfil our obligations regarding the Public Bodies Duties of the Climate Change (Scotland) Act<sup>4</sup>:

### 3.3 Strategic themes

The Council aims to reduce the environmental impact of the various sectors which make up its carbon emissions portfolio. Because **energy consumption** in our buildings accounts for the majority of our emissions, our primary focus will be on reducing our energy use and making our buildings more energy-efficient. However, to complement that action, we also aim to reduce emissions from the other sections which contribute to our overall carbon emissions including **street lighting, fleet, business mileage, water and waste**.

Details of proposed projects are detailed below, grouped under the emission sources which make up our carbon portfolio. Specific details on carbon reduction projects are outlined in the Appendix.

a.	<b>Energy consumption</b>
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- ✓ **Energy consumption** represents **44.7%** of the Council's overall emissions
- ✓ We aim to **reduce it by 15%** by 2016

Energy consumption initiatives:

- improving the energy efficiency of our buildings
- rationalising our operational property estate, reducing the number of old, energy-inefficient buildings and consolidating into a much reduced number of modern or refurbished, more energy-efficient buildings
- increasing the number of our buildings which achieve one of the top three ratings when surveyed as part of the Energy Performance Certificate process
- strengthening our approach to data collection and management
- raising awareness of effective carbon management among our staff through

<sup>4</sup> <http://www.inverclyde.gov.uk/committees/details/1463/> (Item 12)

energy-efficiency training and the implementation of a behaviour change strategy

<b>b.</b>	<b>Street lighting</b>
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- ✓ **Street lighting** represents 8.5% of the Council's overall emissions
- ✓ We aim to **reduce it by 0%** by 2016

Street lighting initiatives:

- improving the efficiency of our street lighting stock
- continuing to install electronic control gear in our street lighting columns
- increasing the amount of white lighting in our stock

<b>c.</b>	<b>Fleet</b>
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- ✓ Our **fleet** represents 3% of the Council's overall emissions
- ✓ We aim to **reduce it by 15%** by 2016

Fleet initiatives:

- reducing the number of vehicles in our fleet and opting for smaller vehicles
- introducing electric cars to our fleet via the Low Carbon Procurement Scheme
- quantifying the possible efficiencies from the introduction of compaction mechanisms in our refuse collection vehicles
- introducing our fleet tracking and management system
- enhancing our driver training programme
- investigating alternative fuels for our heavy vehicles
- examining the whole life costs of our vehicles as part of the procurement process including manufacturing methods and the percentage of recycled materials used in the manufacturing process

<b>d.</b>	<b>Business mileage</b>
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- ✓ **Business mileage** represents 1.4% of the Council's overall emissions
- ✓ We aim to **reduce it by 25%** by 2016

<p>Business mileage initiatives:</p> <ul style="list-style-type: none"><li>▪ reducing the mileage travelled by staff on business</li><li>▪ encouraging use of public transport by staff on Council business</li><li>▪ devising and implementing a Staff Travel Plan</li><li>▪ exploring methods of flexible meeting and working, including mobile working</li><li>▪ exploring the use of IT to reduce or replace the need to travel to meetings</li><li>▪ increasing the use of environmentally-friendly modes of transport, technologies and fuels when travelling on Council business</li></ul>
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<b>e.</b>	<b>Water</b>
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The inclusion of the carbon impact of our water use is new to our Carbon Management Plan for 2011/16.

- ✓ **Water** represents 0.1% of the Council's overall emissions
- ✓ We aim to **reduce it by 15%** by 2016

<p>Water initiatives:</p> <ul style="list-style-type: none"><li>▪ identifying ways of reducing the amount of water we use</li><li>▪ exploring ways of reducing our water waste</li></ul>
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<b>f.</b>	<b>Waste</b>
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Including the carbon impact of our waste use is also new to our Carbon Management Plan for 2011/16.

- ✓ **Waste** represents 42.3% of the Council's overall emissions
- ✓ We aim to **reduce it by 11%** by 2016

<p>Waste initiatives:</p> <ul style="list-style-type: none"> <li>▪ continuing to implement our recycling education and awareness-raising programme to encourage participation in our Waste Strategy Initiative</li> <li>▪ expanding our kerbside recycling service</li> <li>▪ reintroducing our food waste collection programme</li> <li>▪ expanding our business waste recycling service</li> <li>▪ offering our customers more recycling options</li> <li>▪ exploring the possibility of integrating commercial and domestic waste collections</li> <li>▪ trialling a kerbside glass collection service</li> <li>▪ continuing with our aim of halving waste sent to landfill from construction projects</li> </ul>
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### 3.4 Targets and objectives

The Council's overall target is to reduce our emissions by 12% by 2016 from a 2010/11 baseline. This is equivalent to not producing approximately 808 tonnes of carbon dioxide every year until 2016.

Our year on year reduction targets are:

<b>Energy use in buildings</b>	<b>3%</b>
<b>Street lighting</b>	<b>0%</b>
<b>Fleet transport</b>	<b>3%</b>
<b>Business travel</b>	<b>5%</b>
<b>Water</b>	<b>3%</b>
<b>Waste</b>	<b>2.2%</b>

In order to meet our share of the national targets included in the Climate Change (Scotland) Act 2009, the Council has calculated that it must identify projects and initiatives that will achieve a 9,500 tonne saving in carbon by 2020.

## 4. Emissions Baseline and Projections

### 4.1 Scope

The Council's original 2007/08 baseline included emissions from energy use in buildings and street lighting, fleet management and business travel. When calculating our 2010/11 baseline, we took the opportunity to also include emissions from waste and water. Expanding the list of emission sources that we measure and report against will give the Council a more accurate picture of progress we are making against our reduction target.

### 4.2 Baseline

To achieve the Council's aim of a 12% reduction target by 2016, a range of individual carbon management targets have been set for the sources which make up the Council's overall emissions:

- **Energy use in buildings**                      **15%**
- **Street lighting**                                      **0%**
- **Fleet transport**                                      **15%**
- **Business travel**                                      **25%**
- **Water**                                                      **15%**
- **Waste**                                                      **11%**

#### Emission Baselines 2007/08 and 2010/11

Source	2007/08 baseline in original Carbon Management Plan		2010/11 baseline in revised Carbon Management Plan	
	CO <sub>2</sub> Tonnes	% Total CO <sub>2</sub>	CO <sub>2</sub> Tonnes	% Total CO <sub>2</sub>
Energy use in buildings	9,947*	66.3*	15,057	44.7%
Street lighting	2,975*	19.8*	2,866	8.5%
Fleet transport	1,555	10.4	1,024	3%
Business travel	526	3.5	457	1.4%
Water	85	#	36	0.1%
Waste	18,115	#	14,225	42.3%
<b>TOTAL</b>	<b>33,203</b>	<b>100</b>	<b>33,666</b>	<b>100</b>

\* Includes accruals from previously unbilled consumption

# Water and waste were not included in our original Carbon Management Plan

### Comparison between the 2007/08 baseline and the 2010/11 emissions

A recent review of our 2010/11 footprint shows that, between 2007/08 and 2010/11, emissions from street lighting, transport and business travel all decreased. However, we saw an overall increase of 1.4% in CO<sub>2</sub> emissions which is mainly attributable to energy use in buildings.

Source	2007/08 CO <sub>2</sub> Tonnes	2010/11 CO <sub>2</sub> Tonnes	Difference %
Energy use in buildings	9,947*	15,707	+51%
Street lighting	2,975*	2,866	-3.7%
Fleet transport	1,555	1,024	-34.1%
Business travel	526	457	-13.1%
Water	85	36	-57.6%
Waste	18,115	14,225	-21.5%
<b>Total</b>	<b>33,203</b>	<b>33,666</b>	<b>+1.4%</b>

During the life of the Plan, progress against our reduction target will be measured against our 2010/11 baseline.

### 4.3 Projections and Value at Stake

The Council's carbon footprint and associated costs will rise over time if no action is taken to control emissions. If business is allowed to continue as normal, the cost of our emissions could rise from £5,644,125 in 2010/11 to £7,230,250\*#~ in 2015/16, an overall increase of 28%.



However, if the 12% reduction in emissions is fully realised by 2016, there is potential to achieve £947,484 savings, as follows:

<b>Source</b>	<b>Costs 2010/11 £</b>	<b>Potential Savings ^ by 2015/16 £</b>
Energy in buildings*	2,387,424	422,471
Street lighting*	517,737	0
Fleet transport*	594,835	93,687
Business travel*	522,563	137,173
Water#	94,014	14,102
Waste~	1,527,552	280,051
<b>Total</b>	<b>5,644,125</b>	<b>947,484</b>

^ Based on energy and other costs as at May 2011

The 'value at stake' is the cumulative difference of the Council implementing a carbon management programme compared with taking no action to reduce emissions. The value at stake for all sectors of the Plan has been calculated as £4,696,641 by 2015/16.

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<sup>5</sup> \* Based on the Department of Energy and Climate Change's annual predictions for the retail price of energy over the next five years

# Based on the Water Industry Commission for Scotland's annual predictions for the price of water over the next five years

~ Based on H.M. Revenue and Customs stated cost for landfill tax from 2011/12 onwards

## 5. Carbon Management Projects 2011/16

### 5.1 Introduction

During 2011/16, the Council aims to deliver a number of key projects and improvement actions that will help to deliver the objectives of the Carbon Management Plan, as well as the outcomes of the Community Plan, Corporate Plan and the Single Outcome Agreement.

### 5.2 Existing projects

During the *Revisited Programme*, Officers from a number of Council Services devised the following list of projects which aim to achieve the 12% reduction target during the next five years.

#### Near term projects 2011/12

Ref	Project	Lead	Cost			Annual Saving		Pay back	% of Target	Year
			Cap'l	Rev'ue	Res'ce	Fin	CO <sub>2</sub>			
INV-003	Billing Survey	Energy Management Group				£64,105	642 tonnes	Immediate	11.7%	2011/12
INV-004	Zonal Controls for Out Of Hours Working	Gordon Fisher				£5,322	98.5 tonnes		1.8%	2011-12
INV-024	Staff Travel Plan	Green Charter Unit				£60,815	51 tonnes	Immediate	0.93%	Initially 2011/12. Thereafter ongoing (2011/16)
INV-025	Refuse Collection Vehicle (RCV) Technology	Jim Bradley				£35,868	44.2 tonnes		0.8%	2011/12

**Medium to long term projects 2013/14**

Ref	Project	Lead	Cost			Annual Saving		Pay back	% of Target	Year
			Cap'l	Rev'ue	Res'ce	Fin	CO <sub>2</sub>			
INV-008	Printer virtualisation	Allan McDonald				£723	8.6 tonnes		0.2%	2011/13
INV-009	PC and Whiteboard Shut-down	Allan McDonald				£6,082	72.6 tonnes		1.3%	2011/13
INV-017	Schools Green Charter	Green Charter Unit				£116,044	705 tonnes		13%	2011/13
INV-022	Green Fleet and Vehicle Specification Review	Jim Bradley				£4,500	8.2 tonnes		0.15%	2011/13
INV-023	Alternative fuels for vehicles	Jim Bradley				£2,250	1.4 tonnes		0.03%	2011/13

**Long term projects 2015/16**

Ref	Project	Lead	Cost			Annual Saving		Pay back	% of Target	Year
			Cap'l	Rev'ue	Res'ce	Fin	CO <sub>2</sub>			
INV-001	Installation of Biomass Boilers	Alan McClintock								2011/16
INV-002	Building Refurbishment Programme	Gordon Fisher				£15,441	298.3 tonnes		5.4%	2011/16
INV-006	Driver training	Jim Bradley				£113,687	256.3 tonnes	Almost immediate	4.7%	2011/16
INV-007	Vehicle tracking	Jim Bradley				£42,000	94.8 tonnes		1.7%	2011/16

Ref	Project	Lead	Cost			Annual Saving		Pay back	% of Target	Year
			Cap'l	Rev'ue	Res'ce	Fin	CO <sub>2</sub>			
INV-010	Carbon Management Awareness Campaign	Green Charter Unit				£128,211	838 tonnes	0.31 years	15.3%	2011/16
INV-011	EPBD Audit of Council Properties	Gordon Fisher	£40 million							2011/16
INV-012	School Estate Management Plan (SEMP)	Eddie Montgomery	£80 million							2011/16
INV-013	Use of Property Asset Management Information System (PAMIS) for Energy Monitoring and Targeting (EMT)	Gordon Fisher	£30,000 per annum			£128,211	838 tonnes	0.2 years	15.3%	2011/16
INV-014	Green Charter Champions	Green Charter Unit				£128,211	838 tonnes	0.31 years	15.3%	2011/16
INV-015	Analysis of maximum demand for key buildings to reduce excessive tariff charges	Green Charter Unit Brendan Hurrell				£25,642	N/A	Immediate	N/A	2011/16
INV-016	Targeted training for Facilities Managers	Green Charter Unit	£10,000 per annum			£128,211	838 tonnes	0.31 years	15.3%	2011/16
INV-019	Server Virtualisation and Cooling	Allan McDonald								
INV-020	Schools White Board and Projector Refresh	Allan McDonald								
INV-021	CISCO EnergyWise Compliant Switches	Allan McDonald								

Ref	Project	Lead	Cost			Annual Saving		Pay back	% of Target	Year
			Cap'l	Rev'ue	Res'ce	Fin	CO <sub>2</sub>			
INV-027	Increase in Recycling Rates and Reduction of Landfill Waste	Kenny Lang				£793,694	4,120 tonnes		75%	2011/16
INV-028	Street and Flood-Lighting	Gordon McCreedy				£21,384	145 tonnes	5 years	2.7%	2011/16
INV-029	Water reduction	Green Charter Unit				£57,994	19 tonnes		0.4%	2011/16

### **5.3 Projected achievement towards target**

During the life of the Plan, the Council will monitor and report on progress being made towards the overall reduction targets:

**We aim to reduce our emissions by 12% by 2016 from our 2010/11 baseline, split by source as follows:**

- |                                  |            |
|----------------------------------|------------|
| ▪ <b>Energy use in buildings</b> | <b>15%</b> |
| ▪ <b>Street lighting</b>         | <b>0%</b>  |
| ▪ <b>Fleet transport</b>         | <b>15%</b> |
| ▪ <b>Business travel</b>         | <b>25%</b> |
| ▪ <b>Water</b>                   | <b>15%</b> |
| ▪ <b>Waste</b>                   | <b>11%</b> |

## 6. Implementation of the Carbon Management Plan 2011/16

### 6.1 Financing

#### 6.1.1 Benefits/savings – quantified and unquantified

In financial terms, if the 12% reduction in emissions is fully realised by 2016, there is potential to achieve £947,484 savings (see Section 4.3 on Page 22 for more details).

Additional benefits of implementing the Carbon Management Plan 2011/16 include contributing to:

✓	the delivery of our Green Charter
✓	meeting our obligations under the Climate Change (Scotland) Act 2009 and the Climate Change Declaration
✓	the delivery of the corporate aims and objectives included in our Community Plan, Corporate Plan, Organisational Improvement Plan and the Single Outcome Agreement
✓	local action taken to implement the Zero Waste Plan 2011/15

#### 6.1.2 Financial costs and sources of funding

The Council approved its two year Budget on 10 February 2011. Some of the projects in the Appendix include details of financial costs and sources of funding while other long-term projects still require to be costed and sources of funding identified.

However, potential sources of funding include internal budgets, for example, spend-to-save, while external funding could be provided by the Scottish Government's Low Carbon Procurement Scheme. Examples of other sources of finance include the Schools Rationalisation programme which is supported through a PPP/PFI contract while the education and awareness-raising initiatives included in the Plan will be resources by the Green Charter budget.

## 6.2 Governance for implementation

### 6.2.1 Embedding carbon management

A number of Officers from various Council Services were involved in the preparation of this Plan. As part of the *Revisited Programme*, visits were made to staff meetings to raise awareness of the importance of carbon management. During the course of the Plan, our Carbon Management Awareness Strategy will be implemented throughout the Council to raise the corporate profile of carbon management.

The Council recognises the important contribution that every member of staff makes to service delivery. A Performance Appraisal system has recently been introduced throughout the Council and it has been suggested that the process should be used to identify employees' contribution to the following corporate objectives:

Corporate document	Extract relevant to the Carbon Management Plan
Community Plan	Outcome: Protecting the environment and reducing Inverclyde's carbon footprint
Single Outcome Agreement	Outcome: Inverclyde is a place where people want to live now whilst at the same time safeguarding the environment for future generations
Corporate Plan	Aim of the Plan: An ambitious, confident Council, providing strong community leadership that listens and responds to the needs of local communities, delivers excellent services and creates a better quality of life for the people of Inverclyde

### 6.2.2 Data management – measuring the difference, measuring the benefit

The Council recognises that its current data collection and management process could be improved. Appropriate action will be taken to enhance the procedures currently in place with a view to developing more robust methods of collecting and analysing data. The Council recently appointed a Carbon Reduction Officer who has begun reviewing our current data collection and management methods with a view to providing more accurate information to facilitate enhanced reporting of trends and comparisons. Quarterly reports on progress against projects in the Plan will be submitted to the Head of Regeneration and Planning while bi-annual reports will be considered by the Safe, Sustainable Communities Committee.

Enhancing the robustness of its data collection and management will contribute to the Council meeting its objectives under the drivers outlined on Pages 14-16.



### **6.3 Resource commitment**

#### 6.3.1 Implementing the initiatives

A number of Officers from various Services throughout the Council have operational responsibility for implementing and reporting progress on the projects detailed in the Appendix.

#### 6.3.2 Maintaining quality over time

It is proposed to set up a Carbon Management Team whose role would include monitoring the Carbon Management Plan during its five year lifespan.

#### 6.3.3 Programme management of the Carbon Management Programme

The most appropriate methodology of programme managing the Carbon Management Programme will be considered and agreed by the Carbon Management Team.

#### 6.3.4 Governance structure – strategic ownership and oversight

The draft Carbon Management Plan 2011/16 will be presented to the Carbon Management Team for approval and thereafter to the Safe, Sustainable Communities Committee. A quarterly review of progress against the Plan will be reported to the Head of Regeneration and Planning. Bi-annual reports on progress against actions will be submitted to the Safe, Sustainable Communities Committee.

Reducing carbon emissions is one of our Performance Indicators and is included as an Indicator in our Single Outcome Agreement with progress reported annually to the Policy and Resources Committee and the Single Outcome Agreement Programme Board respectively.

#### 6.3.5 Carbon Management Team – delivering the projects

It is proposed to set up a Carbon Management Team whose responsibility it will be to support the development, implementation, monitoring and evaluation of the Carbon Management Plan during the next five years. As part of this process, members of the Team will provide progress reports on the projects for which they have responsibility, as detailed in the Appendix.

#### 6.3.6 Succession planning for key roles

The Head of Regeneration and Planning was the Project Sponsor for the *Carbon Management Revisited Programme* and the Green Charter Unit Co-ordinator was the Project Lead. A number of Council Officers also contributed to the work of the *Revisited Programme*.

Key roles and responsibilities for the Carbon Management Team will be finalised at a later date.

### **6.4 Implementation Plan**

When the Carbon Management Plan 2011/16 has been through the approval route, work will begin to progress the projects outlined in the Appendix, as appropriate. Implementing the Plan will also contribute to a number of corporate plans and strategies outlined on Pages 15-17 of this document.