

The Highland Council Carbon Management Plan 2013-20

Comhairle na Gàidhealtachd Plana Rianachd Càrboin 2013-20



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FOREWORD

Facal-toisich

The environmental quality and the outstanding natural heritage of the Highland region are recognised internationally. The Council, in partnership with community planning partners, communities, and individuals, has a vital role to play in safeguarding the natural environment. The impacts of Climate Change are of vital significance to the Highland region. Increases in flooding, erosion, landslides, storms, wind, and rising sea levels could threaten both the natural and built environment, and also the delivery of Highland Council services.



The Carbon Management Plan 2013-20 will enable the Highland Council to monitor and reduce greenhouse gas emissions that result from Council operations. As a Local Authority, the Scottish Government has identified the Highland Council as a Major Player in carbon management, a responsibility taken extremely seriously. By embedding carbon management across our Services; implementing projects and actions to reduce carbon emissions; showing clear leadership on this issue; exploring new areas for action; ensuring value for money; taking action to reduce community emissions; and raising awareness of Climate Change and promoting behavioural change; Highland Council will ensure it is Carbon CLEVER.

Dave Fallows
Chair of the Finance, Housing and Resources Committee

EXECUTIVE SUMMARY

Geàrr-chunntas Gnìomhach

The Carbon Management Plan (CMP) 2009-12 reduced carbon emissions from Highland Council operations by 13% over a four year period, exceeding a target of 12%. The plan focused on reducing carbon emissions from internal Council operations in the sectors of: Energy use in Council buildings; fleet; business travel; street lighting; internal waste; and water. Since the publication of the last CMP there have been a number of important developments in Climate Change legislation and guidance. These have been utilised to develop and inform a revised CMP. The Carbon Management Plan 2013-20 captures a wider scope of internal carbon emissions and also reports on community emissions arising from Energy Use in Council Housing, and Municipal and Household Waste.

The Highland Council will aim to reduce carbon emissions by 21% between 2013/14 and 2019/20 over a 2011/12 baseline. Achieving this target will ensure the Highland Council achieves its duty as a “Major Player” in terms of Scotland accomplishing its national targets. The Carbon Management Plan 2013-20 has six strategic themes that drive and direct the plan and make The Highland Council “Carbon CLEVER”, these are:



Whilst the primary focus of this plan is to reduce carbon emissions, it will also lead to avoidance of increased costs in light of the rising costs of electricity and fuels. The total costs that can be avoided are projected to be between £17.8million and £22.1million.

In order to reduce carbon emissions at the Highland Council and achieve the targets of the CMP 2013-20, a programme of projects and actions need to be implemented. 33 projects and 58 actions to reduce carbon emissions are identified within this plan. 12 of these projects have funding, totalling £6.3million, and further work is underway to align the Capital Programme with the revised CMP. In addition to this, work will continue to embed carbon management across The Highland Council. This will be complimented by the revised CMP Communication Strategy which outlines actions to promote the work occurring to manage carbon emissions to internal and external parties.

BACKGROUND

Cùl-fhiosrachadh

A Carbon Management Plan (CMP) is a standard framework developed by the Carbon Trust to enable Local Authorities to monitor and reduce carbon emissions from internal operations. Highland Council was one of the first Local Authorities to produce a CMP in 2005. A second CMP was published in 2008 with a broader scope, stretching targets and covered the period 2009-12. This CMP primarily focused on reducing carbon emissions from Energy use in Council buildings; vehicle fleet; business travel; street lighting; internal waste; and water. The plan set the target of reducing carbon emissions from these six areas by 12% over the four year period. This target was exceeded, with total carbon emissions being reduced by 13%.

In the Highland Council Programme, '[Working Together for the Highlands](#)', a commitment was made to publish a revised Carbon Management Plan by 2013. The CMP 2013-20 presents a further increased scope and a revised set of carbon emission targets taking into account recent changes in legislation and guidance. A clear strategy and action plan for Highland Council to reduce these emissions over the period 2013/14 to 2019/20 is contained in the plan. The timescale of the plan is set to run until 2020 to align the plan with the Scottish Government target of reducing national greenhouse gas emissions by 42% by 2020 (over a 1990/95 baseline).

The primary focus of the revised CMP will be to target carbon emissions reductions in the same six areas as the last CMP, but in many cases the scope of these has increased. A significant increase in the scope of the CMP will occur with the inclusion of carbon emissions occurring during to procurement. In addition to this community carbon emissions will also be reported in the Carbon Management Plan. These are areas of emissions which the Council has some influence over but not complete control, for this reason carbon emission targets will not be set against these.

It is important to note that this plan should be regarded as a live document. It will be reviewed and updated periodically to reflect any changes in legislation and guidance during its lifespan.

1. CONTEXT AND DRIVERS FOR CARBON MANAGEMENT

Caibideal 1: Co-theacsa agus Stiùirean Rianachd Chàrboin

1.1 DRIVERS

Climate Change:

The Highland Council continues to recognise the serious threat posed by climate change. The Council is a signatory of Scotland's Climate Change Declaration and is: demonstrating its commitment to mitigate its impact on climate change through reducing carbon emissions; taking steps to adapt to the unavoidable impacts of a changing climate; and is working in partnership with communities to respond to climate change.

We acknowledge that:

- Climate change is occurring and human activities are having a significant, negative and potentially dangerous influence.

We commit to:

- Produce and publically declare a plan, with targets and timescales, to achieve a significant reduction in greenhouse gas emissions from our own operations.

Since the publication of the Highland Council Carbon Management Plan 2009-12 there has been a number of important developments in Climate Change legislation and guidance. These will be utilised to develop and inform the revised plan.

The Climate Change (Scotland) Act 2009:

Long term greenhouse gas emissions reductions need to be achieved by the Highland Council in line with [The Climate Change \(Scotland\) Act 2009](#). The national targets set out in the Act are the most ambitious in the world, with a 42 % reduction in greenhouse gas emissions targeted by 2020, and an overall reduction of 80 % by 2050 (Over a 1990/ 95 baseline).

The Act places duties on public bodies to reduce their greenhouse gas emissions. These duties require that: "a public body must, in exercising its functions, act:

- (a) In the way best calculated to contribute to the delivery of the targets set in or under Part 1 of this Act;
- (b) In the best way calculated to help deliver any programme laid before the Scottish Parliament under section 53;
- (c) In a way that is considers most sustainable."

These duties require public bodies to contribute to climate change mitigation, to climate change adaption, and to act sustainably.

The Report on Proposals and Policies

The Climate Change (Scotland) Act 2009 requires Scottish Ministers to set annual targets for reducing greenhouse gas emissions at least 12 years in advance. [The Report on Proposals and Policies](#) (RPP; 2011) and the draft "[Second Report on Proposals and Policies](#)" (RPP2; 2013) provide a 'roadmap' for achieving these targets, summarising relevant policy and

initiatives that will assist and ensure Scotland meets its annual targets that have been set up until 2027. Progress towards these targets has been good, and based on assumptions in RRP2, targets for greenhouse gas emissions will be met each year up until 2027. Chapter 6 of RPP2 contains specific guidance for the 'non domestic sector,' which includes local authorities, on current operational policies and proposals that are under consideration. The requirements set out by RPP2 on local authorities will gain clarity following consultation and publication of the final draft in October 2013.

Public Bodies Climate Change Duties: Putting them into Practice (2011)

[The Public Bodies Climate Change Duties report \(2011\)](#) is a guidance document prepared to assist public bodies with the duties placed on them by the Climate Change (Scotland) Act (2009). In terms of assisting Scotland achieve its national greenhouse gas emission reduction targets, no formal targets are set against public bodies. Local Authorities are defined as "Major Players" and are expected to take a leading role in helping Scotland achieve its national targets.

Carbon Reduction Commitments (CRC) Energy efficiency scheme

The Highland Council is captured under the mandatory Carbon Reduction Commitment (CRC) energy efficiency scheme which was introduced in 2008. From April 2010, the Highland Council has had to purchase carbon allowances in advance for emissions from heating and powering buildings. The cost to the Highland Council in 2011/12 was £509,832. CRC is charged at a rate per tonne of CO₂ emissions, currently set at £12 per tonne, but this cost is due to rise. The scheme is currently under revision by the UK Government following an announcement in the Chancellor's Autumn 2012 statement. The scope of the scheme is expected to increase, capturing street lighting from April 2014 with the cost of CRC expected to be £16/ tonne by 2014/2015.

Due to the remote nature and large geographical area of Highland, most areas are out with the mains gas network, and rely heavily on the use of oil and electric based heating systems. These latter systems have a larger carbon footprint than gas. This results in the Highland Council producing proportionally greater emissions than elsewhere in the UK. It is therefore important that the Council reduces energy use to avoid costs through the purchase of CRC allowances.

Other Drivers

Alongside the drivers for reducing carbon emissions above, there are a number of other important driving factors which effect carbon management at the Highland Council. These are summarised in Appendix 1.

1.2 CONTEXT

1.2.1 Working Together for the Highlands: A Programme for the Highland Council.

[Working Together for the Highlands](#) is the Council's ambitious programme of priorities for delivery over the next five years. The programme sets out 129 actions across seven main themes, which focus on working together for: the economy; children and young people; caring communities; better infrastructure; better housing; empowering communities; and strong and safe communities.

Climate Change is considered through all seven themes with a continuing commitment to [Scotland's Climate Change Declaration](#) (SCCD). As a signatory of the SCCD declaration, The Highland Council is committed to:

- Mitigating its impact on climate change through reducing greenhouse gas emissions
- Taking steps to adapt to the unavoidable impacts of a changing climate
- Working in partnership with their communities to respond to climate change

The main way in which the Highland Council achieves its commitment to the SCCD to reduce greenhouse gases is through the Carbon Management Plan.

The Programme also has a number of other commitments which relate to climate change and reducing the carbon emissions of the Council and of the Highland region:

- The Council will continue to reduce carbon emissions from Council operations, with their associated costs, to achieve the Scottish Government's target of 42 % reduction in emissions by 2020. We will publish a carbon management plan by 2013.
- The Council will support and invest in appropriate opportunities presented by renewable energy, particularly wave and tidal power. We will continue to develop the Highlands as a centre for research & development, fabrication and engineering.
- The Council will seek to identify means whereby communities can participate in and benefit from the development of renewable energy across the Highlands.
- The Council will promote energy efficiency in Highland schools, and build on the success of our 'eco schools.'
- The Council will provide more safe cycle tracks and 'walk to school' pathways where appropriate, and will encourage healthier and greener methods of travel.
- The Council will work with the Scottish Government, Transport Scotland and Network Rail to secure improvements, reduced journey times and fairer pricing on the Highland rail network, to modernise the sleeper service and to develop new commuter rail opportunities around our urban centres.
- The Council will introduce a plan for sustainable, integrated transport through the Highlands, including consideration of a statutory Quality Bus Partnership and support for schemes, such as the introduction of a 'Cool Rider' for young people.
- The Council will work with the Scottish Government and other partners, to improve cycle safety across the Highlands, and expand cycle routes.
- Working with partner agencies, the Council will draft a Green Transport Strategy.
- The Council will increase opportunities for recycling and achieve a 57 % rate of recycling household waste by 2017.
- The Council will ensure the provision of allotments and the maintenance of green spaces and public parks across the Highlands and encourage various schemes such as community growing.
- The Council will deliver an ambitious Housing Capital Programme, utilising innovative environmentally sustainable methods to build new council houses and achieve the Scottish Housing Quality Standard for existing housing stock.

- The Council will work in partnership with organisations in the Highlands to improve our use of video conferencing, teleconferencing and webcasting technology – efficiently and effectively reaching every part of the Highlands.
- The Council will support communities to be more resilient to climate change and extreme weather events, by implementing the Council’s Climate Change Adaption Strategy.

The position of where Highland Council’s “Working Together for the Highlands” Programme sits in relation to other key legislation and plans is shown in Figure 1.1.

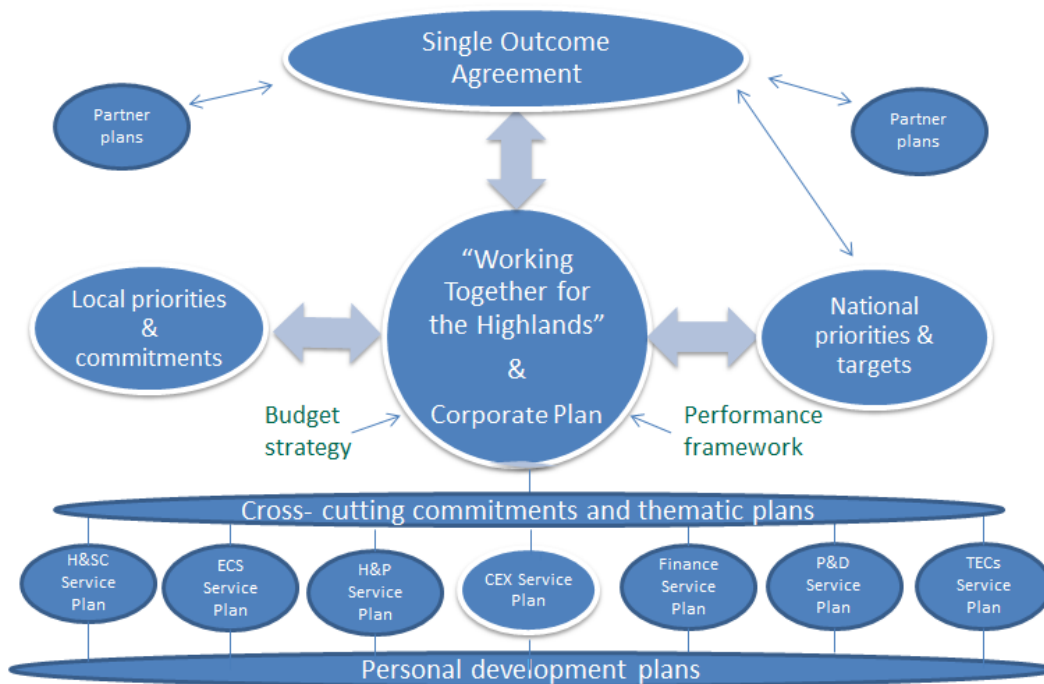


Figure 1.1 Hierarchy of plans

1.2.2 Single Outcome Agreement

The purpose of the Single Outcome Agreement (SOA) is to identify areas for improvement and to deliver better outcomes for the people of the Highlands, and Scotland, through specific commitments made by the Council, its community planning partners and the Scottish Government. The Council and its community planning partners will set out how it will work to achieve the Scottish Government’s national outcomes. Reducing carbon emissions and mitigating against climate change will contribute to the delivery of, and be driven by, many of these outcomes, including:

- We live in a Scotland that is the most attractive place to do business in Europe
- We realise our full economic potential with more and better employment opportunities for our people
- We are better educated, more skilled, and more successful, renowned for our research and innovation.

- Our young people are successful learners, confident individuals, effective contributors and responsible citizens.
- Our children have the best start in life and are ready to succeed.
- We live longer, healthier lives.
- We live our lives safe from crime, disorder and danger
- We live in well designed, sustainable places where we are able to access the amenities and services we need.
- We have strong, resilient and supportive communities where people take responsibility for their own actions and how they affect others.
- We value and enjoy our built and natural environment and protect it and enhance it for future generations.
- We reduce the local and global environmental impact of our consumption and production.

1.2.3 Carbon Trust Standard

Highland Council has been accredited with the Carbon Trust Standard (CTS) for action taken on climate change by measuring, managing and reducing its carbon emissions since 2009. Based on a rigorous, independent assessment, CTS certifies that organisations have measured, managed and reduced their carbon emissions across their own operations, and are committed to reducing them year on year. Certified institutions are able to use the CTS logo having proven their carbon cutting credentials – this is currently used on the Council webpages.

Achieving the Carbon Trust Standard publicly recognises efforts in reducing carbon emissions and provides tangible proof to employees and residents that we are committed to making future reductions. The Carbon Trust is widely considered as the world's leading certifier of organisational carbon footprint reduction. To continue to hold the accreditation, the Council must increase the scope of its reporting and demonstrate absolute emissions reductions. The Council will seek re-accreditation in 2013.

1.3 SUMMARY OF DRIVERS

- The need to address climate change and assist Scotland to meet its national targets of greenhouse gas emission reductions.
- The need to reduce the cost of purchasing carbon allowances through the CRC energy efficiency scheme (currently >£500,000), and to reduce the amount paid in landfill tax (>£150,000).
- The urgent need to address rising pressure on Council budgets from escalating energy and fuel costs.
- To reduce our dependence on fossil fuels and increase energy security.
- To need to retain our Carbon Trust Standard accreditation.

2. STRATEGIC THEMES

Caibideal 2: Cuspairean Ro-innleachdail

There are six strategic themes in the revised Carbon Management Plan 2013-20 that make the Highland Council “Carbon CLEVER”.



Theme 1: Reduce Carbon Emissions from Internal Operations: Reduce emissions from those areas of Local Authority activity that can be measured and monitored. This includes energy use in council buildings and PPP properties; street lighting; fuel use from business travel and fleet travel; emissions associated with the disposal of waste; emissions associated with water consumption and disposal; and emissions arising from procurement.

Theme 2: Lead by Example: Whilst the CMP 2013-20 will focus primarily on Highland Council emissions from internal operations, the Highland Council recognises that it has the ability to influence change within the wider Highland Community and across Scotland.

Theme 3: Explore new Areas for Action: The Highland Council Carbon Management Plan will continue to explore and increase the scope of the activities it manages to reduce carbon emissions. Once new areas are identified and scoped into the plan, the associated carbon emissions will be calculated and actions implemented to reduce carbon emissions.

Theme 4: Value for Money: Energy and fuel efficiency can bring about direct financial savings to the Council and lead to cost avoidance as the unit price of electricity, gas, oil, and fuel continues to rise. This is particularly important in an area such as Highland, which is geographically dispersed and experiences a cooler climate than elsewhere in the UK. Costs will also be avoided through the implementation of the Carbon Management Plan such as those paid through the landfill tax by decreasing the amount of waste sent to landfill, and to the CRC scheme by becoming more energy and fuel efficient.

Theme 5: Capture Community Emissions: For the first time, the Highland Council CMP will capture and report on community emissions, including energy use in Council Housing, and Municipal and Household Waste. Whilst the Highland Council has an influence over these carbon emissions, it does not have direct control and therefore new targets will not be set against these, but national targets set that the Council is working towards will be reported.

Theme 6: Raise Awareness and Promote Behaviour Change: Through training and events run through the Highland Council “Green Ambassadors”, through continuing to work with Human Resources to develop effective staff induction and management training programmes, and through working with partners in Highland and Scotland, the Highland Council will continue to raise awareness of climate related issues and promote behaviour change to mitigate against climate change. A programme of press releases, briefings on the Highland Council website will highlight progress to the public and there will be scope for community conversations and events.

3. EMISSIONS BASELINE

Caibideal 3: Bun-loidhne Bhrùchdaidhean

3.1 SCOPE

The CMP 2013-20 will be used to monitor and report carbon emissions from a range of Highland Council internal and external activities. Targets will be set against the carbon emissions of internal activities, and stated for those adopted for external activities. The following summarises the scope of the Carbon Management Plan 2013-2020:

Internal Activities (Carbon emissions measured, reported and targets set against)

Energy Use in Council Properties: Energy use in Council properties includes all schools and Public-Private Partnership (PPP) properties. It captures and reports the Electricity, Gas, Oil, and LPG used to power and heat these properties. Whilst the Highland Council does not have direct control over the energy use in PPP buildings, it ultimately does pay the bills and it is incorporated in CRC energy efficiency scheme.

Staff Travel: This will be captured for staff travel in their own car, in car and van hire, and on public transport. A breakdown of these categories is shown in the baseline calculation for the Carbon Management Plan 2013-2020, Table 3.1. Whilst targets will be set against this sector as a whole, a key area of focus for the plan is to continue to promote sustainable transport, as a result emissions from staff travel on public transport is expected to rise.

Fleet: Carbon emissions have been captured in the Highland Council CMP since 2008/2009. Data is collected in terms of litres of petrol, diesel and gas oil purchased. This fuel is used to power vehicles owned and maintained by the Council, vehicles hired for seasonal work, and plant equipment which can be anything from lawnmowers to JCBs.

Internal Waste: Waste generated is captured for all council properties. It split into four categories based on whether the waste is generated at schools or other council properties, and whether it is sent to landfill or collected as recycle.

Street Lighting: Electricity utilised to power the street lighting network in Highland will be included in the scope of the CMP. The supply is unmetered and the number of hours the street lights are active is calculated by the Unmetered Supplies User Group (UMSUG). This is calculated based on the location of the local authority. Highland is captured in the North of Scotland group with local authorities such as Moray, Aberdeenshire, and Perthshire. Electricity used to power traffic lights and light bollards will also be scoped into the plan.

Water: All Council properties have water meters installed. This allows for the volume of water utilised and disposed of to be accurately captured. Whilst water use at the Council has a small Carbon footprint, there is a large associated cost, Table 3.1.

Confidential Waste: Data is not available on the volume of confidential waste produced by the Council for the baseline year of 2011/12. The contract for the collection and disposal of confidential waste went out for tender in November 2012 and included the requirement for the successful bidder to report the volume of confidential waste produced by the Council quarterly. Confidential waste can therefore be scoped into the CMP following 2013/14.

Procurement: For the first time Highland Council will capture carbon emissions from procured goods and services. This is expected to be a major area of emissions and will lead to a large increase in the reported carbon footprint of the Highland Council. Monitoring and reducing emissions from procurement will represent a significant and important advance in carbon management for the Council. At the time of publication, work is currently on-going between the Chief Executive's Service and the Finance Service with this footprinting process procured to @UK plc. This work will be brought into the CMP 2013-2020 as soon as possible with carbon emissions determined for the baseline year of 2011/12. Targets set against reducing these carbon emissions will be in line with the other areas of this plan.

External Activities – Community Emissions (Carbon emissions measured and reported):

Energy Use in Council Housing: This has not previously been included in the scope of the Highland Council CMP. Whilst the Council does not have direct control over the energy used in council houses, it does have an indirect effect in terms of implementing energy efficiency schemes and the installation of renewable technologies and is investing in reducing the carbon footprint of the council housing estate in line with rising Scottish Housing Quality standards. Carbon emissions will be calculated based on the fabric of the Council housing estate and the general operation rate.

Municipal and Household Waste: The Council does not have direct control over the amount of municipal and household waste produced but does have an influence due to its role in collecting the waste and promoting and providing facilities for recycling. In January 2008, the Scottish Government introduced its ["Zero Waste" policy](#) which includes ambitious targets to increase recycling to 70 % and reduce waste going to landfill to 5 % by 2025. The amount and types of municipal and household waste collected by the Council is already monitored and reported to the Scottish Environment Protection Agency quarterly. This data will be converted to carbon emissions to be reported in the Carbon Management Plan.

3.2 EXCLUSIONS

The following activities are currently scoped out of the CMP 2013-2020 but could in the future be brought in the CMP.

Energy Use in Adult Care Properties: As part of the Integrated Care project between NHS Highland and The Highland Council, Adult Care services have been transferred from the Highland Council to NHS Highland in 2012. For this reason the energy used in these buildings, costs, and CRC scheme expenditure will be removed from the 2011/12 baseline as they are no longer part of the Council estate.

Commuter Travel: Employee travel to and from work at the Highland Council is not currently captured, therefore it cannot be reported or targets set against it. A review will be conducted annually to assess whether data on commuter transport can be captured for inclusion in the CMP. An action in this CMP will be to investigate the potential of surveying Council employees to ascertain the Council's commuting carbon footprint. This could complement the Council's mobile and flexible working policy which includes staff working from home or alternative Council bases.

School Transport: School transport is contracted to numerous private suppliers. Due to the limited number of suppliers in some geographical areas it is currently very difficult for the

Highland Council to influence carbon emissions. This area of emissions will be regularly reviewed for inclusion in the Carbon Management Plan.

Table 3.1 below summarises which areas are scoped in and out of the CMP 2013-2020 in comparison to the previous CMP, who is responsible for collecting the data for each area, and, the format of the data received. For each area of emissions, data will be collected and reported on at least annually.

Table 3.1: Scope and exclusions of CMP 2013-20.

Area of Emissions	Sector	Scoped in CMP?		Data Collection Team	Data Format (s)
		2009-12	2013-20		
Energy Use in Council Properties	Energy Use in Buildings	✓	✓	Finance/ H&PS	kWh/ £
Energy Use in PPP Properties	Energy Use in Buildings	✗	✓	Finance/ H&PS	kWh/ £
Energy Use in Adult Care Properties	Energy Use in Buildings	✓	✗	N/A	
Fleet	Fleet	✓	✓	Fleet Manager	Litres/ £
School Transport	Staff Travel	✗	⌚	N/A	
Staff Travel – own car	Staff Travel	✓	✓	Finance service	Miles/ £
Staff Travel – car hire and public transport	Staff Travel	✗	✓	Finance service	Miles/ £
Commuter Travel	Staff Travel	✗	⌚	N/A	
Street Lighting	Street Lighting	✓	✓	Lighting Manager	kWh/ £
Traffic Lights and Bollards	Street Lighting	✗	✓	Lighting Manager	kWh/ £
Internal Waste	Internal Waste	✓	✓	Waste Officers	Tonnes/ £
Confidential Waste	Internal Waste	✗	✓*	Procurement	Tonnes
Municipal and Household Waste	Community Emissions	✗	✓**	Waste Officers	Tonnes
Water (top 100)	Water	✓	✗	H&PS	m ³ / £
Water (all sites)	Water	✗	✓	H&PS	m ³ / £
Energy Use in Council Housing	Community Emissions	✗	✓**	H&PS	CO ₂ per unit/ No. units.
Procurement	Procurement	✗	✓*	Finance Service	TBC

✓ Within scope, ✗ Outwith scope, ⌚ Under review, *Will be scoped into the plan when data is available, **Community emissions will be reported but will not have additional targets set against them. H&PS: Housing and Property Services.

3.3 BASELINE

For the purposes of the CMP 2013-20 the baseline period will be set as the financial year 2011/12. At the time of publication this is the most recent full year of data that is available.

The collected data is converted to carbon emissions using [the appropriate conversion factors supplied by DEFRA](#). When calculating the carbon emissions baseline in this Carbon Management Plan, all emissions are calculated as CO₂e than just CO₂ emissions. Using CO₂e (Carbon Dioxide equivalent) captures all the greenhouse gases emitted from an activity, rather than just CO₂. The carbon dioxide equivalent allows the different greenhouse gases to be compared on a like-for-like basis relative to one unit of CO₂. CO₂e is calculated by multiplying the emissions of each of the six greenhouse gases by its 100 year global warming potential (GWP). By reporting in terms of CO₂e, the Highland Council CMP will capture all six of the Kyoto Protocol greenhouse gases emitted: Carbon dioxide (CO₂), Methane (CH₄), Nitrous oxide (N₂O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs) and Sulphur hexafluoride (SF₆).

Table 3.2 summarises the CO₂e emission footprint for the Highland Council for the baseline year of 2011/12. The associated costs from these activities and costs borne from the CRC energy efficiency scheme and Landfill Tax are also included.

**The Highland Council baseline CO₂e emissions for 2011/12 is
63,374 tonnes**

By dividing the Council's carbon emissions into relevant sectors of emissions it can be seen that the majority of the Council's carbon emissions are produced by using energy to heat and power buildings, Figure 3.1. Street lighting and Fleet are the second largest sectors of emissions, at 15% of the total CO₂e emissions each.

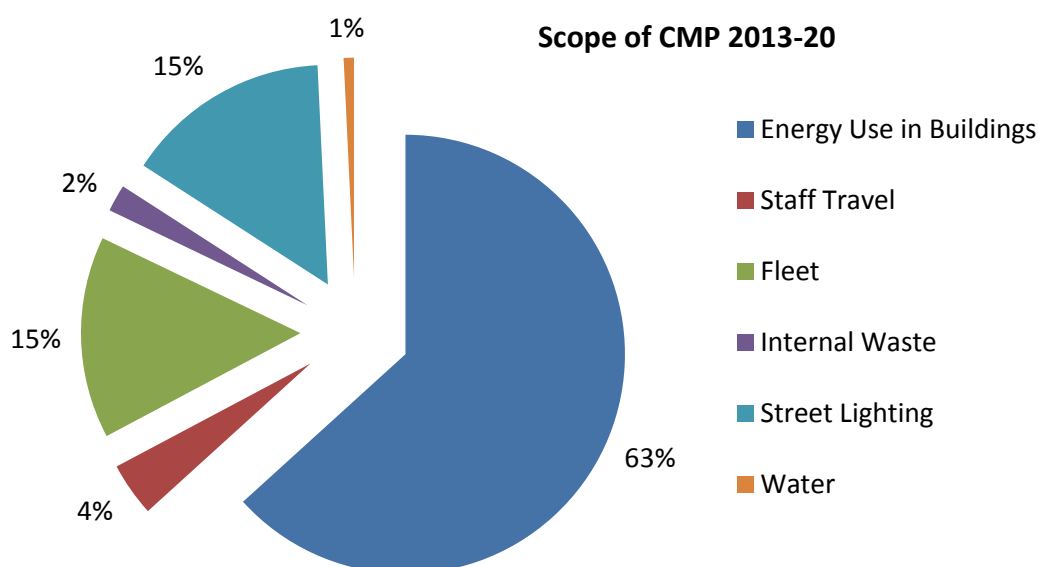


Figure 3.1: Highland Council carbon emissions by Sector, 2011/12.

Table 3.2: Summary of CO₂e emissions for the baseline year 2011/12.

Area of Emissions	DEFRA conversion factor	Units Consumed	Est. units	CO ₂ e (tonnes)	Cost	CRC/ Landfill Tax
ENERGY USE IN BUILDINGS	(kg CO ₂ e/ kWh)					
Core Electricity (kWh)	0.52037	33149520	10114	17255		
Core Gas (kWh)	0.18521	22264247		4124		
Residual Oil (litres)	2.5443	3983081		10134		
Residual Electricity (kWh)	0.52037	13129355	2508138	8137		
Residual LPG (litres)	1.5326	256860	3121	551		
Residual Gas (kWh)	0.18521	249914		46		
Total:				40,095	£7,889,670	£479,441
STAFF TRAVEL OWN CAR	(kg CO ₂ e/ km)	(miles)				
Business Travel	0.19469	4285505		1343	£1,952,809	
Lease Miles	0.19469	556630		174	£70,119	
Training Miles	0.19469	170197		53	£36,081	
Equivalent Car Hire Miles	0.19469	683379		214	£86,635	
Member Miles	0.19469	473092		148	£198,506	
Support Workers/ Canvassers	0.19469	32650		10	£14,692	
Relocated Miles	0.19469	357858		112	£72,277	
Total:		6559311		2,055	£3,300,695	
STAFF TRAVEL CAR HIRE & PUBLIC TRANSPORT	(kg CO ₂ e/ km)	(miles)				
Car (Hire)	0.19469	1222680		383	£557,649	
Coach	0.02874	1233		0	£1,338	
Ferry	0.11608	5552		1	£3,610	
Plane	0.16685	149377		40	£44,168	
Taxi	0.14756	155		0	£164	
Train	0.05818	326779		31	£55,317	
Van Hire	0.24717	3942		2	£1,921	
Total:		1709718		456	£665,933	
FLEET VEHICLES (litres)	(kg CO ₂ e/litre)					
Petrol consumed	2.3144	34265		79	£39,134	
Diesel consumed	2.6769	3163904		8469	£3,664,896	
Gas Oil consumed	3.0213	293271		886	£207,936	
Total:		3491440		9,435	£3,911,966	
WASTE (tonnes)	(kg CO ₂ e/ tonne)					
Landfill Waste: non-schools	290	1282		372	£33,734	
Mixed Recycling: non-schools	21	204		4	£31,593	
Landfill Waste: schools	290	3013		874	£493,662	
Mixed Recycling: schools	21	598		13	£164,431	
Total:		5097		1,262	£723,420	£168,728
STREET LIGHTING (kWh)	(kg CO ₂ e/ kWh)					
Street Lighting	0.52037	17571058		9143	£1,708,258	
Traffic Lights and Bollards	0.52037		860000	448	£83,609	
Total:				9,591	£1,791,867	
WATER (m³)	(kg CO ₂ e/ m ³)					
Water in	0.3441	550602		189	£606,665	
Wastewater out	0.7085	408280		289	£1,176,745	
Total:		958882		479	£1,783,410	
GRAND TOTAL				63,374	£20,066,962	£648,169

3.4 BREAKDOWN OF EMISSIONS BY SECTOR

3.4.1 Energy Use in Buildings

Highland Council uses a mix of electricity, gas, oil, LPG, and renewables to power and heat their buildings. The carbon emissions of this fossil fuel consumption are shown in Figure 3.2.

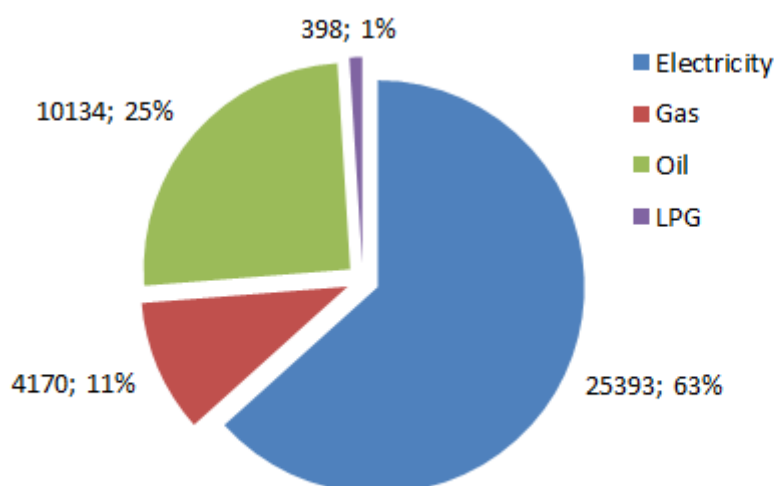


Figure 3.2: The carbon emissions (tonnes CO₂e; %) of the fuel mix used to heat and power Highland Council buildings (2011/12).

The scope of energy use in buildings has been increased from the previous CMP to include energy use in PPP properties. The Council reports on PPP properties as part of its duties under the CRC energy efficiency scheme, and as such has to pay the costs associated with this scheme. Properties which have been transferred to the NHS have been removed from the scope of reporting in the CMP 2013-20.

Due to the limited extent of the gas network in the Highlands, a relatively small proportion of the Council's properties are heated by gas (which has relatively low carbon emissions), instead being heated by oil or electric heating systems. Recent work in reducing carbon emissions in this sector have included reducing energy demand, by measures such as insulation and cultural awareness, but also by the targeted replacement of high carbon emitting heating systems with biomass boilers. The Council is generating increasing amounts of micro-renewable energy to power its estate, such as photo-voltaics, wind turbines and ground source heat pumps, Table 3.3.

Table 3.3: Installed capacity of renewable technologies at the Council (October 2012).

Renewable Energy Technology	Installed Capacity (kW)
Biomass	12,661
Ground Source Heat Pump	706
Solar Photo Voltaics	454
Wind	141
Air Source Heat Pump	84
Solar Thermal	25
Total	14,071

3.4.2. Staff Travel

Business travel by Highland Council staff is captured through travel expense claims for travel in their own car, and through the “travel desk” booking system for public transport and hire vehicles, Table 3.4. Carbon emissions reductions in this sector can be achieved by an overall reduction in the number of miles travelled and by a cultural shift to utilising public transport and car sharing as opposed to staff travelling in their own vehicles.

Table 3.4: Mileage and Carbon emissions associated with business travel at the Highland Council (2011/12). All percentages to 2 d.p. *kg CO₂e/ km.

Mode of Transport	Mileage	% Mileage	CO ₂ e emissions (tonnes)	% CO ₂ e emissions	DEFRA Conversion factor*
Own Car	6,559,311	79.32	2,055	81.82	0.19469
Car (Hire)	1,222,680	14.79	383	15.25	0.19469
Coach	1,233	0.01	0	0.00	0.02874
Ferry	5,552	0.07	1	0.04	0.11608
Plane	149,377	1.81	40	1.60	0.16685
Taxi	155	0.00	0	0.00	0.14756
Train	326,779	3.95	31	1.22	0.05818
Van (Hire)	3,942	0.05	2	0.06	0.24717
Total	8,269,029	100.00	2,512	100.00	

3.4.3. Fleet

The Highland Council powers its fleet using petrol, diesel and gas oil. The use of LPG was phased out during the last CMP. The Highland Council also has access to two dual-fuel cars (electric and petrol) and two electric vans. Carbon emissions from fleet are calculated by capturing data on fuel consumption which is converted to CO₂e emissions using DEFRA conversion factors, Figure 3.3.

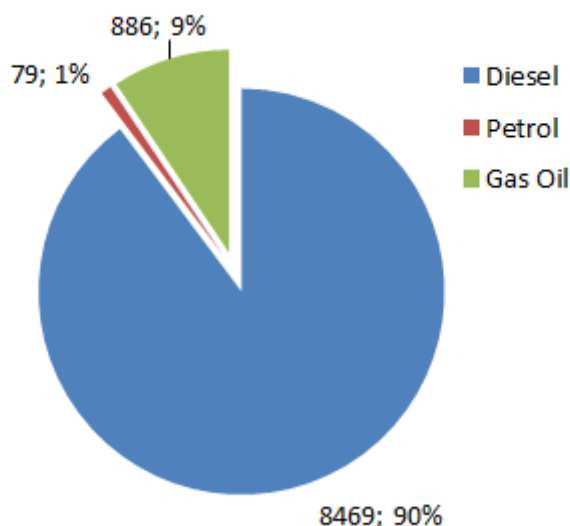


Figure 3.3: The carbon emissions (tonnes CO₂e; %) of fuel consumed to power fleet vehicles (2011/12).

Data is collect by the Highland Council Transport, Environmental, and Community Service through the use of allocated vehicle fuel cards and by monitoring consumption at Highland Council depots.

3.4.4 Waste

The total volume of internal waste sent to landfill by the Council is calculated from bin uplift data collected by the Waste Team. This provides the total number and volume of bins collected and this is converted into weight using standard conversion factors. This data is then converted in CO₂e emissions using the standard DEFRA conversion factor for “municipal waste, average”. This approach is also utilised to calculate the carbon emissions of collected recycled materials, using the appropriate DEFRA conversion factor. Data is collected and presented as waste collected from schools and from non-school buildings, Figure 3.4.

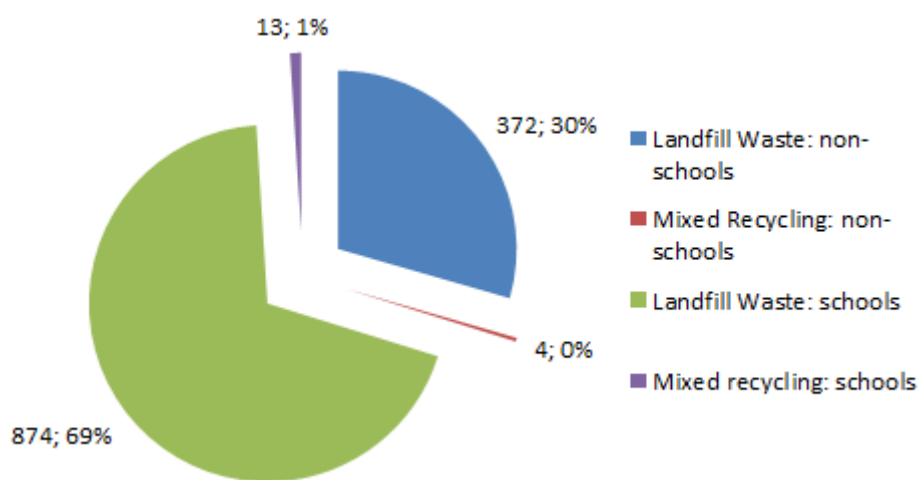


Figure 3.4: The carbon emissions (tonnes CO₂e; %) of internal waste (2011/12).

Carbon emissions associated with waste disposed of to landfill are much greater than that of recycled material, Figure 3.4. This is partially due to the fact that more waste is landfilled than recycled, but also due to the much lower CO₂e conversion factor for recycled material. Landfilled waste tends to degrade and be broken down by bacteria under anaerobic conditions producing large amounts of CH₄, a greenhouse gas with 25 times the global warming potential of CO₂.

3.4.5 Street Lighting

Electricity utilised for street lighting is unmetered and charged on a set price per lantern. The number of burning hours of each lantern is based on the location of a local authority in the UK and set by the Unmetered Supplies User Group (UMSUG). This consumption is then converted to carbon emissions using the DEFRA conversion factor for electricity use, giving CO₂e emissions of 9,143 tonnes for street lighting and an estimated 448 tonnes from traffic lights and bollards. This can be seen as a significant increase from the baseline recorded in 2007/08 (7,065 tonnes CO₂). This is due to three main reasons, an increase in the number of lanterns in Highland (from 47,321 lanterns to 51,289 in 2011/12), an increase in the DEFRA

conversion factor (0.43 to 0.52 in 2011/12) in, and an increase in the burning hours set by UMSUG (3912 to 4130 in 2011/12).

Where energy savings can be demonstrated, such as through dimming projects or through more efficient lighting technologies, a discount on the unmetered bill and a reduction on the amount of energy consumed can be obtained.

3.4.6 Water

Data on water consumption is now captured at all Highland Council properties using water meters. Whilst the carbon emissions of water consumption and disposal in the Council are relatively low in the context of the Council's Carbon Management Plan (479 tonnes CO₂e), there is a high capital cost associated with water use: £1.78 million (2011/12). There are opportunities to reduce water use, save on costs, and to reduce carbon emissions.

4. TARGETS, OBJECTIVES, AND PROJECTIONS

Caibideal 4: Targaidean, Amasan, agus Ro-mheasaidhean

We will reduce carbon emissions by at least 21 % by 2020 over a 2011/12 baseline. A reduction of 3 % per annum.

4.1 ESTABLISHING TARGETS

The Highland Council wishes to demonstrate its continuing commitment towards mitigating against the effects of climate change. The Carbon Management Plan 2009-12 aimed to reduce internal carbon emissions by 3 % per annum (over a 2007/08 baseline) equating to a 12 % reduction (8,052 tonnes CO₂) over the lifetime of the plan. This target was exceeded with carbon emissions reduced by 13 % (8,973 tonnes CO₂). Whilst a linear target will be set for CMP 2013-20, experience garnered from the previous plan indicates that progress towards this target will not be of a linear nature. Certain big emission saving projects will see large reductions in certain years, whilst factors outside the Council's control, such as significantly colder winters will slow progress in other years.

The Highland Council will continue to aim to reduce its carbon emissions by 3% per annum (over a 2011/12 baseline). This target equates to a reduction in carbon emissions of 1,901 tonnes CO₂e per annum or a reduction of 13,308 tonnes CO₂e by April 2020. This can be seen as a slight reduction in the target of the last CMP, 2,013 tonnes CO₂ p.a. This is not a reflection of a decrease in the ambition of the Highland Council. The target should be interpreted as "At least a 3% reduction in carbon emissions per annum", with the aim of exceeding it.

In the previous CMP, emissions savings were not recorded across all sectors, with an increase in CO₂ emissions from Street lighting and Water (Top 100 sites). In addition to this, targets were different for each sector. This approach had limited success, with some sectors greatly exceeding their targets, and others falling short. Given the longer timeframe of this CMP, all sectors will be expected to reduce carbon emissions by at least 21 % over the seven years of the plan. For some sectors this progress may occur in a fairly linear manner, and for others this may occur in a series of step reductions, as large projects are implemented to reduce carbon emissions.

The first year of reporting will be 2013/14. Data for 2012/13 will be collected and reported against the scope of CMP 2009-12 which was rolled forward into 2012/13.

New areas of emissions are currently under investigation for incorporation into the CMP, see Chapter 3. As these are able to be scoped into the plan a 3 % carbon emissions reduction target p.a. will be set against them to align them to other areas in the plan. It should also be noted that these targets are subject to change, and it may be necessary to review them at interim points to take into consideration changing legislation and guidance.

In the context of Scotland achieving the national carbon emission reduction targets set out by the [Climate Change \(Scotland\) Act 2009](#) (42 % by 2020 and 80 % by 2050), with these

detailed at an annual resolution (Report on Proposals and Policies, [2011](#), [2013](#)), Local Authorities are identified as a “Major Player” ([Public Bodies Climate Change Duties, 2011](#)). Due to this, the Highland Council targets of CO₂e emissions should aim to match or exceed the targets set out in the Report on Proposals and Policies (2013), Figure 4.1. Please note, these are targets over a 2011/12 baseline to ensure comparability to the revised CMP. The Scottish Government targets will ensure that Scotland reduce carbon emissions by 42% by 2020 over a 1990/95 baseline.

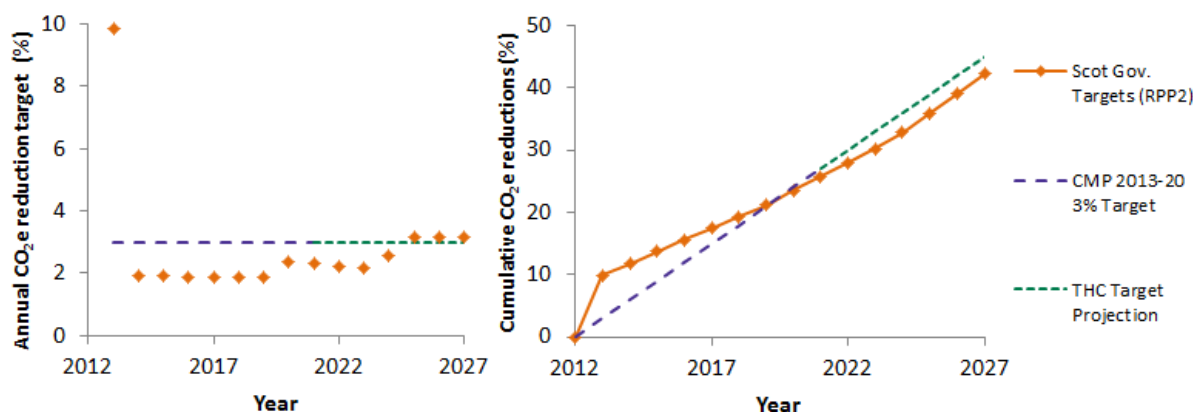


Figure 4.1: Comparison of the Highland Council carbon emission reduction targets to the Scottish Government targets over a 2011/12 baseline. Highland Council target for 2012/13 set in line with the new CMP to allow for comparison.

Analysis of Figure 4.1 shows that the Highland Council carbon emission targets of the CMP 2013-20 compare favourably to the national Scottish targets. The graph on the left indicates that the targets of the CMP exceeds the national targets for all years within the scope of plan with the exception of 2012/13, where national targets are exceptionally high due to the introduction of a raft of new policies. In terms of the cumulative target, by 2020 the Highland Council will exceed the national targets and thus will achieve its responsibility of being a “Major Player” with regards to Scotland reducing its carbon emissions.

4.2. TARGETS

Carbon emissions will continue to be monitored by financial year. The overall emissions reduction target will be 21 % p.a. for each sector, Table 4.1. Progress towards these targets will be monitored annually and reported to the Finance, Housing and Resources Committee.

Table 4.1: Carbon emissions reduction targets over the period 2013/14 -2019/20.

Target	Area of Emissions	Target CO ₂ e savings (tonnes)	Lead Officer
21 %	Energy Use in Buildings	8,420	Principal Energy Engineer
	Staff Travel	527	Policy Coordinator – Climate Change
	Fleet	1,981	Fleet Manager
	Internal Waste	265	Waste Management Officer
	Street Lighting	2,014	Street Lighting Manager
	Water	101	Principal Energy Engineer
	Total	13,308	

4.3 PROJECTED FUTURE EMISSIONS

Without a CMP, the carbon emissions of the Highland Council may increase. Figure 4.2 assumes a business as usual case, with the carbon emissions of the Council increasing at the rate of organic growth (0.7 %) as recommended by the Carbon Trust. Without any carbon management, Highland Council carbon emissions are predicted to increase by 3,637 tonnes from 2011/12 to 2019/20 to 67,011 tonnes CO₂e. This results in a value of 18,845 tonnes CO₂e being at stake, with the CMP target for April 2020, 48,166 tonnes CO₂e.

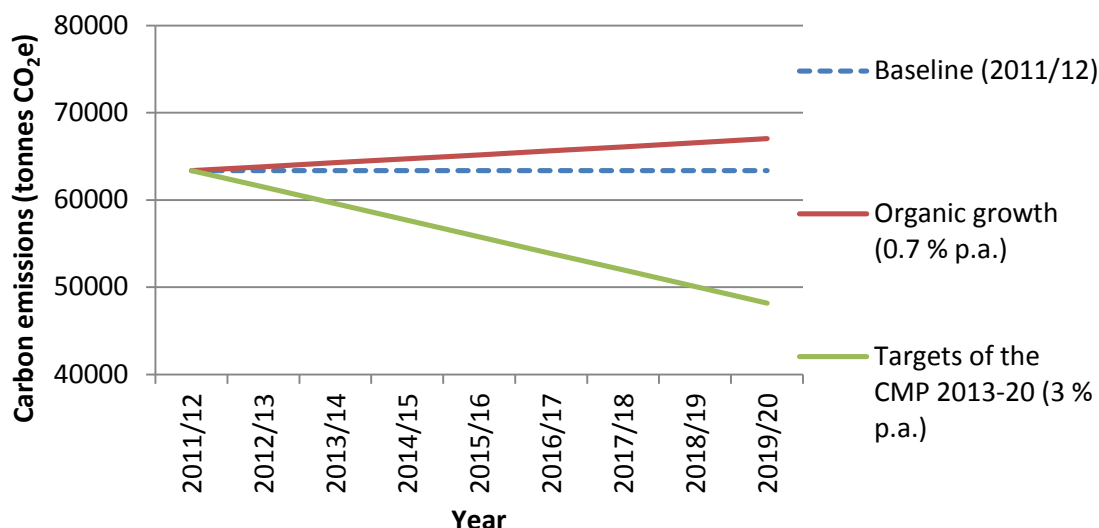


Figure 4.2: Carbon emissions projections. Target for 2012/13 indicative only and set in line with the revised CMP 2013-20 targets.

4.4 POTENTIAL COST AVOIDANCE

Whilst the primary focus of CMP 2013-20 will be to reduce internal carbon emissions at the Highland Council, it will also lead to savings in the costs the Council spends on electricity and fuel. In the following section, the value at stake is calculated for Energy Use in Buildings; Street Lighting; and Fleet. Future cost projections in these sectors is taken from appropriate Governmental guidance. For the purpose of the projections based on the CMP 2013-20, reductions for the year 2012/13 are assumed to be in line with the revised plan.

The total cost projections for 2019/20 are for Zero Growth £17.7million, for Organic Growth £18.7million, and for CMP £13.5million, a difference of £5.2million. The total potential cost savings by achieving the targets set out in the CMP 2013-20 are presented in Table 4.2. These projections are broken down in further detail, and by sector, in the following sections.

Table 4.2: CMP 2013-20 total value at stake. Figures represent annual savings of CMP projections in comparison to Zero Growth and Organic Growth projections.

	Value at Stake (£million)	
	Zero Growth and CMP	Organic Growth and CMP
2012/13	0.42	0.52
2013/14	0.87	1.07
2014/15	1.36	1.68
2015/16	1.88	2.32
2016/17	2.43	3.00
2017/18	3.00	3.72
2018/19	3.61	4.47
2019/20	4.25	5.27
Total	17.83	22.06

It is estimated that achieving the targets set out in the CMP 2013-20 will save the Highland Council between £17.8million and £22.1million in the costs associated with electricity and fuel.

4.4.1 Energy Use in Buildings

Without an adequate CMP in place, the costs associated with increased energy consumption will increase at an organisational level. Future projections of electricity and gas prices are provided by the Committee on Climate Change (CCC) and projections of oil prices by the Department for Energy and Climate Change (DECC).

The price of electricity and fuel is rising, and this increase in prices is forecast to continue, [CCC Energy Prices and Bills](#). Between 2004 and 2011 the price of commercial electricity rose from just over 4.2 p/kWh to just below 9.1 p/kWh, an increase of 115% compared with the general price of inflation of 22% over the same period. The price of electricity is projected to continue to rise, reaching 13.1 p/kWh (2019/20). This cost projection is utilised below to estimate the value at stake in implementing the CMP 2013-20, Figure 4.3.

The projections shown in Figure 4.3 are based on a number of assumptions. Firstly, that the electricity price increase from 2012 to 2020 will occur linearly, Table 4.2; electricity consumption will change in line with carbon emissions under each scenario and this will occur linearly; the associated cost of the CRC energy efficiency scheme is included in these projections, the price of which will increase as outlined in Table 4.3.

The price of the CRC energy efficiency scheme is set in the Chancellor's annual budget and for 2012/13 it will continue to be £12/ tonne. This price is projected to increase, and a guide for this is the carbon floor price, which is due to increase by £2 per year from 2013/2014.

Table 4.3: Projected cost of electricity and the CRC energy efficiency scheme.

Year	Electricity cost (p/kWh)	Cost (£/ tonne CO ₂ emissions)
2011/12	9.1	12
2012/13	9.6	12
2013/14	10.1	14
2014/15	10.6	16
2015/16	11.1	18
2016/17	11.6	20
2017/18	12.1	22
2018/19	12.6	24
2019/20	13.1	26

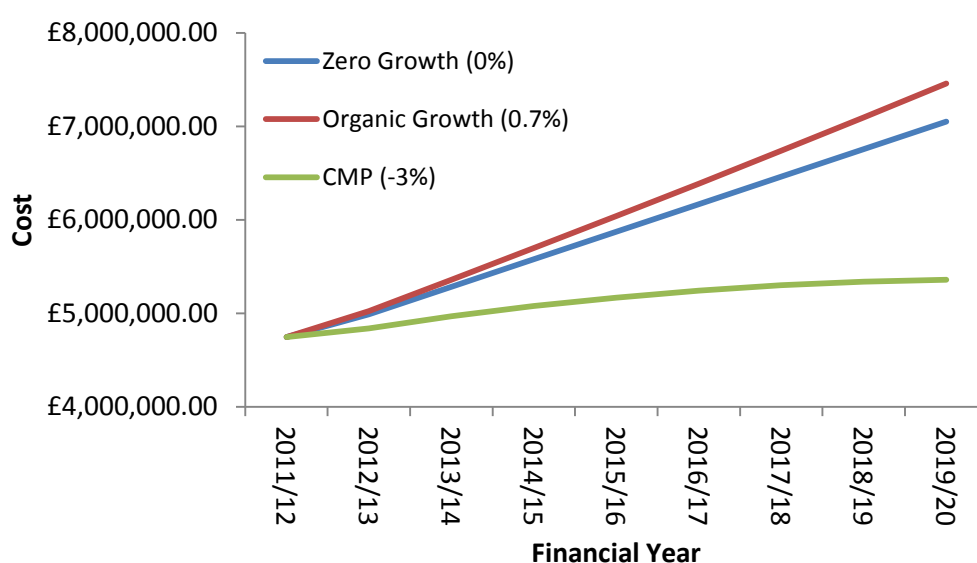


Figure 4.3: Projected cost of electricity use in buildings including CRC energy efficiency scheme. Values in brackets indicate annual change in electricity consumption.

The projected costs associated with electricity use in 2019/2020 under the three scenarios are £7.1million for zero growth, £7.5million for organic growth, and £5.4million for the CMP, a range of £2.1million.

Gas prices have also increased from 1.3p/ kWh to 2.5p/kWh from 2004 to 2011. This price is projected to increase to 3p/ kWh by 2020, [CCC Energy Prices and Bills](#). In calculating cost projections for gas use in Council properties, Figure 4.4, the same assumption that were utilised for electricity use are adopted.

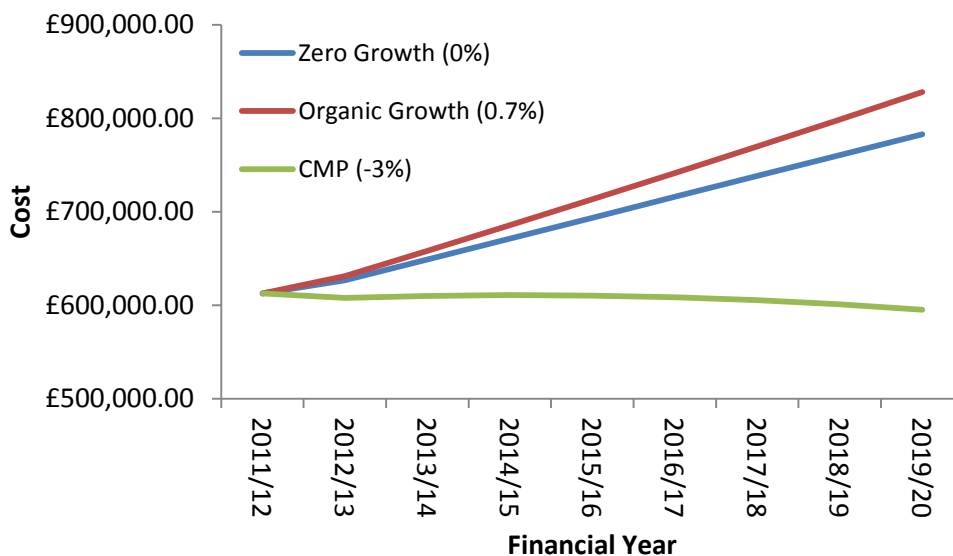


Figure 4.4: Projected cost of gas use in buildings including CRC energy efficiency scheme. Values in brackets indicate annual change in gas consumption.

The projected costs associated with gas use in 2019/2020 under the three scenarios are £0.78million for zero growth, £0.83million for organic growth, and £0.59million for the CMP, a range of £240,000.

Alongside electricity and gas, oil is also utilised to heat Council properties. [DECC projections of the cost of oil](#) are utilised to predict the future cost of this oil heating, Figure 4.5. These calculations are based on the central price projections of the raw price of oil. Under these projections it is assumed that oil consumption will change in line with carbon emissions under each scenario and this will occur linearly. The associated cost of the CRC energy efficiency scheme is included in these projections, Table 4.3.

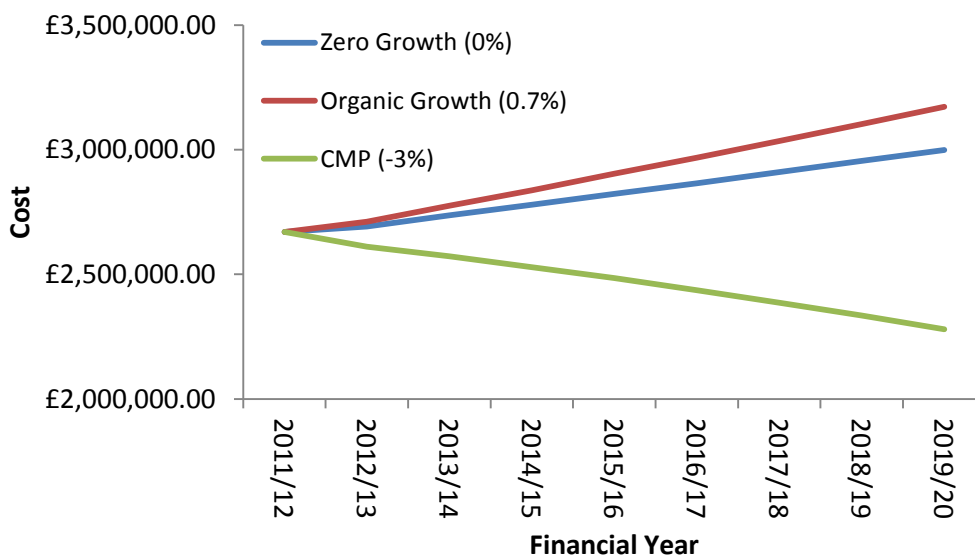


Figure 4.5: Projected cost of oil use in buildings including CRC energy efficiency scheme. Values in brackets indicate annual change in oil consumption.

The projected costs associated with oil use in 2019/2020 under the three scenarios are £3.0million for zero growth, £3.2million for organic growth, and £2.3million for the CMP, a range of £900,000.

4.4.2 Street Lighting

As noted in the section above, the price of electricity has risen over the past seven years and this trend is predicted to continue. This therefore has implications for the Council in terms of operating its street lighting estate. Added to this, it is expected that carbon emissions from street lighting will be added to the CRC energy efficiency scheme in April 2014. The cost of street lighting is projected between 2011/12 to 2019/20 in Figure 4.6. These projections are based on the same assumptions detailed in Chapter 4.4.1 for energy use in buildings and the costs detailed in Table 4.3.

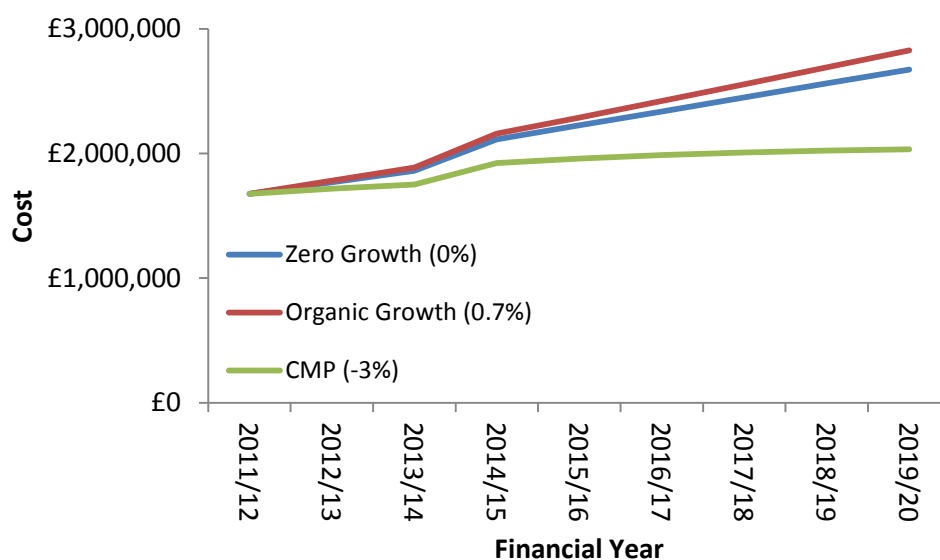


Figure 4.6: Projected cost of electricity use for street lighting including CRC energy efficiency scheme. Values in brackets indicate annual change in electricity consumption.

The projected costs associated with electricity use in street lighting in 2019/2020 under the three scenarios are £2.7million for zero growth, £2.8million for organic growth, and £2.0million for the CMP, a range of £800,000.

4.4.3 Fleet

As noted in Chapter 4.4.1, the price of oil is forecast to increase. This will in turn impact upon the cost of running fleet vehicles. Fuel cost projections are calculated for 2011/12-2019/20, based on [DECC projections of the cost of oil](#), and the cost of fleet fuel in 2011/12, Figure 4.7.

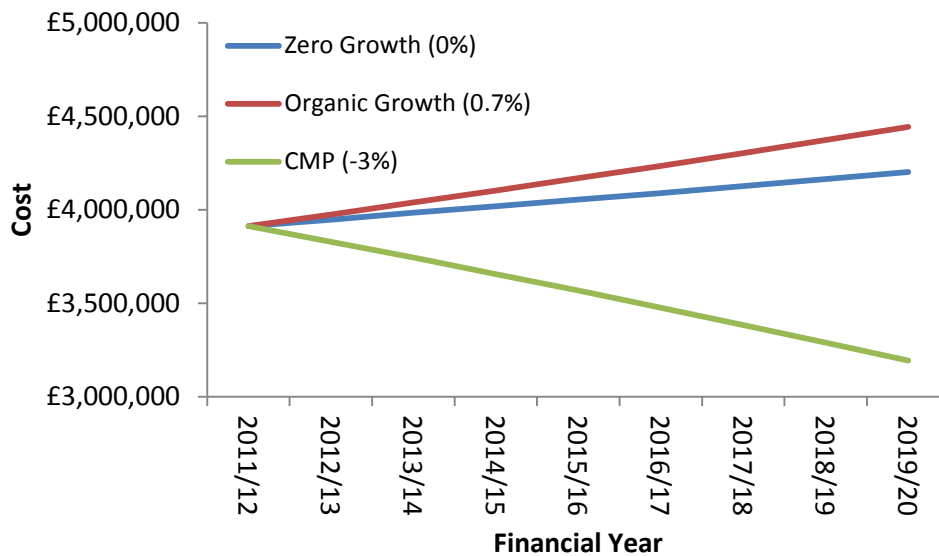


Figure 4.7: Projected cost of fuel use in fleet. Values in brackets indicate annual change in electricity consumption.

The projected costs associated with fuel use in fleet in 2019/2020 under the three scenarios are £4.2million for zero growth, £4.4million for organic growth, and £3.2million for the CMP, a range of £1.2million.

4.4.4 Total value at stake

By combining the projections detailed in Chapter 4.4.1, 4.4.2, and 4.4.3, the total costs which can be avoided can be assessed, Figure 4.8, Table 4.2.

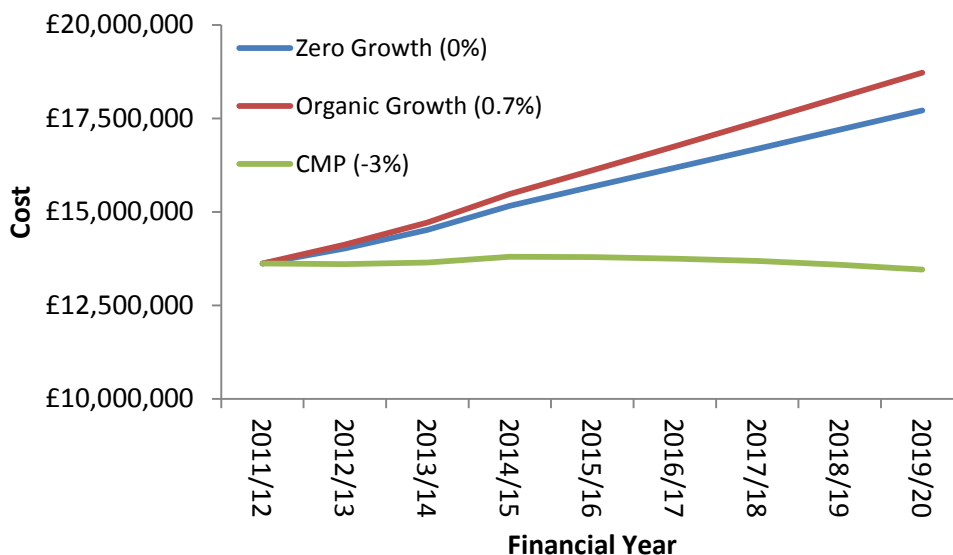


Figure 4.8: Projected costs associated with Energy use in Buildings, Street lighting, and Fleet. Values in brackets indicate annual change in electricity and fuel consumption.

5. CARBON MANAGEMENT PROJECTS AND ACTIONS

Caibideal 5: Pròiseactan agus Gnìomhan Phròiseactan Rianachd Chàrboin

In order to reduce carbon emissions at the Highland Council and achieve the targets of the Carbon Management Plan 2013-20 of reducing CO₂e emissions by 3% per annum, a programme of projects and actions need to be implemented.

- Project: Involves a capital spend to reduce carbon emissions. E.g. Replacement of oil based heating systems with biomass boilers.
- Action: A change in working practices/ cultural behaviours which reduces carbon emissions. E.g. Street light dimming projects.

The projects and actions listed in the Tables in this Chapter have been developed in consultation with the members of the Carbon Management Officers Group (CMOG). The membership of this group is discussed in further detail in Chapter 8. Most of the actions require very little capital funding. This is not the case with the projects as can be seen in the Tables, with the total cost of the projects £45,559,500 over the seven years of the CMP, leading to a CO₂e saving of 7,936 tonnes. Both the costs and carbon emissions savings of the projects have been calculated by the appropriate Council Officer in consultation with the Climate Change Policy Team.

12 projects listed in this Chapter have been funded (£6.3million) which it is estimated will reduce carbon emissions from the Highland Council by over 1,220 tonnes CO₂e. Further work is underway to align the Capital Programme and carbon management for 2016 onwards. If all 33 projects listed below are implemented, the Highland Council would achieve 60% of the carbon emissions reduction target set out in this CMP (13,308 tonnes CO₂e).

In addition to this, carbon emissions will be reduced by the 58 actions listed below. Whilst actions are difficult to quantify in terms of reducing carbon emissions, they will lead to significant carbon emissions reductions. No projects have been planned for after 2018. This does not mean that projects will not be implemented in these years, but that planning such works at present would be highly speculative.

The projects listed should therefore be seen as indicative. This project list is a live document and will evolve, with projects being added to the list, and taken off it, as and when they are funded. Projects that require relatively low amounts of capital may be funded by Service budgets, whilst those with a larger capital costs will seek funding from the Council's Capital Programme.

The projects proposed will have multiple benefits and for many the primary focus is not necessary carbon emissions. The projects reflect the needs of the Services that have developed them and will lead to multiple benefits, such as cost savings, both in terms of energy and fuel efficiency and a reduction in CRC allowances and landfill tax, energy security, income generation for the Council, and an improvement in the quality of the Council buildings.

All projects and actions will be inputted into the Council's Performance Risk and Management System (PRMS). PRMS is a fully delegated model allowing lead officers to update progress on their responsibilities each month and allows any slippage in progress to be noticed quickly and acted on effectively.

The list of projects and actions given in this Chapter is not exhaustive of the work being undertaken by the Highland Council which will lead to reductions in carbon emissions. In particular, an on-going programme of asset management, the ICT refresh, and the current school buildings programme, which are not captured in this list, will lead to large reductions in carbon emissions in certain years.

Through the implementation of the revised Carbon Management Plan it is hoped that more projects and actions will be identified across Services as carbon management continues to become embedded as an integral part of everyday decision making.

For the funding source in the following tables, CP indicates Capital Programme; Service indicates funding through a Service Budget; ICT indicates funding through the ICT Partnership Board Investment Fund; and “–” indicates that funding is being sought.

Table 5.1: Energy Use in Buildings – Projects

	Project	Service Responsible	Completion Date	Costs (£)	CO ₂ e saving (tonnes per annum)	Funding Source
E1	Biomass Boilers to Buildings	H&PS	2013-14	3,000,000	500	CP ¹
E2	CHP installations to large gas users	H&PS	2013-14	600,000	300	CP ¹
E3	Photovoltaic installations	H&PS	2013-15	200,000	30	CP ¹
E4	Micro wind turbines	H&PS	2013-15	150,000	60	CP ¹
E5	Electrical Heating Replacements	H&PS	2013-15	2,000,000	100	CP ¹
E6	Lighting fitting replacement	H&PS	2013-14	80,000	20	CP ¹
E7	LED trial	H&PS	2013-14	30,000	0.5	CP ¹
E8	Building Management System replacements	H&PS	2013-15	200,000	60	CP ¹
E9	Solar water heating systems	H&PS	2013-15	50,000	20	CP ¹
E10	Electrical heating replacements	H&PS	2016-18	3,000,000	500	-
E11	Oil heating reduction	H&PS	2016-18	1,500,000	240	-
E12	Boiler replacement and CHP	H&PS	2016-18	1,400,000	300	-
E13	Heating system upgrades	H&PS	2014-18	2,000,000	80	-
E14	Heating controls and management systems	H&PS	2016-18	300,000	60	-
E15	Lighting replacements	H&PS	2016-18	600,000	20	-
E16	Power quality improvements	H&PS	2016-18	100,000	10	-
E17	Ventilation improvements	H&PS	2016-18	40,000	5	-
E18	Motor and pump upgrades	H&PS	2016-18	100,000	12	-
E19	Energy efficiency improvements	H&PS	2016-18	50,000	5	-
E20	Insulation improvements	H&PS	2016-18	2,000,000	50	-

¹ Funding obtained through the Capital Programme under the project title “Energy Initiatives” will be utilised to fund these projects. However, these projects are subject to change should better opportunities arise.

E21	Window replacements	H&PS	2016-18	2,000,000	20	-
E22	Re-roofing	H&PS	2016-18	2,000,000	10	-
E23	Lighting controls	H&PS	2016-18	50,000	5	-
E24	Fuel switching	H&PS	2016-18	10,000	5	-
E25	Automatic Meter Readers Roll-out	H&PS	2016-18	5,000	10	-
E26	Large scale energy generation	H&PS	2014-18	10,000,000	800	-
	Total			31,465,000	3222.5	

Table 5.2: Energy Use in Buildings – Actions

	Action	Service Responsible	Completion Date
E27	Office Thermometers	CEXO/H&PS	2013
E28	Investigate and Quantify the carbon savings associated with the ICT refresh	CEXO	2013
E29	School and office temperature monitoring	H&PS	2014
E30	Managers training and energy planning	H&PS	2014
E31	RPO training and energy planning for buildings	H&PS	2014
E32	Investigate building occupation rationalisation (opening hours)	H&PS/ CEXO	2014
E33	Portable appliance rationalisation	H&PS/ CEXO	2014
E34	Energy Audits	H&PS	2014
E35	Removal of kettles from Council buildings	H&PS	2014
E36	Investigate the installation of turbines to bridges	H&PS	2014
E37	Achieve ISO50001 accreditation	H&PS	2014
E38	School and office temperature policies	CEXO	2014
E39	Send Thermometers and guidance to Council House Tenants	H&PS	2015
E40	Energy Efficiency Article in Tenants Newsletter	H&PS	Bi-annually

Table 5.3: Business Travel – Projects

	Project	Service Responsible	Completion Date	Costs (£)	CO ₂ e saving (tonnes per annum)	Funding Source
T1	Mobile and Flexible working project. BT Meet Me conference accounts. (Given to 583 staff initially)	CEXO	2013	10,000	TBC	ICT
T2	Shower for main Dingwall office to enable active travel	CEXO	2014	7,000	1	-
T3	High mileage business travel staff to receive Efficient Driver Training	CEXO (paid by services)	2015	5,000	TBC	-

Table 5.4: Business Travel – Actions

	Action	Service Responsible	Completion Date
T4	Continue to promote travel hierarchy through internal and external PR	CEXO	On-going
T5	Bike week	CEXO	On-going
T6	Mobile and Flexible working policy applied to Service plans	CEXO – CIP	On-going
T7	Support community groups promoting sustainable travel e.g. Million Miles Project, Car Clubs	CEXO	On-going
T8	Commitment to low emissions business travel through renewed car hire contract	TECs/ Procurement	2013
T9	Improve travel desk hierarchy (question why VC/TC unsuitable)	Finance	2013
T10	Measure miles avoided by staff working flexibly	Personnel	2013
T11	Travel desk move to quarterly reporting	Finance	2013
T12	Business miles by car reported quarterly	Finance	2013
T13	Investigate the potential to increase and improve VC meeting room equipment	CEXO	2013
T14	Travel and subsistence forms to be completed electronically	CEXO – CIP	2013
T15	BT Meet Me: Investigate Measurement of CO ₂ and cost savings from usage	CEXO	2013
T16	Promote the Journey Genie Sustainable Travel Tool for Highland	CEXO	2013

T17	Encourage staff to share cars for business travel	CEXO	2014
T18	Report Annual travel budget reductions	CEXO/ Finance	2014
T19	Investigate the potential to increase the number of Council meetings that are webcast	CEXO	2014
T20	Mobile and Flexible working - one stop shop web pages	CEXO - CIP	2014
T21	Promote uptake of desk-based webcams	CEXO – CIP	2014
T22	Mobile and Flexible working project. Office Communicator in each refreshed laptop/PC	CEXO	2014
T23	Community Planning Partners sharing VC equipment	CEXO	2015
T24	Investigate the potential to capture commuting miles through a staff survey	CEXO	2015
T25	Car hire booking matching	Finance	TBC

Table 5.5: Fleet – Projects

	Project	Service Responsible	Completion Date	Costs (£)	CO₂e saving (tonnes per annum)	Funding Source
F1	All fleet vehicle staff to receive Efficient Driver Training	TECs	2013	2,500	130	Service

Table 5.6: Fleet – Actions

	Action	Service Responsible	Completion Date
F2	Electric van route optimisation	TECs	2013
F3	Investigate speed and/rev limiters for vehicles without either technology	TECs	2014
F4	Fleet Efficient Driving telematics reporting for the 20 vehicles with the technology	TECs	2014
F5	Rationalise the number of fleet vehicles	TECs	2014 – on-going
F6	Pool Car assessment completed by the EST	CEXO	2014

F7	Enforce policy on staff taking vehicles home	TECs	2015
F8	Community Planning Partners sharing electric vehicle charging points	CEXO	2015
F9	Investigate Journey tracking for fleet vehicles without the technology	TECs	2015
F10	Waste vehicle route optimisation	TECs	2015
F11	Make Council Insurance Provider Aware that 350 Fleet staff have attended Fuel Efficient Driver Training	CEXO	2015
F12	Investigate sharing pool cars with Community Planning Partners	TECs/CIP Integrated Transport Project	2015
F13	Investigate opportunities for making 10% of the fleet electric or dual fuel	TECs	2020

Table 5.7: Waste – Projects

	Project	Service Responsible	Completion Date	Costs (£)	CO ₂ e saving (tonnes per annum)	Funding Source
W1	Waste strategy review	TECs	2013	20,000	TBC	Service

Table 5.8: Waste – Actions

	Action	Service Responsible	Completion Date
W2	Internal paper reduction project	CEXO	2013
W3	Devise policy on recycling excess furniture	CEXO	2013
W4	New online recruitment system	CEXO	2013
W5	Include Paperless Billing as an option	Finance	2014
W6	Investigate using biodegradable crockery	ECS	2014
W7	Apply recommendations from RoWAN report to reduce school food and wrapping waste	TECs/ECS	2015

Table 5.9: Street Lighting – Projects

	Project	Service Responsible	Completion Date	Costs (£)	CO ₂ e saving (tonnes per annum)	Funding Source
L1	Replace existing street lighting lanterns with LEDs	TECs	2014-2018	14,000,000	4577	-

Table 5.10: Street Lighting – Actions

	Action	Service Responsible	Completion Date
L2	Continue to investigate the potential of dimming projects	TECs	On-going
L3	More accurate data on street lighting burning hours	TECs	2014
L4	Investigate the potential of installing Giraffe streetlights	H&PS/ TECs	2014

Table 5.11: Water – Projects

	Project	Service Responsible	Completion Date	Costs (£)	CO ₂ e saving (tonnes per annum)	Funding Source
Wt1	Water saving projects	H&PS	2013-15	50,000	5	-

Table 5.12: Water – Actions

	Action	Service Responsible	Completion Date
Wt2	Increase awareness of water efficiency	CEXO/ H&PS	On-going

6. EMBEDDING CARBON MANAGEMENT PROCESSES

Caibideal 6: Daingneachadh Phròiseasan Rianachd Chàrboin

Following the conclusion of the Highland Council CMP 2009-12 in April 2012, a re-assessment of progress was undertaken using the Carbon Management Assessment Template (CMAT) matrix from the Carbon Trust. Overall, the Highland Council has shown a marked improvement from a score of 15, out of a possible 88, in 2009, to 35 in 2012, Appendix 2. This self-assessment was completed by the seven Service Directors of the Highland Council.

The CMAT matrix tool assesses the extent to which carbon management processes are embedded within an organisation's management structure and operation. This CMAT matrix is not intended to be a precise quantitative tool, but give a qualitative means of assessing how effectively governance, strategy, and policy procedures support on-going delivery of objectives within an organisation's CMP. The intention of the tool is that high CMAT scores correlate directly with the achievement of higher values of carbon savings.

The Highland Council recognises the value of the CMAT matrix at highlighting strengths and weaknesses in carbon management governance. The matrix in turn provides a direct method of identifying enabling actions to improve performance. Carbon management at the Highland Council will be re-assessed annually.

In carrying out the self-assessment matrix a number of areas of action were highlighted to ensure current scores do not slip and that higher scores can be achieved. It should be noted that in certain categories it will not be possible, or appropriate for the Council to implement actions, as improvements are not aimed at organisations of the same size and type. A list of actions, timescales, and appropriate lead officers are shown in Appendix 3. If all the improvement actions are implemented the Council would gain a CMAT matrix score of 65.

7. COMMUNITY CARBON EMISSIONS

Caibideal 7: Brùchdaidhean Càrboin Coimhearsnachd

The scope of the Highland Council Carbon Management Plan has been increased to include reporting on community carbon emissions. These are areas of emissions which the Highland Council has an influence, but not direct control over, namely Energy Use in Council Housing; and Household and Municipal Waste. The Highland Council also has a major role in the planning process for renewable energy schemes in the region, is a key signatory of the Highland Climate Change Declaration, and is one of the seven cities in Scotland that make up the Sustainable Cities Alliance.

7.1 ENERGY USE IN COUNCIL HOUSING

Carbon emissions from the Council Housing stock have been calculated by the Housing and Property Service as **68,007 tonnes CO₂** for the baseline year of 2011/12. This was determined by evaluating the energy systems within the property stock of 13,499 houses using the National Home Energy Rating (NHER) scheme. The NHER method was selected because the calculation takes account of the space and water heating, cooking, lighting and appliances, along with the local environment and regional variations.

The energy efficiency of Council Housing is also assessed as part of the SOLACE (Society of Local Authority Chief Executives) benchmarking framework. The energy efficiency of Highland Council Houses (37.5%) was in the fourth quartile, and 25th out of 32 Local Authorities in Scotland in 2010/11. This metric increased to 47.9% in 2011/12, with Highland Council Housing in the third quartile in comparison with other Local Authorities, 24th overall.

The Scottish Housing Quality Standards contain specific requirements for energy performance of the Council Housing stock. The Highland Council Energy & Sustainability Team, part of the Housing and Property Service, provide support in a range of ways to help with the delivery and maintenance of these standards. Further support is to be given with the drive towards affordable living and advice; and support and training will be provided to assist tenants towards the Governments aims. The Energy & Sustainability Team will participate with external energy authorities, agencies, and community groups to assist in the delivery of energy efficiency advice and initiatives.

There are a range of UK and Scottish Government policies designed to improve the Council Housing stock in terms of energy efficiency; affordable warmth; habitable conditions; and carbon emission reductions. The Council, through the Energy & Sustainability Team, has varying roles to play in the provision of each, from full operation and management of the schemes, to promotion and assistance.

7.2 MUNICIPAL AND HOUSEHOLD WASTE

The total CO₂e emissions for Municipal and Household Waste in 2011/12 was **26,898 CO₂e tonnes**, for further details see Appendix 4. It should be noted that this value includes all waste collected by the Highland Council and therefore includes waste produced at Council sites (1,262 tonnes CO₂e).

The data is collected on a monthly basis with the waste divided into categories based on the type e.g. paper, glass etc. The municipal waste figures are very accurate with all weights being recorded on weighbridges. Household waste figures are estimated to a certain degree as refuse vehicles collect both household and commercial waste and recycling on the same routes. Carbon emissions are calculated from this data using the DEFRA conversion factors, Table 3.5.

Table 7.1: Municipal and Household Waste – Total weight collected and associated carbon emissions (2011/12).

Waste and Treatment	Weight		Carbon Emissions (CO ₂ e)	
	(tonnes)	(%)	(tonnes)	(%)
Biodegradable Recycled	38,996	26.1	513	1.9
Non-Biodegradable Recycled	19,255	12.9	245	0.9
Waste to Landfill	90,056	60.3	26,116	97.1
Energy from Waste	1,139	0.8	24	0.1
Total	149,446		26,898	

Analysis of these figures indicates the importance of recycling to reducing carbon emissions, with waste sent to landfill (60.3 % by weight) responsible for 97.1 % of the carbon emissions arising from municipal and household waste, whilst recycled biodegradable (26.1 % of the total weight) accounts for just 1.9 % of the CO₂e emissions.

Whilst the Council does not have direct control over the amount of Municipal and Household Waste produced each year it does have a certain degree of influence as it provides the facilities to collect and dispose/ recycle the waste. Between 2010-11 and 2011-12 the weight of waste sent to landfill reduced by 11.7 % from 101,932 to 90,056 tonnes, overall waste arisings reduced by 3.6 % from 155,213 to 149,574 tonnes and waste recycled increased by 10.6 % from 52,789 to 58,379 tonnes.

This can largely be attributed to the roll out of the alternate weekly collections. The trial phase commenced in Skye & Lochalsh in September 2010 with the final phase completed in July 2012 in Sutherland. Now all households (around 110,000) and commercial premises (around 4,500) have the opportunity to recycle mixed dry recyclate from their doors. The increase in recyclate was expected but the drop in landfill has been quite dramatic, probably resulting from a behavioural change as residents have seen a drop in the available space for waste. The alternate weekly collection has meant that seven recycling vehicles have been taken off the road with resultant savings in fleet mileage.

The Highland Council has a series of requirements which it has to meet under [Scotland's Zero Waste Plan \(2010\)](#), these are to:

- Provide a dry recycling service to households and business (if requested to do so);
- Provide a separate food waste collection service to households and business (if requested to do so) in Inverness;

- Ensure that residual waste is treated as a minimum to remove metals and rigid plastics;
- Ensure that biodegradable waste is not landfilled beyond 1st January 2021

The Council’s efforts will contribute to the overall Scottish targets:

2013	50% Household waste recycling
2020	60% Household waste recycling
2025	70% All waste recycling
2025	not more than 5% of all waste to landfill

In addition the current Council Administration’s recycling target is 57% by 2017.

7.3 RENEWABLE ENERGY GENERATION (EXCEPT PUBLIC OWNED AND MICRO-RENEWABLES)

Growth in the renewable energy generation sector is a high priority for the Scottish Government, with targets set out to generate 100% of Scotland’s gross annual electricity demand and 11% of the heat demand from renewables by 2020. The Highland region has large renewable resources, and the Highland Council has a key role in terms of planning decisions in determining appropriate renewable energy generation developments.

The capacity of private renewable energy schemes that were consented by the Council by 2011/12 was **1330 MW** (Figure 7.1), with onshore wind energy (1151 MW) and hydro (179 MW) being the main contributors. The Council has had meetings with the prospective developers of the Pentland Firth wave and tidal schemes and Moray Firth offshore wind schemes. A Pilot Marine Spatial Plan for the Pentland Firth and Orkney Waters is in preparation. Grid reinforcements, vital to significant expansion of renewable energy generation in Highland, are being progressed. The [Highland Renewable Energy Strategy and Planning Guidelines](#) (HRES) identifies the capacity in the Highlands for a range of renewable energy, provides locational guidance and supports economic development.

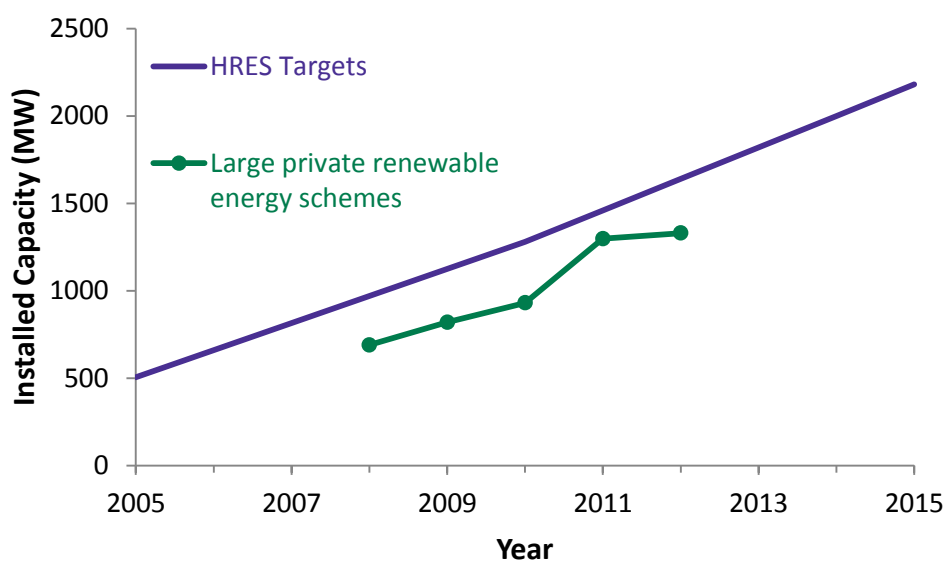


Figure 7.1: Renewable schemes (except public owned and/ or micro-renewables) consented by Highland Council in comparison to HRES targets.

Policies for renewable energy have been incorporated into the Highland-wide Local Development Plan (HwLDP) together with [Supplementary Guidance on onshore wind energy](#). A plan examination was held during 2011-12 and the finalised HwLDP was adopted by the Council in April 2012. Consultation was carried out on draft supplementary guidance for Onshore Wind Energy (April 2011) and a revised version approved as Interim Supplementary Guidance by the Council's Planning, Environment and Development Committee in March 2012. Draft Supplementary Guidance for Small-Scale Wind Turbine Proposals was considered by Committee in September 2011 and approved for publication and for consultation. The Council is continuing to develop its guidance, particularly in relation to landscape and visual considerations, including cumulative impact.

The new policy and guidance supersedes parts of the strategy and planning guidelines of HRES relating to on-shore wind energy. It is important though to note that HRES and the Renewable Energy Resource Assessment on which it is based continue to provide an overarching strategy and much useful information to those involved in renewable energy development, including onshore wind.

The Highland Council Programme, "Working Together for the Highlands, 2012-17", reaffirms the Council's commitment to renewable energy generation: "The Council will support and invest in appropriate opportunities presented by renewable energy, particularly wave and tidal power. We will continue to develop the Highlands as a centre for research & development, fabrication and engineering." The performance of this revised commitment will be monitored by progress in achieving the following two indicators:

- Increase installed capacity of renewable energy to 2908 MW by 2017.
- Three demonstrated wave and tidal projects to be implemented by 2017.

7.4 HIGHLAND CLIMATE CHANGE DECLARATION

In June 2010, the Highland Climate Change Declaration (HCCD) was established with fourteen Highland organisations across the public, private, and voluntary sectors signing up to the joint regional climate change declaration, committing to:

- Measure their carbon footprint and reduce it by 3% per year
- Provide an annual update of progress
- Share information and work with partners in Highland to promote good practice.
- Encourage businesses and communities to take action.

The number of signatories to the declaration has grown each year and currently there are 22 organisations committed to the HCCD. The Highland Council were responsible for collecting data from the signatory organisations and collating an [annual report up until 2010/11](#). This responsibility was assumed by Scottish Natural Heritage in 2011/12 to which the Highland Council submitted its annual report in October 2012.

7.5 CARBON FREE HIGHLAND IN A LOW CARBON HIGHLANDS

Highland Council is developing an ambitious proposal based on achieving a carbon free Inverness in a low carbon Highlands by 2050 as part of the Council's involvement in the Sustainable Cities Alliance. This project will involve a number of community planning partners, with initial discussions involving the University of Highlands and Islands, and Highlands and Islands Enterprise.

8. COMUNICATION

Caibideal 8: Conaltradh

In the last CMP, a communication strategy was developed to assist in the implementation of the plan and to aid in embedding carbon management across both Council Services and the wider community. This strategy was found to be extremely successful and therefore a revised version has been drafted for implementation alongside this CMP, Appendix 5.

It has long been recognised that there are significant carbon reduction savings to be made following a change in cultural behaviour. The communication strategy recognises the vital role staff and Members can play in not only reducing the internal emissions of the Council but also of the region in general through good practice applied at home. The communication strategy recognises that these programmes need to be updated and refreshed to ensure that cultural change continues, and becomes embedded.

The Communication Strategy contains a detailed list of actions, to which a responsible Service is attributed and an associated frequency for how often the communication action should occur. Many of these actions have been utilised previously with a positive effect. The Communication Strategy should be considered a live document and more actions will be added as opportunities arise.

The Highland Council has a voluntary scheme for Council employees called “Green Ambassadors”. Following concerted recruitment, there are now 140 Green Ambassadors across Council Services ensuring that messages are not only cascaded from Senior Management but are distributed and discussed at individual site level. Benefits of the scheme include:

- Resources in the form of posters, stickers, and information sheets both online and in hard copy;
- Advice, guidance, toolkits, and FAQ sources;
- Exclusive opportunities for Green Ambassadors to network and liaise with each other in person at events.
- Exclusive regular e-mail updates on Climate Change related developments and events occurring within the Council, regionally, nationally, and globally.

9. PROGRAMME MANAGEMENT OF THE CMP 2013-20

Caibideal 9: Rianachd Prògramm a thaobh Plana Rianachd Càrboin 2013-20

Good programme governance is required to bring all elements of the CMP together to ensure progress in reducing carbon emissions. A diverse set of projects and actions are planned under CMP 2013-20 to achieve this. There are also multiple actions that need to occur, both arising from the communication strategy (Appendix 5) and to increase our rating on the CMAT matrix (Appendix 2), in order to continue to embed carbon management throughout the Council and the wider community. The progress of individual projects and actions needs to be monitored and reviewed regularly to ensure key milestones are achieved and any issues and slippages in progress are dealt with accordingly. This is achieved through the Council's electronic Performance & Risk Management System (PRMS).

Actions and Projects outlined in this CMP will be imported into the PRMS system. PRMS is a fully delegated model, allowing lead officer to update progress on their responsibilities each month. The system enables these actions and projects to be flagged using RAG (Red, Amber, Green), and this information is cascaded up to senior management at quarterly performance reviews.

9.1 CARBON MANAGEMENT OFFICERS GROUP

CMP implementation will be coordinated by the Policy Officer – Climate Change. The Head of Policy and Performance will oversee progress and submit reports to the Senior Management Team and to relevant committees. A number of key individuals will have responsibility for different aspects of the plan, Table 9.1.

Table 9.1 Responsibilities and Lead Officers of the CMP 2013-20.

Responsibility	Lead Officer(s)
Co-ordination and Monitoring	<ul style="list-style-type: none"> • Policy Officer – Climate Change, Policy and Performance, Chief Executive's Office. • Policy Coordinator – Climate Change, Policy and Performance, Chief Executive's Office.
Energy Use in Buildings	<ul style="list-style-type: none"> • Principal Engineer, Energy and Sustainability Team, Housing and Property Service.
Staff Travel	<ul style="list-style-type: none"> • Policy Coordinator – Climate Change, Policy and Performance, Chief Executive's Office.
Fleet	<ul style="list-style-type: none"> • Fleet Manager, Transport Environment and Community Service.
Internal Waste	<ul style="list-style-type: none"> • Waste Management Officer (Strategy), Transport Environment and Community Service. • Policy Officer – Climate Change, Policy and Performance, Chief Executive's Office.
Street Lighting	<ul style="list-style-type: none"> • Street Lighting Manager, Transport Environment and Community Service.
Water	<ul style="list-style-type: none"> • Principal Engineer, Energy and Sustainability Team, Housing and Property Service. • Policy Officer – Climate Change, Policy and Performance Team, Chief Executive's Office

Procurement	<ul style="list-style-type: none"> • Head of Procurement, Finance Service
Community Emissions: Council Housing	<ul style="list-style-type: none"> • Principal Engineer, Energy and Sustainability Team, Housing and Property Service.
Community Emissions: Municipal and Household Waste	<ul style="list-style-type: none"> • Waste Management Officer (Strategy), Transport Environment and Community Service.

The staff named in Table 9.1, alongside a number of other key individuals at the Council, makes up the Carbon Management Officers Group (CMOG). This Group meet quarterly to discuss progress in carbon management at the Council.

9.2 SUCCESSION PLANNING

An important lesson learnt from past experience is that if key individuals leave their posts before the programme is fully established, progress can stall. For this reason the following succession plan should be used to ensure that this CMP continues to be monitored and reported.

The Policy Officer – Climate Change is responsible for monitoring progress in carbon management. In the absence of this individual, the Policy Coordinator – Climate Change should assume responsibility. In the unlikely event that neither is available, responsibility should go to the Principal Engineer in the Energy and Sustainability Team, Housing and Property Service. All reports must be checked by the Head of Policy and Performance before being submitted to the Senior Management Team and committee.

It is recognised that as key personnel leave the Council, through retirement or other reasons, they take with them a vast amount of knowledge and understanding. It is therefore recommended that where possible replacements shadow staff before they leave the Council to ensure that information and knowledge is retained by Council staff and not lost.

9.3 ANNUAL PROGRESS REVIEW

In addition to progress reporting through the PRMS system, annual reporting on the targets of the CMP will occur to the Finance, Housing and Resources (FHR) Committee each August. The first annual report on the CMP 2013-20 will go to the FHR Committee in August 2014 reporting on the progress in the year 2013/14. This report will include:

- CO₂e emissions reductions against the internal targets;
- Financial savings e.g. from fuel, energy and water efficiency;
- Financial savings through the CRC energy efficiency scheme and the landfill tax;
- Details on the implementation of projects and plans

Appendices

Eàrr-ràdhan

Appendix 1: Drivers for Reducing Carbon Emissions

The table below indicates many of the key drivers for reducing carbon emissions at the Highland Council. This list should not be seen as exhaustive.

Category	Driver	Areas of Impact
Regulation	Climate Change (Scotland Act) 2009	All Council
	The Report on Proposals and Policies - RPP1(2011), RPP2 (2013)	All Council
	Public Bodies Climate Change Duties (2011)	All Council
	CRC Energy Efficiency scheme	Housing and Property Services, Street lighting, paid corporately
	EU Building Energy Performance Directive	Housing and Property Services
	Energy Efficiency Action Plan	Housing and Property Services
	Zero Waste Plan	Waste Team
	Procurement Reform Bill	Finance Service
Plans and Policies	Renewable Transport Fuel Obligation (and sister documents)	Fleet and Integrated Transport
	Single Outcome Agreement	All Council/ partners
	Working Together for the Highlands: A Programme for the Highland Council	All Council
	Scotland's Climate Change Declaration	The Council's operations and communities
	Highland Climate Change Declaration	Sectors scoped into reporting
Economic	Budget setting	All Council
	Increased Energy and Fuel prices	All Council
	Landfill Tax	All Council
	CRC energy efficiency scheme	All Council
	Inflation	All Council
Aspirational/ Reputational	Income generation through renewables schemes (FITs, ROCs)	All Council
	Carbon Trust Standard	All Council
Operational	Mobile and Flexible Working Programme	All staff
	Asset Rationalisation Plan	Buildings/ All Council

Security	Energy and Fuel Security	All Council
	Reduce dependence on fossil fuels	All Council
	Community Resilience	All Council
Stakeholders	General Public and Communities	All Council
	Highland Environment Network	All Council and P&D
	WWF (What wood would you choose, Earth Hour campaigns)	All Council
	Lobbying Groups	All Council
	RSPB	P&D
	Hitrans/ Sustrans	TEC
Other	Transerv Scotland	TECs
	Transport Disruption	All Council
	Weather events	All Council
	Health Drivers (e.g. Community growing)	All Council

Appendix 2: Self-Assessment of Carbon Management at the Highland Council using the Carbon Trust’s “CMAT” matrix.

Assessment Matrix (CMAT 1) – Vision and Strategic Direction

Situation as of 2009		Situation as of April 2012		Target for April 2020	
	Reduction Targets	Asset Management Plans	Carbon reduction contributions	Near term planning	
LEVEL ↓ 4	Organisation has a clear view of its desired long term (2050) and interim (2020 & 2030) carbon footprint, and how it will deliver its share of national reduction targets through strategic decision making	Organisation has a long term management plans that quantify and schedule carbon reduction implications / opportunities arising from 100% of its carbon footprint linking to carbon management plan and long term targets	Organisation understands the relative contribution of energy efficiency and on-site renewables and has calculated the potential carbon reduction from each to help meet interim and long term carbon reduction targets and has factored in implications of decarbonised energy supplies	Organisation has quantified and funded (with sign off by finance manager and corporate management team) 1 & 2 year plans within the overall short term plan (5 years) which contains sufficient projects to deliver 125% of the stated reduction target	
3	Organisation has a clear view of its desired interim (2020 & 2030) carbon footprint, and how it will deliver its share of national reduction targets through strategic decision making	Organisation has a long term management plans that quantify and schedule carbon reduction implications / opportunities arising from 75% of its carbon footprint	Organisation understands the relative contribution of energy efficiency & on-site renewables and has calculated the carbon reduction gains potential from each to meet interim and long term carbon reduction targets	Organisation has quantified and funded 1 & 2 year plans within the overall short term plan (4 -5 years) which has sufficient projects to deliver 100% of the stated reduction target	
2	Organisation has a clear view of its desired carbon footprint, over the next 10 years and how it will deliver its share of national reduction targets through strategic decision making	Organisation has a long term asset management plan that quantifies and schedules carbon reduction implications / opportunities arising from renewal and refurbishment of buildings.	Organisation understands the relative contribution of energy efficiency & on-site renewables but has not calculated the carbon reduction potential from each to meet interim and long term carbon reduction targets	Organisation has quantified and funded short term plan (4 -5 years) that has sufficient projects to deliver over 75% of the stated reduction target	
1	Organisation has 5 year carbon reduction target but has not considered how it will deliver its share of national reduction targets.	Organisation has a long term building asset management plan without quantified carbon reduction implications / opportunities.	Organisation has plans to assess the relative contribution of energy efficiency and on-site renewables and calculate the carbon reduction potential from each	Organisation has short term plan (4 -5 years) that has sufficient projects to deliver over 75% of the stated reduction target but lacks detail & not quantified.	
0	Organisation has no carbon reduction target	Organisation has no long term asset (building) management plan	Organisation has not considered the relative contribution of energy efficiency & on-site renewables	Organisations short term plan has insufficient projects to meet 50% of started target.	

Assessment Matrix (CMAT 2) – Performance Management and Improvement

Situation as of 2009

Situation as of April 2012

Target for April 2020

	Emissions reporting	Operational management	Performance Reporting	Improvement
LEVEL ↓ 4	Organisation issues detailed individual monitoring reports covering 100% (energy, waste and transport) of carbon footprint to all Departments and Lead Carbon Sources on a monthly basis.	Service Directors and Operational Managers have designated carbon reduction targets relating to their operational area as one of their key performance indicators with documented evidence of on-going actions being taken to ensure short term carbon reduction targets are met.	Carbon Management performance report with detailed emission data and project updates reported to: Full Council <u>Annually</u> Staff/Stakeholders <u>Half Yearly</u> SMT <u>Quarterly</u>	Carbon Manager or equivalent reviews carbon performance against CO ₂ reduction targets and following consultation with specialist agencies develops a carbon management improvement programme of actions supported and signed off by Corporate Management Team
3	Organisation issues detailed individual monitoring reports on energy use in buildings to all Departments and Lead Carbon Sources on a monthly basis.	Service Directors and Operational Managers have designated carbon reduction targets relating to their operational area as one of their key performance indicators	Carbon Management performance report with detailed emission data and project updates reported to: Staff/Stakeholders <u>Annually</u> SMT <u>Half Yearly</u>	Carbon Manager or equivalent reviews carbon performance against CO ₂ reduction targets develops a carbon management improvement programme of actions supported and signed off by Corporate Management Team
2	Organisation issues detailed individual monitoring reports on energy use in buildings to all Departments on a bi - monthly basis.	Service Directors have designated energy reduction targets relating to their operational area.	Carbon Management performance report and project updates reported at least annually to senior management, staff and stakeholders.	Carbon Manager or equivalent reviews carbon performance against CO ₂ reduction targets develops a carbon management improvement programme of actions
1	Organisation issues detailed individual monitoring reports on energy use in buildings to all Departments on a quarterly basis.	Organisation has a documented energy reduction target	Carbon Management performance report with emission data and project updates reported to on an ad hoc basis	Carbon Manager or equivalent reviews carbon performance against CO ₂ reduction targets takes actions to improve performance on an ad hoc basis
0	Detailed monitoring report issued annually.	Organisation has no documented energy reduction target	Carbon Management Reports produced on an ad hoc basis	No review of performance against targets take place

Assessment Matrix (CMAT 3) – Governance and Accountability

	Situation as of 2009	Situation as of April 2012	Target for April 2020	
	Senior Management Accountability	Devolution of responsibility	Scrutiny & Audit	Political Commitment
LEVEL ↓				
4	Service Directors accept overall accountability for carbon reduction targets in their department and chairs quarterly meeting on data review, projects update and future plans of their department to show clear commitment / leadership to employees	Carbon budgets are devolved to Departmental Directors, Group Managers and Team Leaders. All have designated emission reduction responsibilities and <u>control</u> over the emissions in their operational area / network	Carbon Management performance reports detailing progress against target formally audited by an external qualified body and reviewed by the organisation's Executive Committee quarterly	Elected Members have placed emission reduction at the core of the organisations key objectives and hold officials to account for carbon reductions against stated targets in Council Plan, Departmental Service Plans and specific Key Performance Indicators of managers
3	Service Directors accepts overall accountability for carbon reduction targets in their department and twice annually chairs meeting on data review, projects update and future plans of their department to show clear commitment / leadership to employees	Carbon budgets are devolved to Departmental Directors and Group Managers who have designated emission reduction responsibilities and <u>control</u> over emissions in their operational area / network	Carbon Management performance reports detailing progress against target formally audited by an external qualified body and reviewed by the organisation's Executive Committee twice a year	Elected Members have placed emission reduction at the core of the organisations key objectives and hold officials to account for carbon reductions against stated targets in Council Service Plan and Departmental Service Plans
2	Service Directors accepts overall accountability for energy / carbon reduction targets in their department and data review, and projects update are covered at management team meetings	Carbon / energy budgets are devolved to Departmental Directors and Group Managers who have designated emission reduction responsibilities but limited opportunities to actually <u>control</u> these emissions.	Carbon Management performance reports detailing progress against target formally scrutinised by the appropriate scrutiny committee/s of the organisation at least annually.	Elected Members have placed emission reduction at the core of the organisations key objectives and hold officials to account for carbon reductions against stated targets in Council Plan
1	Service Directors accepts overall accountability for energy / carbon reduction targets in their department	Plans are in place to estimate individual departments carbon / energy budgets and to devolve these to Service Directors	Carbon Management performance reports detailing progress against target scrutinised on an ad hoc basis.	Elected Members have placed emission reduction at the core of the organisations key objectives
0	Service Directors not accountable for energy / carbon reduction targets	No plans to devolve Carbon budgets	No formal scrutiny or audit takes place	Elected members have not placed emissions at the core of the organisations objectives

Assessment Matrix (CMAT 4) – Embedded within Organisation

Situation as of 2009

Situation as of April 2012

Target for April 2020

	Carbon Appraisal	Procurement	Embedded in strategies, policies & procedures
LEVEL ↓ 4	100% of projects that are subject to financial appraisal are subject to carbon appraisal - including whole life costing and consideration of alternative low carbon methods of project delivery	Consideration of both embedded and on-going operational CO ₂ emissions is standard practice during procurement processes for 100% of goods, services and contracts through whole life costing & consideration of alternatives	All new plans, policies, procedures strategies and committee reports are checked for compliance with carbon management plans by qualified specialist to assess any potential impact on both short and long term CO ₂ reduction targets
3	75% of projects that are subject to financial appraisal are subject to carbon appraisal - including whole life costing and consideration of alternative low carbon methods of project delivery	Consideration of both embedded and ongoing operational CO ₂ emissions is standard practice during procurement processes for 75% of goods/services through whole life costing & consideration of alternatives	All committee reports are routinely scrutinised for compliance with carbon management strategies & plans by qualified specialist to assess any potential impact on both short and long term CO ₂ targets
2	Selected capital projects contain an assessment of carbon emissions associated with the project. Plans in place to introduce more robust whole life costing.	Whole life costing and / or consideration of low carbon alternatives for selected goods and service that are determined to have high carbon impact / implications	All committee reports contain an requirement to consider environmental implications of new proposals but reviewers have limited knowledge of carbon / environmental management issues
1	Carbon assessment only carried out for large building projects with no plans to introduce more robust whole life costing	Procurement strategy contains commitment to consider more sustainable options but no documented evidence of being action actually being taken	Selected committee reports consider environmental implications of new proposals but this is done on an informal and ad hoc basis
0	No carbon assessment takes place	No consideration of low carbon options / alternatives	Committee reports do not cover environmental considerations

Assessment Matrix (CMAT 5) – Use of Resources

Situation as of 2009

Situation as of April 2012

Target for April 2020

	Low Carbon Funding Policy	Designated Responsibility	Energy management capability
LEVEL ↓ 4	Additional funding is <u>routinely</u> made available and embedded as business as usual policy for low carbon building specifications and carbon reduction projects through linkage of capital costs and longer term running costs	Organisations has a designated carbon manager to monitor, and recommend, CO ₂ reduction measures who is supported by a network of departmental & technical champions who have adequate time available to provide support across the organisation	Minimum of one full time Energy Manager / Officer per 2 million pounds spent annually on energy to provide technical support and advice across the organisation.
3	Additional funding is made available for low carbon specifications and carbon reduction projects but only those with 10 year financial paybacks	Organisations has a designated carbon manager to monitor, and recommend, CO ₂ reduction measures who is supported by a network technical champions who have adequate time available to provide support across the organisation	Minimum of one full time Energy Manager / Officer per 4 million pounds spent annually on energy to provide technical support and advice across the organisation.
2	Additional funding is occasionally made available for low carbon specifications and carbon reduction projects but only those with 5 yr financial paybacks	Nominated senior manager in charge of emission reduction across organisation with an identified team to provide support but with limited authority and time.	Minimum of one full time Energy Manager / Officer per 6 million pounds spent annually on energy to provide technical support and advice across the organisation.
1	Additional funding is only made available for low carbon specifications where 5 yr paybacks	Nominated officer in charge of emission reduction across organisation with ad hoc support and limited authority and time available	Minimum of one full time Energy Manager / Officer per 8 million pounds spent annually on energy to provide technical support and advice across the organisation.
0	No linkage of capital and review budgets	No nominated officer in charge of carbon management across organisation	Insufficient energy management expertise available to provide technical advice across the organisation.

Assessment Matrix (CMAT 6) Communication

	Situation as of 2009	Situation as of April 2012	Target for April 2020	
	Communications Strategy	Site champions	Employee Training	Staff competencies
LEVEL ↓ 4	Organisation has a robust carbon reduction communication's strategy, for all parts of the organisation and the wider area, which has components to enable the effectiveness of awareness raising measures and communications to be quantified	Site / network champions appointed at all large premises (with half hourly data) or service delivery networks and given sufficient time, training and control to disseminate / embed low carbon policies and practices across their own site and nearby smaller premises / networks.	100% of staff training / induction packages reviewed to consider CO ₂ implications & where these are identified (building / fleet managers, janitors etc) training is provided to enable emission reduction projects to be delivered and info' disseminated to others	CO ₂ reduction part of competency requirements of 100% of employees job descriptions with specific responsibilities designated to staff appropriate to the carbon intensity of their job function
3	Organisation has a robust carbon reduction communication's strategy, for all parts of the organisation which has components to enable the effectiveness of awareness raising measures and communications to be quantified	Site / network champions appointed at all large premises (with half hourly data) or service delivery networks and given sufficient time, training and control to disseminate / embed low carbon policies and practices. across their site or operation.	50% of staff training packages reviewed to consider CO ₂ implications & where these are identified (building / fleet managers, janitors etc) training is provided to enable emission reduction projects to be delivered and info' disseminated to others	CO ₂ reduction part of competency requirements of 75% of employees job descriptions with specific responsibilities designated to staff appropriate to the carbon intensity of their job function
2	Organisation has a robust carbon reduction communication's strategy but no formal measure of effectiveness is undertaken	Informal group of site / network champions exists for most large premises (with half hourly data) but limited by time & training to disseminate / embed low carbon policies and practices	Selected staff training packages reviewed to consider CO ₂ implications and appropriate CO ₂ reduction awareness training has been introduced	Formal plans are in place to introduce CO ₂ reduction as part of competency requirements for selected staff with high carbon intensity job function
1	Organisation communicates carbon reduction issues to employees but this is done on an ad hoc basis.	Plans to establish site / network champions at all large premises (with half hourly data) or service delivery networks to disseminate / embed low carbon policies and practices	Staff Induction contains information of energy reduction measures but no other formal training packages cover energy / fuel reduction.	Informal plans are in place to introduce CO ₂ reduction as part of competency requirements for selected staff with high carbon intensity job function
0	Organisation has no an ad hoc system for communication of carbon reduction issues	No plans to establish site / network champions to disseminate / embed low carbon policies and practices	No staff training packages include information or guidance on energy use or carbon reduction	CO ₂ reduction not determined to be appropriate for competencies

Appendix 3: CMAT Improvement Actions

MATRIX COMMITMENT	Where we want to be by 2020	Score 2020	Action	Timescale	Responsible Officers
Reduction Targets	Organisation has a clear view of its desired carbon footprint, over the next 10 years and how it will deliver its share of national reduction targets through strategic decision making	2	Revise the Carbon Management plan to 2020 and align with the Statutory duties of the Climate Change (Scotland) act 2009 to ensure we deliver our share of national targets.	Apr-13	Policy Officer - Climate Change CEXO
Asset Management Plans	Organisation has a long term asset management plan that quantifies and schedules carbon reduction implications / opportunities arising from renewal and refurbishment of buildings.	2	Include carbon impact within asset review of Highland Council and maximise carbon savings potential.	2014	Corporate Property Asset Manager
Carbon Reduction contributions	Organisation understands the relative contribution of energy efficiency and on-site renewables and has calculated the potential carbon reduction from each to help meet interim and long term carbon reduction targets and has factored in implications of decarbonised energy supplies	4	This will be met through the <i>Conserve and Save: The Energy Efficiency Action Plan for Scotland</i> . The Council had a policy of buying green energy where available. Supply has since been outstripped by demand and purchase is made through Scotland Excel. Procurement should aim to continue to maximise our green energy share of supply.	2020	Energy & Sustainability, Procurement
Near Term Planning	Organisation has quantified and funded 1 & 2 year plans within the overall short term plan (4 -5 years) which has sufficient projects to deliver 100% of the stated reduction target	3	Quantify the carbon savings from outlined project list to help set the overall target for 2020.	Apr-13	Policy Officer - Climate Change CEXO
Emissions reporting	Organisation issues detailed individual monitoring reports on energy use in buildings to all Departments on a quarterly basis.	1	Won't be practical for all CO ₂ sources but there is progress, particularly with school energy data being available monthly - plans to monitor energy consumption in departments. Capture and increase the proportion of sites receiving this info. Also investigate area-specific and service level datasets.	2014	Policy Officer - Climate Change CEXO
Operational management	Service Directors and Operational Managers have designated CO ₂ targets relating to their operational area as one of their key performance indicators with documented evidence of on-going actions being taken to ensure short term carbon reduction targets are met.	4	This is currently being investigated.	2013	Energy & sustainability
Performance Reporting	Carbon Management performance report with detailed emission data and project updates reported to: Full Council Annually; Staff/Stakeholders Half Yearly; SMT Quarterly	4	Reported to FHR Committee annually. Carbon Management Officers group to meet quarterly. In absence of CCWG, a mechanism is required to report to SMT quarterly.	2013	Policy Officer - Climate Change CEXO

Improvement	Carbon Manager or equivalent reviews carbon performance against CO2 reduction targets and following consultation with specialist agencies develops a carbon management improvement programme of actions supported and signed off by Corporate Management Team	4	No action required. Maintain this set-up		
Senior Management Accountability	Service Directors accepts overall accountability for carbon reduction targets in their department and twice annually chairs meeting on data review, projects update and future plans of their department to show clear commitment / leadership to employees	3			
Devolution of responsibility	Plans are in place to estimate individual departments carbon / energy budgets and to devolve these to Service Directors	1			
Scrutiny & Audit	Carbon Management performance reports detailing progress against target formally scrutinised by the appropriate scrutiny committee/s of the organisation at least annually.	2	We have twice been awarded the Carbon Trust Standard and will apply to be reaccredited in 2013. We have carried out internal audit of EMPP and CRC arrangements. Feedback to SMT.	2014	Policy Officer - Climate Change CEXO
Carbon Appraisal	100% of projects that are subject to financial appraisal are subject to carbon appraisal - including whole life costing and consideration of alternative low carbon methods of project delivery	4	Implementation of the Carbon Assessment Screening of the Capital Programme developed by Energy & Sustainability Team	2012	Energy & Sustainability
Procurement	Whole life costing and / or consideration of low carbon alternatives for selected goods and service that are determined to have high carbon impact / implications	2	Underway through Sustainable Procurement Plan although whole life costing is still in early stages and methodologies vary.	2013	Procurement
Embedded in strategies, policies & procedures	All committee reports are routinely scrutinised for compliance with carbon management strategies & plans by qualified specialist to assess any potential impact on both short and long term CO ₂ targets	3	This is a requirement of the Public Bodies duties in relation to the Climate Change (Scotland) Act 2009 and as such will have to be addressed.	2013	
Low Carbon Funding Policy	Additional funding is made available for low carbon specifications and carbon reduction projects but only those with 10 year financial paybacks.	3	More work is required to better align the Carbon Management Plan 2013-20 and the Capital Programme.	2013- on-going	Policy Officer - Climate Change CEXO/ Finance
Designated Responsibility	Organisations has a designated carbon manager to monitor, and recommend, CO ₂ reduction measures who is supported by a network of departmental & technical champions who have adequate time available to provide support across the organisation	4	The Carbon Management Officers Group	2012	Policy Officer - Climate Change CEXO

Energy Management Capability	Minimum of one full time Energy Manager / Officer per 4 million pounds spent annually on energy to provide technical support and advice across the organisation.	3	The Council's Energy Team now has 11 full time staff working with them so this target has been exceeded and Level 4 obtained.	2013	Energy & Sustainability
Communication Strategy	Organisation has a robust carbon reduction communication's strategy, for all parts of the organisation and the wider area, which has components to enable the effectiveness of awareness raising measures and communications to be quantified.	4	Communication plan has been reviewed and performance indicators will be built into the electronic PRMS system. Annual survey of Green Ambassadors continues to take place and climate change features in the public performance survey and budget consultation.	2012	Policy Coordinator - Climate Change CEXO
Site Champions	Site / network champions appointed at all large premises (with half hourly data) or service delivery networks and given sufficient time, training and control to disseminate / embed low carbon policies and practices across their site or operation.	3	Review the distribution of our green ambassadors and target large sites that currently have no champions at them to gain more volunteers.	2013	Policy Coordinator - Climate Change CEXO
Employee Training	100% of staff training / induction packages reviewed to consider CO ₂ implications & where these are identified (building / fleet managers, janitors etc) training is provided to enable emission reduction projects to be delivered and info' disseminated to others	4	Has been added to staff inductions and included in PDP's. Training given to specific staff e.g. efficient driver training for fleet staff and e-learning packages launched.	2012	Policy Coordinator - Climate Change CEXO
Staff Competencies	Formal plans are in place to introduce CO ₂ reduction as part of competency requirements for selected staff with high carbon intensity job function	2	PDP template reviewed to include climate change and sustainability aspects of job roles.	2012	Policy Coordinator - Climate Change CEXO
Political Commitment	Elected Members have placed emission reduction at the core of the organisations key objectives and hold officials to account for carbon reductions against stated targets in Council Service Plan and Departmental Service Plans	3	Performance Targets are built into the electronic PRMS system and emissions reductions form part of the performance measurement of the Council Programme.	2013	Policy Officer - Climate Change CEXO
	POTENTIAL TOTAL SCORE 2020	65			

Appendix 4: Community Carbon Emissions arising from Municipal Waste

	2011/12			
	Waste Type	Amount (tonnes)	Conversion Factor (kg CO ₂ e/ kg)	Carbon emissions (tonnes CO ₂ e)
Recycled Biodegradable				
	Paper	9791.75	21	205.63
	Cardboard	3135.26	21	65.84
	Books	436.75	21	9.17
	Tetrapacks	9.51	21	0.20
	Textiles	1311.04	21	27.53
	Wood	2984.55	21	62.68
	Furniture	926.44	21	19.46
	Garden Waste	20400.27	6	122.40
Sub Total		38,996		513
Recycled Non-Biodegradable				
	Glass	4760.6	21	99.97
	Steel Cans	247.97	21	5.21
	Aluminium Cans	78.18	21	1.64
	Mixed Cans	398.44	21	8.37
	Mineral Oil	40.77	21	0.86
	Plastic	788.14	21	16.55
	Plasterboard	85.83	21	1.80
	Scrap Metal	1684.89	21	35.38
	WEEE	2348.33	21	49.31
	Batteries	33.91	65	2.20
	Gas Cylinders	25.54	21	0.54
	Tyres	170.21	21	3.57
	Soil	0	1	0.00
	Hardcore	8075.67	1	8.08
	Bric a brac	484.94	21	10.18
	Bicycles	32.05	29	0.93
Sub Total		19,255		245
Waste To Landfill				
Sub Total		90,056	290	26,116
Energy from Waste				
Sub Total		1,139	21	24
Total				26,898

Appendix 5: Highland Council CMP Communication Strategy

Highland Council Carbon Management Plan Communication Strategy 2013-2020

Introduction:

A Carbon Management Plan (CMP) has been developed assist in the reduction of carbon emissions from Highland Council internal operations. There are six strategic themes in the revised CMP2013-20 that make the Highland Council “Carbon CLEVER”.

Reduce	C arbon Emissions from Internal Operations L ead by Example E xplore new Areas for Action V alue for money
Capture Community	E missions R aise Awareness and Promote Behaviour Change

This communication strategy is a key component in the implementation of the CMP and is needed to ensure that further emissions savings are achieved and sustained over time. A programme of behavioural change and awareness-raising will be delivered across all Highland Council staff, Members and the wider public. It will also facilitate knowledge transfer between stakeholders and partner organisations.

The communication plan will help to:

- Form a shared understanding of the Carbon Management Plan’s goals;
- Generate enthusiasm for carbon management;
- Secure necessary resources;
- Keep the actions in touch with changing priorities;
- Identify risks and issues and adapt actions where appropriate;
- Ensure accurate information and guidance is available to staff;
- Improve readiness for change amongst individuals that may be impacted by the carbon management programme, through changes to working practices etc;
- Improve communication between staff of different Services, between operational and management staff and between different organisations.

Identifying Audience

There are a number of key audience groups to target and each require a different approach to ensure key messages are communicated in the correct language, format and to the correct timescale. A summary of key audience groups can be found in the previous [Carbon Management Plan, page 69](#).

Communication Channel Audit

Establishing what current channels of communication exist, who they reach, and how effective they are important. Examples of channels include:

- Face-to-Face channels (e.g. departmental meetings, team meetings, staff forums, management cascades, video conferencing, live online meetings);
- Electronic channels (e.g. e-mail, intranet, internet, CD ROMs, pop-ups);
- Printed channels (e.g. local authority newsletter or newspaper, specialist or departmental newsletter, posters, stickers, external magazines or newspapers);
- Other media channels (e.g. video, telephone, teleconference, marketing media, radio, television etc).

A communication channel audit was carried out at and can be found in the previous [Carbon Management Plan, page 72.](#)

Communication Action Plan

The communication action plan is a summary of intended communications actions, their timing and responsibility. The plan has been developed based on the findings of the communications channel audit. Progress is monitored as part of the CMP monitoring framework.

The Communication Action Plan 2013-2020 is outlined overleaf in **Annex 1.**

HIGHLAND COUNCIL CARBON MANAGEMENT COMMUNICATION ACTION PLAN 2013 - 2020

ANNEX 1

G = Completed or delivery on target **A** = progress with some slippage **R** = No significant progress **P** = To be programmed

INTERNAL FACING:					
	Action	Service	Frequency	Status	Comment
1.1	Ensure carbon reduction is included in at least one management briefing session p.a.	CEXO	Annually	G	Continued from previous plan
1.2	Feature Carbon Management Progress in Service Newsletters and themed newsletters (ICT, Equalities etc).	ALL	Annually	G	Continued from previous plan
1.3	'Green' article in every issue of the Corporate Newsletter "The Big Picture."	CEXO	Quarterly	G	Continued from previous plan
1.4	Advertise initiatives and events on staff notice board on intranet and notice boards at sites.	CEXO	Ongoing	G	Continued from previous plan
1.5	Increase the number of Early Years Centres achieving Eco-Schools bronze, silver and green flag awards.	ECS	Annually	G	Continued from previous plan
1.6	Increase the number of schools achieving Eco-Schools silver awards.	ECS	Annually	G	Continued from previous plan
1.7	Increase the number of schools achieving Eco-Schools green flag awards.	ECS	Annually	G	Continued from previous plan
1.8	5% of schools to engage with the School Global Footprint Project per annum.	ECS/ H&P/TECS	Annually	G	Continued from previous plan
1.9	Put messages in Members Pigeon Holes.	CEXO	On-going	G	Continued from previous plan
1.10	Support Earth Hour & Bike to Work Week.	CEXO	Annually	G	Continued from previous plan
1.11	Carbon Trust Accreditation.	CEXO	2013	G	Continued from previous plan
1.12	Encourage more Green Ambassadors to volunteer and check status of current list	CEXO	On-going	G	Continued from previous plan

1.13	Members CO ₂ Reduction workshop	CEXO	2014	P	Continued from previous plan
1.14	Refreshed Poster Campaign aimed at reducing waste and energy use and encouraging sustainable modes of transport.	CEXO/H&P/TECS	2015	P	Continued from previous plan
1.18	Assign a Member Champion from Current Political Administration.	CEXO	2013	P	Continued from previous plan
1.19	Update Council Screensaver with Green Message.	CEXO	2016	P	Continued from previous plan
1.20	Promote Green Ambassadors signing up to a personal declaration.	CEXO	2015	P	
1.21	Increase the weighting of carbon management in the Capital Programme toolbox.	CEXO	2013	G	
1.22	Investigate the possibility of setting service level targets for carbon emissions reductions.	CEXO	2014	p	
1.23	Introduce CO ₂ reduction as part of competency requirements for selected staff with high carbon intensity job function.	H&P	2014	P	
1.24	Have Key Messages for teachers added to GLOW message board on internet.	CEXO/ ECS	Annually	G	
1.25	Adapt e-mail footer at end of Carbon Officers e-mails.	CEXO	2013	P	
1.26	Participate in Climate Change week.	H&Ps	Annually	G	
1.27	CO ₂ reduction campaign on Council TV's.	H&P	2015	P	
1.28	Investigate ordering envelope re-use labels.	CEXO	2017	P	

EXTERNAL FACING:					
	Action	Service	Time Frame	Status	Comment
2.1	Update the Climate Change Section of the Highland Council Website and ensure linkages are made with all other relevant sections on-line.	CEXO	2014	G	Continued from previous plan
2.2	Hold Community Events to tie-in with National Campaigns. e.g. Energy Efficiency Weeks, Waste Awareness Campaigns & Earth Hour.	ALL	Ongoing	G	Continued from previous plan
2.3	Include CO ₂ message in the distribution of council tax letters.	CEXO/ FINANCE	2016	P	Continued from previous plan
2.4	Continue regular roll-out of press releases related to emissions reductions.	CEXO/Ser vices	Ongoing	G	Continued from previous plan
2.5	Conduct regular workshops with partnership organisations such as members of the Highland Environment Forum.	CEXO	Ongoing	G	Continued from previous plan
2.6	Ensure Carbon Management features in publications distributed to the public.	CEXO	Ongoing	G	Continued from previous plan
2.7	Stalls at festivals/ Highland Games.	ALL	Annually	G	Continued from previous plan
2.8	Social Media - Facebook/Twitter/YouTube	CEXO	On- going	G	Used for Business Travel presentation.
2.9	Flag at HQ saying all schools are green eco schools	CEXO/ ECS	2014	P	
2.10	Share communication expertise with Partners	CEXO	Bi- Annually	G	Continued from previous plan
2.11	Community TV advertising (airport, Eastgate etc)	CEXO	Annually	G	
2.12	Celebrate Renewable Unveilings (PR and articles in Big Pic)	H&P	Annually	P	
2.13	Labels on wheelie bins	TECs	Annually	P	

STAFF TRAINING AND DEVELOPMENT:					
	Action	Service	Review date	Status	Comment
3.1	Attend Management Development Training	CEXO	2015	P	
3.1	Build CMP priorities into staff induction training	Personnel	2015	G	Continued from previous plan
3.3	Responsible Officer training	H&P	2015	P	Continued from previous plan
3.4	Programme of training opportunities for Green Ambassadors	CEXO	Ongoing	G	Continued from previous plan