

**Aberdeen College**

**Environmental Management System and Climate Change  
Action Plan – January 2010 to December 2014**

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## 1.0 Introduction and Background

As part of the College's Environmental Management System, ISO 14001 accreditation and EcoCampus Platinum Award an action plan with targets is required where the environmental significance of activities is high.

The College is also a signatory to the Universities and Colleges Climate Commitment for Scotland (UCCCfS) and this requires the College to *implement measures to reduce the overall carbon footprint and engage in the community planning process to deliver low-carbon solutions ("mitigation") by preparing a five-year climate action plan with targets and timescales to achieve significant reductions in emissions from activities, Including:*

- Energy consumption and source (Theme 1)
- Waste reduction, recycling and responsible disposal (Theme 2)
- Sustainable estate development and Biodiversity (Theme 3)
- Sustainable travel planning (Theme 4)
- Responsible procurement of goods and services (Theme 5)
- Enhance learning and teaching through provision of skills, modules and courses (Theme 6)
- Promote research capacity and knowledge exchange activity in sustainability (Theme 7).

The College has chosen to ensure there is only one action plan in place to avoid confusion. Therefore the action plan prepared for the ISO14001 standard has been revised to fulfil the needs of UCCCfS and the ISO 14001 standard.

Under theme 1 above the action plan has added water conservation because of the high energy consumption involved in supplying domestic water.

The action plan also subsumes the recommendations contained within the College's Energy Performance Certificates (EPC) issued for each building over 1000m<sup>2</sup> in January 2009.

This 5 year Climate Change Action Plan has been produced to support the delivery of our Climate Commitment, signed on 21 January 2009. Aberdeen College recognises that this will require the allocation of time and resources and therefore the plan has become part of the strategic and operational planning process.

### Interpretation

The College has developed the action plan in recognition of both the need to reduce its carbon footprint through both the use of low carbon solutions but also through the overall reduction in energy use directly or indirectly through the consumption of goods and energy.

The College believes that simply moving to low carbon emission technologies or solutions is insufficient on its own to achieve the necessary impact.

### Environmental Policy Statement

The College policy is to ensure that it conducts its business in a manner that minimises its environmental impact as far as is practicable.

This will be achieved by:

- Complying fully with relevant Environmental Legislation.
- Promoting sound environmental management practices in curriculum and administrative support activities.
- Increasing awareness of environmental responsibilities amongst staff and students.
- Minimising waste and preventing pollution via effective waste management practices.

- Implementing a purchasing policy which will, in addition to cost and quality, consider the extent to which providers promote environmental friendly products and services.
- Exploiting the opportunities to reduce the consumption of fossil fuels and the consumption of water.
- Avoiding the unnecessary use of non-environmentally friendly materials, substances and processes.
- Encouraging the use of modes of transport which reduce and minimise the impact on the environment.
- Integrating appropriate environmental elements into academic and vocational courses across the curriculum where feasible.
- Minimising the environmental impact of new buildings during their construction and their use.

### **Community and Stakeholder Engagement**

In developing the plan the college has consulted widely using the following mechanisms:

*Sustainability Groups* – Each College Centre has an established Sustainability Group. One meeting of each group was devoted to considering a draft action plan along with the opportunity to make suggestion for additions and changes. The Sustainability Groups have staff and student representatives.

*Management Information Group (MIG)* – The MIG considering sustainability within one of its regular meetings.

*College Intranet* – A draft version of the draft Environmental Management System and Climate Change Action Plan was e mailed to all staff and comments and suggestions invited.

*Students Association* – The College Student Association was invited to make comment on the draft Climate Change Action Plan

### **2.0 Project Management**

The overall leadership within Aberdeen College in relation to the CCAP has been allocated to the Director of Resources for Learning who is a member of the Senior Management Team

The CCAP Implementation Group will as part of its remit plan and monitor the implementation and assess the impact of the Environmental Management System and Climate Change Action Plan and report to the College’s Environmental Sustainability Group on a regular basis.

The benchmark data in Table 2 is shown as whole year data. Monthly data was used to compile the annual figures. This data provides monthly benchmarking data to more effectively monitor progress towards target and measure the impact of projects and initiatives. To support the monitoring of performance against target a system of monthly recordings and readings has been put in place to support the process of improving the environmental performance of the College.

On an annual basis the Environmental Management System and Climate Change Action Plan will be evaluated by the Management Review Group. The purpose of this evaluation will be to assess progress against the Environmental Performance Benchmarking Data and Targets, recalculate the College’s Carbon Footprint and determine changes to the Action Plan in light of performance and changed circumstances.

The College’s Environmental Management System within the Roles and Responsibilities statement clearly sets out the responsibility of individuals within the College. Table 1 below sets out the main individuals and committees that lead, inform and monitor the Climate Change Action Plan.

Table 1: Management and Delivery Roles

<b>Role in CCAP</b>	<b>Name</b>	<b>Position</b>
<b>CCAP Lead</b>	Robert Bellfield	Director of Resources for Learning
<b>Management Review Group</b>	Rob Wallen	Principal
	Roddy Scott	VP and Director of Finance and Administration
	Alison Hay	VP and Director of Human Resources
	Sandra Walker	Director of Curriculum and Learning
	Robert Bellfield	Director of Resources for Learning
	Frank Hughes	Associate Principal (Student Support Services)
	Charlie Deane	Associate Principal
<b>Environmental Sustainability Group</b>	Gillian Forshaw	Environment and Sustainability Manager
	Robert Bellfield	Director of Resources for Learning
	Frank Hughes	Associate Principal (Student Support Services)
	Gillian Forshaw	Environment and Sustainability Manager
	David Simpson	Facilities Management
	Colin Beattie	Health and Safety Manager
	Morag Cole	Executive Assistant
	Bruce Gilliland	Senior lecturer Quality Improvement
	Rick Hollstein	Quality Audit Co-ordinator
Colin Brodie	Purchasing Manager	
<b>CCAP Implementation Group - practitioners</b>	Graeme Kirkpatrick	Student Association President
	Robert Bellfield	Director of Resources for Learning
	Gillian Forshaw	Environment and Sustainability Manager
	David Simpson	Facilities Management
	Colin Beattie	Health and Safety Manager
	Scott Matthew	Technical Manager

### 3.0 Baseline Carbon Footprint

The carbon footprint calculation in Table 2 below covers the following emissions according to scope.

Scope 1 refers to direct GHG emissions occurring from sources that are owned or controlled by the institution including on site combustion of fossil fuels in boilers and mobile combustion of fossil fuels by the institution its vehicles owned by it. Scope 1 also includes fugitive emissions resulting from intentional and unintentional release of GHGs including leakage of HFCs from refrigeration and air conditioning.

Scope 2 refers to indirect emissions generated in the production of electricity consumed by the institution.

Scope 3 emissions relates to all other indirect emissions – those that are a consequence of the activities of the institution, but occur from a source not owned or controlled by the organisation. These include – waste disposal embodied emissions from extraction, production and transportation of purchased goods, outsourced activities, and contractor owned vehicles and line loss from electricity transmission and distribution. Within the calculation the College has included the following scope 3 emissions:

- Business travel (private car)
- Business travel (train and flights)
- Commuting by College staff (estimate)

Table 2: Baseline Carbon Footprint

Scope	Element	Unit	08-09 Actual 1.04 to 31.3	Emission Factor kg CO <sub>2</sub> -e/unit	Emissions kg CO <sub>2</sub> -e
Direct Emissions – Scope 1	Gas	KWh	3,080,205	0.1850	569,838
	Oil	Litre	555,663	2.520	1,400,270
	College owned transport - diesel	Litre (diesel)	12,300	2.6304	32,353
Indirect Emissions – Scope 2	Electricity	KWh	4,458,345	0.5370	2,394,131
Other Emissions – Scope 3	Business travel - car	km	43,320	0.12	5,198
	Business travel – train	Km	40,903	0.0602	2,462
	Business travel - plane	Km	52,860	0.1911	10,101
	Staff Commuting	Km	2,972,214	0.12	356,665
<b>Total Emissions</b>					<b>4,771,018</b>

#### 4.0 Business as usual Emissions

Table 3 below shows the “business as usual” emissions that the College would produce if no actions were taken to reduce consumption or reduce the level of particular activities.

The annual growth rates used were suggested by EAUC and have been used to produce a compound rate of growth. On the basis of these assumptions the costs for the College for energy and the identified activities would rise as a proportion of total costs. It may also be that due to the increasing scarcity of energy the costs may rise relative to other goods and services.

Table 3: Business as usual Emissions

Scope	Element	Unit	Base Line Emissions 1.04.08 to 31.3.09 kg CO <sub>2</sub> -e	Annual Growth Rate	Emissions AY13-14 kg CO <sub>2</sub> -e
Direct Emissions – Scope 1	Gas	KWh	569,838	0.7%	592,631
	Oil	Litre	1,400,270	0.7%	1,456,281
	College owned transport - diesel	Litre (diesel)	32,353	0.7%	33,647
Indirect Emissions – Scope 2	Electricity	KWh	2,394,131	0.7%	2,489,896
Other Emissions – Scope 3	Business travel - car	km	5,198	0.7%	5,382
	Business travel – train	Km	2,462	0.7%	2,549
	Business travel - plane	Km	10,101	0.7%	10,459
	Staff Commuting	Km	356,665	1%	374,858
<b>Total Emissions</b>			<b>4,771,018</b>		<b>4,965,703</b>

## 5.0 Methodology and Categories for Action

As part of the College's Environmental Management System the College through its Legal and Compliance Register and Environmental Aspects and Impacts Register identifies the key elements to address within the EMS. Therefore to avoid duplication or contradiction these registers have been used to identify the 10 projects within the Climate Change Action Plan. The basis and structure of these registers is explained below.

### Register of Environmental Legislation and other Compliance

To support a high level of environmental compliance the College maintains an Register of Environmental Legislation and other Compliance to ensure that it identifies and responds to existing and new legislation. The maintenance of the register is the responsibility of the College's Environmental Sustainability Manager.

### Environmental Aspects and Impacts Register (EAIR)

The Colleges significant environmental aspects were analysed and recorded in the Environmental Aspects and Impacts Register. An environmental aspect is defined in ISO 14001 as an: "element of an organisation's activities or products or services that can interact with the environment". Significant aspects are those that have either a positive or negative significant impact on the environment. Identifying and recording the College's significant environmental aspects is an important precursor to setting objectives and targets for improvement, and is an essential part of developing an effective environmental management system (EMS). Using the EcoCampus Loreus Significance Calculator, a list of the College's aspects, with their significance scores were recorded in the Environmental Aspects and Impacts Register.

Although the Colleges operations are not classed as particularly high risk any aspect governed by legislation will automatically be given a maximum final significance score of 7 because of the importance of complying with all legislation. As most operations are governed in some way by legislation they were then further divided into high, medium and low risk group. Most have a low or medium risk due to current control measures and the relatively small quantities of liquids/waste stored on site. All aspects are addressed at an early stage when setting objectives and targets for environmental improvement. The maintenance of the register is the responsibility of the College's Environmental Sustainability Manager.

### Categories for Action

Table 4 highlights areas of high environmental significance and all have been fully addressed in the Environmental Management System and Climate Change Action Plan. The Environmental and Sustainability Manager (ESM) will have overall responsibility for implementing the actions.

Table 4: Aspects with High Significance

Aspect	Objective	Theme
Water and Sewage	Reduce water consumption	1, 2 and 3
Oil Use	Reduce oil consumption	1 and 3
Gas Use	Reduce gas consumption	1 and 3
Electricity use	Reduce electricity consumption	1 and 3
Waste	Reduce waste production Increase separation rates	2 and 5
Transport and Deliveries	Reduce car mileage	4

As a further education establishment Theme 6: Provision of Skills Training, Modules and Courses" is considered highly relevant and one that should be addressed within the action plan as the College sees its role as both "quote from HMIE". Conversely the College has a limited role in relation to the Theme 7: Research capacity and Knowledge Exchange Activity and therefore this theme has not been addressed within the action plan.

Therefore, from this analysis the following themes are addressed within the College's Climate Change Action Plan:

- Energy consumption and source (Theme 1)
- Waste reduction, recycling and responsible disposal (Theme 2)
- Sustainable estate development and Biodiversity (Theme 3)
- Sustainable travel planning (Theme 4)
- Responsible procurement of goods and services (Theme 5)
- Enhance learning and teaching through provision of skills, modules and courses (Theme 6)
- Promote research capacity and knowledge exchange activity in sustainability (Theme 7).

## **6.0 Environmental Performance Benchmarking Data and Targets**

A range of measures have been selected to provide benchmarking data for the College regarding its environmental performance. The measures cover the areas of energy and water use, waste and transport. Table 5 on page 10 identifies the benchmarking data for AY2008-09 (based on the period 01.04 to 31.03) and targets for the period AY2009-10 to AY2013-14.

The benchmarking measures have been selected for their impact on the environment and the production of CO<sub>2</sub>. An additional consideration has been the availability of reliable and valid recording and record keeping systems.

Targets have been set for the key energy inputs to the College – energy for heating, energy for electrical equipment and cooling and energy for powering vehicles. A key target relates to water consumption which can be considered an energy target given the high energy input required to treat and transport fresh water and dispose of grey and foul water.

Data related to input goods to the College is difficult to measure and monitor. A key measure is the consumption of paper and the number of photocopies is being used as surrogate measure. The main approach to reducing goods input is to set overall targets for reducing overall waste production as well as targets related to increasing the proportion of separated waste as a portion of overall waste.

Across the five year period the targets can be summarised as follows.

- Water – 15% reduction
- Energy – 15% reduction
- Waste – 15% reduction in total waste and 75% of all waste to be separated for recycling.
- College owned vehicle mileage – 15% reduction
- Reprographics – 15% reduction

Table 6 shows, where appropriate, the benchmark data and targets to carbon emissions to show the impact on the kg CO<sub>2</sub>-e produced. As will be noted the overall fall in kg CO<sub>2</sub>-e is X% which is significantly greater than the reduction in direct and indirect energy consumption. This is due to switching from oil fired heating to methane gas at the College's Gallowgate Centre.

Table 5: Environmental Performance Benchmarking Data and Targets

Category	Element	Unit	08-09 Actual 1.04 to 31.3	% Change AY09-10	AY09-10 Target	% Change AY10-11	AY10-11 Target	% Change AY11-12	AY11-12 Target	% Change AY12-13	AY12-13 Target	% Change AY13-14	AY13-14 Target
Energy	Gas	KW	3,080,205	(2%)	3,018,600	(3%)	2,982,042	+141%	7,195,312	(4%)	6,899,005	(4%)	6,631,203
	Electricity	KW	4,458,345	(2%)	4,369,178	(3%)	4,238,103	(3%)	4,110,960	(4%)	3,946,521	(4%)	3,788,660
	Oil	Litre	555,663	(2%)	544,549	(3%)	528,213	(85.4%)	76,854	(4%)	73,780	(4%)	70,829
Water	Water	m cu	23,980	(2%)	23,500	(3%)	22,795	(3%)	22,111	(4%)	21,227	(4%)	20,378
	College	Miles	123,000	(2%)	120,540	(3%)	116,924	(3%)	113,416	(4%)	108,879	(4%)	104,524
Vehicles	Private	Miles	27,075	(2%)	26,533	(3%)	25,737	(3%)	24,965	(4%)	23,966	(4%)	23,008
	Internal	No	1,596,241	(2%)	1,564,316	(3%)	1,517,387	(3%)	1,471,865	(4%)	1,412,990	(4%)	1,356,471
Copying	External	No	5,945,662	(2%)	5,826,748	(3%)	5,651,946	(3%)	5,482,387	(4%)	5,263,092	(4%)	5,052,568
	Separated Waste	%	56%		62%		66%		69%		73%		75%
Waste	Total Waste	Tonnes	423.8	(2.2%)	414.7	(3%)	402.3	(3%)	390.1	(4.2%)	373.7	(3.7%)	359.5
	Printer cartridges	No	1,330	(2%)	1,303	(3%)	1,264	(3%)	1,226	(4%)	1,177	(4%)	1,130

NB Separated waste includes paper, card, plastic, wood, construction materials, and electrical which has the potential to recycled or reused.

Table 6: Kg CO<sub>2</sub>-e profile for the Climate Change Action Plan

Element	Unit	08-Sep Actual 1.04 to 31.3	Kg CO <sub>2</sub> -e	AY09-10 Target	Kg CO <sub>2</sub> -e	AY10-11 Target	Kg CO <sub>2</sub> -e	AY11-12 Target	Kg CO <sub>2</sub> -e	AY12-13 Target	Kg CO <sub>2</sub> -e	AY13-14 Target	Kg CO <sub>2</sub> -e
Gas	KW	3,080,205	569,838	3,018,600	558,441	2,982,042	551,678	7,195,312	1,331,133	6,899,005	1,276,316	6,631,203	1,226,773
Electricity	KW	4,458,345	2,394,131	4,369,178	2,346,249	4,238,103	2,275,861	4,110,960	2,207,586	3,946,521	2,119,282	3,788,660	2,034,510
Gas Oil	Litre	555,663	1,400,270	544,549	1,372,263	528,213	1,331,097	76,854	193,672	73,780	185,926	70,829	178,489
Vehicles	miles	123,000	32,353	121,100	31,706	117,467	30,391	113,943	29,832	109,385	28,639	105,510	27,493
Private Vehicles	miles	27,075	5,198	26,533	5,094	25,737	4,942	24,965	4,793	23,966	4,601	23,008	4,418
Other			369,228		372,883		376,573		380,301		384,066		387,867
Scope 3			4,771,018		4,686,636		4,570,542		4,147,317		3,998,830		3,859,550
Kg CO <sub>2</sub> -e				1.78%		2.5%		9.25%		3.6%		3.5%	
Reduction - Kg CO <sub>2</sub> -e per year													
Reduction - Kg CO <sub>2</sub> -e Cumulative					1.78%		4.2%		13%		16.2%		19.1%

## 7.0 Emission Reduction Strategies

This action plan has been designed to address the 7 themes identified by the Universities and Colleges Climate Commitment for Scotland, the aspects of high significance from the College Aspects and Impacts Register and where feasible recommendations contained within the Energy Performance Certificates (EPC).

### Theme 1: Energy Consumption and Source

**Project 1:** Improve efficiency of water use.

**Objective and target:** To reduce water consumption by 15% by July 2014.

EAIR Ref	Aspect	Action	Deadline	Responsibility
GO12 – Water and Sewage	All sites - Water use in taps	Install water saving spray heads to all taps where feasible	July 2011	Director of Resources for Learning
GO12- Water and Sewage	All Sites - Water use in toilets.	Install hippo device in toilet cisterns (where capacity over 6 litres) where feasible.	July 2011	Director of Resources for Learning
GO12- Water and Sewage	All Sites - Water use in urinals	Install Passive Infrared Sensor Systems PIRS where appropriate.	July 2011	Director of Resources for Learning
GO12 – Water and Sewage	All Sites – Water temperature in taps.	Look into adding cold mixer valves to sinks to reduce hand wash temperatures.	July 2011	Director of Resources for Learning
GO12 – Water and Sewage	All Sites – Water Use in toilets	Feasibility study carried out on PIRS installed in toilets.	March 2010	Director of Resources for Learning
GO12 – Water and Sewage	Gallowgate– Hot water pipes	Lagging throughout to be inspected and upgraded if found inadequate.	July 2012	Director of Resources for Learning

**Project 2:** Improve efficiency of energy use.

**Objective and target:** To reduce overall energy consumption by 15% and substituting 85% of fuel oil with natural gas by 2014.

EAIR Ref	Aspect	Action	Deadline	Responsibility
GO10 – Electricity Use	All sites: - Energy Policy and Management System.	Develop an Energy Policy and associated Energy Management System.	Jan 2010	E&S Manager
GO10 - – Electricity Use	All sites: - Reduce power consumption of IT systems.	Install power management software to PC. Reduce server numbers through virtualisation Reduce printer power consumption.	Jan 2010 Aug 2010 Aug 2012	IT - MIM

G010 - – Electricity Use	<b>All Sites - Green Energy.</b>	Ensure minimum of 10% Green Energy from supplier.	Jan 2010	Vice Principal (F&A)
G013 – Lighting, Illumination and Projection G010 – Electricity Use	<b>All sites:</b> - Halogen Spotlights.	Install halogen spotlights with CFL equivalent where feasible.	Aug 2012	Director of Resources for Learning
G013 – Lighting, Illumination and Projection G010 – Electricity Use	<b>All Sites – Energy Efficiency</b>	Segregate ventilation from lighting circuits in toilets to allow lighting to be switched off if sufficient natural light is present.	March 2010	Director of Resources for Learning
G013 – Lighting, Illumination and Projection G010 – Electricity Use	<b>All Sites – Energy Efficiency</b>	Lighting schemes throughout the sites could be investigated to see if extra switching would give added flexibility allowing part rooms to be lit if under occupied.	March 2010	Director of Resources for Learning
G08 – Oil Use	<b>Gallowgate - boiler efficiency.</b>	Install optimum start – stop and weather compensation controls.	Aug 2010	Director of Resources for Learning
G08 – Oil Use	<b>Gallowgate - Boiler Efficiency.</b>	Investigate installing gas boilers.	Aug 2010	Director of Resources for Learning
G010 - – Electricity Use G013 – Lighting, Illumination and Projection	<b>Gallowgate - Presence Detectors.</b>	Install presence detectors in an additional 20 classrooms.	Aug 2012	Director of Resources for Learning
G010 - – Electricity Use G013 – Lighting, Illumination and Projection	<b>Gallowgate - Mercury lamps in reception.</b>	Replace mercury lamps in reception with T5 suspended luminaries.	Aug 2012	Director of Resources for Learning
G010 - – Electricity Use G013 – Lighting, Illumination and Projection	<b>Gallowgate - T12 Bulbs.</b>	Replace T12 and T8 bulbs to T5 through routine replacement.	Aug 2012	Vice Principal (F&A)
	<b>Gordon - Cavity Walls.</b>	Investigate installation of cavity wall Insulation.	Aug 2010	Director of Resources for Learning
	<b>Gordon - T12 bulbs.</b>	Replace T12 and T8 bulbs to T5 through routine replacement.	Aug 2012	Vice Principal (F&A)

	<b>Gordon Sports Centre - Renewable Energy.</b>	Investigate solar water heating.	Aug 2010	Director of Resources for Learning
	<b>Gordon Sports Centre - Overheating.</b>	Investigate solar control measures such as the application of reflective coating or shading devices to windows.	Aug 2013	Director of Resources for Learning
<b>G010 - -- Electricity Use G013 -- Lighting, Illumination and Projection</b>	<b>Gordon - Presence Detectors.</b>	Investigate installation of presence detectors to lights in sports hall and corridor.	Aug 2012	Director of Resources for Learning
	<b>Clinterty - Boiler Efficiency.</b>	Investigate replacing boiler with a high efficiency lower capacity boilers.	Aug 2010	Director of Resources for Learning
	<b>Clinterty - Insulation on hot water storage.</b>	Improve insulation of hot water storage.	Aug 2010	Director of Resources for Learning
	<b>Clinterty - Cavity Walls.</b>	Investigate installation of cavity wall Insulation.	Aug 2010	Director of Resources for Learning
	<b>Clinterty -- Roof Insulation.</b>	Investigate improvements in roof insulation.	Aug 2013	Director of Resources for Learning
<b>G09 -- Gas Use</b>	<b>Altens - Boiler replacement.</b>	Investigate replacing existing gas boilers with new efficient boilers.	Aug 2010	Director of Resources for Learning
<b>G09 -- Gas Use G010 - -- Electricity Use</b>	<b>Altens - Heating efficiency.</b>	Investigate installation insulation of external walls where feasible.	Aug 2013	Director of Resources for Learning
<b>G09 -- Gas Use G010 - -- Electricity Use</b>	<b>Altens - Improve heating efficiency.</b>	Investigate replacing the Powermatic oil heater with gas radiant heaters.	Aug 2010	Director of Resources for Learning
<b>G09 -- Gas Use G010 - -- Electricity Use</b>	<b>Altens - Improve lighting efficiency.</b>	Install T8 lamps with retrofit T5 conversion kit.	Aug 2012	Director of Resources for Learning
<b>G09 -- Gas Use G010 - -- Electricity Use</b>	<b>Altens - Improve efficiency of windows.</b>	Investigate replacing/improving glazing and/or frames.	Aug 2013	Director of Resources for Learning
	<b>Altens F Block - Fan Speed.</b>	Investigate adding variable speed drives to fans.	Aug 2013	Director of Resources for Learning
	<b>Altens F Block - Ventilation Systems</b>	Investigate adding heat recovery to supply and extract ventilation systems.	Aug 2013	Director of Resources for Learning

	<b>Altens F Block</b> - Ductwork leakage is high.	Inspect and seal ductwork.	Jan 2010	Vice Principal (F&A)
	<b>Workshop Areas</b>	Where feasible fit clear plastic drapes to large roller doors to prevent heat loss in workshops when doors left open.		

## Theme 2: Waste reduction, separation and responsible disposal

### Project 3: Reduce paper consumption

**Objective and target:** To reduce overall paper consumption by 15% by 2014

EAIR Ref	Aspect	Action	Deadline	Responsibility
	<b>All Sites</b> - Reuse of current items before new ones art procured.	Create a store next to the Mailroom where items which can be advertised internally for reuse e.g. stationery, office furniture etc. Before and stationery orders can be raised the store must first be checked.	May 2010	E&S Manager
G014 – Photocopying and Printing	<b>All Sites</b> - Printers.	Set printers to double side printing where possible. Restrict printer purchase to duplex models.	Jan 2010	IT - MIM
G014 – Photocopying and Printing	<b>All Sites</b> - Photocopiers.	Set photocopiers to print double sided where possible. Review existing photocopiers.	Jan 2010	E&S Manager
G014 – Photocopying and Printing	<b>All sites</b> - Printing Limitations.	Allocate printing limits to each department.	Aug 2010	Director Of Curriculum and Learning and Associate Principal (SSS)
	<b>All Sites</b> - Use of scanners.	Encourage staff to scan documents where appropriate if no electronic copy is available and if copyright permits.	Aug 2012	IT - MIM

**Project 4:** Increase separation rates.

**Objective and target:** To increase overall waste production by 15% and achieve 75% separation of waste for recycling by 2014

EAIR Ref	Aspect	Action	Deadline	Responsibility
	<b>All Sites</b> - Recycling.	Install Separation Stations and advertise.	Jan 2010	E&S Manager
	<b>All Sites</b> - Management of skips.	Ensure all skips are clearly labelled.	Jan 2010	E&S Manager
	<b>All Sites</b> - Office recycling.	Install separation bins in all offices.	Jan 2010	E&S Manager

### Theme 3 - Sustainable Estate Development and Biodiversity

**Project 5:** Ensure sustainable development and environmental management are integral in to the design, construction and occupancy of new and refurbished buildings.

**Objective and target:** To ensure new buildings achieve a BREEAM rating of "Excellent", refurbished buildings achieve a BREEAM rating of "Very Good" and all minor refurbishments and improvements are reviewed by the Environmental and Sustainability Manager.

EAIR Ref	Aspect	Action	Deadline	Responsibility
	<b>All Sites</b> - Environmental Risks	Ensure all environmental risks are assessed, managed and controlled to minimise the impact of new build, refurbishment and maintenance projects. Meet the requirements of Environmental Legislation and protect and enhance the built and natural environment.	Dec 2014	E&S Manager

	<p><b>All Sites - Promotion of Best Practice</b></p>	<p>Promote and adopt best practice for sustainable design, construction and post occupancy management.</p> <p>Ensure:</p> <ul style="list-style-type: none"> <li>• Specification of new build, refurbishment and maintenance projects takes account of economic, social and environmental issues and set targets for key performance indicators.</li> <li>• Design of buildings is flexible to allow ease of changes.</li> <li>• Integrated passive design features, such as orientation, glazing, insulation and natural ventilation, are built into the design of buildings.</li> <li>• Capital projects have an Environmental Impact Assessment that specifies the environmental risks and control strategies</li> <li>• Contractors/consultants have an Environmental Management System</li> <li>• Waste produced during building projects is minimised</li> <li>• Materials have a minimal impact on the environment and that at least 10% of the materials value of projects is derived from recycled content.</li> </ul>	<p>Dec 2014</p>	<p>E&amp;S Manager</p>
	<p><b>All Sites - Whole life costs</b></p>	<p>Reduce whole life costs for new build and refurbishment.</p> <p>Ensure:</p> <ul style="list-style-type: none"> <li>• Buildings meet the requirements of the College's Estate strategy for the development of the campus, its infrastructure and people movement between buildings.</li> <li>• Building design takes into account the impact of climate change on temperature and rainfall.</li> <li>• Building achieves its energy and water efficiency ratings through its management and maintenance plans and seeks to achieve 10 per cent renewable energy.</li> <li>• Sufficient recycling facilities.</li> <li>• Adequate storage and collection facilities for other wastes, such as chemicals, and clinical, radioactive and other hazardous wastes.</li> <li>• Travel by staff and students to the building are in line with the Transport Plan.</li> <li>• Grounds maintenance plans, as part of the College's Estate strategy, seek to protect existing habitats and species and where necessary provide details of mitigation, enhancement and compensation strategies.</li> </ul>	<p>Dec 2014</p>	<p>E&amp;S Manager</p>

	<b>All Sites – Staff development</b>	Develop managers, staff, and students by providing training and information on sustainable design, construction and post occupancy management. Keep College community informed of all objectives.	Mar 2010	E&S Manager
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**Project 6: Improve biodiversity of the College farm holding.  
Objective and target: Maintain 5 year Rural Stewardship Scheme (RSS) at the Clinterty site.**

<b>EAIR Ref</b>	<b>Aspect</b>	<b>Action</b>	<b>Deadline</b>	<b>Responsibility</b>
	<b>Clinterty</b> - Create new habitats.	Create 700m of new hedgerows around boundary of farm and protect against grazing.	Aug 2010	Director of Resources for Learning
	<b>Clinterty</b> - Create new habitats.	Fence 700 metres of ditch to create 6m wide water margins.	Aug 2010	Director of Resources for Learning
	<b>Clinterty</b> - Improve water quality and habitat potential.	Exclude livestock and reduce potential for pesticides or fertilisers reaching watercourses.	Aug 2010	Director of Resources for Learning
	<b>Clinterty</b> - Improve water quality and habitat potential.	Fence area of wetland and only permit grazing by stock at certain times of the year.	Aug 2010	Director of Resources for Learning
	<b>Clinterty</b> - Provide a habitat for predators of arable pests containing an excellent nectar source for bees.	Establish a beetle bank (6m wide grass margin) around one of the main arable fields.	Aug 2010	Director of Resources for Learning
	<b>Clinterty</b> - Protect nesting birds.	Manage grass field under the prescription "Mown Grassland for birds" and restrict agricultural operations to periods when birds are not nesting. Carry out Silage mowing in a way which allows birds to escape.	Aug 2010	Director of Resources for Learning

**Objective and target:** Maintain 5 year Land Management Contract (LMC) at the Clinterty site.

EAIR Ref	Aspect	Action	Deadline	Responsibility
	<b>Clinterty</b> - Increase the number of birds surviving in the winter and reduce erosive action and sediment loss from soils to watercourses.	Retain Winter Stubble on 15 hectares which will commit the farm to leaving stubbles of spring sown crops through till 1 <sup>st</sup> March each year before ploughing for the next year's crop.	Aug 2012	Director of Resources for Learning
	<b>Clinterty</b> - Nutrient Management.	Employ Nutrient Management which aims to decrease diffuse pollution from farmland by carrying out regular soil testing to match inorganic and organic fertiliser to crop requirements.	Aug 2012	Director of Resources for Learning

**Objective and target:** Maintain Land Management Options (LMO) at the Clinterty site on 0.2 ha small scale woodland next to the College.

EAIR Ref	Aspect	Action	Deadline	Responsibility
	<b>Clinterty</b> - Contribute to carbon sequestration. Diversify and enhance the natural landscape. Enhance species habitats and woodland habitat networks.	Plant woodland with native species.	Jan 2009	Director of Resources for Learning
	<b>Clinterty</b> - Contribute to carbon sequestration. Diversify and enhance the natural landscape. Enhance species habitats and woodland habitat networks.	Underplant with wild flowers when ground clear and more shading	April 2011	Director of Resources for Learning

**Objective and target:** Ensure compliance with the designation of the farm land at Clinterty as a Nitrate Vulnerable Zone (NVZ)

EAIR Ref	Aspect	Action	Deadline	Responsibility
	Clinterty - Ensure compliance with the statutory scheme put in place in 2003 to reduce nitrate loss from agricultural land.	Restrict timings and quantities of inorganic fertilisers and organic manures that can be applied.	Jan 2009	Director of Resources for Learning

#### Theme 4 - Sustainable travel planning

**Project 7:** Reduce vehicle mileage

**Objective and target:** To reduce overall College vehicle mileage by 15% by 2014

EAIR Ref	Aspect	Action	Deadline	Responsibility
G015	All Sites - Video Conferencing.	Encourage video conferencing between centres.	Mar 2010	Technical Manager All Managers
G015	All Sites - Travel Plans.	Develop site specific Travel Plans for all College sites in conjunction with NESTRANS.	Mar 2010	E&S Manager
G015	All Sites - Cycle Storage.	Install cycle lockers for pilot scheme at Gallowgate Centre.	Jan 2010	E&S Manager

#### Theme 5 - Responsible procurement of goods and services

**Project 8:** Review the College's supply chain to establish the environmental performance of suppliers and contractors.

**Objective and target:** Ensure all College sub-contractors and approved contractors have an environmental policy or arrangements in place and environmental performance of the supplier and the goods is considered as part of the process in selecting goods and suppliers consistent with good value for money.

EAIR Ref	Aspect	Action	Deadline	Responsibility
G01	All Sites - Current contractors environmental and sustainability criteria.	Review all prequalification questionnaires to ensure reference is made to environmental and sustainability criteria.	Jan 2010	Purchasing Manager

GO1	<b>All Sites</b> - Current suppliers list with regards to environmental and sustainability criteria.	Suppliers to complete and return a prequalification questionnaire to establish their level of environmental performance and check whether their products are re-useable, recyclable or ethically produced.	Jan 2010	Purchasing Manager
GO1	<b>All Sites</b> - Environmental Performance of suppliers and contractors.	Encourage existing suppliers and contractors to improve their environmental performance by making Environmental Policy Statements mandatory. Provide advice/ guidelines to contractors or suppliers who do not currently have one.	Jan 2010	H and S Manager
GO1	<b>All Sites</b> - Environmental Policy Statements.	Require suppliers and contractors to provide their environmental policy statement at tender stage.	Jan 2010	Purchasing Manager
GO1	<b>All Sites</b> - Items currently purchased	Complete survey of items currently purchased and cost out environmentally sustainable/ ethically traded alternatives.	Aug 2010	Purchasing Manager
GO1	<b>All Sites</b> - Whole Life Costing	Evaluate whole life costs of products and services.	Aug 2010	Purchasing Manager
GO1	<b>All Sites</b> - Consideration of environmental impacts of goods and services before they are procured.	Investigate purchasing: <ul style="list-style-type: none"> <li>• Goods with limited packaging.</li> <li>• Photocopiers and printers with double sided capabilities.</li> <li>• Highly durable office equipment.</li> </ul>	Jan 2010	Purchasing Manager

### Theme 7: Enhance Learning and Teaching

**Project 9:** Sustainable development education.

**Objective and target:** Ensure staff and students have high levels of awareness regarding sustainability and the College's approaches and practices.

EAIR Ref	Aspect	Action	Deadline	Responsibility
	<b>All Sites</b> - Environmental and Sustainability days	Organise Annual Environmental and Sustainability Day for students.	Nov - Annually	E&S Manager
	<b>All Sites</b> – Staff Induction	Ensure all new staff is aware of all Environmental and Sustainability initiatives and are made aware of the Environmental Policy Statement.	Aug 2009	E&S Manager
	<b>All Sites</b> - Student Induction	Guidance Tutors to deliver a student induction presentation ensuring all students attending the College are aware of all Environmental and Sustainability initiatives.	Aug 2009	Head of Learner Services

	<b>All Sites - Staff Training</b>	Ensure all staff receive training in relation to sustainability and the College's Environmental Management Systems	Aug 2011	Vice Principal (HR)
	<b>All Sites - Contractor and Sub-Contractor Training</b>	Ensure all contractors and sub-contractors receive information and training.	Aug 2009	E&S Manager
	<b>All Sites - Presentations</b>	Ensure regular environmental and sustainability presentations are displayed on the plasma screens throughout the College.	Aug 2014	E&S Manager
	<b>All sites - Use of Abnet and E-mail</b>	Ensure staffs are communicated effectively with in relation to sustainability issues.	Aug 2014	E&S Manager
	<b>All Sites - Environmental and Sustainability Webpage's on Abnet and Student Portal.</b>	Maintain webpage's on Abnet and S-Portal for staff and students relating to sustainability.	Aug 2014	E&S Manager

**Project 10:** Sustainable development education in curriculum areas.

**Objective and target:** Ensure sustainable education is incorporated into all programmes where and as appropriate.

	<b>All Sites - Embedding sustainability across the curriculum.</b>	<p>Include units on aspects of sustainability within programmes where permitted by course frameworks and embed awareness of sustainability within courses where appropriate.</p> <p>Ensure sustainability is referred to specifically within the Programme Delivery Guidelines and individual lesson plans.</p> <p>Audit and monitor the extent of embedding of concepts of sustainability within different curriculum areas as part of the Soft Skills and Teaching Pack audit, the annual self-evaluation reports of teams and lesson observation.</p> <p>Ensure the College's Knowledge base includes information and examples relating to sustainability in the curriculum in the Soft Skills area in the sustainability area.</p>	Mar 2010	Sector/Department Managers
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	<p><b>Sector of Engineering and Construction - curriculum review.</b></p>	<p>Establish a working group with the Sector - Engineering and Construction to identify units and programmes for introduction to meet the identified needs of industry.</p> <p>Explore partnership arrangements through the Associate College arrangement with The Robert Gordon University.</p>	<p>Aug 2010</p>	<p>Sector Manager - EC</p>
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## Resources

The implementation of the plan falls under the following key headings and responsibilities which are linked to main budget headings within the College. The plan will be used to prioritise the spending in those key areas utilising exiting allocated budgets in the main:

Theme	Projects	Responsible Persons	Budget Source
Energy Consumption and Source.	<p><b>Project 1:</b> Improve efficiency of water use.</p> <p><b>Project 2:</b> Improve efficiency of energy use.</p>	<ul style="list-style-type: none"> <li>Vice Principal – Finance and Administration.</li> <li>Director of Resources for Learning</li> <li>Information Technology – Monitoring and Innovation Manager.</li> <li>Environment and Sustainability Manager.</li> </ul>	<ul style="list-style-type: none"> <li>Facilities Management.</li> <li>Capital works and projects.</li> <li>Information Technology.</li> </ul>
Waste Reduction, Separation and Responsible Disposal.	<p><b>Project 3:</b> Reduce paper consumption</p> <p><b>Project 4:</b> Increase separation rates.</p>	<ul style="list-style-type: none"> <li>Information Technology – Monitoring and Innovation Manager</li> <li>Environment and Sustainability Manager</li> <li>Director of Curriculum Learning and AP (Student Support Services)</li> </ul>	<ul style="list-style-type: none"> <li>Farm trading account</li> <li>Facilities Management.</li> <li>Capital works and projects.</li> </ul>
Sustainable Estate and Biodiversity.	<p><b>Project 5:</b> Ensure sustainable development and environmental management are integral in to the design, construction and occupancy of new and refurbished buildings.</p> <p><b>Project 6:</b> Improve biodiversity of the College farm holding.</p>	<ul style="list-style-type: none"> <li>Director of Resources for Learning.</li> <li>Environment and Sustainability Manager.</li> <li>Director of Resources for Learning</li> </ul>	<ul style="list-style-type: none"> <li>Farm trading account</li> <li>Facilities Management.</li> <li>Capital works and projects.</li> </ul>
Sustainable Travel Planning.	<p><b>Project 7:</b> Reduce vehicle mileage</p>	<ul style="list-style-type: none"> <li>Environment and Sustainability Manager.</li> <li>All managers.</li> <li>Technical Manager.</li> </ul>	<ul style="list-style-type: none"> <li>Multimedia.</li> </ul>
Responsible Procurements of Goods and Services.	<p><b>Project 8:</b> Review the College's supply chain to establish the environmental performance of suppliers and contractors.</p>	<ul style="list-style-type: none"> <li>Environment and Sustainability Manager.</li> <li>Purchasing Manager.</li> <li>Health and Safety Manager.</li> </ul>	<ul style="list-style-type: none"> <li>Change of practice and emphasis.</li> </ul>
Learning and Teaching.	<p><b>Project 9:</b> Sustainable development education.</p> <p><b>Project 10:</b> Sustainable development education in curriculum areas.</p>	<ul style="list-style-type: none"> <li>Environment and Sustainability Manager.</li> <li>Head of Learner Services.</li> <li>Vice Principal (Human Resources).</li> <li>Sector/Department Managers.</li> <li>Sector Manager – Engineering and Construction.</li> </ul>	<ul style="list-style-type: none"> <li>Change of practice and emphasis.</li> </ul>

## **8.0 CCAP Impact on Carbon Emissions and Projected Savings**

In total the emissions of CO<sub>2</sub>-e will be reduced from the baseline figure of 4,771,018 Kg to 3,859,550 Kg in AY 2013-14 as a result of the CCAP a reduction of 19.1% in 5 years. The reduction when compared to the business as usual projection is 23.1% in 5 years.

## **9.0 Communication Strategy**

The following elements will be incorporated into the CCAP communication strategy:

- The Environmental Management System and Climate Change Action Plan – January 2010 to December 2014 will be published on the College's website and staff and student intranet along with Annual Progress Reports
- The key outcomes of this Annual Progress Report will be reported to the College's Board of Management.
- Reference to the Climate Change Action Plan will be incorporated into the staff induction process
- Reference to the Climate Change Action Plan will be incorporated into the student induction process
- The College Guidance Tutors will include information about the Climate Change Action Plan within Guidance Tutorials.

## **Appendix 1**

### **Procedures to support the Climate Change Action Plan**

Environmental Management System - Communication  
Environmental Management System - Competence, Training and Awareness  
Environmental Management System - Control of Documents  
Environmental Management System - Control of Records  
Environmental Management System - Documentation  
Environmental Management System - Disposal of Aerosols  
Environmental Management System - Emergency Preparedness and Response  
Environmental Management System - Environmental Aspects and Impacts  
Environmental Management System - Environmental Policy  
Environmental Management System - Evaluation of Compliance  
Environmental Management System - General Requirements  
Environmental Management System - Internal Audit  
Environmental Management System - Legal and Other Requirements  
Environmental Management System - Management Review  
Environmental Management System - Monitoring Transport  
Environmental Management System - Monitoring and Measurement  
Environmental Management System - Monitoring Energy and Water Usage  
Environmental Management System - Monitoring Photocopying  
Environmental Management System - Monitoring Waste  
Environmental Management System - Nonconformity, Corrective Action and Preventive Action  
Environmental Management System - Objectives, Targets and Programmes  
Environmental Management System - Operational Control  
Environmental Management System - Resources, Roles, Responsibility and Authority  
Environmental Management System - Waste Transfer Notes