The implications for us and future generations should we not rise to this challenge are insurmountable. At the University of Aberdeen we define sustainability based upon our management practices and our behaviour, and the impact these have on the societies in which we operate.

The University has a commitment to corporate social responsibility and is embedding this agenda deep within key strategy documents and operations ensuring it acts as the foundations for all our activities.

We have a real opportunity to make a difference, carrying out research with local and international partners in the pursuit of excellence whilst embedding sustainability and ensuring practical applications as an outcome.

We deliver exceptional teaching that will enable our graduates to develop an understanding of our global future needs and comprehend the challenges ahead of us. We continue to acknowledge the international perspective of all our activities, whilst embracing our position as one of the most northerly institutions.

These ambitions run parallel to corporate social responsibilities.

At the University we have a duty to tackle these head on with accountability and transparency. Embracing it will require embedding this within our culture. It is important to note that our efforts are ongoing; we know there are more difficult times ahead as the impacts of the Carbon Reduction Commitment take effect and we move towards Zero Waste in Scotland.

This document provides an opportunity for the University to express how it has made a contribution and gives scope in some areas for leading the way in the sector, recognising our progress in the People and Planet Green League, our adoption of the Carbon Trust Standard and our merit in recycling through the National Recycling Stars programme to name but a few.

We envisage changes that will not be popular but are necessary to ensure targets are met. We are proud of our achievements to date, as reflected in our previous report; however we are conscious that we align with the cycle of continuous improvement.

Since 2005, the Environment Office has been altering how the University views environmental issues associated with sustainability. From the way in which we dispose of our waste to how we travel to our place of work and study.

Unsustainable practices exacerbate environmental impact, deepen inequalities and reduce our quality of life. Sustainability in all its guises is a challenge faced not just by the educational sector but those who govern on a global scale.

“Collectively we can make progress and pursue the endless possibilities”

This report illustrates the significant steps we’re making towards sustainability.

It relays an important message to all our stakeholders, in that we are taking our responsibilities seriously; in taking direction and going beyond.

It also provides a benchmark against other institutions across the sector, enabling others to see our vision and learn from our experience. Providing the opportunity to share knowledge and impart insight to the sector.

It is important to apply innovative thinking to the hurdles faced when seeking sustainability, and to remember that we all play a part and are responsible for our actions. Collectively we can make progress and pursue the endless possibilities.
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreword</td>
<td>2</td>
</tr>
<tr>
<td>Contents</td>
<td>4</td>
</tr>
<tr>
<td>Part one:</td>
<td></td>
</tr>
<tr>
<td>About the report</td>
<td>6</td>
</tr>
<tr>
<td>University of Aberdeen and the environment</td>
<td>8</td>
</tr>
<tr>
<td>Part two:</td>
<td></td>
</tr>
<tr>
<td>Campus Services</td>
<td>10</td>
</tr>
<tr>
<td>Transport</td>
<td></td>
</tr>
<tr>
<td>Travel Plan</td>
<td>12</td>
</tr>
<tr>
<td>Travel Survey</td>
<td>14</td>
</tr>
<tr>
<td>Utilities</td>
<td></td>
</tr>
<tr>
<td>Carbon Management</td>
<td>16</td>
</tr>
<tr>
<td>Electricity</td>
<td>18</td>
</tr>
<tr>
<td>Fugitive Emissions</td>
<td>20</td>
</tr>
<tr>
<td>Heating</td>
<td>22</td>
</tr>
<tr>
<td>Water</td>
<td>24</td>
</tr>
<tr>
<td>Waste</td>
<td></td>
</tr>
<tr>
<td>Arisings data review and management</td>
<td>26</td>
</tr>
<tr>
<td>Performance</td>
<td>28</td>
</tr>
<tr>
<td>Waste - case study</td>
<td>30</td>
</tr>
<tr>
<td>Additional progress and next steps</td>
<td>32</td>
</tr>
<tr>
<td>Compliance - global reporting initiative</td>
<td>36</td>
</tr>
</tbody>
</table>
About the Report

This is the University’s second environmental report and this year we observe its growth. The report now covers more angles, introducing the work of Campus Services and showcasing some social aspects of sustainability in the form of volunteering.

This report illustrates the culmination of work undertaken over the last financial year showcasing the steps the University is taking towards embedding sustainability. It is produced on an annual basis.

The report is in two parts. Part one illustrates our approach to sustainability. It describes the structures we have in place. Part two looks in more detail at particular strands identified as performance indicators. It concludes with how we will take our next steps, and our strategy looking forwards.

Whilst it cannot be considered a holistic corporate social responsibility report, it is a step in the right direction. The topics covered in this report are benchmarked, where possible, against the Global Reporting Initiative, providing a balanced and reasonable representation of our performance.

The report illustrates both positive and negative aspects of performance to enable a reasoned assessment of overall performance, graphically illustrated to enable the reader to understand the information provided.

“This report illustrates both positive and negative aspects of performance to enable a reasoned assessment of overall performance, graphically illustrated to enable the reader to understand the information provided”

Why we report

Whilst highlighting significant achievements, this report discusses performance against key indicators providing detailed evidence and data with reference to published documentation where appropriate, with particular emphasis on our strategic ambition and mission.

Our ambition is to build on our history to enhance the University of Aberdeen’s reputation as one of the world’s leading universities.

Our mission is to be recognised throughout the world as a renowned international university, focussing on society’s future needs and challenges, employing the best staff and delivering a unique and stimulating intellectual experience for students.

Our strengths are our people, both current staff and students and our alumni, scattered widely across the globe. We will work to engage with all the Aberdeen family in the next few years, through keeping them informed of our successes and engaging them with our plans.

A copy of our first report and all relevant documentation is available online. Throughout this report hyperlinks direct the reader giving easy access to the information whilst illustrating our accountability and transparency. Further information is also available from the Environment Office, environment@abdn.ac.uk or 01224 272063 www.abdn.ac.uk/able
The University and the Environment

Founded in 1495, the University has been a centre of excellence in teaching, learning and discovery. We are determined that our sixth century is the most exciting and promising in our history, as we pursue our mission to be ranked among the world’s top one hundred universities.

Our Sixth Century Campaign, launched in 1999, has already helped create state-of-the-art buildings for biomedical research, new scholarships for students, conservation of our historic campus, and new facilities for students.

Providing the most advanced environment for learning, research and leisure demands continual new investment in people and in infrastructure. We have a student community of 16,000 representing 120 nationalities, which is governed by 3,000 staff which nearly half of which are academics.

We are committed to becoming one of the top 100 world-leading universities, with a unique role developed over 500 years as ‘the global university of the north’. We aim to be recognised locally, nationally and internationally as a broad-based university that delivers innovative and excellent teaching and research. We are committed to positive change, to celebrating culture, to embracing enterprise, and to pioneering new ideas and inventions.

The mission, objectives and targets outlined in our Strategic Plan are approved and monitored by the governance structure of the University Court, which has corporate and legal responsibilities, and the Senatus Academicus (Senate) which is responsible for the regulation and superintendence of teaching and the promotion of research. The General Council comprises all University graduates and certain academic staff and is empowered "to take into consideration all questions affecting the well-being and prosperity of the University", and to make representations from time to time on such questions to the University Court.

High quality teaching - with over 89% subjects rated Excellent / Highly Satisfactory

The University has three colleges and is managed by an administrative team that looks after finance, human resources, campus services, information technology, planning, policy and governance as well as our estate.

The University of Aberdeen’s estate and buildings are wonderful assets for the University and our Community. They provide some of Aberdeen’s most attractive, specialist, high-tech, unique and historic buildings. Our campuses provide a pleasant, safe and stimulating environment to work in.

Our Foresterhill Campus, which we share with the NHS Grampian, provides a teaching hospital experience over a site extending to approximately 125 acres. Our main estate at King’s College has a blend of modern and ancient buildings, set off the attractive High Street of Old Aberdeen, and extends over approximately 85 acres.

Following the University merger with the Rowett Research Institute, our managed estate increased with the addition of the land and buildings at Bucksburn. These provide a range of research facilities which, together with the extensive farmland holding, extends to approximately 520 acres.

The University estate has experienced considerable change over recent years with the refurbishment of many facilities and the building of a number of new ones.

The most recent developments include the Aberdeen Sports Village, Suttie Centre for Teaching and Learning in Health Care, Ocean Laboratory 2, extension of the Fraser Noble building and the refurbishment of our halls of residence at Hillhead.

The centrepiece of our current development plans, the new Library, is now on site and is scheduled for completion in the summer of 2011. Also now in the pipeline are our plans for the new Rowett Institute facility on the Foresterhill campus and the refurbishment of 50/52 College Bounds, Old Aberdeen.
 Campus Services is committed to helping the environment and increasing awareness within the University. Sustainability is a major part of our planning in Campus Services. Our approach and commitment to carbon management is key to our service provision for students, staff, visitors and external organisations on a daily basis.

As one of the largest departments in the University, we have changed the way we do things in our halls of residence, in our cafes, restaurants and our shops.

We strive to ensure that any packaging is biodegradable or can be recycled

Our approach and commitment is key to reducing waste.

Our achievements to date include:

• A switch to energy saving light bulbs in all Halls.
• No plastic carriers in University shops.
• Recycling bags into all student flats.
• Launch of the Bring Your Own Bag - reusable cotton carriers available to everyone.
• Across all our eateries we strive, where possible, to ensure that any packaging is biodegradable or can be recycled.
• Eliminated plastic mugs from student dinner service.
• Fairtrade products are available in all Tiki Cafes, Caffe Zeste, the Hub, Bishop’s Table and the Watering Hole.
• Delivered Catering have Fairtrade products on offer including a wide selection of Fairtrade wines, fruit juices and confectionery.
• All our fresh eggs are free range.
• Our used Vegetable Oil is collected and turned into Bio Diesel.
• Reducing the amount of disposable plates & cutlery in a number of locations and over the coming months, will introduce the necessary facilities to service proper plates and steel cutlery.
• As part of the limited parking on campus initiative, Campus Services have given up resident parking at Crombie Johnston.

Supporting Fairtrade
We run Fairtrade Fortnight each year which offers up a range of activities such as free tasters, information points, trolley dashes, Fairtrade shops and cafes, offers on all Tiki venues and waffle stalls.

As a part of a wider commitment to increasing the availability of Fairtrade products on Campus and awareness of Fairtrade within the University, Campus Services supplies Fairtrade orange juice, coffee, black tea and sugar in all its delivered catering orders and eateries.

Wherever you are on campus, staff and students have the power to impact positively on the lives of people around the globe just by buying a coffee. Together with our commitment to provide Fairtrade products across all our eateries we strive, where possible, to ensure that any packaging is biodegradable or can be recycled.

Delivered Catering
We are also making efforts to move away from the 9,600 plastic trays used in Delivered Catering annually, to a much more environmentally friendly option.

Coffee Grounds
We continue to recycle the coffee grinds from the staggering 116,700 cups of coffee (in one shape or another) we serve up monthly by offering it free to keen green finger people for environmentally friendly plant feeder and pest deterrent.

Smug Mugs
Still using the paper mug? Adopt a SMUG. Our SMUG campaign has, in the last year, reduced the number of disposable cups being used by 11,275 with over 1,500 Smug Mugs being sold across campus.

Munchable Lunchboxes
Our Munchable campaign, launched late 2010, was introduced into the Hub and strives to reduce the level of plastic salad containers used by staff and students by offering 25p off the price of a salad every time one is used.
The University’s first sustainable travel plan was developed in 2006 and approved in 2008 as a four-year plan. In December 2010 a travel survey was conducted to assess the progress that had been made towards the targets that were identified in the travel plan. While our primary target of reducing single occupancy car use proved challenging but achievable, other targets were clearly inconsistent with this. The data gathered during the implementation of the first travel plan will help to develop more realistic and robust targets for the 2012-2016 travel plan as well as clear and achievable actions which will help meet those targets.

A number of the actions identified in the travel plan have been developed and progress has been made since its inception. By implementing better car parking controls, a stable system has been created which can be used to monitor car use, develop deterrents and maximise the limited resources that are available. At the same time, actions have been taken to encourage the use of alternative modes of transport. The Bike to Work salary sacrifice scheme has proved consistently popular among staff and the student-led BeCycle project has encouraged cycling among students and the wider community.

A Travel Plan is a constantly evolving document designed to aid and direct behaviour changes in a way that benefits both the institution and individual. By learning from experience, best practice and building in compliance with the Publicly Available Specification (PAS) 500 for travel plans, the University aims to develop a travel plan for 2012-2016 that will help move the University closer to an environmentally sustainable transport system. By incorporating business travel and carbon emissions, the scope of the travel plan will be widened to help influence areas of University business which have not yet been addressed.

<table>
<thead>
<tr>
<th>Target</th>
<th>Progress</th>
<th>Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce single occupancy car use by 10%</td>
<td>Reduced, staff by 9.2%, students by 27.3%</td>
<td></td>
</tr>
<tr>
<td>Increase walking by 20%</td>
<td>Decreased, staff by 2%, students by 8.3%</td>
<td></td>
</tr>
<tr>
<td>Increase cycling by 20%</td>
<td>Increased, staff by 50%, students by 250%</td>
<td></td>
</tr>
<tr>
<td>Increase public transport by 10%</td>
<td>Decreased, staff by 20%, increased, students by 0.7%</td>
<td></td>
</tr>
</tbody>
</table>

In its travel plan the University identified the development of a bike to work salary sacrifice scheme as a desirable incentive to encourage staff to cycle to work. The scheme allows staff to sacrifice part of their salary in exchange for the use of cycling equipment. Since the scheme was first introduced, we’ve seen around 80 staff take part in the scheme each year. This equates to about £55k worth of cycling equipment being used for cycling to work each year. The financial, social, health and environmental benefits of having more staff choose an active mode of travel make this a particularly attractive scheme for staff and the organisation as a whole.

What did we do?
Prior to 2006 the University did not have a specific strategy to deal with rising demands on car parking resources or transport emissions.

What are we doing?
Through the actions in the current travel plan progress is being made to reduce car use and limit emissions in the area of staff and student commuting.

What do we do now?
The development of a new travel plan will create new actions which can be used to further the progress already made and encompass new areas of University business.
The University conducts a travel survey every two years to check our progress towards the goals in our sustainable travel plan. 2010 marked our third survey and showed some very positive progress from both staff and students.

Car - Both staff and students at the University have shown great progress in moving away from single occupancy car journeys and adopting other travel modes instead. This positive change has repeated in each of the travel surveys conducted since 2006.

Public Transport - The majority of public transport journeys are made by bus as rail journeys for commuting are not viable for the majority of staff and students. Both staff and student use of bus services has declined in recent years, most likely as a result of rising public transport prices and a general reduction in services. While this is a worrying trend, it is largely outwith the control of the University. Engagement with local transport operators is key to keeping services which are essential to the University and identifying when and why fares are increasing. The University has adopted the Service 6 to ensure a vital link between Hillhead, Old Aberdeen and Foresterhill is maintained.

Walking - Travelling by foot is the most common mode of travel used by students, primarily due to their proximity to the University. Staff are less likely to walk but a consistent 20% of staff regularly walk to work. As an active mode of travel the University benefits from healthier staff and students and encourages walking as part of its Healthy Working Lives programme.

Cycling - A significant increase in cycling has been seen in both staff and students. An increased interest in cycling has been noticeable in recent years through local initiatives like the student led BeCycle project and national initiatives like the London ‘Boris’ bikes. The University has encouraged participation in local cycling events and has been working with local authorities and the regional transport partnership to embed cycling in the culture of the University and Aberdeen as a whole.
The University of Aberdeen has seen an increase in carbon emissions from energy use in buildings. The changes by utility were:

Electricity 622 tonnes – Primarily this increase is a result of the additional electricity used for construction of the new library and reduced operation of the Combined Heat and Power Engine. (Pictured opposite)

Gas plus Oil 173 tonnes – The increase is mainly due to the fact that the main gas supply was interrupted making it necessary to use more polluting oil.

Steam 176 tonnes – This increase arises from the re-commissioning and use of the autoclaves in IMS.

In terms of new buildings opening and old sites closing the main significant change affecting the difference for the current year has been the electricity use for construction of the new library, which has contributed 153 tonnes of additional carbon dioxide emissions.

In respect of refurbishments at the main Hillhead student halls, three blocks, Fyfe, Adam Smith, and Wavell blocks were refurbished, but at the same time student numbers reduced. Following on from the refurbishment there was a significant fall in gas and oil at the site, equivalent to 247 tonnes, which is particularly of note as the winter was colder this year.

The University has submitted its first Carbon Reduction Commitment (CRC) Annual Report

Gas plus Oil 173 tonnes – The increase is mainly due to the fact that the main gas supply was interrupted making it necessary to use more polluting oil.

Steam 176 tonnes – This increase arises from the re-commissioning and use of the autoclaves in IMS.

In terms of new buildings opening and old sites closing the main significant change affecting the difference for the current year has been the electricity use for construction of the new library, which has contributed 153 tonnes of additional carbon dioxide emissions.

The University has one renewable project nearing completion. The new library which is due to open September 2011 has solar panels on the roof. When these are operational, the output from these will be displayed on a screen in the building, and on the web. Further, the University is proceeding with a low carbon project working in partnership with the Grampian NHS Trust on a Combined Heat and Power scheme. This is due to commence operation in October 2011 with the University taking electricity and heat.
Electricity consumption at the University has effectively remained constant when compared with last year. (An increase of less than 0.1% was recorded). Within this overall figure there have been some local increases and reductions as detailed in the following examples:

Reduction - During the year, the Queen Mother Library electricity meter was connected to the Meteorology remote meter reading system. This identified that there was an unusual pattern of consumption for the building. The energy consumption for this building would remain high overnight, only dropping to 13% of the peak for a single half-hour period between 0430 and 0500 (Red line on graph). A simple “out of hours” site visit identified that this building was being cleaned overnight by two cleaners. While they cleaned the building all lights, on all floors, were left on. The cleaners were asked to turn the lights off as they worked their way through the building (Blue bars on graph). This has itself delivered significant savings without any capital costs. The daily saving of £60.84 represents an annual saving of more than £15,000 p.a.

Increase - The IT services at the University are going through a period of expansion and re-consolidation. During March 2011 new server capacity was installed in the University Office. Energy use has increased by 20kW on a 24/7 basis which is highlighted by the line in red on the graph below. Currently there is no free-cooling facility for this server room, but the air-conditioning is due to be refurbished and, at this point, free-cooling will be installed, funded by Salix, and this will offset approximately 12kW of additional load. This clearly demonstrates the stresses between growth and the need to reduce carbon emissions.
Utilities
Fugitive Gas Emissions

Total Fugitive Gas Emissions
During the year 10/11 leaks of refrigerant gases were equivalent to the emission of 200 tonnes of Carbon Dioxide.

Potency of Green House Gas (GHG)
A leak of 1kg of a GHG refrigerant gas is equivalent to emissions of over a tonne of carbon dioxide.

Comparison with Water
If one tonne of water is used, then the carbon dioxide emissions are 0.4 kg. A 1kg leak of refrigerant is equivalent to using over 2,500 tonnes (or m³) water.

Green House Gas Emissions - Leaks of refrigerant gases

<table>
<thead>
<tr>
<th>Refrigerant Gas</th>
<th>Proportion</th>
<th>Tonnes of Carbon Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>R134a (GWP 1,300)</td>
<td>85.41 tonnes</td>
<td></td>
</tr>
<tr>
<td>R22 (GWP 1,700)</td>
<td>2.89 tonnes</td>
<td></td>
</tr>
<tr>
<td>R404A (GWP 3,260)</td>
<td>0 tonnes</td>
<td></td>
</tr>
<tr>
<td>R407C (GWP 1,526)</td>
<td>111.25 tonnes</td>
<td></td>
</tr>
<tr>
<td>R410A (GWP 1,725)</td>
<td>0 tonnes</td>
<td></td>
</tr>
</tbody>
</table>

During the year refrigerant leaks were equivalent to the emission of 200 tonnes of carbon dioxide. The assessment of this is achieved by using a combination of the amount of gas that has leaked together with the Global Warming Potential (GWP) of the gas. The GWP factors are based on how many more times more powerful these gases are at causing global warming than carbon dioxide.

The first option for reducing emissions of these greenhouse gases is to reduce the need for the installation of air-conditioning. The University now assesses requests for air-conditioning against the requirement for it based on loads, whereas previously this check was not undertaken. One alternative is to use natural ventilation. The second option is to use refrigerant with a lower GWP. The third option is to reduce the refrigerant charge required in the system.

Hillhead Halls

Hillhead Halls provides accommodation for 1,632 students. During the summer three of the accommodation blocks Fyfe, Adam Smith, and Wavell were partially refurbished. As part of these works the old single glazing was replaced with sealed double glazed units. While the winter was colder than the previous year, heating consumption dropped by 11%. This corresponds to an energy saving of 1,200,000 kWh or a reduction in emissions of 247 tonnes.

Utilities - Case Study - Energy Saving
Where the winter of 09/10 was the coldest for over 30 years, the winter for 10/11 was even colder. December of 2010 was particularly cold and this resulted in additional carbon emissions from heating the University buildings beyond that of just the additional heating requirement.

The winter of 10/11 was colder than the winter of 09/10, which had been the coldest winter for 30 years. The cold weather placed an additional load on the system of approximately 1.8% (when hot water requirements are allowed for), which is equivalent to an increase in emissions of 284 tonnes. In addition to this, December of 2010 was the coldest in 100 years. This resulted in exceptional demand on the gas supply network and, as a result, the University had to interrupt the gas supply to the CHP station and Hillhead. The University had to change over from burning gas to burning oil. The rate of carbon emissions for oil is higher than that for gas which resulted in additional emissions of 170 tonnes.

The University has taken steps to offset these factors, and has managed to limit the increase in emissions from gas and oil use to 173 tonnes for the year. The main steps taken are detailed below.

Change in heating control strategy – The main heating supply for the University of Aberdeen is provided by the Combined Heat and Power (CHP) Station. This was originally set up with the temperature set-point based on the return temperature to the buildings of 75 deg C. The result was that the return temperature in the circuit was coming back at 75 deg C. To obtain the best energy efficiency from the CHP, the return temperature should be as low as practicable. The controls were reset with the temperature based on the return temperature in each individual building. The effect was to reduce the return temperature by 5-10 Dec C. The projected saving from this measure has been assessed at 5% which is equivalent to 2,200,000 kWh p.a., £51,000, or 453 tonnes carbon dioxide.

During the course of the year, a number of heating based technical projects have been undertaken using Salix funding. These include improved heating control at 23 St Machar Drive, insulation of heating pipework, refurbishment of the BMS Medical Library, and additional boiler control for the IMS building.
There has been significant progress in reducing water consumption at the University during 2010/11. Year on year water consumption has fallen by 25,216 m³, or 9.5%. This is equivalent to a cost saving of £50,000 p.a.

Water has a relatively low ratio for carbon emissions when compared with other utilities. While water consumption has reduced by 25,216 m³, the carbon saving arising from this corresponds to 10 tonnes.

The main area where water consumption has fallen is from the main water meter off Bedford Road. This supplies Fraser Noble which is being refurbished on a phased basis. The refurbishment includes the toilet areas which have a series of water-saving measures fitted as standard. Further, the underground water main pipework in the area has been rationalised. Going forward, the water supply for the New Library supply will be provided off this meter. The water requirements for the building have been minimised in the design, and a rainwater harvesting system has been installed. Based on this, it is not anticipated that there will be a large increase in water usage when this starts operation in September 2011.

During the course of the year, a leak was identified at New King’s and a potential increase in water consumption of ~4,000 m³ p.a. was averted. At King’s College, a leak off the heating system under a floor was identified. This was repaired and water consumption reduced by 1,813 m³ as a result.
Waste

Arisings data review and management

The University’s waste policy statement stipulates that: “…we will review opportunities and implement measures to reduce the volume of waste generated and to increase the proportion of that waste which is reused and recycled in accordance with the principles of the waste hierarchy, by embedding waste management into corporate policies and processes.”

In order to achieve this, the University has taken a closer look at its operational practices and altered waste management in accordance with the principles of the waste hierarchy.

Over the past year the University has helped divert 514.697 tonnes from landfill, of which 13.517 went for reuse and 501.18 was recycled. Overall this equates to the following reuse and recycling rates: reuse 0.94% and recycling 34.76%, a decline when compared to the previous reporting periods.

Reduced reuse rates might relate to the fact that items which are less fit for purpose have become available that could be offered for reuse and which meet acceptability criteria for donation to charity. Many of the items that have been reused are furniture, computer equipment, books, mattresses and stationery donated to local charities. The recycling rate has also seen a decline; this might not necessarily reflect less recycling by users but likely suggests more accurate reporting.

Similarly, the reduction in overall waste arisings over the past few years is unlikely to be related to reduction measures at source or a result of awareness raising, rather more accurate reporting again.

Waste

Arisings data - Comparison of reuse and recycling rates over the past four years

- **Reuse rate for period 2010 to 2011**
  - 0.94%

- **Recycling rate**
  - 34.76%

This year has seen a marked decline in items being reused

07/08 08/09 09/10

1.0% 1.39% 1.58%

07/08 08/09 09/10

36% 41.9% 35.9%

Arisings data - Comparison of overall waste arisings produced over the past four years

- **1441.93 tonnes disposed of for period 2010 to 2011**

- **64.31% of waste was disposed**

- **501.18 tonnes recycled**

- **927.24 tonnes of waste disposed**

- **13.517 tonnes reused**

Waste reduction?

This trend could simply relate to better waste data reporting and less waste being disposed of as part of day-to-day operations. It is unlikely this is linked to reduction at source measures.

Waste studies...

**Solar powered litter**

Over the last year we have seen installation of six solar powered compaction litter bins across the main two campuses.

**National Recycling Star**

In recognition of the work the University is doing towards improving waste management practice, it was awarded a merit.

**Food waste collections**

Continued collections in catered areas has seen 11.451 tonnes of food waste composted over the 2010 to 2011 financial period.
The Waste Framework Agreement will be a valuable provision for those educational establishments with limited resources available to undertake this scoping and tendering exercise, offering them the opportunity to call off the contract or undertake mini-competition within their geographical lot.

A number of site visits to review waste contractor performance against University expectations and their compliance with the Duty of Care were completed during the last year. Visits were undertaken with our general waste contractor - Total Waste Management Alliance, our computer disposal contractor - TES-AMM, our paper recycler - Shred-it (North-east) Ltd, our chemical and waste electrical goods contractor - Enviroco, and our food composter, Keenan Recycling Ltd. All of those visited operated clean, well-managed facilities and could provide supporting evidence to illustrate compliance. It is expected that further site visits will ensue over the coming year to cover remaining waste contractors.

During November, the University was involved in European Week for Waste Reduction, a three year project supported by the European Commission. Activities included environmental champions handing out scrap paper notepads, provision of Donate Don’t Dump stalls, where staff and students were encouraged to bring items in from home for charitable donation, relaunch of the SMUG reusable thermal mug, textile reworking workshops, as well as articles in bulletins and information stalls at various locations. Whilst numbers were disappointing, the building blocks are there to improve on this event for the coming year.

“Zero Waste is about changing the way we manage resources. It means using natural resources in the most effective way, as many times as possible, while minimising impact on the environment.”

The Waste Framework Agreement will be a valuable provision for those educational establishments with limited resources available to undertake this scoping and tendering exercise, offering them the opportunity to call off the contract or undertake mini-competition within their geographical lot.

The development of the specification of requirements has been an arduous but comprehensive process, ensuring inclusion of best practice, the requirements of Zero Waste Scotland and factoring in regional variation. The tender process is still ongoing with appointment to the framework of successful waste contractors during the latter part of this year.
The University has been working with the New Hope Trust for a number of years, supporting their worthy cause through the donation of unwanted items that are still fit for purpose.

The New Hope Trust undertakes humanitarian work focusing upon Eastern Europe, providing emergency relief and ongoing supplies of aid to children, particularly in Romania and Moldova. They also manage a charity shop within Aberdeen but have their main facilities at Peterhead, where they have a conference suite, coffee shop and a second-hand barn providing items for sale. All profit raised from their operations goes straight into their humanitarian activities.

The University works closely with the New Hope Trust during end of term when students are vacating their halls for the summer vacation. Working together with the student-led Environment and Ethics Committee, Campus Services, as well as the Environment Office, has seen a great number of items donated including mattresses, duvets and duvet covers, curtains, crockery, clothing and other miscellaneous items.

The New Hope Trust also has textile banks on site which accept clothing and foot wear. Money raised from either re-sale of these items or rag production goes direct to the charity.

donate the New Hope Trust with six computers for use in orpanahges in Moldova for educational purposes.

Our ongoing relationship with the New Hope Trust, and many other local charities, is important in not only diverting waste from landfill, but fulfilling the corporate social responsibility agenda.

The University has been fortunate to be able to donate the New Hope Trust with six computers for use in orpanahges in Moldova for educational purposes.
Over the last year we have continued to engage with our stakeholders, raising awareness of sustainability through its many guises. Our internal and external relationships have developed, with some real symbiotic partnerships seeing fruition.

Our Able – To Do Your Bit identity continues to grow, with the production of further promotional items aimed at varying levels of impact; these are detailed further below.

**Sustainable building plaques**

These have been installed in a number of buildings across campus to highlight the individual buildings’ environmental sustainability credentials. The plaques illustrate building attributes including sun pipes, building management systems, rainwater harvesting to low-flow cisterns. The plaques are located within Polwarth, Fraser Noble, Zoology, MacRobert, Edward Wright, Suttie, Oceanlab, William Guild, Butchart and Regent buildings.

**Disposal cup cardboard sleeve advertising**

This campaign evolved around advertising at the point of sale, placing awareness-raising labelling onto the cardboard sleeves used to reduce heat transfer whilst carrying disposal cups used for hot beverages at our catered outlets. The labels advertised a range of things from our Facebook page to the University shuttle bus.

**Munchable lunchboxes**

Working closely with colleagues in Campus Services, the segregated lunchbox more commonly known as the Munchable, was created. In a similar vein to that of the SMUG. All these lunchboxes are designed to reduce the need for disposable packaging whilst rewarding the user by providing a 25p discount on their salad bar purchase.

**Promotional items**

From trolley coins to organic edible gummy bears, jute shopping bags to high visibility cycle slap bands, pens, mugs and button badges. All these promotional items have been branded with our Able logo and sourced from recycled content and organic material where possible. These items have been distributed at our stalls and events throughout the year.

---

**People and Planet Green League**

People and Planet intend to illustrate through their Green League a comprehensive and independent league table of British Universities ranked by environmental and ethical performance. Compiled annually, the league covers some 142 Universities scoring performance in degree classification format.

The 2011 result ranks Aberdeen 31st, with a fourth successive annual improvement in the University’s ranking. Although a drop had seemed likely following changes to the scoring methodology, the result is in fact our highest ranking, and is our first ‘First’ in the scheme.

---

**A Hard Rain’s going to fall...**

In March, the University hosted Mark Edward’s impressive Hard Rain photographic exhibition. The installation and lecture was jointly funded through the student-led Climate Challenge Fund and the Environment Office, showcasing emotive images dealing with many aspects of sustainability linked to the words of Bob Dylan’s song A Hard Rain’s A-Gonna Fall.

The 60m banner was located outside New Kings for one month, allowing staff, students and members of the public to witness this moving exhibition. During this period Mark presented to a packed audience at the Regent lecture theatre where he played Dylan’s music along with the images to a captivated audience.
Our Environmental Champions scheme has continued through another year, with ongoing monthly challenges, volunteering events and quarterly workshops.

Via participation in the monthly challenges, our champions have implemented environmental messages on their email signatures, installed water saving stickers within their workplace, signed up to the vegetable bag scheme, and undertaken many more activities, earning points for each activity they undertake. This year our lead Environmental Champion was Rachel Shanks for the second year in a row. Our workshops have allowed our champions to understand the importance of eco-driving through a simulator, to hear the theory behind renewable energy through a talk by Aberdeen Renewable Energy Group, and to witness first hand water treatment at the Kelda Water Treatment works at Nigg, as well as In-vessel composting of food and garden waste at Keenan Recycling based near Peterhead. Volunteering events have also been organised for our champions, including building raised beds within Sunnybank Park in conjunction with the British Trust for Conservation Volunteers, pond building and permaculture garden development at Easter Anguston Farm, and assistance with the Tour de Rayne cycling event for school children organised by Aberdeenshire Council.

The student intern programme has seen another two undergraduates pass through the doors of the Environment Office moving on to further their education and gain employment within the sustainability sector. We have continued to recruit two more interns to cover marketing and utility monitoring activities for the coming year. Feedback from previous interns has proved invaluable in developing this initiative so that both the intern and the Environment Office have positive outcomes.

The future holds many further changes ahead particularly in relation to carbon management. Our targets are reviewed annually in line with our policies and operational plans, ensuring continual improvement and reassessment where necessary.

The following table gives an indication of what the coming year has to offer.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste</td>
<td>Increased recycling rates through a review of waste management practices, with the potential for co-mingled collections and offsite segregation, to ensure compliance with the Zero Waste Plan.</td>
</tr>
<tr>
<td>Waste</td>
<td>Finalisation and use of the sector specific Waste Framework agreement.</td>
</tr>
<tr>
<td>Waste</td>
<td>Ongoing Duty of Care visits to waste contractors and charitable partners.</td>
</tr>
<tr>
<td>Utilities</td>
<td>Continued measurement of carbon arisings in line with the requirements of the Carbon Management Plan.</td>
</tr>
<tr>
<td>Utilities</td>
<td>Lecture theatre ventilation control.</td>
</tr>
<tr>
<td>Utilities</td>
<td>Roof insulation at 23 St Machar &amp; St Mary’s.</td>
</tr>
<tr>
<td>Utilities</td>
<td>Installation of motor controls for fridges and freezers within College of Life Sciences.</td>
</tr>
<tr>
<td>Utilities</td>
<td>Connection of 50/52 College Bounds to the Combined Heat and Power plant.</td>
</tr>
<tr>
<td>Utilities</td>
<td>Ongoing development of Salix initiatives.</td>
</tr>
<tr>
<td>Utilities</td>
<td>Double glazing window replacement within the Taylor building.</td>
</tr>
<tr>
<td>Utilities</td>
<td>Connection to NHS Grampian Combined Heat and Power plant at Foresterhill.</td>
</tr>
<tr>
<td>Transport</td>
<td>Re-launch the Bike to Work salary sacrifice scheme for 2012.</td>
</tr>
<tr>
<td>Transport</td>
<td>Invest car parking revenue in sustainable travel initiatives like additional cycle storage and subsidised bus travel.</td>
</tr>
<tr>
<td>Transport</td>
<td>Develop a 2012-2016 Travel Plan to identify actions the University can take to improve its performance in the coming years.</td>
</tr>
<tr>
<td>Marketing</td>
<td>Installation of window art in the Taylor building.</td>
</tr>
<tr>
<td>Marketing</td>
<td>Exhibiting part two of the Hard Rain project.</td>
</tr>
<tr>
<td>Marketing</td>
<td>Ongoing promotion of the Able campaign.</td>
</tr>
</tbody>
</table>
The table within this section reports on the University’s achievement against performance indicators within the Global Reporting Initiative. It is hoped that in future years further reporting to this International Standard will be undertaken.

### ENVIRONMENTAL PERFORMANCE INDICATOR

<table>
<thead>
<tr>
<th>GRI Number</th>
<th>Topic</th>
<th>Performance (including indicator of level of compliance with F = fully compliant and P = partial compliance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC2</td>
<td>Financial implications and other risks and opportunities for the organisation’s activities due to climate change.</td>
<td>P</td>
</tr>
<tr>
<td>EN3</td>
<td>Direct energy consumption through primary energy source.</td>
<td>F</td>
</tr>
<tr>
<td>EN4</td>
<td>Indirect energy consumption through primary energy source.</td>
<td>P</td>
</tr>
<tr>
<td>EN5</td>
<td>Energy saved due to conservation and efficiency improvements.</td>
<td>P</td>
</tr>
<tr>
<td>EN8</td>
<td>Total water withdrawal by source.</td>
<td>F</td>
</tr>
<tr>
<td>EN16</td>
<td>Total direct and indirect greenhouse gas emissions by weight.</td>
<td>P</td>
</tr>
<tr>
<td>EN17</td>
<td>Other relevant indirect greenhouse gas emissions by weight.</td>
<td>Based on sample business travel data, an emissions figure of 2,427.22 tonnes was returned for business air travel in the reporting period. Emissions associated with other forms of business travel (rail, car etc.) were not assessed. Commuter travel emissions are included within EN29.</td>
</tr>
<tr>
<td>EN18</td>
<td>Initiatives to reduce greenhouse gas emissions and reductions achieved.</td>
<td>Business Travel - A shuttle bus was introduced to reduce business travel emissions between the primary University sites. Commuter Travel - Corporate Travel Club membership was purchased to provide discounted staff travel on public transport. A Bike to Work salary sacrifice scheme was provided to encourage staff to cycle to work. Reductions in emissions relating to these measures were not directly recorded. For energy use some but not all of the savings are detailed: Salix measures 409 tonnes, improving heating control 453 tonnes, refurbishment at Hillhead 247 tonnes Overall total 1109 tonnes.</td>
</tr>
<tr>
<td>EN22</td>
<td>Total weight of waste by type and disposal method.</td>
<td>F</td>
</tr>
<tr>
<td>EN23</td>
<td>Total number and volume of significant spills.</td>
<td>F</td>
</tr>
<tr>
<td>EN28</td>
<td>Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.</td>
<td>F</td>
</tr>
<tr>
<td>EN29</td>
<td>Significant environmental impacts of transport products and other goods and materials used for the organisations operations, and transporting members of the workforce.</td>
<td>F</td>
</tr>
<tr>
<td>EN30</td>
<td>Total environmental protection expenditures and investments by type.</td>
<td>F</td>
</tr>
</tbody>
</table>

**Energy Savings**

- **Electricity:** 19,218,371 kWh (69.2 GJ)
- **Heating:** 6,560,419 kWh (23.6 GJ)
- **Total:** 25,778,790 kWh (92.8 GJ)

**Salix Measures**

- **Emissions:** 409 tonnes
- **Improving Heating Control:** 453 tonnes
- **Total:** 862 tonnes

**Other relevant indirect greenhouse gas emissions by weight**

- **Utilities:** 26,532 tonnes
- **Water:** 96 tonnes
- **Fugitive Emissions:** 200 tonnes
- **Total:** 26,828 tonnes

**Compliance - Global Reporting Initiative**

- **EC2** Financial implications and other risks and opportunities for the organisation's activities due to climate change.
- **EN3** Direct energy consumption through primary energy source.
- **EN4** Indirect energy consumption through primary energy source.
- **EN5** Energy saved due to conservation and efficiency improvements.
- **EN8** Total water withdrawal by source.
- **EN16** Total direct and indirect greenhouse gas emissions by weight.