

BOARD OF GOVERNORS**13 OCTOBER 2009**

2008/09 ANNUAL REPORT ON SUSTAINABILITY IN THE UNIVERSITY

THE BOARD'S TERMS OF REFERENCE TO WHICH THE ITEM RELATES

- 1 The Board is responsible for:
 - i) the determination of the educational character and mission of the University and for oversight of its activities;
 - ii) the effective and efficient use of resources, the solvency of the University and the Corporation and for safeguarding its assets;

PURPOSE

- 2 This report gives a summary of some of the achievements made towards sustainability in the 2008/09 academic year.

CONTEXT

- 3 The University's move toward sustainability is underpinned by a holistic approach which has at its core:
 - The careful management of the earth's natural resources and other assets that we use for all our operations
 - The positive contribution that we can, and do make, to society's understanding and good practice (in the sustainability agenda) by playing a leadership role in the example we set and through the teaching of our students who will become future professionals (in a wide range of disciplines), and in the development of our staff and partners
 - In the research and development that we carry out which contributes to society's future understanding as well as the provision of the new solutions which are needed to become more sustainable
- 4 To achieve success we need to draw upon and include our staff, students, visitors, business contacts, suppliers, local residents and partners. Our approach to all of these areas is being set out in a new set of strategy documents currently being drafted. Sustainability is more than making savings on energy or reducing waste. It is about adopting a series of policies and strategies which over time underpin how the University operates, functions and presents itself to the outside world. These are not abstract concepts but will need to be adopted as key business principles as, for example the climate change and carbon impact agendas provide increasingly important economic drivers as public expenditure and capital grants are going to be dependant on our response to Government demands for change. In addition, there is increasing awareness and pressure to perform across a wide range of sustainability agendas expressed by our current and potential future students as well as from other important business streams such as new and existing research and teaching contractors.

5 This document sets out the results of the University's further developments in sustainability found in the examples of:

- Management of water, energy and waste
- Management of carbon emissions
- Initiatives to improve our future environmental performance in our estate
- Promoting sustainable travel to staff and students
- Courses and Research development
- Raising the Universities profile and awareness raising
- Local community impacts

WATER, ENERGY AND WASTE MANAGEMENT

6 The University reduced its water consumption by 630,000 litres or 0.8% during 2008/09. The figures recorded during 2007/08 included a period when water consumption dropped sharply as the Owen Level 6 catering facilities were refurbished. To achieve further savings against this baseline is challenging. Our figures for 'water consumption per student FTE' are among the best in the sector. The official Estates Management Statistics for 2007/08 ranked Sheffield Hallam University as 4th out of 145 HE Institutions on this measure.

7 Water conservation measures continue to be implemented where potential savings are identified. This has involved installing items such as spray taps as well as improving flush controls on urinals and toilets.

8 Although the winter weather was colder than in the previous year, the total amount of energy used for heating fell by 8%. Increased use of the district heating system and natural gas was more than offset by the impact of closing the oil fired boilers at Psalter Lane and Southbourne.

9 Electricity consumption across the University estate fell by 2.9% between 2005/06 and 2008/09. During 2008/09 total electricity use was higher than in the previous year as new buildings and refurbished areas were brought into full use whilst we still have the existing buildings due to be disposed of. These include the new Mews and Furnival Building whilst still holding Psalter Lane campus.

10 The University continues to source 3.5% of its electricity from renewable sources which currently power 30 small properties around the University estate.

11 Over the twelve year period since 1996/97 reporting year

1. Electricity use is now 16% higher and annual consumption has risen by 2.77 million kilowatt-hours (This is due to the impact of 24 hour opening of our learning centres and the services needed to support this, increased use of technology in our teaching rooms and increased numbers of computers to support increased student numbers as well as improved availability)
2. Use of heating fuels is now 45% lower and annual consumption has been reduced by 15.2 million kilowatt-hours
3. Total water use is now 61% lower and annual consumption has been reduced by 118 million litres

12 The Energy Action Group continued to support the work of the energy team by helping to identify spend to save opportunities across the estate. Projects initiated so far have been focused on water and heating controls.

Display Energy Certificates

- 13 A legal requirement for Display Energy Certificates (DECs) to be displayed in the entrances of large public buildings came in to force on 1 October 2008.
- 14 These DECs show the actual energy usage of a building, and identify to the public the energy efficiency of a building and its consumption as recorded by gas, electricity and other meters. A DEC is valid for one year.
- 15 A DEC is accompanied by an Advisory Report (AR) that lists cost effective measures to improve the energy rating of the building. The Advisory Report is valid for seven years.
- 16 Recommendations from the Advisory Reports are being used to identify areas where viable energy saving projects may be developed.

Buildings with DECs and ARs	Area m²	Rating
Arundel Building	3,159	B 44
Graham Solley Sports Centre	1,215	C 60
Woodville Hall & R Winston Building	12,845	C 68
Broomgrove Hall & Teaching	4,759	C 69
Sheaf & Eric Mensforth Buildings	14,926	C 71
Collegiate Hall & Saunders Building	4,990	C 71
Adsetts Learning Centre	11,037	C 71
Collegiate Learning Centre	4,294	D 76
Stoddart Building	9,692	D 81
HUBS - Students Union	4,765	D 89
Owen, Harmer, Howard etc.	48,480	E 117
Marshall, HOTC, Pearson	9,879	E 119
Southbourne, White House, Lodge	2,847	E 124

- 17 As new buildings are added to the University portfolio additional certificates will be commissioned in line with the rules of the scheme.

Waste management

- 18 Several initiatives to reduce waste took place during this reporting year including those to manage the usage and waste of paper by implementing double sided printing as default to all staff and student printers (which are capable of doing so). As old printing equipment is replaced, duplex printing will be a standard requirement. 2,007 items of electrical equipment went for re-use not only earning the University over £11,000 in income for the year but also making significant savings in waste disposal costs.
- 19 Recycling of paper increased with over 25,000 kgs being collected. The total waste produced by the University over the year increased slightly to 831 tonnes (from 814 tonnes) due to the closure and emptying of Psalter lane campus.
- 20 The Environment Agency renewed the University's hazardous waste licenses this year as a result of there being no breaches to the restrictions and processes that we have to follow.

MANAGEMENT OF CARBON DIOXIDE EMISSIONS (CO₂)

- 21 During this reporting year, total carbon dioxide emissions associated with the overall use of energy on the Sheffield Hallam University estate fell by 198 tonnes or 1.5% from 13,574 tonnes to 13,378 tonnes.

- 22 This was made up of the following changes:
- 23 CO₂ released by heating our buildings fell by 16% or 502 tonnes (from 3,136 to 2,634 tonnes). This was achieved by carrying out new and targeted initiatives within certain buildings. Some examples are:
1. Fitting some new windows to improve natural ventilation.
 2. In the Stoddart building, fitting solar film to certain windows to reduce solar gain and fitting additional insulation beneath the floor slab to reduce heat losses.
 3. Installing new central chillers which operate with higher efficiency in the Harmer Building.
 4. Recycling a gas boiler from Psalter Lane to Southbourne to enable the decommissioning of the existing oil boiler (burning oil emits higher carbon emissions than using gas).
 5. Several domestic hot water systems modified to use small heat exchangers which give improved control and reduce standing losses.
- 24 CO₂ emissions associated with electricity consumption increased by 2.9% or 304 tonnes to 10,744 tonnes. This increase was due to the activities involved in opening the new Furnival Building and operating it at the same time as still operating and decanting Psalter Lane campus.
- 25 During its first year of operation the Furnival Building used less energy overall and the associated CO₂ emissions per square meter were 17% lower than would have been expected at Psalter Lane.
- 26 Another significant change was the decommissioning of the last oil fired heating systems at Collegiate Crescent and Psalter Lane campuses. Since 1996-97, when the University burnt 1.2 million litres of oil, two satellite campuses have been closed, and six oil-fired heating systems at Collegiate Crescent have been converted to natural gas. As a result of implementing a planned replacement programme, the University no longer uses oil as a heating fuel. This has had a beneficial environmental impact on CO₂ emissions and resulted in significant cost savings.
- 27 Another groundbreaking initiative has been the implementation of virtual IT infrastructure with over 170 virtual machines created (which is over half of the entire server estate at the University). The power required to run 170 physical machines is estimated at 686,000 kilowatt-hours (kWh) per year; and the virtual infrastructure runs the 170 virtual machines at only 60,500 kWh per year. This saves the University an average of £43,000 per annum on power bills and 269 tons of CO₂ emissions each year.
- 28 Next year we will increase the estate measured with the addition of Hallamshire Business Park and 1 - 11 Arundel Gate. Historical data tells us that even if the level of activity or the number of staff does not increase, the introduction of additional buildings increases the energy and related costs and increases the CO₂ emissions overall.

Carbon Reduction Commitment (CRC) carbon trading scheme

- 29 In May 2009 the University joined the Carbon Action Yorkshire's carbon trading scheme (one of only two universities along with 32 other private, public and voluntary sector organisations across Yorkshire) in a Carbon Reduction Commitment (CRC) simulation exercise which will run for 10 months. The purpose of taking part is to reduce business and reputational risk and give advantage to the University by making the best preparations possible in readiness for the mandatory carbon trading scheme being introduced nationally in April 2010.

Both the simulation and the real scheme require the measuring, reporting and trading of carbon emissions generated by energy used in buildings.

Once the carbon baseline is agreed, the organisation has to forecast and buy allowances for 12 months ahead. Information about an organisation's CO₂ emissions and their performance against reduction targets will be publicly listed in a national annual league table and determines how much an organisation ultimately pays for carbon tariffs. Failure to report accurately or within required timescales can lead to fines. As the management of the scheme requires a range of skills, such as market trading, a small group (consisting of energy, sustainability and finance staff) has been formed to take the University through the simulation exercise. The first trading day in the simulation took place in August 2009.

Carbon Management Plan

- 30 In preparation for the CRC already mentioned, as well as other anticipated drivers (such as the proposal for capital funding from HEFCE to be linked to HEI's carbon management and our Local Authority intention to introduce climate change reduction and adaptation strategies for organisations in the city) as well as our ongoing commitment to sustainability activities, the University took part in the HEFCE Carbon Management Programme which has resulted in the development of a Carbon Management Plan framework for the University for at least the next 6 years. The plan contains targets for reduction as well as lists of potential identified opportunities for carbon savings (across a range of activities). Given that the University has been so active in this area over a number of years, many of the remaining opportunities require capital funding and building changes.
- 31 Audits of staff (and in some areas, student) behavior in energy usage and waste have been carried out. The findings are proving helpful in prioritising our activities. For example, we know that most staff are already, at the end of the day, turning off most of the equipment used on desk tops along with lighting and fans etc. in their work areas. However, there are significant savings to be made in reviewing how the provision of computers for students in our laboratories and learning centres is managed. Some sections of the University are now carrying out carbon foot printing on their area of activity in order to inform the detail of the activities in the plan.
- 32 When fully implemented, the plan and the ongoing activities within the University are expected to reduce overall CO₂ emissions from University owned buildings by at least 15% (using baseline data starting at 2006/7 financial year) by 2014/15 financial year which will include the following indicative targets:
- Reducing the kwh/m² energy consumption of the non residential University buildings by a minimum of 15% (Electricity and heating energy consumption will be separated and individual targets set to deliver the overall target)
 - Reducing normalised water consumption by 10% in non residential buildings. Performance to be recorded in terms of cubic metres of water per square metre GIA.
 - Reducing waste (refuse) created by the University by 15%
 - Measuring CO₂ emissions and then reduce by 5% staff travel on behalf of business, with a plan to extend the saving to travel to and from campus for work and study by staff and students in the future.
 - Reducing CO₂ emissions by 30% in future construction and refurbishment of our buildings which will be built to be more energy efficient than our existing buildings (pre Furnival building as baseline).

- Identify where additional carbon and financial savings can be made by investing in technologies, infrastructure, staff and student training and as new advances are made over time, apply these where applicable.
- 33 In addition, we are part of the City's low carbon and climate change adaptation working groups: to make sure that both the City and University's targets are aligned and that the City provides opportunities and support to enable the University to achieve its objectives in this area as well as our business and support of our students.

ESTATE MANAGEMENT

- 34 Energy efficient lighting and lighting controls continue to be installed as part of refurbishment works and new builds across the estate.
- 35 Work continues to update and convert boilers and heating systems to help provide energy and carbon savings. Improving control systems to boilers and heating systems is also taking place in order to provide greater local control within individual buildings.
- 36 The University's new Furnival building has given us 'first hand' experience of new energy saving technologies (which includes: solar panels, ground source heat pumps, photovoltaic panels, intelligent lighting and building management systems etc.) and now work is currently being carried out to make even better use of the energy we are generating from the building as well as learning about the actual effectiveness of some of these solutions in order to inform our future new buildings.
- 37 With partner organisations outside the University there are numerous projects being worked on. An example is the project underway to develop a scheme (in two phases) to improve the public realm along Arundel Street which connects some of our city campus buildings. The first phase is to improve access for and safety of pedestrians and cyclists which supports the University travel plans. The second phase will include "greening" the route with tree and other planting, therefore improving its environmental performance as well improving the public realm for our staff, students and neighbors.

SUSTAINABLE TRAVEL

- 38 The University continues with all the existing car alternative options built into the travel plans for staff and students. These are too numerous to mention but include: reduced public transport tickets conveniently available locally on campus, free cycle lessons, maintenance and servicing along with showers and changing facilities for cyclists and those who walk to and from work and for business: a "cycle4work" reduced cost cycle purchase scheme: improved telephone and video conferencing facilities: permit scheme for car parking with strict criteria for eligibility: travel plans tailor made to individuals on request: car hire deliveries direct to home to reduce congestion and time taken to travel in to collect hire cars: constant dialogue with First bus operators and continuance of support for the "Uni80 service" (a ten minute bus service with convenient bus stops connecting both campuses, the teaching hospitals and University of Sheffield): Promotion to our staff and students about existing and new initiatives throughout the year.
- 40 Over the coming year, we intend to measure the carbon footprint from some of our internal transport and business travel to inform our prioritisation of activities to further reduce our negative impact in this area. Attention to this subject will become more intense (internally and externally) as transport begins to be included in various carbon reduction strategies.

- 41 The University is also part of the group working on creating a new transport strategy for the city (and some regions beyond) as well as being a key member of "Sheffield on the Move" the public forum hosted by the Cabinet Minister for Transport . Our purpose in taking part in these forums is to ensure the best interests of the University operations and welfare of our staff and students are represented as well as trying to enhance the offer that the City has to make which also impacts on our ability to attract new students.
- 42 Hallam University supported Sheffield's "Sustainable travel city bid" (for £22m government revenue funding) to introduce new initiatives into the city from which our own staff and students as well as the community in Sheffield, will benefit. The City has been shortlisted to the final 4 candidates in the UK with the results being given at the end of October 2009.

COURSES AND RESEARCH

- 43 The number of courses with sustainability content which we deliver continues to grow, with many new programmes including: sustainable communities, corporate social responsibility and environmental management subjects introduced last year.
- 44 The new "Sustainability Hub" an academic, research and operational staff cross disciplinary information sharing initiative was launched this year with over 100 staff involved. In addition to opportunities for staff from all different sustainability subject areas to share information and learn from each other on the latest technology and knowledge available in the field, the Hub intends to improve the University's potential to win bids for new business and develop its consultancy offers as well as using this extensive knowledge base to help the university achieve its estate and operational (including carbon management) plans. This initiative is currently unique in the sector.
- 45 "Hallam Energy" was formed in 2008 as part of Sheffield Hallam's commitment to the sustainability agenda, by transferring energy engineering knowledge from a range of multi disciplinary research subject areas into business and organisations. The subjects include: energy economics and engineering: energy management (including project management), staff training and product design. This is proving to be very popular with businesses and customers have so far included North East Derbyshire District Council, Iceotape and Beatson Clark to name but a few.
- 46 The range of research activity in the sustainability field continues to grow, particularly in the areas of energy management and renewable energies, food innovation and sustainable communities. This builds on the University's long standing activity in environmental management, sustainable architecture, countryside and heritage management and wellbeing subject areas.
- 47 It is now common practice for businesses and other organisations to include questions and criteria related to (in particular but not exclusively) environmental sustainability in the pre qualification questionnaires and tender documents that the University has to complete when bidding for new business or when trying to get re accreditation, demonstrating the importance and value that is now being placed on this subject both internally and externally.

RAISING THE PROFILE OF THE UNIVERSITY AND AWARENESS RAISING

- 48 The University and Students' Union achieved re accreditation of Fair trade Status this year. (The accolade has to be renewed each year with the demands made by the Fair trade foundation becoming more challenging each year). To celebrate we were invited, along with some other organisations by the Lord Mayor to an event at the Town Hall and which was publicised in the local and regional press. Children from many of the local schools came and were invited to talk to those involved in the

Fairtrade activities to learn about the purpose and how this affects the University and students. We also held another successful "Just Fair Laughs event", raising over £500 for volunteering activities whilst entertaining an audience of over 200 staff students and visitors and making the dry subject of ethical procurement and investment entertaining by use of the comedians.

- 49 We achieved a gold status in the Business in the Environment public benchmarking event which was announced at the May Day Summit hosted by HRH Prince Charles. This exercise benchmarks our performance against hundreds of public, private and voluntary sector organisations and in addition to receiving national media, participants receive attention through the live web video links across several continents as part of this prestigious event. We use the gap analysis provided as part of the exercise to help inform our strategic objectives for future developments.
- 50 The growing national student environmental campaigns group - People and Planet awarded the University a "First" in its annual Green League table this year when we improved our position from 23rd last year to 8th this year. The league table (is a benchmarking exercise which consists of universities and colleges in the UK) results received national media coverage. We also receive feedback about areas for improvement.
- 51 Both of these benchmarking exercises have highlighted the gap that the University currently has in the areas of sustainable procurement and ethical investment policies and practices: we will be focusing on these areas during the forthcoming year.
- 52 The University was awarded a Gold award for its entry in Yorkshire in Bloom during this reporting year. The judging and assessment criteria covers: our environmental impact on the local community, waste management, transport planning, external estate and grounds management, and maintenance as well as floral and art displays within the estate. The achievement was celebrated in the town hall and reported in the local and regional press.
- 53 Dozens of events took place across the University in relation to environmental management, including raising awareness of energy use and waste which generated over 120 champions across all different job roles and work locations. More resource has also gone into working with various staff departmental sustainability groups within the university where the activities have been more tailored to their needs and aspirations.

LOCAL COMMUNITY IMPACT

- 54 During the year, 526 Hallam students took part in formal volunteering through the Hallam Volunteering programme covering over 34 projects (equal to over 12,266 hours of volunteering). This included the first ever international social enterprise project (Kanye Kanye - in partnership with the University's social enterprise centre) which resulted in 2 Hallam volunteers accompanied by students from a local school, winning a 10 day trip to Africa. Training sessions in conjunction with external organisations such as Activity Sheffield (as a two way learning process for our students and local youths and children) took place in addition to Hallam Challenge events. Volunteering activities won 3 National HEVA (Higher Education Volunteering Awards) for their excellent work. There are many other Hallam students doing unpaid activities in the community in an informal way, these include helping run sports activities and clubs for children, carrying out research and taking part in or running community meetings and events etc.
- 55 The Local Authority changed the structure and priority of formal community engagement this year and introduced Community Assemblies which have been given

greater powers than the previous Area Panels (for example to make decisions about spending and influence policies). The University is actively involved in the Assemblies to ensure that our business and students welfare is considered along with the University contributing to the local community.

- 56 In addition, we support many and varied community and resident groups including: Broomhall Park Conservation Association, Botanical Gate Neighbourhoods Association, community justice panel development, Safer Neighbourhood Action Groups, Sharrow Partnership Board, City Centre Residents forum and the Students in the Community task force. Activities include managing and reducing the waste, litter, noise, congestion and housing saturation that some of our students can cause in some parts of the city at times.
- 57 The Landlords for Excellence Programme continues to provide free 10 week training for private landlords with residential properties (many of whom house our students) in the city which is now seeing improvements to the quality and sustainability of private rented housing.
- 58 Various joint activities and events with the University and Students' Union took place last year including the "I love Sheffield" sustainability and community campaign which was very warmly received by local people and elected officers. The Students' Union were publicly applauded for their campaign to reduce the effects of excessive alcohol intake in our students, which included giving out free drinking water to students during evening events in the city.
- 59 The on line student induction (which was piloted with a few students last year) which explains the behavior expected by the University of students when in the community was rolled out across students in all halls accommodation this year.

FUTURE ACTIVITIES

- 60 The policies and action plans relating to the sustainability agenda at the University will be reviewed and updated as part of the new sustainability strategy currently being developed. This will also include the new carbon management plan, the development of a waste strategy and a new environmental legislation and regulation register.
- 61 As part of our ongoing work with Business in the Community, a corporate social responsibility audit is planned. We will be able to compare our performance against the last audit which took place in 2006 which will enable us to review our targets for the future.
- 62 The Board is asked to receive this report.

TO BE INTRODUCED BY

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