Sustainability Report 2014/15
Key Performance Indicators

Environmental Management System (EMS)

The University successfully passed audit for ISO14001 (giving a fifth year of holding ISO14001). The University included Education for Sustainable Development within this management system in 2014 which was a significant step to include curriculum within the EMS to have a full institution certification, the first within the Russell Group and one of only a handful in the sector. Sustainability continues to maintain an annually reviewed environmental legislation register available on our web site. A new version of ISO 14001 was published in late 2015 which this focuses on outcomes as well as processes, inclusion of curriculum puts the university in a strong position to deliver the new certification. The University is working towards this new standard in 2016.

Carbon/Energy Management

We have considered for this report, as in previous years, the areas for which we have full operational and financial control. These are areas owned and leased by the University at which we contract and pay for fuel. This is the area considered by Carbon Reduction Commitment.

Estates Management Records now require us to also consider leased areas where we do not pay for fuel and do not have maintenance control – largely space within hospitals and leased accommodation. We have very limited control over consumption in these areas, and do not include them in our Carbon Management Plan.

From the table below we note that **carbon dioxide emissions are 0.2% below the baseline**, a lower reduction than the 1% noted in the previous year. This change can be ascribed to Life Sciences, and Hiatt Baker 2, additional activity at NCC-2 and additional activity around the Precinct due to higher student numbers.

	Elec GWh	Gas GWh	Oil GWh	Steam GWh	Total	Elec tCO2	Gas tCO2	Oil tCO2	Steam tCO2	CO2 (t) tCO2	Total tCO2
05/06	60.0	79.9	1.2	1.4	142.6	31,229	14,801	336	335	46,845	0%
06/07	55.2	77.4	0.6	0.9	134.1	28,630	14,329	167	207	43,332	-7%
07/08	56.8	85.1	1.2	0.5	143.6	28,969	15,753	320	124	45,166	-3%
08/09	57.8	86.4	0.9	-	145.1	30,146	16,000	259	0	46,404	-1%
09/10	56.3	87.4	0.3	-	144.0	29,767	16,187	95	0	46,049	-1%
10/11	56.5	84.0	0.4	-	140.9	28,520	15,552	108	0	44,179	-5%
11/12	57.5	81.6	0.3	-	139.4	28,425	15,111	81	0	43,617	-7%
12/13	57.8	94.5	0.3	-	152.5	28,246	17,436	70	0	45,752	-2%
13/14	60.6	81.0	0.3	-	141.7	31,226	14,957	75	0	46,201	-1%
14/15	62.1	83.6	0.3	-	145.9	31,020	15,413	55	0	46,488	-0.2%

[1]

The University maintains the Carbon Management Standard ISO 14064 (achieved April 2015).

[1] The co-efficients with which carbon emissions are calculated have been changed retrospectively by DEFRA to take into account the effect of imported electricity, which tends to be less carbon intensive. The figures within this report have been re-calculated to take account of this.

The following tables show how the University's size has changed since 2005/6 by several measures.

	2005/6	2014/5	
GIA	352,500	489,350	+35%
Total Staff FTE	4,745	5,140	+8%
Students FTE	15,347	20,845	+38%
PG FTE STEM	997	1,328	+33%
Turnover £m	286	486	+70%
Turnover in 2015 pounds £m	364	486	+34%
CO2 (tonnes)	46,845	46,488	-0.2%

Table 1: Changes in several of the volume indicators for the University since 2005/6

Emissions have reduced very slightly whilst floor area, turnover corrected for inflation and Gross Internal Area have increased by a third. If we normalise emissions by the volume indicators, we see the following:

	2005/6	Present	
CO2 (tonnes)	46,845	46,023	-2%
tCO2/£m corrected for 2015	129	95	-26%
tCO2/m2 GIA	0.13	0.09	-27%
tCO2/FTE student	3.05	2.20	-28%

Table 2: Carbon Performance Indicators

There has been a demonstrable increase in economic activity, space and students, emissions and costs would have been significantly higher if they had risen proportionately.
Some emissions changes caused by new buildings, projects, facilities and measures are detailed below. Previous work has demonstrated that highly serviced space such as server rooms and laboratories can cause the emission of ten times as much CO_2 per square metre as office space, and that around 5% of the University, the highly serviced space, and causes up to 40% of our emissions.

Year	Project	Emissions increase	Emissions decrease
2006-7	H-Floor, CETL	+750	
2006-8	CHPs		-2,100
2008, 2012	HPC 1, 2, 3	+2,000	
2008 onwards	Stoke Bishop improvements and controls		-550
2008	Oakfield	+500	
2010 onwards	Small Measures		-1,900
2011-12	Voltage Opt		-1,200
2012-14	Reboilering activity		-1,200
2011-14	NCC 1 & 2	+2,600	
2014	Life Sci (net)	+750	

Table 3: Some Key Increases and Decreases

The table below shows how other measures and growth could affect our emissions to 2020. Without significant growth we could experience a further 20% reduction.

	Sources of addnl tCO2	Reductions tCO2
Fume Cupboards, S-LABS		-3,400
Lighting		-1,100
Renewables – ASHP, PV		-450
Electric Halls Control		-750
ELENA		-2,000?
More small works		-2,000
Fry, QP, Beacon, 73M, Langford	+2,000	
Electricity Decarb by 2020 or PPAs		-4,500?
	Growth?	Other works?

Table 4: Planned and Possible changes by 2020

By 2020/21 the CMP will be delivered in its current form, and we will be seeing annual utilities costs £3m below a notional business as usual case.

Rethinking the CMP

As the Sustainability Policy will be renewed in 2016, we are starting to think about how the Carbon Management Plan should evolve.

There are some elements that the new Plan will no doubt retain:

- Action to reduce costs
- Action to reduce reputational risk
- Elements that attract staff and students
- Elements that satisfy funders and potential funders
- A focus on highly serviced areas

However, we may also want to:

- Ask more of building occupiers in the way of behaviour change
- Look at how the supply chain can be manipulated to reduce Scope 3 emissions, reducing reputational risk again
- Undertake beacon projects to demonstrate that we might wish to test nascent technologies, attracting positive comment and press
- Make strong links with Education for Sustainable Development
- Think about Scope 3, and what should be incorporated beyond our current boundaries.

Water

A full audit of consumption at all supplies was undertaken in Dec 2013, correcting some historical errors. The University's water consumption was 23% down in 2014/15 against its baseline year of 2007/08, despite a major leak at Hiatt Baker and increasing numbers and activity.

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15
M^3	491,473	448,713	445,265	448,161	416,403	367,037	377,772	378,951
		-9%	-9%	-9%	-15%	-25%	-23%	-23%

The avoidance of tap water being used for cooling electrical equipment is now a key strand of our water conservation and cost saving activity.

Transport

In 2015 96% of students were traveling to study sustainably, up from 95% in 2013. Therefore the Transport target No. two (single occupancy car use) has been met with a reduction of 22% in the last two years. The most popular mode of travel, walking increased by 3% (to 63.4%). Usage of the University's Bus Service 16 saw an increase of 16% (to 9.9%). General bus and coach increased to 5.6%. Park and Ride usage increased to 0.7%. Formal car share increased by 133% (to 0.2%) and motorcycling increased to 0.4%. Formal study from home decreased by 17% (to 2.8%), train usage decreased by 16% (to 2.4%) and cycling also decreased by 24% (to 9.3%).

The staff travel survey will be undertaken again towards the end of 2016, but in 2013 81% of staff were travelling to work sustainably down from 82% in 2011.

Key actions this year:

- The University's Bus Service 16 transported 812,000 passengers from September to June; an increase of 38% from 2013/2014 and an increase of 198% from the first year of operation in 2010/2011. Overall satisfaction increased from 60% in 2013/2014 to 88% in 2014/2015.
- The £265,000 Local Sustainable Transport Fund (LSTF) grant programme was delivered, which included an additional 348 cycle parking facilities, the employment of the Travel Plan Assistant (now core funded by the University) and a pilot 'night bus' from the Stoke Bishop Halls of Residence.
- The cycling package offered to staff and students was enhanced to include bespoke cycle security advice, discounted locks and lights, bicycle maintenance, an increased number of cycle clinics and an additional 354 cycle parking spaces bringing the total to over 4,000 spaces.
- The completion of the parking review that covered all aspects of parking on the Precinct and Satellite Sites.
- The introduction of the new car parking policy that covers the Precinct and satellite sites.
- The launch of the Travel Options Programme, which includes personalised travel planning sessions, travel roadshows and local operator travel fairs.
- A 14% membership increase to the University's Liftshare scheme and an increase of 27% in the number of Liftshare 'budi' teams created.
- The ongoing success of the communication strategy has seen a 28% membership increase for the University's' Bike Users Group (TUB-BUG), currently 1,341members.

Waste

In 2014/2015 the University **reused, recycled and composted 83.1% of its total waste achieving our strategy target of 65%.** The amount of general (residual) waste to landfill produced at the University has consistently fallen since our baseline year of 2007/2008 and due to waste market changes is now less than 5%. Under the European Waste Framework Directive, waste should be managed using a hierarchy with prevention as the first option and landfill as the least preferable option. The University has minimised landfill and utilises alternative technologies such as energy from waste (EFW) in line with the Directive.

Proportion of general waste going to landfill:

	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15
% waste sent to landfill	59.7	52.0	51.3	44.3	24.12	5.0	5.8	<5%

In 2013/2014 the amount of waste produced per FTE had grown by 8% on 2012/2013 numbers. This was a reflection of new build projects and associated office/laboratory moves. The move into Life Sciences in particular produced a significant amount of waste as old materials are discarded. In 2014/2015 this figure has started to reduce again which is a positive step towards our target of waste reduction overall.

Can and plastic recycling had increased by an incredible 80% in 2013/2014 with the introduction of new systems collecting all types of plastics. This increased by just 1% in 2014/2015 and work continues to communicate the importance of recycling all plastics while focusing on reducing single use plastics also.

Over 160 tonnes of confidential material was disposed of by the University in 2014/2015 compared to 130 tonnes in 2013/2014 and compared to 80 tonnes the previous year. This upward trend will focus our attention on a balance between managing our confidential and non-confidential media correctly in 2015/2016.

Construction Waste

Current average recycling/reuse rates for 2014/2015 is 92% up from 89% last year.

Carbon Dioxide emissions from waste

Our target of achieving a 50% reduction by 2016 in emissions was met in 2013/2014 with a recorded reduction of 59% of the baseline year.

Hazardous waste

- The aim is to reduce the amount incinerated by 50% by 2018 (baseline 2010/11), **in 2013/14 this fell and the trend continued in 2014/2015, making a total reduction of 9.4% from the baseline figure.** Initiatives to speed up reductions include more compliance audits, staff training and improved disposal systems and contracts during 2014/15 along with S Labs initiatives.
- New contracts for hazardous waste and recycling have pushed the University's recycling rates up by allowing all plastic to now be recycled. Polystyrene recycling collections have doubled in frequency over the last 2 years to capture this light but bulky waste, in 2015/2016 this will continue but will expand to working with suppliers to the University to reduce unnecessary packaging.
- Over 70 tonnes of chemicals were disposed of in 2013/2014 and this has reduced by 45% in 2014/2015. This is as a result of much improved chemical waste management in terms of housekeeping and reducing backlogs and will also be due to large amounts of disposals associated with Fry refurbishment in 2013/2014.

Feasibility of zero waste to landfill

The amount of general (residual) waste to landfill produced at the University has consistently fallen since our baseline year of 2007/2008. There were particular leaps in this target over the last two years as the University was able to retender contracts and make use of new technological solutions for waste management. **We do not feel 100% diversion is ever achievable, but about 95% has been**

achieved consistently over the last two years. A more challenging target for waste management in current markets is overall waste reduction.

Reuse

The University expanded a reuse website Re-Store that re-homed directly within the University over 13 tonnes of reusable furniture 2013/ 2014 and this increased to 18 tonnes in 2014/2015. A further 8 tonnes of reusable items were rehomed externally in 2014/2015 to local charities and partners. This has helped the University avoid buying new furniture saving between £50k and £100k, saved disposal costs, minimised environmental impact and reuse supports the local community. In addition the Bristol Big Give project, of which the University is a partner has reused over 72 tonnes of student waste, which would otherwise have gone to landfill, this raised up to £125, 000 for local and national charities.

Staff Waste/Compliance Training

The University CIWM (Chartered Institute of Waste Management) Training Centre in 2014/2015 developed a chartered Student Waste Audit course to raise awareness of waste management amongst students while providing students with certified training. In addition 60 members of staff and external partners were trained in CIWM accredited courses as part of the University's Commitment to resource management for Bristol Green Capital. A further 80 members of staff were trained in spill response and more specialist areas of laboratory waste management, helping the University to run more efficiently and remain compliant with complex waste legislation.

Sustainable Procurement

In 2014/2015 The University made a pledge as part of Bristol Green Capital to develop a strategy to include social and environmental considerations into our procurement process. A Procurement Policy has been developed which includes sustainable procurement and plans are in place for Procurement and Estates Contracting to achieve the Flexible Framework for Sustainable Procurement. Clothing and furniture tenders have included sustainability this year and new sustainability tenders for energy and water efficient -80 freezers, pure water systems and drying cabinets in labs are being developed.

Sustainable Construction

Further projects have been completed using the BREEAM assessment, these include The new build Lecture Theatre on Woodland Road (Excellent), refurbishment of 73 St Michael's Hill (very good), design certificate for the refurbishment of the Fry Building (very Good) and the SAP assessment for the wardens home at Hiatt Baker (a code 5 building – five stars). Capital Projects within the Estates Office have been instrumental in delivering this BREEAM scores. Achieving an EPC rating of A has been prohibitively expensive, but the University still investigates if it is cost effective for projects. The SKA assessment method is being trialled at Richmond Building Film and Television as a possible standard for sub-£1million projects for the future, as is Beacon House. BREEAM refurbishment is also being used as a trial for smaller projects in 8-10 Berkeley Square.

Biodiversity

This year has seen the further implementation of a biodiversity action plan; with all the surveys having been carried out within residences. Work has commenced on converting these to the ArcGIS mapping system. New green roofs have been included above Art and Social Sciences lecture theatre and on the entrance and exit covers on Life Sciences building; whilst new planting has taken place at Hiatt Baker Hall, Life Sciences, 3-5 Woodland Road and Senate House.

Surveys of key indicator species were completed in 2015 and will be assessed against the 2014 results for: Birds (particularly: House sparrows, Swift, Green Woodpecker); Hedgehogs; Amphibians

(particularly Common toad and Great crested newts); Butterflies; and Ivy Broomrape. Early indicators suggest that more can be done, by the University, to support specifically: house sparrows, spotted flycatcher willow warbler and house martin and swifts through the increase in habitat or nest boxes.

External Estates have continued to establish links and schemes in order to "work in partnership with environmental groups and involve staff and students in biodiversity issues". The 25 acre woodland (Providence Plantation) has been used to successfully engaged students (Bristol University Conservation Group - BUCG) with the management of this habitat; and we are currently discussing both the sustainable harvesting of the timber and replacing coniferous species increasingly with broad leafs. In turn BUCG have connected with the Avon Wildlife Trust to enhance the groups' knowledge concerning general conservation practices.

This area of the policy has been delivered by the External Estates Team

Staff and Community Communications

A full communication plan was implemented during 2013/14 and included the running of Green Impact in 20 departments, a joint Green Impact scheme with the Bristol University Hospital Trust. A range of communication stories around sustainability activity. Members of the Sustainability team spoke at a number of staff events, including Professional Services Divisional Heads meeting, Technical Managers Conference and Site Services Supervisors meetings. A key event this year has been the close working with the technicians helping to sponsor their conference. Transport has run a number of events around personalised travel planning, as well as running a bike user group with over 1000 members and facebook pages. A new facebook and twitter feed for sustainability has been set up. Sustainability is one of half a dozen teams that now regularly 'speed dates' with new staff at welcome lunches!

S-Labs Initiative

In 2013/14 a new initiative was started aimed at improving the safety, security and sustainability of laboratories, called S-Labs. The scheme has grown over the last year projects include; replacement of old lab equipment with energy/water efficient equipment such as -80 freezers in medical school and DHB and drying cabinets in chemistry. Work has been undertaken to reduce energy use within Chemistry looking at Liquid Nitrogen use and fume cupboard management resulting in a 4% reduction in electricity use in Synthetic chemistry. Other projects include a cold storage sample inventor system being delivered in DHB/biobank and soon to medical school, chemical inventory system delivery and a £1million fume cupboard program. S-labs will run for at least two years. We have also been lucky and received £13,000 from HEFCEs catalyst fund and key to the future success of the scheme has been the two year appointment of a sustainable labs officer.

Education for Sustainable Development (ESD)

The University took part in the pilot Responsible Futures accreditation. Responsible Futures is an externally assessed accreditation mark, evaluating how well an institution embeds social and environmental responsibility across its formal and informal curriculums. This is a whole-institution approach denoting the institution and the students' union working together in partnership. Bristol was also amongst the first wave of collaborators with the Global Sustainability Literacy Test. The University signed up to the UNESCO Gap Commitment to ensure ESD opportunities are part of every student's formal and informal curriculum.

The ESD team engaged with the higher education sector at a number of events during the year. ESD Academic Lead, Chris Willmore, spoke at the launch of the QAA/HEA ESD guidance documentation. The University of Bristol and University West of England hosted "Learning from the sharp end:

Implications for sustainability in higher education", an international symposium on the next steps for ESD. The team's article 'Measuring education for sustainable development: experiences from the university of Bristol' was published in the International Journal of Sustainability in Higher Education, June 2015. Bristol SU hosted the Bristol SU hosted the Sustainable Schools Alliance Conference.

Institutionally, staff engagement was also a priority. Training was provided to PGs and staff new to teaching within UoB's CREATE scheme. The Sustainability Skills Survey was launched for all UoB staff. Our e-newsletter grew by 140 members, YouTube views increased by over a thousand, and our bespoke resource wiki received almost 30,000 views in twelve months. The team consulted on the University's Pandisciplinary 'Bristol Offer' plans.

Reviewing ESD within quality systems was updated for the 2014/5 review process. ESD has been embedded as a consideration (rather than separate questions) within the Policy for Annual Programme Review for Taught Programmes (APR (T)), section 4.2 APR (T) Template section 5. Initial steps were also made towards embedding monitoring processes within the University's Unit and Programme Monitoring System (UPMS).

For the second year in a row, £5,000 was awarded to departments as part of the Green Apple 2014/2015 Scheme. The funds serve as a catalyst to test out innovative curriculum ideas that are embedded within the discipline but also relate to ESD. Dr. Simon Thornton's project, within the Centre for Academic Primary Care, deals with issues of climate change and its threat to global health, and is embedded within the existing curriculum. Prof. Mark Horton's project reached across the Atlantic to North Carolina where community engagement and school education projects related ongoing archaeological research with contemporary issues of sustainability.

The ESD Team was recognised for its contributions to sustainability. Two members of the ESD Team were short listed in this year's Bristol SU awards: Martin Wiles, short listed for UoB Staff Member of the Year, and Aisling Tierney, short listed for the Sustainability Award. The ESD Team featured in the special Bristol's green light edition of *Nonesuch* magazine, May 2015. Hannah Tweddell's role as a Sustainability and Engaged Learning Coordinator was featured in the EAUC's Meet a Professional series on the EAUC website.

STUDENTS and ESD

ESD training was provided for Bristol SU course reps and then again at the Leaders conference. The Green Curriculum Team was launched to support student led ESD. The team supported students from Engineers without Borders to start to explore how the EWB challenge could be incorporated into the curriculum. The team also organised 'A Student's Guide to Sustainability' showcasing student research. Talks were given on: A Greener Internet, Looking beyond the state: Today's Hydraulic Societies and the much dreaded water wars, Prescribing nature : The benefits of contact with nature, the mechanisms of this and how we can encourage more of it and Divestment. Posters were displayed on: Using Twitter to aid UK Flooding Disaster Management Technique: a Semantic, Sentiment, and Behavioural Analysis, Microporous Polymers for CO2 Capture and Conversion and Rammed Earth.

Bristol SU Get Green Engage Café meetings were very successful throughout the year exploring a range of environmental, economic and social topics. Over 285 students attended six Cafes through the year to discussed issues including divestment, Fairtrade and future cities. Each Engage Café was led by a different individual or group of students

The Whole Earth Exhibition was placed across University campus during October. WHOLE EARTH? is based on the premise that the future belongs to today's young people and that students and universities everywhere can play a major role in making society more sustainable. The exhibition provides the kind of evidence students need to join the debate about their future. But it's not prescriptive – it's an invitation to students and their tutors to articulate the kind of world they want to live in, and, through Students Organising for Sustainability (SOS - see below) bring them together to show political and business leaders support to take the difficult long-term decisions that underpin security for all.

HEFCE awards £250,000 to the University of Bristol and UWE in a project aiming to boost the city's economy, promote sustainable action, and encourage increased student volunteering.

Bristol was amongst the first wave of collaborators with the Global Sustainability Literacy Test

University adopts pledge to make ESD part of all students experience at Bristol.

Student Communications
A continued partnership with the Bristol Student Hub supporting a schools' plus outreach program, ethical internship scheme and three conferences on social enterprise, international development and sustainable futures has been completed. The £180,000 HEFCE/NUS funded Student Green Fund project was completed. The project met all it objectives including reducing energy use in halls, increasing recycling and engaging with about 10,000 students. The project is a partnership program between UBU and Sustainability and has been branded as UBU Get Green. Two notable successes were the introduction of recycling into all Unite Halls of residence, which continues, something which had not been possible before and the expansion of the 'Big Give' end of term reuse scheme, which grew from a scheme that generates £20,000 for charity to one that generates £200,000! The success of the project has led to the creation of a post within the student union aimed at delivering student engagement around sustainability.

Food

The implementation of the Ethical and Sustainability Policy for food continues, noting locally sourced seasonal foods, FairTrade and rainforest alliance certified products, all milk used is organic and all eggs are free range and the good egg award status has been achieved from Compassion in World Farming. Sourcing of only 'Red Tractor' meats continues as does sourcing fish from Marine Stewardship Society approved suppliers. On site bottling of water continues reducing transport related carbon emissions while saving money. New water fountains have been introduced to promote use of tap water over disposable bottled water and where disposable bottled water is sold it is FRANK water supplied by a local Bristol charity. Vegware which is a compostable brand for disposable plates, cups and cutlery has been introduced to reduce use of plastics. The team continues to work with suppliers to reduce our scope 3 carbon impacts, with our sandwich supplier being a carbon neutral company. Hospitality achieved a Soil Association Silver award in 2013/2014 and have maintained this in 2014/2015. The hospitality team has also won the Bristol FairTrade Business Awards 2015 for best FairTrade University or College. Delivery of ethical and sustainable food is a major success story for the University.

Awards
The hospitality team has also won the Bristol FairTrade Business Awards 2015 for best FairTrade University or College

Appendix one – Target update 2014/15 for Sustainability Policy

Environmental Management System and Legislative Compliance

Targets:

1. To implement a fully operational, externally verified environmental management system across the entire University including curriculum by 2014

   In 2012/2013 the University's EMS ISO 14001 was externally audited and certified including Education for Sustainable Development (ESD / Curriculum). A further EMS for permitted Installations at Langford was also achieved. **Target achieved**. Certification continued in 2013/14 and 2014/2015.

2. To expand the influence of the University's EMS, by process, to other relevant stakeholders such as contractors by 2016 to ensure best practice for environmental management.

   In 2013/2014 the University carried out a programme of CIWM training which was offered to contractors most likely to produce waste as part of their work activities. The University also committed to achieving Flexible Framework level 5 for the Estates Office. **On target for completion 2016.**

3. As part of the EMS, an environmental legislative register will be maintained which will include emissions and discharges. This will outline the compliance required; responsibilities for compliance, the controls needed and detail resultant actions.

   A full legal register has been developed including emissions and discharges and is audited against in accordance with EMS auditing procedures. The register is updated regularly and communicated to relevant staff. **Target achieved**. Register updated annually.

Energy

Targets:

1. To put the University on a path consistent with a reduction in carbon emissions of 80% by 2050, from a 2005/06 baseline, entailing a reduction of 15% by 2016. This target covers all scope 1 & 2 carbon dioxide emissions. Investments planned for measures consistent with delivering this target will deliver a net cost saving in-period. This will be undertaken using the measures detailed in the Carbon Management Plan, which is aimed at producing a 38% reduction in emissions from buildings by 2020.

   Carbon Descent plan allows for current slow reduction of emissions, but continued student growth and estate expansion may mean a review of this target is required. Normalised target show a 28% target when income or floor area or student/staff number changes are accounted for. **On target for completion 2020.**

2. The University will reduce scope 3 carbon dioxide emissions by 10% from a baseline of 2010/11 by 2020.

   New work is being planned with procurement, with a commitment from senior management to include scope three within procurement practices. **On target for completion 2020.**

Water

Target:

1. An initial target to reduce water consumption by 10% by 2016 from a 2007/8 base year and to do this cost neutrally or better within period was achieved in 2009/10. We now aim for a 20% reduction on 2007/08 by 2016.

23% reduction achieved, even with student number icreases. Further work is needed to maintain this reduction. **Target achieved.**

Management of Waste as a Resource

Targets:

1. To achieve continuous year on year reduction in waste arising per FTE staff and students.

   In 2013/2014 waste produced by the University totalled 97.7kg per person an increase on the previous year of about 8% (2012/2013 - 90.6kg per person). In 2014/2015 this upward trend started to reverse with total per FTE being 92kg.

2. To reuse, recycle and compost 65% of total waste produced at the University 2016.

   In 2014/2015 The University reused, recycled and composted 83.1% of its total waste at the University. **Target achieved.**

3. To reduce the amount of hazardous waste incinerated at the University by 50% by 2018 based on a baseline of 2010/2011.

   In 2011/2012 the University increased waste incineration due to changes in legislation and process and increased laboratory activity. Against the baseline this figure dropped in 2012/13 by 4%, in 2013/2014 6% and in 2014/2015 by 16%. **Currently not on target for completion 2018.**

4. To recycle or reuse 85% of construction and demolition waste by 2018.

   The University's contractors all use a combination of waste transfer stations and segregated skips for construction and demolition waste. The average segregation rates range from 65-100% for waste transfer stations and 95-100% for segregated skips. 72% of waste from construction was reused or recycled in 2010/2011, this increased to 82% in 2011/12 and 87% in 2012/2013, 85% in 2013/2014 and 92% in 2015/2016. **Target achieved**.

5. To reduce emissions from waste management by 50% from a 2007/8 baseline by 2016.

   In 2013/2014 emissions were recorded at 59% of the baseline year. **Target achieved**.

6. By 2013, to test the feasibility of the University sending zero waste to landfill by 2016.

   The University has consistently achieved 5-6% waste to landfill for the last two years and will continue to minimize this where possible in line with available technology and targets. **Feasibility tested, target achieved.**

Transport

Targets:

1. Develop a framework to support sustainable modes of transport to work and study at the University by staff and students (e.g. walking, cycling, public transport and car sharing). Achieving 85% (baseline 2007) and 96% (baseline 2008) respectively by 2016 for sustainable modes of transport.

   In 2015, 96% of students were travelling to study sustainably, up from 95% in 2013.

In 2013, (last time surveyed) 81% of staff were travelling to work sustainably down from 82% in 2013. Staff will be surveyed again in 2015. **Currently on target for completion in 2016.**

2. Reduce the percentage of single occupancy car journeys made to the University by staff and students by 2016 from 21% to 15% (baseline 2007) and to remain at 4% (baseline 2008) respectively.

   In 2013 18% for staff and in 2015 4% for students. **Currently on target for completion in 2016.**

3. Reduce the percentage of All students and Stoke Bishop Students bringing a car to the University by 2016 from 27% to 14% (baseline 2008) and 19% to 7% (baseline 2008) respectively.

   In 2015, 18% of all students brought their car to the University and 8.4% for Stoke Bishop students. **Currently not on target for completion in 2016.**

4. Increase the percentage of All students and Stoke Bishop Students usually travelling by bus from 4% to 10% (baseline 2008) and 3% to 60% (baseline 2008) respectively by 2016.

   In 2015, 15.4% of all students and 80.6% of Stoke Bishop students were traveling by bus. **Target complete**

5. Reduce car and aviation business mileage by 5% by 2016 (from a baseline of 2009).

   Due to incomplete 2009 baseline data, Sustainability has put in place collection protocols for the data and now has a good understanding of all data sources. This means our first robust baseline is 2012/13 and the target would be moved to 2020 in the revised Sustainability policy.

   In 2013/2014 Car Business mileage was up by 2.7% from 1,062,873 km to 1,091,200km and Aviation business mileage was down 2.0% from 30,570,921 km to 29,956,340 km. **Based on the original 2016 target, this target is currently not on target for completion in 2016.**

6. Review the University's supply and demand for fleet vehicles and produce a Fleet management plan by 2014.

   Review not carried out. Review required when this will be feasible to do. **Target not met.**

7. Measure and analyse visitor activity to the University; develop and implement a management plan to encourage sustainable travel by visitors by 2016.

   Not action to date. Review required when this will be feasible to do. **Target not met.**

8. Identify measure and monitor carbon emissions related to all University related transport by 2015.

   This is in the baseline and regular data now. **Target Complete.**

9. Identify how 'deliveries' to the University can be reduced and develop a reduction plan by 2016.

   No action to date. Review required when this will be feasible to do. **Target not met.**

10. Analyse and seek opportunities to reduce student travel to and from Bristol by 2016.

    No action to date. Review required when this will be feasible to do. **Target not met.**

Sustainable Procurement

Targets:

1. To implement the Government's 'Flexible Framework for Sustainable Procurement' to level 4 by 2016.

   Current assessment across the areas of procurement place us between levels 2 and 3. **Currently on target for completion 2016**.

2. To implement a new sustainable procurement policy/strategy produced in 2011 with individual actions for the different areas of the flexible framework.

   Policy written and published in 2015. **Target achieved.**

Sustainable Construction

Targets:

1. To build new buildings that cost over £1million to at least BREEAM "Excellent" and Energy Performance Certificate (EPC) "B" rating.

   All new builds built to excellent standard. All achieved EPC of 'B'. **Target achieved**.

2. To undertake refurbishments over £1million to at least BREEAM "Very Good" and EPC "B" rating, with an aspiration to achieve 'Excellent'.

   All refurbishments built to very good or excellent standard. **Target achieved.**

3. To assess for each building the cost effectiveness of achieving EPC "A" rating.

   Each project is assessed to this level, but as yet none have been cost effective to build to 'A' rating. **Target achieved**.

4. Develop guidelines, targets and procedures for introducing sustainability issues into projects smaller than £1million by July 2014.

   Trialling SKA assessment and BREEAM refurbishment for smaller projects. **Target achieved**.

Biodiversity

Targets:

1. Using the data supplied, every two years, by the Bristol Regional Environmental Records Centre, produce comparative data indicating levels of Biodiversity surrounding key University estates (Precinct, Stoke Bishop and Clifton Village Halls).

   Agreed and on-going process.

2. Complete Phase 1 habitat surveys:
   - Of all halls of residence - by the end of 2011,
   - For the Precinct, sports grounds and other outlying properties – by the end of 2012,
   - For agricultural land – by the end of 2013.

   These have been completed are currently being converted to the industry approved mapping system ArcGIS - **Target achieved**

3. The University maintains four categories of tree stock, these are:
    a. Native Woodland
    b. Tree collections
    c. Landscape
    d. Heritage landscapes and veteran trees

    3a. From 2013, individual woodlands will have a management plan, informed by the specific British Plant community (Rodwell *et al* 2003) together with a short report containing the actual tree species growing. The objective will be to remove, over a period of time, undesirable species which have become established in the past and to prevent their regeneration. Subsequent reports will be written on a three year basis to display, as a percentage, an increase in desirable community and native trees.

    On target with initial plans being written during the winter of 2015.

    3b. Gardens and Grounds have a list of viable trees within specified collections. Each collection has a management plan which aims to maintain the current range of species and identifies, an objective to increase the diversity. On a three year basis, collections will be surveyed to ensure the objectives of the management plans are achieved; and, in a short report, new stock levels will be identified.

    On target with initial plans being written during the winter of 2015.

    3c. All landscape trees, within University grounds, have been identified and tagged. As a holistic approach, over a large disparate estate, species diversity is a main objective to achieve. Starting in 2013, and then on a three yearly basis, a short report will be produced, which will statistically calculate the diversity index.

    On target with initial plans being written during the winter of 2015.

    3d. Heritage Landscape and veteran trees (located in numerous sites), have been mapped. By 2015 management plans will be produced for the reinstatement of trees lost within a heritage landscape, and successional planting. Within the same time frame a veteran tree plan will be produced, establishing a strategy for their protection and on-going maintenance.

    Currently on target.

4. A biodiversity protocol has already been established, whereby each University development (over £1m) must achieve a BREEAM excellent award. In order to achieve this award each project will appoint a suitably qualified ecologist, at the development stage, to identify existing ecology and habitats; biodiversity must be maintained and enhanced. Consequently biodiversity targets can be identified for each project, within a specific target date.

    Target achieved for 2013/14.

5. From 2013, Gardens and Grounds will run a competition which requires students to identify a biodiversity project which they wish to run on University grounds. Gardens and Grounds will award funds to run the project and the student/group will receive a prize and publicity after the receipt of a short report which identifies a quantifiable measure of success.

    External Estates have commissioned Wessex Ecological Consultancy to organise and run this. Currently the consultants are establishing initial information, through surveys, before launching the competition in 2015. Results not yet available. **Currently on Target.**

Communications

Targets:

1. Annually review the communications strategy for sustainability which will inform each annual communication action plan.

   Annually reviewed as part of EMS, communications implementation plans also reviewed annually. **Target Achieved.**

2. Develop an annual communication action plan for each academic year starting with the year 2009/10. Report on progress with each plan at the end of each academic year.

   Implementation plans on the sustainability web site. **Target Achieved**.

3. Produce an annual sustainability report covering all aspects of the sustainability strategy.

   Annual report produced. **Target achieved**.

Teaching and Research

Targets:

1. To annually monitor progress in the three areas of formal curriculum provision, informal curriculum opportunity and subliminal experience through estates provision.

   Formal curriculum monitored via APR annually.
   Informal curriculum being reviewed as a baseline in 2014/15.
   Subliminal curriculum to be reviewed.
   Currently on target for completion by 2017.

2. Implement a new Education for Sustainable Development (ESD) strategy starting in 2012.

   Strategy approved and delivery of implementation plan. **Currently on target for completion 2018**.

Food

Targets:

1. Approval of an Ethical and Sustainable Food Policy for the University by 2012.

   Policy approved and reviewed annually. **Target Achieved**.

2. Deliver targets as set out in the Ethical and Sustainability Food Policy by 2016.

   Implementation plan complete for 2014/2015 with the majority of actions achieved or carried over to 2015/2016.