

Environmental and Sustainability  
**Annual Report**



**2016-17**

- Certified EcoCampus Platinum
- An electric car club was launched in January 2014, the first of its type at a UK Higher Education Institute
- More than 95% of waste is diverted from landfill
- New species have been recorded at the University's Bayfordbury campus including the rare Barbastelle bat and Nathusius Pipistrelle, and water shrew
- Successfully launched the University Community Fridge project
- Increased focus on sustainable procurement

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# 1. University life

The University of Hertfordshire's vision is to be internationally renowned as the UK's leading business-facing university. This vision is supported by our Strategic Plan objectives, which are challenging and progressive. They are based on our values of ambition and enterprise and are achieved in a friendly, collegiate environment where the positive transformation of the lives of our students is our core purpose. Hertfordshire students embody the University's Graduate Attributes: professionalism, employability and enterprise; learning and research skills; intellectual breadth, depth and adaptability; respect for others; social responsibility and global awareness. These attributes ensure that University of Hertfordshire graduates stand out in the workplace, enhance their career aspirations and confer high employability.

Our ten Academic Schools drive our key strategic objective to 'provide expert teaching informed by research, business and the professions'. They offer diverse degree programmes ranging from vocational subjects such as paramedic science to innovative history degrees from one of the UK's top-ranked research groups in its field (Research Excellence Framework (REF) 2014). Our teaching is informed by active external partnerships: 100% of new programme validations are shaped with the input of relevant businesses and professional partners, and every School works with an Employer or a Professional Advisory Board to ensure the relevance and currency of our programmes. Eighty five percent of our single honours undergraduate awards are accredited, approved or recognised by Professional, Statutory or Regulatory Bodies (PSRBs).

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# 1.1 Managing our environment - Environmental Management System

The University of Hertfordshire has an internationally recognised management system to provide structure for the protection of the environment. The University has accreditation to ISO 14001:2004 Standard and EcoCampus Platinum for its Environmental Management System (EMS) with a plan for accreditation to ISO 14001:2015 scheduled for September 2018. For both these Standards the University is audited annually by an external certification body, with the last audit having been completed in October 2016. The EMS is implemented to manage the University's environmental risks and aims for continuous improvements in environmental

performance; all the areas detailed in this report are underpinned by the EMS. An internal audit programme, which reviews the University's EMS compliance against associated legislative requirements, is undertaken annually, with objectives and targets reviewed to ensure that environmental areas are targeted and are specific.

This is the University's seventh Environment and Sustainability Annual Report and covers the University's financial year August 2016 to July 2017.





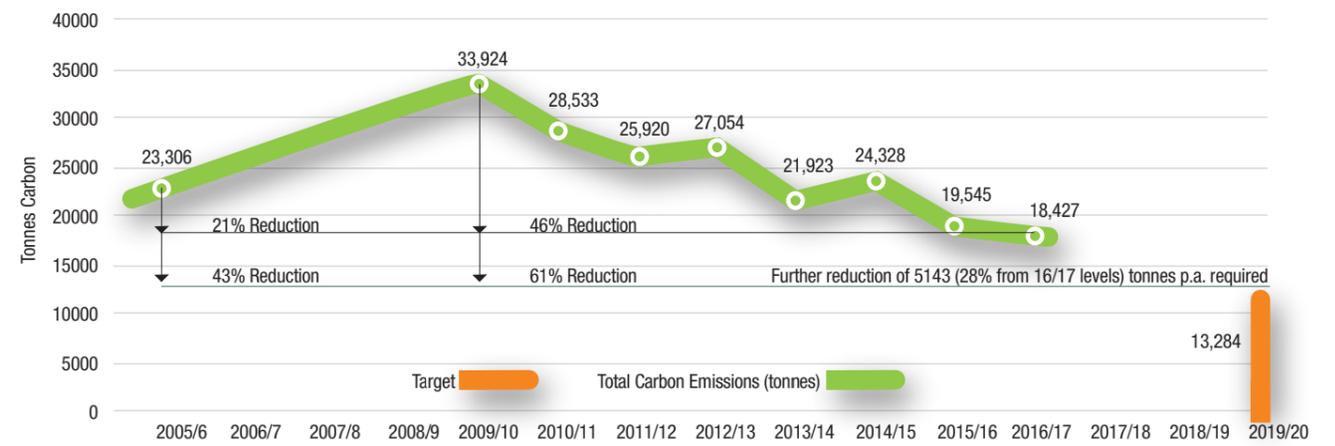
## 2. The scope

- **Estate Management Return (EMR)** scope is dictated by the HEFCE (Higher Education Council for England), and the same scope is used for the Carbon Management Plan (CMP). For 2016/17 the residential scope includes the de Havilland halls; the non-residential scope includes all sites but excluded all commercial space. The EMR scope for the waste data includes all construction waste.
- **UH Board Group** scope for carbon emissions includes all University-owned buildings.
- **Waste and Resource Management Strategy** scope includes only the waste managed by the University.

## 3. Carbon management

**Performance:** The University's Carbon Management Plan (CMP) adopts the HEFCE sector target for carbon emissions, which is monitored through the annual EMR and aims for a 43% reduction in emissions from owned buildings and vehicles by 2020 against a 2005/06 baseline. As the University expanded significantly during the years prior to and including 2009/10, this initial target is equivalent to the University reducing emissions by 61% from a 2009/10 baseline of 33,924 tonnes to 13,284 tonnes by 2019/20.

UH Carbon Emissions vs HEFCE Target Reduction of 43% by 2020 against 2005/6 Baseline



An assessment of progress against the target is undertaken annually and the graph above demonstrates that there has been a 21% reduction in carbon emissions from buildings and University-owned vehicles against the CMP/HEFCE scope since 2005/06 and a 46% reduction in carbon emissions since 2009/10. This means that the University will need to make further reductions of 28% from 'current' levels (2016/17), if it is to reach the required target reduction for 2019/20. It is recognised that the University grew as an institution between 2005/06 (the baseline) and 2009/10 by increasing the size of its built estate by approximately 21%.

The University continues to progress energy-efficiency and carbon-reduction projects. These projects have been varied and include plant insulation, adoption of low-energy lighting and controls, improvements in heating controls, building management system reviews and adjustments, installation of improved boiler and chiller plant, Combined Heat and Power (CHP) plant and Solar PV panels to generate 'green' electricity.

**Recent and new projects:** The University has undertaken, and continues to undertake, a range of measures that reduce carbon emissions:

Recent projects:

- Window replacement programme
- Lighting improvements (LED installations)
- HVAC improvements (boilers, chillers, controls etc.)
- New Solar PV

New projects:

- College Lane LRC – HVAC and lighting
- Upgrading the boilers at the de Havilland M, N and R blocks

In addition, where possible all other refurbishments are carried out to the highest energy efficiency standard.

The University complies with the requirements of the Energy Performance of Buildings Directive and has Display Energy Certificates, Advisory Reports and Technical Tables for all the necessary buildings. It uses this and other information to identify future projects for reducing energy consumption.



## 3.1 Scope 3 emissions

**Performance:** Scope 3 emissions are those that are a consequence of an institution but occur from sources not owned or controlled by the institution - for example, water, waste, commuting and procurement. HEFCE provided the sector with guidance on how to measure these emissions in 2011/12 and it has since made a requirement for all institutions to report Scope 3 emissions from water and wastewater on an annual basis as part of the EMR. In addition, the University has committed to reporting emissions from other areas of Scope 3 and has included them in the 2014/15 EMR submission. Total Scope 3 emissions from 2012/13 to 2016/17 have decreased from 94,359 tonnes to 87,398 tonnes, with noticeable decreases in non-residential waste and residential water.

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## 4. Waste

**Performance:** The University's targets in relation to waste management are detailed in the Waste and Resource Management Strategy which was first produced in 2008, updated in 2011 and revised again in 2015. This Strategy is only for waste managed by the University, and not that which is produced during construction, through the PFI or at U-Living.

During 2016/17 the University achieved the following recycling targets:

- The total waste arising in 2016/2017 was 990.45 tonnes, an increase of 193.64 tonnes on the previous year, and thus did not achieve the target of 986 tonnes as set out in the Waste and Resource Management strategy.
- In excess of 95% of the University's waste was treated as recycling and/or energy from waste, and that the small percentage of less than 5%, went to landfill. This excludes waste from Capital Projects works such as building refurbishment or building demolitions.

### **Programmes undertaken:**

The University has completed the implementation of the two waste streams: Mixed Waste and General Waste.

- New labelling for internal bins
- 25kg of glass reused.
- Veris Discovery Waste Audit completed, and report submitted
- Confidential Waste now serviced fortnightly to keep levels stable (inclusive within monthly allowance)

The University works closely with the de Havilland and College Lane student residences management companies to improve data collection and performance with recycling rates. Both sites use the same waste contractor. Ellenbrook's recycling rate has increased from 27% in 2010/11 to 84% in 2016/17. The student residence average recycling rate was 50% in 2014/15, and it increased to 63% in 2016/17. It now operates at a recycling rate of 67%.

Links have been established with the resident management companies to increase their recycling rate and ensure consistency across the University, and to raise awareness and educate students. Initiatives have included regular meetings between the University, waste contractor and stakeholders; toolbox talks with students in the halls of residence; information days held by the waste contractor and the University; and regular monitoring of performance.



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## 5. Transport

**Performance:** The University Travel Plan is a statutory document required as part of the local authority planning and highways framework. First developed in 2002, the University is now in its third phase of modal split targets. The targets were last updated in 2013, covering the period 2013-2018, and require the University to continue to work towards reducing the number of employees and students travelling alone by car to work/study to 60% and 20% respectively. There has been a decrease in staff travelling alone by car from 82% in 2002 to 68% in 2016. For students, a decrease was recorded from 38% in 2002 to 18% in 2016.

**Programmes of work undertaken:** As part of the Travel Plan, a package of measures/interventions has been implemented and continues to be developed. These include:

- An electric car club was launched in January 2014, the first of its type at a UK Higher Education Institute. As of the end of May 2016, 150 'active' University 'Private' members had signed up to the club. The fleet of electric hire cars consists of five e-cars.
- Mobile ticketing is provided by INTALINK, in partnership with HCC. This enables users to purchase Uno bus tickets. The project was launched in October 2014 and has continued with an 11% conversion from cash to mobile tickets since launch. There have been more than 34,000 App downloads.
- Improved marketing of existing services to and from the station has been implemented, to coincide with the improvements at Hatfield station. In addition, the single fare was reduced from £1.70 to £1, or a £2 return.
- The University offers the Transport for London (TfL) photo card scheme, which enables students to live or undertake a placement in London to obtain one-third off their travel. In 2016/17, over 2,000 students were registered with this scheme.
- In May 2014 the U-Bike scheme was launched by Derwent FM, with the support of the Environment and Sustainability Team. The scheme now provides U-bikes for weekly, monthly and termly periods.
- The University offers the 'Cycle Scheme' and Halfords' 'Cycle2work'. The schemes provide staff with greater flexibility in terms of the length of the 'hire': two 'hire' periods are now available (12 and 18 months), which allow employees on shorter contracts to take advantage of the scheme, whereas previously they were excluded as only an 18 month 'hire' period was available.
- Carshare and Travel Planning software is being reviewed to better support staff and students who wish to car share to the University for their commute.

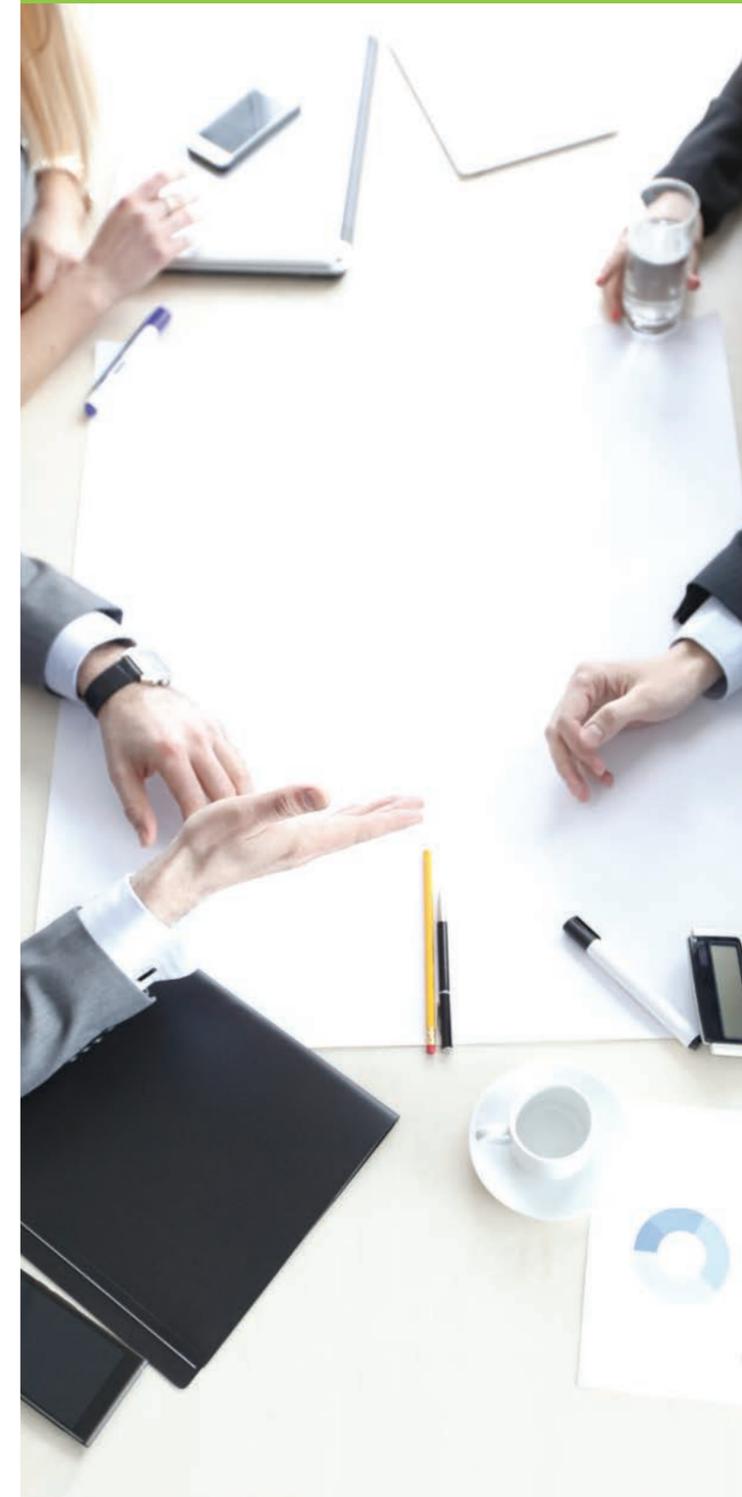
## 6. Procurement

**Performance:** Work on sustainable procurement has focused on embedding sustainable procurement principles into the University using the Government's Flexible Framework as guidance. An action plan has been produced and approved by the Procurement Committee that aims to achieve level three (out of five) for all criteria.

The University's Sustainable Purchasing Policy was approved and as standard is included in the terms and conditions presented to tenderers during any tender process and incorporated into any subsequently awarded contract to ensure contractor compliance to University policies. The policy forms part of our Modern Slavery Act Statement.

The Procurement team has been formed, with an emphasis on improving both 'purchase to pay' and 'contract processes' to achieve a greater standard of professionalism and outputs in line with a business-facing University. Sustainability tools and staff skillsets are being further developed to achieve these goals. Examples of this include whole-life costing/life-cycle assessment tools; regular staff training sessions to increase sustainable purchasing knowledge with set sustainable procurement objectives; carbon footprint reporting; supply chain management to preserve natural resources, reduce deliveries and eliminate surplus waste in materials or processes, with an ongoing ethos for resource efficiency. Category guides covering responsible procurement – for example, economic, environmental and social aspects – have been produced for the contract managers to reference for tender and contract management considerations.

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## 7. Case study – Community Fridge



The Community Fridge Network was initially set up in 2017 by Hubbub (a community and environmental London-based charity). The project received funding via The Big Lottery, and had the aim of providing a free support service for any group across the UK to set up or run a Community Fridge. The Community Fridge Network aims to reduce unnecessary food waste. This is established by redistributing surplus or unwanted food, whilst also promoting community sharing and trust.

The Community Fridge scheme was highlighted as a potential project via the Collegiate Campus Life group at the University of Hertfordshire. The Campus Community Officer in the Dean of Students' Office took the lead in setting up a Community Fridge in The Oval at College Lane Campus.

A significant fund via Hubbub and Sainsbury's was secured, and a double glass-fronted fridge was purchased via FoodHerts in October 2017. The UH Community Fridge is the second fridge to open in a University setting.

Since its launch, the UH Community Fridge has more than 50 new visitors, as well as a large number of regular visitors. It has also redistributed 338kg of surplus food. Links have been established with the local branches of Sainsbury's and the Co-op to arrange regular food sharing, which will increase redistribution statistics dramatically.

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## 8. Biodiversity

**Performance:** Bayfordbury continues to be the University's flagship campus in terms of biodiversity. Its 32ha of land consists of a diverse array of habitats, including significant priority habitats such as woodland and grassland meadow, and supports a diversity of invertebrates, birds, mammals, and plants. It also has a lake that supports some rare fish populations (such as Crucian carp). These habitats are managed carefully to maintain and enhance the biodiversity of the site. A prescriptive management plan for the site as a whole was updated by staff, and grounds maintenance contractors were given detailed guidance on its implementation.

**Programmes undertaken:** Extensive ecological monitoring takes place throughout the year and is undertaken by staff and volunteers. An excellent working relationship with local wildlife groups, including the Herts and Middlesex Bat Group, Hertfordshire Amphibian and Reptile Group, Herts and Middlesex

Wildlife Trust, Hertfordshire Natural History Society and others, allows for expertise to be shared and a detailed understanding of the biodiversity of the site to be achieved. The following groups of species are intensively monitored annually using national monitoring protocols: amphibians, reptiles, bats, small mammals, birds, plants and butterflies. Specific focus is given to protected species on the site, such as the Great Crested Newt and all species of bat. Other species are monitored on an ad hoc basis. A number of notable new species records for the site include the rare Barbastelle bat and Nathusius Pipistrelle, and water shrew. Glow-worms, which are relatively rare in Hertfordshire, were spotted during a bat survey. Nationally rare nightingales have been heard on site, and Barn Owls are seen regularly. Targeted surveys have been undertaken for Hertfordshire Biodiversity Action Plan species. Detailed species lists are maintained in a records database and work is ongoing to update the Biodiversity Action Plan for the site.



## 9. Green ICT plan

**Performance:** Progress continues to be made on reducing power consumption and CO2 emissions through the consolidation, rationalisation and virtualisation of ICT equipment and services.

**Programmes undertaken:** The principle 'Green' ICT activities undertaken during 2016/17 include:

- Finishing the three-year Network Replacement project which delivered enhanced network capacity as well as energy savings.
- Upgrading lectern and many laboratory computers with solid-state memory hard-disks (SSDs) to provide faster boot times, quicker functioning and more power-efficient operation.
- Continued investment in our corporate server and storage equipment to facilitate replacement of power-inefficient hardware.
- Continued consolidation of legacy school-based services on to the secure and efficient enterprise VMware architecture.

## 10. Looking forward

- Reinvigorate the Environmental Management System.
- Priorities for 2017/18 are to focus on joining together main areas of the EMS.
- Direction up to 2020 is to refresh and embed EMS across the University and focus on awareness through a variety of initiatives, such as a focus on community (a sense of belonging) and waste recycling awareness (with a focus on plastics and food).



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