

# Environmental Sustainability Report 2019/20



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# Environmental Sustainability Report 2019/20

## 1 Executive Summary

Environmental sustainability has long been embedded into University of Reading's DNA; a core theme running through much of its teaching and research, as well as a key strength in its operations, which have gained increasing recognition for sector leadership over the past decade. This year, the University has gone further still, by identifying sustainability (both financial and environmental) as one of 4 key principles underpinning its new 2020-26 Strategic Plan.

To bring this to life, six workstreams were identified to take sustainability to new levels. Just a few weeks after the workstream leads met for the first time however, the UK and therefore the University went into lockdown due the COVID-19 outbreak. Work on the new workstreams has needed to be scaled back temporarily, however work has continued in the background where possible. In the short term, the significant drop in activity due to the lockdown resulted in unprecedented reductions in carbon emissions, waste and travel at the University.

The urgency for strong environmental action remains as great as ever though, with WWF's latest State of Nature report warning that "...*Humanity's destruction of nature is having catastrophic impacts not only on wildlife populations but also on human health and all aspects of our lives*"<sup>1</sup>. While the year ahead may involve a good deal of uncertainty, our work will continue to grow towards becoming one of the leading universities globally for delivering environmental sustainability.

In January 2020, before COVID-19 had impacted UK activity, the University reached a **44% reduction in its carbon footprint** compared to its 2008/09 baseline, just short of its 45% reduction target for July 2021 with 18 months to spare. These are **the largest percentage CO<sub>2</sub> reductions of any research-intensive university in the UK**. The temporary cessation of campus activity led to a far more dramatic drop in emissions, with full year emissions being 57% below baseline. Accumulated savings now stand at **£34m** since 2010, not including a one-off **£2.5m** saving from the lockdown.

Waste production has continued to dramatically decline, standing at **17.6% less per person** in January 2020 when compared to our 2015/16 baseline. Waste production has changed significantly over the last few years, including significantly less single-use items, which in turn mean there is less to recycle. Nevertheless, our recycling rates are static at around 50%, and when construction waste is included, Reading has the **fourth-highest recycling rate of any research-intensive university in the UK**<sup>2</sup>.

Water use was estimated to be **27% lower than the 2011/12 water baseline**, with two significant factors contributing this year: the installation of water saving devices in University premises by Thames Water in the summer of 2019 and the COVID-19 lockdown. Gaining a precise consumption value is complicated by the lack of information provided by our supplier since March 2020. Without the lockdown, consumption is estimated to be 18% below baseline. Reading now has the **third lowest water consumption rate per head of any research-intensive university in the UK**<sup>2</sup>.

Sustainable travel continues to be a priority for the University, and new ways of working implemented during the COVID-19 outbreak offer some valuable learning for the benefits and limitations of radically different approaches to work and study arrangements in the future. Resource is more constrained however, and the most recent travel survey has shown an increase in staff and students travelling by single occupancy vehicle. 82.2% of staff and student commuter journeys were made by sustainable modes (in January 2020) – slightly behind the 83% target, and further still behind the revised 87% stretch target set last year.

As the 2020/21 academic year begins, there is much to look forward to, despite the inevitable uncertainties associated with COVID-19. We plan to publish our new Environmental Strategy, including our Net Zero Carbon Plan, and look forward to the 6 new sustainability workstreams embedding sustainability into all that we do.

<sup>1</sup> WWF Living Planet Report 2020, summary available at <https://f.hubspotusercontent20.net/hubfs/4783129/LPR/PDFs/ENGLISH-SUMMARY.pdf>

<sup>2</sup> See main report for references

## 2 Introduction

Our annual environmental sustainability report summarises progress against our key sustainability targets over the past 12 months, as well as providing a wider review of sustainability initiatives, and a look forward to the year ahead.

This is a year like no other, and we have taken time to consider how best to check and report progress, when for almost half the year, our onsite operations have been severely curtailed. Ultimately, we are reporting on our environmental impacts. We have therefore decided to report as usual on our absolute impacts on the environment (which in many cases will have temporarily reduced), as well as, where possible, to look at progress to the end of January, before COVID-19 began to significantly affect business-as-usual operations.

Progress with our Carbon & Water Plan, Waste Strategy and Travel Plans are summarised here, and for those that like the detail, we have produced more detailed reference information as appendices.





### 3 Progress Against Targets

#### 3.1 Energy Performance Indicators (EnPI's)

The following EnPI's are defined in the energy and environmental management system (EEMS):

##### Carbon Emissions (tCO<sub>2</sub>)

- The University's headline EnPI is its 45% carbon reduction target for July 2021 against a 2008/09 baseline. By January 2020, we had reached a **44.1% reduction** in our carbon emissions, within touching distance of our 45% carbon reduction target 18 months early. Our final end of year emissions were actually 57% below baseline, reflecting a significant reduction in onsite operations and a temporary cessation of business travel. Appendices 1-4 contain a detailed breakdown of our emissions scope and progress in each area.
- Our Carbon Management programme has now saved **£34m** cumulatively since 2008/09, compared to a business as usual scenario. In addition, approximately £2.5m further was saved through a drastic reduction in business travel and energy use during the COVID-19 lockdown.
- Our 'scope 1 and 2' emissions<sup>3</sup> were **49.1%** below our 2008/09 baseline by January 2020, temporarily falling to 54% below baseline for the full year to July 2020.
- Even before the COVID-19 outbreak, business travel emissions had slowed this year, with a **17%** drop in emissions to January 2020 compared to the previous year (partly due to changes in published figures for CO<sub>2</sub>/km travelled). Temporarily, these emissions are **63%** down on the previous full year, accounting for a large proportion of the extremely large reduction in our emissions this year.
- Analysis of reported 2018/19 carbon emissions to HESA's Estates Management Record indicate that Reading has made the **sixth highest carbon reductions in the sector** as a percentage against a 2005 baseline; and the **highest of any research-intensive University**<sup>4</sup>.

<sup>3</sup> Defined as Direct and Indirect emissions, covering electricity, gas, oil, refrigerant gases, fleet vehicle fuel. Scope 3 emissions are 'Value Chain' emissions. Appendix 1 provides further details of the University's emissions scope.

<sup>4</sup> HESA is the Higher Education Statistics Agency - <https://www.hesa.ac.uk/data-and-analysis/estates/environmental> - comparison of Scope 1 and 2 emissions 2018/19 to 2005 baseline

##### Projected emissions for 2020/21

- Our emissions over the next 12 months are currently extremely hard to predict, and are likely to be anywhere between 50% and 60% below baseline, depending on the extent and speed that operations return to normal, as well as the precise timings of building closures resulting from the opening of the new Health & Life Sciences building. It is likely to be 2021/22 before our carbon emissions are fully back on an 'even keel', by which time, we anticipate being some way beyond our 45% carbon reduction target. New interim targets will be set during 2020/21, as a pathway towards being Net Zero Carbon by 2030.

##### Energy cost (£)

The 'phase 2' Carbon Management Plan for 2016-21 identified £10.4 million of cumulative savings could be achieved from a 45% carbon reduction by July 2021. By July 2020, **£6.4 million of savings have been realised** towards this target, plus £2.5m from the temporary COVID-19 shutdown. This is in addition to £27.6 million saved from the original 2011-2016 programme.

Utilities costs for the University in 2019/20 totalled £5,466,250, a 5.5% reduction on 2018/19<sup>5</sup>, which is less than the decrease in utilities use and resulting emissions, largely due to gas price increases.

Electricity unit prices in 2019/20 were level with those of 2018/19, whereas gas unit prices rose by 29% compared to the previous year. Water unit prices also rose by 8%. Energy prices have currently dropped however, and for gas particularly, a significant reduction in unit costs are anticipated for the year ahead.

##### Energy (kWh)

In order to provide a meaningful comparison of energy consumption year-on-year, we convert all sources of energy back to their primary energy equivalents, so that heating and electricity kWh can be meaningfully combined. These are normalised against the key significant variables we have identified, of heating degree days (for heating supplies) and m<sup>2</sup> building space.

Appendix 3 provides a detailed breakdown of raw and normalised kWh consumption. Key conclusions from this data are:

- Reductions in energy use compared to the previous 2 years are: 12% for electricity, 2% for gas and 18% for oil
- Primary Energy use was 3% less than the previous year

##### Projected energy consumption for 2020/21

- As with carbon emissions, projecting energy use for 2020/21 is complicated by the uncertainty about the level of use of facilities as we respond to COVID-19, together with timings of building closures linked to the opening of the Health & Life Sciences building. Temporary changes in ventilation rates and practices in buildings to reduce the risk of the spread of the virus will result in additional energy use and energy use could range between a 10% year-on-year reduction to a 5% increase.

##### Display Energy Certificates (DECs)

DECs are produced for all public buildings over 250 m<sup>2</sup>, either annually (>1,000 m<sup>2</sup>) or every 10 years (251m<sup>2</sup> – 999 m<sup>2</sup>). The University produces its DECs each October, based on energy data from the previous financial year. The October 2019 data indicated that 75% of our assessed buildings perform better than average from an energy perspective.

##### Review of Significant Energy Uses (SEU's)

The University has identified 11 SEU's in its Energy Review Matrix. These are assessed on a building-by-building level to assess the potential for carbon and energy savings.

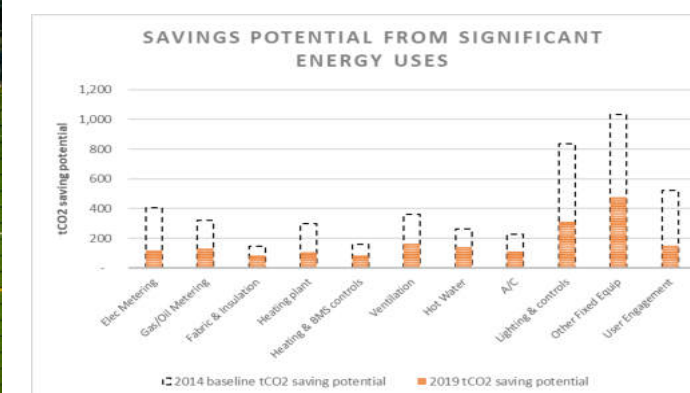


Figure 1 – SEU 2014 baseline year versus 2019

Figure 1 shows the potential for carbon savings across each SEU currently, compared with the original 2014 analysis. This clearly illustrates that as overall carbon emissions have reduced, the potential for further savings have also reduced. These SEUs are still felt to be suitable for ongoing assessment of the potential for energy and carbon reductions. It would be sensible to also add a category for renewable energy and heat metering; not energy 'users' as such, but important enabling technologies for implementation.

<sup>5</sup> Source: "Carbon footprint baseline tool – 2019-20.xlsx"



### 3.2 Water

The headline water reduction target is 30% - 35% for the academic estate by July 2021 against a 2011/12 baseline. Use during 2019/20 is estimated to have been **27% lower than the baseline** (and 22% lower than 2018/19). The recent reduction is the result of two main factors: the installation of water saving devices by Thames Water in summer 2019 and the COVID-19 lockdown. Without lockdown, it is estimated that the reduction in use from the baseline would have been 18%. Identified leaks (now repaired) accounted for about 1.5% of the annual use.

Gaining a precise picture of water consumption for 2019/20 was complicated by the fact that our water supplier provided few invoices after March, site access for meter reading was restricted, and our main water meter requires replacement. However, there is full-year data for some meters, which has been used to approximate consumption for the remaining supplies.

Without significant improvements in the University's water metering infrastructure, further water reduction opportunities are likely to prove difficult to identify and monitor. Whilst such improvements have long been an ambition, these are disruptive works that can often only be achieved when wider water infrastructure works are planned.

It currently therefore seems unlikely that the ambitious 2020/21 water reduction target of 30% will be fully achieved. Nevertheless, **Reading now has the third lowest water consumption per head of any research-intensive University<sup>6</sup>**.



<sup>6</sup> HESA is the Higher Education Statistics Agency - <https://www.hesa.ac.uk/data-and-analysis/estates/environmental> - comparison of water consumption per head 2018/19

### 3.3 Waste

#### Reduce

- The total amount of waste generated in the first half of the year (Aug '19 to Jan '20) was 25.5kg per person; whilst only 10.4kg per person was generated in the second half of the year (Feb to Jul '20), showing the effects of the COVID-19 shutdown. This gave a total of 35.9kg per person for the year, compared to the 2015/16 baseline of 61.9 kg per person; a **42% reduction in waste generated**, and well ahead of the targeted 5% per person reduction against the baseline set for 2021. If the total amount of waste generated in the first half of the year had been repeated in the second half, this would have equated to 51.0kg per head across the whole year, slightly lower than the total per person generated in 2018/19. This would equate to a 17.6% reduction compared to 2015/16.

#### Re-use

- Re-use of items, mostly furniture, via the online Warp-it system was affected by the University shutdown, but 6.8t of items were re-used across the year (down from 11t in 2018/19), with a further 6.2t of additional items re-used via routes other than Warp-it. Therefore, total **annual re-use of 13t of items** is still in excess of the target of 8.5t for 2021.

#### Recycle

- The recycling rate for the first half of 2019/20 was 50.0%, but for the second half was 46.4%, due to a significant reduction in the type of waste available to be recycled during the University's shutdown. Over the whole year, this led to an **annual recycling rate of 49.0%**, compared to 50.3% in 2018/19 and 49.5% in 2015/16. Although this year has seen an unusually low recycling rate in the second half of the year, it is clear that meeting the 60% annual target for 2021 will be very challenging.
- Since 2015/16, the University has significantly decreased the amount of waste generated per person as a result of key initiatives to reduce single-use items, to improve the re-distribution of unwanted furniture and equipment, and to reduce packaging waste. It has become apparent that a greater proportion of recyclable items have been removed from the waste stream compared to non-recyclable items as the total amount of waste generated has reduced, so it has become more difficult to increase the recycling rate.

- The Waste Hierarchy states that it is most important to prevent and reduce the total amount of waste generated, then to re-use items, and then to recycle materials. As such, we are focused on the prevention of waste, first and foremost, even if this has the knock-on effect of impacting our overall recycling rate.
- Analysis of reported 2018/19 recycling rates to HESA's Estates Management Record<sup>7</sup> indicates that Reading is in the top quartile for total percentage of waste recycled (including construction waste); and the **fourth highest of any research-intensive University**. This good performance compared to our peers is in part due to a large amount of recycled construction waste, the volumes of which can vary significantly year-on-year.

<sup>7</sup> HESA is the Higher Education Statistics Agency - <https://www.hesa.ac.uk/data-and-analysis/estates/environmental> - comparison of total waste and recycled waste per institution 2018/19



### 3.4 Travel to campus

- The 2017 University Travel Plan originally set a headline target of 83% of commuter travel to the University to be by modes other than Single Occupancy Vehicle (SOV) by 2022; but a stretch target of 87% was approved in December 2018 as a result of improved data collection methods and analysis in the 2018 travel survey, which showed that the 83% target was already being met. Based on results from the 2020 travel survey undertaken in Jan/Feb 2020, 17.8% of overall commutes were by SOV, and therefore **82.2% of staff and student journeys were by sustainable modes** – so the University is currently off track to meet both its original and stretch SOV targets for 2022.
- The Travel Survey has shown a concerning trend in the rise of travel to the University by SOV, both for staff and students, even before the COVID-19 shutdown occurred. The survey responses provide a clear indication of some priorities to consider when reviewing our Travel Plan Action Plan to further our progress towards the University Travel Plan targets.
- Despite the rise in SOV usage, the **overall cycling rate has increased to 12%** from 10% in 2018 and is now at its highest level since the surveys started in 2012. Public transport (combined train and bus) is now at 15%, which is also at its highest.

### 3.5 Pollution Prevention

The University continues to work on minimising the risk of pollution from its activities by controlling emissions, meeting regulatory standards, and implementing emergency response procedures. The water quality of the lake continues to be monitored, and issues and incidents have been raised and dealt with effectively. Work to improve procedures and documentation continues with staff undertaking level 1 spill training and this will be further strengthened with the second phase of spill training which is due to take place during the 2020/21 academic year once staff return to campus more formally.

### 3.6 Procurement

Sustainable procurement objectives have been reviewed this year and with the formation of the Responsible Procurement Working Group, a coordinated approach to Sustainable Procurement going forward will help develop a Responsible Procurement Strategy. Continued efforts to embed sustainability into University procurement processes has seen:

- The University divested from fossil fuels within its investment portfolio
- Continued developments of the new category plans for utilities, waste and travel have all provided a number of opportunities to embed sustainability
- Collaboration on a range of sustainability project tenders and appointments
- The University signing up to Electronics Watch to ensure electronic products are sourced ethically and sustainably.



### 3.7 Conservation and Biodiversity

The University met its objective for Whiteknights campus to receive its 9th Green Flag award in 2020. This award recognises the hard work that has gone into maintaining such a pristine and diverse green space. The Grounds department have revised the Habitat Management Plan for 2020. This plan will steer the habitat maintenance strategy for Whiteknights campus and is run in conjunction with the Wilderness Woodland Management Plan.

- There are over 1500 recorded species of wildlife which call our Whiteknights Campus home
- Staff and students can take advantage of the University's community campus garden to grow their own produce
- The University of Reading's community nature reserve, Langley Mead, attracts over 37,000 visitors and is home to 125 species of plant, including 5 of Britain's IUCN red list species

### 3.8 Campus Commerce

The University's hospitality operations have committed to continuously improve their services' environmental sustainability:

- In 2019/20, Catering introduced new market stalls in some catering outlets selling a range of environmentally-friendly products
- The following sites use entirely renewably-sourced electricity for cooking; Park Eat, Hospitality Kitchen, Greenlands
- All water is sold in either packaging made from 100% recycled plastic (rPET) or aluminium cans. A hydration map of campus is also available showing where water can be found free of charge
- The University retains its status as a certified Fairtrade University and is now looking at the more stringent requirements to retain this certification in 2020
- See Section 5.1 Energy, Carbon and Water for information on the recently completed solar panel installation at CEDAR farm

### 3.9 Estate Development and Maintenance

The Health & Life Sciences Building and Library projects both aimed for the 'Very Good' BREEAM rating during the planning phases of development as per the EEMS objectives. Interim assessments show that HLS is on track for Very Good and the Library, although not requiring a formal assessment, has been delivered to the BREEAM Very Good standard. Site Waste Management Plans will be reviewed in the coming year.

### 3.10 Supporting education for sustainability

- In 2019/20, the School of Chemistry, Food and Pharmacy (SCFP), signed up for the Laboratory Efficiency Assessment Framework (LEAF) for delivering greater practical value within laboratories. A sustainable working group has been set up to produce terms of reference and key performance indicators for SCFP going forwards.
- An Education for Sustainability Development working group has been set up to create and deliver the Education for Sustainability Development programme at the University.

### 3.11 Communication and Community Involvement

See section 5.4 Engagement & Awareness.

### 3.12 Noise and Nuisance

Issues regarding noise and nuisances are reported to the Community Relations Officer. Issues are investigated and action is taken promptly to resolve the problem. It is understood that there are no outstanding issues however monitoring complaints and issues from the local community may need to be defined further within the EEMS. This will be taken up as an opportunity for improvement.





## 4 Compliance

### 4.1 Energy & Environmental Management System (ISO14001 & ISO50001)

The Energy & Environmental Management System (EEMS) provides a framework to enable the University to maintain compliance with its legal and other obligations and improve its overall energy and environmental performance.

- The Environmental and the Energy Management System were successfully merged in December 2019 to create one management system which will enabling better and more efficient management of the core elements of these management systems.
- The auditing body NQA undertook a reassessment audit of the now joint EEMS in February 2020, and recommended that the University retain their ISO14001:2015 and ISO50001:2018 certifications.
- This annual external audit identified no non-conformities relating to clauses within the ISO14001:2015 and ISO50001:2018 standards.
- Alongside this public report, a report on the annual review of the EEMS system has been prepared for the University Executive Board. That report provides an update to senior management about the progress and opportunities for improvement within the system and general environmental management at the University. It also provides a summary of the non-conformities that have been identified as part of the internal auditing programme as well as any environmental incidents that have occurred in the last year.

The EEMS continues to help embed sustainability into everyday practices and decision making by giving a framework to set objectives, identify opportunities and risks, and monitor progress via internal audits and management reviews.

### 4.2 People & Planet Green League

- Due to the COVID-19 outbreak, People & Planet have not produced a 2020 Green League.
- In the 2019 League, we were awarded a **‘1<sup>st</sup> class’** rating for our environmental and ethics performance, ranking 28<sup>th</sup> out of 154 institutions, scoring top marks in both environmental management and auditing systems.
- Further progress in this League is now a key metric identified in the University’s Strategic Plan.



## 5 Completed Projects 2019/20

### 5.1 Carbon, Energy & Water

The COVID-19 shutdown meant that the focus for implementing projects for 2019/20 needed to shift to practical opportunities that could continue to be addressed with minimal presence on campus. Work on the more strategic initiatives has continued in the background, with minimal required investment at this stage. The table below shows progress against key targets, both for projects implemented in 2019 and those in 2018 that were not previously reported:

Item	Target	Outcome
District heating extension to Chemistry Research & Hopkins	171 tCO <sub>2</sub> p.a. savings by July 2019	Construction completed Sept 2018.  Savings at Hopkins for 2019/20 88 tCO <sub>2</sub> , almost 10% more than its target savings of 81 tCO <sub>2</sub> . Metering issues at Chemistry means no calculated savings for 2019/20.
Review further opportunities for solar PV installations on Whiteknights	Identify projects to deliver at least 100 tCO <sub>2</sub> p.a. savings	50 kWp solar panels installed by Reading Community Energy Society at CEDAR Farm, targeting 44,000 kWh generation and 13 tCO <sub>2</sub> savings per annum. 32 kWp solar panels also installed on the new Health & Life Sciences building, bringing total solar PV capacity to 428 kWp (1,675 panels) – expected to generate 372,000 kWh annually.
Lighting improvements	89,000 kWh and 25 tCO <sub>2</sub> savings p.a.	£232,000 invested across a number of buildings. In Edith Morley, corridor lighting has been upgraded throughout the building, targeting 89,000 kWh and 25 tCO <sub>2</sub> savings. Already, 16tCO <sub>2</sub> savings are evident, from the Aug 19 installation until COVID-19 shutdown in Mar 20. Early assessment of further installations at Edith Morley since shutdown suggest another 18 tCO <sub>2</sub> p.a. will be realised. Archaeology has also had an LED lighting makeover.
Work with RUSU to ‘green’ the Students’ Union building	Lighting, heating, solar opportunities	Ground and first floor offices, and ground floor shops upgraded to LED. A solar panel scheme has been designed for the building (see 2020/21 projects). The Union themselves also achieved the NUS Green Impact Gold for their sustainability efforts.
Partitioning of IT server rooms	90,000 kWh and 25 tCO <sub>2</sub> savings p.a.	Work has been delayed in order to address wider considerations of required changes to fire suppression systems

Appendix 2 provides the full list of carbon and water projects implemented last year.



## 5.2 Waste

- Use of the Warp-it portal by staff to claim items of furniture for business re-use remained strong before it had to be put on pause during the COVID-19 shutdown. A take-home event for staff took place in December 2019 when unwanted items could be claimed for personal use.
- Over 8 tonnes of items were donated to local charities and schools as a result of the clearance of unwanted furniture from URS building.
- Over £28,000 in waste and purchasing costs have been saved this year within the University as a result of the re-use of items via Warp-it.
- The University has increased the amount of IT equipment that it redistributes back to schools and functions, and has trialled a more formalised mechanism for doing this, with a view to fully launching the project in 2020/21.
- A project coordinated by staff from Technical Services has commenced to investigate ways to improve the recycling of laboratory plastics.
- Promotional work has focused on improving the clarity of information about existing recycling facilities, particularly in catering facilities.
- Appendix 6 provides further detail on waste initiatives implemented this year.

## 5.3 Travel

- Another major pedestrian and cycling pinch point on campus has been addressed this year by widening the footpath from RUSU to Black Bridge. Combined investment from Sustainability Services and Maintenance Services in improved, shared pathways is almost £500,000 since 2017.
- The biennial travel survey was completed in early 2020, which is discussed further in section 4.4 above.
- Progress with the expansion of the Co-Wheels car share scheme in Reading, and the installation of electric vehicle charge points at Greenlands, have been delayed by the COVID-19 outbreak. Nonetheless, the uptake of Co-Wheels more than doubled over the year, while electric charge point usage at Whiteknights was also showing a steady increase before COVID-19 hit.
- Cycle training and maintenance support continued to prove popular with many students and staff, but was curtailed in March due to the COVID-19 outbreak, and will resume in autumn 2020.
- Unfortunately, GWR took the controversial decision to end their partnership with Easit, which has resulted in the withdrawal of discounted train season tickets for commuters into Reading on their services. The University lobbied against this decision, without success.
- Bus travel has inevitably dropped this year, given the almost complete cessation of the use of public transport for a few months, in line with Government COVID-19 guidance.
- Appendix 7 provides further detail on the travel initiatives implemented this year, and on the uptake of different schemes.

## 5.4 Engagement & Awareness

The Annual Communication Plan targets were met as follows:

- **Green Festival 2019** – Green Festival was well received and we achieved good attendance to most events. The Climate Jamboree, which was held in collaboration with RUSU and the University, was very well attended.
- **Jump** - There was an increase of more than 40% of staff signing up, having risen from around 431 to 613. We launched the wellbeing module of Jump in collaboration with HR and this has been well received over lockdown with good staff engagement levels throughout the activities.
- **Sustainability Matters** - The mailing list has increased over 2019/20 with an additional 50+ staff members signing up and there was an increase of more than 200 student sign ups.
- **Engagement** - Sustainability Services have had regular meetings and engagements thought out the year with RUSU, UPP, Procurement, Catering, Technical Services, Staff and Student Communication teams. Sustainability has delivered lectures to students in the School of Real Estate and Planning and the School of Agriculture Policy and Development. The topics covered included Sustainability in Facilities Management and Energy Management.
- **Social media platforms and website** - The website click rate increased to 45,000 in 2019 from 40,000 in 2018. We had an increase of 229 followers on twitter which takes us up to 1,836 followers in total. On Instagram we have 476 followers and have been increasing our activity on this platform. This has generated more engagement, but more work to track this trend in the upcoming year will give us more information about communicating via this platform.
- **Visible fixed sustainability signage** - The project to create and install fixed signage has been delayed until 2020/21 due to the current COVID-19 pandemic.
- **Energy Event** - The remaining 2019/20 event calendar including the energy event has been suspended due to the current COVID-19 pandemic. Work to deliver events online or partly online is currently underway, including Welcome Week and potentially the Green Festival.







## 6 Planned Initiatives 2020/21

### 6.1 Environmental Sustainability Strategy

The University has created an Environmental Sustainability Committee as part of the new University Strategy, chaired by Professor Mark Fellowes, Pro-Vice Chancellor (Academic Planning & Resource). Six inter-related working groups have been set up to cover the University's significant sustainability aspects and work together towards developing a new Environmental Sustainability Strategy:

- Zero carbon
- Waste & resource use
- Civic and community engagement
- Education for sustainable development
- Biodiversity & green infrastructure
- Campus commerce

Progress with the development of the new strategy can be tracked on the University's sustainability homepage - <https://sites.reading.ac.uk/sustainability/>

### 6.2 Carbon, Energy & Water

- A full Zero Carbon Plan for 2030, will be published during 2020/21, including interim targets to help monitor progress.
- Solar PV generation will again be expanding, with large, subsidy-free solar now proving as competitive as some 'traditional' energy efficiency projects, such as lighting upgrades. The next 2 schemes proposed are 150 kWp for JJ Thomson, anticipated to generate 135,000 kWh annually, and 116 kWp for the Students' Union, though current budgets can only fund one of these projects this year.
- Work on our low carbon heating strategy will continue, including initial feasibility work for decarbonising the Energy Centre, and progressing discussions with potential funding partners.
- LED lighting upgrades will continue to roll out, with a further £13,000 and 25 tCO<sub>2</sub> savings target this year across the Meteorology, Agriculture and Carrington buildings.
- Delayed from 2019/20, we will pick up work with IT to partition off their server rooms, to enable ventilation and cooling requirements to be reduced. This is targeting savings of 90,000 kWh energy and 25 tCO<sub>2</sub>.
- Appendix 2 provides the full list of carbon and water projects planned for this year.

### 6.3 Waste

- Work with RUSU to improve the waste and recycling facilities in their buildings.
- Launch a project to create a more formalised mechanism for increasing the amount of IT equipment that is redistributed back to schools and functions, rather than being recycled after its first use.
- Led by Technical Services, the University will introduce the LEAF (laboratory efficiency assessment framework) scheme to monitor and improve environmental sustainability in laboratories. This will help to provide a focus on the reduction of waste and increase in re-use and recycling in science schools.
- The University's main waste contractor, Select Environmental Services, is due to open a new Materials Reclamation Facility locally, which will enable the University to work with the company to improve the type and quality of items recycled from the campuses.

### 6.4 Travel

Funding for travel initiatives is linked to parking permit and pay & display parking income and is therefore more uncertain than usual due to some operations continuing to take place remotely. Subject to available budget, key initiatives planned this year are:

- Installation of electric vehicle chargepoints at Greenlands, London Road and Earley Gate
- Expansion of the Co-Wheels scheme to introduce an additional car at the Northcourt Halls
- Introduction of a new lift share programme and associated onsite facilities
- Continuation of the successful cycle skills promotion campaigns and events
- Further cycle parking improvements.

In addition, the new Health & Life Sciences building includes major new cycle parking provision, and Maintenance Services will be widening the pathway from Bridges Hall to Erleigh House at Earley Gate.

Outside of the University's campuses, we have been working with a local campaign group, local councillors and some local schools regarding delivery of safe crossings on 2 key pedestrian routes to campus; on Upper Redlands Road and Pepper Lane. We have also highlighted our key priorities in the recent Local Walking and Cycling Infrastructure Plan consultation run by Reading Borough Council in partnership with Wokingham Borough Council.



# 7 Financial Information

## 7.1 Investments

Investments of £383,938 have been made in sustainability initiatives this year:

- £300,372 in carbon reduction initiatives\*
- £73,856 in sustainable travel initiatives
- £9,710 in waste facilities improvements

\*Plus £46,852 on mandatory 5-yearly air conditioning TM044 energy inspections, identifying a number of future opportunities for energy savings, and a further investment by Maintenance Services for CEDAR Farm Power Factor Correction.

A full list of investments is included in Appendix 2.

In addition, Reading Community Energy Society invested approximately £45,000 in the installation of solar panels at CEDAR Farm. Identifying innovative funding solutions such as this will be critical to ensuring continued progress against our carbon reduction targets in the years ahead.

## 7.2 Savings

For our Carbon & Water Management programme, we measure savings in 2 ways; against the original 2008/09 target and against the start of the 2016-21 programme. The cumulative programme savings are as follows:

- £27,638,863<sup>8</sup> cumulative savings from original programme (investments made between 2009/10 and 2015/16)
- £6,381,206 cumulative savings from current programme (investments made since 2016/17) – excluding approx. £2.5m from the COVID-19 lockdown

Whilst the savings from the current phase of the programme are beginning to accumulate, they are £2,446,537 less than anticipated at this point, due to lower than projected investment in energy saving projects.

Our Waste Strategy was signed off in 2017, and since the 2015/16 baseline year, has delivered cumulative savings of £390k against the predicted ‘business as usual’ costs (excluding hazardous waste). This is primarily because of the significant drop in the overall amount of waste the University has produced, and approximately £50k of these savings can be attributed to the reduction in waste generated due to the COVID-19 shutdown at the University.

<sup>8</sup> Adjusted to fix energy costs at 2016 prices so savings are not over-inflated

# 8 Appendices

See - <https://sites.reading.ac.uk/sustainability/appendices-environmental-report-2019-20/>

- 1 – Carbon Management Scope
- 2 – Carbon & Water projects 2019-20 and 2020-21
- 3 – Emissions & energy breakdown vs baseline and last year
- 4 – Additional out of scope emissions
- 5 – Avoided emissions through renewable generation
- 6 – Waste management actions and projects
- 7 – Travel Plan Annual Report 2019-20

