



Environmental Impact (Negative) Headlines – April 2019

The Students' Union at UWE understands that through our operations as a charity, we will create a negative impact on the environment around us. We have started the process of analysing our impact, which will inform the creation of future Sustainability Action Plans and will focus our work with our students, staff and University colleague to reduce this impact.

As an organisation, our main impact has been evidence through energy use and utilities consumed, waste produced and the impact of creating multiple and sustained coach travel through our plethora of BUCS fixtures.

Ranked in order of impact:

			kg CO2e / kWh	Tonnes CO2equiv	
Electricity	193,142 kWh			67.90	Higher impact
Gas	19389 m3		<u>216455</u>	61271.9	<u>37.6779</u>
Waste (cans, Plastics, paper, General, Food Waste)	46,054 kg			<u>13816.2</u>	13.816
BUCS Transport	25,649.20 km			8.5881	
Water supply	1407 m3		0.344	0.484008	
Paper (Excluding Large Format in Marketing) A4	104920 Pages			0.499815748	
Paper (External printing through Marketing) A4	58110 Pages			0.276823228	Lower Impact

*Please note: BUCS travel data, utilities and waste data is used from previous academic year 2017/2018 due to UWE reporting. Paper usage data is from academic year 2018/2019.

Reducing Utilities: Over the last three years, we have saved 11.29 Tonnes of CO₂ equivalent through our electricity usage. These energy savings are enough to provide **11.8 average UK household's with electricity for one year**. In the last three years, there has been a 127.2m³ water saving, an 8.3% decrease in this utility. This is enough to provide water supply to wash **636 full loads of laundry**

The Students' Union at UWE has achieved this through:

- lobbying the University to build a new Students' Union building that has been fit with eco-saving lights and sensors
- Energy saving challenges and awareness campaigns with staff and Officers as to their role to play in "embedding sustainability in all we do" as an organisation
- Replaced the IT servers resulting in an 85% reduction in the CO₂ emissions of our company servers.
- Changing the timings our projection screens operate (no longer weekend and evenings)
- The carbon intensity of the UK grid has decreased, resulting in the CO₂ from the SU electricity consumption to have also dropped.

What more can we do?

- Continuing staff and student engagement campaigns – using our data to drive behaviour change
- Water signage in the building for taps not on automatic timers
- Automatic computers in sleep mode for Students' Union computer machines

Utility – Electricity

Electricity Usage

Compare:		Electricity (kWh)	Tonnes CO ₂ e from electricity
SU 2015-16	New U block	192,172	79.18
SU 2016-17	New U block	193,018	67.86
SU 2017-18	New U block	193,142	67.90

*** Although the Electricity use has increased, the carbon intensity of the UK grid decreased in 2016, resulting in the CO₂ from the SU electricity consumption to have also dropped. [Source for Conversion](#)*

- Comparing 2015/16 to current available data from 2018, there is an **11.28 Tonne CO₂ equiv. saving!**
- These energy savings are enough to provide 11.8 average UK household's with electricity for ONE YEAR! [Source for Equivalency Calculation](#)

Improved Efficiency

Due to the Students' Union's new building, the organisation is more prominent to students and offer meeting and events spaces, making us more utilised by students. This has enabled us to better achieve our charitable aims and to organise larger equality and diversity campaigns and events within our space. Even though the building is used more by students, we are still making an energy saving on two utilities.

To add some additional context to the increase of the electricity usage, we can analyse how much the U block space is used via a report from our booking system. The booking system provides data on each bookable space and how many hours it was booked. We have totalled the hours of bookable spaces below.

Improved Efficiency

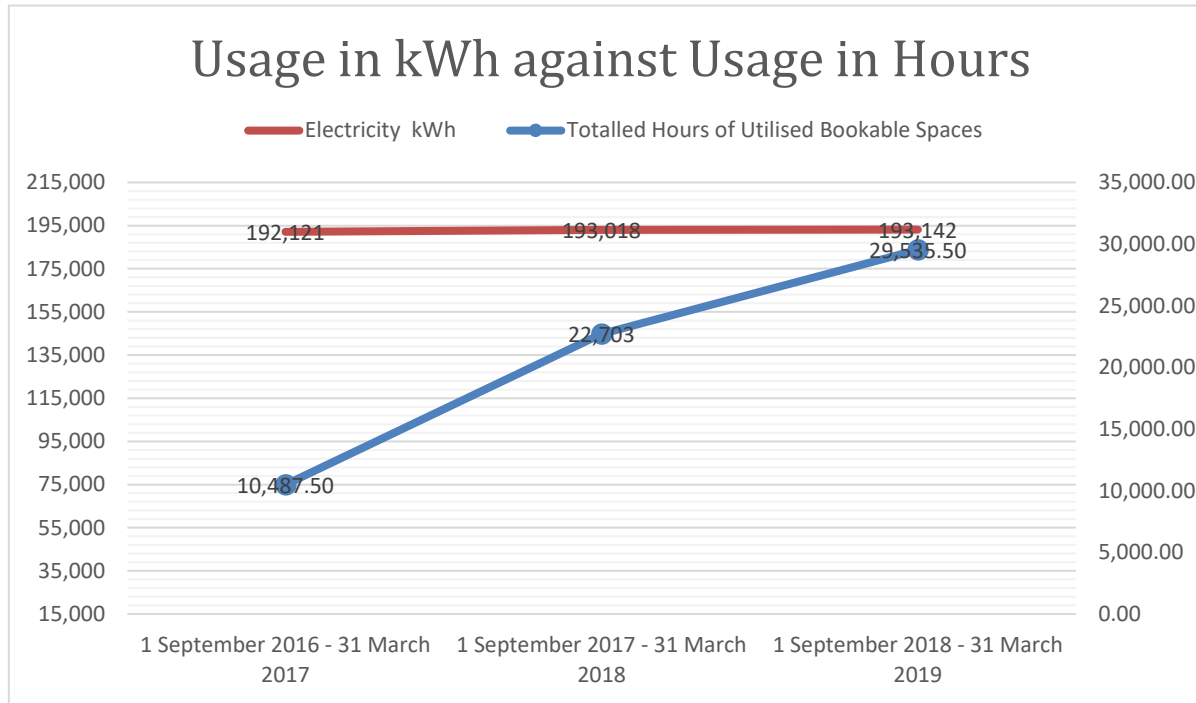
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Hours of Facility Use

Time Frame	Totalled Hours of Utilised Bookable Spaces
1 September 2016 - 31 March 2017	10,487.50 Hours
1 September 2017 - 31 March 2018	22,703 Hours
1 September 2018 - 31 March 2019	29,535.50 Hours

- This translates into an **increase of 19,048 hours** of bookable spaces utilised in the facility in the last three years, i.e. usage of the facility has nearly tripled at The Students' Union since 2016.
- Despite the increased usage in hours, the consumption of energy measured in kWh has remained virtually consistent with just a small increase.
- This effectively displays that efficiency measures taken at The Students' Union result in higher utility efficiency.



Utility – Water

- In the last three years, there has been a 127.2m³ water saving, an 8.3% decrease in this utility.
- This is equivalent to £407 in savings. This is enough to provide water supply to wash **636 full loads of laundry!**
- Source: <http://www.parksville.ca/cms/wpattachments/wpID70atID4418.pdf>

Year	Water Supply (m3)
2015/2016	1534.20
2016/2017	1497.9
2017/2018	1407

Utility – Gas

Gas

Type	Unit	2015/2016	2016/2017	2017/2018
Gas	m3	16645	16913	19389

*We have increased usage by 16.48% since 2015/2016

*We have increased usage by 14.64% since 2016/2017

Our gas usage has stayed fairly constant over the last two years, does show a slight increase.

Waste Reduced: The waste collected in 2017-2018 has decreased on waste from the previous academic year, 50.4 tonnes to **46 tonnes**.

2017-2018:

Row Labels	Cans & Plastics	Food Waste	General Waste	Glass	Paper & Card	Grand Total
Frenchay	2260	1930	31718	2503	7642	46054
Students Union	2260	1930	31718	2503	7642	46054
Glenside	1341	1444	6928	2203	6181	18097
Students Union	1341	1444	6928	2203	6181	18097
Grand Total	3602	3375	38646	4706	13823	64151

Even though general waste went up, which is the more expensive disposal method, the overall cost of waste at the Students Union Bin Store went down by £348.43.

Please see variances in each waste stream and totals below:

	2016/17		2017/18	
Waste Stream	Lifts	Cost	Lifts	Cost
Cans & Plastics	400	£1,771.20	267	£1,182.28
Food Waste	110	£1,231.56	49	£548.60
General Waste	497	£5,892.43	621	£7,302.96
Glass	153	£677.48	144	£637.63
Paper & Card	374	£1,656.07	273	£1,208.84
Totals	1534	£11,228.75	896	£10,880.32

What are we doing to reduce waste sent to Landfill? The University are separating cans, plastics, food waste, glass, paper & cardboard. We are also sending unsorted waste to a treatment facility to further extract resource from the material. We have put the correct recycling points at strategic locations to make it easy for all staff to use and embedded into procedures for commercial areas. We also have waste prevention initiatives with students including the annual Bristol Big Give and 20p off hot drinks for bringing a reusable cup.

What more can we do?

- Reducing food waste from events through the new events booking process
- Increasing awareness of the discount for bringing own coffee mug on campus
- Increased promotion of reusable water bottles, reusable coffee cups, water fountains on campus and discounts available
- Investigate zero waste shop outlets with new Student Officers and zero plastic aisles

*NB The totals shown above are for car park 28 bin store, which includes inputs from Bristol Robotics Laboratory. General waste is not sent directly to landfill but to a treatment facility where further resource is extracted from the material. Approx. 15% of the general waste is landfilled

BUCS Transport

The sports teams collectively travelled 25,649.20km in 2017-2018 compared to 17,874.74km in 2016-2017. This total distance travelled for BUCS in one year is the same as driving over half way round the circumference of the earth. BUCS travel has the equivalent emissions to a single passenger flying from London to New York 11 times.

This depends on the location of the fixtures on a yearly basis and if teams qualify for later rounds in competitions.

What more can we do?

- Investigate Electric Coach and minibus companies
- Encourage the sports teams to fundraise to 'off-set' their carbon footprint with The Converging World, tackling deforestation issues
- Continue to promote the Greener Futures Sports and Societies Award to reward and encourage sustainable travel to training
- Explore the issue with other Students' Union through BUCS conference in Summer 2018 to share best practise in the sector

Reducing internal Students' Union Printing:

The Students' Union Staff Printer Totals

- In 2017 we printed 118813 sheets of paper
- In 2018 we printed 104920 sheets of paper
- The saving was 13893, or 12% of our 2017 total

Currently figures up to March 2019 show a saving of 1699 sheets of paper compared to 3 months of 2018 printing
This equates to a 6% reduction in printing, or 3.4 Reams of paper

Paper Savings (Internal)

Media	Individual Sheets of Paper
HR New Starter Forms	175
Internal Finance Forms	1699
Staff Printers	13898
Total	15772

- 15,772 individual sheets of A4 paper (used as average size printed) is equal to 31.5 reams of paper, with a savings of £189

- Source - A ream of A4 paper from our provider, Cannon, costs approximately £6, therefore The Students' Union has saved £189 on internal printing services!

Paper weight source
1 sheet a4 paper = 0.0044kg

Source for paper co2 data
1.1 tons co2e are produced for every ton (1016kg) paper produced

Carbon emissions from 1 piece a4 paper TCO2e	4.76378E-06
Carbon emissions from 1 piece a3 paper TCO2e	9.52756E-06

External Printing Reductions Compared to 2017-2018:

External Reductions (SU Wide Elections & Editorial Print)

The Students' Union has successfully made a significant decrease in paper consumption in 2018/2019 by means of actively reducing printing services, eliminating certain practices, and digitalising media.

Freshers Magazine

Media	Year	Item Quantity	Size	Printed Sides	Single Pages
Freshers	2017/2018	4,000	A5	36	72,000
Freshers	2018/2019	0	0	0	0
Total					72,000

- In 2017, The Students' Union printed 4,000 copies of the Fresher's Magazine with 36 printed sides per copy on A5 paper.
- In 2018, The Students' Union eliminated this service by digitalising information and signposting.
- A savings 72,000 single pieces of paper is reflected from this – 144 reams of A5 paper!
- This equates to saving 4.32 trees or 94kg CO₂e!
 - Data based on that a tree contains 33.34 reams of A5 sized paper ([conservatree](#))
 - Data based on that a tree stores 21.75kg CO₂

Welcome Guide

Media	Year	Item Quantity	Size	Printed Sides	Single Pages
Welcome Guide	2017/2018	8,000	A5	32	128,000
Welcome Guide	2018/2019	7,500	A5	28	105,000
Total					23,000

- A savings of 23,000 A5 pages has been made since 2017/2018 by reducing the amount of copies and quantity of pages contained in the Welcome Guide. This is a decrease of 18% for this service.
- A savings of 23,000 single pieces of paper is reflected from this – 46 reams of A5 paper!
- This equates to saving 1.38 trees or 30kg CO₂
 - Data based on that a tree contains 33.34 reams of A5 sized paper ([conservatree](#))
 - Data based on that a tree stores 21.75kg CO₂

Elections Newspaper

Media	Year	Item Quantity	Size	Printed Sides	Single Pages	A5 Equiv. (pages)
Elections Newspaper	2017/2018	1,500	420 x 289 mm	16	12,000	48,000
Elections Newspaper	2018/2019	0	0	0	0	
Total						48,000

- The 2019 election season at The Students' Union at UWE has eliminated the practice of printing election newspapers. The candidate's and their respective manifestos were digitalised and promoted via The Students' Union website.
- <https://www.thestudentsunion.co.uk/news/article/thesuatuwe/The-Leadership-Race-Candidates-announced/>
- We have decreased our paper use for this media outright, and saved the equivalent of 48,000 A5 single sheets of paper, or 96 reams of A5 paper.
- The elimination of printing election newspapers translates in 2.88 trees saved or 62.62kg CO₂e
 - Data based on that a tree contains 33.34 reams of A5 sized paper ([conservatree](#))
 - Data based on that a tree stores 21.75kg CO₂
- Further, this equates to a financial savings of £435.

Additional (External)

External printing has seen huge reductions between 2017/2018 to 2018/2019.

- Printing of media on A5 sized paper has been reduced by 47%.
- Printing of media on A6 sized paper has been reduced by 29.6%.
- We have saved £3759 on external printing by reducing A5 and A6 services

External Reductions on Media Sources

Media	Individual Sheets of Paper (A5)
Freshers' Magazine	72,000
Welcome Guide	23,000
Elections Newspaper	48,000
Total	143,000

- By reducing and eliminating specific media sources, we have saved the equivalent of 143,000 sheets of A5 paper, or 286 reams of paper.
- This equates to saving 8.57 trees or 186.57kg CO₂e
 - Data based on that a tree contains 33.34 reams of A5 sized paper ([conservatree](#))
 - Data based on that a tree stores 21.75kg CO₂