



## Environmental Impact (Negative) Headlines – April 2020

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 CO <sub>2</sub> e / kWh	<b>Tonnes CO<sub>2</sub>equiv</b>	
Electricity	195,542 kWh		0.2556	<b>49.98</b>	Higher impact
Gas	18570 m <sup>3</sup>		0.18385	<b>38.79</b>	
Waste (cans, Plastics, paper, General, Food Waste)	69, 237 kg		<u>20771.1</u>	<b>20.77</b>	
BUCS Transport	25,649.20 km			<b>13.8</b>	
Water sewerage	1269.86 m <sup>3</sup>		0.708	<b>0.8990644</b>	
Water supply	1336.7 m <sup>3</sup>		0.344	<b>0.4598248</b>	
Paper (Excluding Large Format in Marketing) A4	90856 Pages			<b>0.4327471</b>	
Paper (External printing through Marketing) A4	75,109 <sup>i</sup> Pages			<b>0.3304796</b>	Lower Impact

\*Please note: utilities and waste data is used from previous academic year 2018/2019 due to UWE reporting. Paper usage data is from academic year 2019/2020.

\* Waste data (/1000 x300 as per cited abstract link)

### Reducing Utilities:

- Over the last three years, we have saved 17.88 Tonnes of CO<sub>2</sub> equivalent through our electricity usage. These energy savings are enough to charge 2,280,276 mobile phones or power three homes with electricity for one year.
- In the last three years, there has been a 160.9m<sup>3</sup> water saving, a 10% decrease in this utility, saving 0.16 Co<sub>2</sub>e. This is equivalent to £553 in savings. This is enough to provide water supply to wash **804 full loads of laundry!**
- We have decreased our gas usage by 819 m<sup>3</sup> on last year.

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 CO<sub>2</sub> 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 CO<sub>2</sub> 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 <sub>2</sub> e from electricity
SU 2016-17	New U block	193,018	67.86
SU 2017-18	New U block	193,142	67.90
SU 2018-19	New U block	195.542	49.98

*\*\* Although the Electricity use has increased, the carbon intensity of the UK grid decreased in 2016, resulting in the CO<sub>2</sub> from the SU electricity consumption to have also dropped.*

### 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. 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 160.9m<sup>3</sup> water saving, a 10% decrease in this utility, saving 0.16 Co<sub>2</sub>e.
- This is equivalent to £553 in savings. This is enough to provide water supply to wash **804 full loads of laundry!**
- Source: <http://www.parksville.ca/cms/wpattachments/wpID70atID4418.pdf>

		Water supply (m <sup>3</sup> )	Water treatment (m <sup>3</sup> )	Total CO <sub>2</sub> e from water
SU 2014-15	F block	2578.32	2449.40	<b>2.62</b>
SU 2015-16	New U block	1534.20	1457.49	<b>1.56</b>
SU 2016-17	New U Block	1497.9	1432.005	<b>1.52</b>
SU 2017-18	New U Block	1407	1336.7	<b>1.43</b>
SU 2018-19	New U Block	1336.7	1269.9	<b>1.36</b>

### Utility – Gas

Type	Unit	2015/2016	2016/2017	2017/2018	2018/19
Gas	m <sup>3</sup>	16645	16913	19389	18570

We have decreased our gas usage by 819 m<sup>3</sup> on last year.

## Waste Reduced

Whilst the overall waste figures have increased in 2018-2019 compared to 2017-2018, the percentage of general waste has decreased by 14.57% – so more of it is being recycled. Under the new waste contract with Veolia, none of our waste goes direct to landfill – general waste goes for energy recovery.

2018/19:

	Weight (Kg)					
Site	Cans & Plastics	Food Waste	General Waste	Glass	Paper & Card	Grand Total
Frenchay	14470	3693	33705	8347	9022	69237
Glenside	3173	1760	7299	1906	6407	20544
<b>Grand Total</b>	<b>17643</b>	<b>5453</b>	<b>41004</b>	<b>10253</b>	<b>15429</b>	<b>89781</b>

	Cans & Plastics	Food Waste	General Waste	Glass	Paper & Card	Grand Total
Frenchay %	20.90%	5.33%	48.68%	12.06%	13.03%	100.00%
Glenside %	15.44%	8.57%	35.53%	9.28%	31.18%	100.00%
<b>Grand Total %</b>	<b>19.65%</b>	<b>6.07%</b>	<b>45.67%</b>	<b>11.42%</b>	<b>17.19%</b>	<b>100.00%</b>

Site	Cans & Plastics	Food Waste	General Waste	Glass	Paper & Card	Grand Total
Frenchay	726	94	1637	239	514	3210
Glenside	190	44	199	53	272	758
<b>Total Containers Collected</b>	<b>916</b>	<b>138</b>	<b>1836</b>	<b>292</b>	<b>786</b>	<b>3968</b>
Frenchay	£500.82	£286.59	£1,716.97	£167.38	£402.12	£3,073.87
Glenside	£717.86	£309.18	£1,020.77	£129.57	£396.70	£2,574.08
<b>Total Cost</b>	<b>£1,218.68</b>	<b>£595.76</b>	<b>£2,737.74</b>	<b>£296.95</b>	<b>£798.82</b>	<b>£5,647.96</b>

The waste collected in 2017-2018 has decreased on waste from 2016-2017, 50.4 tonnes to **46 tonnes at Frenchay**.

2017/18:

	Weight (Kg)					
Site	Cans & Plastics	Food Waste	General Waste	Glass	Paper & Card	Grand Total
Frenchay	2260	1930	31718	2503	7642	46054
Glenside	1341	1444	6928	2203	6181	18097
<b>Grand Total</b>	<b>3602</b>	<b>3375</b>	<b>38646</b>	<b>4706</b>	<b>13823</b>	<b>64151</b>

	Cans & Plastics	Food Waste	General Waste	Glass	Paper & Card	Grand Total
Frenchay %	4.91%	4.19%	68.87%	5.43%	16.59%	100.00%
Glenside %	7.41%	7.98%	38.28%	12.17%	34.15%	100.00%
<b>Grand Total %</b>	<b>5.61%</b>	<b>5.26%</b>	<b>60.24%</b>	<b>7.34%</b>	<b>21.55%</b>	<b>100.00%</b>

Site	Cans & Plastics	Food Waste	General Waste	Glass	Paper & Card	Grand Total
Frenchay	135	54	610	56	329	1184
Glenside	80	60	297	27	141	605
<b>Total Containers Collected</b>	<b>215</b>	<b>114</b>	<b>907</b>	<b>83</b>	<b>470</b>	<b>1789</b>
Frenchay	£1,182.28	£548.60	£7,302.96	£637.60	£1,208.84	£10,880.32
Glenside	£797.04	£1,119.60	£3,552.70	£208.10	£1,204.42	£6881.87
<b>Total Cost</b>	<b>£1,979.32</b>	<b>£1,668.20</b>	<b>£10,855.66</b>	<b>£845.70</b>	<b>£2,413.26</b>	<b>£17,762.18</b>

**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 36320.6km in2019/2010, up by 41% from 25, 649.2km. UWE students were 4,000km short of travelling round the circumference of the Earth. BUCS travel has the equivalent emissions to a single passenger flying from London to New York nearly 18 times (up 7 flights on last year).

We have seen an increase in this year’s travel compared to 2018/2019, this is likely due to:

- 4 new BUCS teams being added to the programme this year which includes an American Football team with a squad of around 50 students.
- We had a successful knockout round competition for many of the teams meaning that there were more away fixtures and more travel, one such trip was a coach journey to Durham which was a 550 mile round trip. The alternative would have been to fly but that would have cost more and also contributed more to the environmental impact. 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 (see below)
- 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
- Ensuring that any team that competes in BUCS is entered into the B league which typically covers the northern part of the Western Region (as far north as Gloucestershire) as opposed to the A league which can go as far as Plymouth and Falmouth.
- Work at the start of the year to arrange games at an opposition venue to be around the same time so teams can travel together more often and save on money and environmental impact.
- Further encourage the use of public transport as opposed to driving cars for the smaller teams

Research into the viability of Electric/Hybrid vehicles in replacement of petrol/diesel vehicles, and the cost implications of this:

		Petrol/Diesel	Hybrid	£ Difference	% Difference
Small Hatchback Car	1-6 Days inclusive	£15.00	£27.00	£12.00	80%

Medium Estate	1-6 Days inclusive	£26.15	£38.68	£12.53	48%
Medium Hatchback	1-6 Days inclusive	£24.15	£30.15	£6.00	25%
Large Estate	1-6 Days inclusive	£30.05	£40.48	£10.43	35%
Large Hatchback	1-6 Days inclusive	£27.00	£39.60	£12.60	47%
MPV	1-6 Days inclusive	£39.00	£62.91	£23.91	61%
Small Hatchback Car	7-27 Days inclusive	£11.83	£20.70	£8.87	75%
Medium Estate	7-27 Days inclusive	£16.75	£32.31	£15.56	93%
Medium Hatchback	7-27 Days inclusive	£13.55	£23.31	£9.76	72%
Large Estate	7-27 Days inclusive	£18.16	£35.08	£16.92	93%
Large Hatchback	7-27 Days inclusive	£17.00	£35.91	£18.91	111%
MPV	7-27 Days inclusive	£18.65	£44.91	£26.26	141%

### Reducing internal Students' Union Printing:

#### The Students' Union Staff Printer Totals

- 2017/2018 - 118813 sheets of paper
- 2018/19 – 98624 sheets of paper
- 2019/20 – 90856 sheets of paper
- 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.
- This year, we have reduced internal printing by 7,768 sheets, 7.88%. This saves 15.5 reams of paper. This saved The Students' Union £93.
- Over 2 years, we have saved 27, 957 sheets of paper, equalling 56 reams of paper and a 23.5% decrease. This saved The Students' Union £336.
  - 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

<b>Carbon emissions from 1 piece a4 paper TCO2e</b>	4.76378E-06
<b>Carbon emissions from 1 piece a3 paper TCO2e</b>	9.52756E-06

- We consumed 0.432747128 TCO2e carbon emissions this year through internal printing
- We saved 0.037 TCO2e carbon emissions from reducing internal printing sources this academic year
- Reducing internal printing this academic year translates to 93% of a tree saved or 20.2kg CO<sub>2</sub>e
  - Data based on that a tree contains 16.67 reams of A4 sized paper ([conservatree](#))
  - Data based on that a tree stores 21.75kg CO<sub>2</sub>

**External Printing Reductions 2019-2020 compared to 2018-2019:**

**External Reductions (SU Wide Elections & Editorial Print)**

The Students’ Union has been tackling our externally printed paper consumption by means of actively reducing printing services, eliminating certain practices, and digitalising media. We have seen a rise in printing on last year, likely due to more accurate figures logged and increasing some printed materials for welcome (printed 8,5000 A3 welcome posters in addition to the 7,500 welcome guides with 4 additional pages).

External printing has seen certain reductions between 2018/2019 to 2019/2020.

- Printing of media on A6 sized paper has been reduced by 81.8%.

**Black History Month Magazine**

Media	Year	Item Quantity	Size	Printed Sides	Single Pages	A5 Equiv. (pages)
BHM Magazine	2018/2019	2,000	A4	32	32000	16000
BHM Hall of Fame	2019/2020	30/22	A2/A3	240+88		328



<b>Total</b>	<b>15,672</b>
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- 2000 copies of magazine printed in A4 – 32 pages= £1,483
- Eliminating the magazine in favour of the printed Hall of Fame saved 15,672 A5 pieces of paper, which equates to 0.94 of a tree and 20.44kg CO<sub>2</sub>
  - Data based on that a tree contains 33.34 reams of A5 sized paper ([conservatree](#))
  - Data based on that a tree stores 21.75kg CO<sub>2</sub>

### 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
Freshers	2019/2020	0	0	0	0
<b>Total</b>					<b>72,000</b>

- 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 CO<sub>2</sub>e!
  - Data based on that a tree contains 33.34 reams of A5 sized paper ([conservatree](#))
  - Data based on that a tree stores 21.75kg CO<sub>2</sub>

### 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	0

Elections						
Newspaper	2019/2020	0	0	0	0	0
<b>Total</b>						<b>48,000</b>

- 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 CO<sub>2</sub>e
  - Data based on that a tree contains 33.34 reams of A5 sized paper ([conservatree](#))
  - Data based on that a tree stores 21.75kg CO<sub>2</sub>
- Further, this equates to a financial savings of £435.

Additional steps that The Student's Union has taken in 2019-2020 to reduce printing:

- when entering a marketing request on our ticket system, each team is being reminded: 'Before requesting printed material, please take into consideration the impact of the materials and decide if they are necessary for the campaign duration.'
- for every campaign, the Marketing team ensures teams are aware of the variety of existing marketing channels outside of printed posters.
- as often as possible, we design assets with no specific date so they can be reused. For instance, for our Accommodation Fair 2019, we created a banner that says 'Coming soon'. Another example of this is the banner we created for Student Experience Awards and which doesn't display a date.
- we send off cuts from our large formats to the nursery. For every A2 poster printed for example, the nursery receives a blank A3 for crafts.
- this year for our Christmas competition, we decided to go entirely digital and our promotion was done through social media channels, our website and digital screens.
- the Media Pack we send to prospective commercials is entirely digital
- we make sure our large poster frames across campus contain year-long campaign posters, in order to reduce having to print new posters on a regular basis.
- the Zero Waste area of the Shop has a vinyl detailing instructions and containing relevant SDGs. The promotion of this section was done digitally through social media, the website and digital screens.

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<sup>i</sup> This result comprises all the pages (A0, A1, A2, A3, A4, A5 and A6) printed externally from August 2019 until March 2020. All pages have been converted into A4s (i.e 1 A1 = 8 A4)