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Submission of first United Nations Sustainable Development Goal report  
Launch of a new carbon reduction roadmap "[Our Journey to Net Zero](#)"



## 2. Sustainability Action Plan

### 2.1 Teaching

Work continues to promote the campus as a “living laboratory”.

2.1.1 Estates and Facilities Management colleagues continue to work with the School of Architecture Building and Civil Engineering aligning with the objectives in the Sustainability Action Plan. Students have been given Sports Park Pavilion 4 as a case study as well as opportunities to select parts of the campus to improve. The projects are provided by E&FM colleagues and relate to live issues/challenges and opportunities.

2.1.2 PE students students D Tw 10 (SC)7 (ues0.) ( )1beg(r)7 (tD[S]-r)7 (20r)7 (21 (o)T(r)7 (t)2eng)

3 year programme that began in September 2020 with funding from EPSRC. It aims to reduce greenhouse gas emissions associated with manufacturing in the UK through more efficient use of heat in industrial processes.

2.2.4 The Hydrogen Development and knowledge Exchange (HyDEX) is a three-year programme associated with the Midlands-based Energy Research Accelerator (ERA) which partners eight universities to support and foster the creation of a new hydrogen industrial economy in the Midlands. The partners will work with businesses to accelerate the development of new hydrogen products, transition from declining industrial sectors, train and re-skill and demonstrate the viability of new products supporting the creation of a market for low-carbon hydrogen solutions.

2.2.5 Loughborough University is leading on the Interdisciplinary Centre for Circular Chemical Economy (ICCCCE) to explore how better design and manufacturing of products and structures can help the UK's construction industry to do more with less reducing waste, pollution and costs. It aims to reduce reliance on fossil resources by recovering and reusing the raw materials for organic chemical production. The centre is developing new transformative technologies and working with businesses to reduce their carbon footprint whilst improving all aspects of the manufacturing process. The centre is funded by the UKRI Strategic Priorities Fund.

### 2.3 Loughborough University Science and Enterprise Park

2.3.1 LUSEP continues to prosper with a growing cluster of businesses with interests in energy and sustainability. In 2021 a £9M development project was launched to extend SportPark by creating a 2000 sq m four-storey fourth pavilion. The project is due for completion at the end of 2022 and is built to Passivhaus Classic Accreditation which will significantly reduce CO2 emissions and operating costs. The project was part-funded through the Leicester and Leicestershire Enterprise Partnership (LLEP) as part of the Get Building Fund.

### **3.0 Environmental Management and Compliance**

Our environmental performance is managed through the ISO 14001 2015 accreditation, which is an externally verified environmental management system. The 2022 external surveillance audit report confirmed the general management of the system provides the required level of control with best practice noted for leadership and environmental management.

This is reflected in the levels of compliance with requirements

## 5.0 Carbon Management

The absolute scope1 and 2 emissions for the 2021/22 academic year were reduced by 34% compared to the 2010 baseline year. The scope 1 and 2 carbon emissions relative to student numbers for the 2021/22 academic year were reduced by 43% compared to the baseline year.

| Scope 1 & 2 Emissions (tCO2)               |               |               |               |               |               |               |               |               |               |               |               |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Year                                       | 2011/12       | 2012/13       | 2013/14       | 2014/15       | 2015/16       | 2016/17       | 2017/18       | 2018/19       | 2019/20       | 2020/21       | 2021/22       |
| Scope 1 Emissions                          | 19,603        | 21,351        | 19,654        | 18,609        | 17,547        | 17,827        | 16,828        | 18,280        | 16,917        | 21,179        | 16,721        |
| Scope 2 Emissions                          | 13,891        | 11,517        | 11,517        | 11,382        | 11,082        | 8,976         | 8,501         | 7,104         | 6,065         | 4,735         | 5,590         |
| <b>Total Scope 1&amp;2 Emissions</b>       | <b>33,494</b> | <b>32,194</b> | <b>31,171</b> | <b>29,992</b> | <b>28,628</b> | <b>28,628</b> | <b>25,330</b> | <b>25,384</b> | <b>22,982</b> | <b>25,914</b> | <b>22,312</b> |
| Student Numbers                            | 16,703        | 16,237        | 17,008        | 16,557        | 17,314        | 17,505        | 17,101        | 17,519        | 17,524        | 18,012        | 18,759        |
| <b>Scope 1&amp;2 Emissions per Student</b> | <b>2.01</b>   | <b>1.98</b>   | <b>1.83</b>   | <b>1.81</b>   | <b>1.65</b>   | <b>1.53</b>   | <b>1.48</b>   | <b>1.48</b>   | <b>1.31</b>   | <b>1.44</b>   | <b>1.19</b>   |

### Absolute Scope 1&2 Emissions

Note – The carbon emission data has been calculated using the latest Department for Business, Energy and Industrial Strategy (DBEIS) carbon emission factors for electricity and natural gas and reflect the increased decarbonisation of the national grid.

There are 3 categories of emissions that count towards our overall emissions baseline:

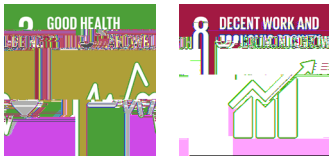
Scope 1 accounts for the direct emissions from gas combustion – 16%.

Scope 2 accounts for the indirect emissions from electricity consumption – 3%.

Scope 3 emissions associated with the university's activities include: procurement, Student travel, staff business travel, construction, ICT and staff commuting – 81%.



## 6.0 Sustainable Travel



The pandemic greatly impacted the travel plan with less people travelling to, from and within Campus. During the recovery period we have seen an increase in dynamic working on pre-covid levels. In 2022 a travel survey was carried out for both staff and students to review the impact of the pandemic on travel choices.

### Staff Survey Results

|   | 2015 | 2018 | 2020 | 2022 |
|---|------|------|------|------|
| Walk / run                                  | 18%  | 19%  | 17%  | 18%  |
| 12% Cycle                                   |      | 11%  | 13%  | 13%  |
| <1% Motorbike/scooter                       |      |      | 1%   | 1%   |
| 57% Private car alone (single driver)       |      | 55%  | 48%  | 51%  |
| 20% Private car as a driver with passengers |      |      | 6%   | 7%   |
| 4% 2% Bus or coach                          |      |      | 4%   | 6%   |
| 3% 4% Train                                 |      |      | 3%   | 4%   |
| 0% <1% Taxi                                 |      |      |      | 0%   |
| 3% 3% 1% Other                              |      |      |      |      |

These results were used to estimate the Scope 3 CO<sub>2</sub>e emissions from staff commuting which came to a total of 861,818kg CO<sub>2</sub>e of which 653,811kg (76%) were created by solo car drivers

### Student Survey Results

|   | 2018 (n=512) | 2022 (n=550) | CHANGE |
|---|--------------|--------------|--------|
| Walk / run                              | 55%          | 57%          | +2%    |
| Manual or e-scooter                     | N/A          | <1%          |        |
| Cycle                                   | 19%          | 15%          | -4%    |
| E-bike                                  | N/A          | <1%          | -      |
| Motorbike/scooter                       | <1%          | 0%           | 1/n c  |
| Private car alone (single driver)       | 11%          | 12%          | +1%    |
| Private car as a driver with passengers | 1%           | 2%           | +1%    |
| Private car as a passenger              | 1%           | <1%          | 1/n c  |
| Bus or coach                            | 9%           | 9%           | 1/n c  |
| Train                                   | 2%           | 2%           | 1/n c  |
| Taxi                                    | <1%          | <1%          | 1/n c  |
| Other                                   | 10%          | 1%           | 1/n c  |

These results were used to estimate the Scope 3 CO<sub>2</sub>e emissions from student commuting which came to a total of 1,161,408kg CO<sub>2</sub>e of which 945,930kg (81%) were created by solo car drivers.



## 7.0 Infrastructure

Sustainable infrastructure continues to be developed in line with the LU Estates Strategy 2020-2040. The University's first Passivhaus development on SportPark Pavilion 4 is due for completion by the end of 2022.

Work is underway to install 70 new EV charge points throughout the campus. These are expected to go live in 2023. Work is also underway to install 4.69m new LED lighting across the campus. Work is also underway to install 0.002m new trees across the campus. Work is also underway to install 0.26m new trees across the campus.

## **9.0 Sustainability Leadership Scorecard**

The Sustainability Leadership Scorecard includes a direct link to the Estates Management Record data.