

# UCL Sustainable Development Goals Report

2022–23



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# FOREWORD

In UCL's 2021–22 Sustainable Development Goals (SDGs) Report, I cautioned that the world was beyond the halfway point to 2030, the target date set out by the UN in its 2030 Agenda for Sustainable Development, which it published in 2015. A year on, the world is still not on track to achieve the SDGs by 2030.

It makes it ever more important that universities – with each other and with our partners in other sectors – continue to focus our efforts on addressing the challenges framed by the SDGs.

Addressing global problems has been at the core of UCL's mission since our founding almost 200 years ago. In 2008, we established our Grand Challenges initiative to help solve complex global challenges through innovative cross-disciplinary research. Since then, the initiative has supported colleagues across UCL's breadth of disciplines to come together with partners outside our university to develop holistic solutions to complex global problems.

This year, we announced we would refocus on five issues of global concern. The first two new Grand Challenges – Climate Crisis and Mental Health & Wellbeing – commenced at the end of 2023, with further themes launching in the coming years. We look forward to working with our current and new partners to accelerate the pace and scale of action in these critical areas.

The Grand Challenges demonstrate our institutional commitment to addressing complex global challenges, but they are not everything we do. Our academic

community continues to undertake excellent research across all our disciplines that address all aspects of the SDGs, as illustrated by the breadth of examples that you can read in this report.

These span from improving the biodiversity of the River Lea, which flows through our new UCL East Campus (page 8) and reviewing the UK's progress towards achieving the SDGs (page 13), to our students helping local charities to address their own sustainability challenges (page 24).

Recognising that solutions to these global problems will take decades, we are also seeking to equip our students during their time at UCL with the knowledge and skills to address the SDGs in their future careers. Many of our students are not waiting until they graduate: recognising the urgency of problems like increasing inequalities and biodiversity loss, they are also undertaking volunteering activities to address the SDGs outside of their studies.

We have supported several of the initiatives featured in this report through our UCL Grand Challenges Pathway to Achievement (SDGs) funding scheme. These included:

helping the world to restore the health of its coral reefs (page 6); improving access to healthcare for marginalised groups (page 9); inspiring a new generation of engineers to embrace sustainability (page 22); and holding a student society model UN Conference (page 27).

Over the next five years, it is critical we see a step change in progress on the SDGs. UCL commits itself to use our world-class research, education, and innovation to accelerate the pace and scale of local and global action.

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**Dr Michael Spence,**  
UCL President and Provost

2022–23 is the third academic year that UCL has reported on the extent of SDGs-related activity across the university.

We are aware some of our measures could be improved and that some of the organisations who supply the data we use are also continually refining their methodologies: we set out some of these caveats to our methodologies below. We will continue to improve our measurement of SDGs-related activity by learning from others in the sector and beyond. In addition to the extent of activity, going forwards we will also explore how we can measure the impact of SDGs-related activity.

## **SDGs-related research activity at UCL**

### **Research publications**

Like last year, to broaden our search for SDGs-related research, we mapped UCL research activity related to each SDG by combining the publications found in \_\_\_\_\_

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# Our research

Scientists from UCL's Biome Health Project are collaborating the IPB University, Indonesia, and Lancaster University, UK, on the world's largest coral restoration programme at Hope Reef in Indonesia's Spermonde Archipelago. They are shedding light on the complexities of the reef's 3D structure and how the new ecosystems develop. The project is being co-produced with local experts and is already supporting the career development of female scientists in Indonesia who are underrepresented in their country.

The international team is using a technique called photogrammetry to create and analyse 3D scaled digital models of the reef from overlapping photographs. Experts, based anywhere in the world, can use these models to explore the complexities of the coral's 3D structure and the corals and fish within the reef. The information will help to ensure that future restoration projects maximise biodiversity within coral ecosystems, as well as identifying changes that

## Reversing biodiversity loss in East London river

A collaborative project led by UCL to identify and record river invertebrates in and near the River Lea is helping local organisations to monitor natural habitats and inform conservation efforts.

Dr Isabel Bishop (UCL Centre for Biodiversity & Environment Research), a freshwater ecologist in UCL's recently established People & Nature Lab, is collaborating with local organisations to help to address concerns about the River Lea's health.

The river provides drinking water for thousands of Londoners and habitats for thousands of plant and animal species. However, pollution and land management issues are destroying natural habitats and affecting how local people can use it.

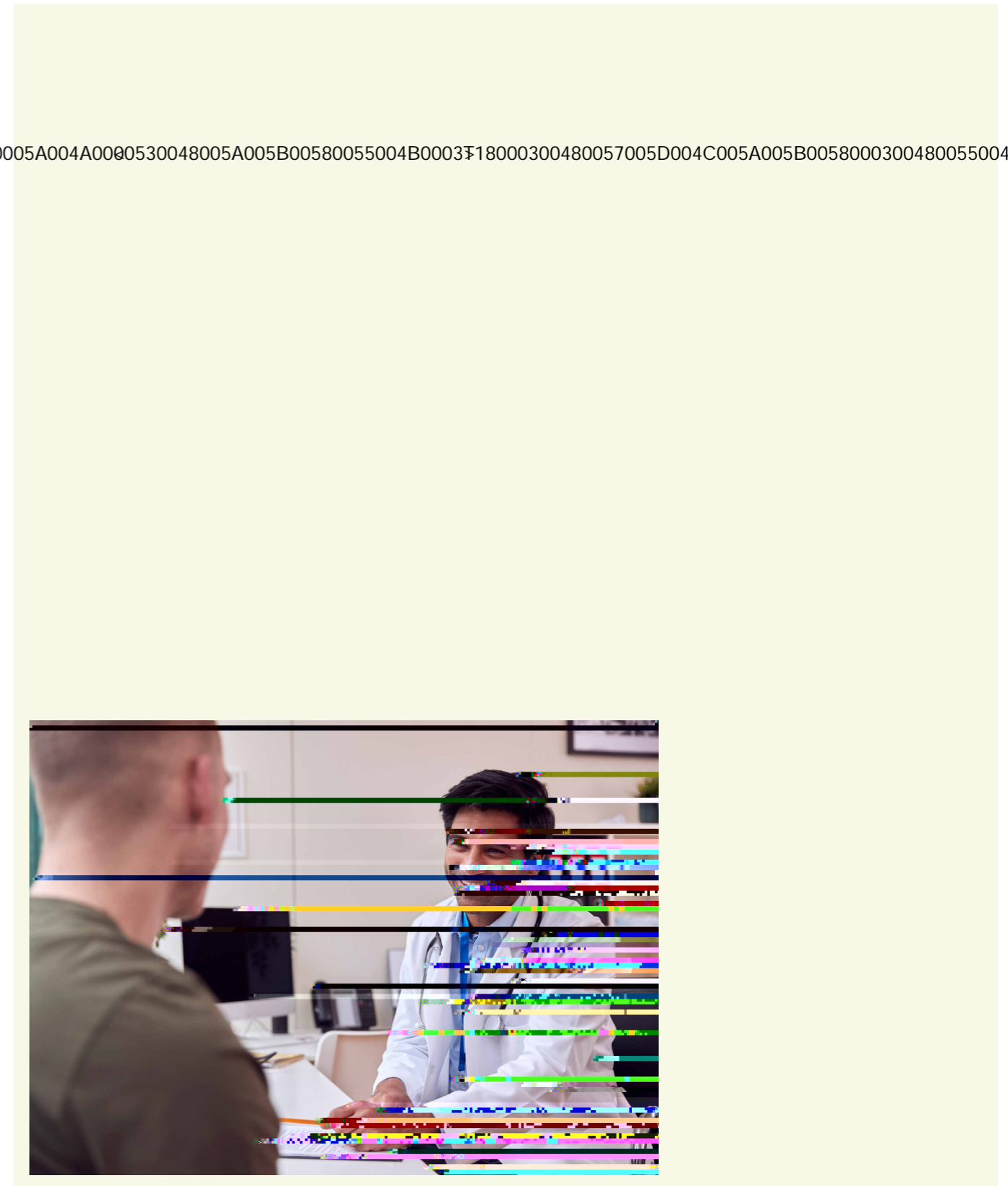
The Lea passes through the new UCL East campus in Stratford, East London. UCL staff and students are working hard with local community and conservation groups, to reverse the decline.

"The River Lea is complicated and has multiple issues that affect its wildlife habitats," Dr Bishop explains. "Pollution is a big problem, with sewage discharges and agricultural run-off affecting oxygen levels and plastic waste endangering wildlife."

To tackle the issues, local organisations including Thames21 and The Wildlife Gardeners of Haggerston are leading restoration projects to introduce reedbeds that help to oxygenate the water. They are also installing wood

structures to attract sediment that will encourage plant life, providing new habitats for insects and invertebrates.

In collaboration with the  
Thames21, Dr Bishop is working with local organisations to



### Survey highlights the need for better professional development for teachers in climate change and sustainability

A recent survey of 870 teachers in England, led by a team of researchers at the Centre for Climate Change & Sustainability Education (CCCSE), in UCL Institute of Education, found that only 13% of respondents reported that climate change and sustainability had been included in their Initial Teacher Education. 'Teaching climate change and sustainability: A survey of teachers in England' found that teachers from all subjects and at all stages need more support to help them embed climate change and sustainability across the curriculum.

In England, climate change and sustainability are most commonly incorporated into secondary school geography and science lessons. The curriculum emphasises facts about the science and impacts of climate change but does little to encourage students to think about how they might themselves respond

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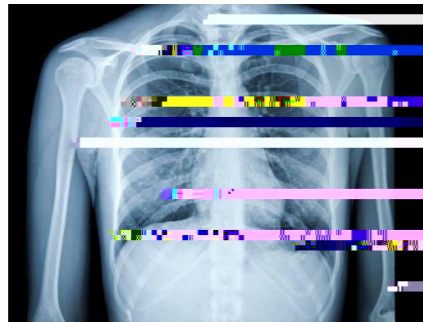
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**UCL institute becomes  
UK's first WHO  
Collaborating Centre to  
help beat tuberculosis**

Infectious diseases such as tuberculosis (TB), hepatitis and malaria cause millions of deaths worldwide each year. Across Europe, more than 27,000 people die prematurely each year due to drug-resistant TB or from TB/HIV co-infection. Nine out of the 30 countries in the region have the world's highest proportion of antibiotic-resistant TB cases.

To accelerate progress in eliminating TB epidemics worldwide, the World Health Organization (WHO) has designated the UCL Institute for Global Health (IGH) as a Collaborating Centre for TB Research & Innovation, the first of its kind in the UK.

The centre will act as a hub to facilitate research initiatives and activities with WHO in the European Region, on TB and related challenges such as pandemic preparedness and vaccine development.



To do this, experts within the centre and UCL-TB Network will work with partners to support implementation of WHO programmes and global policy developments. They will also accelerate the implementation



# Our teaching

Increasing numbers of our courses are equipping our students with the skills and knowledge that will help them to address the SDGs in their future careers after graduating from UCL.

## UCL management summer school helps students build sustainable business mindsets

A summer school led by UCL to build students' understanding of innovation management is encouraging entrepreneurship and inspiring delivery of sustainable business solutions that benefit society.

Bright minds and entrepreneurial thinking are vital if humanity is to address the complex challenges facing the world, and to meet the SDGs targets. A summer school delivered by the UCL School of Management (SoM) is helping to upskill a cadre of new managers who will help guide future innovation ecosystems.

The module runs as a two-week residential course, Innovation Ecosystems for Grand Challenges, in the heart of London's financial district at Canary Wharf. It is open to postgraduates from all disciplines from partner educational institutions. The course ▶

▶ combines theory and practice to convey concepts of how businesses can be managed to create and benefit from innovation ecosystems, and emphasises data-driven analysis, risk management and prioritisation.

"By connecting discussions of innovation in organisations to urgent global problems, students develop the skills, knowledge and capabilities to be critical decision-makers in complex environments, such as those relating to SDGs," explains Professor Magda Hercheui, MSc Management Programme Director, UCL SoM.

During the summer school, UCL experts and industry professionals deliver a range of interactive lectures, discussions and activities. Topics range from the innovation ecosystem framework to business model platforms, artificial intelligence and climate and urban innovation.

This year, more than 30 students studying management and business, some with engineering, completed the course. They came from UCL or at one of its partner institutes in Belgium, China and India. In future years, the organisers plan to extend its reach to North America, South America and other parts of Asia.

The course culminates with students completing an assignment to develop a business plan for a new or existing company, following the principles of a research-based education, as defined by the UCL Connected Curriculum: that all UCL students are able to learn through participating in research and enquiry at all levels of their programme of study.

This year, several students chose projects relating to the SDGs, from assignments in the areas of: global cancer healthcare and wellbeing for ageing populations (SDG3); developing new materials for batteries (SDG7); and supporting education for children with disabilities in developing countries (SDG4).

By teaching aspects of management theory for innovation management, students go away equipped to bring key stakeholders together, including government,

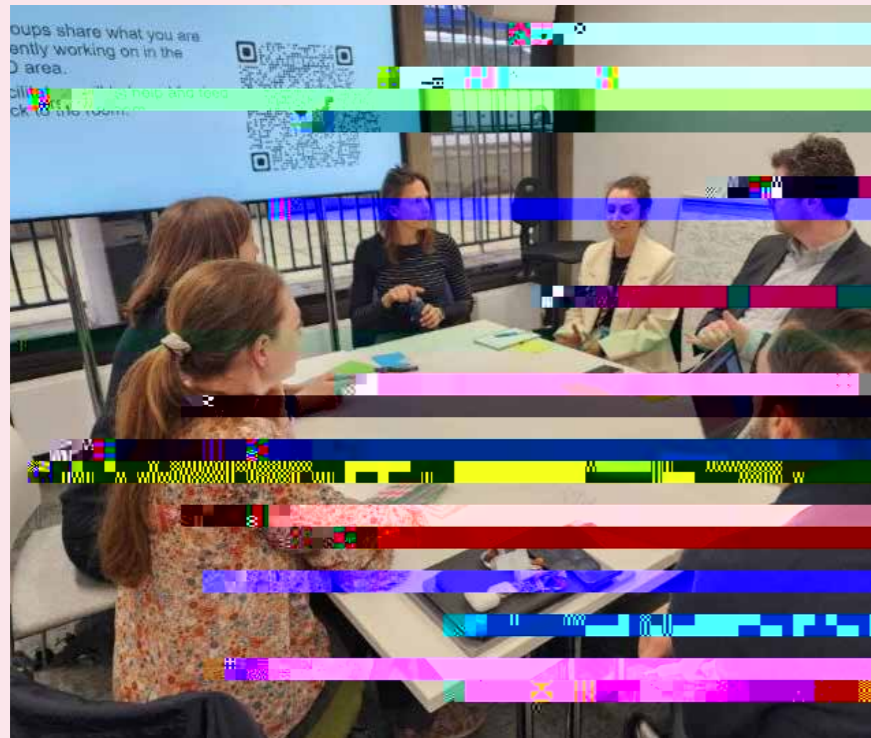


## UCL network launched to increase education for sustainable development

A new network was launched in May 2023 for staff who are already practising education for sustainable development (ESD) within their courses to share their experience with others, and for those who want support in embedding ESD in their programmes. The network is also open to students at UCL who want to contribute to UCL's ambitions to increase ESD across the university.

The network is helping to progress UCL's commitment that 'every student will have the opportunity to study and be involved in sustainability by 2024'.

Dr Kate Roach (UCL Engineering), Chair of the UCL ESD Steering Group, said: "We have discovered a vast array of





### **Undergraduate module paves the way for greener cities**

A UCL degree module is empowering students across disciplines to explore how cities and other urban environments can be adapted through nature-based solutions to address the impacts of climate change.

More than half the world's population live in urban spaces and this proportion is expected to rise to almost 70% by 2050. As the climate warms, cities face multiple challenges, from overheating and

### **New master's course accelerates sustainable energy solutions**

A new MSc is teaching students how to design materials for use in technologies that can help create sustainable low-carbon solutions for transport, heat and energy production.

The UN's Intergovernmental Panel on Climate Change (IPCC) has advised that to keep global temperature rise below 1.5°C by 2030, greenhouse gas emissions

A photograph showing students in a workshop setting. They are working on a project that involves plants and cardboard. One student is holding a white paper cup with a green plant inside. Another student is working on a cardboard structure. The background is a wooden table with various materials and tools. The text 'Our students' extra-curricular activities' is overlaid on the image in white text on orange rectangular backgrounds.

# Our students' extra-curricular activities

## Inspiring a new generation of engineers to embrace sustainability

UCL student-led volunteering programme, in collaboration with the charity Engineering Without Borders (EWB), is providing undergraduates with an opportunity to develop leadership and project management skills, while encouraging more young

**UCL students achieve  
Europe's highest number**

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### UCL undergraduates inspire more girls to keep up their football

A student-led volunteering project in collaboration with football clubs across London is inspiring more young women to continue playing football, building their confidence and challenging stereotypes.

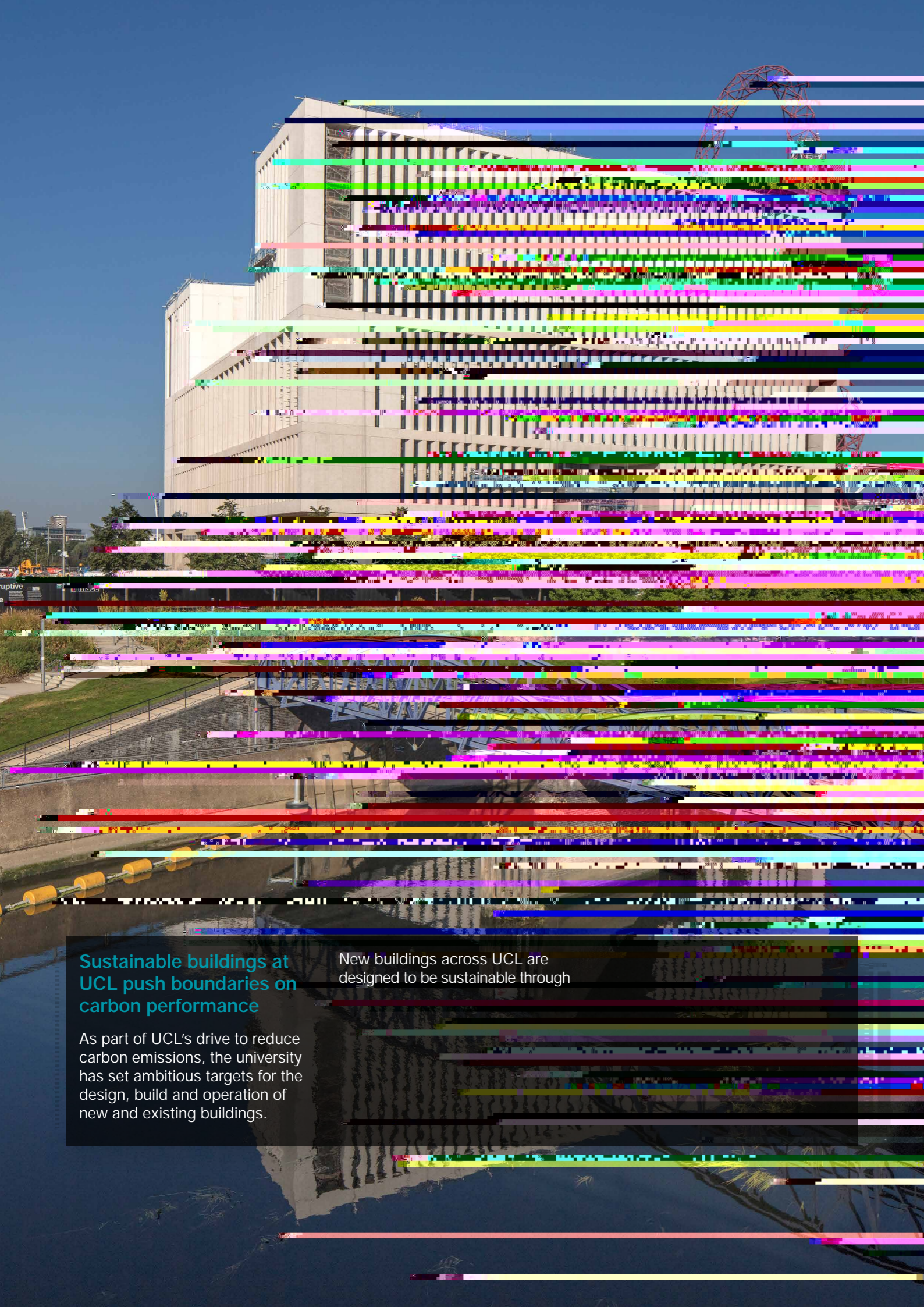
To encourage more teenage girls to continue with football, two UCL undergraduates devised a student-led volunteer programme to reverse a trend that sees almost half of teenage girls in the UK drop out of playing the sports they once enjoyed.

Lily Wielar (UCL Education), and Emilia Privat (UCL English) run 'Girls Can Kick' in collaboration with UCL's Women's Football

### Figure 6: Number of student societies addressing the SDGs

SDG





### Sustainable buildings at UCL push boundaries on carbon performance

As part of UCL's drive to reduce carbon emissions, the university has set ambitious targets for the design, build and operation of new and existing buildings.

New buildings across UCL are designed to be sustainable through







# Our external partnerships

We are working with a variety of external partners to help achieve the SDGs, including with local communities – both around our campuses in London and across the world – industry, non-governmental organisations, corporate and individual donors, and local and national governments.

## Strategic alliance fuels talent pipeline in the real asset sector

A new industry partnership is bringing together industry and UCL staff and students through a new centre to address sustainable development challenges in real estate.

Sustainable technologies that reduce the costs and environmental impacts of building processes and materials are needed to design, build and manage real estate suitable for a net-zero future.

A new strategic alliance, established between UCL and

PGIM Real Estate, is nurturing new talent, leveraging world-class research and building an innovation ecosystem that combines AI, property technologies and environmental, social and governance (ESG) objectives.

To help deliver the SDG targets, large multinational companies ▶

like PGIM Real Estate are adapting their business models to work and invest sustainably. PGIM Real thverh [(t su)-20B(he SDG4.1 (. PGIM .hat )T] -0.025 Tc1 Tf037002E0030003400030039004C004800530003002CBB>73gov



UCL start-up takes

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