The Leeds Living Lab drives the University’s commitment to embedding sustainability through knowledge, engagement, collaboration and innovation. It brings together students, academic and operational staff to research and test sustainable solutions, enhance our curriculum and solve real-world challenges using the University as a test bed.

We are creating institutional value by:

• Developing sustainable solutions for our campus and our communities
• Contributing towards our ambitions of being a world leading sustainable university
• Developing student knowledge and skills by enhancing research-led teaching across our campus and estate
• Developing interdisciplinary relationships and breaking down institutional boundaries
• Providing opportunities and funding for early career researchers to pilot scalable projects
• Supporting the University’s research themes by developing academic projects with demonstratable impact
• Generating match funding from internal and external sources
• Providing staff and students with a greater sense of pride and connection to the institution
• Sharing our learning across the sector both nationally and internationally, the University of Leeds is becoming a recognised leader in living labs.


Since launching in May 2017:

• Nine interdisciplinary research projects
• Ten individual curriculum projects
• Over £130,000 collaborative funding
• More than 140 staff and student participants.
Leeds Living Lab has been working with Schools and Services across the University to develop new collaborative projects with impact. Here is a summary of some of the key things we have been working on and the outcomes we hope to achieve. As a result of our Sustainability Strategy’s global outlook, current Leeds Living Lab projects are contributing to the following United Nations Sustainable Development Goals (SDGs).

### Current Projects

**Air Quality Living Lab**
- Monitoring and mapping air quality across campus and researching pollution exposure on key staff and student commuter routes over an initial 12 month period
- Shaping and informing a strategic approach to projects that improve health and the environment
- Web-based data and information sharing to engage staff, students and external stakeholders
- Two MSc dissertation projects on commuter exposure and over 30 staff and student volunteers participating in campus monitoring.

**iTree Leeds: Campus Survey**
- Exploring the monetary value of the environmental and social benefits of our campus trees and enhancing our ability to account for these in campus development decision making
- A pilot study for a citywide roll-out by Leeds City Council with global relevance
- Knowledge sharing with Estates Services through a workshop and development of an online tree data map
- Two student placements, two dissertations, 14 volunteers and a community engagement day increasing awareness and participation.

**Living Lab for Food Waste**
- Researching and trialling scalable food waste solutions that reduce costs and emissions
- An assessment of current campus food waste management practice, and feasibility of technology options and opportunities for interdisciplinary research collaboration
- Three MSc projects and two Student Sustainability Architect projects producing operational recommendations.
Mixed Ability Sports

- Trialling the Mixed Ability Sports (MAS) model (developed by the not-for-profit community interest company International Mixed Ability Sports) through workshops and taster days for staff and students
- Increasing participation in sport and raising awareness of MAS through creation and recruitment of a Student Ambassador role with a mentor in the Sustainability Research Institute
- Seeking to expand the model to more sports at the University and recommendations on how to transfer and replicate to other institutions.

Enhancing Urban Ponds

- Co-creating an innovative space for interdisciplinary, research-led teaching through the redevelopment of the Roger Stevens Pond
- Plans include new planting to enhance natural water quality, improve biodiversity and amenity value and reduce operational costs
- Installation of sensors for environmental monitoring, and an online data dashboard to share data in an accessible way
- Linking to taught undergraduate and postgraduate modules in the Faculty of Biological Sciences, the Faculty of Environment and the Faculty of Engineering.

Biofiltration for SuDS on Campus

- A PhD project investigating the design and configuration of biofiltration systems for sustainable urban drainage
- Assessing feasibility for a scale pilot biofilter on campus, including plant growth trials on an installation of 24 biofilter columns at our Bardon Grange site in Leeds
- Production of a technical reference guide for urban planners and developers
- Developing student projects on sustainable drainage systems with the School of Civil Engineering and School of Geography

Last-Mile Deliveries on Campus

- A pilot project mapping delivery vehicle flow around campus to provide recommendations for environmental and health improvements
- Improving our knowledge of innovative logistics solutions, scalable to the City and highly relevant to Clean Air Zone plans in Leeds
- Seeking to work with other City stakeholders to identify future opportunities for partnerships, consolidated deliveries and low emission delivery solutions.
The Leeds Living Lab offers students the opportunity to carry out their assessed projects to deliver sustainable impact in collaboration with staff at the University. The skills and experience they gain also provide them with a greater sense of connectivity to the Institution.

The Living Lab has already supported ten dissertations, work placements and module assessments. Topics are as diverse as urban agriculture and atmospheric pollution, mindfulness and wellbeing in the Sustainable Garden and the impact of energy consumption in collaborative lecture rooms.

**Networking and sharing best practice**

• We have hosted and facilitated workshops at a number of conferences including Reimagining the Future of Urban Public Space 2017, Student Education Conference 2018, and the EAUC Annual Conference 2017 and 2018
• Public engagement activity at the University of Leeds Be Curious events in 2017 and 2018
• Co-convening the EAUC Living Labs Community of Practice
• New webpages have been developed on the Sustainability Service website.
• Significant media coverage of air quality work including TV and radio interviews with academic and operational staff.

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**Individual Curriculum Projects**

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**Dissertation – Anna Ashbridge**
(MSc River Basin Dynamics with GIS)

*Drainage and water quality assessment at the Bodington site;*
• Investigating the runoff from the Brownlee Centre cycle track and associated facilities
• Examining water quality at stages of the drainage system and balancing pond
• Reporting on effectiveness of existing drainage and identifying opportunities for improvement

“I wanted to do my dissertation on something that would benefit the University as well as something to grow my skills and experience in water quality for my CV.”
- Anna Ashbridge, 2018

**Work placement – Alex Hills**
(BSc Geography)

*Measuring the amenity value of trees and green spaces on the University of Leeds campus;*
• Surveying how staff and students view and engage with green spaces
• Identifying campus sites with high biodiversity and wellbeing value
• Recommendations for evaluating amenity value as part of the University’s Biodiversity Tool

“The opportunity to work with the Sustainability Service and Estates Services to deliver a project that I know will benefit them and the wider University was really valuable to me.”
- Alex Hills, 2018

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**In the pipeline...**

The Living Lab Programme continues to grow with plans for new projects and further collaboration already in development. These projects include a sustainable theatre living lab, working in collaboration with key contractors on embodied carbon in construction and development, and a focus on sustainability engagement and behaviour change across the University.

**Get Involved**

To find out more or to develop your Living Lab project ideas please contact the Sustainability Service using the details below.

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