

University Living Lab for Sustainability

Opportunities for Applied Teaching and Research on Campus – Landscape Design and Management

The Project

The University of Manchester Living Lab for Sustainability research project aims to develop the university campus as a site for applied teaching and research around sustainability and low carbon. Using the campus in this way requires greater collaboration between academics and the Estates department, and greater use of academic expertise in helping develop a world-class, sustainable university campus.

The Living Labs Steering Group has identified landscape design and management – a key area for the university in addressing sustainability and biodiversity – as having considerable potential for Living Lab projects to emerge. Interviews with academic and PSS contacts have highlighted the importance of advertising campus projects and opportunities in order to encourage academic involvement on campus and foster closer links between the campus and research/teaching. This document outlines the existing landscape design and management expertise at Manchester, the imperative and the opportunity to forge closer links in addressing broader campus sustainability issues, and some details on forthcoming projects that could benefit from academic involvement.

Key Landscape Design and Management contacts identified so far

Design and Management		Biodiversity	Heritage	Estates and PSS
Simon Guy, Society and Environment	Andrew Karvonen, Architecture and Urbanism	Richard Preziosi, Ecological Genetics and Biodiversity	Nick Merriman, Manchester Museum	Diana Hampson, Estates and Facilities
Prof Graham Houghton, Urban and Environmental Planning	Alfredo Stein, Urban Development Planning	Matthew Cobb, Zoology	Henry McGhie, Manchester Museum	Steve Jordan, Capital Projects
Cecilia Wong, Spatial Planning and Urban Policy	Anna Hiley, Architecture and Project Management	Clare Robinson, Ecology and soil biogeochemistry	Dr Rachel Webster, Manchester Museum	Lucy Millard, Environmental Sustainability
Richard Kingston, Urban Planning, GIS, and Urban Ecology	Jeremy Carter, Urban and Regional Ecology	Roland Ennos, Plant Sciences and Urban Vegetation	Dean Whiteside, Whitworth Art Gallery	Emma Gardner, Environmental Sustainability
Carys Jones, Environmental Planning	Joe Ravetz, Sustainable Urban and Regional Development	Giles Johnson, Plant Sciences	Becky Burns, Jodrell Bank	Phil Lord, Operations
			James Hopkins, University Heritage Officer	

The Imperatives and the Opportunities

The Campus Environment and University Strategy

“Through innovative architecture and urban design, [The Estates Strategy] will reflect the university’s academic ideals”¹

Featuring some 300 buildings occupied by over 45,000 students and staff, The University of Manchester’s 85 hectare campus is the largest of any higher education institution in the UK². The sheer size of the campus has a huge impact on surrounding communities, and with a further £1bn to be spent on capital projects in the next decade, there is a unique opportunity for collaborations between university Estates and academics to shape a significant section of Manchester’s urban landscape.

Goal 3 of the University’s Strategic Plan 2020 states that the university must become a more socially responsible institution; a key enabling strategy to reach this goal is environmental sustainability. In practice this involves not only meeting the university’s carbon targets, but also working to make the campus environment a greener, cleaner and more inclusive place. Of particular note is the emphasis placed in the Strategic Plan on achieving these goals through

increased collaboration between the university estate and in-house academic expertise.

Opportunities unique to Manchester

In addition to the breadth of expertise listed in the table above, the university hosts a number of leading research groups, centres and institutions focused on the urban landscape, most notably Manchester Architecture Research Centre (MARC), Centre for Urban and Regional Ecology (CURE), Centre for Urban Policy Studies (CUPS), cities@manchester, and Water@Manchester. These research groupings provide a ready-made foundation for pursuing campus-based sustainable projects. Meanwhile, the university-wide Biodiversity Working Group, chaired by Professor Matthew Cobb, is a key forum for academics and estates representatives to discuss upcoming activities relating to landscape and biodiversity.

The university also has a rich set of cultural institutions that impact on the urban and rural landscape. An allotment plot at the front of The Manchester Museum is being used for a biodiversity project in collaboration with FLS and Estates, Whitworth Art Gallery has a green roof installation, while Jodrell Bank hosts a range of sustainability and biodiversity activities in its gardens.

Forthcoming Projects and Opportunities

There are numerous potential projects that could build on and compliment existing examples being led by researchers, estates staff and cultural institutions, such as green roofs, forest gardens, butterfly and biodiversity gardens, planters and container-growing, and rain gardens. These kinds of activities are also ripe for student-led projects and engagement with local schools and the wider community. Other key opportunities include:

Estates Master Plan

The major new build soon to commence will transform much of the campus landscape, most notably the Oxford Road area. This provides a significant opportunity for projects that utilise academic expertise in the area of landscape design and management, not only during the upstream 'ideas phase' but also during the implementation and completion of this huge development. The University Living Lab team is keen to encourage dialogue between Estates representatives and key academic researchers in order to identify potential points for collaboration.

Biodiversity Project

The University Living Lab team is facilitating a new amenity trees project, led by Dr Clare Robinson. This initiative aims to survey the tree species, soil types and other scientific properties of vegetation on campus, as well as mapping the university's green spaces and conducting research on the sustainability impacts of different plant species. As well as being cross disciplinary, utilising expertise from three faculties, there are expected to be plenty of opportunities for student collaboration at each stage of the project.

iTrees

A perfect example of Living Lab principles in action is iTrees, a unique project that aims to demonstrate the importance of trees and other types of greenery in the fight against climate change in our cities.

Led by Dr Roland Ennos (FLS), and backed by a coalition of supporters including community forest initiative Red Rose Forest, the iTrees project monitors how trees and grass can influence local climatic conditions in an urban setting. Using sensitive monitoring equipment, iTrees compares the water absorption and cooling rates of different trees and surfaces in a number of sites across the university campus.

As well as being a groundbreaking initiative, since its inception in 2007 iTrees has provided a steady stream of opportunities for student-led projects at the undergraduate and postgraduate level.

¹ The University of Manchester (2011) *Manchester 2020: The Strategic Plan for The University of Manchester*, p.25. Available at <http://www.manchester.ac.uk/aboutus/vision/>. Accessed 24/06/13.

² Ibid.