

Living Laboratory for Sustainability - Embedding Students, Staff and Curriculum into the Campus Sustainability Strategy



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What is a living lab?

Living labs encourage students, researchers and university members to carry out projects that aim to work towards the enhancement of the institution's sustainability.

Why a living lab?

Education for sustainable development

...to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future. (UNESCO, 2014)



Source: UN (2015)

Tangible contribution to environmental improvements. Living labs help meet policy and targets within the University setting

Living Labs routes to participation

Curriculum

Applied Research

Volunteers

Internships

Clubs & Societies



University of
Strathclyde
Glasgow

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Learning, Teaching
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Curriculum and Applied research

MSc Dissertations
and class projects

SLabs – Research
Development
Programme (RDP)

All projects and initiatives are credit bearing for
students and researchers

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MSc Dissertations and Class projects:

Developed through good relationships with academic staff in:

MSc Environmental
Entrepreneurship

MSc Environmental &
Sustainability Studies

Department of Civil and
Environmental Engineering

MSc Renewable Energy
Systems and the
Environment

Department of Mechanical and
Aerospace Engineering

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Recruitment

Formal recruitment process, students apply through CV/Cover Letter to carry out projects under our Living Lab Scheme

Only high calibre students are selected to work with us

High quality projects

Effective use of staffing resources

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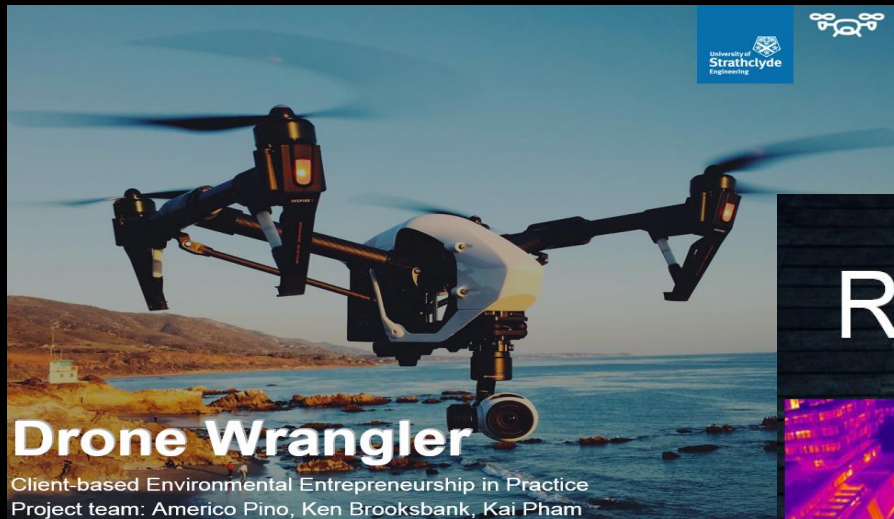
Since our Living Lab Launch in 2013 more than 30 international and local students have taken part in the scheme

Strathclyde Living Lab examples

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Drone Wrangler

Client-based Environmental Entrepreneurship in Practice
Project team: Americo Pino, Ken Brooksbank, Kai Pham

Potential to start a
spin-off company

Results



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A University of Strathclyde



Elspeith McIntyre

3.0 Research Findings

3.1 Literature Review

The literature review confirmed that a community garden at Strathclyde has a high potential to create positive ecological and social change within the university community and through the wider Glasgow urban area, through mutual learning with other existing community gardens, or by seeding gardens in new locations.

3.2 Gardener Surveys

From both surveys, four key concerns became clear;



Attracting new
volunteers to
grow the group



Planning
for summer
absences



Seeding
responsibility
and ownership



Curating a
social and
relaxing space

5.0 Implementation of Findings and Future Development

The site was cleared by the University of Strathclyde Grounds and Gardening team in March in preparation for use (Figure 2), and a representative from StudentEats made a site visit in March to advise on garden layout and volunteer engagement. The resultant site plan is below in Figure 3.



Figure 2: Site photographed mid-clearance from Northeast corner

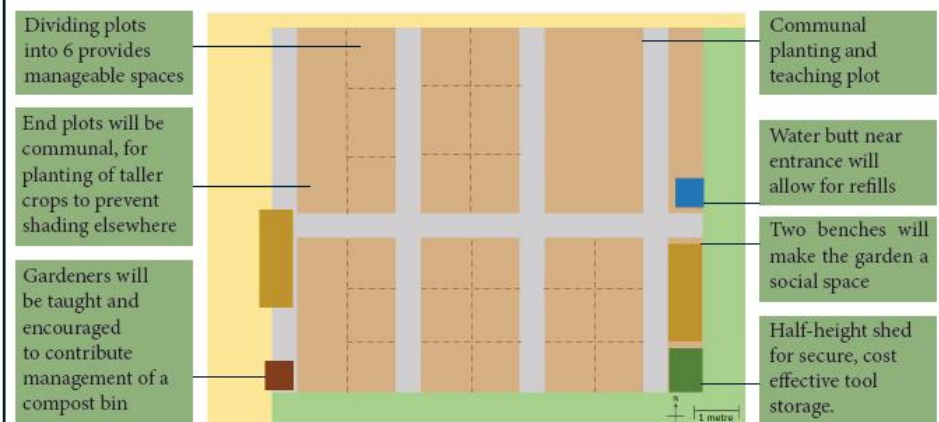


Figure 3: Annotated community garden site plan detailing garden bed layout and features

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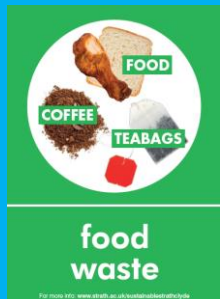
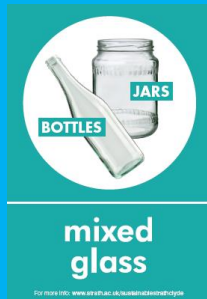
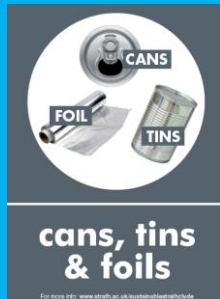


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Examples

Effective recycling signage – MSc Dissertation



Wasting Bad– Client-based project



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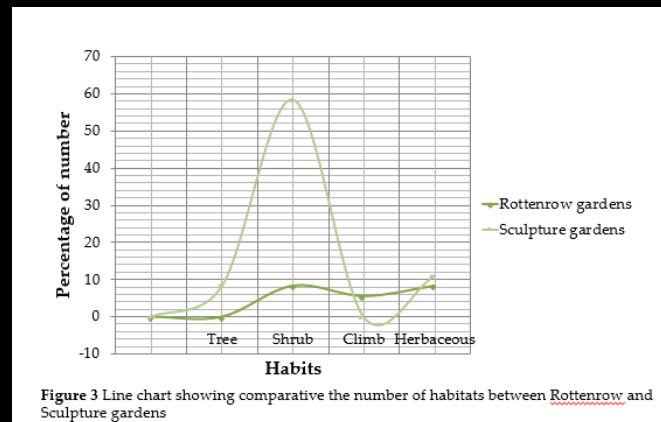


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Examples

Towards the Enhancement of the university's green Spaces
- A vegetation survey study (Collaboration with industry project)



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And Many more!!...

Asset
share /
reuse

Keep cup
feasibility study

Carbon audits

Effective
Sustainability
communication

Sustainable
Transport

Sustainable
procurement

Campus Carbon
Reduction study

Energy
efficiency

Food
waste
reduction

Impact
reduction
through vegan
options

Water footprint
of food sold on
campus

Sustainable
cafes

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Key enablers

Academic Staff

High calibre – motivated students

Grounds Team

Cleaning Staff

Staff and students volunteers

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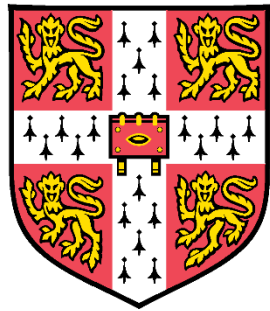


Useful tips

Start small – make use of your academic contacts

A formal recruitment process enhances quality (plus is great for CV!)

Let students/researchers propose ideas they are passionate about



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Academic projects



Voluntary projects



Internships



Award scheme

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AIMS:

- **Impact:** Improve the University's environmental sustainability
- **Innovation:** Test and research sustainability solutions using the University estate
- **'Intrepreneurship':** support student opportunities to create change



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OUTCOMES



Effects on university
operations



Environmental
impacts



Culture change
across the university



Teaching and
research



Student
experience

Internships



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Features:

Summer - 8 weeks - Paid - Contributes to work of E&E

How to:

Full recruitment process

Advertise

Clear work plan with tangible outcomes

Induction and integration with team

Regular meetings

Wrap-up + presentation

Follow up on project outcomes



Internships: Case studies



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Laura Briggs

Subject? Natural Sciences

Motivations? Wanted to work on sustainability issues from a non-student perspective and help to make changes within the University.

Worked on? Assessing the quantity and types of plug-in equipment across the University, as well as their energy consumption, to make recommendations for reductions in energy use.

"This project has helped me to improve my data handling and analysis skills. I also gained experience in building relationships with contacts in order to gain new ideas and data."



Elsa Durieux

Subject? Land Economy

Motivations? Interested in urban planning, contributing to the issues of congestion in Cambridge and communicating about environmental issues.

Worked on? Understanding how different departments promote sustainable travel behaviour, to share best practice on promoting sustainable travel to University staff.

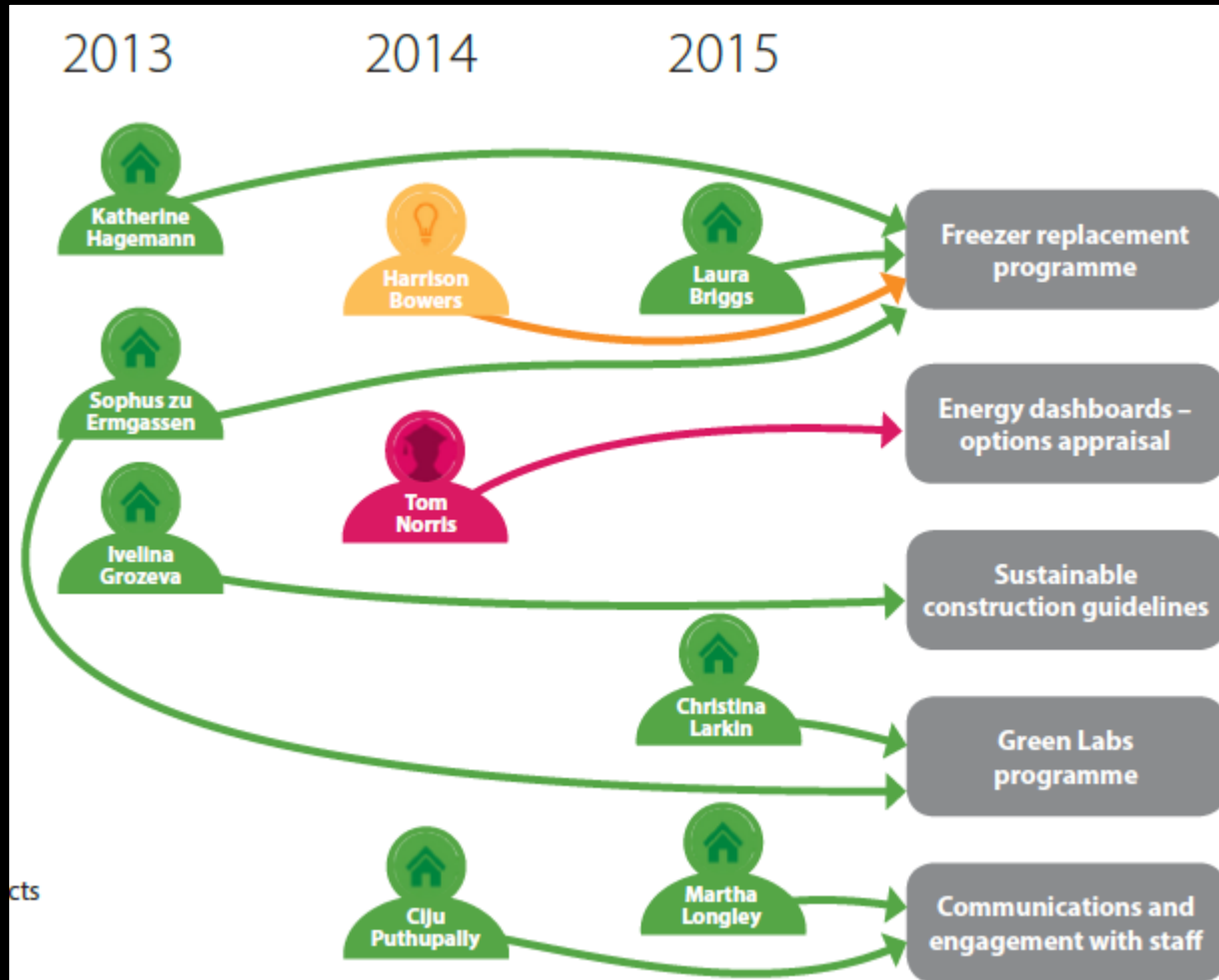
"I learnt about how to be effective in communicating environmental issues and the specific challenges of giving a central call for action in a decentralised context."



Internships: contributions to work



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Voluntary projects: “How to”



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- Find allies/collaborators
- Understand what happens already if anything & link up
- Keep it time limited
- Show value e.g. tangible impact, skills development
- Keep the need and outcome in mind
- Recruit teams of students = more fun, more accountable, less risk of failure
- Do a face-to-face intro session including time for people to get to know each other
- Advertise, advertise, advertise! (Before and after)

Voluntary projects: Case studies



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- Thermal imaging to inform energy efficiency improvements
- Working with student society, CUECS, and local charity, Cambridge Carbon Footprint



Voluntary projects: Case studies



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- “Bin busting” – waste audit assessing amount being recycled to inform making improvements
- Working with University academic with a team of students



Questions and Answers