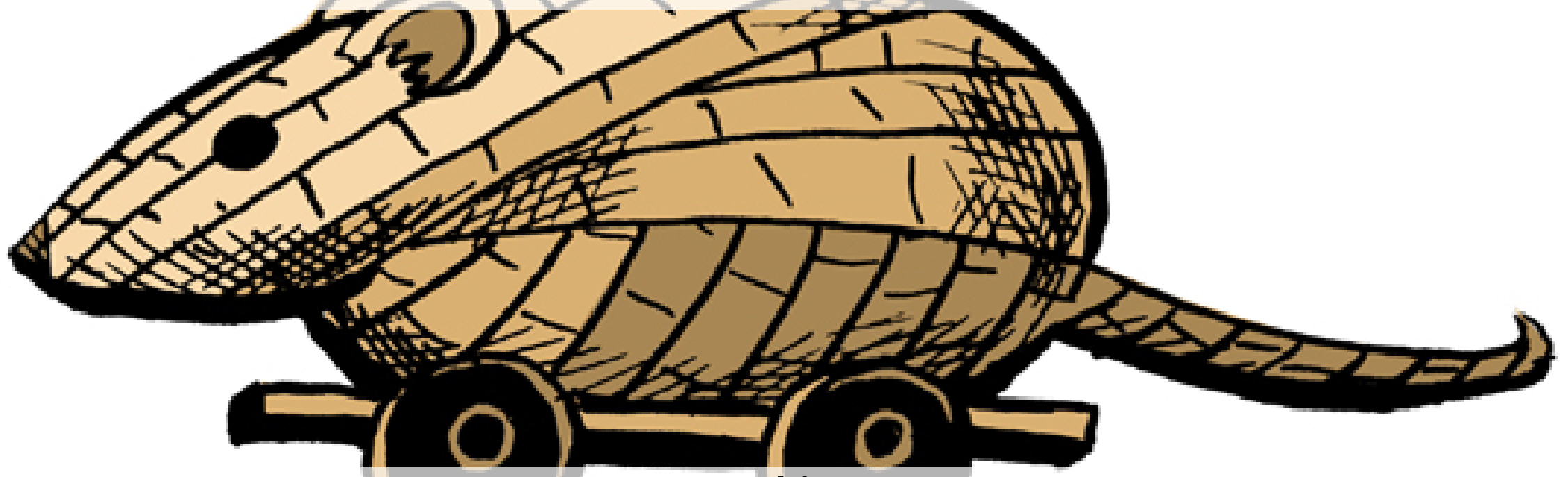


The Trojan Mouse of Sustainability: Dropping Sustainability into Education



Dr Zoe Robinson

Director of Education for Sustainability
Reader in Geography and Sustainability
Keele University



- **Our over-arching approach**
- **Examples of mouse holes and droppings**

O V E R V I E W

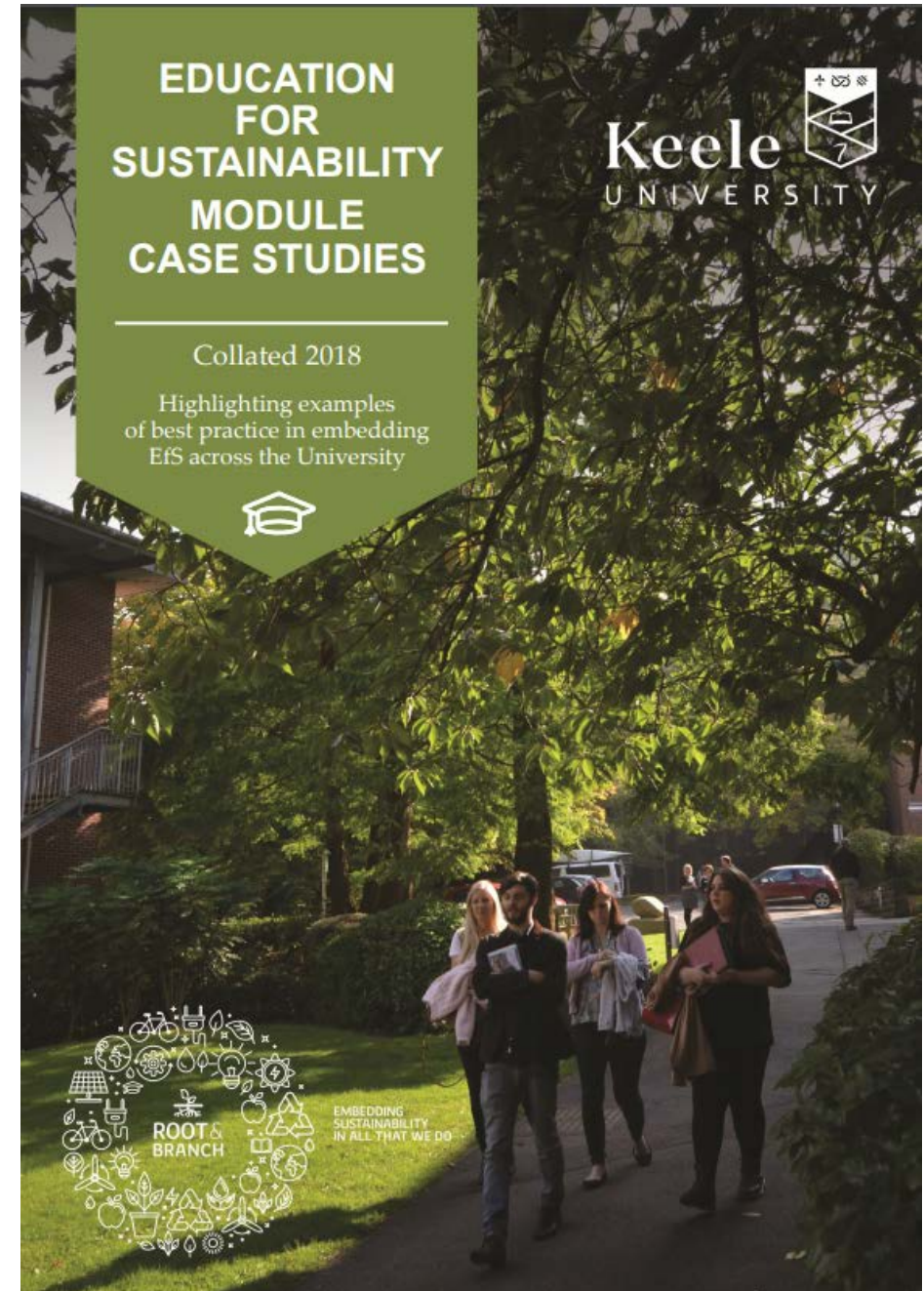


Achievements

- 96% of programmes embed sustainability
- 19% of modules engage with sustainability
- But only a small team...

**Hearing about new work
all the time**

**Not knowing
is good 😊**



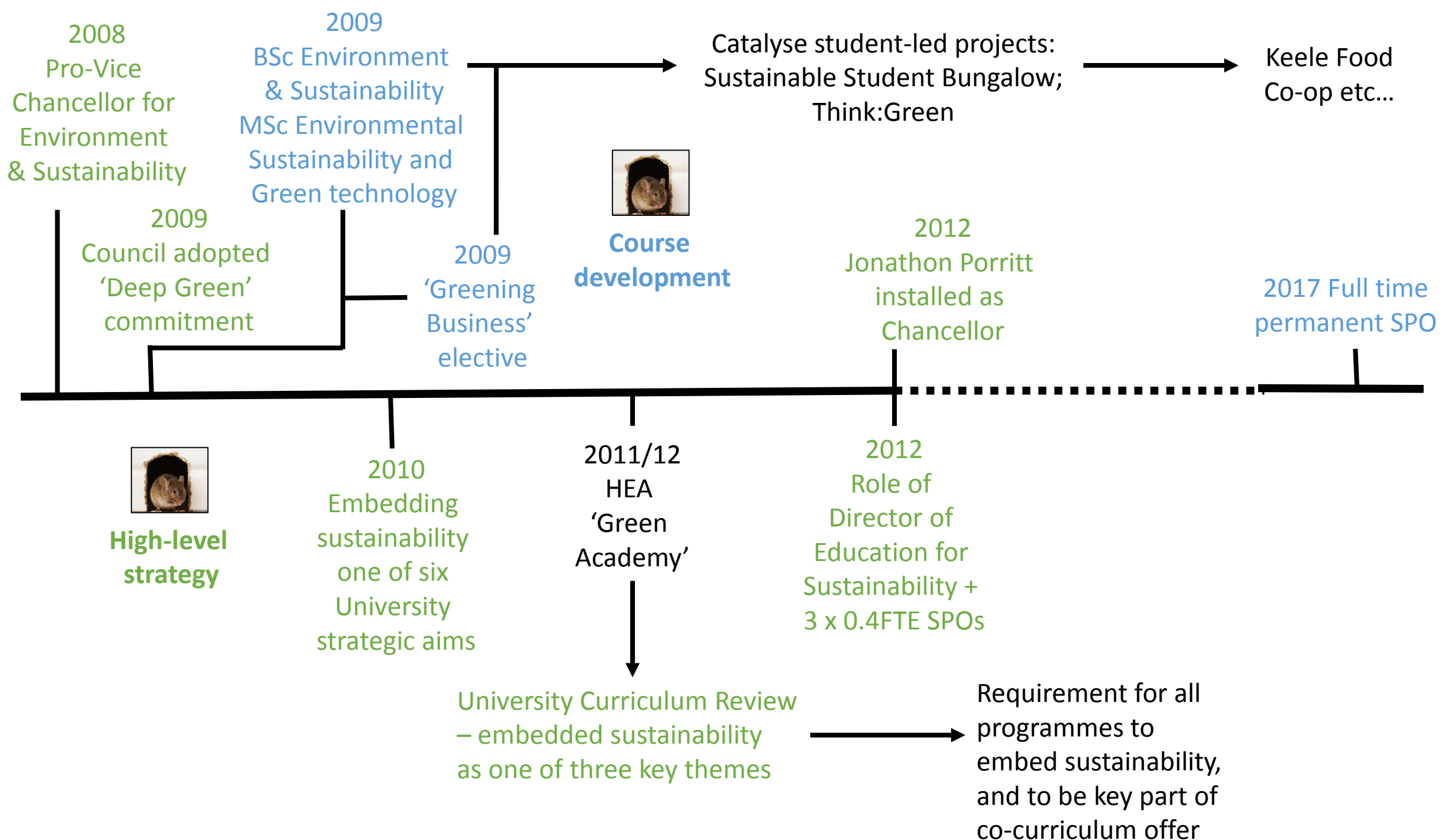
Our approach to embedding sustainability in education....

- No single large-scale project
- Multiple entry points (mouseholes) at different levels
- Droppings create fertile ground for new developments driven by others



Our journey...





Some specific 'mouse holes
and droppings'





PGCert for new academic staff

- Working with Education and Learning and Professional Development Unit (now Keele Institute for Innovation and Teaching Excellence)
- Embedded in Teaching and Learning in Higher Education Programme since ~2009
- Taken by all new academic staff
- Inspired several...





ESD 'consultancy'

- Work with individual staff
- E.g. Supporting sustainability context for generic skills development assessments (Foundation Year)
 - Now Group project for ALL FY students
- E.g. One-to-one discussion with Medical School
 - Now embedded throughout each year





ESD in Green Impact

- Setting own ESD criteria...
- School of Law set up 'Green' Student Course Representative
- Scheme adopted by SU
- Now Student Voice representatives receive training in ESD

nus

greenimpact



Student skills development workshops

- Sustainability as context
- Led by Curriculum Development Unit
- Worked with
 - Physics
 - Physiotherapy
 - Chemistry...



C - Chemistry

Responsible
Futures
Accredited Institution

Dissertations
for Good

Dr Katherine J. Haxton, senior lecturer in Chemistry at Keele University, feels incredibly lucky to work with a group of academics who are passionate and extremely knowledgeable about sustainability.

Course overview

Chemistry courses at Keele University include a compulsory module in the first year entitled 'Sustainable Chemistry'. The module is also offered as an elective for second year Environmental Science and Sustainability students and also forms part of a distance learning course at Nanjing Xiaozhuang University in China. The module looks at the numerous global challenges that chemistry has the potential to solve – including health, food and water, energy, plastics, gender equality, terrorism and security.

"We tackle topics such as gender equality indirectly, looking at medicines for emerging diseases... Ebola, Zika, malaria, and considering the headlines related to Zika (such as women being advised to avoid pregnancy) that place burden on women disproportionately. Students also look at how medicines are often tested disproportionately on white males leading to poor efficacy information for females."

Katherine Haxton

In the second year module 'Industrial Chemistry', students are encouraged to think about how industrial processes have been improved by environmental legislation, or how they could be improved in the future.

"In one particularly memorable session in 2015 we asked the students to prepare for class by picking a general election candidate or party, and to investigate their environmental policies. We used the class session to discuss these issues. Many

students used it as an excuse to try and dredge up the worst possible policies so it was a very lively session."

Katherine Haxton

Sustainability is also built into first and second year skills sessions, designed to develop skills such as group work, negotiation and presenting – for example, the '12 Principles of Green Chemistry' are used as a basis for group activities.

"Those teaching Chemistry get bogged down in the 12 Principles of Green Chemistry and, by incorporating those, tend to feel they have 'covered' sustainability. There is no reason why chemistry cannot be placed in a broader social, economic, political and environmental context... And there are many reasons why it should be, not least that it can engage and challenge students and staff. Suddenly it becomes the most obvious thing in the world to talk about global warming alongside infrared spectroscopy and gender equality alongside discussion of drug molecules."

Katherine Haxton

Links

- [Centre for Doctoral Training in Sustainable Chemistry, The University of Nottingham](#)
- [The Twelve Principles of Green Chemistry: What it is & why it matters](#)
- [SusChem](#)
- [OECD: Sustainable Chemistry Platform](#)

Related subjects: Biochemistry, Chemical engineering, Environmental science, Forensic science, Materials science, Medicinal chemistry, Pharmacology

Further information: <https://www.keele.ac.uk/chemistry/>
Contact: chemistry@keele.ac.uk

nus
national union of students



Be More...

- Led by Careers and Employability
- Post-exam 'enhancement' programme
 - Be More Womble
 - Be More Green
 - Be More Wild and Free
 - Listen More
 - Bee More.....





BE MORE

BE INSPIRED BE SKILLED BE EMPLOYABLE

29TH MAY - 8TH JUNE 2018

 @bemorekeele | www.keele.ac.uk/bemore

#BeMoreKeele



How to release your mice....

- Importance of roles - Director of Education for Sustainability
 - Shows importance/commitment from University
 - Title important
 - Legitimises work
 - Held by academic – understands academics and gains buy-in
 - Curriculum ***and*** ‘wider student experience’
 - Plus dedicated Sustainability Project Officer
- Consistent high level messaging
 - From the Vice Chancellor
- Senior Executive team Sustainability Lead
 - The ‘unblocker’
- Make sustainability part of every new initiative – ear to the ground



Thank you for listening!!