

Student learning through *real-world, real-time* sustainability audits

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Kingston University



Real World Learning for Sustainable Environmental Management (SEM)

Kingston University Sustainability Hub (SH)
and the
School of Geography, Geology and the Environment (GGE)



Dr Ros Taylor SH
and ex GGE
Founding
Director SH -
Project
Coordinator



Dr Colin Ryall GGE
Module leader and
SEM expert



Nicola Corrigan SH
Pioneer of
Positive Environment
Kingston (PEK) a
SEM volunteering
scheme run with the
Royal Borough of
Kingston



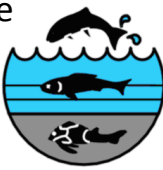
Jana Bentley
Maternity cover for
Nicola and EMS
expert



Hannah Smith SH
Instigated use of real-world learning
in the modules under review
Former participant in MSc module



Maria (Bozser)
Richardson
Project Assistant
and former
participant in
undergraduate
module



Context for the project

- *Real World Learning for Sustainable Environmental Management* linking with **local businesses (MA/MSc)** and **university campus and facilities staff (BA/BSc)** has become a key strategy for learning teaching and assessing of BS8555, ISO14001 and related themes
- HEA funding support enabled a thorough evaluation of the scheme
- Surveyed all participants students, employers and staff
- Is it worth the hassle factor?????



Kingston
University
London



Hassle factor yes go for it

- Apparently win-win-win *and win* benefits for all:
 - Client 'employer' gains a free audit & learns about sustainability;
 - 'Clients' welcomed the university link; the consultation about curriculum
 - Students gain work place experience, deep discipline knowledge and insight into the multidisciplinary skills and knowledge needed for sustainability auditing
 - Students also gain diverse 'soft skills' relating to team work, negotiating and communicating etc
 - Academic staff gain by links with real-world practitioners and more engaged students
 - Un-plagiarisable; entertaining to assess
 - Community relations improve; town with gown and internally within the university



Wider benefits

- Increasingly diverse cohorts, in terms of nationality, ethnicity, and discipline background are engaging with the module - sustainability is more widely understood?
- Meets the employability agenda
- Improves the student experience
- Award winning
- University SMT / governors thereby get interested



Student career benefits

- Alumni found in wide variety of environmental management positions
- Volunteering opportunities
- Links with external organisations
 - Local Authority placement
 - University internship
 - Anecdotal reference to audit at interview



Getting started



Positive Environment Kingston PEK

- KU Sustainability Facilitator, Nicola Corrigan, working with RBK Environment Officer, Carlos Queremel
- Student volunteers (from any discipline) trained in environmental auditing
- In return the students worked with local charities, identified by CQ as needing to improve to help RBK reach its targets for carbon reduction and waste management
- Student completing the charity's audit receive a certificate confirming their expertise
- **Unexpected benefit:** some students gained related paid work experience



A brief history

2005/06	UG Halls of residence waste audits
2006/07	UG Campus environmental audits PG Campus environmental audits
2007/08	UG Campus environmental audits PG local 3rd sector environmental audits
2008/09	UG Campus environmental audits PG local 3rd & 2nd sector environmental audits
2009/10	UG Campus environmental audits PG local SME & 1st sector environmental audits
2010/11	UG Campus environmental audits PG 1st sector environmental audits



Sectors / areas covered

- Retail (variety)
- Recruitment offices
- Entertainment complex
- Shopping centre
- Late night entertainment
- Public House
- Faith building
- Care home
- Outdoor Markets
- Catering
- Student Union
- Halls of residence
- LRC
- Major works site
- Lighting projects
- Labs
- Biodiversity

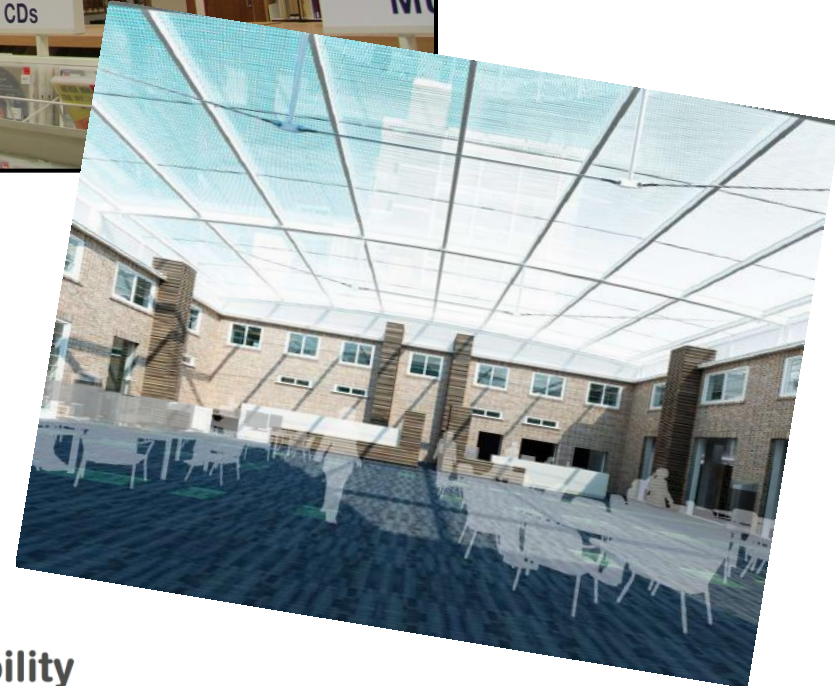


Making friends - disarming the barriers

- KU weapons - the SGS
 - the Sustainability Facilitator
 - the Sustainability Projects officer
 - Offering to help 'ease the burden' of a key academic staff member
 - committed course director
 - enquiring students .. wanting real world data about the university
- Barriers were legion but grass roots friendships overcame concerns - *because we could demonstrate benefits*







Example study

Luminar Leisure

- Two Nightclubs
 - Hippodrome
 - Oceana
- Two groups
- Presentation X
- Report X
- Do it again? v

It was easy to work with the students. We met up, had a chat and I walked them around. Because I didn't really have an expectation, I couldn't say that there was anything we could have done differently to make it easier.

The whole experience was an eye opener to me. Carbon foot-printing isn't everything, it gave me a broader understanding of what we do already do and our company ethos.



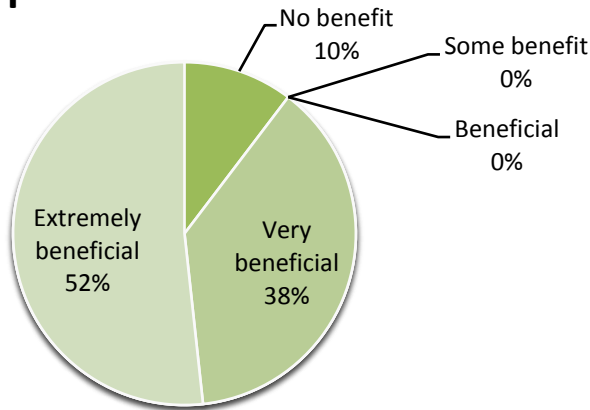


At our new sites we are going to be rotating furniture. We have a storage space where we store our furniture from the 3 sites and we can re-furbish them and do some up-cycling so we don't have to throw away and we don't need to buy brand new. This makes total re-use sense and financial sense, and it also looks great.

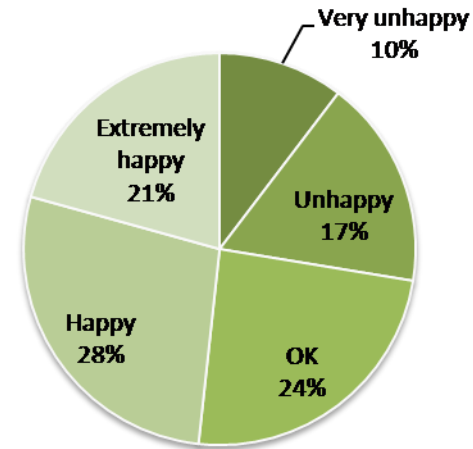


What the students thought

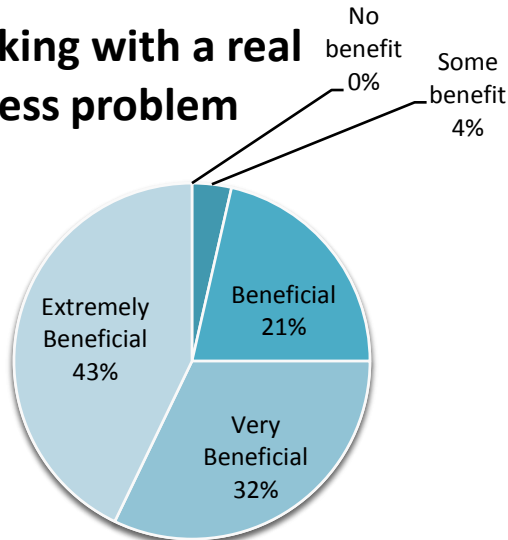
PG- Working with a real business problem



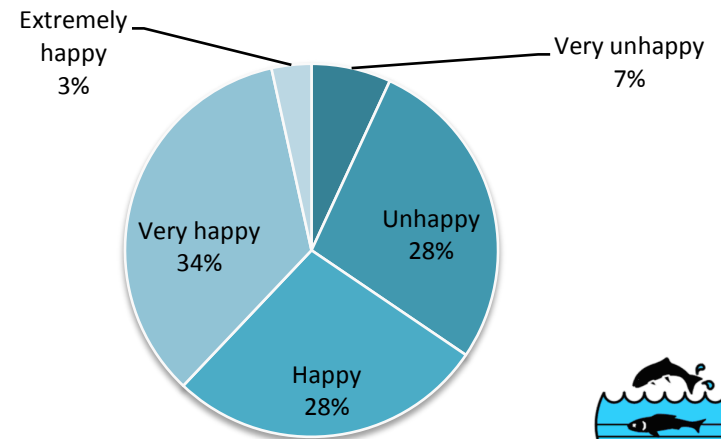
PG- Group work satisfaction



UG- Working with a real business problem



UG- Group work satisfaction



Go-between – a facilitator is invaluable

- This could be short-term start-up employment for a new graduate
 - *Assists* in development of projects
 - *Identifies* 'client employers'
 - *Produces a 'tool kit'* for students, academics and clients
 - *Guides the professional expectations and behaviour* of students
 - *Manages expectations* of all parties
 - *Trouble shoots* and *problem solves*
 - *Nags*

How does it work?

- Facilitator engages 'client employers' before the module starts
- Facilitator and lecturer establish professional expectations for all participants
- Lecturer explains what an audit involves; ISO14001, BS8555 etc
- Student audit teams identified
- Client clarifies his / her requirements with Facilitator and lecturer
- Clients and student teams meet
- Students undertake site visit (s)
- Teams:-
 - Present their findings to their clients, peers and staff assessors
 - Produce an audit report for their client (which staff assess)
- Facilitator de-briefs students, clients and academic leaders



Feedback from 2011 *in-house* audits - LRC Lighting



Positive observations

Improvements and renovations are visibly a 'work in progress'.

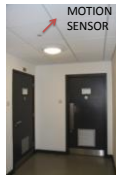
Correct positioning of lights in relation to floor area and ceiling heights.



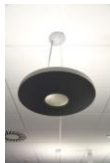
Several spaces have great potential for maximised natural light exploitation.



Motion sensors are mounted in bathrooms and non emergency staircase.



Use of reflective lighting fixture to give an overall brighter room.



New fixtures fitted with anti-glare device and more efficient lamps.

"I didn't have the figures in terms of light levels etc to back things up before and these aspects are very important."

Employer feedback.. KU Energy Manager

"Locating and processing real data was the most valuable part of the audit assignment" Student feedback

"it's invaluable to be using real case studies for assignments" Student feedback



Negative observations

Inconsistent luminance (too dark or too light areas)
Many dirty and broken fixtures.
Inadequate numbers or distribution of lights .



Fixtures fitted with high wattage lamps.
Rooms and shelves too cluttered.
Shelf positioning obscures source of light.
Lights were left on despite abundant natural light .



NO Energy saving dimming switches or light sensitive dimmers were observed in any LRC's.
NO sticker or poster campaign reminding students to switch the lights off.



Feedback from 2011 *in-house* audits - Halls waste

"It is always useful to have fresh eyes look upon an ongoing issue such as waste management".

Employer feedback

Seething Wells Audit:

A spot check on all black bags for potential recyclable waste.



"it revealed true obstacles to improving and monitoring environmental performance". **Student feedback**

Recommendations for Facilities



New plastic bins may be used to improve the organization and appearance of waste facility areas in halls kitchens.

Stackable recycling bins or reusable bags may also be used to eliminate space constraints and the added waste element of plastic bags.



**sustainability
hub**

Feedback from 2011 audits with Kingston First - Market stalls

Nationalities and postgraduate degree routes participating

Group 1 India, Greece, Jamaica

Environmental and Earth Resources Management, Sustainable Environmental Development with Management Studies, Sustainability for Built Environment Practice

Group 2 UK, Columbia, Lebanon

Environmental and Earth Resources Management, Sustainable Environmental Development with Management Studies, Sustainability for Built Environment Practice

Group 3 UK, USA, Maldives

Environmental and Earth Resources Management, Sustainability Environment and Change, Sustainable Environmental Development with Management Studies,

Group 4 UK, Portugal, Cyprus

Environmental and Earth Resources Management, Sustainability Environment and Change, Sustainable Environmental Development with Management Studies



Feedback from 2011 audits with Kingston First - Market stalls

- *“Some [students] were so comfortable and great to listen to and others were the other side of the scale”* **Employer feedback**
- *“Basic social skills would be good. Some groups came at the last minute and asked for information without giving me any time. Variety was huge. Some students booked me in advance, were patient, turned up on time, emailed after meetings with discussion and action points and followed up on each occasion”.* **Employer feedback**
- *“To enable the report and presentation to proceed the group utilised email and Skype to communicate information across countries”.* **Student feedback**



Feedback from 2011 audits with *Kingston First*

“Some of the issues they [the students] brought up were things we had overlooked “
Kingston First Ranger

*“It focused our minds... the first step was to show us what we **SHOULD** be auditing and cataloguing.*

- *When you're asked a question, often you just muddle along but when the students were demanding reports etc we realised we do need to find them, focused us on where gaps were in our data, how we collated and whether we used it efficiently”*

Kingston First Operations Manager

Kingston First confirmed that they would take part in the project if the opportunity arose again.

Feedback from local retailer outlet of a national chain



- *“it has made us think about it a bit more”.* **Employer feedback**
- *“We should be doing things that are easy. I think there will be benefits in the future as we’ve been making cost saving commitments and so I don’t see any reason why we wouldn’t do incentives based around energy saving.”* **Employer feedback**
- *“I think the students expected me to know more than I did”.* **Employer feedback**
- *“[the students] would actually show their surprise and dismay over my answers to questions or when I didn’t know the answers, and that made me feel rather uncomfortable”.* **Employer feedback**
- *“It was extremely beneficial to work with a real business problem as it gave us hands-on experience”.* **Student feedback**



To do list for *real-world, real-time* sustainability audits

- What would really help me ? What do I need to know ?
- Is there a lecturer teaching this ?
- Should I seek help from the volunteer co-ordinator?
- Should I set up / is there a sustainability 'group'?
- Can we find / afford a student experience facilitator?
- Which top level person(s) should I engage?
- What would really make top level staff listen?
- How will I entice external partners to participate?



To find out more

- Visit us, or skype us, for further discussion
email: sustainabilityhub@kingston.ac.uk
- Consult the HEA website



NB The 'end of project' HEA workshop for all the funded interdisciplinary sustainability projects takes place tomorrow, 14th December 2011

Full reports, executive summaries and case studies should be available on their web site following this meeting