



"Making it Real" Oct 10th 2007

Introduction

The purpose of this document is to provide a record of discussions that took place between members of the University of St. Andrews and others about what the University would look like if it put sustainable development (hereafter SD) at the core of its activities. During the afternoon there was a presentation of the challenges of SD, how these translate specifically into the university sector and an outline of some of the responses of the University of St. Andrews to these challenges. The majority of the afternoon, however, was spent discussing a series of questions in small groups (and then sharing thoughts with the whole group). There were four sets of questions, namely: (i) what will universities look like in a carbon constrained world? (ii) where are the boundaries of a university that is addressing its SD impacts, (iii) how will education change in the face of SD demands and (iv) what does leadership in SD look like for the university sector? Answers to these yielded some outline answers that have been brought together below.

Key issues

It was clear that there was much crossover in discussions between the various questions, and some key points and actions were raised in response to almost all topics. These commonalities are outlined below.

Our Business

The University should (re)define its function and objectives with regard to resources consumed by it. We should aim to become more localised in terms of resource use and self sufficient in our day to day operations. It is vital that we 'walk our own talk' when it comes to ecological sustainability.

If we are to manage this, different layers or boundaries exist between the University and its external environment. These boundaries could be seen as being a series of concentric layers. At the heart of our activities we have direct control of and responsibility of a variety of impacts (for example, the business of the university and the energy and resource use, waste and pollution that arises from this). Decreasing degrees of influence and moral responsibility exist for impacts further away from the core of the University business (that is, for staff and student behaviour, the local community and

the influence and effects that arise from our activities). While we may not be able to control all impacts, we should seek to influence others that generate impacts as a result of our activities (most obviously the ecological impact of people travelling to St Andrews to participate in education). Indeed, it was the impact of our teaching programmes that attracted much of the discussion.

Who we teach

Overseas students are important for contributing to diversity of the study body and bringing alternative viewpoints to the education experience. They may also play a key role in the redistribution of privileges and knowledge to other parts of the world. Overseas students are also important financially to the University. It may be wise, however, to explore a carbon 'cost-benefit' analysis to ensure that travelling for education continues to be worthwhile (from the student's and the world's perspective). In the meantime, it would be appropriate to encourage students to travel in a more carbon conscious way. While there is a 'carbon cost of education', it would be appropriate to balance this cost with the benefits that are felt over the lifetime of the student rather than just count the years spent at the University.

What we teach

It was believed that we need to seek a balance between the social, economic and environmental impacts of a University education. Especially we should aim to deliver the University's functions in a less carbon intensive way whilst maintaining the benefits of social interaction in the process of learning. Students need to develop their emotional and eco intelligence as well as developing academically. One way to think about this goal would be to ensure that 'the St Andrews experience' includes the embodiment of sustainability into all aspects of it: from halls of residence to teaching. This approach may also have the outcome of creating an indirect education in SD as well as being defensible in terms of leading by example.

It was believed that SD education can be delivered in both direct and indirect ways. The latter can be achieved by embedding sustainability into the ethos, building fabric and systems of the University. It may be possible to introduce formal SD teaching (general or subject specific) into every degree, although student attention may be limited if it is not also the basis of assessment. A more participatory teaching approach may be more successful than traditional methods in developing engagement with the topic area. In addition, we may need to work with partner organisations to achieve our goals, especially in the area of lifelong learning.

Some elements of courses are likely to be teaching unsustainability and it was recognized that there needed to be a dialogue about this issue.

How we teach

The current academic calendar is wasteful in terms of travel; exam and semester dates could be optimised to reduce the carbon impact. More use could be made of satellite (or partner) institutions and distance learning to reach a compromise situation where a four year degree may involve less than four years in St Andrews itself. While this model may reduce the impact of each individual student, it may not reduce the overall impact of the University, if more student throughput is possible as a result. There may be other reasons to avoid this more intensified model as well – for example, staff and student exhaustion.

Technology has some, but not all the answers to minimising the University's impact on the environment. Video conferencing and other IT solutions can reduce some transport requirements. In addition, the Open University may become a very competitive model if the carbon costs of a 'traditional' education become prohibitive.

Research

It is not always possible to know all the applications of research at the time it is being pursued. Therefore, there will always be space for developing knowledge 'for knowledge's sake' rather than restricting activities to those with clear SD implications. There was a reluctance to discourage particular areas of research but a general desire to support more SD research. The idea of prioritising certain forms of research, however, contrasts with traditional notions of academic freedom and this is likely to cause problems in any institution.

In terms of how research is conducted, it was suggested that it may be appropriate to consider adding an ecological impact assessment to the existing risk and ethics assessments of proposed research projects. It was also noted that dissemination of research findings by way of flying to attend conferences may also require further consideration as the cost of carbon increases.

Leadership

The University could play a key leadership role in the development of sound science testing to produce accurate carbon and ecological footprinting/accounting models to assess the impacts of our operations. This

would aid in decision making processes, and, if applied across all institutions, could see students basing decisions on where to study on the carbon costs/efficiencies of the Universities.

We can also act as leaders in the field of SD by way of conducting research, publications, participation in policy agendas and hosting SD conferences. We can also lead by example, promoting best practice in terms of SD in academia, and encouraging practical dialogue between researchers and estates. We should also support and facilitate the local community as it moves towards SD – acting in a participative manner, but without overriding community interests.

Concluding comments

A number of broad conclusions emerged from the discussions.

1. A carbon constrained world would require a significantly different approach to higher education, especially for an internationally orientated university. In addition, the process of knowledge production and intellectual renewal may be currently carbon intensive (depending on discipline) and as a result, this other core aspect of university life is likely to have to change.
2. A key part of a university's contribution to SD is what it does to manage and reduce its own impacts. These impacts include those it has direct control over and also those it can influence (but does not control). Different impacts of different natures will require different approaches to management. Any actions in this area are also likely to influence students and there is an aspiration that the University of St. Andrews experience is one with SD considerations at the fore.
3. All universities exist within a network of relationships, with their relationship with the local community being a key aspect. This is especially the case given the relatively large impact of the University on the town of St Andrews. Many SD issues (for example, energy production and use) would be more effectively addressed in partnership with the local community and ways of engaging with those outside the University on matters of SD was thought to be a valuable activity.
4. While the University of St. Andrews has moved somewhat in understanding SD, there are many issues that require further development and consideration. Seeking to address these other issues will place the University in a leadership position in the sector.

Annex I: Question responses

This Annex captures the points made by various participants in response to the question sets that were discussed in groups. This material forms a record of the discussions and has been used to generate the summary of key issues that emerged from the session.

1) What will Universities look like in a carbon constrained world?

- a) How will intellectual renewal be achieved?*
- b) How will student diversity be achieved?*
- c) Will Universities still be international in orientation?*
- d) If in 2050 we have achieved a 80% reduction in carbon emissions, what would we be spending our remaining 20% of our carbon on?*
- e) And discussion of any other aspects relevant to this question.*

It is important to consider what the Universities are for and what benefits they create, in relation to the carbon they generate. After this point, the mechanics of carbon reduction can be considered.

We do want to continue to be international in outlook. The University benefits from diversity (as do students at the University) and the alternative outlooks of overseas staff and students widen our perspectives. We may also contribute to enhancing social justice by the transfer of the privileges of learning and knowledge to other parts of the world. For example, students coming to St Andrews may transfer benefits to other parts of the world. There always was an extensive amount of travel as individuals sought learning (and maybe always will be), but there may not be as much as there is now. We need to work out how to deliver the University's functions in a less carbon intensive way, whilst still maintaining the benefits of social interactions during learning.

Once carbon is priced, people may well choose where they study depending on the carbon cost. This trend would be a threat to the University of St. Andrews. Overseas students may have to pay more to account for their carbon impact. The Open University is a very successful in its own niche, and this format may become more advantageous in a carbon constrained world.

A sustainable lifestyle should be part of the student experience. Developing the student's emotional intelligence is crucial; students should become SD literate, steeped in a sustainable environment.

If we have the solutions to become low carbon, we can take the lead in implementing them. Technology can go part of the way to help, for example, renewables, video conferencing and IT solutions, but it was thought that this could not and should not detract the student experience.

Teaching in satellite campuses worldwide may be part of a solution. Satellite sites will decrease CO₂ but also decrease interaction and diversity.

Teaching may become more efficient, for example, by looking at the length of breaks to reduce the overall time needed to complete a degree, and by revising semester and exam dates to reduce travel needs. However, more efficient degrees may lead to increasing student numbers, higher student turnover and more travel overall.

It may be that we should become more localized and self sufficient in our day to day operations, whilst continuing to welcome overseas students.

2) Where are the boundaries of a University that is addressing its SD impacts?

- a) *Where does the University of St Andrews start and finish?*
- b) *Who is the community of interest?*
- c) *On what scale is it sensible to talk about a sustainable entity?*
- d) *To what extent are students/staff lives part of the footprint of the University (eg travel to St Andrews and where students are recruited from)?*
- e) *What is the nature of the relationship between the University and its community of interest with respect to SD?*
- f) *And discussion of any other aspects relevant to this question.*

Boundaries may be measured geographically, defined by groups of people, or translated into various measures of 'footprint'. There is no one answer to the extent of our boundary, however it is measured. The University has a series of layers of influence/responsibility.

The first order of influence/responsibility includes core aspects of impacts which we have direct control of and are legally responsible for. This includes the University as a business entity, our direct supply chain, energy use, environmental and corporate responsibilities. In travel terms this includes 'business' travel of University staff but not how they travel to/from the University.

The second order is the area we can influence, and have moral (but not legal) responsibility for. This includes the behaviour and wellbeing of students and staff while they are here.

The third order includes more distant fields of influence, for example, the wider community, and a possible role as mentor to government and society.

Although we cannot directly impose control on the activities of students while they are here, the active recruitment of overseas students is a key part of the University's ongoing business plan, and therefore we must accept some responsibility for the associated carbon costs. This aspect of the business plan is exposed to risks such as a potential decrease in the availability of cheap flights in the future, and effects of terrorism attacks on the desire of people to fly, especially from the USA.

It is important to find a balance between the social, economic and environmental aspects of a university education. A compromise situation could be for degrees to include periods of distance study along with study in St Andrews (which would provide the social interaction and student experience). This may also be achieved by working with partner educators in different countries, creating satellite sites for the University. The key question is at what point would we need to consider making such a change? Are we at the crisis point yet with respect to carbon emissions to make this necessary?

A boundary not specifically mentioned in the initial questions is that of time. It was proposed that the carbon impact of the period of education should be spread over the lifetime of the student, rather than being made to balance in the four years spent in the institution. This is a reflection of the long term benefits of exporting sustainable practice back to student's own countries (assuming that the University is committed to educating students in sustainable practices in all that it does).

The teaching of sustainability itself can be divided into direct and indirect (learning by example and culture). This latter may be more valuable than is often acknowledged, and the University experience should include development of emotional and eco intelligence across all disciplines as well as academic education. The power of indirect learning means that it is crucial that we as a University 'walk the talk'.

3) How will education change in the face of SD demands?

- a) Should SD education be mainstreamed in all courses?*
- b) Who are the appropriate targets for education?*
- c) Are we teaching unsustainability?*
- d) What new models of education might be developed?*
- e) What priority should attach to education for SD literate citizens (via life long learning) and what is the role of the University of St Andrews in this arena?*
- f) And discussion of any other aspects relevant to this question.*

SD education is not an endpoint in itself, but needs to be incorporated into everything we do. The SD experience should be enshrined into all aspects – for example, in estates and halls of residence. (recycling, communal dining, food choices and health choices).

Do we want to make every student do a specific SD module? This may be achieved by incorporating SD education into each discipline or by involving all students in a SD module. There was a concern that some subjects may not be ready for such a move. There may also be problems in getting students to pay attention to formally taught issues if they are not going to be examined or assessed. It was felt that SD teaching should not be ring fenced, but be part of an ethos of all direct and indirect education.

A paradigm shift in the way topics are taught may be required. It was noted that the environmental education taught to date has not resulted in much change in behaviour (from a societal perspective). A move away from the teacher/class divide to a more participatory approach may also be required if one used a SD ethos. School teachers have been involved in ways of teaching sustainability in the curriculum through discussion rather than formal training – this could be incorporated into University teaching too.

Some people believed that we are teaching unsustainability (most obviously in some aspects of economics and management education). Unpicking educating for unsustainability will be challenging.

Education itself is shifting away from the learning experience to a system of top down, target driven approached focusing on league tables and financial aspects, which is not supportive of more complex educational processes.

It is not always possible to know the applications of research at the time they are being pursued, therefore there will always be space for developing knowledge 'for knowledge's sake' rather than restricting activities to those with a 'sustainable' agenda. It might be worth considering adding an

ecological impact assessment when assessing the ethical approval for proposed projects.

4) What does leadership in SD look like for the university sector?

- a) *What concrete actions would constitute leadership in SD?*
- b) *How would the sector create leadership (barriers/incentives)?*
- c) *Who are universities seeking to influence regarding SD?*
- d) *What role is there for public debate and influence (intellectual and moral leadership)?*
- e) *How can core functions of teaching and research be linked to leadership?*
- f) *And discussion of any other aspects relevant to this question.*

Several questions were raised in the discussion on this topic. For example; Do we want leadership or pollination? Is leadership just a power thing, and if so do we want this power? What does leadership mean? The person in front could be going the wrong way, some leaders push from the rear. Leadership may be defined as being inspiring, pioneering, being at the top of the league. Universities are funded and resourced to have the luxury of inspecting, reflecting, being sceptical and able to stand back from issues. Is this compatible with leadership? Critical assessment of SD is very important – most people agree SD is a good idea, but there is much conflict over the details.

We could act as leaders in thought – by being a point of reference, providing media spokespeople on SD matters, making comment/writing articles, and influencing public policy. We can also lead by research, publication, participation, contributing to policy agendas.

Our role is the production of sound science and the development, critical testing, and use of good, accurate models to produce an evidence base for public policy.

Being a leader in SD means defining the green criteria, not just coming top of someone else's league tables. The idea behind this comment is that if the University of St. Andrews gets its response to SD 'right' it could become the benchmark of what good practice looks like, rather than being subject to evaluation against another standard.

Good examples of how we could lead include:

- Walking the talk
- Being an exemplar of good practice for SD in academia

- Leading the way in forging links between academia research and our practical operations (estates)
- Being a leader in delivering solutions
- Best practice in term of embedding SD into disciplines
- Being a location for conferences in SD – for example, an annual St Andrews conference in sustainable leadership.

We could reinforce good behaviour in the community, facilitate indirect learning, develop links with Fife Council (some case studies for SD degrees). We need to take care in being involved with some community issues, for instance serving on panels re wind farms – we don't want to be seen to override community interests. We could use our knowledge base to act as impartial consultants.

If we become a leader in SD, will we drive away privileged and rich students which (in part) we depend on? Or will SD leadership attract all types of students?

Final observations

The workshop ended with a series of short observations about how a university may embrace SD.

1. A key blocker is that SD is seen to require sacrifice and restraint. There is a need to rebrand SD away from the dark and gloomy future cataclysmic scenario to become one of cheerfulness and joy (while not flinching from the hard choices that will have to be made). Need to look for the positives in the transition to a better state. The language of responsibility and making a difference may help this journey.
2. We have the academic freedom to decide what and how to teach and assess. This gives us a strong position from which to start the change process.
3. Most students are in halls – they are much more able to be influenced in this situation.
4. Our University is in a small town and community – this enables influence via elements such as fair trade, community energy to go in both directions, and actions of the town to support the University and vice versa. As a combined community we can do more than each one can do on its own.

5. Today's children are being educated in SD from an early age, and will be the market for tomorrow's universities. Scotland is a global leader in the Eco Schools project and as such it may be an opportunity to attract students for whom SD has been at the core of their prior educational experience.
6. It may be helpful to make the footprint knowledge available to community – knowledge and communication is the enabler (2 way). This may create the opportunity for collaborative inquiry into SD aspects.
7. There are lots of different levels of drivers towards SD in the University – governance / staff / students / estates. These drivers are evidenced in different ways but all drive towards the same outcome.
8. This "Making it Real" event is an enabler in itself, by allowing stakeholders to buy into the ideas. This is also what leadership looks like.
9. In Vermont, one University hall has gone very 'green' and students are queuing up to go in that hall. SD can make you more desirable.

Annex II: Participants list

Richard Baker (Chemistry)
Nick Barter (Management)
Jan Bebbington (Management)
Inga Burton (Campus sustainability programme consultant)
Mark Butler (Secretary & Registrar)
Paul Connor (Chemistry)
Joe Crayston (Chemistry)
Will Cresswell (Biology)
Tony Crook (Social Anthropology)
Lesley Duncan (Procurement)
Roy Dyckhoff (Computer Science)
Emilia Ferraro (Geography & Geosciences)
John Forster (Campus sustainability programme consultant)
Harry Giles (Oneworld Society)
Lucy Green (SD Society)
Susan Horsman (Environment Officer)
Paddy Leckie (Permaculture Society)
Bill Lynch (Teaching & Learning Scotland)
Olly Markeson (Rector's assessor)
Tom Meagher (Biology)
Sarah McCusker (Ethics & Environment Cttee)
Emily Moore (Tree & Frog Society)
Lesley New (Mathematics & Statistics)
Charlie Morrison (Environmental Association of Universities & Colleges)
Gozde Ozakinci (Medicine)
Dave Patterson (Biology)
John Purcell (Library)
Shivani Reddy (SDC Scotland)
Ruth Robinson (Geography & Geosciences)
Emilka Skryzpek (SD Society)
Chris Smout (Environmental History)
Crawford Spence (Management)
David Stutchfield (Energy Officer)
Georgina Stutchfield (SASI administrator)
Morag Watson (WWF and SDE network)
Steve Tinsley (SDRC, UHI)
Ian Thomson (Strathclyde University / CSEAR)
Daniel Wahl (University of Dundee / Findhorn Foundation)
Rehema White (Geography & Geosciences)
Philip Winn (Dean of Science)
Roddy Yarr (Energy & Environment Manager)