



Sustainability Operations Advisory Group (SOAG)

Tuesday 26 January 2016, 2pm

Cuillin Room, Charles Stewart House

AGENDA

1 Minute **A**
To approve the minute of the previous meeting on 16 September 2015

2 Matters Arising
To raise any matters arising not covered on the agenda or in post-meeting notes

SUBSTANTIVE ITEMS

3 2014/15 Waste Annual Report + Q1 **B**
To discuss and endorse a report from the Waste & Environment Manager

4 2014/15 Energy Annual Report + Q1 **Verbal**
To receive a report from the Energy Manager

5 SRS Programmes Update **C**
To receive an update from the Head of SRS Programmes

6 Utilities Programme Brief **D**
To consider and recommend to SRSC a paper from the Director of SRS

7 Sustainable Campus Fund Proposal **E**
To consider and endorse a paper from the Director of SRS

8 Climate Strategy Update **F**
To receive a report from the Director of SRS

ROUTINE ITEMS

9 Update on Sustainable Laboratories Activities **G**
To note the minute of 17 November 2015

10 Utilities Working Group & Practical Plan Update **H**
To note the minute of 8 October 2015

11 Any Other Business **Verbal**
To consider any other matters from Group members including:
• Green Gown Awards

ITEMS FOR FORMAL APPROVAL/NOTING

12 SRS Reporting **I**
To note finalised content from the Head of SRS Programmes

13 Supply Chain SRS Risk Assessment **J**
To receive a report from the Assistant Director of Procurement (Operations)

14 Mandatory Climate Change Reporting under Public Bodies' Duties **K**
To note a paper from the Head of SRS Programmes

15 Consultation responses to HM Treasury review of Climate Change Levy **L**
To note a paper from the Director of SRS

If you require this agenda or any of the papers in an alternative format e.g. large print please contact Jane Rooney on 0131 650 4375 or email jane.rooney@ed.ac.uk

UNIVERSITY OF EDINBURGH

MINUTE OF A MEETING of the Sustainability Operations Advisory Group held in Main Library Meeting Room 1.11 on Wednesday 16 September 2015.

Members: Hugh Edmiston, Director of Corporate Services
David Barratt, Engineering Operations Manager
Michelle Brown, Head of SRS Programmes
Michelle Christian, Senior Accommodation Manager
Dave Gorman, Director of Social Responsibility & Sustainability
Sarah Gormley, Business Manager & Deputy Head of IS Planning
Andrew Haddon, Head of Estates Finance
David Jack, Energy Manager
Andrew Kerr, Director of Edinburgh Centre on Carbon Innovation
Urte Macikene, EUSA Vice President Services
Phil McNaul, Director of Finance
Brian McTeir, Roslin Campus Facilities & Services Manager
Fleur Ruckley, Waste & Environment Manager
George Sked, Assistant Director of Procurement
Geoff Turnbull, Assistant Director, Estates Operations
Elizabeth Vander Meer, Climate Policy Manager
Dougie Williams, Energy Systems Manager

In attendance: Clare Wharmby, Director Carbon Forecast Ltd, for item 5
Jonny Ross-Tatam, EUSA President

Apologies: Hugh Edmiston; David Barratt; Sarah Gormley; Andrew Haddon;
David Jack; Andrew Kerr; Brian McTeir; George Sked; Geoff Turnbull;
Elizabeth Vander Meer

- 1 The minute of the meeting held on 27 May 2015 was approved as a correct record. In the absence of the Convener, the Director of Social Responsibility and Sustainability chaired the meeting. Consequently, it would not be possible to come to a decision on all items, but members could offer comment to be fed back. **A**

SOAG welcomed new member Michelle Christian, Senior Accommodation Manager, replacing Liz Beattie; and Clare Wharmby, Director of Carbon Forecast Ltd, in attendance for item 5. On behalf of the Group, the Director of SRS thanked outgoing members Liz Beattie and Geoff Turnbull for their substantial contribution to sustainability issues down the years.

2 Matters Arising

There were no matters arising not covered on the agenda or in post-meeting notes.

SUBSTANTIVE ITEMS

3 SOAG Membership **B**

The Director of SRS presented a proposed update to the Group's membership, reflecting staffing changes, realignment with the Group's practical operational remit, and designed to mesh with the new SRS Committee membership which had moved away from individual interest to a focus on role and function.

Members were broadly supportive of the changes, including adding representation from the Colleges, Health and Safety, and Estate Development.

Attendees recommended further reducing the size of the group to enhance its effectiveness, with individual members responsible for bringing along the views of several colleagues. Comments would be fed back to the Convener.

Action – JR to update the proposal to swap SOAG roles for the Energy Manager and Energy Systems Manager respectively and shift the overall emphasis from named individuals to roles.

Post-meeting note: Proposal amended as discussed.

Action – JRT & UM to decide sabbatical representation for SRSC and SOAG respectively and report back to the Secretary.

Post-meeting note: EUSA VPS to attend as main representative, with EUSA President providing cover as required.

4 SRS Reporting, 2015/16 Plan and Quarterly Reporting

C

The Head of SRS Programmes presented this update on SRS reporting and timelines, a proposed plan for updating progress towards the annual SRS Implementation Plan, and quarterly reporting requirements for SOAG.

In a move toward integrated reporting, the SRS Department were working with Finance on sustainability content to be included in the UoE Annual Report and Accounts. In addition, there was a stand-alone SRS report which included the same data with more case studies. Issues arising included materiality, identifying the most important areas to report on, as well as those topics of greatest interest to stakeholders.

Quarterly reporting structures had already been introduced for SOAG. The SRS Programme Manager was meeting with key stakeholders on introducing standardised reporting templates.

The SRS Department is working on gathering content for SRS Reporting with a deadline for Estates performance data of 23rd October. This deadline also enables Public Bodies Duties reporting requirements (November). Though this may be challenging in some areas, it was better to have the data, even with qualifiers.

As SOAG meetings were scheduled based on dates cascading from Court through CMG to SRS Committee, future dates were not currently aligned with reporting.

Members agreed that Table 2 aligned with SOAG's business, and that reporting should not to be viewed as a stand-alone exercise, but linked back to University strategy, goals, metrics and KPIs, giving a snapshot of current performance and an indication of the direction the University needed to take.

Mandatory reporting under the Climate Change (Scotland) Act 2009 unified reporting timelines, creating problems for the education sector working to the academic year. UoE had successfully secured an additional month to report. With a robust quarterly reporting system in place, submitting four months after year-end should be feasible, as there would be three solid quarters plus a fourth including some estimations. UoE would report on the 14/15 academic year in November, taking solid data up to a point, then extrapolating.

An update on progress of the 14/15 Implementation Plan would be presented at the next meeting in November and a revised version of Paper C would go to SRS Committee in October.

Action – MB to review the current order of the topics listed (starting with climate / investment), emphasising links to the University business model, and

flesh out the titles, quantifying the scale of the problem and how much of a difference UoE wanted to make, to aid prioritisation.

Action – JR to issue a follow up email by the end of October outlining actions and requesting content.

Action – JR to realign SOAG dates to the quarterly reporting timeframe.

Post-meeting note: 2014/15 Implementation Plan was signed off by SRS Committee on 21 October. Development of a framework for SRS reporting was discussed further at the SRSC Away Session on 23 October.

5 Climate Strategy Phase 1 Update & Tool Presentation

D

The Director of SRS introduced a climate strategy update for noting. Progress had been somewhat hampered in the absence of the Climate Policy Manager, however consultants had been retained and various packages of work were being done, the most important of which was Lot 1 – development of a climate modelling and scenario tool. The tool would inform development of a new carbon target.

Clare Wharmby, Director of Carbon Forecast Ltd, presented an update on Lot 1. Objectives for the tool were to manage all carbon footprint data, acting as a master dataset to draw subsets from, and to calculate UoE's carbon footprint. The tool would be able to calculate the impact of carbon reduction projects, project the impact of changes in student numbers or income, decarbonisation of the grid, and so forth. These aspects together would be designed to produce a climate strategy best placed to meet the set targets.

A key element was establishing the boundary, i.e. the subset of total emissions that the target would be based on. Discussions were ongoing to decide which areas of Accommodation Services fell within the boundary, based on operational control. Estate and waste data would be broken down into five campuses which aligned with how that data was controlled and managed.

Attendees discussed exclusions, noting cattle as a typical example - biogenic emissions were difficult to estimate, represented a very small source, and UoE was unlikely to have the data. It was acceptable to make these exclusions, provided UoE was explicit about the reason.

The project had factored in opportunities for knowledge transfer including: involving Carbon Masters student in testing the tool; a student completion to find the best carbon reduction project; providing briefings for courses with an interest in this area or presentations for conferences; and sharing links to the tool with University networks. UoE would need to be confident in the tool before engaging in any promotional activity.

Action – CW to add food and compost back in to the boundary diagram.

Action – All members with comments or queries on the paper to follow up with DG or MB.

Post-meeting note: Update to be provided at January's meeting under item 8.

ROUTINE ITEMS

6 Update on Sustainable Laboratories Activities

E

SOAG noted the minute of the SLSG meeting on 2 June. A lot of traction and buy-in to sustainable laboratories had been built up, and work was ongoing to translate this into practical action, including exploring the case for a permanent Sustainable Labs Coordinator post on a 'spend to save' basis.

- 7 Utilities Working Group & Practical Plan Update** **F**
 SOAG noted the minute of 11 August, recognising utilities as a key strand of the Climate Strategy Review. The meeting had reflected on the 10% reduction target, breaking it down into components and identifying requirements to meet it. Major challenges were identified in terms of data, infrastructure, and behaviour change. It would be necessary to spend to save, and the group was looking at schemes implemented elsewhere that were showing 10-20% returns on investment.
- 8 Any Other Business**
 No items were raised.

ITEMS FOR FORMAL APPROVAL/NOTING

- 9 Sustainability Awards Update & Feedback on Proposed Special Awards** **G**
 The Head of SRS Programmes presented for noting a paper on the status of the Awards programme, thanking members for feedback contributed to the review. Building on success and lessons learned in 2014/15, changes in 2015/16 would ensure a more strategic approach that:
- Aligned more closely with key UoE sustainability priorities
 - Fitted the workflow of the academic and business year
 - Reduced risk of the awards process becoming a 'box ticking' exercise.

A ceremony in April would focus on Special Awards (labs, energy, innovation, impact, personal contribution) and would align with volunteering, specifically Development & Alumni promotion of [the Big Leap](#).

This would be a year of transition, with parallel aims to increase the number of teams participating (spreading the scheme and reducing processing cost) and the overall impact of the Awards. While continuing to celebrate grass roots activity, the scheme was looking into ways of recognising leadership, for example engraining sustainability in working practices at School level. Some members would be invited to join the judging panel. Attendees recommended adding a representative from Health & Safety.

Action – All members wishing to be involved to contact Caro Overy.

- 10 3 Year Strategy** **H**
 SOAG noted a paper outlining the current 2015-2018 strategy of the SRS Department, including goals, objectives, ways of working and plans to monitor and measure outcomes.
- Members suggested reviewing the document to test whether the objectives were genuinely SMART, and dividing the timeframe into 12 quarters to break down actions in a way that would allow for more effective staff performance management.

Action – All members to provide comments which would be addressed when the document was reviewed.

- 11 Annual Risk Assessment – Operational Components** **I**
 SOAG noted this paper assessing potential risks, their impact and mitigation in terms of operational sustainability. Elements relevant to SOAG had been extracted from the overall SRS Department risk log.
- Members recommended reviewing those net risks that were considered unacceptable, splitting out the current set of controls which were insufficient, and including SMART objectives to improve these controls and reduce the risk to an acceptable level.



Sustainability Operations Advisory Group (SOAG)

Wednesday 26 January 2016

2014-15 Waste Annual Report + Q1

Description of paper

This paper summarises the University's performance within the academic and support Estate for Waste & Recycling for the academic year 2014-15 and the first quarter of 2015-16.

Action requested

SOAG is invited to discuss and endorse this paper.

Recommendation

It is recommended that this report be made publically available on the University website.

Background and context

The current University Strategic Plan has an objective to minimise our environmental impact through improving our overall management of resources to reduce waste and maximise recycling. The University's Waste Management and Recycling Policy further outlines this along with objectives and actions built into the annual SRS implementation plan.

This paper provides a report by the Waste & Environment Manager summarising the University's waste management performance within the academic and support estate for the academic year 2014-15. Additional waste management data is provided for the first quarter of 2015-16 in order to assist with projections for performance for this year.

Discussion

Annual waste and recycling performance continues to be positive overall.

Headline data for 2014-15:

- Reuse: 180 tonnes (increase since 2013-14)
- Recycling: 1,763 tonnes (increase since 2013-14)
- Recovery: 1,208 tonnes (slight decrease since 2013-14)
- Landfill: 230 tonnes (decrease since 2013-14)
- GHG emissions: 79 tonnes (decrease since 2013-14)
- Landfill diversion: 93% (increase since 2013-14)
- Waste arising: 3,377 tonnes (increase since 2013-14)

Further detail is supplied in the attached report.

Preliminary data for Q1 suggests that landfill diversion continues to increase with a noticeable increase in food waste diverted to food waste recycling. The data available also suggests a slowing in the increase in arising during quarter 1.

Resource implications

Current resource implications have been accounted for within existing staff, operational and equipment budgets included in Departmental planning.

Risk Management

Key risks associated with implementation of Waste Management actions at the University include:

1. The cost of waste disposal and recycling continues to rise and in so doing to outpace the increase in staff and student numbers;
2. A need to update the overarching policy which is scheduled for the current academic year;
3. Tender of radioactive, electrical and electronic equipment, healthcare/ABP, hazardous and confidential wastes contracts are all due within 2016;
4. Space to store and manage bulky wastes effectively is at a premium.

In order to control and mitigate these risks, it is essential that sufficient resource is available to manage the waste and recycling service.

Equality & Diversity

No implications identified.

Next steps/implications

- To retender the contracts noted above in order to ensure that the University remains compliant with Procurement law and has appropriate, best value contracts.
- Full academic and support estate composition audits are currently ongoing and these will assist in the framing of the updated Waste & Recycling Policy as well as the development of implementation strategy.
- The University's Waste & Environment Manager is moving on during this academic year and the process has commenced to replace her. Efforts will be made to ensure that this does not have any substantive impact on delivery against targets.

Consultation

This paper has been reviewed and approved by David Brook, Assistant Director Estate Operations.

Further information

Author & Presenter

Fleur Ruckley
Estates Department
26 January 2016

Freedom of Information

This paper is open.

WASTE & RECYCLING PERFORMANCE INDICATORS

ACADEMIC AND SUPPORT ESTATE (2014-15)

HEADLINE FIGURES

ACADEMIC AND SUPPORT ESTATE ONLY

Waste Arising – 3,377 tonnes (2,985 tonnes) ↑

GHG Emissions – 79 tonnes (131 tonnes) ↓

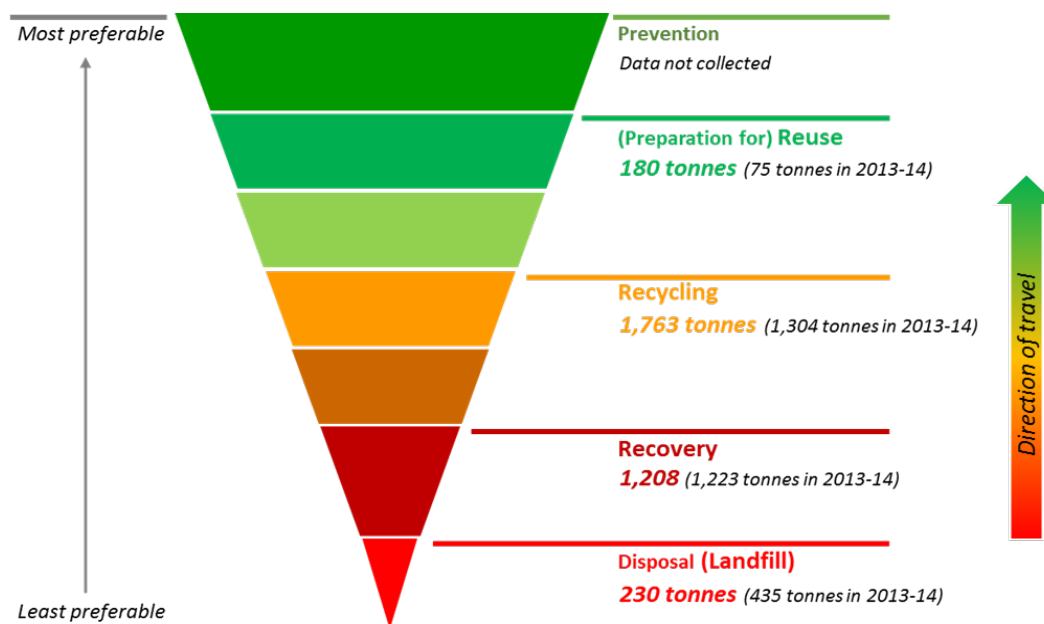


FIGURE 1: HEADLINE DATA

BREAKDOWN OF WASTE COLLECTED

COMPARISON TO PREVIOUS YEARS

In 2014-15, 47% less waste was sent to landfill, 35% more was recycled or composted and double the waste was reused at the University compared to 2013-14.

These improvements led to an **increase in landfill diversion** (of 550 tonnes). In 2014-15, Landfill Diversion reached 93% with Figure 2 showing a continual improvement over the past 3 years.

QUARTERLY BREAKDOWN

It is helpful to break our data down further, to determine whether patterns or trends are visible across the year. Figure 3 illustrates our quarterly waste performance over the past two years. Generally, there is a higher output of waste over the summer months and a lower output in the late winter.

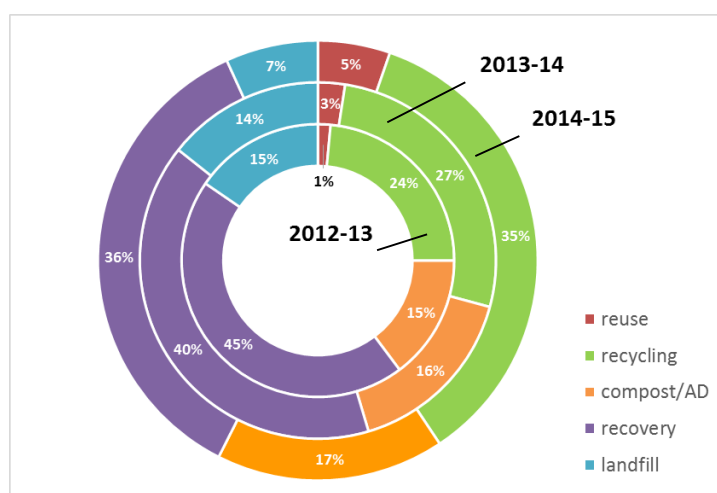


FIGURE 2: COMPARISON TO PREVIOUS YEARS

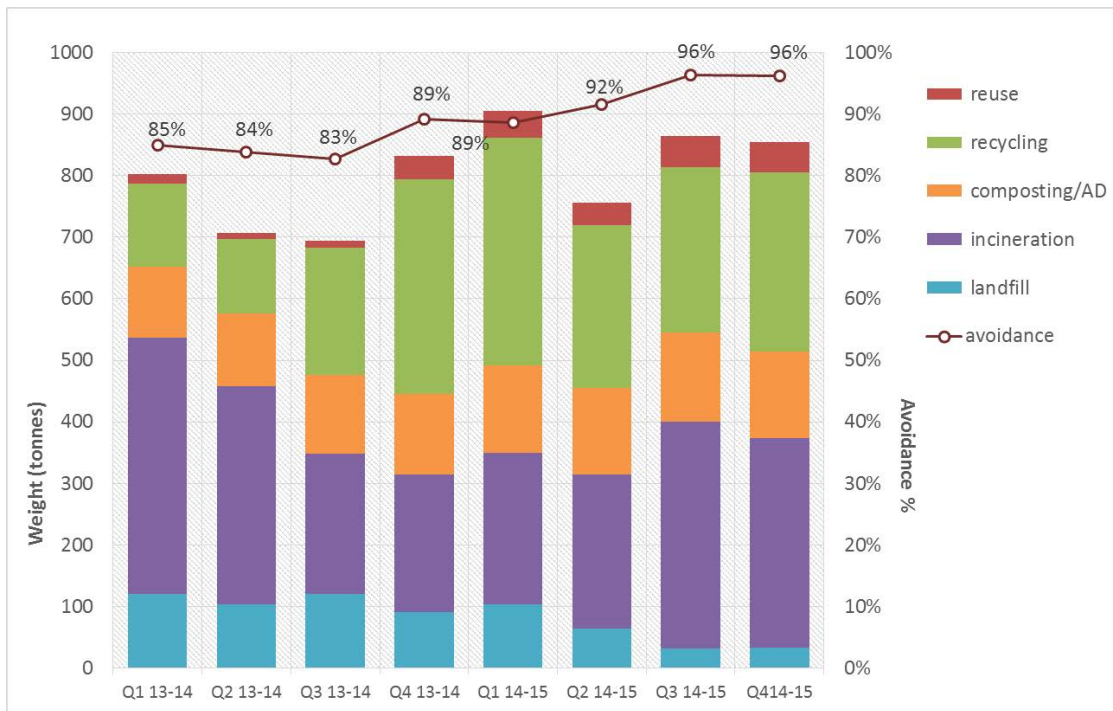


FIGURE 3: QUARTERLY BREAKDOWN

The increases in the summer months coincide with “spring cleans”, building moves and the impact of the Edinburgh Festivals and Summer Schools, whilst the lower outputs tend to coincide with the winter closure period.

Waste Recycled & Reused (tonnes)	2013-14	2014-15	% change
Books	13.6	10.0	↓
Cartridges	0.4	3.0	↑
Confidential	120.0	118.9	-
Dry Mixed Recycling	513.8	868.1	↑
Food	49.3	78.9	↑
Furniture & bulky	113.2	218.9	↑
Glass	130.8	145.7	↑
Hazardous	12.2	24.8	↑
Landscape	443.0	443.0	-
Office supplies	0.2	1.5	↑
Plastic	1.5	4.5	↑
Printer cartridges	1.8	1.7	-
Textiles	0.0	0.5	↑
WEEE	129.4	107.4	↓
Wood	20.6	24.3	↑
Grand Total	1,549.7	2,051.0	↑

TABLE 1: BREAKDOWN OF RECYCLING AND REUSE

Particularly interesting to note is the continued increase in landfill diversion. As of the third quarter of 2014-15, the University has been sending **zero non-hazardous waste to landfill**.

WASTE REUSED AND RECYCLED

The total weight of **waste diverted to recycling and reuse in 2014-15 was 2,051 tonnes**. This is an increase of 501 tonnes since 2013-14 (see Table 1 for more information).

Work has been ongoing throughout the year to improve the quality of our recyclate,

with improved signage, strategically placed recycling bin lids, improved web resources and the trial of different collection systems all contributing to this. It is therefore particularly reassuring to see that the recycling rate is also beginning to recover alongside this. It is expected that the recycling rate will continue to rise.

The weight of waste diverted to reuse in 2014-15 is more than double that reused in the previous year. This total includes over 100 tonnes of items donated to third parties for direct use, resale and donation. The majority of this reuse activity has been generated where peaks in resource availability coincides with a lack of storage space (e.g. during the clear out of a large building). In addition, there is a small but steady rise in internal cascading, managed through our exchange portal WARPit. With the engagement of the

University legal team in the drafting of third party agreements, the further development of partnerships and of WARPit, reuse should continue to rise.

NORMALISED DATA

Waste-related headline data can be normalised in a variety of ways. This approach allows us to analyse changes in KPIs outside of variations in estate size, turnover and occupancy over a period of time.

TOTAL WASTE ARISING

The University continues to grow, with 45% higher turnover and 42% more people in 2014-15 than in 2007-08. Figure 4 shows that the growth in waste arising in the same time period is higher still at 55%.

Analysis of this growth indicates that it is at least partially related to departmental moves – i.e. a factor of a growing institution – with double the weight of furniture and bulky waste being disposed of in 2014-15 as compared to the year before.

GREENHOUSE GAS EMISSIONS

Waste related greenhouse gas (GHG) emissions continue to drop – both outright and when normalised against turnover, gross internal area (GIA) and occupancy (see Figure 5 opposite). This reduction is primarily a result of improvements in waste management performance and a consistent movement up the waste hierarchy.

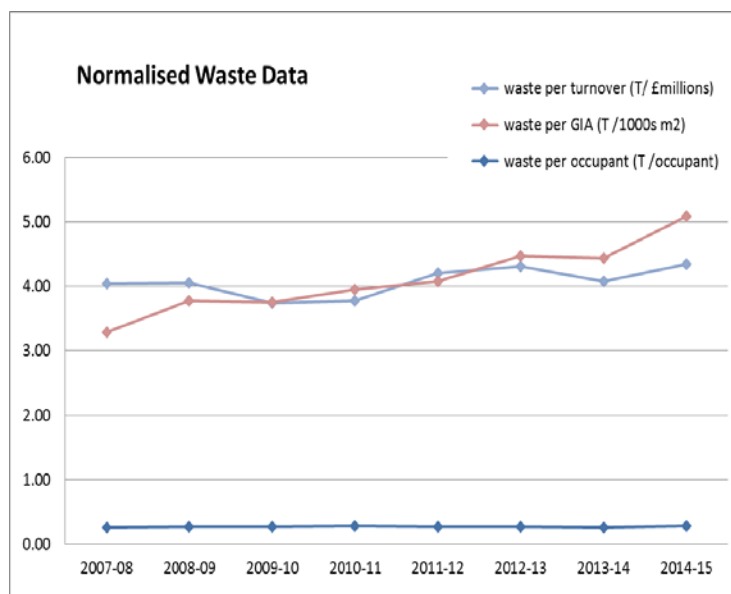


FIGURE 4: WASTE ARISING NORMALISED

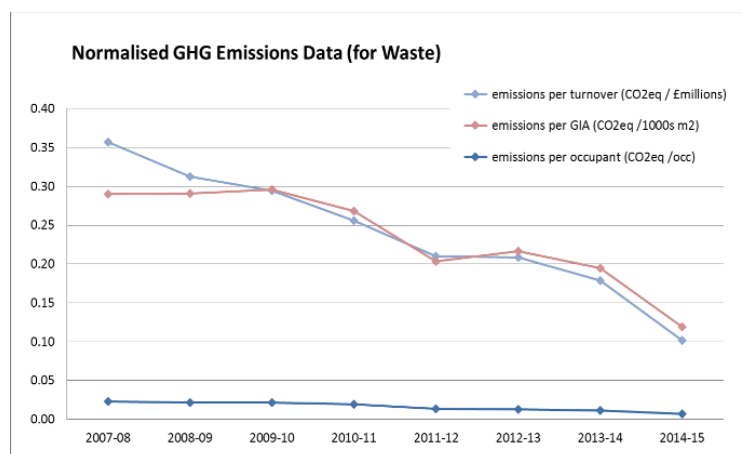


FIGURE 5: WASTE RELATED EMISSIONS NORMALISED

Final report supplied by: Waste & Environment Manger, Estates Department – January 2016

Notes:

1. A wide variety of treatment routes are specified by the University and reported on by our contractors. These treatment methods have been combined into four main categories. **Reuse** applies to waste for which another use has been found which does not involve deconstruction. **Recycling** applies to waste which is broken down first in order to obtain resource value – this includes composting. **Recovery** includes any form of burning of our waste, when energy is recovered such as with refuse derived fuel (RDF). The category of **Landfill** is applied when the final destination of the waste is a landfill site.
2. The figures provided above are for the academic and support estate only and do not include Construction & Demolition waste. C&D waste figures and data for our accommodation estate for 2014-15 will be supplied for the HESA Estates Management Record.
3. GHG emissions supplied have been calculated by the Carbon Guru software supplied by Carbon Masters.
4. UoE turnover and GIA figures supplied above are for the Academic and Support estate only and do not include Accommodation related turnover and GIA.

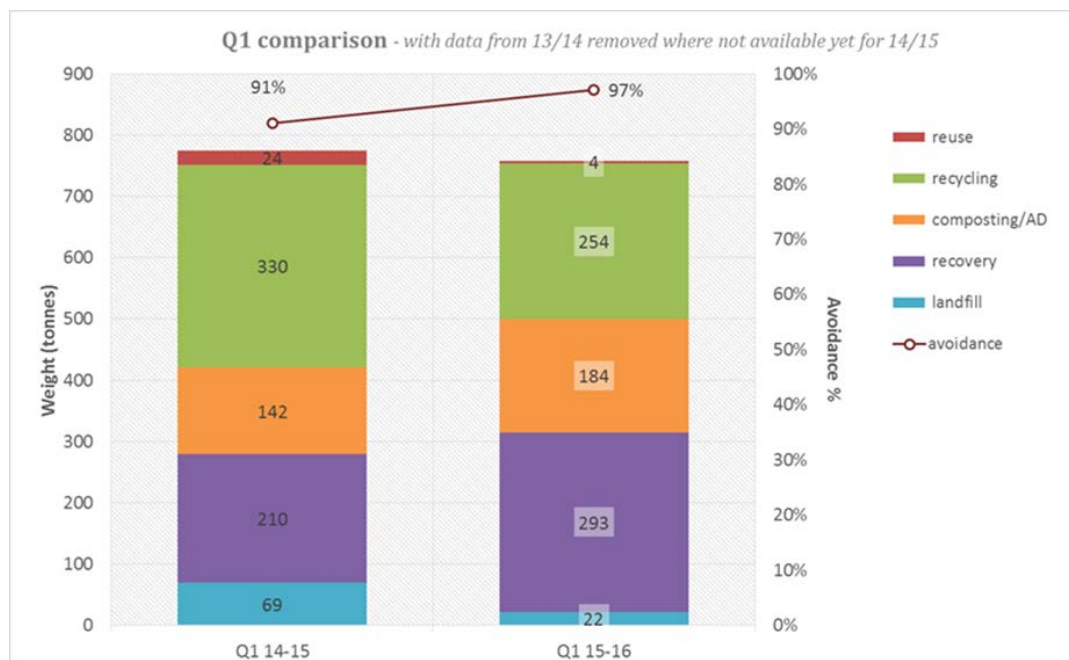
Quarterly Data Report

2015/16 - Waste & Recycling

QUARTERLY METRICS

Headlines:

- Quarter 1 arising - 750 tonnes (*expected to be +/- 900 tonnes once all data is included*)
- Running total for 2015-16: 750 tonnes
- Last year's quarter 1: 906 tonnes
- Running total for same period 2014-15: 906 tonnes



Trends

- The overall landfill avoidance rate in Q1 this year is likely to be *at least* 94% once all data is in.
- Food waste recycling continues to rise with the opening of new cafes and point for food waste capture across the estate.
- The weight of waste arising from the main contract during the first quarter 2015-16 is identical to the same period 2014-15 (594 tonnes). This is positive following a rise of 17% in arising on this contract between the first quarters of 2013-14 and 2014-15.
- Overall recycling tonnage within the main contract is down for the first quarter 2015-16 compared to the same period last year. Analysis of the data suggests that this is linked primarily to bulky waste uplifts.

MAJOR PROJECTS / ACHIEVEMENTS

An exercise was carried out during Q1 to identify where the capacity at buildings was out of sync with requirements – leading to wheeled bins being lifted when they were not full. This resulted in a reduction of bin lifts in key areas thereby keeping costs in check.

NEXT STEPS/IMPLICATIONS

- The exercise to address capacity vs requirements will be extended during January and February 2016 to bulky waste lifts. This exercise is carried out periodically in order to ensure that the University is getting best value for money.
- Compositional analysis audits are being carried out currently. They will be completed during Q3. The results from this will allow the Waste Team to assess progress towards meeting recycling quality requirements and to identify key streams and production areas which require attention.
- Work is ongoing with the College of Art to ensure that wastes arising from their studio areas is appropriately segregated and managed.

Report supplied by: Waste & Environment Manager, Estates Department – January 2016

Sustainability Operations Advisory Group (SOAG)

Tuesday 26 January 2016

SRS Department Programmes Update

Description of paper

This paper provides a report on SRS Programmes 2014/15 + Q1 2015/16.

Action requested

SOAG is invited to consider and comment on the paper.

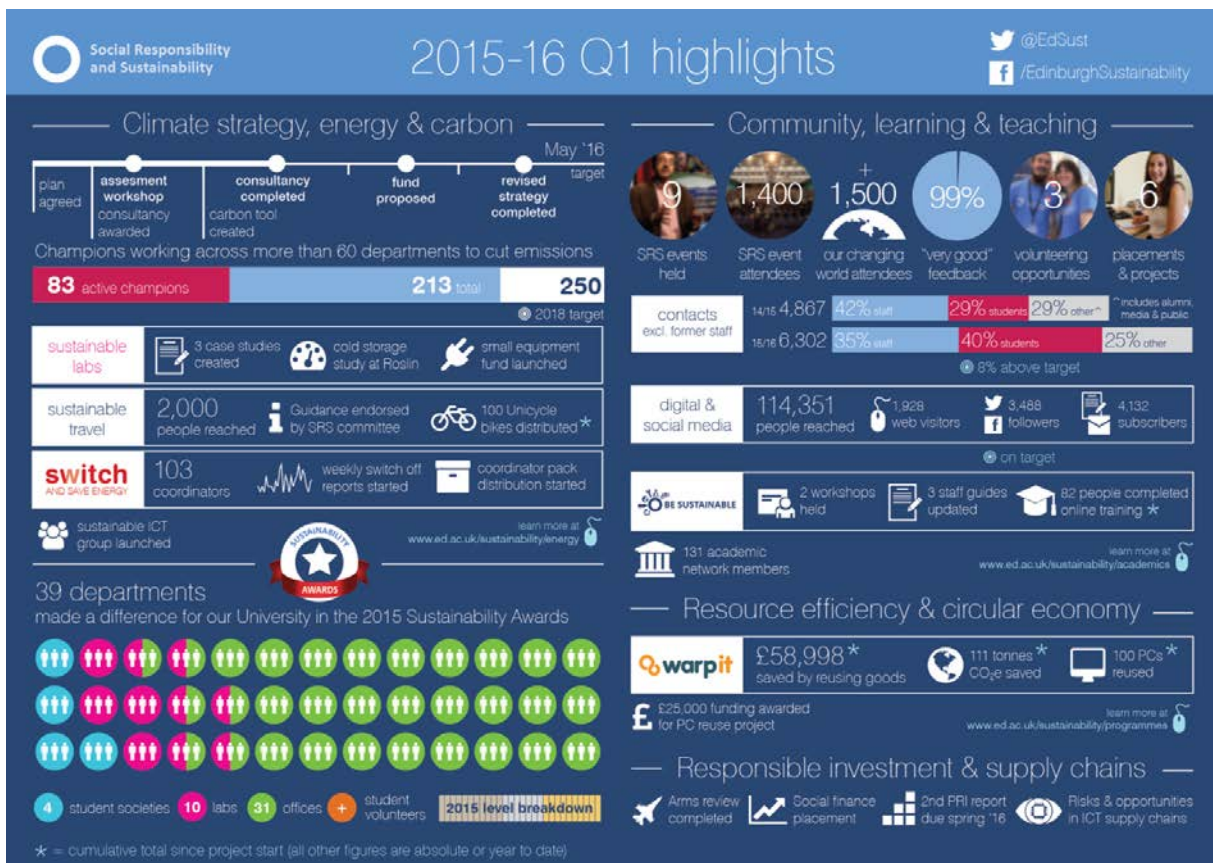
Discussion

2014/15 +Q1 Performance

MAJOR PROJECTS / ACHIEVEMENTS

Following an initial start-up process, the Department has agreed 7 priorities for the coming 3 years: carbon and energy savings; resource efficiency; supply chain SRS; responsible investment; localised advice and projects; community / public engagement and links to learning and teaching.

Despite challenges, 2015 was a very successful year. The SRS Department has led or substantially contributed to saving or generating £650,000 over the last year. A top Green Gown award was received recognising University sustainability achievements in laboratories.



Energy and Carbon

- 103 Energy Coordinators took practical action in 2014-15 (target 250 by 2018). 39 departments took part in the Sustainability Awards exceeding the target of 35. A review and refocussing of the awards was completed and will be launched in spring 2016. Administrative costs per award have continued to fall.
- Complete revamp of energy communication materials and engagement completed and launched. Action for the Climate campaign linked to CoP21.
- £3.3M (over 5 years) of potential savings identified through labs specific energy saving projects in partnership with lab users and technical experts. Top UK Green Gown Award for Universities across the UK received for sustainable labs work.
- Climate Strategy review delayed in starting following senior management and governance changes but commenced summer 2015. Funding of £30,000 secured from SFC for joint delivery of technical work to support the review.

Resource Efficiency

- Estimated £59,000 saved through the Waste and Reuse (Warp-it) portal; good progress in developing a process for PC reuse (with Estates and ISG). Received £35,000 in support from Zero Waste Scotland (both research and reuse projects) during 2015-2016. Joint research and contributions to policy consultations. Communications campaigns (A-Z recycling) to improve contamination levels.

Supply Chain SRS

- Working with colleagues in procurement and elsewhere to anticipate and manage risks and identify lower impact products and services. Risks and opportunities in ICT supply chains mapped and partnerships developed.
- Two student placements supported to look at our lentil and fair trade supply chain (Malawi) and another student reviewed garment supply chains and the effective of the Workers' Rights Consortium partnership.
- A Conflict Mineral Policy has been developed following extensive consultation and an assessment of the implications of the UK Modern Slavery Act briefing was prepared.

Responsible Investment

- Planned reviews of fossil fuels and armaments both completed with strong organisational backing and implementation well underway. Supporting colleagues in reviewing the case for social finance.

Localised Advice and Projects

- Analysis for Accommodation Services on 'drop n go' to advise on best environmental option
- Continued support to Estates with advice on comms, new developments, transport and waste issues.
- Worked with Business school to assist its development of a sustainability strategy. Advice offered to Centre for Sport and Exercise, accommodation services, chemistry, biology, Roslin and a range of other departments as well as support to Vice Principal on Race Equality Charter Mark.

Community and Public Engagement and Links to Learning and Teaching

- Events, online engagement and other activities reached almost 75,000 people. Sustainable travel campaign reached 2000 staff and students; estimated 3000 attended departmental events in 2015 with positive feedback
- On track to deliver target to treble social media users by 2018 and to meet targets to engage with staff and students. Most successful Fresher's Week to date with more than 1000 students engaging with our products and/or signing up for more information.
- Successfully supported schools of education and geosciences to secure funding for design and launch of University wide 20 credit MOOC on SRS issues. SRS Dissertation prizes launched.

STATUS (RAG)

Green	All objectives on track or only minor deviation. Report major milestones and successes.
Amber	Some risk of some objectives not being met or being delayed- explanation of mitigating measures proposed required.
Red	Serious risk that some or all objectives will not be met or will be delayed- explanation required.

SRS Department currently reports on Red Amber Green Status across our key themes and targets for 2018.

2015-18 Plan Key Themes	Indicators	Targets for 2018	14/15 progress as of end of 2015
1.Scanning, Evidence and Strategic Development	<ul style="list-style-type: none"> • Scanning used by senior managers • Climate Strategy in place on time • Contribution to RI • SRS in UoE Strategies 	<ul style="list-style-type: none"> • 3 main policy areas scanned by 2018 • Delivery of agreed Climate Strategy by 2016 • All RI reviews and policy complete by 2016 • UoE strategy 2016 and Estates Strategy 2016 	<ul style="list-style-type: none"> • Climate Strategy consultancy work in progress. 4 consultancy projects have produced draft documentation w two near completion. Carbon tool + management sector review need further work. Targets needed by CMG in Spring 2016. • Preliminary work on department scanning system carried out with outline in place for next steps. • Supply chain SRS policy work • Responsible Investment work.
2. Inspiration and Communications	<ul style="list-style-type: none"> • Reach of communications campaigns and events 	<ul style="list-style-type: none"> • 25% of staff and 10% of new intake students reached through campaigns • Trebling digital presence from 2014 baseline • 5000 people reached through SRS Dept events annually by 2018 	<ul style="list-style-type: none"> • Contact with more students than staff members in Semester 1 (1,198 students, 90 staff) but likely partially due to changing time frame for Sustainability Awards. Depth vs breadth of engagement. • Action for the Climate Campaign limited impact end of '15 • 6302 Contacts in Database. Over 100k people reached through social media with nearly 2k web visitors and over 3k twitter followers as well as over 4k newsletter subscribers • 1400 SRS Dept event participants in Semester 1 where 99% of respondents rated 'very good'. 1500 at Our Changing World.
3.Operational Responsibility and Sustainability	<ul style="list-style-type: none"> • Participation in awards • #of active Energy Coordinators • Contribution to Utilities Savings • Funded EE projects • Categories completed for supply chain risks and opportunities SPPT • Waste avoided 	<ul style="list-style-type: none"> • 60 Teams by 2018 • 250 Active Champions by 2018 • Contribution to 10 percent savings – T • XX Projects Funded • 3 Topics / Categories by 2018 w Procurement • 10k kg Waste Avoided through Warpit (TBC) 	<ul style="list-style-type: none"> • Awards toolkits reviewed and updated. Special awards panels agreed. Date for ceremony confirmed. • Energy Engagement process further developed and working on alignment with Energy Office. Roll out of some engagement activities delayed due to staffing (injury + secondment to Estates) and prioritisation of climate strategy. • 10 percent target risk. Not yet fully developed list of opportunities and without funding mechanisms will not be possible to achieve • 83 Active Champions end of Q1 (Energy, Waste, Transport) • Proposal for Staff Sustainability CPD in development • Laboratories Programme won Green Gowns Award • Be Sustainable Toolkit + Training • Waste diverted and 111tCO2e saved through 422 Warp-it members. Café Waste Audits completed.

4.Links to Research, Learning and Teaching	<ul style="list-style-type: none"> • Student learning opportunities for SRS • Researcher & Practitioner Living Labs for Programmes • Academic participation in programmes 	<ul style="list-style-type: none"> • All students able to access SRS options by 2018 • 25 placements in SRS by 2018 • 3 priority issues reviewed with academics by 2018 • SRS Academic network to 200 by 2018 	<ul style="list-style-type: none"> • Case Studies in Sustainable Development Course • Student placements identified (making most of masters / MSc Science Communication / • Dissertation prizes – judging panel confirmed with 15 members from 13 schools. • Building links with Ed Living Lab, 2020 etc. on approach to Living Labs • Academic Networked mapped and a few new members. • Proposal / Paper development with LFSS re staff CPD 	
5.Governance, Planning and Reporting	<ul style="list-style-type: none"> • SRS Reporting to required standard and on time • Items to committees get approval 	<ul style="list-style-type: none"> • Annual Report signed off by committees • 80 percent approval rate for items brought to SRS Committee and SOAG 	<ul style="list-style-type: none"> • SRS Section for Annual Report and Accounts prepared. Reviewed at SOAG, SRS Committee, and via Finance to other Committees. • SOAG meeting reviewed quarterly reporting • FTSG Review with Director of Procurement • Sustainable IT working group has commenced • SRS Student Forum for 15/16 (EUSA) 	
6.Our People, Systems and Processes	<ul style="list-style-type: none"> • IIP level • Staff L&D Strategies • Partnership Agreements • Funding and Income 	<ul style="list-style-type: none"> • Silver by 2016 • 100 staff have L&D plans aligned to strategy • £150k raised by 2018 	<ul style="list-style-type: none"> • Aiming for IIP silver in 2016 • Annual reviews carried out 100% of staff have L&D plans • £25k raised for resource efficiency project Proposals out for 3 year Sustainable Labs (180k) and to Scottish Government 	

Risk Management

Currently there are 2 areas which are showing with amber and at risk of being delayed or not being met.

- Climate strategy: Given the urgency of the climate strategy work to align with University strategy planning deadlines, staff time and resources have been prioritised for this.
- Energy and Utilities Savings of 10 Percent: Without incentives for change awareness and behaviour focussed bottom up campaigns have risk of limited impact. Senior level buy in and support for messaging across the University can partially help to mitigate this. Investment in energy efficiency measures will be required to ensure savings. See other paper on Sustainable Campus Fund.

Equality & Diversity

Although due consideration has been given to equality and diversity as a key element of the SRS agenda and we do not currently think that an Equality Impact Assessment is required, we will continue to monitor issues within our Programmes.

Next steps/implications

We seek to continuously improve our monitoring and evaluation seeking to ensure programmes, projects and activities are cost effective in their use of time and other resources with inputs costed and quarterly and annual reviews measuring outcomes and outputs. Further work on service areas linked to discussions around the Resource Allocation Model (see annex 1) have also helped with costing and potential return on investment analysis.

Consultation

Monitoring and evaluation takes place with stakeholders. Monthly RAG status reports reviewed within the department. Quarterly output and outcome reports prepared for senior management and shared with other interested stakeholders.

Further information

Prepared by SRS Department. Presented by Michelle Brown, Head of SRS Programmes, January 2016.

Freedom of Information

This is an open paper.

Annex 1: Services Expectations Statements as part of the Resource Allocation Model (RAM)

Working Draft for Comment

What are our services and how do they bring benefits to the university?

	Service (i.e. what do we provide)	Benefit (i.e. why?)	Performance Measure	Cost Driver / Cost per Unit	Universal? University? Unit Specific - TBC
1	Delivering an updated Climate / Carbon Strategy for UoE	Strategic Needs Risk Management Reputation Compliance Stakeholder Expectations	Targets to be set as part of the strategy development Delivery of agreed Climate Strategy in 2016	Compliance and Reputation £/unit (GIA and Students)	Universal (i.e. compliance function and not related to size and shape of university)
2	Energy / Carbon Engagement* and Local Energy Savings (with Estates)	Financial Savings Carbon Savings Enables achievement of Strategy Innovation A better place to study and to work Links to learning, teaching and research Industry engagement	Contribute to corporate objective of 10% over 2 years # of active champions across the university	Space, Staff, Students, £/unit (GIA and Students)	University (i.e. drivers are largely similar across all areas, although services may be tailored to meet varying needs)
		Energy Engagement Includes Laboratories Specific Programme work		Unit Specific (?)	
3	Resource Efficiency (with Estates)	Financial Savings Resource Savings Stakeholder Expectations Compliance Innovation Industry engagement	Contribute to corporate objectives to reduce waste, increase reuse Financial savings Landfill diversion	Space, Staff, Students, £/unit (GIA and Students)	University (i.e. drivers are largely similar across all areas, although services may be tailored to meet varying needs)
4	Supply Chain SRS (Fair Trade and Sustainable Procurement) (with Procurement)	Risk Management Reputational Links to learning, teaching and research Industry engagement	Risks and opportunities mapped Category briefings Participation	Size and scale and complexity of supply chains £/unit (?)	Universal (i.e. compliance function and not related to size and shape of university)
5	Responsible Investment (with Finance)	Risk Management Financial + Reputational Stakeholder Expectations Industry engagement	TBC Reviews completed and new commitments implemented	Reputation Size of endowment	Universal (i.e. compliance function and not related to size and shape of university)
6	Localised Advice and Projects (LifeCycle Analysis, School Specific Work)	Risk Management Reputational Financial Savings Links to learning, teaching and research	Contribute to corporate objectives (energy, resource efficiency, etc...)	£/unit	University & Unit Specific
7	Community and Public Engagement and Links to Learning and Teaching (with various) (OCW, Volunteering, Events, etc.)	Reputation Innovation A better place to study and to work + Links to learning, teaching and research and Industry engagement	# Involved Feedback Reach of communications campaigns and events	Reputation Size and Scale of Organisation	Universal and University

Additional internal services include committee support and SRS reporting.... Integrated across all services....



Sustainability Operations Advisory Group

January 2016

Utilities Programme Brief

Description of paper

The purpose of this paper is to outline the scope and shape of the programme of work and next steps towards achieving a 10 percent reduction from business as usual during 2015-2017 from a 2014-15 baseline. Annex A provides the objectives, scope, assumptions, and next steps.

Action requested

SOAG is requested to comment on the paper prior to submission to the SRS Committee.

Resource implications

The programme has been developed based on current staffing assumptions but is dependent upon the University investing in 'spending to save'. Hence roll out of activities should go hand in hand with a proposed Sustainable Campus Fund or similar mechanism.

Risk Management

See attached.

Equality & Diversity

Although due consideration has been given to equality and diversity as a key element of the SRS agenda and we do not currently think that an Equality Impact Assessment is required, we will continue to monitor issues within our work.

Next steps/implications

1. Comment on Programme Objectives and Scope at SOAG meeting in January 2016 for sign off by Director of CSG with Director of SRS and Director of Estates (SOAG) and SRS Committee in due course
2. Confirm funding mechanisms for sustainable campus fund
3. Continue to further develop and roll out communications and engagement (SRS)
4. Further develop compilation of projects
 - a. Labs – in progress – working through Sustainable Laboratories Steering Group
 - b. Large building projects – in progress (Estates)
 - c. Small projects via energy coordinators (Spring 2016) (SRS)
5. Analysis of triad / store / demand opportunities (Estates)

Consultation

This paper has been developed as an output of the Utilities Working Group including representatives from Estates, SRS and (more recently) Accommodation Services. Earlier version was presented at the Group.

Further information

Presenter

Dave Gorman, Director of SRS

Freedom of Information This paper may be included in open business.

University of Edinburgh:

Utilities Working Group Programme

Brief: Pathways to Energy Savings

Version

Version	Date	Description	Author
1.0	October 15	First version to Utilities Working Group on 8 th October for discussion and endorsement.	Dave Gorman, Jane Rooney & Michelle Brown
2.0	December 15 January 15	Final Draft incorporating comments from Working Group Members. To be circulated back to members and final review at SOAG in January 2015.	Dave Gorman, Jane Rooney & Michelle Brown

Approval

Approvers	Role	Signed	Approval Date – TBC
Director of Corporate Services Group	Senior Programme Sponsor		January 2016 target
Director of Estates	Programme Sponsor		January 2016 target
Director of SRS	Programme Sponsor		January 2016 target

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1. Programme Purpose

Estates and the Department for Social Responsibility and Sustainability (SRS) have been tasked with developing a programme to identify and implement savings to University energy use with the following goal:

- **to achieve a 10 percent reduction from business as usual during 2015-2017** from a 2014-15 baseline

Despite progress made through investment in energy infrastructure (in particular Combined Heat and Power), and other efficiency measures as well as behaviour change programmes, the costs of utilities are soaring and the University is not on track to achieve its current carbon reduction targets.

Based on preliminary analysis of the cost of utilities to the University over the last 10 years (2004/5 to 2014/5), it appears that costs have increased at roughly 15 percent per annum (from £5.3M in 2004/5 to £20M in 2014/15). Following these projections, in 2 years, utilities would be estimated anywhere from £21.2 to £27.4M and by 2025 £25M to £40M. The wide range in different forecasts is based on which scenario is used with the lower scenario aligned with UK industry averages and the higher scenario based on an average of the previous 10 years. Figure 1 (below) shows these wide variances. Figure 2 shows actual and potential energy consumption (kWh) as per Energy Office data during the same time (primarily electricity and natural gas).

Figure 1: Energy Costs at the University of Edinburgh.

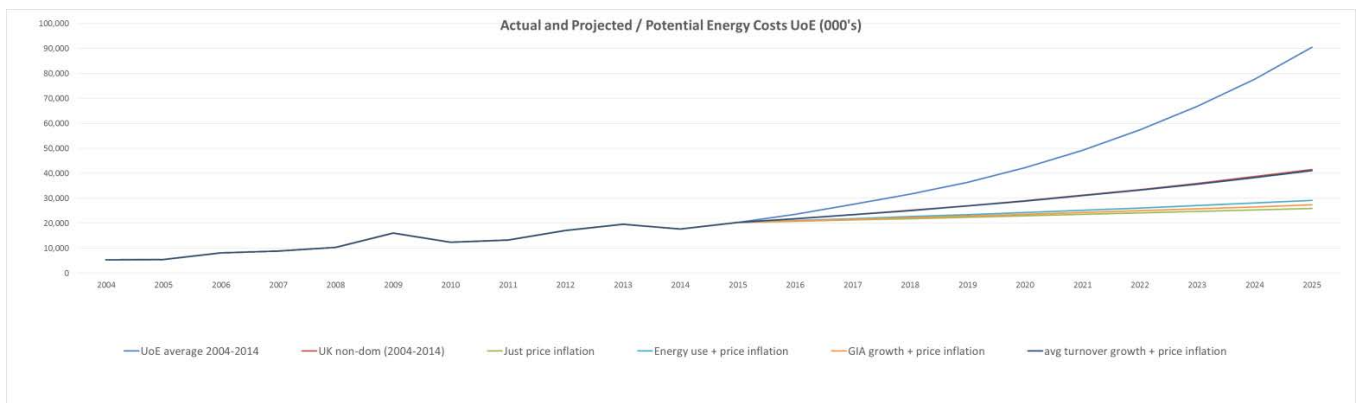
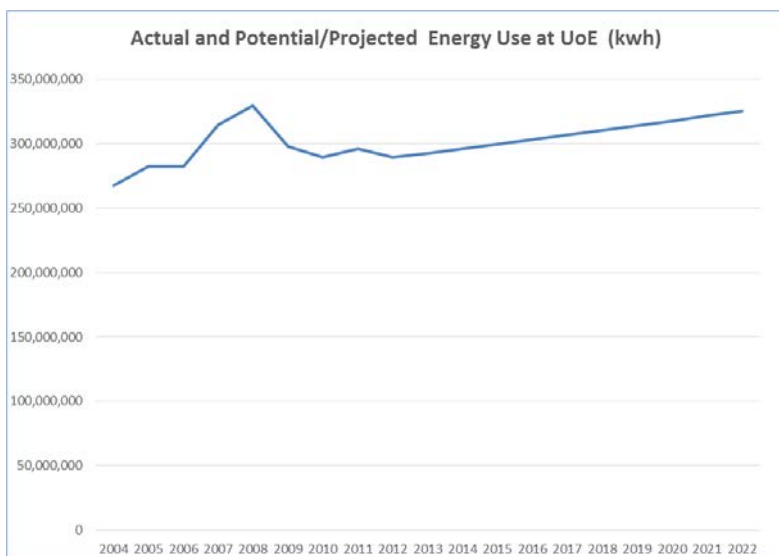


Figure 2: Energy Use at the University of Edinburgh



Unlocking savings from utilities (consumption, financial or carbon) will require a joined up approach taking into consideration: building design and refurbishment; energy monitoring and reporting infrastructure; specific issues within laboratories; promoting positive policies and behaviour change; ensuring incentives are in place for managers and administrators; identifying technical initiatives for energy supply and unlocking funding mechanisms to drive local buy in. Ramping up efforts to be more efficient with energy use can help to reduce

electricity demand, tackle rising energy costs and meet carbon targets.

In 2015 a Utilities Working Group was established as a sub-group of the Sustainable Operations Advisory Group (SOAG) with Director of SRS and Assistant Director Estates Operations as co-chairs. This programme

brief has been developed as an output of the group to define the target, identify potential pathways and outline responsibilities, actions, risks and governance arrangements.

2. Definition and Scope

Programme Objective: The programme aims to **identify** and **implement** the savings which would achieve a 10 percent reduction from business as usual during 2015-2017 calculated from a 2014-15 baseline.

Baseline: 2014-15 will be used as a baseline with the target covering 15-16 and 16-17.

Targets:

- **Financial:** As the utilities spend was £16,900,000 for academic year 2014/15¹, the target will be to identify savings of roughly **£1.7 Million by 2016/17**. A projected spend for 2016/17 is estimated at approximately £21-27 Million.
- **Energy Use:** As the utilities usage was approx. 290,000,000 kWh for academic year 2014/15 the target will be to identify savings equivalent to **29 Million kWh by 2016/17**. If we estimate that actual energy use increases by 1 percent per annum then projected energy use for 2016/17 would be approximately 296,000,000 kWh.
- **Carbon:** The Climate Strategy / Action plan will be setting out future targets for CO2 emissions. The Climate Action Plan 2010 proposed a reduction in University carbon emissions of 29% by 2020, with an interim target of 20% by 2015, against a 2007 baseline. Future carbon targets to be confirmed as part of the climate strategy work.

Each year of the programme should therefore look to identify roughly £1M of savings or approximately 15M kWh adding up to **£1.7M** or **29M kWh** at the end of the programme in year 2.

The current scope includes all University activities including accommodation services but excluding developments with no overall control (e.g. Holyrood development).

Note: It has been debated if ACF should be included within the project scope and that the (approx.) £2.5 M paid in utilities (14/15 estimate) for ACF should be excluded from calculations. However, for the time being the targets have not been adjusted to reflect this.

3. Assumptions

- The target is to be achieved from a bottom up compilation of individual projects that together make up the cumulative target.
- That the University invests in 'spending to save' and will approve a Sustainable Campus Fund as well as additional mechanism to allow for this².
- The target would be from a fixed baseline and expressed as percentage saving from business as usual and is separate from any growth in university and changes in prices.
- Quantifying savings will require estimates based on rules of thumb or industry best practice where metering data is not available.
- Targets are based against a base year and changes to energy prices are not part of the programme scope.
- Some increase in Estates capacity to manage the increased flow of spend to save projects is likely to be required but that SRS staffing is sufficient to deliver on labs and communications / engagement elements.
- Other stakeholders will be able to devote appropriate staff time and the financial resources necessary to conduct the programme and projects.
- That both SRS and Estates have a shared objective to deliver 10 percent savings but support from across all parts of the University is required to secure success.

¹ Annual Report and Accounts 2014/15

² Currently proposed Sustainable Campus Fund is £2.75M. Assuming optimistic average of a 4 year payback period (25% ROI) we would need to spend £8M to achieve £2M savings

4. Programme Approach

Preliminary work-streams identified included: 1) data, feedback and incentives; 2) new developments and standards; 3) technical solutions; 4) awareness and promoting positive behaviours; and 5) novel energy solutions and technologies which has helped to frame the programme approach and identify dependencies. Estates is currently undertaking a utilities metering, monitoring and targeting and reporting systems review (see project scope document August 2015) which this programme will need to link with.

Based on opportunities identified through the Utilities Working group the following programme elements will make up the programme approach:

Pathways to Savings

- I. Large Scale Building Projects (Estates)
- II. Energy Communications & Engagement (SRS w Estates)
- III. Local small scale energy savings and initiatives (SRS and Estates)
- IV. Laboratories (SRS and Estates)
- V. Triad / Store / Demand Management Processes (Estates)
- VI. IT (SRS and IS and Estates)

Savings identified would need to make up the 'Pathways to £1.7 Million' in energy savings. This would require investment and hence the Sustainable Campus Fund (Green Revolving Fund?) would be a key component of this programme

4.1 Pathways to Savings

The table below illustrates potential pathways to financial savings of £1.7M within two years. Various options have been discussed as part of the Utilities Working Group and further analysis will require more detailed reviews with specific locations and schools. Further analysis to look at the energy and carbon savings would be required and could be reviewed via the Sustainable Campus Fund or a similar mechanism.

Table 1: Indicative Pathways to Financial Savings ³

Potential Pathways	Potential Projects Identified for	Potential Projects Identified for	Total Potential £ Savings	Total Potential KWH Savings	Lead	Notes (see main body text for more details)
	Year 1	Year 2	Year 1 + Year 2	Year 1 + Year 2		
I Large Building Projects Investments (i.e. Library or other large scale systems change)	£200,000	£300,000	£500,000	tbc	Estates	14/15 projects estimated savings of 100k. If further investment assuming this could be ramped up.
II Energy Communications & Engagement (SwITCH) and	£50,000	£100,000	£150,000	tbc	SRS (with Estates)	Assumption based on previous work. Difficult to measure and show attribution.
III Local Small Scale Energy Savings Investments (i.e. no	£139,000	£150,000	£289,000	tbc	SRS (with Estates)	Risk of overlap in estimates between small and local and large building projects
IV Laboratories Investments (freezers, fume cupboards, LED, timers, etc)	£100,000	£100,000	£200,000	tbc	SRS (with Estates)	See 2-5 Year Forecast to Labs Steering Group. Only potential. No Funding Confirmed. Some overlap with large scale projects below.
V Triad Management	£10,000	£20,000	£30,000	tbc	Estates	Approx 30k saved already. Potential for additional 10k? Guessing at numbers. DB to advise
VI IT		£100,000	£100,000	tbc	SRS/IS/Estates	
Running total	£499,000	£770,000	£1,269,000			Cannot be achieved without investing. Sustainable Campus Fund would draw further projects out. Would need to ensure capacity to implement.
<i>Indicative Gap</i>			£431,000			

Rationale:

Large Buildings: An assumption has been made that one or two major buildings can be intensively tackled to deliver substantial savings of £200-250k each year. This is based on the work put forward in the first meeting of the Utilities Working Group. In 2014/15 Energy Conservation Projects within estates equated to potential savings of £95,000 per annum. These included: demand based ventilation in Main Library (estimated savings of £66k per annum); chilled water systems changes in JCMB (estimated savings of £35k per annum); heating modifications to circuits in CSE (estimated savings of £48k per annum); adjustments to speed heating and

³ Projects and savings estimates to be confirmed

cooling pumps at QMRI (estimated savings of £18k per annum); and hot water systems improvements in Paterson's Land (estimated savings of £13K per annum). These projects are currently in the feasibility or pipeline stage and Estates is currently looking at prioritised projects for 15/16.

Awareness and Promoting Positive Behaviours - Energy Communications and Employee Engagement:

In 2006, the University of Edinburgh launched a Switch & Save campaign. This was complemented by face-to-face engagement (via a team now embedded within SRS) at various buildings and departments. Based on analysis from 2013, this local engagement was estimated to save £80k in energy costs. Lessons learned from previous engagement at UoE and elsewhere have pointed to the need for: availability of data so that individual buildings/departments/schools are able to see and understand a measurable change; alignment with local building context (feedback from staff that they are too hot/too cold /unable to influence their local situation) as well as incentives and recognition. The Edinburgh Sustainability Awards, the Be Sustainable Series and other programme offerings of the SRS Department also engage employees on energy / carbon savings. Given that schools do not pay for their own energy costs, there are perceived lack of incentives for energy savings.

Organisations such as Carbon Trust estimate that an investment of between 1-2% of energy spend in an effective employee engagement campaign, could enable organisations to save up to 10% on energy costs with the right institutional mechanisms in place.

For this Programme, communications and engagement campaigns have been estimated to save a modest £50k in year one, and £100k in year 2. SRS has worked with Estates to review objectives and activities and ensuring data is in place to facilitate engagement. A key element of this programme is to work with and support the network of Energy Coordinators across the University. It should be noted that it is difficult to measure the impact from awareness raising activities and lessons learned from previous projects has identified that measures need to be in place to fund projects identified by local coordinators together with colleagues from Estates. In spring 2016 location specific engagement reviews (including energy audits) will take place to engage in depth with employees and identify further potential savings across 17 locations.

Local Energy Savings Projects: Based on rudimentary analysis it is estimated that approx. £150k savings in small projects could be identified. Lighting improvements, heating and cooling settings optimisation, and infrastructure upgrades, among other projects, could achieve savings across target locations. For example, the Energy Coordinator at the Informatics Forum has identified *potential to save up to an estimated 480kWh/day (ca. 9% of electricity consumption) by rationalising the use of Uninterrupted Power Supply (UPS) equipment.* However, until the Energy Audits are carried out we would not be able to provide further estimates.

Laboratories: Based on a review of opportunities for efficiency improvements in laboratories, an original programme was developed which was reviewed with the Sustainable Labs Steering Group in 2015. Total annual cost savings were estimated to be approximately £100k per year with an opportunity for a 5 year *cumulative* savings estimated to reach nearly £3.4M. This would include proposals such as: replacing old ULT freezers with new ones; rationalisation of sample storage (to enable some freezers to be emptied and switched off); replacing fume cupboards (with VAV or low flow); motion sensor controls or lighting; fitting timer plugs; replacing inefficient equipment; demand based ventilation; incorporation of natural ventilation and adjustments to freezer temperatures. Given the nature of these projects (linked to behaviour change and communications and engagement) some could be led and implemented by SRS with the appropriate building / lab users while other projects would require alignment with estates building plans. Hence there is a risk of overlap with the large building projects noted above as well as labs behaviour change campaigns.

Triad Management: Identifying times to reduce electricity usage during the triad periods could potentially provide significant savings on purchased electricity⁴. Investing in energy storage and onsite energy generation (and in particular renewables) could also help to substantially control future costs.

⁴ From November to February - National Grid monitors the system to identify the three half-hour periods when national demand for electricity peaks. The three highest periods are known as "Triads" and at these times large power users'

Sustainable IT: Following sign off on the remit, a Sustainable IT Group is now being established and may well identify savings over time. To reflect the fact that the group is only just being established, zero savings are proposed in y 1 but a notional £100k in year 2. However, savings may tie in with other categories above.

4.2 Investing in Savings

There are clear opportunities for investments into energy efficiency projects throughout the University. However due to a lack of effective drivers these opportunities are not currently being properly identified and secured. This may change over time as a result of the transparent accounting and RAM projects.

A joint bid between Estates and SRS Department is proposed for a 5 year Sustainable Campus Fund. Commencing in 2016-17 this would make available additional funding for energy and sustainability projects across the University on a spend to save basis. Staff costs associated with the design, delivery and review of the Fund would be absorbed by CSG.

It is proposed that the fund be managed jointly by Estates and SRS staff on a project by project basis, with applications sought across the University for projects to identify, capture and deliver energy efficiency and energy and carbon reduction in support of the 10% energy reduction target. Reviews of best practice from elsewhere such as Stanford, Harvard and Cambridge Universities, combined with discussions with colleagues managing buildings, laboratories and catering, suggest there are cost-effective spend-to-save opportunities and paybacks of less than 5 years. The fund would be established with clear criteria to be met including cost savings, carbon reduction, return on investment and simple payback and would build on best practice identified elsewhere. An important component would be potential savings identified within laboratories. Evidence gathered from Harvard, Stanford and Cambridge Universities suggest such mechanisms can deliver real improvements in staff engagement on these issues beyond the immediate sums saved.

It is proposed that the fund be established on a pilot basis in 2016/17 and reviewed after its first year for success in delivering cost and energy/carbon savings. The proposed profile of spend over the next 3 years is £0.75m in 2016/17 rising to £1m in 2017/18 and 2018/19. This will be reviewed by Estates Committee in 2016.

5. Deliverables

- Development of Sustainable Campus Fund mechanism subject to corporate agreement to finance projects
- Compilation and subsequent delivery of individual projects that together make up the year 1 and year 2 targets.
- Increased awareness of, and support for the need to manage energy for efficiency and sustainability reasons, and positive changes in awareness and behaviour
- An audit of performance and delivery of targets in 2017 and review of lessons learned.

6. Dependencies

- Unlocking funding to 'Spend to Save' via Sustainable Campus Fund or similar mechanism
- Developed and implemented proposals for improvements to energy monitoring, metering and reporting at increased accuracy and granularity
- Data availability to understand specific location baseline and potential and actual savings
- Incentives for Schools and Integrated Accounting:
- Potential need for increased Estates capacity to deliver new flow of projects
- Sustainable IT group agrees and delivers savings

transmission system charges are based on their demand. Triad demand tariffs forecast for 2015/16 Southern Scotland £22.25/kwh.

7. Approvals

- The Director of Corporate Services Group, the Director of Estates and the Director of SRS will need to collectively approve this Programme Plan with additional agreement sign off for the Sustainable Campus Fund.

8. Roles and Responsibilities

- Governance: SOAG
- Coordination: Utilities Working Group
- Executive Sponsor / Sign off: Director of Corporate Services Group, Director of Estates, Director of Social Responsibility & Sustainability
- Programme Management:
 - Work-streams / Sub-Programmes
 - Large Scale Building Projects (Estates)
 - Energy Communications & Engagement (SRS and Estates)
 - Local small scale energy savings and initiatives (SRS and Estates)
 - Laboratories (SRS and Estates)
 - Triad / Store / Demand Management Processes (Estates)
 - IT (SRS and IS and Estates)

Following SOAG meeting in January 2016, it is proposed that a tightly focused Utilities Working Group meet monthly with rotating chair between SRS and Estates.

9. Programme Control

SRS and Estates would need to work closely to ensure deliverables.

- Sub-Programme Status and RAG reports via Utilities Working Group
- Issues log(s) via Utilities Working Group
- Risk log(s) via Utilities Working Groups

More details on each of these to be provided.

10. Programme Timelines

Detailed programme and sub-programme timelines to be worked up. The current assumption is that this will fall into the following phases:

Phase I	Phase II	Phase III
2015-2016	2016-2017	Summer/autumn 2017
<ul style="list-style-type: none"> • Initiation and agreement of brief • Identify potential pathways to £1M and £2M • Seek agreement on campus fund proposals • data project • Initial projects • Deliverables descriptions 	<ul style="list-style-type: none"> • Commence delivery, • Record progress, • learn and refine pathways 	<ul style="list-style-type: none"> • Close down and next steps • Audit of delivery of targets and lessons learned

11. Next Steps

1. Approve Programme Objectives and Scope at SOAG meeting in January 2016 for sign off by Director of CSG with Director of SRS and Director of Estates (SOAG)
2. Confirm funding mechanisms for sustainable campus fund (DG/HE/GJ/PM)
3. Continue to further develop and roll out communications and engagement (SRS)
4. Further develop compilation of projects
 - a. Labs – in progress – as per SLSG paper (AA)
 - b. Large building projects – in progress (RC/DB/DJ)
 - c. Small projects via energy coordinators (Spring 2016) (CO)
5. Analysis of triad / store / demand opportunities (DB)

12. Governance

Programme oversight and governance arrangements for the project will be via the Utilities Working Group to the Sustainability Operations Advisory Group.

13. Risk Management

There are recognised and significant financial risks as well as reputational risks for the University in terms of the costs of utilities. There are numerous risks (linked to the dependencies) for this programme and mitigation strategies will need further development. A detailed risk register to be reviewed within Utilities Working Group.

Risk	Probability	Impact	Proposed Mitigation (to be reviewed)
Campus Fund not agreed or funded. Programme depends on spend to save investment.	Possible	Major	<ul style="list-style-type: none"> • Director of SRS, Director of Estates and Director of Corporate Services Group to take proposal to Estates Committee.
Delivery within 2 year deadline. Currently halfway through year 1 with only partial pipeline of identified projects. Current gap of approx. 400k in pipeline of potential savings	Possible	Major	<ul style="list-style-type: none"> • Prioritisation of objectives has already taken place with this being a key area for SRS in coming year. Early programme stage requires significant amount of time from energy office for data analysis. • Sustainable Campus Fund to draw further projects into pipeline.
Pipeline of projects does not come forward	Possible	Moderate	<ul style="list-style-type: none"> • Sustainable Campus Fund to draw further projects into pipeline.
Capacity to deliver. Risk that those responsible for programme delivery will have competing priorities or lack of capacity in teams.	Possible	Major	<ul style="list-style-type: none"> • Programme management approach to clarify goals, objectives, roles and responsibilities in progress. Placement of project coordinator from SRS within Energy Office to help with data and other tasks on agreed timescale. • Estates and SRS to ensure clarification of roles and objectives in teams
Confusion of roles and responsibilities. Risk that many programme areas depending on shared responsibilities between Estates and SRS.	Possible	Moderate	<ul style="list-style-type: none"> • Chair of Utilities working group currently shared between Asst Director of Estates and Director of SRS. Clear role identification and application of project management.
Data availability	Possible	Moderate	<ul style="list-style-type: none"> • Projects coordinator from SRS seconded to Energy Office Nov to March 2016 to help with Data.

Lack of joined up strategic approach on financial savings and carbon savings	Possible	Moderate	<ul style="list-style-type: none"> • Development of revised Climate Strategy • Internal cost of carbon factored in future development • Evidence based: planning should make use of expertise around the university and targets will need to be stretching but realistic
Lack of buy in from around the University	Possible	Moderate	<ul style="list-style-type: none"> • Communicating the plan with clear messages from ‘the top’ on expectations • Clarity on funding mechanisms for implementing spend to save projects, and information and reporting which connects day to day work with the bigger picture. • Bringing the plan to life and engaging with staff and students across campuses on actions that can be taken, recognising that different strategies will be needed for different groups (energy coordinator network)

Sustainability Operations Advisory Group (SOAG)**Tuesday 26 January 2016****Sustainable Campus Fund Proposal****Description of paper**

This paper proposes a Sustainable Campus Fund (SCF) to be piloted in 2016/17 to support energy and carbon emissions reduction projects that generate cost savings across the University.

Action requested

SOAG is invited to consider and endorse the proposed Sustainable Campus Fund as a pilot to run in 2016/17, with central budget funding of £2.75M over 3 years.

Recommendation

It is recommended that SOAG endorse the piloting of the Sustainable Campus Fund and an amount of £750K allocated for 2016/17, rising to £1M in subsequent years.

Background and context

The new Climate Change Strategy currently under development for the University of Edinburgh is proposing creation of a Sustainable Campus Fund, managed and administered by Estates and SRS, to support carbon emissions, cost and energy reduction goals. The success of similar funds is evident in the United States at top performing universities such as Harvard, Caltech and Stanford. Success can also be found in the UK, with the Higher Education Funding Council for England's (HEFCE) Revolving Green Fund (RGF).

HECFE's RGF delivers annual savings of almost £19M. It is estimated that projects will reduce CO₂ emissions by 103,318 tonnes, or around 12% of 2020-21 reduction targets. HEIs receiving RGF funding have reduced their emissions by between 7-10% more than non-participating HEIs.

Discussion

The Sustainable Campus Fund would deliver improved resource efficiency resulting in cost savings and emissions reductions, aiding in delivery of the shared corporate objective of a 10% reduction in energy spend over the next two years. It would provide a clear mechanism to collate and prioritise action against agreed parameters and clearer incentives for local and building level action.

In order to obtain funding, proposed projects would be judged using a points-based system that considers financial payback and minimum ROI of 6%, carbon savings, match funding, innovation, creativity, collaboration and additionality. A carbon assessment tool to allow applicants to input data and calculate project savings has been developed. The full proposal for the SCF is available as Annex 1 of this paper.

Resource implications

The Sustainable Campus Fund could be established with an initial allocation of £750K from the central budget. The fund proposed is not a revolving fund, but cost and energy savings and emissions reductions would be tracked and measured in a similar manner to tracking in a revolving fund. The amount allocated would be adjusted in subsequent years in line with lessons learned from Year 1, but is currently proposed as £1M in each of 2017/18 and 2018/19.

Risk Management

Potential risk include: inadequate number of applications for funding received; difficulties in adequately administering the fund so that deadlines slip; savings uncertainties due to changes to building usages, technical issues, utility costs decreasing, difficulties in actually tracking savings; and lack of resource within Estates to implement successful projects. Proposed mitigating action would include: development of an awareness campaign, SRS department support to Energy Coordinators and other sustainability champions in application preparation; an online submission and reviewing system; development of a cost calculator/savings tracking system and ensuring Estates leadership and involvement in the Panel.

Equality & Diversity

Due consideration has been given to equality and diversity as a key element of the SRS agenda. An Equality Impact Assessment is not required.

Next steps/implications

If endorsed as part of corporate planning round discussions, the Climate Policy Manager will follow up with relevant stakeholders on securing funding, partnership working to review and confirm project criteria, using the demonstrated spreadsheet tool, and development of a communications strategy around the fund, in line with other planned communications.

Consultation

A short brief on this paper was circulated to key members of the Utilities Practical Planning Group in advance of this meeting, and this paper has been written in close collaboration with Estates colleagues. Previous proposals have been discussed in a variety of informal workshops and at SOAG.

Further information

Author: Elizabeth Vander Meer, Climate Policy Manager, 13 January 2016
Presenter: Dave Gorman, Director of SRS.

Freedom of Information

This is an open paper.

Annex 1: Sustainable Campus Fund Full Proposal

Sustainable Campus Fund: A Proposal for University of Edinburgh

Description of paper

This paper proposes the pilot introduction of a Sustainable Campus Fund in 2015/16 to aid with the delivery of the shared corporate objective of a 10% reduction in energy spend (from business as usual) up to end of 2016/17. The Sustainable Campus Fund is proposed to facilitate increased work to reduce carbon emissions and generate energy and cost savings on and connected to the University of Edinburgh campuses. The fund is proposed to have the following dimensions:

- £750K capital investment fund in 2016/17 and £1M in each of 2017/18 and 2018/19, to be reviewed in line with resultant cost savings for coming years
- Open to applications from all staff and student groups and societies
- Fund for projects relating to energy efficiency and reduction (including microrenewables), efficiencies in labs, waste, travel, and procurement
- Administered by SRS Climate Policy Manager, jointly managed by Department for SRS and Estates, projects implemented by Estates / Schools.

Action requested

Members are asked to discuss and endorse the proposal, reflect on suggested sustainable laboratories efficiencies, and provide comments for further alignment with corporate priorities.

Background and Context

The new Climate Change Strategy currently under development for the University of Edinburgh is proposing the creation of a Sustainable Campus Fund, managed and administered by Estates and SRS, to support carbon emissions and energy reduction goals. The case for this type of fund has been made in the United States¹, at top performing universities such as Harvard, Caltech and Stanford and in universities throughout the UK, particularly in England. Many English Universities have taken advantage of similar green revolving fund financing through Funding Councils (e.g. HEFCE). It should be noted that the fund proposed here is *not* a revolving fund, but a fund supplied and replenished centrally and designed to both harvest savings for utilising towards corporate objectives and to provide stronger incentives for local action at college/school/building level. However, energy savings and emissions reductions will be tracked in the same manner that they are tracked in a revolving fund.

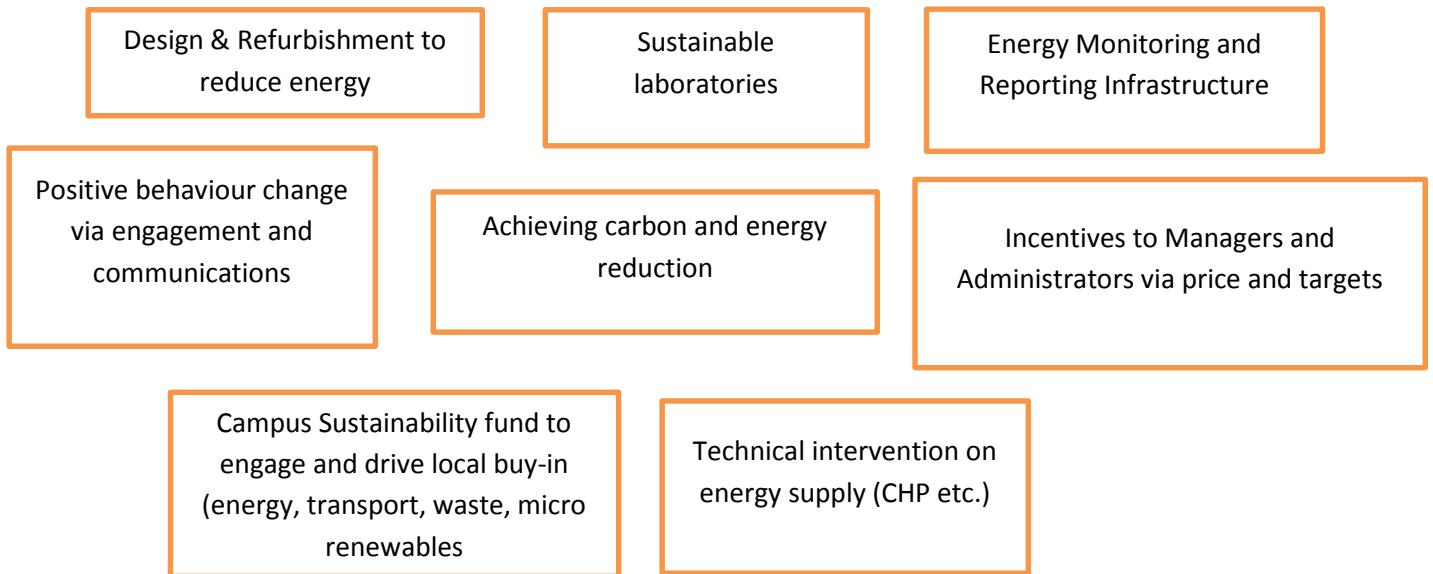
There are several powerful reasons to establish a sustainable campus fund:

- Provides a means to meet energy and emissions reduction goals through retrofits, energy saving improvements, and other sustainable campus investments, for example strengthening capacity for sustainable travel and waste and reuse related activities where energy / carbon reduction can be shown
- Funded projects lead to improved financial resource efficiency which in turn results in cost savings

¹ Billion Dollar Green Challenge Case Studies, <http://greenbillion.org/resources/#case-studies>

- Provides a means to engage with the University community to collaborate creatively to solve campus problems, and has potential to embed sustainability in mind-sets and behaviours
- Provides a clear mechanism to collate and prioritise action against agreed parameters and clearer incentives for local and building level action
- Strengthens the University's reputation as a named public body committed to contributing to national carbon emissions reduction targets

In order to reduce carbon emissions, we require a coherent plan, for which the following elements will be needed to achieve and monitor progress:



The University's Estates Energy Office currently administers an Energy Efficiency Fund (EEF), in the amount of £600,000 annually to fund energy efficiency projects within the University. The EEF has been successful in funding projects including BEMS (Building Energy Management Systems) optimisation at QMRI (Queen's Medical Research Institute, Little France), LED street lighting on King's Buildings campus, and other energy saving projects. Improvements to this existing Fund are possible, in terms of administration, awareness raising, incentives to participate and monitoring of savings.

The Sustainable Campus Fund could have broader scope, not only focused on supporting energy efficiency projects, although it is recommended that carbon and cost saving remain central. The Energy Efficiency Fund is also primarily available to improvements of facilities that Estates manage directly, whereas a Sustainable Campus Fund could be open to projects that would ordinarily fall under School and Department spend.

Subsequent sections introduce best practice, details of the purpose and scope of the proposed Fund and proposed plans for its administration, concluding with potential risks.

Best Practice

The Higher Education Funding Council for England (HEFCE) provides a best practice example of a green revolving fund that operates across universities. HEFCE has partnered with SALIX Finance Ltd to provide higher education institutions in England the opportunity to apply for repayable grants to finance projects that will reduce carbon emissions, through the

Revolving Green Fund (RGF). A recent (2014) analysis of the fund's impact noted the following:

- “RGF-funded projects are expected to reduce CO₂ emissions by just under 12 per cent of the sector's 2020 reduction target
- The projects will deliver annual savings of nearly £19M and bring a further £23.9M from other sources
- HEIs applying for or receiving RGF funding have reduced emissions by 7-10 per cent more than HEIs that did not apply for or receive RGF funding.”²

In the US, Harvard has a long history of utilising green revolving funds to reduce its carbon footprint and energy costs. The current Green Loan Fund (GLF) was launched in 2001 and championed by faculty and administrators³. The university provides \$12M per year to fund energy efficiency and waste reduction projects. Challenges faced by Harvard fund administrators may resonate with University of Edinburgh administrators' experiences with the EEF:

- Promotion of the fund when there is a decentralised campus
- Adequate encouragement and incentives for Schools and Units to submit proposals
- Successfully implementing, monitoring and documenting projects

Harvard has saved \$4.8M per year as a result of the GLF, with 30% ROI.

Caltech, ranking first in THE World University League Table, has established a successful Energy Conservation Investment Program (CECIP), begun in 2009⁴. The program sets aside \$8M per year to finance capital projects, funded from within their Endowment Fund. Both staff and students can propose projects, but they must reach a 15% return on investment (ROI). The program is able to track building energy use after projects are undertaken, compared with use before project inception. **Caltech has seen a \$1.5M reduction in its energy bills since August 2010, with a 33% ROI and 3 year payback period.**

Executive administrators at Stanford University aimed to capture utility savings by installing more efficient technology which would lead to cost savings, so they created the Building Energy Retrofit Program (ERP) in 1993.⁵ Any university group receiving utility services from the Sustainability and Energy Management Department can apply for project funding. Stanford's ERP could be used as a model for the University of Edinburgh's proposed fund as it does not work like a typical green revolving fund. The Fund is replenished annually through Stanford's central budget, but the amount available each year is dependent upon energy savings captured by past projects. The Billion Dollar Green Challenge case study notes the following:

“Collectively, the ERP has produced a total annual savings of 13,782,798 kWh. Since the fund's creation, it has grown to \$1.42 million and tallied cost savings

² HEFCE Publications, Evaluation of Rounds 1-3,

<http://www.hefce.ac.uk/pubs/rereports/Year/2014/rgf1to3/Title,92158,en.html>

³ <http://greenbillion.org/case-study/harvard-university-green-loan-fund/>

⁴ <http://greenbillion.org/case-study/california-institute-of-technology-caltech-energy-conservation-investment-program/>

⁵ <http://greenbillion.org/case-study/stanford/>

of approximately \$3.02 million. The fund has completed 360 projects since its creation, with an average simple payback period of 3.07 years.”

Further best practice examples are being identified based on forthcoming research undertaken for SRS through consultancy work.

Purpose

The Sustainable Campus Fund is proposed to serve as a vehicle for implementing sustainability projects that reduce the University’s carbon emissions to meet targets, while also generating cost savings.

Scope

It has been proposed to begin by providing £750K per year from the central budget to establish the fund, rising to £1M in subsequent years.

The Sustainable Campus Fund would provide all staff and students with an opportunity to propose projects in areas where carbon and cost savings can be made, for example:

- Energy efficiency and reduction - lighting upgrades, building efficiency improvements
- Microrenewables on campus according to an agreed list and agreed parameters
- Waste reduction and recycling
- Travel
- Procurement

It is recommended that projects should be approved by a Head of School or equivalent within units to ensure buy-in on delivery and stimulate the possibility of Schools and units providing match funding at an appropriate level.

In terms of project size, the fund would aim to fund high efficiency projects in an efficient way. As such, we propose that projects costing less than £15,000 be subject to a light touch assessment to ensure overall proportionality. More details on proposal relating to this included below.

Project Requirements

In order to be funded, it is proposed that projects be judged on the following criteria according to a points-based system, as suggested below. The relevant issues for each of these criteria are raised below, and a draft spreadsheet tool to guide decision-making on setting these criteria has been developed.

It is also recommended that we explore weighting and prioritising different criteria through a points-based system. An outline of initial suggestion on such a prioritisation system is included below, and objections are made for each set of suggested criteria.

Financial

Payback: Good practice in the sector suggests that we should require a proposed project to achieve a simple payback of 6 years or less, saving its own capital cost in that time.

ROI: Projects should achieve a minimum ROI of 6%.

Match funding: Where a School or Unit are also willing to commit part of their funds to a project, the project should be given greater priority.

Carbon saving

Carbon saving £/tCO₂e: Since the core purpose of the Sustainable Campus Fund in its initial stages is to make carbon, energy and cost savings, we propose that projects must attain carbon savings in order to be funded. A suggested price per tCO₂e saved is £200, based on capital cost, based on guidance given for SALIX funding⁶

Annual carbon saving tCO₂e: Since the fund should achieve maximum savings over its lifespan, projects with higher absolute carbon savings should be preferred.

Other

Innovation: Projects that show innovation should be preferred to an extent, although it is not recommended that innovation be prioritised over other criteria. In terms of defining and scoring innovation, we should consider innovation in business model, technological innovation, if the project is happening for the first time at the University, and if the project forms part of a Living Lab initiative⁷.

Suggested points based system

Score	1	2	3	4	5	weight				
Payback score (yrs)	8	7	7	5	5	3	3	1	1	1.5
ROI score (%)	6%	45%	45%	75%	75%	100%	100%	200%	200%	1
Match funding score (% funded by School/Unit)	1%	20%	20%	35%	35%	50%	50%	60%	60%	1.5
Carbon saving score £/tCO ₂ e	600	500	500	400	400	300	300	200	200	1
Annual carbon saving score tCO ₂ e	1	150	150	350	350	850	850	1600	1600	1.5

It is suggested that projects achieve a minimum of 10 points in the points based system outlined in the table. We have input existing data around past Energy Efficiency Fund funded projects and proposed projects for Sustainable Laboratories (Appendix 1) to test these values, and discovered that the majority of projects would be covered.

⁶ <http://salixfinance.co.uk/>

⁷ The Department for SRS has been developing how the concept of a Living Lab works at the University, settling on its definition as using our own academic and student research capabilities to solve social responsibility and sustainability issues relating to our infrastructure and practices.
<http://www.ed.ac.uk/about/sustainability/themes/research-teaching/the-university-as-a-living-lab>

Application Information Requirements

It is recommended that the following information be required from applicants. Support will be available to calculate and prepare the information as detailed below.

	Under £15,000	£15,000+
Annual operational expense (OpEx) £	Required	Required
Capital expense (CapEx)	Required	Required
Annual CO ₂ e saving (tCO ₂ e)	Required	Required
Annual £ saving	Required	Required
School/Unit approver	Required	Required
Named project lead	Required	Required
Project type	Required	Required
Project objectives	Required	Required
Project description	Desirable	Required
Implementation plan including timeline	Desirable	Required
How does the project innovate?	Desirable	Desirable

Information and Support for Applicants

We recognise that some applicants to the fund may not be able to provide some information of a more technical nature, and that some may have different interpretations of criteria. We will develop parameters for the information we request to help make the process easier. For example, we will provide a calculator based on current DEFRA figures for CO₂e calculations, and guidance on what to include within operational expenses. The scope for savings will be wider than energy.

A spreadsheet or online tool will be provided to give immediate feedback to applicants on whether projects will be considered for funding based on how they meet the criteria. A draft prototype of this is available at K:\SRS\Futures\4 - Climate Change\Sustainable Campus Fund and on request from Caroline.Overy@ed.ac.uk.

Call for Applications cycle

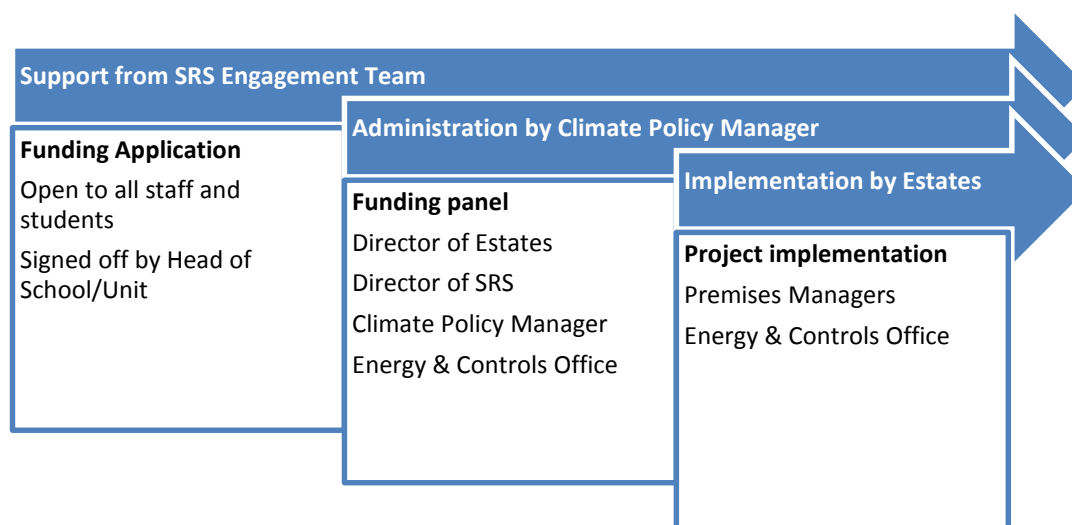
Subject to discussion with Estates, who will be responsible for delivery of the projects, we propose the following as an initial timeline:

January 2016	Call for applications
March 2016	Deadline for submission of applications
May 2016	Panel Decisions

June 2016	Estates and Applicants' Implementation Meeting
July 2016	Project work
December 2016	Completion of 2015/16 projects

Process and Administration

The Sustainable Campus Fund will be administered by the SRS Climate Policy Manager, and the Fund will be jointly managed by Estates and SRS. The SRS website will host an online system for submitting and reviewing applications. Online submission will ensure that all applications can be tracked. The system will also provide a means for reviewing and scoring, including providing feedback to applicants, successful or not.



A ratings system will be established and followed for scoring each application, considering the project criteria previously mentioned. The initial reviewing takes place online, followed by a formal meeting of the Panel to discuss each project and the scores given, to reach consensus on what projects will be successful.

Awareness and Engagement

It is proposed that the fund be open to all staff and student groups with sign-off from their relevant Head of School or Unit. However, successful and targeted communication of the fund will be important to encourage applications. There is a prime opportunity to raise awareness of such a fund through the Energy Coordinators network, as well as through teams of participants in the Sustainability Awards.

All communications and engagement will be in line with existing initiatives and planned activities and could be managed by the Department for SRS. The SRS Engagement Team will specifically work with Energy Coordinators to ensure they have the skills to apply for funding from the Sustainable Campus Fund, and to generate such applications in collaboration with them.

Incentives could be considered to encourage applications, for instance an allocation of cost savings back to applicants, although these should be proposed and discussed subsequently.

Resource implications

The following resources will be required to implement this:

- Staff time to follow up on developing the proposal with relevant stakeholders
- £1M funding

Risk Management

Risk	Mitigation
Inadequate number of applications for funding received	Awareness campaign SRS Engagement Team support to Energy Coordinators and other sustainability champions in application preparation
Difficulties in adequately administering the fund so that deadlines slip	Online submission and reviewing system
Savings uncertainties due to: changes to building usages, technical issues, utility costs decreasing, unforeseen damage to buildings, difficulties in actually tracking savings	Development of a cost calculator/savings tracking system
Lack of resource within Estates to implement successful projects	Estates leadership and involvement in Panel

Equality & Diversity

No EIA required.

Next steps/implications

Climate Policy Manager to follow up with relevant stakeholders on the following:

- Securing funding between Department for SRS and Estates or requesting funding from elsewhere
- Working with key stakeholders in Estates and SRS to review and confirm project criteria, using the demonstrated spreadsheet tool
- Communications strategy around the fund to be developed in line with other planned communications

Consultation

A short brief on this paper was circulated to key members of the Utilities Practical Planning Group in advance of this meeting, and this paper has been written in close collaboration with the Director of SRS. It has also been discussed with the Energy and Controls Manager.

Further information

Author

Caro Overy, Engagement Manager
Liz Vander Meer, Climate Policy Manager
Department for SRS

Presenter

Caro Overy, Engagement Manager

Freedom of Information

This paper is open.

Appendix 1: Sustainable Laboratories

The table below gives an overview of potential energy saving actions which could be realistically implemented at University of Edinburgh in 1, 2, and 5 years timescales to achieve an annual cash saving of up to £650,000 against an investment of £1.13M. Projects such as these could be funded through a Sustainable Campus Fund, as proposed above.

Year 1

Action	annual cost saving per unit	savings comments	no. units	total annual cost saving	unit cost (no VAT)	total cost (no VAT)	cost comments	payback period
Replace old -80 freezers with new on a rolling replacement basis	£500	£400 plug load + £100 air conditioning load reduction	10	£5,000	£6,000	£60,000		12.0
Improved sample management/introduction of room temperature DNA storage	£900	£700 plug load + £200 air con load reduction	2	£1,800		£500	Passive storage cabinets are also needed to keep samples below 30% relative humidity, and may cost \$500-1000 per lab.	0.3
Fit Save-A-Watt voltage optimisation plugs to ULT freezers where V.O. has not already been implemented	£70		6	£420	£35	£210		0.5
Replace CV fume cupboards with VAV	£1,000	savings almost entirely from make-up air	46	£46,000	£2000	£92,000	costs likely to be between £1k and £3k per FC (quotes are being gathered for 2 labs in Joseph Black)	2.0
Replace standard air flow fume cupboards with low flow fume cupboards	£800		10	£8,000		£20,000	ESTIMATE: costs currently unknown	2.5
Replace overhead fluorescent lighting with LED	£31	average of a variety of operational hours and	100	£3,100	£83	£8,300	average of a variety of fitting types (ranging from £72 to £120)	2.7

		fitting types (ranging from £11 to £65)						
Install motion sensor controls on lighting	£34	average of a variety of fitting types (ranging from £27 to £41)	25	£850	£50	£1,250	Includes installation cost. Assumes one control for one fitting.	1.5
Fit timer plugs to drying ovens	£400		10	£4,000	£30	£300		0.1
Fit timer plugs to temperature controlled centrifuge	£275		10	£2,750	£30	£300		0.1
Fit timer plugs to temperature controlled shaker	£900		25	£22,500	£30	£750		0.0
Fit timer plugs to gas chromatographs/mass spectrometers	£200		5	£1,000	£30	£150		0.2
Replace drying ovens with poor thermal properties with new well insulated and sealed ones	£630		5	£3,150	£1800	£9,000		2.9
YEAR 1 TOTAL				£98,570		£222,760		2.3

Year 2

Action	annual cost saving per unit	savings comments	no. units	total annual cost saving	unit cost (no VAT)	total cost (no VAT)	cost comments	payback period
Replace old -80 freezers with new on a rolling replacement basis	£800	£400 plug load + £400 air conditioning load reduction	10	£8,000	£9,000	£90,000		11.3
Improved sample management/introduction of room temperature DNA storage	£1,400	£700 plug load + £700 air con load reduction	5	£7,000		£500	Passive storage cabinets are also needed to keep samples below 30% relative humidity, and may cost \$500-1000 per lab.	0.1
Replace CV fume cupboards with VAV	£1,000	savings almost entirely from make-up air	10	£10,000	2000	£20,000	costs likely to be between £1k and £3k per FC (quotes are being gathered)	2.0
Replace standard air flow fume cupboards with low flow fume cupboards	£800		15	£12,000		£30,000	ESTIMATE: costs currently unknown	2.5
replace overhead fluorescent lighting with LED	£31	average of a variety of operational hours and fitting types (ranging from £11 to £65)	200	£6,200	83	£16,600	average of a variety of fitting types (ranging from £72 to £120)	2.7
install motion sensor controls on lighting	£34	average of a variety of fitting types (ranging from £27 to £41)	50	£1,700	50	£2,500	Includes installation cost. Assumes one control for one fitting.	1.5
fit timer plugs to drying ovens	£400		25	£10,000	30	£750		0.1
fit timer plugs to temperature controlled centrifuge	£275		25	£6,875	30	£750		0.1
fit timer plugs to temperature controlled shaker	£900		50	£45,000	30	£1,500		0.0

fit timer plugs to gas chromatographs/mass spectrometers	£200		5	£1,000	30	£150		0.2
replace drying ovens with poor thermal properties with new well insulated and sealed ones	£630		10	£6,300	1800	£18,000		2.9
YEAR 2 TOTAL				£114,075		£180,750		1.6

Year 5

Action	annual cost saving per unit	savings comments	no. units	total annual cost saving	unit cost (no VAT)	total cost (no VAT)	cost comments	payback period
Incorporate natural ventilation into design of new freezer rooms/"farms"	£700	£700 air con load	100	£70,000		£100,000	ESTIMATED additional design and build costs	1.4
raise ULT freezer temperatures to -70C	£350		250	£87,500		£5,000	staff time and test costs for the freezer trial at Roslin	0.1
replace old electric humidifiers in animal labs	£300,000	based on experience from Gurdon Institute in Cambridge	1	£300,000		£750,000	ESTIMATE: costs currently unknown	2.5
install demand based ventilation controls (e.g. Darwin)	£56,000	based on experience from MRC building at Cambridge (incorporates a reduction in savings equivalent to the £11k cost of maintenance)	1	£56,000	£97,000.00	£97,000	based on experience from MRC building at Cambridge	1.7
Replace old -80 freezers with new on a rolling replacement basis	£800	£400 plug load + £400 air conditioning load reduction	10	£8,000	£9,000	£90,000		11.3

Improved sample management/introduction of room temperature DNA storage	£1,400	£700 plug load + £700 air con load reduction	20	£28,000		£1,500	Passive storage cabinets are also needed to keep samples below 30% relative humidity, and may cost \$500-1000 per lab.	0.1
Replace CV fume cupboards with VAV	£1,000	savings almost entirely from make-up air	10	£10,000	2000	£20,000	costs likely to be between £1k and £3k per FC (quotes are being gathered)	2.0
Replace standard air flow fume cupboards with low flow fume cupboards	£800		15	£12,000		£30,000	ESTIMATE: costs currently unknown	2.5
replace overhead fluorescent lighting with LED	£31	average of a variety of operational hours and fitting types (ranging from £11 to £65)	200	£6,200	83	£16,600	average of a variety of fitting types (ranging from £72 to £120)	2.7
install motion sensor controls on lighting	£34	average of a variety of fitting types (ranging from £27 to £41)	50	£1,700	50	£2,500	Includes installation cost. Assumes one control for one fitting.	1.5
fit timer plugs to drying ovens	£400		25	£10,000	30	£750		0.1
fit timer plugs to temperature controlled centrifuge	£275		25	£6,875	30	£750		0.1
fit timer plugs to temperature controlled shaker	£900		50	£45,000	30	£1,500		0.0
fit timer plugs to gas chromatographs/mass spectrometers	£200		5	£1,000	30	£150		0.2
replace drying ovens with poor thermal properties with new well insulated and sealed ones	£630		10	£6,300	1800	£18,000		2.9
YEAR 5 TOTAL				£648,575		£1,133,750		1.7



Sustainability Operations Advisory Group (SOAG)

Tuesday 26 January 2016

Climate Strategy Update

Description of paper

This paper provides an update on Lots 1, 2 and 3 of the technical consultancy work supporting review of the University Climate Strategy.

Action requested

SOAG is invited to note and comment on the paper.

Background and context

As part of the new Climate Strategy currently under development for the University external consultants were appointed to undertake three lots of work:

1. development of a carbon modelling and scenarios tool
2. review of carbon management best practice in the sector along with recommendations
3. development of business cases to support investment in renewables, micro-renewables and energy reduction.

Discussion

Technical Consultancy Support

Progress Report

To assist with its Climate Strategy Review the University of Edinburgh appointed consultants to deliver the following three projects; develop a carbon modelling and scenarios tool, undertake a review of carbon management best practice in the University sector and provide subsequent recommendations to the University of Edinburgh and the wider sector in Scotland, develop business cases to support investment in renewables, micro-renewables and energy reduction.

The Scottish Funding Council (SFC) has provided funding to assist the sector in taking forward its climate change strategies, and the outputs from the technical consultancy support will be shared with the wider Scottish sector.

The carbon modelling and scenarios tool requires further data and development for the University's purposes. The review of carbon management best practice has been completed and a final report is due shortly. The development of business cases project has been completed and a final report has been received.

Carbon modelling and scenarios tool

Aether UK

The process for developing the tool has been beneficial in developing calculations to project and forecast future carbon emissions. Further work is required to develop the tool for the University's purposes however the tool will be of value to the sector going forwards (especially for those institutions without CHP). The tool currently reports carbon emissions against campus sites – this would need to be altered to meet the specifications of each institution.

The carbon modelling and scenarios tool has been designed to be used as the central hub for collecting data related to energy use in buildings, from transport, water consumption and waste generation and will compile and calculate resulting carbon emissions. The tool will act as the repository for the historical time series dating back to the University's baseline year 2007/08, and provide insight into potential future emissions based on the trends in historical consumption, on carbon saving projects and potential changes to the university's operations (e.g. floor area and student population). Functionally, the tool has taken the form of an excel workbook providing the data repository and calculation mechanism, which generates a number of scenarios through an online dashboard.

The tool has been developed further based on feedback from University stakeholders however further work is required to ensure it produces accurate and robust projections and forecasts. Further energy data is required to ensure the carbon assessment generated by the tool for 2013/14 is close to the figures reported by the University. Ensuring emissions from the University's Combined Heat and Power (CHP) Energy Centres and Networks are accurately represented within the tool continues to be a challenge.

Review of carbon management best practice

Aecom

Best practice identified through the research will be shared with the wider Scottish sector and will compliment research previously carried out by the EAUC/SAUDE and the Sierra Club. Feedback on a draft report has been provided by University stakeholders, with an updated report due week commencing the 11th January.

The report on best practice in carbon management in the University sector is based on research into practices at UK universities, considering first Russell Group universities, and some exemplar universities internationally. A questionnaire was developed and thirty two institutions were contacted. In the report a total of twenty institutions were included through interviews, completed questionnaires and desk based research.

Universities were asked to provide information on carbon targets and metrics target setting processes and decision tools, governance and reporting, financial assessments and rules, key actions, innovative approaches, green revolving or sustainable projects funds, behavioural change initiatives and communications, approaches to energy provision and use, micro renewable usage and incentivisation, accounting for energy, travel and waste, laboratories design and management, building design including laboratories and research areas, capital programmes, green IT, space management and off-site renewable energy production.

The report includes summaries of the Scottish universities carbon management performance review undertaken by EAUC/SAUDE and the Sierra's Club report on 'America's Greenest Universities'.

Developing business cases

Aecom

A final report with templates for business cases have been provided to the University, and will be of great benefit to the University's Climate Strategy Review. The research into renewables, micro-renewables and energy reduction measure will be of benefit to the wider Scottish sector. The business case templates can be adapted and used by institutions. A meeting to close the project will be arranged for February.

The project included the following work;

1. Development of business case information and presentation (this evolved to providing a carbon assessment spreadsheet for the business case template developed in conjunction with the University's Finance Department)
2. Technology assessment - a list of technologies was developed and input gathered from stakeholders on what could be suitable for the University, with high level assessments carried out to identify benefits where possible,
3. An investigation into potential technology funding options - input was gathered from the Finance Department and external funders including the Green Investment Bank and Scottish Equity Partners to build an understanding of how projects could be funded
4. The provision of example business cases - business cases were provided using the carbon assessment spreadsheet, with supporting information in this report.

Additional research was completed to provide a better understanding of the decarbonisation of the electricity grid, levelised costs for future energy generation and offsetting through land carbon sequestration.

Resource implications

No direct resource implications. Primary resources for the review come from the SRS Department, supported by Estates.

Risk Management

Key risks for Climate Change Strategy development include: project deadline drift; failure to delivery consultancy work on time/to satisfaction; failure to agree new targets and KPIs; failure to align with core strategic processes; failure to deliver work stream proposals on time/to satisfaction; and lack of awareness, support or buy in from the University community and senior managers during strategy development, and/or once strategy completed. Strategies are in place to manage and mitigate these risks including use of a project management approach, stakeholder workshops and dialogue, and discussions with GaSP on the new strategic plan.

Equality & Diversity

Due consideration has been given to equality and diversity as a key element of the SRS agenda. An Equality Impact Assessment is not required.

Next steps/implications

SOAG will continue to receive updates as the review progresses through to spring 2016.

Further information

Author: Matthew Lawson, Programmes Manager, 12 January 2016

Presenter: Dave Gorman, Director of SRS.

Freedom of Information This is an open paper.

UNIVERSITY OF EDINBURGH

MINUTE OF A MEETING of the Sustainable Laboratories Steering Group held in the Elder Room, Old College on Tuesday 17 November 2015.

1 Welcome and Introductions

The Convener welcomed attendees to the third meeting of the Group and outlined the agenda for the session.

2 Minute

The minute of the meeting held on 2 June 2015 was approved as a correct record.

A

3 Matters Arising

There were no matters arising not covered on the agenda or in post-meeting notes.

SUBSTANTIVE ITEMS**4 Report from S-Labs Conference**

The Labs Sustainability Coordinator briefed the Group on findings and developments from the September 2015 S-Lab Conference in Leeds. Content from the lectures was available from the [S-Lab website](#). International presence at the event attested to the rising status of the awards. Ten representatives attended from UoE, an appropriate level given the range of content. Valuable insight was afforded into the various approaches being taken by different Universities, which was followed up through informal discussions between lectures. Attendance in future years was strongly recommended.

Members were keen for any feedback or recommendations around space standards. While there was no conclusive standard of square meterage per lab user, there were some examples of this being put in place. Some labs in the private sector such as AstraZeneca were using 13m² plus write up space. Wellcome Trust standards varied according to the science.

Action – AA to draft a briefing on the most pertinent case studies from other institutions.

5 Lab Refurbishment Presentation – University of Strathclyde

Energy & Environmental Manager Dean Drobot presented on lessons learned from lab refurbishments. Strathclyde had been involved with S-Labs from an estates point of view for 18 months, with Sustainable Labs Co-Ordinator Ruby Oun now on board to link estates and academic areas, investigating how to better support the needs of students and researchers. Laboratory Superintendent Alaine Martin, in post for 11 years, had been involved with six or seven major refurbishment projects in that time. Given the cost of lab refurbishments, it was essential that they last, with an expected lifespan of 15-20 years. Past refurbishment projects included a number of success stories, however there could be conflicting priorities between estates, which tried to make provision as generic as possible, and Schools which wanted clear ownership and specialist provision.

B

A new NMR facility (similar to Joseph Black at UoE) was created from fallow space in 2004. Its level 2 and level 4 teaching labs and organic chemistry research labs were refurbished in 2005/6. The level 7 organic chemistry lab was refurbished in 2007, the specialist forensic lab in 2008, and the specialised trace analysis lab in 2010. With each refurbishment Strathclyde learnt lessons which could be implemented in future projects.

Strathclyde worked with two design teams who had taken very different approaches. One had engaged with end users, sought critical information and clarification, asking questions regarding use, hazards and so forth. The other team did not engage beyond the initial meeting, did not share information, failed to collect vital information or did not use it, and did not seek technical input. Overall, the key aspects to making a project a success were

identified as: end user satisfaction; good quality product; safe; low maintenance; value for money; future-proof design; and never make assumptions (e.g. that a design team will know what needs to go into a lab).

The trace analysis lab was a positive example. Combining mass spectrometry and elemental analysis, the lab contained large kit needing routine maintenance. In order to do this safely, service galleys were created between banks of instruments. Gas cylinders were rationalised into one bank of gases fed on overhead gantries, allowing instruments to be moved relatively easily. Technicians and students had fed back positively on the changes.

On the less successful projects the key had been lack of consultation. Design teams had not asked what users were working with in these labs, resulting in significant retrofitting requirements (e.g. to raise taps up to accommodate glassware, provide eyewashes where users were working with solvents, retrofitting gas lines, replacing fume cupboards eaten away by acid). Cupboards fixed to the floor were a major problem as flexibility and movement were essential, to facilitate flooring repairs for example. One refurb needed to be redone six years on, leading to major expenditure for estates. Given uncertainty about the future of the space, this refurb was largely cosmetic, focusing on new floors, sink tops and sashes (£2.5K per fume cupboard, compared to £15K for full replacement).

The old microanalysis lab was in use from 1962 to 2010. The refurbished lab needed to have both temperature control (due to the mass specs and instrumentation) and fume cupboards, leading to issues around maintaining the temperature differential. The solution had been to create a small fume cupboard room in an adjoining space.

Innovation in space utilisation could lead to significant savings in terms of space charging (the chemistry lab yielded space savings of around £40K p.a). Where there were significant restrictions (e.g. windows along several walls) it could be prudent to split the lab, putting all fume cupboards in one space where solvent work could be done. At Strathclyde this would save up to £1million over the lifetime of the lab in space charges alone, not including the associated energy saving. Strathclyde additionally recommended auto sash closers on all fume cupboards, separate exhaust for vented cupboards and building supplies of nitrogen gas. These small changes were often value engineered out, yet could make a vast difference.

The same logic and criteria could be applied to new builds. If University controlled the process was relatively straightforward. In the case of a design and build it was vital to have tight control on requirements, evaluate all options and ensure all relevant information was gathered before going out to tender, as any subsequent changes were very expensive. It was important to keep a written record of what was agreed between the contractor and client.

Communication and information gathering was the critical first step to a successful project, establishing needs and then looking at these from a sustainability point of view to see what improvements could be suggested. It was vital to have a technical expert in place for projects, seconded in or employed by the University as liaison between estates and end users and feeding back to the design team, and these roles were becoming more commonplace.

Sustainable Labs Coordinator Ruby Oun outlined her first year in post, having been active in three of the 12 S-Lab criteria so far, with the aim to progress other areas next year. Traffic light posters had been designed (similar to those in use at Joseph Black) outlining good and bad fume cupboard practice. 42 fume cupboards in Chemistry had been upgraded from constant to variable flow. The introduction of automatic sash closers, funded by SALIX, had saved £50K. Waterless condensers were introduced, with students particularly positive on Asynt air condensers. Unichillers replacing two condensers per fume cupboard would create a saving of £25K p.a. Energy monitoring with different equipment was being carried out to raise awareness, identify the most energy intensive

and the cost if left on. Strathclyde had also held their first Sustainability Awards ceremony, sending the message that sustainability was important and valued, and a number of additional teams had joined since. There were a lot of opportunities for engagement with lab users and this area would be developed further. Plans for the next year included an energy and water incentive fund of £15K to help purchase energy efficient equipment and further energy monitoring, including a -80 freezer audit. There were plans to integrate S-Labs into the PhD research learning and development programme and to introduce a monthly S-Lab steering group.

Members thanked colleagues from Strathclyde for sharing their experiences, recognising the importance of involvement at the design stage from a technical person with an understanding of how the lab is going to run, and ensuring contractors have the right information from the outset to avoid additional costs. An experienced mechanical engineer was valuable in projects involving highly serviced buildings. Attendees generally advised against ring mains for deionised water as these had a relatively short lifespan and were expensive to maintain.

Attendees discussed their experiences of the SALIX funding application process - Strathclyde's primary source of funding for major projects - and of revolving green funds. It was possible to aggregate projects if they were over £5K. Published metrics were an early driver and starting point (e.g. Health & Safety lists depending on the class of lab) though there were not yet established metrics for sustainability. These could include heating, cooling and ventilation relative to occupancy, movement sensors and so forth. The more energy efficient the lab, the more money would be available for research.

As they were in the process of setting up a steering group, colleagues from Strathclyde were interested in how successful this group had been. Members had found SLSG helpful in giving access to a range of expertise and perspectives, allowing discussion of plans to establish consensus and identify issues. SLSG's membership was very mixed in terms of roles, responsibilities and status within the University, enabling the Group to give a more representative opinion.

6 SLSG Implementation Plan

C

The Labs Sustainability Coordinator presented a quarterly update on progress against the Implementation Plan, split into 5 topics.

A. Evidence Building

The Labs Coordinator had drawn together evidence on three topics: ventilation, cold storage and lab equipment.

B. Training & Engagement

Work in this area had been taken forward through the Labs Workshops. There had been four meetings so far covering waste, procurement, utilities savings, design and CPD for technical staff. The workshops had been well-attended and topics for next year were being planned. Engagement materials had been developed including posters and induction materials. The S-Labs Conference had been useful in terms of generating soundbites and practical tips. Engagement with the School of GeoSciences had been initiated and other targeted areas included SCRUM, Physics and Engineering.

C. Utilities and Waste Efficiencies

The next area to be targeted would be utilities and waste efficiency, particularly focusing on potential financial savings. Discussions were ongoing regarding fume cupboard changes at Joseph Black and roll out of LED microscopes, dependent on funding. The College Registrar had agreed to cover half the cost of the microscopes, and other funding streams including SALIX were being investigated to cover the rest. A new lab equipment fund for small scale projects had been set up.

D. Outreach and Securing Funding

The presentation from Strathclyde was one aspect of the outreach programme which had seen different partner universities present at different meetings. The S-Lab event had been particularly useful in getting in touch with other institutions working in this area. Negotiations on funding the labs post were ongoing, using internal and external funds, possibly including support from Zero Waste Scotland if there was sufficient overlap to their work.

E. Estates Design and Construction

A well-attended labs workshop on design had taken place on 16 June. There had been significant engagement in this area, with the Labs Coordinator invited to attend meetings on the Darwin development, Demand Based Ventilation (DBV), and the IRR Bioquarter. Attendees discussed concerns that there was only one producer with an effective monopoly in DBV. Other institutions including Cambridge and Aberdeen, feeling the pros outweighed the cons, were currently working toward implementation. Strathclyde were at a similar stage to UoE, waiting to see if it was effective elsewhere and if other suppliers came on to the market.

The aim was to be more strategic about finances and self-sustaining savings in future. Estates were currently working on a project with Engineering deciding whether sustainable systems could be incorporated at greater capital cost but with a 3-5 year payback. The Sustainable Campus Fund would be particularly valuable in rolling out improvements across schools. Aggregation made for better control over the process. The SCF would initially be funded at £1million, to set the direction of travel, and aim to generate savings within one year.

ROUTINE ITEMS

7 **Breakout Session – Long Term Strategic Priorities & Future of the Group**

The Labs Coordinator facilitated a group break-out session to discuss 3-5 year objectives and targets for lab sustainability - with an emphasis on energy savings and resource efficiency to inform the new Implementation Plan - and evaluate the Group so far, review its remit vis-à-vis labs workshops, and consider next steps.

Group A

This group recognised positive discussions and generation of ideas at SLSG, but less success in terms of implementation due to internal barriers which the Group had not yet succeeded in breaking down. More input was needed from academics and senior management, as well as greater student involvement. In terms of future objectives the group highlighted financial and carbon savings in the face of rising utility prices. A fund was needed to support and implement change.

Group B

Members recognised the contribution of the Labs Coordinator in engaging and taking plans forward, and the need for dedicated funding to support this role and further labs projects. In terms of 3 -5 year objectives, the group proposed that new up to date design guidelines be produced so all labs across the University would start from the same high level criteria, with internal estates guidelines feeding in, not just using BREEAM but also colleagues' own experience surfaced through wider consultation undertaken at an early stage by the managers and engineers responsible. The group acknowledged the time and budgetary pressures involved, but despite the initial resource requirement this would be gotten back tenfold at the end of the project. A soft landings process beyond practical completion was strongly recommended and needed to be costed in. Effort should be made to influence the procurement process, which was still largely focused on cost, to take a broader perspective. Videos were felt to be very useful in communicating good practice in labs.

There was scope to video demos of O&M manuals at Roslin, though the manuals themselves were still necessary to give the full picture. Existing apprenticeship programmes could be developed and new schemes introduced.

Group C

This group acknowledged the diverse representation and outreach efforts of SLSG, though it had not yet managed to achieve tangible outputs. Current membership was CMVM heavy and colleagues were asked to nominate potential representatives from the College of Science & Engineering. It was proposed that separate Labs Steering Groups for the two Colleges be set up, feeding in to the main group. Though the intention was to develop objectives across the five main areas, availability of funding may dictate objectives to some extent (e.g. Zero Waste Scotland and a focus on resource efficiency). Overall the aim was to develop an easily communicable vision of where the group wanted labs sustainability to be and promote this to relevant departments, organisations and individuals to secure buy-in and funding. It would be necessary to monitor lab developments within UoE to inform the Group's plans and projects and develop metrics to measure success.

Action – All to send their nominations to the Secretary.

Group D

The group advised involving SRS Communications and Marketing in future planning. The goal was to get the knowledge of the group back to academics and budget holders who had the influence to roll schemes out. SLSG and the labs workshops were felt to be running well, though concerns were raised about representation of SLSG at SRS Committee and communication up to University level. The group advised enhancing the visibility of monetary savings and where they feed back to. Further engagement with students and academics was recommended, including involving Chancellors Fellows in discussions.

8 Labs Business Case Options

D

The Labs Coordinator outlined potential 5 Year Labs savings programmes. Paper D was a summary and visual representation of the spreadsheet circulated following June's meeting, comprising low, medium and high approaches and related resource implications. Four to six actions were planned for the first year, with a number of schemes identified at Joseph Black which were ready to go once funding was secured. Actions tagged as 'Low' were those from the original proposal which could be done in five years. 'Medium' projects were around two years. The aim was for annual savings of £200K in two years through short-term intensive projects. 'High' projects had no financial boundary.

The intention was to use these plans to develop a case for a Sustainable Campus Fund and link to University plans for a 10% utilities cost saving in two years. The final page gave costs, payback periods and carbon savings. The Low actions were the most attractive and readily achievable. The original business case would be expanded, using this Group to check assumptions and advise on which one to pitch for.

Action – All to review the paper, interrogate the figures, sense check and feed back to Andrew.

Action – AA to circulate the spreadsheet including the actual figures.

Action – AA to check if the cost of equipment disposal was included and liaise with FR on general figures.

Action – AA to change CO₂ savings for Medium from 2 to 5 years, to ensure like for like comparisons.

The findings of the Roslin cold storage study may be insufficient in themselves to persuade a large percentage of lab users to change temperatures. Progress could be made by clearing out old samples and if this was done ruthlessly and systematically it could

significantly cut the number of freezers. If funding could be secured for Schools to purchase the hardware and change PIs a fee for the space then a more efficient approach could be adopted. Under this approach initial SLAs would include the temperature the freezers would be maintained at, so researchers would know from the beginning what they were signing up to, rather than changing temperatures halfway through. A high level of academic support and enforcement would be needed to implement the change.

Action – All to feed back their thoughts to Andrew.

9 Funding for Sustainable Laboratories Role

The Convener gave a verbal update on funding scenarios for the Sustainable Laboratories role, including a proposal for shared funding from across the colleges over three years, linked to three year objectives, as a shared endeavour and commitment. UoE was continuing to make a case to Zero Waste Scotland. The Scottish Funding Council, while expressing interest, lacking immediate funds. Persuading other universities in Scotland to demonstrate that they wanted to take part would help, but it would be difficult to persuade other institutions to demonstrate that interest without the required funding. There were too many other commitments for labs funding to succeed in the planning round. SALIX and capital funding would also be pursued.

Action – All to share their ideas any other potential sources of funding.

10 Climate Strategy Review, Utilities Project & Sustainable Campus Fund Update

The Engagement Manager gave a verbal update on progress of the Climate Action Plan, utilities targets, and potential for a Sustainable Campus Fund. Despite positive developments including the CHP, UoE was not on track to achieve reduction targets. This was largely due to expansion of the campus and student numbers, which was set to continue. Looking at relative targets gave a better picture, but UoE still needed to take action. There were positive stories around the waste figures, commuting, and energy and infrastructure in the longer term. There would be further review of how the targets were set. Performance data had been published in the Annual Report and Accounts for the first time this year, putting climate targets into the main University story. A carbon forecasting and scenarios tool was being developed to help in setting future targets.

Action – All interested in seeing or testing out the tool to contact SRS.

Consultation was ongoing on best practice in carbon management within the sector. The baseline, boundary and scope had been reviewed and a business case around renewables was being developed and would soon be available for circulation. The deadline for the new Climate Action Plan was April 2016. The utilities target was a 10% reduction against business as usual over two years – effectively a £1.8m saving. SLSG would need to identify opportunities for labs to feed in to the utilities saving and to integrate with the Climate Strategy Review.

ROUTINE ITEMS

11 Thematic Workshops & Utilities Working Group meetings

The Labs Coordinator presented for noting this summary and action log from the recent Labs Workshops on Lab Design, Utilities and CPD, as well as Utilities Practical Planning meetings. The workshop had discussed S-Lab design principles, the second version of which had recently been circulated.

Action – All to review and share their thoughts with Andrew to feed back to S-Lab.

12 Any Other Business

There were no other matters raised by Group members.

E

Minutes of meeting of Utilities Working Group

Torridon Room, Charles Stewart House



8th Dec, 2015

In attendance:

David Brook (DBr), Graham Bell (GB), Kevin Houston (Carbon Masters) (KH), Andrew Arnott (AA), Pauline Jones (PJ), Dave Gorman (DG), Rab Calder (RC), David Barratt (DBa), David Jack (DJ), Caro Overy (CO), Michelle Christian (MC), Matthew Lawson (ML), Chris Litwiniuk (CL), Charles Hill (CH), Emma Crowther (EC), Michelle Brown (MB), Fleur Ruckley (FR).

DG introduced the purpose and scope of the UWG

- To guide work towards a 10% utilities cost saving target
- Getting to the stage where we almost have a plan, so the UWG may be refocused into smaller groups
- Purpose of this meeting is to update the group on progress to develop a climate strategy to replace the Climate Action Plan and to ask for feedback on this.

Climate Strategy Review - DG

- The initial timescale SRS were working to on this was to report in summer 2016 but have since revised this to a shorter timescale in order to harmonise with the University's Strategic Plan
- UoE need to replace the Climate Action Plan with a Climate Strategy with buy-in from across the University of Edinburgh and including research and teaching.
 - o Need to include the impact of UoE research and teaching on climate change.
- 3 phase review
- Phase 1:
 - o Evidence gathering; Emission sources; Predicted trends in emissions sources; Success of last plan; Weaknesses of last plan; Global best practice; Future of CHP; What does growth do to our emissions?; What is our ambition?; What should our targets look like?
- Phase 2
 - o Discuss in UoE with senior managers
- Phase 3
 - o Write plan and understand governance
 - o Understand we are successful in waste and transport but these have a relatively low carbon impact

KH – Boundary for Target Setting and Reporting

Task:

- Review international best practice
- Gap analysis
- Interview 18 stakeholders
- Produce recommendations

Global Best Practice Review:

- All Scottish Unis set themselves similar targets to UoE and are similarly failing to meet them but have re-stated their commitment to these targets
- Carbon Disclosure Project, Dow Jones Sustainability Index and FTSE Carbon Clear were all assessed to identify good practice requirements
- Interestingly, Sky, Unilever and BT have achieved the three certifications noted above respectively, and are also fast growing businesses (like UoE)
- The certification schemes all ranked applicants against:
 - o Measuring and Verification
 - o Strategy
 - o Carbon Reduction
 - o Stakeholder Engagement
- KH applied the merged criteria of these schemes to UoE and found that the University of Edinburgh was partially compliant

Interviews:

- Everyone thinks action on climate change and carbon is a good idea
- Insufficient attention given to how to deliver carbon reductions when UoE is growing its estate and undertaking more carbon intensive operations (e.g. Flo Wave and ARCHER)

- Climate Action Plan and other work on carbon saving has generated cross-departmental dialogue among our world-class researchers
 - o Also resulted in creating the position of Director of SRS
 - o Switch Off campaigns
 - o Energy Efficiency Programme
 - o Waste management and travel
 - o CHP tri generation – at the time of installation UoE was a leading institution in this respect
- No mention of renewables in our plans
 - o Unlike Unilever, University of St Andrews, University of Ulster who are investing substantially in renewables
- Need to be more proactive about decarbonising UoE energy supplies
- Seek co-investment partners
 - o UoE is in a really good position to attract long term investments at relatively low rates of return
- Seek project partners
 - o e.g. City of Edinburgh Council as a supplier of waste for a waste to energy plant at Easter Bush
- Reduce reputational risk of failing to meet target
 - o Need to bear this in mind when setting targets in future
 - A relative carbon reduction is achievable, an absolute reduction is not.

Recommendations:

Measuring emissions

- Use GHG Protocol or other international standard
 - o Helps to define scope boundaries
 - Recommend operational control
 - Recommend scope 1&2 with some elements of scope 3
 - Scope 3 = construction and ICT
 - o Establish a *de minimis* rule
 - Exclude anything under 1% of current footprint (currently 1% = 1,200 tonnes)
 - o Develop policy to revise base year

Revise Base Year

- Where we have good data
- '07-'08 is good data for scope 1&2 but not so good for scope 3
- '12-'13 good base year for scope 3
- Need a policy where we can re-state the base year if there are mergers and acquisition

Targets

- Target year 2025 (interim target for 2020)
- There is a reputational risk of moving away from an absolute reduction
- Nationally we are aiming for an 80% reduction by 2050 so we should assume that applies to UoE too. Thus we need to pick a route to get there, which will involve substantial carbon reductions.

Carbon Reduction Plan

- Rationalise, replace and upgrade estate
- Energy Efficiency and Renewable Energy
- Get the plan independently verified
- Develop a stakeholder engagement plan

Impact Assessment

- Include the impact of our climate change research and teaching

Resilience Assessment

- Assess the impact of climate change on UoE infrastructure
- Assess the impact of climate change on UoE's business model
 - o e.g. recruiting students from overseas who may be strongly impacted by the effects of climate change

Q&A

- DJ – targets
 - o Should we avoid adopting national targets, as we adopted them previously and found them impossible to achieve?
 - Absolute emissions are very hard to bring down

- Need to think carefully about the methodology and boundaries chosen
- DG – grid will decarbonise at some point, so ML and consultants are developing a tool to allow us to look at future scenarios
- KH – need to ‘harness the talent’ and use keen climate change masters students to research best options for estate improvements

ML – Update on Consultancy

3 lots

1 = carbon tool – forecasting and modelling

2 = carbon management best practice

3 = business cases for LZCTs

Lot 1

Thanked contributors; Now on version 4 of the tool; Online interface now available; Will use this to work out what the BAU scenario is and the impact of various interventions; Aim to complete in new year

Lot 2

Compared to 20 universities globally – surveyed

- Governance structures
- Technologies adopted
- Resources/funding
- Targets (absolute/relative)
- Now have 2nd draft of report
- Finalised before winter break

Lot 3

- Solar + wind; EE; Bio energy
- Terry Fox in Finance is developing a business case model with Robert MacGregor of AECOM
- Robert to look at future pricing and decarbonisation
- Expect to be finalised before winter break

DG – tool will illustrate the value of different approaches

- We may wish to look at carbon sequestration/off setting
 - o Forestry
 - o Peatlands
- But is there a danger to the reputation of UoE from offsetting (especially abroad)? Seen as Greenwash?

PJ – Interested to ensure she can be provided with reliable carbon data by June, as the carbon figures used by KH are different to the ones she’s been working from for the Strategic Plan.

- o ML – yes, this is achievable
- o DG – depending on how you set boundaries and choose your calculation methodologies you can get different carbon figures.

CH – won’t achieve any substantial carbon reduction unless devolve budgets. Acknowledges this forms part of the RAM plan but this won’t be operational until 2018.

Sustainable Campus Fund – CL

Chris Litwiniuk introduced and demonstrated a spreadsheet with functionality to calculate future financial position based on different scenarios. Energy spend is rising faster than inflation despite CHP. Energy costs don’t show much correlation with changes in Gross Internal Area.

- Some similarity to trend of Full Time Equivalent students and staff

Average ROI on labs improvement projects is 30%. A calculation of future financial position was based on a number of factors including % utilisation of fund.

- Looked at the position after 5 years
- Could spend £3.7M and save £2.1M after 5 years based on conservative assumptions of 20% ROI and 75% fund utilisation
- RC – does this include increase in research funding? CL – no
- MB - £1m SCF fund still only makes a small dent in our projected growing energy spend
- GB – this is a great spreadsheet but we need to make it easier to understand

ACTION: DG – asks all attendees to review and validate CL’s spreadsheet

- What is a sensible size of SCF?

- RC – what if someone comes to you with a business case for a project which costs more than your fund? DJ and DG – Look outside the fund. The amount requested for the fund will, to some extent, just be to stimulate discussion and action, and it is hoped that some flexibility would be built in.
- DJ – Energy Efficiency Fund was £1.3M with mandatory spend of £600k annually. This attracts interest
- CH – The Small Capital Projects fund could be a template
- RC – Need to incorporate staff resource to assess the bids
- CH – there are some great bids out there (including fume cupboards at Chemistry) – college should pay
- RC – college doesn't benefit from the savings, so should be centrally funded
- DBr – agree
- DJ – Need a mechanism to get around the delays which make us miss years of energy savings while we try to work out who will pay for a project.
- RC – Small Capital Projects could be a good template, but still need someone to assess the bids
- DG – SRS + Estates to assess. DG and Director of Estates to review and then send up to Estates Committee
- GB – Johnathon Seckl would question this in great detail so we need to get our case very well prepared if going to Estates Committee
- RC – Estates Committee would make this grind to a halt
- DJ – Need a rolling funding programme without barriers around spend times
- DG – Many other places have made SCF work with only 20% ROI so can we use that experience as 'proof of concept' rather than re-inventing the wheel for Estates Committee
- RC – what do people get for their efforts (i.e. adopting sustainable behaviours)
- DG – this is a market failure, there is little incentive for people to change behaviours currently. The SCF is aimed to address this.
- FR – there are different payment models around the University of Edinburgh (e.g. Roslin have to pay for their energy). Does this result in a more engaged and motivated population in those locations who pay for their energy?
 - o RC and AA, yes

Pathways to 10% - MB

- Utility costs soaring
- 10% saving target by 2017
 - o Shared between SRS and Estates
 - o Financial target
 - Utility spend grows c.15% per year
 - o 10% saving = c.£1.8M
 - o Align this with the SCF to help cost saving projects happen
 - o The £1.8M saving should be achieved by combining the predicted savings from a number of individual projects
- Should we exclude elements where we don't have much control?
 - o ACF = large energy user but very efficient so very little opportunity for savings
 - o Removing the ACF would reduce the target to £1.6M
 - o Exclude changes due to energy prices
 - DJ – but we include changes to the carbon intensity of energy sources as they vary with DEFRA-DECC figures
 - DG – but we didn't want to be held accountable if energy prices went up, so we shouldn't benefit from energy prices going down.
- Brainstorming session last week identified options for utility cost savings:
 - o Triad
 - o Focus our efforts on large buildings
 - o Demand based ventilation
 - o Ventilation adjustments
 - o Labs projects
 - o Energy coordinators
 - o Space efficiencies
 - o 24/7 space use - whole building vs hub



Sustainability Operations Advisory Group (SOAG)

January 2016

SRS Reporting

Description of paper

The purpose of this paper is to update SOAG members on 2014/15 Social Responsibility and Sustainability (SRS) Reporting.

Action requested

SOAG is invited to note the paper and share any comments or feedback.

Background and Discussion

The University of Edinburgh reports annually on its Social Responsibility and Sustainability (SRS) performance.

For 2013/14 we included SRS content in the University's Annual Report and Accounts and also produced a 14 page standalone document with additional metrics and data.

For 2014/15 we have also included SRS content in the University's Annual Report and Accounts and will only produce a shorter summary as a standalone document with other content online.

- University Annual Report and Accounts were published in December 2015.
 - Pages 24 to 31 focus on Social Responsibility and Sustainability http://www.accounts.finance.ed.ac.uk/sites/default/files/UE_Annual_Report_and_Accounts_2014-15.pdf?dm_i=2YP3,5AYV,2K3OAA,FO88,1#page=28
- A standalone SRS summary (4 pages / A3 folded) and online microsite will be available at the end of January 2016 based on the content signed off and approved in the Annual Report and Accounts.

Integration of environmental, social and governance issues in our Annual Report and Accounts. Staff and students and other external stakeholders are interested in seeing the sustainability reporting and hence a standalone summary document to report performance and practice is beneficial and can help with multiple reporting needs. Within the website we can also provide linkages to additional case studies and stories that celebrate our achievements.

Equality & Diversity

Due consideration has been given to equality and diversity as a key element of the SRS agenda.

Further information

Michelle Brown, Head of SRS Programmes, 19 January 2016

Freedom of Information

This is an open paper.



Sustainability Operations Advisory Group (SOAG)

January 2016

Supply Chain SRS Risk Assessment

Description of paper

This paper outlines the proposed process for assessing SRS risks and opportunities linked to supply chains and procurement.

Action requested

SOAG is invited to consider the paper, suggesting any additions or alterations, and endorse it for action.

Discussion

The University Court has adopted the Scottish Sustainable Procurement Action Plan, endorsing UN Marrakech approach for Sustainable Procurement. This defines Sustainable Procurement as *"a process whereby organisations meet their needs for goods, services, works and utilities in a way that achieves value for money on a whole life basis in terms of generating benefits not only to the organisation, but also to society and the economy, whilst minimising damage to the environment."*

Managing SRS in our procurement and in the supply chains that are connected to the University can help to: save money; protect the environment; protect human rights; link to research and teaching; build the reputation of the University and support other objectives such as industry engagement.

The Procurement Reform Bill will mandate additional sustainability requirements, for all regulated procurements (above £50k). Further guidance is being released in early 2016 but we anticipate the new duties will focus on how risks and impacts are assessed and managed and a likely requirement to publish the results. The PRB will be enacted on 18th April 2016.

The SRS issues will of course vary for different commodities, companies and in different contexts. For example, when considering sustainability in the context of ICT we need to consider various aspects from mineral extraction, labour rights, emissions to waste, as well as all the associated issues, legislation and guidance. The University needs to understand the risks we face at the various points along the value chain and where we can influence the consortia who own the frameworks (and the evaluation process) and the suppliers we buy from when the business is awarded.

The Procurement Office has been testing the beta model for the Scottish Procurement Prioritisation Tool (SPPT), which looks at risks and impacts in different prioritised categories in order to support decision making. SPPT was developed by Scottish Government and provided by Sustainable Procurement Ltd. Working initially in the ICT area we have delivered workshops and received feedback, whilst creating a draft methodology and proposed changes to the tool to enable Scottish Government to improve and roll this tool out.

The development of this tool and its use in the University is important to ensure it delivers aspects of the soon to be introduced statutory Sustainability Duty. It will also have the ability to link these activities to the Outcome Agreement 2014-17 and form part of the Procurement and Commercial Improvement Program (PCIP) (former Procurement Capability Assessment).

Next Steps:

Procurement will be required to analyse and identify the

- risk,

- scope and
- influence

across various procurement categories. This will enable the University to take steps to prevent or mitigate potential risks and to integrate into supplier / contractor selection and management.

Procurement and SRS plan to work together to carry out the risk assessment for supply chain SRS in:

- ICT
- Labs
- Estates
- Food
- Travel

Ultimately this will need to be tracked in a quantifiable risk score which will integrate into the Sustainable Procurement Prioritisation Tool.

The following table proposes a programme of work to be shared between Procurement and SRS, and associated timescales. For the five categories, short briefing papers on SRS issues will be prepared, preliminary assessment using the SPPT will be carried out by the two departments, a wider stakeholder consultation workshop will be held, and further analysis will then complete the process. At the end, full guidance will be available for each of the five categories, detailing prioritised SRS considerations and how to integrate them into procurement practices.

Categories (pre-prioritised by Procurement)	Risk Score					
	Preliminary Risk Assessment		Checking and Verifying			Sign off
	Risks & Opportunities 2 Page Summary Brief (Updated)	SRS/Procurement Review meeting and planning Next Steps	Stakeholder Engagement workshop (Researchers / Practitioners)	Risks & Opportunities 2 Page Summary Brief, including outputs from tool e.g. a graph? And link to the detailed guidance produced(Updated)	Risk Score (SPPT Spreadsheet completed)	Sign off and plan to implement through procurement processes
Travel	In progress. Key messages integrated into Sustainable Travel Advice.				Procurement	SOAG
ICT	Who: Liz Cooper (LC) /Chris Litwiniuk (CL) - in progress When: Jan	Who: SRS/Proc/IS to attend. CL to organise When: Jan/Feb	Who: CL and Stuart Mclean (SM)organise and run When: April	Who: LC When: April?	Who: Procurement to lead this, SRS to input When: May?	Who: SITC to first review, then SOAG When: May
Labs (will need sub-categories)	Who: Andrew Arnott (AA) When: Feb	Who: SRS/ Procurement/ Labs AA to organise, CL to attend When: July	Who: SM and AA organise and run When: August	Who: AA When: August	Who: Procurement to lead this, SRS to input When: Sept	Who: SOAG When: Sept
Food	Who: Alexis Heeren (AH)	Who: SRS/Procurement / Accom Services	Who: SM and AH organise	Who: AH When: August	Who: Procurement	Who: SOAG

	When: June TBC	AH to organise, CL to attend When: July TBC	When: August		to lead this, SRS to input When: September TBC	When: Sept
Estates (will need sub-categories)	Who: LC When: June	Who: SRS/Procurement / Estates SM to organise Sub categories to be defined – garments, construction, furniture? When: July TBC	Who: SM to lead on organising, LC and CL to help facilitate Sub categories discussed simultaneously at one workshop When: Oct TBC	Who: LC When: Oct TBC	Who: Procurement to lead this, SRS to input When: Oct TBC	Who: SOAG When: Nov TBC

Resource implications

This process will require time from a number of colleagues in Procurement and SRS, as well as other stakeholders across the University, but efforts will be made to ensure no duplication of work takes place and the process is run efficiently.

Risk Management

We expect to have an increasing legal duty to report on our efforts regarding incorporating SRS considerations into procurement decision making and processes – if we do not carry out this work, we are at risk of not meeting new legal obligations. In addition, there are of course risks of social and environmental harms continuing to be the norm throughout supply chains, and our associated reputational risk if we are not seen to be acting to reduce these harms.

Equality & Diversity

Due consideration has been given to equality and diversity as a key element of the SRS agenda. An Equality Impact Assessment is not required.

Next steps/implications

As per table above.

Further information

Authors: Stuart McLean/ Michelle Brown/ Liz Cooper
Presenter: George Sked

Freedom of Information

This is an open paper.



Sustainability Operations Advisory Group (SOAG)

January 2016

Mandatory Climate Change Reporting under Public Bodies' Duties

Description of paper

The purpose of this paper is to update SOAG members on the mandatory Public Bodies Climate Change Reporting and the 2015 University of Edinburgh submission.

Action requested

SOAG is invited to note the paper.

Background and context

In 2009 the Scottish Parliament passed the [Climate Change \(Scotland\) Act](#) with cross party support. Part 4 of the Act states that a “public body must, in exercising its functions, act: in the way best calculated to contribute to the delivery of (Scotland’s climate change) targets; in the way best calculated to help deliver any (Scottish adaptation programme); and in a way that it considers most sustainable”. [Guidance](#) issued in February 2011 explained further what these duties mean and how to put them into practice. The Scottish Government subsequently brought forward ‘[Public Sector Sustainability Reporting Guidance](#)’ in 2012 (revised in 2013) to inform the production of public sector sustainability reports, with a strong focus on the reporting of public sector Greenhouse Gas (GHG) emissions¹.

Required reporting is being introduced for all public sector ‘major players’ which includes approximately 20 Universities and 25 Colleges.

In 2015 the reporting template was piloted for all major players to submit 2014-15 data by 30th November 2015. The first mandatory reporting deadline will be 30th November 2016 for reporting on 2015-16 data and activities.

Discussion

The University of Edinburgh submitted during the pilot year. This helped us to understand where evidence is currently available, and where further work is required.

The reporting template is an Excel document. A copy of the submitted report is available from the SRS Department.

The Scottish Parliament’s Rural Affairs, Climate Change and Environment Committee invited the University to provide feedback on the trial reporting period, and on the preparations and readiness of the University for the first year of formal reporting. The deadline for responses is 22nd January.

The University responded to this request and provided feedback including comments on the original timeline of the trial reporting period and the format of the report. A copy of the response is available from the SRS Department.

Equality & Diversity

Due consideration has been given to equality and diversity as a key element of the SRS agenda.

Further information

Michelle Brown, Head of SRS Programmes January 2016

Freedom of Information This is an open paper.

¹ Public Sector Climate Change Duties Reporting Guidance ver 1.3



Sustainability Operations Advisory Group (SOAG)

Tuesday 26 January 2016

Consultation responses to HM Treasury review of Climate Change Levy

Description of paper

This paper summaries responses from the University and the Association of University Directors of Estates to HM Treasury proposals to simplify energy taxes.

Action requested

SOAG is asked to note the paper.

Discussion

As a large publicly-funded body UoE has an important role to play in delivering a low-carbon, resilient UK and should broadly welcome proposed measures to simplify a complex field of often overlapping and contradictory fiscal measures impacting on business energy consumption.

AUDE estimate (from a small joint sample) that existing CCL exemptions are worth between £18 and £20M to the HE sector annually and are concerned to ensure that any change in the energy tax regime does not lose this exemption and result in a large additional cost to the sector.

The UoE response highlighted a number of concerns for consideration. Continued support for Combined Heat and Power should be ensured and the CCL levy exemption for energy centres accredited as Good Quality CHP under CHPQA should be retained. If CCL is to be the basis of a new single energy / carbon tax then the existing arrangements for non-business charitable use being levied VAT at the lower rate of VAT and thus exempt from CCL should be retained. Required reporting should be determined at a sector / country level rather than any new obligations being imposed on the whole of the UK – especially as public bodies in Scotland are now formally required to report annually using a consistent negotiated format.

Risk Management

Potential impact on UoEUSCo, research, and staff resource should additional reporting mechanisms be implemented.

Equality & Diversity

Due consideration has been given to equality and diversity as a key element of the SRS agenda. An Equality Impact Assessment is not required.

Next steps/implications

UoE to collaborate with the rest of the HE sector to ensure the exemption from Climate Change Levy for residential use and for non-business charity use is not removed as part of the introduction of a replacement tax system for energy usage.

Consultation

A draft response was shared with the Director of ECCI and colleagues in Estates and Finance including the Director of Estates, Energy Manager, Engineering Operations Manager, the Director of Finance, Director of Specialist Services and Tax Manager.

Further information

Author & Presenter: Dave Gorman, Director of SRS, 19 January 2016

Freedom of Information This is an open paper.

Appendix 1: UoE Response

Response to Khalid Aly, Energy & Transport Tax, HM Treasury,
1 Horse Guards Road, London SW1A 2HQ Tel: 020 7270 5000

Email to businessenergyefficiencyreview@hmtreasury.gsi.gov.uk

Date: 9 November 2015



Department for Social Responsibility and Sustainability
The University of Edinburgh
9 Hope Park Square, Meadow Lane,
Edinburgh EH8 9NP
Phone: 0131 651 5588

Dear Khalid Aly,

University of Edinburgh Response to the consultation on Reforming the Business Energy Efficiency Tax Landscape

Please find below our response to HM Treasury proposals – to simplify energy taxes and improve effectiveness of resultant measures – published on 28 September 2015.

The University of Edinburgh, established in 1583, has an international reputation for research excellence and innovation and consistently ranks in the world's top 20 Universities. With over 45,000 students and staff, and an estate comprising over 600 buildings on five sites across the city, we aim to create new fields of knowledge and make a difference to the societal, cultural, health, environmental and wealth development of communities in Scotland, the UK and across the world.

We are committed to being a world leader in addressing global challenges such as poverty, climate change and the growing demand for energy, food and water, and to embedding the values of social responsibility and sustainability in our operational activities and in our research and curricula so that our students develop a clear understanding of their importance.

As a large publicly-funded body we recognise that we have an important role to play in delivering a low-carbon, resilient UK. We welcome the UK Government's seeking to simplify a complex field of often overlapping and contradictory fiscal measures impacting on business energy consumption. We have some concerns for consideration including:

- If CCL is to be the basis of a new single energy / carbon tax then the existing arrangements for non-business charitable use being levied VAT at the lower rate of VAT and thus exempt from CCL should be retained
- Continued support for Combined Heat and Power – including the CCL levy exemption for energy centres accredited as Good Quality CHP under CHPQA should be retained.
- Required Reporting should be determined at a sector / country level rather than any new obligations imposed on whole of UK – especially as public bodies in Scotland now formally required to report annually using a consistent negotiated format.

Yours sincerely,

Dave Gorman

Director of Social Responsibility and Sustainability

University of Edinburgh Responses to Consultation questions

[extracted from website at https://econsultation.decc.gov.uk/decc-policy/business-energy-efficiency-tax-landscape/consult_view]

1. *Contact Name:* Dave Gorman, Director of Social Responsibility and Sustainability
2. *Email* Dave.Gorman@ed.ac.uk
3. *Organisation* The University of Edinburgh
4. *Do you agree with the principle of moving away from the current system of overlapping policies towards a system where a single business / organisation faces one tax and one reporting scheme? Please provide evidence on level and types of benefits of an approach like this.*

Yes, we support this principle. Currently organisations face a range of different taxes and regulations, many working to the same purpose but with different rules, or in some cases working directly against one another.

The University currently is obligated under the Climate Change Levy, EU Emissions Trading Scheme, Carbon Reduction Commitment, Energy Efficiency Scheme, and the CHP QA auditing procedures – alongside our own sector reporting to both the Higher Education Statistics Agency (Estates Management Reporting) and Scottish Funding Council requirements. They are onerous, all have different boundaries and conversion factors and different reporting timelines and take a lot of time to prepare.

A streamlined system could have significant benefits for both public and private entities. However, regulatory change impacts stakeholder confidence, increasing risk expectation and, potentially, costs. Efforts to simplify the landscape should minimise changes to existing protocols as much as possible.

We observe that Company GHG Reporting may not apply to publicly-funded bodies which already face formal reporting requirements framed by their funding bodies.

This is certainly the case with Universities in Scotland where new Public Bodies' Reporting Requirements¹ lay down a clear and extensive set of absolute and relative data to be reported consistently – enabling Ministers and the public bodies themselves to recognise improvements in performance (or otherwise).

Note that public bodies obligated under public procurement legislation are excluded from ESOS.

We observe that HM Treasury's stated criteria to judge reforms are:

1. Impact on productivity
2. Impact on carbon savings

While supporting these criteria, we urge the Government to add a third:

3. Impact on energy security.

By considering the beneficial impacts of energy efficiency savings on energy security, Treasury would include economic benefits of energy efficiency investments to non-domestic customers. For example, each permanent 500 MW reduction in electricity demand during peak periods reduces Capacity Market costs to consumers by £10m². This collective benefit does not go to organisations that reduce their electricity demand.

¹ The Climate Change (Duties of Public Bodies: Reporting Requirements) (Scotland) Order 2015
<http://www.legislation.gov.uk/ssi/2015/347/contents/made>

² Capacity Market 2014 auction cleared at £19.20 per kW of capacity.

We commend the approach for measuring the productivity benefits of energy efficiency outlined in recent research commissioned by the International Energy Agency. This review showed that energy efficiency investments could provide benefits to business productivity up to 2.5 times the actual value of the energy demand reduction. It provides a guide on the key benefits that need to be included in any review of the impact on productivity of business energy efficiency improvements.³

5. *Do you agree that mandatory reporting should remain as an important element of the landscape in driving the uptake of low carbon and energy efficiency measures?*

Yes, we support the continuation of mandatory reporting requirements as one of several ways to promote uptake of cost-saving measures. This mandatory reporting should be appropriate to the sector and context in which each organisation operates.

Public Bodies in Scotland have recently been formally required to report using a specific format⁴ after extensive consultation and any Treasury requirement should simply refer to this rather than replicate / duplicate it.

6. *Should such reports require board level sign-off and should reported data be made publically available? Please give your reasons.*

Public bodies in Scotland have recently agreed a set of frameworks for required reporting and HM Treasury should simply support these and not impose any separate / additional reporting requirements and should not try to impose ESOS on public bodies who are deemed to be exempt from ESOS.

7. *Do you agree that government should develop a single reporting scheme requiring all ESOS participants (and potentially the public sector - see final page) to report regularly at board level?*

Please refer to our responses to Questions 4 and 5 above.

8. *The government recognises the importance of ensuring market actors have access to transparent, reliable and comparable information to support financing and investment in energy efficiency and low carbon measures. How best can a streamlined report achieve this? To what extent does your response apply to other large companies (as defined in the Companies Act) that are not listed companies?*

Ideally both public and private sector organisations should report in a consistent manner compliant with global standards for GHG reporting. We strongly recommend against trying to impose a single pro-forma and urge application of emerging sector-specific protocols / reporting procedures as outlined for our sector in 4 and 5 above.

9. *Do you agree that moving to a single tax would simplify the tax system for business?*

CRC has been unsatisfactory for organisations that monitor and report energy costs on a building-by-building or supply point basis – as the CRC annual charge is levied against the whole organisation rather than the supply point.

We support the application of a single tax on energy consumed based on carbon content – currently called the Climate Change Levy.

³ IEA, 2014. *Capturing the Multiple Benefits of Energy Efficiency*, p. 136

⁴ http://www.legislation.gov.uk/ssi/2015/347/pdfs/ssipn_20150347_en.pdf

However the exemptions for supply of gas to CHPQA accredited energy centres that deliver low carbon heat and power should be retained, as should the exemption for non-business charitable use application aligned to the lower rate of VAT.

10. How should a single tax be designed to improve its effectiveness in incentivising energy efficiency and carbon reduction?

Keep it simple. Update it each year for inflation / changing carbon emissions associated with its consumption. This was a great failure of the initial phase of the CCL – it flat-lined and was never even increased for inflation and consequently message given was that it was not important.

By contrast there was a clearly published escalator for the Landfill Tax which all in the industry could understand meant steadily increasing costs of traditional approach to dump to landfill. This planned, properly announced increase was a strong driver in changing the approach taken by an otherwise 19th century waste disposal industry.

11. Should all participants pay the same rates (before any incentives / reliefs are applied) or should the rates vary across different businesses? For example, do you think small consumers and at risk Energy Intensive Industries (EIs) should pay lower rates?

All participants should pay the same rates, before any exemptions / protections for sectors at risk of carbon leakage.

12. Do we currently have the right balance between gas and electricity tax rates? What are the implications of rebalancing the tax rate ratio between electricity and gas? What is the right ratio between gas and electricity rates?

Note comments in Question 10 above about the importance of clear projected levy rates for Landfill Tax that so clearly incentivised major changes on the Waste Management industry.

Please explore any way that a clear step change increase in CCL can be signalled to incentivise sector-wide changes in adoption of energy conversion technologies and investments in demand reduction / energy conservation projects.

13. Do you believe that the CCA scheme (or any new scheme giving a discount on the CCL or on any new tax based on the model of the CCL) eligibility should only focus on industries needing protection from competitive disadvantage? If so, how should government determine which sectors are in need of protection?

Please ensure that any changes have no material impact on the value of existing energy efficiency capital investment, including combined heat and power (CHP). Those organisations operating efficient plant and operations under the existing regimes are the same organisations that will potentially consider new investments.

14. Do you believe that the CCA scheme (or new scheme) eligibility should focus only on providing protection to those EIs exposed to international competition and at risk of carbon leakage? If so, how should the government assess which CCA sectors are at risk of carbon leakage?

The CCA scheme has tended to penalise large public organisations that have a broad estate with many buildings / supply points and has effectively taxed the public sector while sheltering private sector bodies. This may not be best way to achieve across the board efficiency investments as too much effort is spent complying with and reporting on the agreements to maintain the protection of the CCL discount.

15. *Do you believe that the targets set by the current CCA scheme are effective at incentivising energy efficiency? Do you believe that the current CCA scheme is at least as effective, or more effective, at incentivising energy efficiency than if participants paid the full current rates of CCL? How could CCAs be improved? Are there alternative mechanisms that may be more effective?*

The University has not been eligible for membership of such schemes and offers no comment save that in above response.

16. *Do you agree that incentives could help drive additional investment in energy efficiency and carbon reduction? Please explain why you agree or disagree.*

Yes. Incentives can help to both highlight investment opportunities to key internal decision makers, such as a Finance Director, while also making efficiency opportunities investable. Allocation of grants to public bodies undertaking significant energy efficiency investment projects – such as the Community Energy programme which ran 2001-2005 – and tax allowances of the same order for companies making similar investments could provide such an incentive.

17. *What is the best mechanism to deliver incentives for investment in energy efficiency and carbon reduction (e.g. tax reliefs, supplier obligations, grants, funding based on competitive bidding)? Are different approaches needed for different types of business? If so, which approaches work for which business types? What should be avoided?*

We support incentives for investments in energy efficiency, especially for those sectors which are not currently eligible to access CCAs.

Any mechanism should be based on carbon intensity, rather than absolute carbon emissions. Energy or carbon intensity reflects the improvement in an organisation's energy productivity and allows absolute energy demand to grow with increased output and economic growth.

Any such mechanism should be agnostic about how individual users achieve energy savings and carbon reductions, creating a bottom-up, market-lead approach. An agnostic, bottom-up approach allows for the more efficient use of existing assets, including behavioural changes. A mechanism that is focussed only on achieving new investments risks incentivising inefficient decisions, choosing new equipment rather than encouraging the better use of existing assets.

An investment-only approach also risks excluding some of the most cost-effective efficiency opportunities, such as behavioural changes, which may not have any capital cost but require significant staff and management resourcing to achieve.

Therefore, a bottom-up, business-led approach would:

- Not attempt to set minimum thresholds for return on investments, as these would excluded the lowest-cost approaches which may simultaneously be the most difficult to achieve, requiring changes in behaviour and management approach.
- Not be restricted to only 'eligible technologies' lists, which can limit bottom-up opportunities for businesses to achieve energy savings through every-day investments, such as by investing in new pumps, drives or boilers.
- Measure success according to energy savings, through measurable, verifiable data and reported to Government. Advances in Measurement and Verification (M&V), building modelling and cloud computing can now enable an actual metering of efficiency gains more widely.

- If an investment-based approach is implemented, it should allow businesses the alternative option to show carbon intensity reductions from year to year.

We would recommend the mechanism provides reliefs from CCL for energy saving measures, and that these reliefs are based on measured reductions in energy intensity. Such an approach could be achieved through two different approaches:

- A target could be set either through the Climate Change Agreement or by requiring a percentage of the total energy savings identified through the most-recent ESOS audit.
- A percentage of tax relief could be applied based on reductions in energy intensity based on measured improvements from a base year. For example, a 5% energy intensity saving from the base year could result in a 50% relief, while a 10% energy intensity saving or greater could result in 100% relief.

Finally, any changes in the approaches on efficiency mechanisms should not change the current system of reliefs currently available for combined heat and power (CHP).

Existing reliefs are very important to support existing CHP operators, and any change in the regime would have a significant cost impacts, damage the value of existing capital investments and significantly impact their long-term competitiveness.

Furthermore, it would slow investment in new CHP assets, which are used by large energy users to mitigate the impact of rising energy costs. Institutional and commercial CHP operators have experienced significant uncertainty over previous years, including the removal of CHP Levy Exemption Certificates in 2013.

HM Treasury's implementation of a new relief from Carbon Price Support in 2015 was welcome, and further changes to the CHP tax regime at this time would negate the positive impacts of that decision.

18. What impact would moving to a single tax have on the public sector and charities?

The present anomaly whereby extensive public bodies with large numbers of buildings are caught by the CRC but other non-domestic supply points only pay a very small CCL charge on their energy supplies is not fair.

However it is essential that the longstanding treatment of VAT on Heat and Power for charities and for non-business charitable use be retained at the lower rate of VAT and that supplies thus rated be exempt from CCL or its successor.

The University would face a very considerable increase in tax levied if these long-standing exemptions were removed – causing very significant detriment to research capability.

19. How should the merged tax be designed to improve its effectiveness in driving energy and carbon savings from the public sector and charities?

The growing adoption of required reporting for public bodies which has been so effectively introduced in Scotland should be extended to require all large public bodies and all large charitable organisations to account for the proactive approach they are taking to achieve carbon reductions and the impact of these measures / the absolute and relative reductions in carbon emissions associated with their activities.

20. Should a new reporting framework also require reporting by the public sector?

As described at Q 4 and 5 there is already a strong and well-supported Required Reporting framework for Public Bodies in Scotland. We recommend that no additional burden be placed on public bodies where a robust sector-wide scheme has already been put in place.



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Response to HM Treasury Consultation: Reforming the business energy efficiency tax landscape

November 2015

Amanda Darley, Tax Specialist, BUFDG
amanda@bufdg.ac.uk / 07711 289039

Jane White, Executive Officer, AUDE
jane@aude.ac.uk / 01509 228836

What impact would moving to a single tax have on the public sector and charities?

BUFDG and AUDE have little to input in response to many of the consultation questions, but our main concern is that a change in regime does not simply create a huge additional cost for universities. Therefore our response is limited to question 15, 'What impact would moving to a single tax have on the public sector and charities?', and issues around this.

1. Combining existing taxes:

1. Combining Climate Change Levy (CCL) and the Carbon Reduction Commitment Energy Efficiency Scheme (CRC)

Removal of the CCL exemption could cost the HE sector from **£18M to £20M per year**⁵

- 1.1 BUFDG and AUDE are therefore keen that the benefit of this exemption is retained, either in the CCL itself, or in any replacement tax. The cost to individual universities varies, but could cost some larger institutions up to **£0.5M per year**.

Exemption applies to buildings used for non-business activity or residential accommodation

- 1.2 Non-business activity includes grant funded research. The exemption is currently linked to the rules for the reduced rate of VAT on supplies of fuel and power.

2. Other points:

2.1 Tax Reliefs

Universities (and other charities) would not benefit from tax reliefs given against corporation tax paid

- 2.1.1 Charities (including universities) are exempt from corporation tax on their primary purpose trading activities, so tax reliefs given against corporation tax have no effect on behaviour.

However, an 'above the line' tax credit, such as the Research & Development Expenditure Credit ('RDEC'), could be utilised by universities so would help drive behaviour

- 2.1.2 The added benefit of an above the line tax credit is that it can be taken into account earlier in the planning process so is more likely to drive behaviours and investment in energy efficiency in all industry sectors (this was precisely why the RDEC was introduced to replace the existing tax relief for R&D expenditure, as the previous tax credit regime was not taken into account when planning R&D spend).

⁵ Based on a small sample of universities. However, it is difficult to estimate as research is an energy intensive activity and universities have a mixed portfolio of activities

2.3 CCL (or replacement tax) exemption basis

There appears to be no particular reason to link the CCL exemption to the VAT reduced rate for fuel and power. It could be linked to charitable status or charitable purposes instead.

2.3.1 This would enable universities to claim the exemption on other charitable activities (such as teaching) which are not linked to the reduced rate VAT relief.

2.4 Reduced Rate VAT

Reduced rate VAT is not mentioned in the consultation paper, but is also of significant value to the university (and wider charity) sector.

2.4.1 Therefore, BUFDDG and AUDE do not want to see any changes that would remove or reduce this relief.

2.5 Energy Prices

The cost of energy itself will be a major driver for energy usage behaviour, and this has increased hugely in the last 10 years.

2.5.1 The huge additional energy costs incurred by universities are likely to drive behaviour in energy use as much as, or more so, than tax regimes.

We have no comments on the associated reporting requirements.