



Sustainable Laboratories Steering Group (SLSG)

Monday 12th December 2016, 3pm

Cuillin Room, Charles Stewart House

AGENDA

- 1 Welcome, Introductions, Purpose and Aims of Meeting**
The Director of SRS will outline the programme for the session
- 2 Minute** **A**
To approve the minute of the previous meeting on 14 September 2016
- 3 Matters Arising**
To raise any matters arising not covered on the agenda or in post-meeting notes.

SUBSTANTIVE ITEMS

- 4 Energy audits in lab buildings – main findings** **Verbal**
To receive a presentation from the Projects Coordinator (Labs)
- 5 Sustainable Campus Fund lab projects** **Verbal**
To receive a presentation from the Engagement Manager
- 6 Progress against Labs Implementation Plan** **B**
To discuss and endorse a paper from the Projects Coordinator (Labs)
- 7 Sustainable Labs Vision and Programme Plan** **C**
To receive and discuss a paper from the Engagement Manager on medium term planning for the sustainable labs programme and how to interpret this into annual Sustainable Labs Implementation Plans
- 8 Extension of Labs Implementation Plan to August 2017** **Verbal**

To receive and discuss a verbal update from the Engagement Manager and Projects Coordinator (Labs) on aligning timing with academic year, and subsequent adjustment of targets
- 9 Working with People Committee, HR and IAD to improve support for Technical staff** **Verbal**

To receive a verbal update from the Projects Coordinator (Labs)

ROUTINE ITEMS (verbal)

- 10 Any Other Business**
To consider any other matters from Group members.

UNIVERSITY OF EDINBURGH

MINUTE OF A MEETING of the Sustainable Laboratories Steering Group held in the Cuillin Room, Charles Stewart House on Wednesday 14 September 2016.

1 Welcome and Introductions

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

2 Minute

The minute of the meeting held on 22 March 2015 was approved as a correct record.

A

3 Matters Arising

There were no matters arising from the previous minutes.

SUBSTANTIVE ITEMS**4 Vision Statement & Metrics**

The Labs Sustainability Coordinator presented the Vision Statement which would communicate the aims of the Group to a variety of stakeholders. Vision statements for SLSG and for the labs sustainability programme had been merged into a single document. Advising caution around use of terms such as 'world leading', SLSG agreed that the essence of the statement was correct, but suggested that it be expressed more succinctly, and that a follow-up implementation statement be provided outlining how the vision was going to be achieved.

B

Action – All members to send any further comments to AA.

5 Sustainable Labs Programme: 3 Year Plan

The Engagement Manager presented on plans to map activity and work more effectively on sustainability in labs across the University, setting goals and identifying risks and indicators such as awards, carbon emissions, supply chain data, design guidelines, and management practices.

Action – CO to circulate a draft for views by the end of September.

Key outcomes included contributing to a 10% reduction in energy consumption, increase in equipment sharing, reuse and correct disposal of waste, and reduction in overall consumption, particularly of hazardous materials.

Planned activities included: peer learning, campus meetings, SLSG meetings, the labs design guide, testing the sustainability credentials of equipment, promoting collaborative working and communication between labs to save on mechanical plant and avoid duplication, supporting projects (DNA, lighting, freezers) and lab technical staff, publishing results, developing criteria to guide best practice, recognition of good practice and fostering competition to spread positive behaviours, continuing to gather a body of evidence and supporting development of a chemical management system. The Group recognised that most labs shared equipment to some degree, but this was not currently being captured, and an incentivised approach was needed. Work on supply chains was ongoing, building on the existing SPPT process, and a simple chart had been produced to break down items in labs.

Action – CO & AA to review and update the Plan, giving members opportunities to feed in.

6 Lab Equipment Resale Options

C

Potential opportunities were being investigated around UniGreenScheme, who provide an asset resale service for universities, storing excess equipment and splitting the profit when it sells. This would allow the University to reclaim space and value which could be diverted into other costs of research. Moving ahead would require a procurement process, inviting other organisations to tender, including CCL North and Mitie. The precise detail of the tender would be influenced by the value of the equipment involved. SRS, Procurement and Waste were working to find the best way forward. Though the resale value of equipment involved a significant drop, lab users attending workshops frequently advocated for alternatives to throwing away functioning equipment.

UoE would continue to seek opportunities for internal reuse in the first instance, then pathways for resale through existing University networks such as EAUC. There were legislative obligations around reuse built in to the current contract with CCL North, and it would be preferable for external partnerships to operate through them. These partnership opportunities would be raised with CCL North at a meeting in October.

SLSG noted concerns that there was still no internal system to flag available equipment before it left the University, though Warp-it could be further developed to serve this function. More work was needed to understand barriers to reuse and what could be done to improve it and increase uptake. Internal reuse had no additional health and safety implications. Members agreed on another push to promote Warp-it, and that it would be included in the University Waste Policy. The Group recognised that storage was a massive issue. It was proposed that a recycling channel on MyEd be investigated.

Action – CO & AP to look into promoting or potentially relaunching Warp-it, and establishing a list of contacts at the right level, and report back on next steps in December.

7 Estates Development Guidance

The Labs Sustainability Coordinator updated the Group on work with Estate Development and ECCI over the last 6 to 9 months to develop guidelines on how the University should approach new builds and refurbishments, distilling down global best practice and clarifying relevant rating schemes.

On 23 August staff from Estates and SRS met with Peter James of S-Lab to look at 12 priority areas, distilled down to 5 principles, to include in these guidelines. A small number of KPIs were identified, including CO₂ per m² per year. The T46 Sustainability Strategy form needed to be updated as it currently referenced an old version of the building standards and needed to reflect new legal structures and guidelines.

A range of stakeholders would be consulted to ensure building design was appropriate for users, easy to maintain, and that the basics were right, including use of passive ventilation systems where possible. Much of this was already covered under Section 6 of the Scottish building regulations. The guidelines would dovetail with current procedures. The Labs Coordinator would present interim

findings at the S-Lab Conference, seek input from attendees, and update the document.

Action – AA to circulate the latest version of the guidelines to the Group.

Action – All members to send their feedback on the document to AA.

SLSG stressed the need to ensure that all work ongoing to deliver sustainable buildings was aligned.

ROUTINE ITEMS

8 Sustainable Campus Fund

Estates Committee had approved the Fund as an internal investment vehicle to implement energy efficiency projects that generated cost savings. SRS were working with Estates to develop an online paperless system to manage the pipeline of projects coming forward. Projects were pre-screened via the Utilities Working Group. Following a soft launch in August there had been 17 expressions of interest, resulting in 11 applications, 9 of which went forward to the Directors of Estates and SRS for sign off. A few were micro projects and a portion of the fund would be set aside to cover these. Sustainable Campus Fund Roadshows were planned across the University estate in October.

Action – All members with ideas for projects to get in touch with CO.

9 Expansion of Engagement

The number of people regularly in touch on lab sustainability was fairly constant, and SRS were always looking for more active participants to engage with on a regular basis to push sustainable behaviours and expand their network. There had been fewer applicants for the lab awards, raising concerns that the process was too time-consuming, and as a result it had been deliberately streamlined. SRS regularly had a stall at new staff events. A bespoke engagement project was ongoing with Louise Horsfall, PI at Roger Land, to monitor and meter three lab space over 3 months, with a face-to-face presentation in the third month sharing the energy data (discussed under item 12).

Action – All members with other labs to nominate, particularly if they had not been the subject of much engagement to date, to proposed them to AA, and share any further ideas on how to promote sustainable behaviours in labs.

It was suggested that School Forums or inductions be targeted to increase engagement, and that the Labs Sustainability Coordinator could present at routine lab meetings. Be Sustainable online training could be offered on Learn, and the physical guide could be used to produce posters. Workshop numbers meant that these were not always viable. Engagement with postdocs offered a good in-road into buildings, including engagement through postdoc societies. It was anticipated that funding bodies would soon start to look into the sustainability of labs.

Action – All members with meetings SRS could present at to get in touch with AA.

10 Energy Audits

The Engagement Manager updated the Group on a number of interlinking energy projects. There were 115 Energy Coordinators across the University estate. Quarterly workshops were held and other support was provided. SRS were working with Estates to take a deeper dive into 17 locations identified for energy savings, including walkarounds, stimulating activity, and getting teams to participate in the

Sustainability Awards where it would add value. Initial engagements were underway at Teviot quad, Hugh Robson, Roslin, QMRI, SCRM and Joseph Black. There were challenges around the energy data for Joseph Black. Most initial walkarounds were complete and potential links to the Sustainable Campus Fund had been identified. The Engagement team were also looking beyond the 17 locations for energy saving ideas. A series of lighting projects had been identified and further insulating and draft-proofing work was needed.

The Group discussed the use of intelligent systems that could protect the fabric of buildings at 10 degrees (which could be reduced to 8). It may be worth carrying out a check on all buildings. In some the issue was installation of equipment that the building had not been designed for.

Further analysis of the BEMS should be carried out to better align with building schedules. A new helpdesk had been created in Estates Operations which should include a BMS operator who understood and could interrogate the system and change the schedule based on building activity. These activities should result in energy savings, the issue would be how to measure it.

Action – CO to provide a further update at the next meeting.

11 The Sustainable Public Procurement Prioritisation Tool

The tool was currently being tested by the University, along with other public sector bodies, to better understand risks and opportunities. Procurement had prioritised certain categories and were working with SRS on an initial scan. A small group was being put together to develop initial thoughts on the main environmental and social impacts of lab purchases, including equipment, solvents, sharps, and biological agents, down supply chains and up to the point of disposal. Outcomes would be recorded in the Scottish Government spreadsheet and would be available to share with the Group by the end of the year. There would also be a briefing output, which Procurement would use as part of purchasing guidance.

12 Lab Energy Monitoring Project

Energy usage in Louise Horsfall's lab in Biology was being monitored using clip-on power meters. Initial results had been very interesting, and final consumption figures would be available at the end of September. It would be useful to have another lab to compare. The HGU, which had been refurbished 5 years ago, would be one option.

Action – AA to follow up with Stewart McKay at HGU.

The monitored lab spaces at Roger Land were quite small. For bigger labs distribution boards could be used to measure what staff were trying to change, either on the basis of one lab or a whole floor, depending on how the unit was organised, to see the impact engagement was having. The unit would be given tips on energy saving behaviours, backed up by quality data, with any impact on consumption monitored.

Action – AA to present the findings back to the Group.

There would be an Enhance project running over one year working with a UoE building, probably a lab, providing an opportunity to carry out a living lab project in that space designing some sort of digital innovation to help reduce energy use.

Action – All members with ideas to follow up with Evan Morgan.



Sustainable Labs Steering Group (SLSG)

12th December 2016

2016 Sustainable Labs Implementation Plan Progress Report

Description of paper

This document is intended to give an update on progress against the objectives of the 2016 Sustainable Laboratories Implementation Plan, which was drawn up to provide a structured approach to improving sustainability within laboratories at the University of Edinburgh in 2016. A traffic-light system (RAG) has been used to communicate quickly and clearly the progress which has been or is being made. In general this is taken to mean: green = on track, amber = delayed or problematic, red = objective is in danger of not being met. Further details on the progress against each individual action is included within the comments column. This document will be updated prior to each meeting of the Sustainable Laboratories Steering Group.

Action requested

The Sustainable Labs Steering Group is asked to note the progress identified within this document, and, where relevant, provide advice and guidance to improve matters going forward.

Recommendation

It is proposed that an interim plan or extension of the 2016 plan be developed by the SRS Projects Coordinator (Labs) in collaboration with the SLSG to cover the period January – July 2017, and following that all future plans should be aligned to the academic calendar.

Background and context

The 2016 Sustainable Laboratories Implementation Plan was developed in January 2016 after consultation with the SLSG in December 2015. It leads on from the 2015 Implementation Plan and seeks to build on the successes of that initial phase of operation of the SLSG, expanding and deepening the reach and influence of sustainable laboratories projects and programmes across the University of Edinburgh.



Programme Overview

| Area | Objective | KPI | Comments | Progress (RAG) |
|--------------------------------|--|---|--|----------------|
| A. Operational savings | Support the delivery of projects which result in reduced environmental and financial costs. | Savings in: £, tonnes CO ₂ e, kWh, tonnes waste. | SCF labs projects with funding approved are predicted to give annual savings of: £74k, 447tonnesCO ₂ e, 2,745,000kWh. A solvent purification system was installed at Joseph Black but not funded by the SCF. This is predicted to give annual savings of: £3k - £5.5k, 10-25tonnesCO ₂ e, 20,000 - 45,000kWh, 60litres annually of waste solvent. | |
| B. Lab Design and Construction | To ensure sustainability concerns are embedded within the processes of lab design and construction | Level and frequency of input from SRS into lab design and construction | SRS have been invited to input to 4 developments: IRR (Bioquarter), Geosciences, Biology, and QuarterMile. This has involved around 7 meeting invites. | |
| C. Data and Evidence | To gather, collate and develop evidence and data on the | Number of topics for which a body of evidence has been produced and made available to SLSG. | Via applications for the SCF, Energy Auditing and other activities evidence has been gathered on: Solvent purification, chillers vs water cooling, | |

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| | effectiveness and consequences of various opportunities for efficiency improvements. | | effectiveness of SRS engagement campaigns, LED lighting and controls, ventilated storage cupboards, LED microscope and dairy vacuum pumps. | |
| D. Engagement | To secure funding to support the continuation of sustainable laboratory work within the University of Edinburgh. | Amount of time the sustainable laboratories work is supported for after August 2017. | Responsibility for lab sustainability now forms the majority of a new permanent post, which will also incorporate energy efficiency and sustainable design. | |
| | To increase knowledge and awareness of sustainability actions among laboratory users. | Number of communications (events/presentations/talks/meetings/distribution of materials) between Labs Sustainability Coordinator and key laboratories personnel. | Newly active relationships now exist with the CBS team. Engagement with the Horsfall lab in Roger Land Building (SBS) has developed a good working relationship. SBS invited SRS to speak at their School forum. SRS also shared a stall with Printing Services at the Easter Bush suppliers' day. However, large areas of the university's scientific estate are still not engaging regularly with SRS, and in some areas | The launching of the Climate Strategy and Sust. Campus Fund along with pre-existing regular engagements are planned to increase interactions. |

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| | | | (Chancellor's in particular, and Little France in general) engagement is weaker and less frequent than previous years. | Additional efforts are being made to engage with new people where old contacts are no longer active. |
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Detailed review of the Sustainable Laboratories Implementation Plan 2016

| Progress (RAG) | Tasks | Colleagues Responsible and Colleagues to Consult | Comments (November 2016) |
|--|--|---|--|
| Objective A: Support the delivery of projects which result in reduced environmental and financial costs. | | | |
| Regular contact with key partners is being made to ensure this project continues at appropriate pace. | A1. Replace fume cupboards (constant air volume to variable air volume) | Responsible: Small Projects and Minor Works team (Robin McEwan). Andrew Arnott Procurement To Consult: Rab Calder David Jack Technical Manager (Ron Brown) Premises/Zone manager (Jim Brown) Martin Crawford | £113,500 approved by SCF for fume cupboard retrofit of 16 fume cupboards in lab 34 and 26 fume cupboards in lab 29. This should now be managed by Estates and Procurement to implement. If prices have risen significantly (for example as a result of the falling value of Sterling) additional funding may be required. |
| | A2. Change set point temperature of ULT freezers to -70°C | Responsible: Andrew Arnott Lab users To Consult: SLSG | Advice relating to ULT freezers at -70 is included within many of our SRS communications to lab users. As a result, anecdotally, a number of ULT freezers are running at -70 across the University of Edinburgh estate. Exact figures are not available at this time, but we are working on this for future. |

| Progress (RAG) | Tasks | Colleagues Responsible and Colleagues to Consult | Comments (November 2016) |
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| | A3. Remove DNA from ULT freezers and alternative storage methods identified | Responsible: Andrew Arnott Lab users To Consult: SLSG | Initial communications have been made with some key individuals across the University of Edinburgh who may be willing and able to help with a trial of room temperature storage techniques. |
| Discussions and evidence gathering is taking place in both SRS and Estates to investigate and alleviate concerns. | A4. Install demand based ventilation in relevant areas | Responsible: Andrew Arnott Rab Calder Estates Development/Small Works team SLSG Premises managers To Consult: Health and Safety representatives Lab users | This is still to receive approval for SCF funding – concerns are based around single supplier issues. |
| All suppliers have now requoted with | A5. Implement a system for helium capture | Responsible: Juraj Bella | £24.5k approved by SCF for helium capture project (this is expected to be 50% of total project cost – School of Chemistry have agreed to provide match |

| Progress (RAG) | Tasks | Colleagues Responsible and Colleagues to Consult | Comments (November 2016) |
|--|---|---|--|
| <p>only marginal cost increase to £50,200. Final stage is for Chemistry to re-confirm they can cover the required amount. Regular communications with key partners to keep project on track.</p> | | <p>John Kenmure</p> <p>To Consult: Jim Brown Andrew Arnott</p> | <p>funding). Appropriate procurement processes should now be followed to lead to the implementation of this project. Renewed quotes have been sought to confirm (hopefully final) prices.</p> <p>If prices have risen significantly (for example as a result of the falling value of Sterling) additional funding may be required.</p> |
| | <p>A6. Install a Solvent Purification System</p> | <p>Responsible: Michael Cowley Phil McDonald Jim Brown</p> <p>To Consult: John Kenmure Andrew Arnott Rab Calder</p> | <p>School of Chemistry progressed this project on their own timescale using their own budget, rather than waiting for SCF funding. The equipment has been purchased but not yet installed as installation is dependent upon a lab clear-out/rearrangement, which has not yet happened.</p> |

| Progress (RAG) | Tasks | Colleagues Responsible and Colleagues to Consult | Comments (November 2016) |
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| | A7. Access funds for replacement of old inefficient lab equipment | Responsible: Andrew Arnott Lab users To Consult: SLSG Andy Kordiak/other Procurement representative | A ring-fenced fund within the SCF has been set up to fast-track applications for replacement of equipment with a value of under £10k. A second ring-fenced fund has been set up within the SCF for freezer replacement. |
| Email communications and posters to all labs contacts to encourage freezer clear-outs as part of winter shut down. If this has little or no impact we may need to consider if we can supply supporting resource (e.g. | A8. Work with lab group(s) to undertake freezer inventory(ies) including removal of redundant contents. | Responsible: Andrew Arnott Lab users To Consult: SLSG | Lab groups participating in the Edinburgh Sustainability Awards are encouraged to undertake this basic good practice. Additional encouragement is provided to other labs via communications from the SRS communications department. Anecdotally, practice is thought to be mixed. |

| Progress (RAG) | Tasks | Colleagues Responsible and Colleagues to Consult | Comments (November 2016) |
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| lab based summer interns, such as employed at Wellcome Trust CRF). | | | |
| LED lighting projects being re-submitted to Utilities Working Group for Sust. Campus Fund support based on revised financial model (10yr payback). | A9. Include a lighting replacement as part of a planned refurbishment | <p>Responsible: Andrew Arnott Small Works Team Premises managers</p> <p>To Consult: Lab users Rab Calder</p> | <p>Energy audits of the top 20 energy consuming buildings of the University of Edinburgh estate have highlighted a number of lighting replacement/upgrade/controls replacement projects which will be put forward for SCF funding once appropriate business cases have been written.</p> <p>It is currently thought that many LED lighting projects would have a payback period of c.10 years, which exceeds the stated requirements of the SCF (8 years). However, a special case is being made for LED projects within the SCF and it is thought that a number will go ahead (but perhaps not all).</p> |
| | A10. Conduct a trial/pilot project monitoring the impact of practical support and communications materials in a specific location. | <p>Responsible: SRS Comms team Andrew Arnott Lab users (a lab which has not previously had much SRS engagement)</p> <p>To Consult:</p> | <p>A project was completed at the Horsfall labs within Roger Land Building (SBS). Sadly there were failures of some monitoring equipment during the project, so the data is inconclusive.</p> <p>A second project has been identified at IGMM and it is planned to use better quality monitoring equipment.</p> |

| Progress (RAG) | Tasks | Colleagues Responsible and Colleagues to Consult | Comments (November 2016) |
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| | | David Jack SLSG | |
| We may need to revisit the support available from the Sust. Campus Fund as this type of action currently is not supported by SCF and thus falls entirely to the School/ College. | A11. Identify funding to support replacing mercury lamps in microscopes with LED lamps. | Responsible: Andrew Arnott Stewart McKay (IGMM) Andy Kordiak To Consult: SLSG | An application was put to the SCF for support for this, but it was declined. No alternative funding has yet been identified. |
| | A12. Work with suppliers and Procurement to identify opportunities to reduce environmental and financial costs (waste and operational). | Responsible: Andrew Arnott Andy Kordiak (and/or other representatives from Procurement) To Consult: SLSG | The Sustainable Public Procurement Prioritisation Tool (SPPPT) has been implemented throughout 2016, which identifies the University of Edinburgh's main environmental and social impacts coming from procurement. This will then lead to a prioritised list of suppliers to engage with. |

| Progress (RAG) | Tasks | Colleagues Responsible and Colleagues to Consult | Comments (November 2016) |
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| Objective B: To ensure sustainability concerns are embedded within the processes of lab design and construction | | | |
| | B1. Review and develop design and construction guidelines for new laboratories. | Responsible: Andrew Arnott Graham Bell (Others from Estates Development) To Consult: SLSG Labs users | This major project will take a long time yet to complete, but is making progress. A draft guide has been written on how to develop sustainable laboratory buildings. Currently the project is paused while an external consultancy, Cundalls, provide their input. |
| Further work on this will be undertaken as part of the (currently paused) investigation into sustainable estates development and labs building design. | B2. Gather data on a 'model' lab building | Responsible: Andrew Arnott Graham Bell To Consult: SLSG | Data will be gathered from a number of monitoring projects across the University of Edinburgh. This will hopefully provide information on average and typical energy consumption figures for different disciplines. |

| Progress (RAG) | Tasks | Colleagues Responsible and Colleagues to Consult | Comments (November 2016) |
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| | B3. Ensure Value Engineering strikes an appropriate balance between operational costs and capital expenditure. | Responsible: Graham Bell (Others from Estates Development) To Consult: SLSG Andrew Arnott | The integration of SRS into Estates Development practices and stages seems to be progressing well, however it is unclear/hard to measure the impact this has had on Value Engineering decisions. |
| Estates Development will be requested to provide new contact(s) for this and/or revise the process by which this update is provided. | B4. Ensure SLSG is made aware of labs developments in UoE (i.e. closures, opening, refurb) | Responsible: Estates Development To Consult: SLSG SRS (Comms Team) | It was agreed that Estates Development would provide a report upon request from SRS prior to SLSG meetings. At the time of writing no report had yet been received. |
| Objective C: To gather, collate and develop evidence and data on the effectiveness and consequences of various opportunities for efficiency improvements. | | | |

| Progress (RAG) | Tasks | Colleagues Responsible and Colleagues to Consult | Comments (November 2016) |
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| | C1. Develop metrics for measuring success | Responsible: Andrew Arnott Dave Gorman Michelle Brown To Consult: SLSG | These are incorporated into the new 1 and 3 year Programme Plan documents. |
| Data consolidation project via Estates Operations will be reviewing data and the systems required and piloting for further roll out. | C2. Energy metering at a building, floor or equipment level to see the impact of actions | Responsible: David Jack Andrew Arnott To Consult: Lab users SLSG | At the time of writing little progress has been made on this in a permanent manner. Short term monitoring of a lab at Roger Land Building (KB – SBS) was implemented for 3 months over the summer, and further short-term monitoring is planned at IGMM in early 2017. |
| | C3. Report progress against the Implementation Plan to SLSG core group meetings (written report with RAG status) | Responsible: Andrew Arnott To Consult: SLSG | As evidenced by this report. |

| Progress (RAG) | Tasks | Colleagues Responsible and Colleagues to Consult | Comments (November 2016) |
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| <p>Objective D: To secure funding to support the continuation of sustainable laboratory work within the University of Edinburgh. To increase knowledge and awareness of sustainability actions among laboratory users.</p> | | | |
| <p>The launching of the Climate Strategy and Sust. Campus Fund along with pre-existing regular engagements are planned to increase interactions.</p> <p>Additional efforts are being made to engage with new people where old contacts are no longer active.</p> <p>Advice is still sought from SLSG on suggested approaches for further/deeper engagement.</p> | <p>D1. Identify gaps in engagement across UoE, and work with Schools to address those gaps.</p> | <p>Responsible: Andrew Arnott Caro Overy</p> <p>To Consult: SLSG</p> | <p>Substantial gaps still exist where no regular contact with SRS takes place – specifically Physics and Engineering. Communications continue to be made but no breakthrough has yet occurred.</p> <p>The main contact at Chancellor’s Building has been discouraged by her manager from spending much time on sustainability matters, so there is less interaction there than in previous years. Contact with QMRI is also limited as only one person is allocated to take responsibility for all sustainability actions, which is impractical with a building of the size and complexity of QMRI. We are lucky to have representation from the Health and Safety advisor across both these sites, and he has provided some form of continuity. However, in general, contact with Chancellor’s and QMRI is now disappointingly low.</p> <p>In contrast, contact is greater now than in previous years with Biology (where we now have regular contact with a relatively large cohort of individuals), Chemistry and (CBS) Central Bioresearch Services.</p> <p>Although not responsible for all of the increased contact, it is felt (anecdotally) that the launch of a number of new support and funding mechanisms in</p> |

| Progress (RAG) | Tasks | Colleagues Responsible and Colleagues to Consult | Comments (November 2016) |
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| | | | 2016 has helped to encourage more people to actively engage with the sustainable labs programme. |
| | D2. Deliver labs workshops for specific networks or contacts groups (e.g. College specific meetings) in order to reach a greater number of lab users and receive a broader range of inputs/ideas/contributions. | Responsible: Andrew Arnott To Consult: Lab users | Over the course of 2016 specific sustainability workshops/inductions/events were held at SBS School's Forum, Chemistry postgraduate induction, CBS staff presentation, Easter Bush Suppliers Day event. In addition, via a different mechanism (energy audits of the most energy consuming buildings in the university estate) inputs/ideas/contributions have been gained from a broad range of people in a range of locations. |
| As noted, an additional team at from SBS is hoped to take part next year, and also another team (SynthSys) may be more able to participate again next year. It is possible that some large departments | D3. Increase labs participation in Edinburgh Sustainability Awards. | Responsible: Andrew Arnott Caro Overy To Consult: SLSG | Numbers of participating teams have reduced this year from 10 to 7. Teams who participated last year but not this year are: Chancellor's Building Biology Teaching Organisation (contact retired) Peter Wilson Building (SRUC) SynthSys lab (Waddington Building) This year has seen the QMRI team change from just the Centre for Reproductive Health, to cover the whole building (although also changing from Silver to Bronze level). So it may be the case that we are reaching similar numbers of lab users. We have also gained an SRUC team at Easter Bush (Biomarkers Lab). |

| Progress (RAG) | Tasks | Colleagues Responsible and Colleagues to Consult | Comments (November 2016) |
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| with varying practices may apply as multiple teams (i.e. areas with good practice applying for Gold, while the remainder of the building is assessed for Silver). | | | <p>We hope that next year the Horsfall Labs (SBS) at Roger Land Building will take part, following on from their enthusiastic participation in the lab monitoring project in 2016 – perhaps also encouraging neighbouring labs to participate.</p> <p>As with other areas of engagement, uptake is low in Physics and Engineering. Geosciences have reviewed the scheme and may consider it in future.</p> |
| | D4. Communicate on labs sustainability and increase awareness. | <p>Responsible: Andrew Arnott SRS Comms team</p> <p>To Consult: SLSG</p> | <p>As noted above, a number of events have been attended where lab sustainability awareness has been raised with new individuals. In addition new communication materials (posters, stickers, advice cards, etc) have been created and distributed. In addition, the Sustainable Campus Fund has provided another platform upon which we can describe our priorities for lab sustainability projects.</p> |
| | D5. Consolidate experience into guides describing good practice in labs. | <p>Responsible: Andrew Arnott</p> <p>To Consult: SLSG</p> | <p>This is happening in relation to estates development and a sustainable design guide for laboratory buildings, but in other areas (i.e. energy efficient equipment) it is felt that existing case studies and advice guides may be sufficient.</p> |

| Progress (RAG) | Tasks | Colleagues Responsible and Colleagues to Consult | Comments (November 2016) |
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| | | | It would be interesting to hear if the SLSG feel there is any particular area lacking in SRS's published guidance. |
| | D6. Develop a Vision by which to communicate our aims to people who could fund work to continue the work to improve sustainability in labs. | Responsible: Andrew Arnott Dave Gorman Michelle Brown To Consult: SLSG | A number of drafts and iterations of a Vision statement have been produced and SLSG are invited to review again during the December meeting to help identify/select a final wording. |



Resource implications

See specific items for resource implications.

Risk Management

As noted above, some of the Sustainable Campus Fund projects budgets are based on costs quoted prior to the fall in the value of Sterling (subsequent to the EU Referendum vote in June 2016). There is a risk that purchase costs may rise, and as such business cases may need to be revisited – adding delay and cost.

There is also a risk from low and reduced engagement with the medical research and teaching buildings at Little France, specifically Chancellor's and QMRI. These buildings are some of the most energy intensive among the university's estate but rates of engagement and support for sustainability appear to be falling.

Equality & Diversity

No identified impact.

Next steps/implications

The 2016 Sustainable Labs implementation plan will continue to be followed until the end of 2016. It is proposed that an interim plan or extension of the 2016 plan be developed to cover the period January – July 2017, and following that all future plans should be aligned to the academic calendar.

Consultation

This paper has been reviewed by the SRS Engagement Manager, and SRS Head of Programmes.

Further information

Further information can be provided by Andrew Arnott, SRS Projects Coordinator (Labs).

Author and Presenter

Andrew Arnott, SRS Projects Coordinator (Labs).

SRS

December 2016

Freedom of Information

This is an open paper.



Sustainable Labs Steering Group

Monday 12th December 2016

Sustainable Labs Programme Plan 2016-2019

Description of paper

The purpose of this paper is to update Sustainable Labs Steering Group on the three year Sustainable Labs programme developed by Department for Social Responsibility & Sustainability.

Action requested

Sustainable Labs Steering Group members are requested to review the paper and provide any feedback or suggested amendments as well as suggestions on how the group would like this reported in the future.

Background

The Department for Social Responsibility & Sustainability is in the process of updating its three year strategy, and as such is ensuring that all related programme documents reflect the aspirations of the Department and the wider University in these different areas. Below is the Programme Summary and Key Projects included in the Programme.

Sustainable Labs Vision

At the September meeting a single vision for Sustainable Labs at the University of Edinburgh was discussed.

“University of Edinburgh laboratories shall be international exemplars in energy, water and resource efficiency, and shall enable world class science teaching and research in a healthy working environment. The Sustainable Labs Steering Group shall be a respected and effective agent for change internally and externally. Our broad base of members shall work together with experts within the University of Edinburgh in a ‘living labs’ approach to identify and execute such changes as may be necessary to enable University of Edinburgh laboratories to be among the most sustainable globally. The aims and activities of the Group shall align with and complement the scientific and research aims of the University of Edinburgh.”

Sustainable Labs Programme Summary

| | |
|---|--|
| SRS Department Priority Area: | Energy and Resource Efficiency |
| Programme Name: | Sustainable Labs |
| Current Department Objective(s): that this programme achieves | Energy savings, number of Energy Coordinators/active champions |
| Programme Goal for 2020: | University of Edinburgh laboratories shall be recognised as among the most sustainable globally. |

| | |
|---|--|
| Wider University Strategic Priorities that this programme contributes towards: | Vision “As a truly global University, rooted in Scotland’s capital city, we make a significant, sustainable and socially responsible contribution to the world” and City – “meet the needs of researchers, with sustainable labs and room for collaboration and innovation |
|---|--|

| Indicators | 2016 Performance Status | 2020 Targets (Draft) |
|---|---|---|
| Currently in use | Sustainable Labs Implementation Plan 2016 | |
| Proposed other: | | |
| Number of utilities efficiency projects identified through labs at project development stage or beyond/£ & CO2e savings from projects | 10 projects with £109,686/525tCO2e annual savings | Monitor 2016/17 and target for subsequent years |
| Labs design guidance complete | Complete November 2016 | Embedded into practice |
| Number of local quantitative tests on sustainability | 1 carried out | Complete 4 per year |
| Coverage of Labs programme in number of people | To be measured | Monitor 2016/17 and target for subsequent years |
| Number of Energy Coordinators in labs | To be measured | Monitor 2016/17 and target for subsequent years |

| Programme Summary | Summary | Indicators | Means of Verification (how to measure) | Risks / Assumptions |
|--------------------|--|---|--|---|
| Goal | <p>Among the most sustainable globally.</p> <p>Low carbon through optimised utilities use and maximised reuse.</p> <p>Understanding of SRS issues in labs supply chain.</p> <p>Sustainably designed and managed labs which enable and promote world-class science.</p> | <p>Awards (local, national and global)</p> <p>University carbon emissions figures and reuse figures for labs commodity</p> <p>Approach to labs within Procurement Strategy and evidence of action among suppliers</p> <p>Actions taken within development projects in lab areas</p> | | <p>Assumptions</p> <p>Increasingly accurate carbon emissions reporting and related data availability</p> <p>Continued engagement with suppliers and action on labs procurement</p> <p>Continued prioritisation of sustainability within Development projects</p> |
| Outcome Objectives | 10% reduction in energy consumption. | Number of utilities efficiency projects identified through | Energy data | Risks |

| | | | | |
|---|---|---|--|---|
| | <p>Reuse and Equipment Sharing</p> <p>Reduced consumption of materials, especially hazardous materials.</p> <p>Enable culture of sustainable working through provision of support and training for lab technicians.</p> | <p>labs at project development stage or beyond/£ & CO2e savings from projects Lab based energy coordinators in all labs buildings</p> <p>Participation in WARPit and/or authorised external reuse scheme.</p> <p>Long term easily accessed funding mechanism for projects with good business case.</p> <p>Support in place to enable positive working culture and sustainable practices for lab technical staff</p> <p>Processes reviewed to identify substitution opportunities to reduce hazardous materials.</p> | <p>Sustainable Campus Fund reporting</p> <p>Reuse and equipment sharing data</p> | <p>Misinterpreted goals of SCF and/or revenue versus capital.</p> <p>Procurement/legal issues with re-use/sharing/resale.</p> <p>Assumptions Buy in from all necessary people to widen engagement.</p> <p>Volunteer labs required to take part in substitution identification.</p> |
| <p>Outputs (topline only can be described in projects below)</p> | <p>Increased reach.</p> <p>Design guidelines which fit into the working practices and processes and are used by Est Dev project managers etc regularly as a 'key text'.</p> <p>Operational guidelines (S-Lab/NUS) embedded within practice</p> <p>Case studies in house (living labs)</p> | <p>Relationship with majority of labs across UoE.</p> <p>% of labs staff across the uni engaging with SRS.</p> <p>By 2020 every building with labs will have an energy coordinator who is lab-based.</p> <p>Design guidelines used in all developments with labs.</p> | <p>Mapping of labs and participation across UoE</p> <p>Number and spread of Energy Coordinators</p> <p>Development project records</p> | <p>Risks Increased demands on staff time from all angles could impact capacity of staff to engage in programmes</p> <p>Assumptions Demand based ventilation is appropriate technology to achieve reduced energy consumption through air changes (to be tested and evaluated against alternatives)</p> |

| | | | | |
|---|---|--|---|---|
| | <p>SCF funded projects</p> <p>Demand based ventilation in place.</p> <p>Conclusion of haz.chem. substitution project(s).</p> | | | |
| <p>Activities (topline only)</p> | <p>Peer learning (via awards and workshops)</p> <p>Campus meetings</p> <p>SLSG</p> <p>Labs design guidelines</p> <p>Test equipment for 'sustainability' credentials</p> <p>Support lab based sustainability projects (DNA, lighting, freezers)</p> <p>Publish and promote our results</p> <p>Criteria for 'good labs' (linked to awards)</p> <p>Recognition of good practice.</p> <p>Haz.chem. substitution opportunities identification.</p> | | <p>Number of Lab Awards participants</p> <p>Number of people reached through local meetings and events</p> <p>Test data for case studies</p> <p>Studies published and communications circulated</p> | <p>Risks Increasing demands on staff time could impact capacity for involvement in engagement initiatives</p> <p>Assumptions Optimised data gathering and analysis for tests and case studies</p> <p>There is room for improvement on substitution of hazardous chemicals</p> |

Key Stakeholders

- Sustainable Labs Steering Group
- Lab users and technical staff
- Estates Operations colleagues
- Estates Development colleagues

Equality & Diversity

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

Further information

Paper prepared by Caro Overy and Andrew Arnott with input from feedback previously gathered from Sustainable Labs Steering Group and Michelle Brown (Head of SRS Programmes)

Presented by: Caro Overy, Engagement Manager

Freedom of Information This is an open paper.