UNIVERSITY OF EDINBURGH **A**

MINUTE OF A MEETING *of the Sustainable Laboratories Steering Group held in the Raeburn Room, Old College on Monday 23 September 2019.*

Members: Dave Gorman, (Convener), Director of Social Responsibility and Sustainability
Andrew Arnott, SRS Projects Coordinator
Rachael Barton, SRS Projects Coordinator
David Brown, Technical Services Manager, School of Chemistry
Michelle Brown, Deputy Director of Social Responsibility and Sustainability
Glen Cousquer, Joint Unions Green Rep
Dean Drobot, Head of Energy and Utilities Management
Joanne Dunne, Early Stage Researcher
Grant Ferguson, Director of Estates Operations
Kate Fitzpatrick, Waste & Recycling Manager
Simon Santamaria Garcia, Student Representative, School of Engineering
Val Gordon Technical Officer, Institute for Education, Teaching & Leadership
David Gray, Head of the School of Biological Sciences
Sharon Hannah, Bioquarter Campus Operations Manager
Yuner Huang, Early Stage Researcher
Angela Ingram, Service Manager, IGMM
David Jack, Energy & Utilities Operations Manager
Andy Kordiak, Laboratory & Medical Equipment & Consumables Team Manager
Julia Laidlaw, Estate Development Manager
Sandra Lawrie, Technical Services & Estates Manager, School of Biological Sciences
Chris Litwiniuk, Engagement Manager
Guy Lloyd-Jones, Forbes Chair of Organic Chemistry
Robert MacGregor, Energy Engineer, Utilities Management
Stewart McKay, Technical Services Manager, IGMM
Brian McTier, Easter Bush Campus Facilities and Services Manager
Lee Murphy, Genetics Core Manager
Thomas Reynolds, Chancellors Fellow in Civil Engineering
Candice Schmid, Occupational Hygiene and Projects Manager
Matthew Sharp, BVS Deputy Director - Business

Apologies: Michelle Brown; Grant Ferguson; David Gray; Brian McTeir; Kate Fitzpatrick; David Jack; Angela Ingram

1 Minute **A**

The Convener welcomed attendees to the fifteenth meeting of the Group. As this would be Sandra Lawrie's last meeting, members made a formal note of thanks. Sandra and the School of Biological Sciences had always been strong supporters of lab sustainability.

The minute of the meeting held on 27 May 2019 was approved as a correct record.

Actions carried forward

Action – AA to circulate the project plan for Ashworth.

Matters Arising

SLSG noted the excellent work on the Joseph Black fume cupboard upgrade by Premier (the main contractor) and the project team, with most of the work done out of hours and minimal disruption to the operation of the lab. The two double width cabinets had been especially challenging to upgrade. With the change in air flow, the impact on the whole area was expected to be significant. Review of the energy data to assess the success of the pilot had not yet taken place as controls connections were not fully complete. The intention was to roll this pilot out to other areas, particularly other teaching labs. It should be replicable in smaller areas, though there needed to be a minimum of five fume cupboards in the same room.

Members had been impressed by CSE SRS intern Jasmine Hussain's presentation, and supported her findings on the carbon footprint of the College and its engagement with SRS. Outcomes from the freezer internship had been mixed, with more support needed, as well as more direct interaction with users. On the LILLEE project, members felt there had been a lack of communication and follow up.

2 Sustainable Labs Programme Plan with RAG Status Update **B**

All activities were either at green status or grey (scheduled for future work).

Communications & Engagement

Estates had purchased meters for the energy monitoring project based in Ashworth and were arranging installation in late September or early October (depending on the electricians' availability). An engagement activity schedule had been agreed with the lab manager.

There were now nine teams actively taking part in the Lab Awards, six of which were new participants, with eight teams still accredited from last year.

The first stage of the LEAF tool pilot in Chemistry had concluded and findings were being written up.

The lab plastics project was drawing to an end. A survey to better understand purchasing, use and disposal of plastic items in UoE labs had received 225 responses. Analysis was currently being done, and the SRS Projects Coordinator - Laboratory Plastics was creating an action plan, guidance, and best practice documentation. SLSG discussed Lab Plastic Waste Day on 17th September. SRS had sent out information to all lab contacts, but there had been limited uptake.

Members discussed the potential impact of a plastics ban on UoE labs. It was anticipated that work on plastics across the University would only have a small impact on labs, as the focus would be on easy wins elsewhere, such as in catering, which did not have the same technical or Health and Safety issues. Work with labs would involve a consultation period to surface issues that had not yet been considered, and the focus would be on offering guidance and best practice.

SLSG discussed the importance of making contact with programme directors at Moray House, in order to feed in to teacher training and potentially run workshops with School of Education students.

Action – AA/DG to connect VG to Pete Higgins who was leading work in this area.

As the current Plan was in its final year, a workshop session would be held during this meeting to share ideas and agree basic principles for the ensuing plan, with a first draft

being submitted to the 25th November meeting and a final version for adoption planned early in 2020.

Since the Group last met there had been a major change in momentum within the University around climate change, with existing support and activities ramping up. At the University Executive Away Day on 13th June there had been three hours of discussion around climate change, resulting in a substantial list of actions, including recognition of business aviation as an issue needing to be addressed. A Travel and Aviation Working Group had been set up, chaired by Prof. Sandy Tudhope, the University's senior academic lead on climate and sustainability, and would report directly to the Principal. A commitment had been secured for academic courses on sustainability that any student could access, and this had been included in the curriculum reform process. The RELCO proposals, which had been paused, were now live again, and new building standards had been adopted, with a process planned to update these further. The Directors of Estates and SRS were preparing to report back on what needed to be done to upscale decarbonisation of heat and energy. In this context, SLSG should be framing an ambitious and stretching programme of work for the next Labs plan.

3 Hugh Robson Energy Monitoring Project Report **C**

This was an update to the HRB project results paper submitted at January's meeting, now including Phase 4 follow-up data. The original scope of the project, reported on in January, had seen a small increase in energy use over the monitoring period. The fourth phase, carried out in March, was designed to follow up and identify if there had been any long term impacts on energy consumption. It solely comprised data monitoring, with no additional engagement activity.

There had been a dramatic and unanticipated increase from September 2018 to March 2019 of 93%, though the per capita figure was much lower at 36.4%. The first period to September had seen a reduction in per capita energy use. The increase was most likely due to a change in research intensity, with a lot more masters and UG students coming in to labs, and potentially not taking as efficient an approach as permanent lab staff. Students also tended to feel that they did not have the authority to turn equipment off. The success of these projects depended on good local management, and it was recommended that turn off schedules be included in a lab member's job description.

The project did not have accurate figures for the number of lab users, as not all were using the swipe card access system. Outcomes from the project had demonstrated the difficulty of isolating variables in a real world scenario. SRS were taking these issues into account for the Ashworth project.

As engagement was with individual labs and energy data was at building level, there was a need for sub-metering to isolate areas, which was very expensive to install. Estates were currently looking to test the value of sub-metering and how it could feed in to performance and exception reporting. Much of the cost of new buildings was not taking into account whole life costing, with Estate Development Managers often deciding not to include additional metering due to the cost. Efforts were ongoing in Estates to include metering in Estate Development planning. It was important to have data at different levels in order to unpick what could be addressed through culture changes. To do a project looking at the energy consumption of a whole building would require a very different engagement strategy. Getting a measureable change was much easier from a small lab where variables could be isolated, but it was possible that SRS should be being more ambitious in this area.

4 LILEE Distribution Project

In the absence of the Design Informatics Research Software Engineer, the SRS Projects Coordinator updated SLSG on the project. Student internships were undertaken in June and July, and 50 LILEE devices were built. However, due to time constraints, only one LILEE device was deployed during the internships. The project had maintained a list of labs that expressed interest, and once ISG had completed set up of the new server for LILEE, more deployments could be initiated. Following the request from SLSG, the devices had now undergone a fire risk assessment and had been deemed safe. The project were interested in any further opportunities for funding or support to help manage the roll out of LILEE across the University.

A device had been in use at Roslin for the last few years for booking temperature-controlled shakers which had generated a good payback. The intention was to expand to other equipment, where these offered an equally attractive financial case.

Action – All members aware of any labs interested in trialling LILEE to contact Evan Morgan.

Action – JR to invite Evan Morgan to return and update the Group at November's meeting.

5 Lab Procurement - Equipment Re-use/Re-sale Process

The Equipment Reuse paper was currently with SRS for updating and reshaping, and was nearing a final draft. Next steps would depend on feedback from University Executive. Once signed off, it would appear on the SRS website, where others could link to it.

Action – AA to circulate the updated draft for information.

Action – DG to take the finalised paper on to University Executive.

6 Technician Commitment update

An overview of support, development and recognition for technicians was available on the University website at https://www.ed.ac.uk/technicians. The main highlights since the last meeting included improved engagement with professional registration. UoE was on track to achieve Employer Champion status. This was a reflection of the University's increased investment in its technicians, including securing funding to support professional registration for 80 technicians. A roadshow of events was planned, and the first newsletter was due to come out at the end of September.

Action – All members in lab management roles to encourage their technicians to look into registration.

Action – AA to follow up with SRS Comms on promoting Professional Registration and linking to the fund.

7 Sustainability Champions Network

The new network was a successor to the separate Energy and Waste Coordinator networks, with a broader remit. While waste and energy would remain key themes, the Sustainability Champions network would also cover other areas, such as sustainable travel. While there would be separate launch events for staff and students, the network itself would include both. This should make it easier for students to find out what was going on, be a part of it, and contribute their energy and ideas. The staff launch would take place from 10am – 1pm on 26 September, in room 1.06 at 50 George Square. 250 members had signed up to the network so far, and numbers would grow once students

started to sign up. Targets had not yet been set for the network as input from members would be sought to help define what success would look like.

8 SLSG Programme Plan 2020-2025 – Workshop session

Attendees divided into two groups, focused on either waste and procurement, or energy and climate, and reviewed the current position, its weaknesses and successes, and what lab activities might look like in these areas in 2024, as well as identifying any interim steps. The next workshop in November would look at how to get there in more detail.

Objectives set in 2016/17:

- 10% reduction in energy consumption
- Lab equipment sharing and reuse increased
- Reduce consumption of materials, especially hazardous materials
- Provision of support and training for lab technicians
- Adopt sustainable building design guidelines and Soft Landings (or similar approach)
- 100% of labs covered by Edinburgh Sustainability Awards teams
- By 2020 every building with labs will have a lab-based energy coordinator.

Waste & Procurement

- Packaging

The current position was at the beginning of the journey, with some pockets of improvement, and some reuse opportunities, but with a major issue around polystyrene. One aim would be a scheme or award system for suppliers, to be better able to praise good practice. The group identified that procurement hubs were being established and that SRS would actively engage with them on waste packaging.

- Equipment Reuse

Currently the amount of equipment being reused had increased and this area was on a good trajectory to 2024 when the group expected the reuse process to be formalised and in use. They would also expect to see an increase in equipment being shared on WARPIT or a similar platform.

- Lab plastics

Currently there was a lot of confusion on what could be done, and what substitutions could be made. By 2024 there should be clear labelling and guidance, with more streams for recycling negotiated with contractors, and universalised waste segregation on high volume items.

- Hazardous chemicals

Currently hazardous chemicals were only used in very small amounts, with solvent cleaning being carried out in Chemistry. By 2024 the group expected to see more substitutions and a reduction in the use of hazardous chemicals in teaching labs, in consultation with academics involved in teaching. Solvent substitutions in teaching was a good area for a potential living lab project. It also anticipated a centralised solvent cleaning service. Case studies featuring good practice should be available on the SRS website. With more Schools looking into adopting a chemical management system, that discussion should be reopened.

Energy & Climate

- Design standards

The group felt there had been missed opportunities with regard to the current design standards, and looked forward to a more coordinated approach, which would enable labs to consolidate equipment use (through projects like LILEE), and manage freezer space more efficiently. Smaller Estates projects were stretched for budget, and often had to cut these aspects. In 2024 there was expected to be a more holistic approach.

- Awards

More could be done to reach those who were currently reluctant to engage with SRS.

- Sustainable Campus Fund

Successful projects should be rolled out to other labs. By 2024 a new design standard should be in place, as well as increased capability for Schools to better manage and run their own spaces. There should be centralised chemical storage, linked in to best practice in terms of ventilation and energy efficiency.

- Behaviour change

There was an opportunity for sustainability champions to act as mentors for new lab users.

Outcomes from today's discussions would be written up and circulated in advance of the next meeting, which would focus on how to realise these aspirations for 2024.

Action – KF to get back to SM on autoclaved plastics query.

9 Any Other Business

There was an upcoming tender for life sciences consumables, with wording to be finalised over the next month.

Action – All members who would like to request elements to include in this (e.g. around conflict minerals or packaging) to contact Andy Kordiak.

***Post-meeting note**: The Life Science tender shall include the appropriate sustainability strategy measures agreed with Alexis Heeren in accordance with our Procurement Category Sustainability Strategy.*

There was an internal sustainability group within Procurement which may look to SLSG for input in order to make sustainable procurement more strategic and better integrated into existing processes.

Members discussed the possibility of organising a conference at which suppliers could present - a smaller version of the Lab Innovations conference recently held in Birmingham. UoE was also hoping to host a future S-Lab conference.