THE UNIVERSITY of EDINBURGH

Sustainable Laboratories Steering Group (SLSG)

Tuesday 18th January 2022, 2pm

via Microsoft Teams

AGENDA

1	**Minute** To *approve* the minute of the previous meeting on 28th September 2021 and *raise* any matters arising	**A**
2	**Covid-19 Impact and Implications for Labs** *Discussion* led by Director SRS. *Specific focus on impact on labs of recent guidance changes.*	**Verbal**
3	**Sustainable Labs Programme Plan Update** To *note* and *discuss* a report from the SRS Projects Coordinator (AA)	**B**
4	**Update on decarbonising estate** To *receive* an update on the process to decarbonise our estate from Director SRS.	**Verbal**
5	**Freezer Fund Update** To *receive* an update from the SRS Projects Coordinator (AA)	**Verbal**
6	**Technician Commitment update** To *receive* an update from Laboratory Technician Val Gordon	**Verbal**
7	**COP26 presentation** To *receive* a presentation from Director SRS on COP26.	**Verbal**
8	**Lab consumables tender outcomes** To *receive* a report from the SRS Projects Coordinator (AA) and discuss the new lab recycling options arising.	**C**
9	**UKRPIF aborted application for Building a New Biology** To *receive* an update from the SRS Projects Coordinator (AA)	**Verbal**
10	**UKRI funding for research into improving Environmental Sustainability in life science and medical practices.** To *receive* an update from the SRS Projects Coordinator (AA) and discuss options	**Verbal**
11	**Schools' Sustainability Framework** To *receive* a reminder from the SRS Projects Coordinator (AA) and discuss any local progress members are aware of.	**Verbal**

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

12 Sustainable Travel Policy **Verbal**

To *receive* an update from Director SRS

13 AOB

As a member or attendee of University committee meetings, we process and store your data in accordance with our privacy statement. Your involvement in a committee is public by default, but you may opt-out by contacting SRS.Privacy@ed.ac.uk or Jane.Rooney@ed.ac.uk

A

UNIVERSITY OF EDINBURGH

MINUTE OF A MEETING *of the Sustainable Laboratories Steering Group held on Microsoft Teams on 28th September 2021.*

Members: Michelle Brown, (interim Convener) Head of SRS Programmes
Val Gordon Technical Officer, Institute for Education, Teaching & Leadership
Lee Murphy, Genetics Core Manager
Andrew Arnott, SRS Projects Coordinator
Chris Litwiniuk, Engagement Manager
Tony Newjem, Procurement Officer
Claudia Schaffner, Technical Services & Estates Manager, School of Biological Sciences
David Jack, Energy & Utilities Operations Manager
Neil Johnston, Lab Manager, Centre for Cardiovascular Science
Lawrence Dickson (H&S)
Stewart McKay, Technical Services Manager, IGM
Angela Ingram, Service Manager, IGMM
Robert MacGregor, Energy Engineer, Utilities Management
Matthew Sharp, BVS Deputy Director – Business
Steve McLean, Centre for Cardiovascular Science

Apologies: Dave Gorman, Director of Social Responsibility and Sustainability
Brian McTier, Easter Bush Campus Facilities and Services Manager
Sharon Hannah, Bioquarter Campus Operations Manager
Yuner Huang, Early Stage Researcher,Engineering
Candice Schmid, Occupational Hygiene and Projects Manager
David Brown, Technical Services Manager, School of Chemistry
Kate Fitzpatrick, Waste & Recycling Manager
David Gray, Head of the School of Biological Sciences
Julia Laidlaw, Estate Development Manager
Grant Ferguson, Director of Estates Operations
Dean Drobot, Head of Energy and Utilities Management
Glen Cousquer,
Rachael Barton, SRS Projects Coordinator

1 Minute **A**

Minutes were accepted.

2 Covid impact for labs

Claudia Schaffner

- Open-ish throughout
- Move to covid level 0 had a smaller impact than predicted, but there is an increase in lab activity and number of people
- Less people staying in the evening
- More people in offices
- From sustainability perspective - the conversations are coming back to the agenda

Tony Newjem

- Labs back at 100% from Procurement perspective
- 2 new recruitments
- Record research income

- Supply chains issues
    - Priority given to NHS
    - Plastics particularly affected
    - Anything to diagnostics
    - Large orders get trimmed back, keeping orders flowing
    - PPE prices stabilising and even going down

Lee Murphy

- Greater sense of worth of technicians and co-facilities
- Interesting time scientifically, working on covid
- Problems with deliveries of tips, plastics, putting in lots of orders hoping some will arrive, leads to a bit of ineficiency
    - Backed by Claudia Schaffner and Steven McLean

Steven McLean

- Focus on getting people in the building
- Little focus on sustainability as is

Stewart McKay

- Lack of plastics
- More or less back at full speed
- No alternatives to plastics in some areas
    - Looking into this came to nowhere
- Little thinking about sustainability, but in position now

Neil Johnston

- Not done an awful lot on sustainability
- Trying to set-up a centre committee
- Issues in getting plastics

David Jack

- Monitoring use of energy at the University
- Seen the same characteristic:
    - Longer run-hours
    - Increased heating
    - Continued use of more energy and gas
    - Will keep on until we move away from any additional safety measures
    - Med-long term - looking at how to reduce energy consumption
- Changes to the vent in the near future
    - No big changes planned
    - Safety still priority
    - Putting in best estimates as to where we're going to be
- Extreme April/May - colder than expected

Angela Ingram

- Not at full capacity
- Labs busy since July
- Wide supply chain and labour issues
- Lots of problem solving
- Back at point of thinking about sustainability

Val Gordon

- Students back in
- A lot more sustainability being brought into programmes

- Linking wellbeing to sustainability

Lawrence Dickson

- Standing in for Candice Schmidt
- The need to balance sustainability and H&S going forward
- Not expecting any changes in ventilation in the near future

Andy Arnott

- Interest in alternative ways of doing things

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

(notes only on areas of comment/question)

- Question about the types of equipment that are being influenced via SciQuest engagement following review of energy use.
- KJT lab audits looking at ventilation systems
  - Looking to implement the Uni California Irvine approach to regulating ventilation
  - Energy Office will be engaging lab users
- On plastics:
  - Decontaminating is difficult
    - Solutions might be around recycling contaminated waste stream

4 Sustainability Framework

Verbal report informing that Office Awards are being replaced by Sustainability Framework – received and approved.

5 Freezer inventory **C**

- Matt Sharp suggesting Evans and BRF items weren't counted in 2018
- Question on split between archive and lab freezers
  - No idea, rule of thumb is 30% archival
- Neil Johnston suggesting there is much tighter controls on buying new freezers
- **ACTION: request to Neil Johnston to share an outline of his system**

6 Freezer Fund Update **D**

Update on latest financial performance of the Freezer Fund section of the Sustainable Campus Fund received and approved.

7 Sustainable Estates Design Update

POSTPONED until next meeting

8 Technician commitment

- Support of 50% for renewal fees for technicians

Question about continuing meetings

- Seen as priority to restart meetings

9 AOB

- EDI and diversifying membership
- Group pays an important role
- Recognition to Andy
- If there any recommendations for improving representation on the group, they could go to Andy
- Question about diversifying on hierarchy
- **Action to AA to review the remit of the group and see if there are any recommendations on improving EDI**
-
- Promega Helix Gold Award – congratulations to Procurement

Sustainable Laboratories Steering Group

B

18th January 2022

SLSG Programme Plan August 2020 – July 2025 – Progress Report

Description of paper *(to include Contribution to Strategy 2030*)

1. This document is intended to give an update on progress against the objectives of the 2020-2025 Sustainable Laboratories Steering Group Programme, which was drawn up to provide a structured approach to improving sustainability within laboratories at the University of Edinburgh over that time period, with a view to achieving wider University goals such as the Zero by 2040 target within the Climate Strategy.

This document will be updated prior to each meeting of the Sustainable Laboratories Steering Group. A Gantt Chart using a traffic-light colouring system (Red/Amber/Green) 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, and grey = action scheduled for future work.

The RAG grading is applied to the Objectives and the Targets of the plan, but not the individual actions, which are described in the body of the text where appropriate.

2. Contribution to Strategy 2030 (from selection of pre-set statements):

i) We will see our research having a greater impact as a result of partnership, international reach and investment in emergent disciplines.

x) We will see integrated reporting of our whole organisational impact against the United Nations Sustainable Development Goals.

xi) We will be on track to be a Carbon-Zero University by 2040.

xiii) Our estate will be fit for purpose, sustainable and accessible. We will support learning, research and collaboration with our neighbours, businesses and partners.

Action requested/Recommendation

3. SLSG is asked to note the progress described in this paper and provide any advice or guidance for further improvement.

Background and context

4. Between October 2019 and May 2020 this 2020-2025 programme plan was developed and approved. This report notes the progress against this 5-year plan.

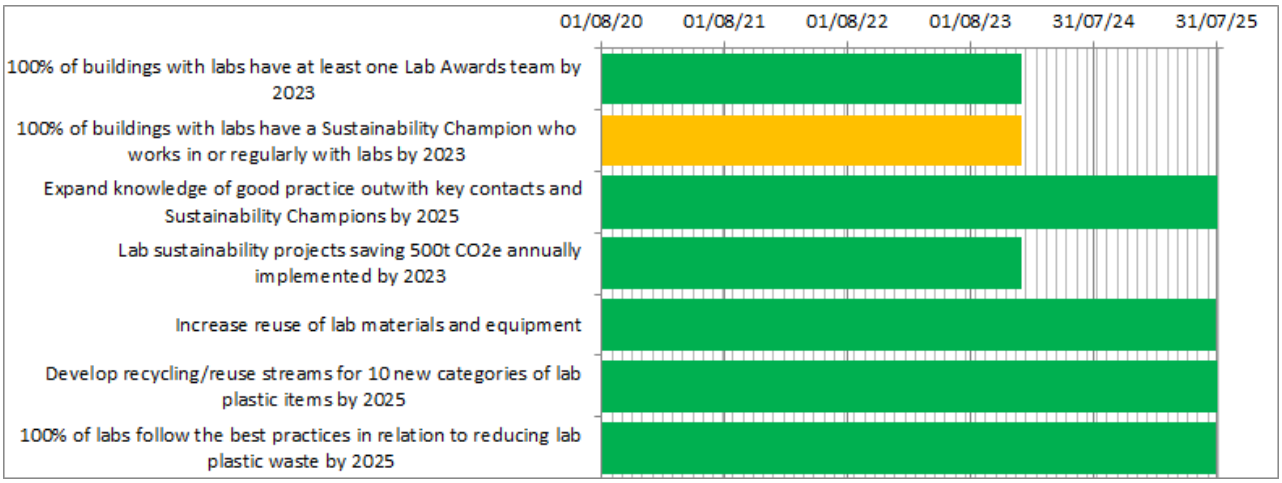
Discussion

5. Summary of objectives and targets:

1. Good practice behaviours adopted across all labs
    a. TARGET 1: 100% of buildings with labs have at least one Lab Awards team by 2023
    b. TARGET 2: 100% of buildings with labs have a Sustainability Champion who works in or regularly with labs by 2023

    c. TARGET 3: Expand knowledge of good practice outwith key contacts and Sustainability Champions (as measured in biannual SRS staff and student surveys) by 2025
2. Funding is made available and used to support lab sustainability
    a. TARGET 4: Lab sustainability projects saving 500t CO2e annually implemented by 2023 (including ventilation/HVAC improvements in lab buildings)
3. Increase reuse of materials and equipment across University labs
4. Eliminate avoidable lab plastic waste through increasing options and increasing awareness
    a. TARGET 5: Develop recycling/reuse streams for 10 new categories of lab plastic items by 2025
    b. TARGET 6: 100% of labs follow the best practices in relation to reducing lab plastic waste that are practicable in their lab by 2025

RAG Progress Reporting



OBJECTIVE 1: Good practice behaviours are adopted across all labs

TARGET 1: 100% of buildings with labs have at least one Lab Awards team by 2023

Action	Responsible	Timescale	RAG
Schools mandate that all labs achieve at least Bronze in sustainability awards.	SRS and School management	December 2021	A Sustainability Framework is being launched to support the embedding of sustainability within all Schools and Departments. This will promote Lab Awards participation at Silver level (after a year at Bronze)
Lab-based PG students get amount of credits for working on a lab sustainability awards team (as part of their skills training outside of the curriculum)	SRS and School management	December 2022	Communications were sent out in early May 2021 to awards teams about eligibility for SLICCs. SRS Student Pathways / Edinburgh Award were also included in the communication and were promoted again in September 2021.

Develop an e-learning course specifically focussed on sustainable labs (as a spin-off from Be Sustainable)	SRS	July 2021	Completed April 2020 An online interactive workshop delivered quarterly since April 2020. The relevant section of Be Sustainable was updated in May 2021.
Review the Awards processes making the awards more appealing / less burdensome for participants.	SRS	February 2022	A review of potential alternatives to the current online Awards Platform (where Awards submissions are made), is underway. A comparison of the SRS Lab Awards with other similar schemes to identify possible improvements will commence in Q2. This will also look at the inclusion of research excellence. Alongside this, a Sustainability Framework for Schools is being developed, which will replace the Office Awards, focussing on comprehensive embedding of sustainability across all areas within each School. Where Schools have lab facilities, participation in the Lab Awards will be expected as part of completing the Sustainability Framework.

TARGET 2: 100% of buildings with labs have a Sustainability Champion who works in or regularly with labs by 2023

Action	Responsible	Timescale	RAG
Increase number of contacts/labs undertaking pilots to demonstrate that good practices are compatible with science	SRS	1 case study published each year (ideally on different topics).	Pilots on lab plastics now taking place at Reagan Wallace lab (SBS) as well as Roslin. Case study on Roslin has been written (by the lab) and published in Access Microbiology. Case study of Reagan Wallace can be written early 2022.

Case studies to include details to contact the participants. Including information on costs, staff time, buy-in from management and practicalities			August 2021 interviews with technicians leading sustainable practices resulted in blog posts and inclusion in various newsletters (e.g. CSE newsletter, Bulletin, etc)
Colleges mandate that each School with labs has an appointed/nominated Sustainability Leader who heads up a committee of Sustainability Champions and coordinates sustainability actions across their School.	SRS and College management	First Schools declare their decision by July 2021 50% of Schools declared by July 2022 100% of Schools declared by December 2025	The outcomes of this work may not look exactly as described in the action plan – there are other ways for Colleges and Schools to integrate sustainability into their governance structures, e.g. Sustainability Committees. A Sustainability Framework is being launched for Schools to follow, which will cover this area. Target of 1 School by July 2021 was missed. 50% target by July 2022 currently seem quite a stretch. If good uptake of the Sustainability Framework, the 100% target by Dec 2025 could be possible.
Sustainability Champions encouraged to work with neighbouring labs, helping to spread good practice and information	Lab Users, SRS	November 2020	This was delayed in order to become part of a more systematic lab communications plan run in conjunction with the SRS Communications team. This team have been short staffed (under 50% capacity) since summer 2021 so prioritisations and delays have occurred. This will most likely occur from Spring 2022 onwards.

TARGET 3: Expand knowledge of good practice outwith key contacts and Sustainability Champions (as measured in biannual SRS staff and student surveys) by 2025

Action	Responsible	Timescale	RAG
Publicise that the Sustainability Awards criteria is available to all lab users to inform good practice.	SRS	November 2020	This is delayed but will form part of the various communications messages which are included in the planned SLSG communications via SRS channels (I.e. entering content in existing School/College newsletters rather than having a Sustainable Labs newsletter) This is also included in the quarterly lab sustainability training webinars which are reaching quite a large audience (c.100/year).
Link communications about lab sustainability to academic research e.g. Horsfall Labs' work on complete life cycle analysis / Bio Technology and Circular Economy ('theme' within CSE) / Chemistry's work on global mineral scarcity/ capacity	SRS with input from key academics and lab users	July 2022	This will form part of the various communications messages which are included in the planned SLSG communications via SRS channels (I.e. entering content in existing School/College newsletters rather than having a Sustainable Labs newsletter) This specific action will also involve our SRS Comms team building relationships with School Comms teams August 2021 interviews with technicians leading sustainable practices resulted in blog posts and inclusion in various newsletters (e.g. CSE newsletter, Bulletin, etc)
Restrict procurement options/ heavily promote better options	SRS and Procurement with input from lab users	July 2022	Work continues between SRS and Procurement. AA has provided Procurement with a list of ULT freezers and glassware drying ovens with good performance credentials. Other ULT freezers and glassware drying ovens will be removed from SciQuest catalogues where technically

			possible. These shortened lists of 'green' items will also be transferred to People and Money when that system is rolled out. Information about suppliers who use more sustainable packaging materials/take-back schemes is included in the lab sustainability training webinar. Procurement have cautioned that restricting procurement options may not be wise right now as for some items (e.g. gloves) just getting hold of them is hard enough due to supply chain disruption from Covid, Brexit and recently revealed forced labour practices in the world's largest glove manufacturer (TopGloves in Malaysia).
Undertake more face to face lab audits/advice visits to give targeted and personalised advice	SRS	3 new labs visited each year, with follow up advice and support provided where appropriate.	Due to Covid19 this target is likely to be missed. A virtual lab tour was undertaken at Edinburgh Genomics lab (SBS) in July, highlighting a number of opportunities for sustainability improvements. An in-person tour of CVS in QMRI was undertaken in November, as a pre-audit for their Lab Awards application. SRS communications includes promotion of video tours of labs for sustainability audits.
Identify the top 5 initiatives that labs are working on and develop into posters and other communications to prompt spread of good practice.	SRS	December 2020	Data gathering was completed in November 2020. Poster completed May 2021 and published on website.

OBJECTIVE 2: Cost effective lab sustainability improvement projects are identified, funded and implemented

TARGET 4: New lab sustainability projects implemented between August 2020 and July 2023 save 500t CO2e annually (including ventilation/HVAC improvements in lab buildings)

Action	Responsible	Timescale	RAG
Assess labs to optimise ventilation rates and controls, including night set-back	SRS, Estates, Lab users, H&S	Ongoing	**[RM to give verbal update]** K.J. Tait are progressing through the second phase of the Lab Ventilation Effectiveness programme. Planning to complete the study by end of March 2022. Project for improvements to ventilation for IVCs at SCRM has been delayed as it is proving difficult to get a contractor to commit. Building Ventilation in response to COVID continues to be led by the Building Services Group following the published guidance.
Lab users are trained in ventilation risk assessment	H&S, Estates, Lab users	Ongoing	**[RM to give verbal update]** Estates Building Services and Controls teams remain extremely busy and do not have time to support any non-priority activities. Lab Vent Risk Assessment process being developed by KJ Tait as part of the above project, mainly to understand energy opportunities. Once further developed input will be requested from H&S, lab users and other stakeholders.
Pilot projects funded for novel approaches such as LILEE	SRS, Lab users, Estates	2 more pilots by 2023	Disruption from Covid19 will impact this, but it's still possible to achieve within the timescale described.

			Lab plastics re-use/substitutions may be one area which could be suitable for this. Possible project at IGMM MRC labs involving sending polystyrene plastics for a heat treatment to recover high quality feedstocks for making new plastics. This project is currently applying for funding from MRC. Additional possible funding from recently announced (Dec 2021) UKRI fund looking into sustainable life science practices – **to be discussed later in this meeting.**
Identify replicable actions which are cost effective, impactful and broadly relevant across labs.	SRS, Lab users, Estates	By February 2021	Published July 2021
Roll out replicable actions identified (e.g. drying ovens)	SRS, Lab users, Estates	By July 2022	The SCF and Staff Grants funds are promoted to staff in ad hoc communications, training, and planned communications to enable the adoption of these actions.
Work on ensuring the Sustainable Campus Fund is available until 2025	SRS, Estates	Ongoing	There is an SCF fund of c.£180,000 for 2021-22 to support staff and student identified projects. Carbon costs from successful lab SCF projects are around £250/t, so if we manage to spend £180k we should hit the target of 500t/year carbon savings by the target date of July 2023. This will be entirely dependent on getting enough good quality applications - see above point about promotion of SCF.

OBJECTIVE 3: Increase reuse of lab materials and equipment

Action	Responsible	Timescale	RAG
Identify any gaps in the departments/Schools which use Warpit, and target these to increase participation	SRS	July 2021	AA completed desk-based analysis from Warpit data July 2021. Lab Equipment analysis: Medics are good at using Warp It to get rid of lab equipment (avoiding waste), while Medics, Engineering and SBS are good at using Warp It when they need lab equipment (I.e. avoiding purchases). Chemistry and Vets have low levels of activity on Warp It for lab equipment. This will inform communications.
Raise awareness of Warpit and promote external sale/donation with Lab managers/Stores/those with purchasing responsibilities	Procurement	July 2021	This is covered in the lab sustainability training webinar, and on the newly relaunched lab sustainability website. This will be covered in SRS communications channels SRS are in communication with Procurement (Andy Wright, Tony Newjem, Colin Miller and Kirsty Hughes) about incorporating various sustainability messages and 'nudges' into the new procurement system which will be embedded in People and Money. Procurement have advised that the People and Money implementation for procurement won't now happen before summer 2022.
Provide greater clarity on what is and is not allowed on Warpit (e.g. plasticware and consumables can be included),	SRS	December 2020	This will be covered in the SRS communications channels but not until Spring 2022.

processes and guidelines			
Provide more case studies of successful usage of WARPit, including savings.	SRS	March 2021	This will be covered in the SRS communications channels but not until Spring 2022.
Adopt a policy requiring people to show evidence of trying to source from Warpit or 2nd hand before purchasing new equipment/resources.	Procurement	July 2022	See above notes about SRS contact with Procurement regarding implementing sustainability into the new procurement system on People and Money. A project to consider options for managed equipment services is on hold due to staff turnover in the lab team of Procurement in 2021-22. If this comes to fruition procurement will ensure sustainability objectives are built into strategic agreements.
Increase visibility of information about Warpit e.g. the main page of the Procurement website, clearly on SRS and Waste websites, and as a reminder box on SciQuest.	SRS, Waste and Procurement	July 2021	This is included within the new version of the SRS Labs website. See notes above about P&M. AA to work with Procurement to develop text for inclusion in P&M.

OBJECTIVE 4: Eliminate avoidable lab plastic waste

TARGET 5: Develop recycling/reuse streams for 10 new categories of lab plastic items by 2025

Action	Responsible	Timescale	RAG
Hold a workshop to bring suppliers and waste contractors together to share challenges on both sides, and to	Procurement Waste SRS	April 2021	AA has been involved in creating sustainability questions for the APUC lab consumables tender and analysing responses. Some suppliers are offering

prompt development of new lab plastics waste streams.	NHS EAUC ZWS		(limited) recycling schemes for decontaminated used lab plastics. This tender is now complete and the new options for lab plastic waste reduction have been shared with lab users, via email and via the lab sustainability training quarterly sessions. Separately, UoE is now seen as quite 'expert' on the topic of lab plastics and are regularly contacted about this, including internationally. UoE Clinical and Biological waste contract is up for tender in summer 2022 – the new tender will request more recycling options for used lab plastics.
Identify the most commonly used lab plastic items and confirm which plastic types they are.	SRS	December 2020	A desk-based assessment of the lab consumables procurement spreadsheet was undertaken, which identified tips, stripettes, tubes, plates and syringes as the most common. Resin-code information was not often included in the spreadsheet. However, where it was available it showed that PP (5) and PS (6) were the common types. (see note above about working with suppliers to get better resin code data). Unfortunately PS is not currently recycable – although see note above about pilot project at IGMM-MRC. Further useful information was gained from the APUC tender, in which all suppliers had to declare the plastic

			type(s) of their consumable products. In a 2020 EAUC TSN a colleague from the Life Sciences College in Dundee shared their findings describing which items are commonly produced using which plastic types. This information can be used in discussions with waste contractors in future.

TARGET 6: 100% of labs follow the best practices in relation to reducing lab plastic waste that are practicable in their lab by 2025.

Action	Responsible	Timescale	RAG
Develop case studies on swapping to use glassware instead of plastic.	SRS	March 2021	The group at Roslin undertaking a pilot published their own write-up in Access Microbiology in October 2020. The online version is available here: **https://doi.org/10.1099/acmi.0.000173** When further information becomes available from Reagan Wallace lab a case study can be written.
Communicate to provide clarity on what can (and cannot) be recycled in a lab setting	SRS Waste Lab users	December 2020	This has been covered in the lab sustainability training which has been conducted quarterly since April 2020. This was also covered in the website launch May 2021.
If new recycling streams/ recyclable items become available	SRS Procurement Waste	July 2024	Take-back schemes and lab recycling option are highlighted within the

promote these options to lab users.	Lab users		quarterly lab sustainability training. The new Clinical and Biological waste tender will give further opportunities for this in summer 2022.
Work with labs to undertake trials/pilots to phase out non-recyclable / reusable plastics, and help designing experiments to reduce waste.	SRS Waste Lab users	2 labs undertake trials by July 2023	The work of the Reagan Wallace group means we now have 2 pilots underway/completed. Further pilots are always welcomed, and SLSG members are encouraged to promote this in their area.
Share the findings of the trials/pilots	SRS	December 2023	The Access Microbiology paper from Roslin was shared with the SLSG in October 2020.
Encourage labs to rethink the location of bins and consider allowing recycling bins in labs to facilitate ease of segregation.	SRS Waste Lab users	July 2023	Recycling bins in labs would be an outcome from any lab taking up the new offers available under the APUC consumables tender – which was publicised in November 2021 by email, and in the December 2021 lab sustainability training.

Resource implications

7. No resource implications are related to reporting on progress against this plan. Implementation of the plan will have wider resource implications, which have been detailed elsewhere.

Risk Management

8. No risks associated with reporting on progress against this plan. No items on the plan are currently at risk of failure (red graded).

Responding to the Climate Emergency & Sustainable Development Goals

9. Climate Emergency: the actions in this plan will reduce either direct or indirect carbon emissions (or sometimes both) through reducing energy consumption, water consumption, waste production (and high impact hazardous waste streams), and resource consumption.

10. SDGs: the various actions in this plan will contribute positively to the following SDGs:
3 – Good health and wellbeing
Many sustainability actions also improve health and wellbeing, for example good practices with fume cupboards, or substitution of hazardous chemicals.
4 – Quality education
A quality education requires incorporation of the global challenges we face (as set out in the SDGs) and also the practical actions which can be taken to combat these challenges.
6 – Clean water and sanitation
Sustainable lab practices promoted by this plan will reduce potable water consumption.
9 – Industry, innovation and infrastructure
Some of the actions which might be taken in relation to sustainable labs will fall into the categories of innovation and/or infrastructure.
11 – Sustainable cities and communities
Actions to make UoE labs more sustainable will contribute to making the city of Edinburgh more sustainable.
12 – Responsible consumption
Sustainable lab practices promoted by this plan will reduce material consumption.
13 – Climate action
Sustainable lab practices promoted by this plan will reduce greenhouse gas emissions.
14 – Life below water
Actions on lab plastic waste reduction will help to reduce negative impacts on aquatic and oceanic life.
15 – Life on land
Reducing our material consumption reduces the amount of raw materials which must be mined, extracted, or grown – all of which have negative impacts for life on land.

Equality & Diversity
11. No foreseen impacts.

Next steps/implications
12. A further progress report will be provided at the next SLSG meeting by the SRS Project Coordinator – Labs (or appropriate substitute). During that time further actions will be taken towards the outcome objectives of the plan.

Consultation
13. This document has been reviewed by:

Director – SRS

Senior Programmes Manager - SRS

Sustainable Innovation and Engagement Manager – SRS

Further information
14. Author and Presenter

Andrew Arnott SRS Projects Coordinator - Labs

Department for Social Responsibility and Sustainability

December 2021

Freedom of Information
This is an open paper.

Sustainable Laboratories Steering Group

18th January 2022

C

APUC Lab Consumables Tender Responses

Description of paper

1. This paper describes the outputs, in terms of sustainability, from the APUC Lab Consumables Tender.

2. Contribution to Strategy 2030 (from selection of pre-set statements):

    x) We will see integrated reporting of our whole organisational impact against the United Nations Sustainable Development Goals.
    xi) We will be on track to be a Carbon-Zero University by 2040.

Action requested/Recommendation

3. SLSG is asked to note the options now available, comment, and promote these options around colleagues in their areas.

Background and context

4. APUC ran a tender for lab consumables in the first half of 2021. In this context 'lab consumables' refers to single-use lab plastics. In their responses, some suppliers committed to provision of services or products which can reduce our lab waste – specifically our lab plastic waste. The tender was finalised and approved for circulation at the end of October 2021.

Discussion

5. The following is a summary of the commitments made by suppliers:

Alpha Laboratories Ltd have a free-of-charge recycling scheme for certain used decontaminated plastics (HDPE, LDPE, PP, PC) in the UK for goods purchased from Alpha Laboratories Ltd. The waste contractor is Tradebe Labwaste Ltd.

Arco works with Recycling Lives Ltd, a recycling and waste management company which promotes community benefits through its Recycling Lives Charity which supports offender rehabilitation, homeless support and food redistribution. Recycling Lives process all PPE to ensure all garments are diverted from landfill and recycled into insulation, plastics pellets, or metals. Collections can be made from customers whereby a certificate is issued which details the safe disposal of the items. Arco also sometimes donate old/used workwear to the Salvation Army.

Camlab would consider the take-back of the following packaging if it was originally supplied by them:

- Outer shipping cardboard packaging (only where this is reusable i.e., untorn).
- Inner void filler packaging between outer packaging and product packaging.
- Pallets.

D R Caswell's policy is to take-back items regardless of volume, agreed in advance to coordinate with delivery schedules. For example, the organisation offers a service to recycle Home Office and hospital clothing which must go to an incinerator be destroyed. The by-product of this can contribute to electricity generation.

Elkay offer free recycling for used uncontaminated polypropylene tip racks, used centrifuge tubes, test tubes, caps and used Liquipette Pasteur pipettes made from low-density polythene. As they do not offer recycling on decontaminated products, this is impractical for research institutions as they would not have many products which qualify for the service.

Fisher Scientific UK offers the following take-back options:

- Free pickup and recycling of empty Winchester bottles, Mauser bottles, and associated packaging (e.g., surrounding cardboard and pulp inners).
- Free recycling and disposal of electrical equipment through its partner B2B Compliance.
- Free wooden pallets take-back.
- Bulk lab waste recycling, including mask recycling through its partner – Tradebe Labwaste.
- Partner programs, such as the Kimberly-Clark Right Cycle glove and garment recycling program.

Greiner Bio-One offers a free of charge recycling scheme for end-of-life pipette tip products (wafers and racks). Regarding unused excess products, Greiner Bio-One will accept any return if the products are returned in a resalable condition and have a remaining shelf life of at least 50% (full shelf life usually 4-5 years) (this will be subject to a restocking fee). Where possible these items will be resold to ensure usage prior to expiry.

SLS are proposing a complimentary pipette tip box waste take-back scheme called plastic to purpose.

Starlab offers a recycling service to all TipOne customers. All TipOne racks, tip wafers and the clear packaging on our refills are made from recyclable polypropylene. These are collected from customers and sent directly to Tradebe Labwaste UK.

VWR provide a Free of Charge Collection Service for VWR waste as an added value service. They also provide cages to Institutions to store empty chemical bottles for collection free of charge. VWR's collection service collect plastics from customer sites, returning this material to the TradeBe Labwaste Ltd recycling facility

Resource implications

6. Most of the services provided are free (although limited), so there should be no increase in waste costs. It's possible there would be a decrease in waste costs from waste being diverted from Clinical and Biological waste streams (via decontamination) into these recycling waste streams. Some purchase costs may increase if labs have to switch from the lowest cost supplier in order to access these recycling schemes (possibly outweighed by the reduction in their costs for Clinical and Biological waste).

Risk Management

7. Decontamination processes pose the greatest risk here. It will be important for laboratories to accurately risk assess their waste products, and to take appropriate decontamination steps, prior to transferring the waste to the waste contractor. However, this type of risk assessment and waste processing is familiar to lab users, and occurs currently – the difference being that currently the waste is not recycled once it leaves our site.

Responding to the Climate Emergency & Sustainable Development Goals

8. Climate emergency: Clinical and Biological waste treatment is many times more energy and carbon intensive than recycling processes. Diversion of waste from C&B to recycling streams will therefore reduce our waste emissions. In addition, plastics are typically derived from fossil fuels – involving emissions in their manufacture. The diversion of plastics from incineration into recycling will reduce the requirement for the manufacture of virgin plastics.

9. SDGs: the actions in this plan will contribute positively to the following SDGs:

12 – Responsible Consumption and Production
Diverting materials from incineration into recycling is closer to the circular economy approach to materials which is required.

13 – Climate action
The replacement of inefficient cold storage units with more efficient units reduces electricity consumption, and associated carbon emissions. In addition, the new units must be confirmed to have low GWP refrigerants before they can receive funding.

Equality & Diversity

10. No Equality and Diversity implications have been identified relating to this fund.

Next steps/implications

11. SLSG members are asked to familiarise themselves with the options available from these suppliers, choose the options which are applicable to their work, and publicise the options around their colleagues.

Consultation

12. This document has been reviewed by:
Director – SRS

Senior Programmes Manager - SRS

Sustainable Innovation and Engagement Manager – SRS

Further information

13. *Author and Presenter*
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16/12/21

Freedom of Information

14. This is an open paper.