

# Smaller Institutions Sustainability Meeting: Biodiversity

Lara Fahey, Sustainability Projects Lead

June 2025

#### The Context

#### What is biodiversity?

Biodiversity – short for biological diversity – is the diversity of life in all its forms; the diversity of species, of genetic variations within one species, and of ecosystems (Convention on Biological Diversity (CBD) Biodiversity Glossary).



### The three types of biodiversity

#### Genetic diversity

The variety of genes and characteristics within a species



#### Species diversity

The variety of species within an ecosystem



#### Ecosystem diversity

The variety of habitats and ecosystems in an area





#### The Context

#### What is biodiversity?



In the latest <u>ScotGov Climate Survey</u> (survey from Oct 2024 - Jan 2025, published April 2025), they found that:

- More than three quarters (77%) of respondents said they knew little or nothing about the biodiversity crisis in Scotland.
- **Graduates** and those who felt they knew at least a fair amount about climate change also tended to report higher levels of knowledge about Scotland's biodiversity crisis **27% and 28%** of respondents in each group respectively said that they knew at least a fair amount about this topic, compared to 19% overall.
- That means that at least 70% of those graduating from higher and further education in Scotland don't know about the biodiversity crisis.

#### The Context

#### What is biodiversity?

The UK is also one of the most nature depleted nations on Earth according to the Natural History Museum's Biodiversity Intactness Index.

As EAUC is one of the leading voices for sustainability in post-16 education, we need to improve the sector's knowledge and feeling of empowerment to act on the issue.



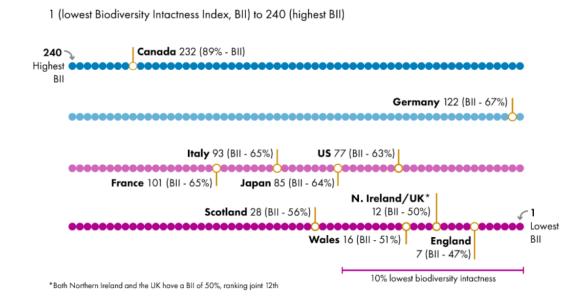


Image 15: Ranking of the BII value for specific countries against 240 countries and territories, where each point represents a country or territory (<u>The Scottish Parliament 2021</u>).

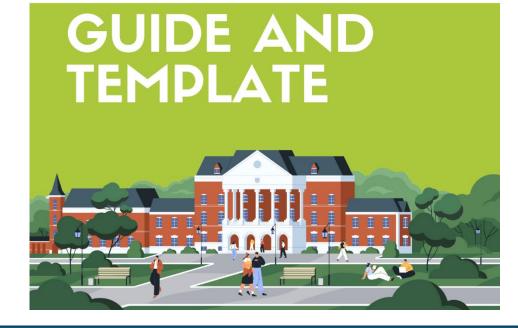
# The Guide and Template

- What the guide is
  - Post-16 education sector relevant
  - Clear opportunities
  - Action framework
  - Whole-institution approach



2025

#### BIODIVERSITY STRATEGY AND ACTION PLAN



#### The Guide



2025

- Key areas:
  - What is biodiversity?
  - Why is biodiversity important?
  - The Challenge
  - The Opportunity
  - Strategy and Action Plans
  - Case studies
  - Action summary

#### BIODIVERSITY STRATEGY AND ACTION PLAN



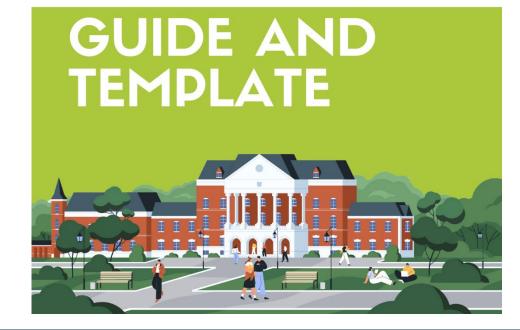
#### The Action Plan



2025

- Key areas:
  - Leadership and governance
  - Teaching, learning and research
  - Estates and operations
  - Partnerships and engagement
  - Data collection and monitoring
- We try to cover most of these areas with case studies and discussion today.

#### BIODIVERSITY STRATEGY AND ACTION PLAN



## Agenda



10:15am Introduction

10:30am Workshop 1: Biodiversity on the Estate

12:00pm Lunch and Networking

1:00pm Workshop 2: Biodiversity Walk with iNaturalist app

2:00pm Comfort break

2:15pm Workshop 3: Integrating Biodiversity into Learning and Teaching

3:30pm Roundtable chat

3:50pm EAUC Summary

4:00 – 4:20pm Optional: Forth Valley College, Stirling Campus tour

## Housekeeping



- EAUC Staff, FVC Staff
- Fire Alarms
- Photo permission
- Toilets

#### Introductions



Name, institution and role

- What has been your experience of biodiversity so far at your institution?
  - Non-existent
  - There is more work to do
  - Good doing well in some areas
  - Excellent embedded across the institution

## Cauc The Alliance for Sustainability Leadership in Education

#### Biodiversity on the Estate

10.30 Rory Hill, Sustainability Project Manager – Joint Sustainability Partnership

Tree-planting with the International Tree Foundation at Borders College and West Lothian College

10:37 Vicki Tierney, Project Officer (Estates and Sustainability), West Lothian College

Partnership working with Cedarbank School and West Lothian College

10:45 Rory and Vicki Q+A

10:55 Mareike Moeller-Holtkamp, Urban Nature Adviser, NatureScot

Brief introduction to the SOS-UK Nature Friendly Grounds Programme on behalf of Jo Wilkinson, Senior

Project Manager, Biodiversity, SOS-UK

11: 05 Mareike Q + A



#### Biodiversity on the Estate

11:15 Gabi Brame, Sustainability Development Coordinator, University of Stirling Students Union

Introduction to iNaturalist and making campus dashboards and hosting Bioblitz events

11:35 Gabi Q + A

11:45 Andy Muir, GUEST Biodiversity Promoter, University of Glasgow

Brief introduction to Biodiversity initiatives at The University of Glasgow

11:50 Lara Fahey, Sustainability Projects Lead, EAUC

Introduction to iNaturalist workshop



## Rory Hill

Sustainability Project Manager – Joint Sustainability Partnership EAUC



## Vicki Tierney

Project Officer (Estates and Sustainability), West Lothian College

Tackling Biodiversity
Loss through
Community
Partnership Working



**BORDERS** 



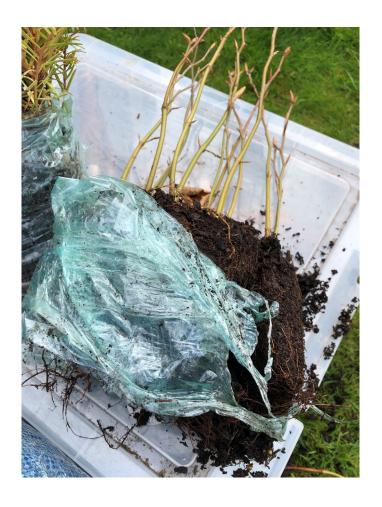


#### **Tree Planting Funding**



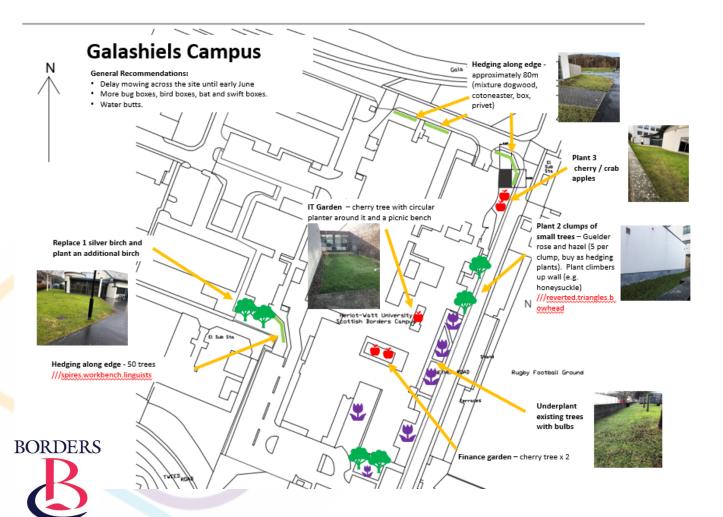
**UK Community Tree Planting Programme** 





#### **Galashiels Campus**







#### **Hawick Campus**

## eauc Vears

#### **Hawick Campus**









#### **Outcomes**



- 1300+ trees planted
- Incorporated into teaching
  - NC Introduction to Countryside Skills
  - Level 5 Landscaping
  - Level 4 Horticulture
  - Level 5 Horticulture
- Addressed student requests for more opportunities on campus
- Positive feedback from campus users

"Just wanted to say the outdoor Estates revamp/refresh at Netherdale is looking great - from the new hedges to the summer annuals replacing the weeds and tired old alpines in the concrete "funnel" planters at the High Mill: the place is showing real promise again! I'm especially fond (already!) of the new columnar cherry outside the library window - just perfect for that space."



## **Community Engagement & Biodiversity**



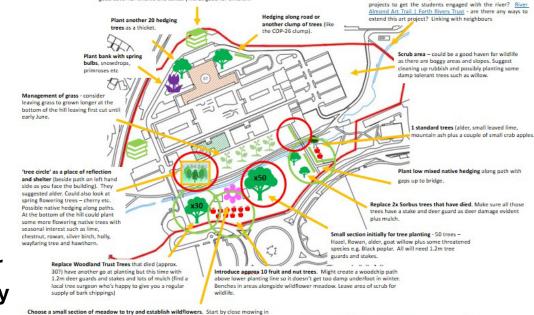
Almond & Avon | Forth Rivers Trust Nominate some Stream

champions and have regular clean ups of the area. Any other



Our Purpose – to engage with the wider community to develop the college's green spaces





west lothian

Forest classrooms - could do some thinning of trees. Also underplanting with winter flowering

evergreen shrubs (e.g. mahonia), plus a few holly trees. Perennial herbs e.g. rosemary also provide

good cover for wildlife and sensory herbs good for children

Autumn and then scarifying (bashing grass with rake to expose bare patches of soil). Then sow yellow rattle seeds (<u>Rhingthus</u> major). Then mow hard again in late summer again scarify a bit, and sow native and locally prominent wildflower seeds. It's best to ask around to try to get the most

local seed you can (ideally find someone with a wildflower meadow who can give you the cuttings when they mow). Plant Life International (Scotland can probably advise on a local flora group).

Our Aim – to increase biodiversity and nature awareness, provide spaces for nature and support community health and wellbeing

#### **Taking Action**









#### **Outcomes**



Enabled a collaborative and sustainable partnership



- Increased student and staff engagement
- Green spaces developed for nature to adapt and thrive
- Opportunities for resilient nature-based solutions to tackle climate change
- Community connections beyond the partnership
- Fostering an inclusive, supportive and welcoming environment for all

#### **Next Steps**



- Future biodiversity projects planned
- Work closely with community-led organisations
- Increase biodiversity engagement and knowledge
- Expand biodiversity actions into student development and learning
- CDN Sustainability Action Award 24-25



## Mareike Moeller-Holtkamp

Urban Nature Adviser, NatureScot

## SOS-UK's Nature-Friendly Grounds programme





Mareike Moeller-Holtkamp Urban Nature Adviser NatureScot

#### A need for nature-action across the UK:

We are in the midst of a global nature crisis, and the UK is one of the most nature-depleted countries in the world.

Why does this matter?



**Climate Change Mitigation** 



**Ecosystem Stability** 



Health & wellbeing



**Ecosystem Services and food security** 



## Potential for nature-based action in the education sector:

~100k ha

Combined land owned across UK education estate!

#### Student demand:

86	
%	

think that all universities/colleges should take action to protect nature on their grounds and land



think their university/college should provide opportunities for students to experience nature

#### **Sector demand:**

200

**Hedgehog Friendly** schools, colleges and universities

29

Universities have signed the **Nature Positive pledge** 

4000

Schools signed up to **National Education Nature Park** 

#### Nature-Friendly Grounds:

Nature-Friendly Grounds is SOS-UK's new accreditation programme for the education sector, including universities, colleges and schools.

#### The programme will include:

- Operational actions
- Specialist modules for Habitats and species, co-created by experts.
- Points-based scoring system for Bronze,
   Silver and Gold institutional awards



#### Aims of the programme:

#### Core aims:

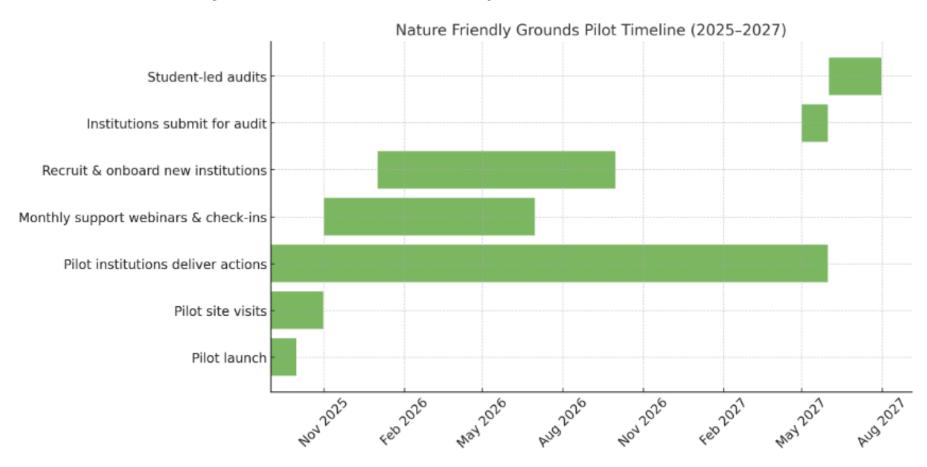
- 1. The education estate becomes more biodiverse
- 2. Students and staff understand the importance of nature
- 3. Students and staff are empowered to take action for nature

SOS-UK are currently being supported by working groups to finalize the toolkit this summer, and will be consulting with partner conservation charities to create additional modules.



#### Timeline of new programme:

SOS-UK will initially be launching a 2-year pilot from September 2025 with 16 institutions, followed by wider roll out in September 2026.



#### Thanks!

For any questions please email: Celine.clark@sos-uk.org

Or register interest via the form here: <a href="https://bit.ly/Nature-friendly">https://bit.ly/Nature-friendly</a>

mareike.moeller-holtkamp@nature.scot







### Gabi Brame

Sustainability Development Coordinator, University of Stirling Students Union Using iNaturalist for Biodiversity at Stirling University







## What is the Green & Blue Space

- Sustainability Hub:
   Overarching name for the
   Union's sustainability projects.
- Core Projects: Fair Share,
   Foodhive Refillery, Community
   Garden, Orchard and
   Wildflower Meadow,
   Skillsharing Space,
   Community Food Initiative.
- Staff & Student Partnership:Student lead and Staff



#### Green Week

- A full week of Sustainability events in Stirling University: University and SU collaboration with focus on Active Travel, Circular Economy and Biodiversity themes
- BioBlitz as the main Biodiversity
   Event: Full day of species
   recording on campus.
- o iNaturalist: The use of iNaturalist is a method we use to for community engagement to build species database during our





#### **Our BioBlitz Structure**

Bug Walk!	11am - 12 noon
Spring Litter Pick Walk!	12 noon - 1pm
Mammal Walk!	1pm - 2pm
Bird Walk!	2pm - 3pm
Fungi Walk!	3pm - 4pm







- A way to record species:
   Citizen science platform that allows you to see what biodiversity is found on your campus.
- A way to promote biodiversity:
  Connects your students and
  staff to nature. An engagement
  tool.
- Campus Biodiversity Network
   (CBN) Institutional account: All species recorded within your





## How



### Works



#### Keep Track

Record your encounters with other organisms and maintain life lists, all in the cloud.



#### Create Useful Data

Help scientists and resource managers understand when and where organisms occur.



#### Crowdsource Identifications

Connect with experts who can identify the organisms you observe.



#### Become a Citizen Scientist

Find a project with a mission that interests you, or start your own.



#### Learn About Nature

Build your knowledge by talking with other naturalists and helping others.



#### Run a Bioblitz

Hold an event where people try to find as many species as possible.

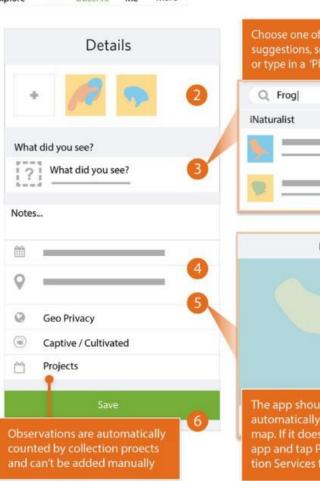
## How



## Works

#### How to Make an Observation with your iPhone

- 1 Tap observe.
- 2 Add one or more photos as evidence.
- Choose what you saw.
- When you saw it should be added automatically.
- 5 Where you saw it should be added automatically. If it doesn't, check Privacy in the Settings app.
- 6 Save your observation.



Choose one of the computer vision suggestions, search for something else, **Edit Location** The app should fetch your location automatically and display it on the app and tap Privacy to enable Loca tion Services for iNaturalist

## Stay in touch!

∘ Email:

GreenAndBlueSpace@stir.ac.uk

Socials:

@GreenBlue Ctiviing Union







# Workshop 1



Andy Muir

GUEST Biodiversity Promoter, University of Glasgow







# University of Glasgow







# Workshop 1

## Biodiversity on the Estate



#### **Introduction to Workshop 2**

- Please download the iNaturalist app if you haven't already
- Please wear appropriate clothing suitable for the outdoors and bring a smartphone with the iNaturalist app installed.

#### Walk leaders:

- Aileen Webster (Active Travel Coordinator), Forth Valley College
- Larissa Purves (Walking and Cycling Officer), Forth Valley College

#### iNaturalist experts:

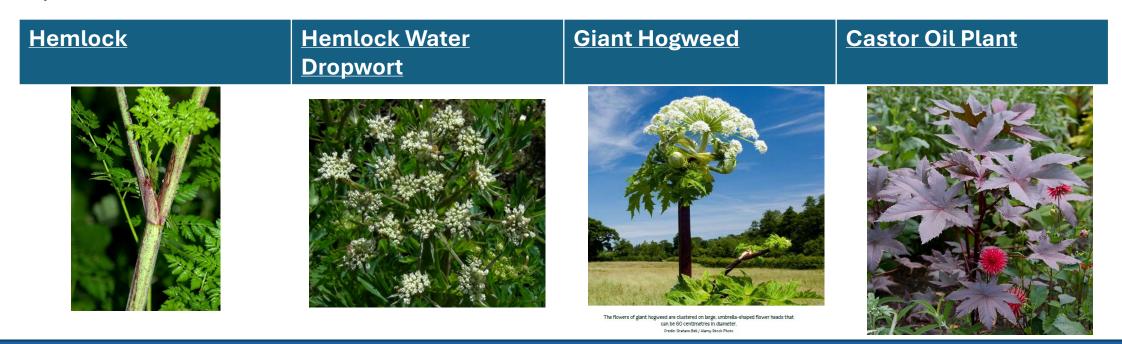
- Gabi Brame (Sustainability Development Coordinator) from University of Stirling
- Andy Muir (GUEST Biodiversity Promoter) from University of Glasgow

# Workshop 1 Biodiversity on the Estate



#### Introduction to Workshop 2: Plants to avoid

 Watch out for the following plants that we might come across and DO NOT TOUCH these or lookalike plants:



# Workshop 1 Biodiversity on the Estate

**Preferred Route: Kildean River Walk** 

Route will preferentially visit the Kildean Nature Walk (more information via: TreeLink Stirling, Froglife). TreeLink Stirling's 'Crown of Trees' project sets an ambition to create a 36km ring of trees around the city of Stirling.

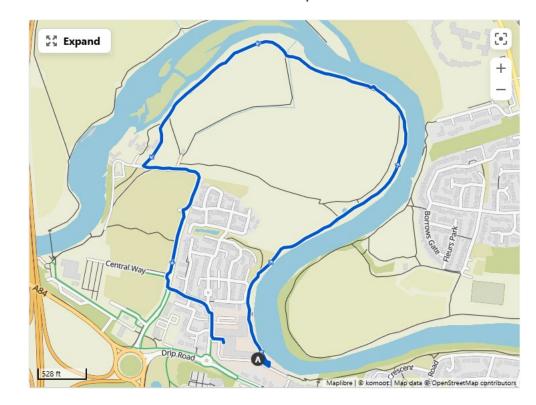
#### Walk link:

https://www.komoot.com/tour/2184203970?share\_token=aRhkQz40SrenvCMfXXRgVmA6Haor5N7Pp51StGY0yJYRlrK7zk&ref=wtd



#### Kildean river walk

© 00:34 ↔ 1.95 mi Ø 3.5 mph ↗ 50 ft ↘ 50 ft



# Workshop 1 Biodiversity on the Estate

#### **Back up route: River House Pond and Grassland**

If it has rained heavily before or during the event, we will visit the meadow and pond areas next to the River House restaurant, Stirling.

#### Walk link:

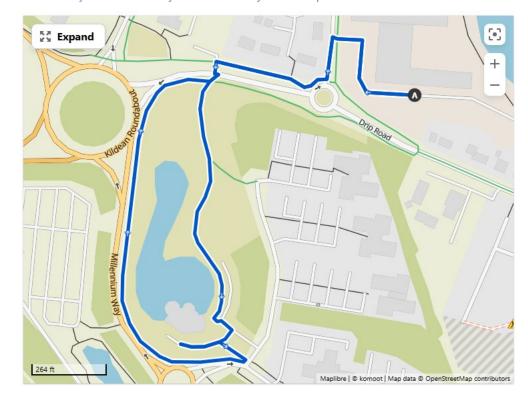
https://www.komoot.com/tour/2226175775?share\_token=a5k4fLVHxsq R9cQlmuDJu0LqSD79R14qrr8U42m0gm6bReU863&ref=wtd



#### ST walk around the pond/Riverside rest.

[Easy 0 00:28 ↔ 0.97 mi Ø 2.1 mph → 0 ft > 0 ft

Easy hike. Great for any fitness level. Easily-accessible paths. Suitable for all skill levels.



# Workshop 2 iNaturalist Walk



#### iNaturalist walk feedback and reflection

- How did you find it?
- Could you see this being implemented at your institution?

# Lunch and networking



Cafeteria lunch with plenty of time for networking

- Voucher system
- Let Matt know if you have any questions

Back here for 12:55pm

Workshop 2 will start at 1:00pm sharp

# Workshop 3



# Integrating Biodiversity into Learning and Teaching

2:15 Sarah Shea, Environmental Sustainability Manager, Glasgow Kelvin College

2:25 Sarah Q + A

2:35 Patrick Boxall, Lecturer in Education, Division of Psychology, Sociology and Education, Queen Margaret University

• Presenting on Queen Margaret University's Outdoor Learning Hub

# Workshop 3



# Sarah Shea

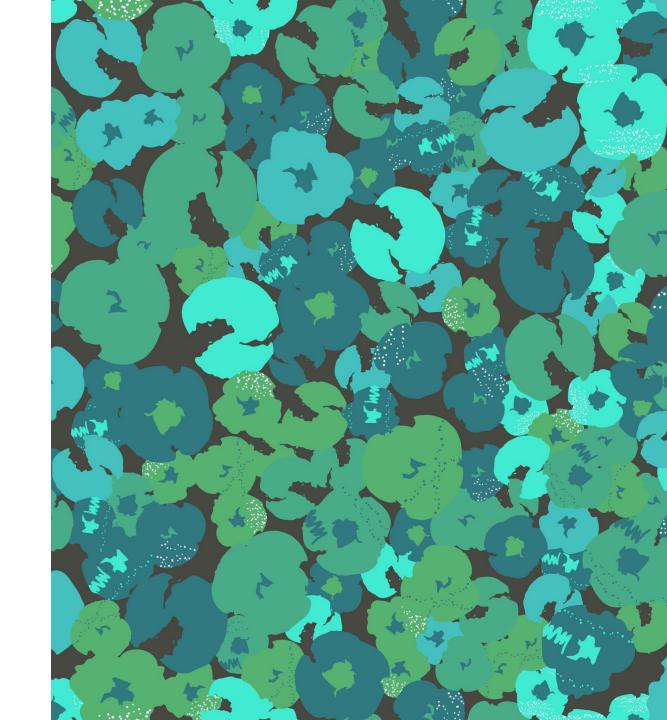
Environmental Sustainability Manager, Glasgow Kelvin College

# BIODIVERSITY COURSEWORK INTEGRATION

Sarah Shea

**Environmental Sustainability Manager** 

Glasgow Kelvin College





## INITIAL CHALLENGES

- My role housed in Estates Department.
- No direct 'in' with Faculties/Learning & Teaching.
- Teaching Staff perception of 'no time'...
- within curriculum for new content.
- to organise projects.
- Small, urban campuses without large areas of green space.
- Questions of budget/funding.

#### WHAT HAS WORKED?

- Persistence & Visibility
- Enthusiasm
- Word of Mouth
- Success begets success
- External partnerships
- Being a 'match-maker'
- Opportunities to experience & appreciate nature (Library Resource Hubs, pop-up stalls wellbeing walks and cycles, organized litter picks, etc)
- This applies beyond biodiversity work to integrating other aspects of sustainability into coursework.











## HEDGEHOG FRIENDLY CAMPUS



## OUTDOOR SPORT COURSEWORK













# LEARNING GARDENS

Built, managed, and used by:

- Joinery
- Construction
- Support for Learning
- Professional Cookery

Enjoyed by all students and staff!









# UPCOMING BIODIVERSITY PROJECTS INCLUDE:

- Rainwater Harvesting System (SfL)
- Campus rewilding & Water Vole Project (Estates & SfL)
- Signage Project (Marketing)
- Coursework and Ecological Conservation
   Projects with RSPB and Frog Life (Sciences

   8 Courses)
- Establishing a Gardening Club and Community Garden at Springburn (Student Association)
- Participation in No Mow May & 'Defensive Gardening' (Estates)



## THANK YOU

- Don't hesitate to get in touch!
- SShea@glasgowkelvin.ac.uk

# Workshop 3



# Patrick Boxall

Lecturer in Education, Division of Psychology, Sociology and Education, Queen Margaret University





Biodiversity in Learning and Teaching



# Began with curriculum...

- Undergraduates in Primary & Education Studies, 2019
- Post-graduate Home Economics
- Local Primary schools
- Partnership with National Trust at Newhailles House
- Research led













# Values in Action

Social Justice

Sustainability

Think global; act local

Creative & critical pedagogies





## QMU Outdoors: Aims

To create an Outdoor Learning Hub on the QMU campus:

- **■** To enrich our students' experience
- To connect to our communities
- To contribute to national and global concerns in education, sustainability and health and wellbeing.





## Partnership & Co-creation













Architecture & Design Scotland

NatureScot

Local Authorities & Schools

Higher and Further Education

National Networks: NNOL, SAPOE, LfS, OWLS,

Private Sector:
Wardell Armstrong local business

Learning Through
Landscapes

Edinburgh and Lothian Greenspace Trust

Local Charities and Social Enterprise





# Architecture & Design Scotland

Ailtearachd is Dealbhadh na h-Alba

Design concept...

Whole Campus is the Hub







The Howff and Discovery Trail Opening

March 19 2024









- > Stakeholder engagement
- > Student involvement
- > Local schools
- > Community
- Local Maker
- > Local materials





## The Discovery Trailhabitat and Biodiversity











# Terrace, Hedgerow and Woods...













# The Wee Forest last weekend...

















# Gifts of Place: Digital Trail





# The De-Discovery Trail: Interrogating Gifts of Place

### The De-Discovery Trail June 2025

This alternative 'De-discovery Trail' invites a series of provocations to start critical dialogue.

Go to this Sway



A& DS



# Key Outcomes so far...

Discovery Trailphysical and digital Outdoor activity spaces

Gathering Place 'The Howff'

Wee Forest

Education Curriculum

Research

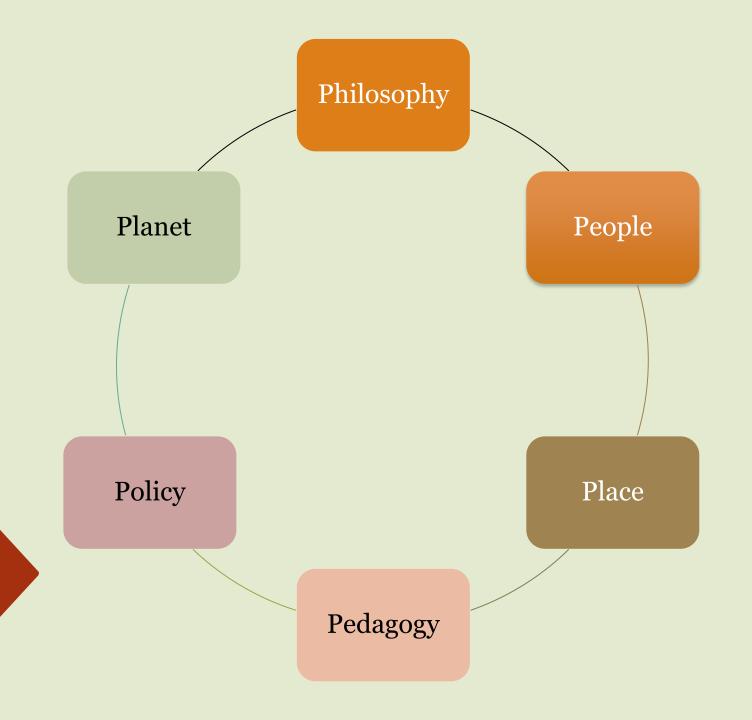
Community Activity

Professional
Development:
Masters level Microaccreditations





# Perspectives on Place Making



### National Framework for Learning for Sustainability in Initial teacher Education

- **■** Curriculum
- Cultures
- Communities
- Campus

<u>Learning for Sustainability in ITE | SCDE</u>

**April 2025** 

A Praxis of
Creativity in
Outdoor Learning:
Pedagogies of
Making, Growing
Anger and
Kindness

Journal of Perspectives in Applied Academic Practice Vol 13, Issue 1

### Making:

➤ Enacted through processes of making, by makers, who have agency over these processes

### Growing:

- Maker enacts the process of making by interaction and integration with the natural world
- Making process is one of growth- that which is made comes from the place as much as from the human

### Anger & Kindness:

- Leaders enact deep personal and ethical motivations towards planetary and human flourishing through the processes of making and growing
- Creative practice of leaders is so bound up with their values that it becomes a manifestation of anger and kindness in the world

### Discussion –

How can we enable people and the natural world to flourish through...

- ➤ Practice of Making?
- ➤ Practice of Growing?

➤ Practice of Anger & Kindness?

# Rise of the Eco-Jedi...

'The Eco-Jedi'- peaceful warrior leaders scattered across the planet who act to enable people and the natural world to flourish.

These leaders are powerful and change the world through an infinite number of creative actions.

The Eco-Jedi Make and Grow; they are Angry; they are Kind.

### The Future...

- > For QMU
  - > Develop curriculum across the University
  - Future branches e.g. meadow, sensory garden, arts and performance, traditional skills, health & well-being...
  - > Research
- Community
  - > Green Infrastructure
  - ➤ Environmental and cultural activity
  - > Health and well-being
- Nationally
  - > a nexus for activity
  - Professional Learning
  - National agendas
- > Globally
  - ➤ Hosted groups from the USA, Germany...word is getting out

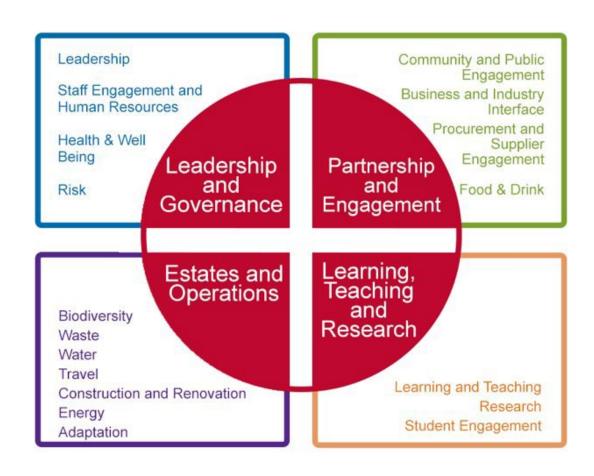


# Roundtable



#### **Discussion time**

Topics not restricted to biodiversity – ask anything!



# Key takeaways



- There have been large declines in biodiversity
- Scotland is one of the most nature depleted countries in the world

### However:

- There are numerous benefits to improving biodiversity for institutions
- No matter your role there will be something you can do to help improve biodiversity in your institution
- We have a wealth of resources to draw upon within the EAUC membership, as seen by our brilliant speakers

# Discussion



What is one action you could take forward on biodiversity at your institution?

Note: Refer to the <u>Action Plan section of the guide</u> if you are unsure what actions you could take (pages 57 to 73).

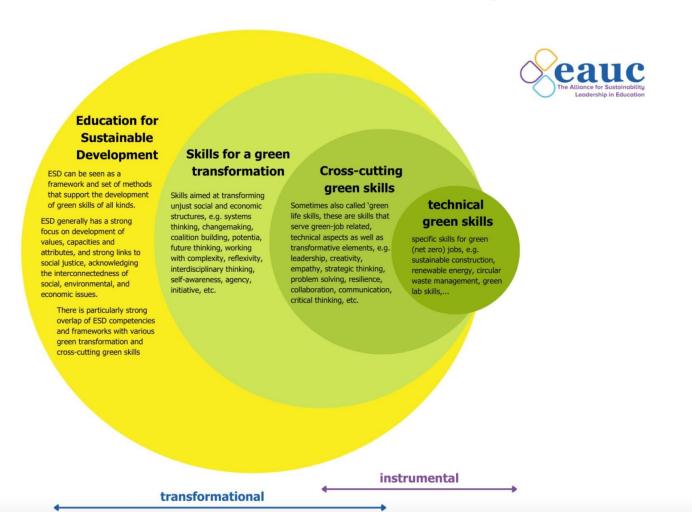
# **EAUC Summary**



- Thank you
- What's coming up:
  - 24th 26th June EAUC Annual Conference (Sheffield Hallum University)
- Key Contacts have been sent a link to vote for the next Trustee to our Board
  - Voting closes on 30<sup>th</sup> June

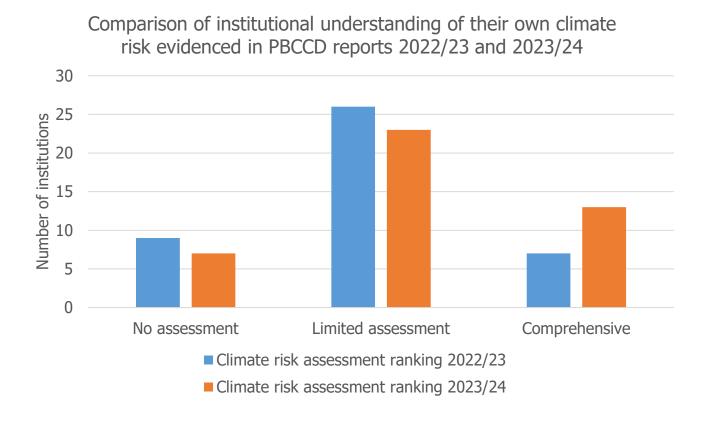
### Coming up: education for sustainable development

- Education for Sustainable Development Community of Practice
- Pilot: Targeted support programme for 4 institutions
- Development of ESD guidance for college education



### Coming up: climate risk and adaptation

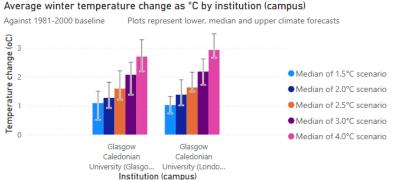
- Climate risk dashboard
- Climate risk and adaptation communications pack



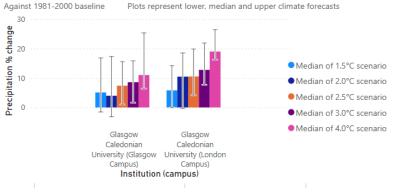
### Coming up: climate risk and adaptation

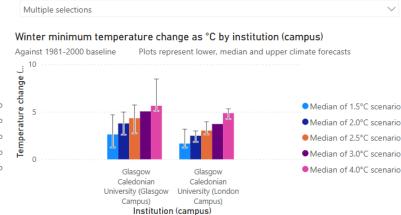
- Climate risk dashboard
- Climate risk and adaptation communications pack

#### Winter climate projection summary



#### Average winter precipitation change as % change by institution (campus)

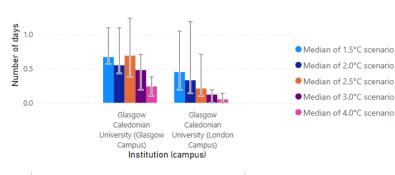




#### Annual count of icing days by institution (campus)

Institution (campus)

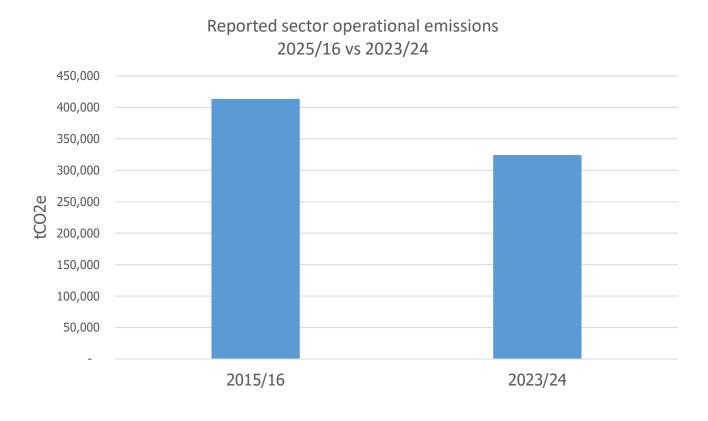
Against 1981-2000 baseline



Plots represent lower, median and upper climate forecasts

# Coming up: sustainability reporting

- Consultation response on draft statutory guidance
- PBCCD sector analysis reports
- PBCCD Group Peer Review



**Trend: 22% emission reduction** 

## Coming up: further resources

- Sustainable catering best practice guide
- Sustainable catering regional training with Forward Food Programme

### **Equipping chefs for a plant-powered future**

**Forward Food Plant-Based Culinary Training** 



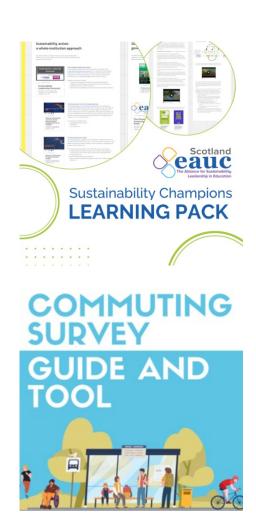
Help your diners make healthier culinary choices while smashing your sustainability goals!

Our aim is to equip and inspire foodservice professionals to create delicious and nutritious plant-based cuisine - not only for vegans, but for everyone.

## Coming up: further resources

### Updates to:

- Sustainability champions learning pack
- Commuting emissions calculator
- Domestic and international student relocation travel emissions calculator
- Funding register







# Acknowledgements



### We would like to acknowledge:

- Pauline, Rory, Aileen, Larissa, Iain, Robert and colleagues from Forth Valley College for hosting this event and providing the tour.
- All of our brilliant speakers for making the time and effort to share their insights.
- Colin Mclaren (Edinburgh College) and Lisa McGovern (City of Glasgow College) who couldn't make it along, but have shared resources for our post-event Resource Pack.
- The Scottish Funding Council for funding EAUC Scotland's Step-Change for Sustainability programme, of which the Biodiversity Guide and Template and this event were key outcomes.

# Any questions?



Scotland team: Scotland@eauc.org.uk

Lara Fahey: <a href="mailto:lfahey@eauc.org.uk">lfahey@eauc.org.uk</a>