THE UNIVERSITY of EDINBURGH

Forests and Peatland Project:

# Learning, teaching and research strategy

From 2023 until 2028

# What is the Forests and Peatland Project?

## The University of Edinburgh has made a long-term commitment to capture and store its unavoidable carbon emissions - and benefit nature in the process - by expanding forests and restoring peatlands in Scotland.

We have made this commitment because the global crises of climate change and biodiversity loss are intimately connected. As part of our University vision to make the world a better place, we aim to not only get our own house in order, but to use our world-leading research, learning and teaching to lead the way for other organisations to do the same.

The University of Edinburgh has made major progress in delivering a wide range of commitments on climate change, biodiversity and circular economy leading to our 2022 QS sustainability rankings of first in Europe and fourth globally.

**By 2040, we will become net zero.**

Our emissions continue to fall despite strong organisational growth, and we are actively delivering on major commitments such as carbon sequestration via forests and peatlands.

As a large educational institution, emissions from travel occur as part of teaching and research activities. While technology such as low carbon air travel is not yet in commercial use, our carbon footprint will not reach zero. Therefore, we will sequester all the carbon from business travel and student travel to and from their place of study. We want students to travel to their university knowing that their travel emissions are being mitigated through woodland creation and peatland restoration. Our commitment is to only offset what we consider to be unavoidable emissions, such as air travel, and cut all other emissions to zero.

# Why we need a learning, teaching and research strategy

## Our core business is learning and teaching, research, innovation and enterprise, and knowledge curation.

Our 2030 vision of “making the world a better place” by ensuring climate and sustainability teaching is included as core to the curriculum and the student experience, ensures that all students can critically engage, learn and feel empowered to take action to address the climate and environmental crises.

This strategy will increase the effectiveness of those opportunities and embed the Forests and Peatland Project within the University’s curriculum, research and experiential learning offer.

# Vision

**The University's Forests and Peatland Project will sequester all carbon dioxide from the University's travel emissions over a 50-year period and ensure additional benefits for nature and society.**

It will also create significant partnership opportunities for research, teaching, and community benefits through our owned land and partnership land.

This strategy will support the whole University community to utilise, create and experience our land and our partners' land assets for teaching opportunities, recreation, the broader student experience, and research impact in Scotland.

# Strategic drivers

## To realise our vision and achieve our objectives as a large institution, we will be influenced by multiple factors.

We have identified key external and internal strategic drivers that will need to be considered if we are to succeed in realising our vision.

These will all inform the Forests and Peatland Project's purpose, values and way of working.

### International

**UN Sustainable Development Goals** | **United Nations Conference of the Parties** | **Convention on Biological Diversity**

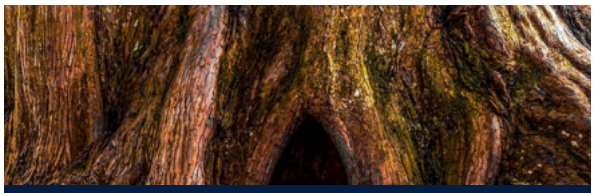
### Scottish Government

**Climate Change legislation** | **Just Transition commitments** | **Woodland creation targets** | **Peatland restoration targets**

### University of Edinburgh

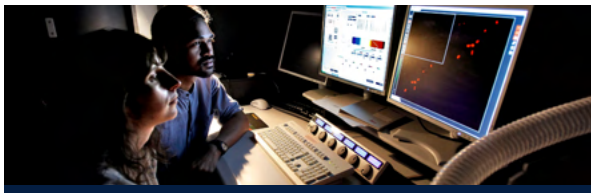
**Strategy 2030** | **Zero by 2040 Climate Strategy** | **Curriculum Transformation Programme** | **Social and Civic Responsibility Plan** | **Biodiversity Plan** | **Community Plan**

# Objectives



Ensure our forests and peatland and those of our partners are **resilient to expected climate change impacts and are sustainably managed**.

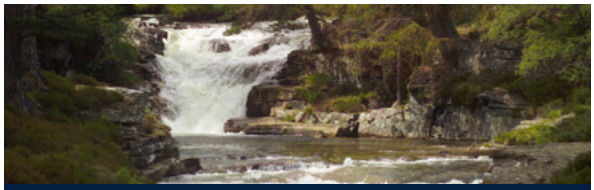
Implement baseline and continuous monitoring to **assess land-use change and ensure sustainable management**.



Create a **digital data strategy and implementation plan** to record longitudinal data on land-use change and climate adaptability.

**Engage with communities and businesses** near our sites to identify and co-develop benefits, such as educational opportunities and recreational access to nature.

Mobilise our sites as **Living Lab** opportunities for **research and teaching** to enhance the broader **student experience** across all disciplines.



**Restore, enhance and maintain ecosystem services** using best practice measures and effective management.

**Engage with the University community** so that the project becomes part of the life of the University, for all our students, staff and alums, through **educational opportunities and recreational access**.

# Our principles

## Urgency

The climate and nature emergencies mean that we will accelerate learning, teaching and research activities across the project as quickly as possible, with a view to every student and staff member in the University having a meaningful opportunity to engage in nature-based learning.

## Clarity

Clearly communicating the objectives and opportunities of the project is paramount in our large and diverse University community. Likewise, our alums, external stakeholders and the public all need to have clarity on what we are doing, how, and why. We will provide accessible reporting on all aspects of the project, including carbon uptake and biodiversity gain assumptions, rationales for land use decisions, and monitoring of progress.

## Credibility

Land management that successfully delivers on the climate and biodiversity goals we have set relies on using the best available evidence, robust safeguarding, and expert engagement. We will draw on world-leading expertise from across the University, collaborating closely with communities and external agencies, to ensure all plans and actions have the highest credibility possible.

## Coordination

The array of learning, teaching and research opportunities provided by the project, together with the huge diversity of disciplines and aspirations across our University community means that this project requires proactive and institution-wide coordination to maximise its success. We will draw on colleagues' expertise from across all three Colleges, from academic and professional staff, and from students and alumni, to make sure our plans, approaches and activities are well coordinated and integrated across the University.

**College of Arts, Humanities & Social Sciences**

**College of Medicine & Veterinary Medicine**

**College of Science & Engineering**

## Justice

Land in Scotland remains under high demand from myriad sources. All land use and management designed to address the climate and nature emergencies must also be considered within the context of achieving a resilient, sustainable and just transition to net zero. We will engage closely with communities and businesses local to our project to ensure the opportunities for their involvement and benefit are maximised throughout.

# Themes for all our discipline areas

## We want the Forests and Peatland Project to provide opportunities for students, educators and researchers from all three Colleges and across all disciplines.

As a response to environmental changes, the Forests and Peatland Project will play an active role in shaping and restoring the landscape. As such, the project provides an opportunity to observe and study these types of changes through a multiple disciplinary lens.

To increase interdisciplinary opportunities, we have identified interconnected thematic areas with relevance to all of our Colleges.

We use the well-recognised three pillars of sustainability to investigate Ecological, Economic and Social sustainability.

A justification for the use of this framework is that it has been used for the last four decades and forms the basis of the Sustainable Development Goals.

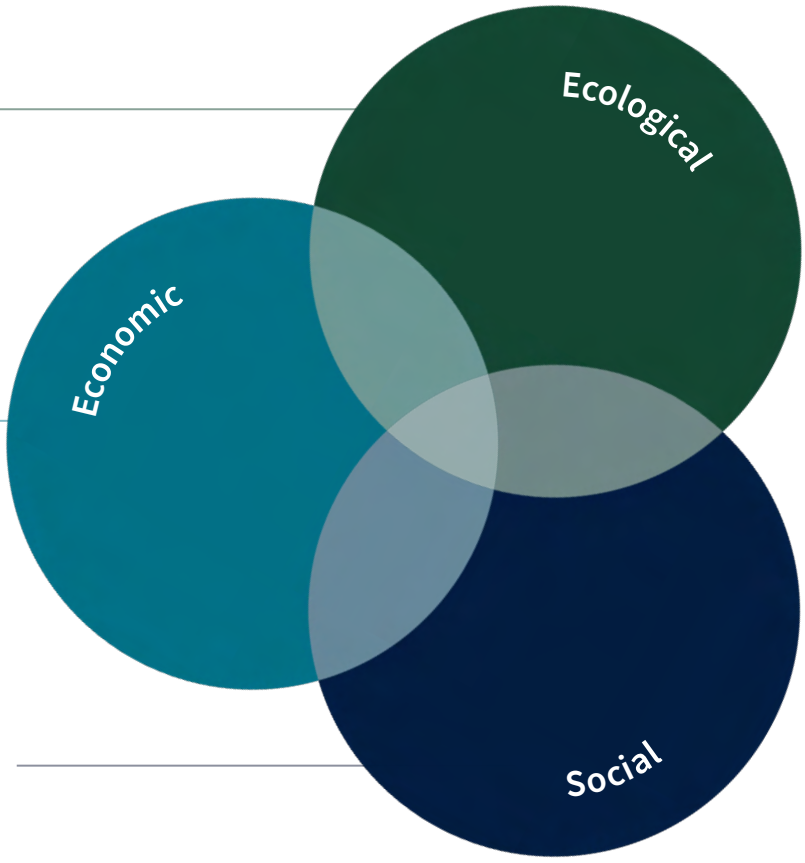
The following three dimensions incorporate our desire to measure and monitor environmental and societal change as they relate to land use change: ecological, economic and social.

These three dimensions will feature as part of the project's Monitoring Reporting Verification (MRV) approach to ensure that the project is delivered effectively and delivering nature positive solutions and societal benefits.

**Ecosystem services and functioning, sustainable or nature-positive land management (woodland creation and peatland restoration), biodiversity, carbon management.**

**The rural economy, bioeconomy, carbon finance, forest economics and the circular economy.**

**Human health and wellbeing, governance, gender dynamics, participation, recreation, policy evaluation, community justice, landscapes and society.**



# Learning

## Experiential education is a vital part of the pedagogical process for any subject area and can be used as an opportunity to embed sustainability into all subjects and disciplines.

Enabling staff and students to visit the project site in person will allow them to experience the development of forests and the restoration of peatland. We want sites to be used by as many staff and students as possible, so they become ingrained in University life. It is an opportunity for placed-based learning and outdoor education, as well as supporting the development of specific discipline skills such as plant identification.

To achieve these aims, we will leverage impact by working with colleagues delivering projects such as:

- Students as Change Agents (SaChA)
- the Careers Service
- LEAPS
- Edinburgh Award
- the Chaplaincy
- Edinburgh University Students Association
- Career Ready Programme
- STEM Ambassador Scheme.

We will develop new areas of nature-based engagement through:

- Citizen science initiatives and bioblitzes with local schools and communities
- Encourage colleagues across our disciplines to offer field trips and broader outdoor education opportunities for students.
- Tree planting for staff, students, friends and alumni to engage with nature and celebrate together
- Explore the option to dedicate a tree as graduation gift
- Incorporate information about the site into staff and student inductions
- Widening participation and engagement for local schools in liaison with the Widening Participation team
- Design and deliver massive open online courses (MOOCs) for University students and beyond
- Provide opportunities for students through the Volunteering Service.

# Teaching

## We want to establish a University-wide discussion on teaching interest across all subject areas.

Our Forests and Peatland Project will provide multiple types of opportunities for our students to learn scientific and social science skills in a natural environment.

This can be achieved through:

- outdoor educational opportunities such as course-specific field trips
- pedagogical approaches such as place-based learning
- or desk-based research using collected data sets.

The sites give educators a chance to use some or all the United Nations Sustainable Development Goals in their teaching delivering positive change locally, regionally and globally.

Living Lab dissertations for undergraduate or post graduate students can be chosen at both our owned and partners' sites. Dissertation mixers will be held annually for students who are interested in their applying their research to real sites across Scotland.

We will create an online data bank of usable data sets which students can continue to contribute to for high-quality long-term data. Data sets from ecosystem monitoring can directly help the University with biodiversity measuring and reporting.

In the first five years of the project, we will also investigate the provision of onsite facilities to maximise teaching and experiential trips for both course organisers and the students taking part in field trips.

# Research

## The University of Edinburgh is a world leading research-intensive University. We are here to address today's and tomorrow's greatest challenges.

The Forests and Peatland Project will not only sequester carbon, increase biodiversity and provide positive social impact, but also provide innovative research opportunities that start to build a data legacy. Longitudinal, rich data sets can be used for research internally but also have national and international relevance.

By providing opportunities for research on our sites and on our partnership sites, we hope to provide observable evidence of change over time - some driven by climate change - that supports changes to land management and delivers a sustainable future.

The Forests and Peatland Project aspires to be innovative, where all the project's sites could be smart sensing test beds.

Data could be collected remotely or in person and include baseline and long-term surveys for example on pollinators, invasive species surveys, surveys on disease such as Lyme disease from ticks, as well as conservation surveys for birds, peat, European protected species, heritage, habitats and ecological improvement reporting.

Business modelling, community net benefits and engagement, public use and just transition can all be researched using innovative methods providing high educational value and research impact.

To achieve these aims, we will provide:

- The security that a University owned site offers such as long-term econological monitoring as high value data sets.
- Ensure that access to University owned sites are offered at zero cost with in-kind staff time contributions claimable on grants.
- Work with researchers and academics interested in using the site to maximise site usage.
- Advice on health and safety limitations and provide permits required for research design.
- A University Monitoring, Reporting and Verification (MRV) methodology that will provide a clear statement of our intentions, whilst providing a clear comparison to other carbon codes (such as the Woodland Carbon Code).

We will align with funding bodies' strategic, and research aims, and with support from the Edinburgh Research Office aim to see increased grant application success. By 2024-25 we will set targets for additional income arising from the programme for research, innovation and enterprise.

We will investigate the opportunities and benefits of joining other networks (local to international) that measure long term socio-ecological factors.

# Scholarships and studentships

## PhD scholarships

We aim to develop a cohort of postgraduate students using the University owned sites for their research. The aspiration is for PhD students to address research gaps identified by the Forests and Peatland Project Board to achieve the project's aspiration through funded scholarships.

We hope to be able to provide University funded scholarships that collaborate and support existing and future Doctoral Training Partnerships (e.g., the E4 DTP) and Centres for Doctoral Training (e.g. SENSE) creating cohorts of researchers where possible.

## Scholarships and studentships with our partners

We will work with our partners, Development and Alumni and our Widening Participation team at the University to explore opportunities for co-generated income for students from disadvantaged and rural backgrounds, allowing undergraduate and post graduate study to be an option where it might not have been.

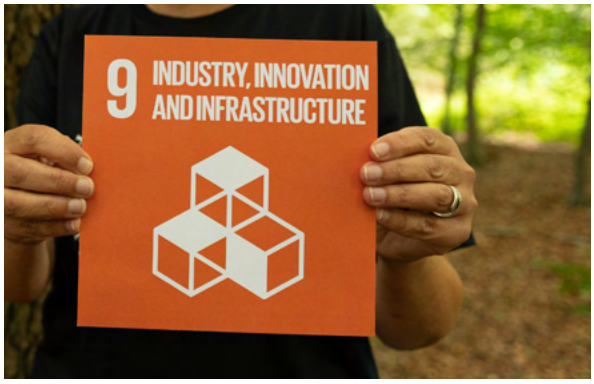
# Research income and commercialisation opportunities

The project intends to generate research and commercialisation opportunities by exploring the opportunities for business innovation via changes to both technology and business models, mutual research projects with the private sector and translational research.

It will do this by:

- Working with the Edinburgh Research Office to identify suitable funding calls.
- Working with academic colleagues applying for grants that make use of University and partner owned site(s).
- Work with Edinburgh Innovations to explore opportunities for commercialisation and test bed offerings.
- Opening conversations with private companies, trade associations and foundations to identify areas of mutual interest.

We will aim to set income goals for the project in this area during 2024-25.




# Next steps

## In order to deliver positive change, we know we need to develop a 'whole institution' approach to working with our learning, teaching and research communities.

We are working on a two-phase mechanism to deliver this strategy and will prepare an implementation plan in due course.

## Phase 1

- Communicating across the University to explain our ambitions, and work to ensure the project is embedded across the life of the University.
- Hosting consultation and engagement opportunities with key stakeholder groups such as the Curriculum Transformation Project, the Students' Association, each school's teaching and research offices, the student community and wider professional services staff.
- Provide clear explanations and communications that the project is part of a decarbonisation strategy in order to meet Net Zero by 2040 and explain our approach to managing emissions reductions.
- Highlight to the research and teaching community how they can take opportunities to embed the programme into their disciplines.
- Explore the funding of an academic with dedicated resource to:
  - Support delivery of a longitudinal data strategy and implementation plan
  - Ensure baseline surveys are agreed, with agreed sample points and type e.g., measures in hectares, abundance, etc
  - Generate a clear list of learning, teaching and research priorities and assist with aligning the programme's work and opportunities with existing internal and external funding
  - Set targets during 2024-25 for additional research and commercial income associated with the project.

## Phase 2

- Co-creation of an operational delivery plan for the Learning, Teaching and Research strategy with academic, professional services and student stakeholders.
- Maximise PhD opportunities by type, number and agree how they may be financed.
- Work with business and industry to commercialise sustainable land management theories into practice and generate research income.
- Continue communicating across the University as site plans progress and more partnerships become available for research and teaching opportunities.
- Begin to secure research and commercial income in line with targets set .

You can view this strategy online on our website, **www.sustainability.ed.ac.uk** at **edin.ac/land**
It can be made available in alternative formats on request.

**Easter Bush tree planting day**
**Andrew Perry, Sport & Exercise**
Front cover and page 3

**The Edinburgh Plant Growth Facility**
**by MAVERICK PHOTO AGENCY LTD**
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**Biological Sciences students at a computer, and George Square gardens by Paul Dodds**
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**Students in the Pentlands**
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**Students at the Bioquarter by**
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Developed and co-written by the Learning, Teaching and Research committee who report in to the Carbon Sequestration Programme Board.