



THE UNIVERSITY
of EDINBURGH

MSc Soils and Sustainability

Dr. Jennifer Carfrae, Programme Director & Dr. Rose Boyko, Deputy Programme Director,
06 November 2024

EDINBURGH
extraordinary futures await

MSc Soils and Sustainability

■ Why study MSc Soil and Sustainability?

- Healthy soil systems are the foundation for feed, fibre, and fuel; store and filter water; host a quarter of our planet's biodiversity; help to combat and adapt to climate change by playing a key role in the carbon and nitrogen cycles.
- The conservation and restoration of soil systems is necessary for a sustainable future (food security, resilience to floods and droughts, climate change mitigation and adaptation).
- This interdisciplinary programme encompasses the fundamentals of soil systems, sustainable land management and monitoring techniques to evaluate the role and effective management of soils in various environmental landscapes and socioeconomic contexts.



Why study at Edinburgh?

- Interdisciplinary approach
 - Strong emphasis on varied teaching approaches for both theoretical understanding and practical skills, such as laboratory and field-based activities.
- Taught by active researchers
 - Delivered by active researchers, and guest speakers from industry or research organisations.
 - Benefit from up-to-date research-led knowledge on soils and sustainability, and links to organisations and industries.
- Applied learning
 - Applying learning knowledge and skills to real-world situations.



THE UNIVERSITY
of EDINBURGH

EDINBURGH
extraordinary futures await

Programme Structure

- Structure of the programme. This programme is comprised of:
 - 4 compulsory courses
 - 2 optional courses
 - Field trip
 - Dissertation
- Assessment & Teaching
 - You will experience a range of teaching and assessment styles while you are studying.
 - Courses can be delivered through a mix of lectures, tutorials, seminars, workshops, practical's, laboratory work, short field trips and longer field courses.



THE UNIVERSITY
of EDINBURGH

EDINBURGH
extraordinary futures await

Part-time Structure

- You may study this programme part-time as we are committed to helping people into education while continuing to work or managing family and personal commitments.
- Two and three-year part-time options are available.
- We recommend living within a commutable distance from Edinburgh in order to undertake part-time study, and we encourage you to contact us to discuss part-time study in more detail.

2-year recommended programme:

- 3 compulsory courses in year 1 to include Professional and Research Skills in Practice.
- 1 compulsory course in year 2
- 20 credits of optional courses in Year 1, 20 in Year 2 (or both in year 2)
- Dissertation in Year 2

3-year recommended programme:

- 2 compulsory courses in Year 1, 2 in Year 2
- 20 credits of optional courses in Year 1, 20 in Year 2
- Dissertation only in Year 3



Course Structure Soils and Sustainability

Find a full list of compulsory and optional courses on [Degree Programme Timetables](#).

- Core Courses

- Soil Protection and Management
- Soils Science Concepts and Application
- Ecological Processes in Soils
- Professional and Research Skills in Practice

- Optional Courses

- Phytotechnology for Environmental Management
- Environmental Modelling
- Environmental Monitoring
- Environmental Impact Assessment
- Sustainability of Food Production
- Integrated resource management
- Land Use/Environmental Interactions
- Water Resource Management
- Frameworks in Food Security
- Human Dimensions of Environmental Change and Sustainability



THE UNIVERSITY
of EDINBURGH

EDINBURGH
xtraordinary futures await

Hours Required



20 credits (one course) = 200 hours work



This consist of 30 to 40 hours contact time in classes per course.



The rest of the time is devoted to in-class preparation (c. 30 to 40 hours), reading – guided and your own (c. 60 hours), group work and assignments (c. 70 hours)



Over 14 weeks, 600 hours is 43 hours of work per week.



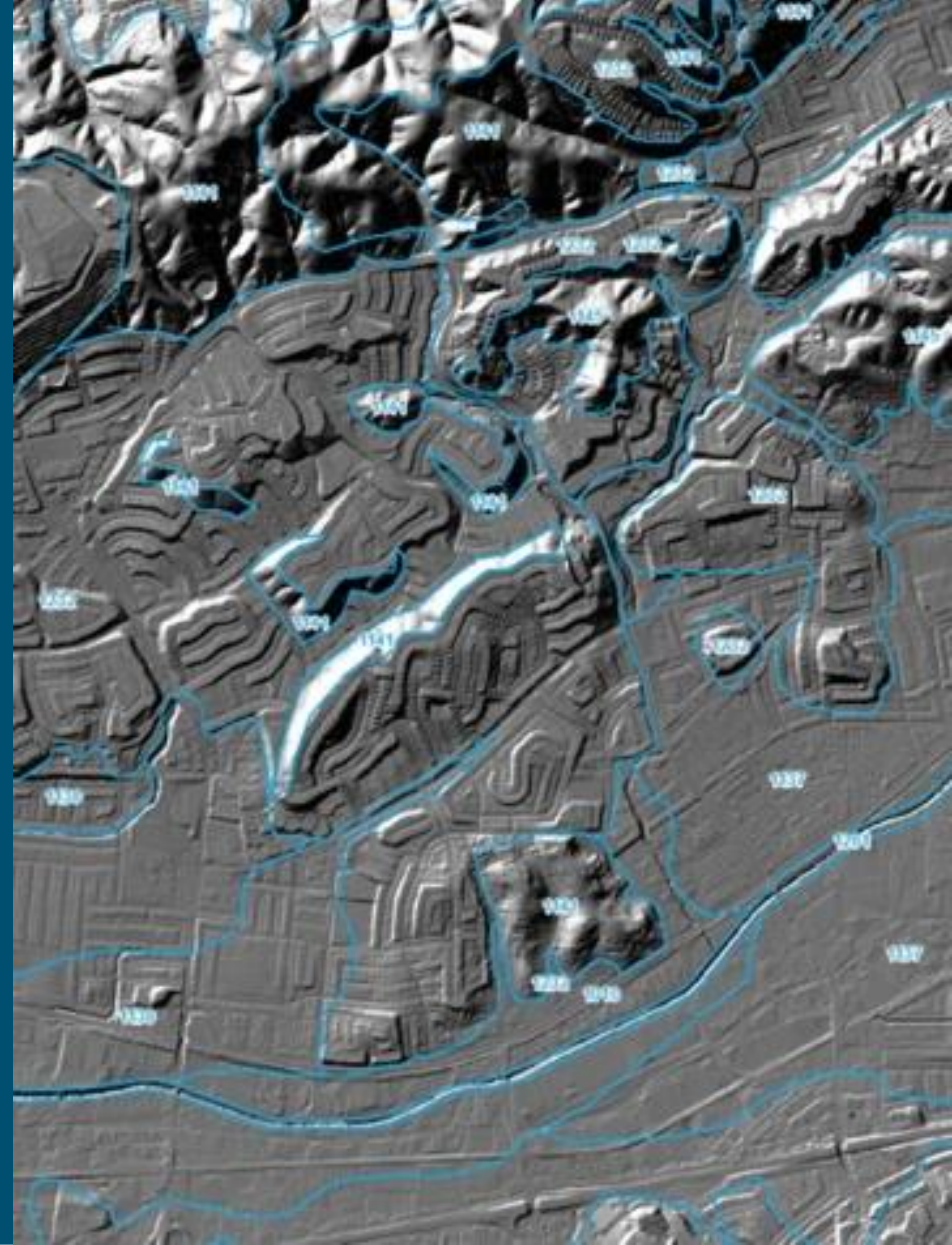
Assessment of work is based on the above time inputs.



MSc Soils and Sustainability

■ Field trips

- You will take part in a unique residential field trip, where you will have the opportunity to conduct primary data collection for soil stability and soil health as well as wider environmental monitoring.
- Location of study tours can vary from Portugal to Morocco and allow students to engage with local land management practices and socio-economic implications whilst exploring the soil types and management practices.
- Students undertake a combination of in field assessments together with collecting soil samples to undertake field laboratory analysis back at the centres.
- We also provide induction and course specific fieldtrips together with bespoke laboratory and field skills training.



THE UNIVERSITY
of EDINBURGH

EDINBURGH
extraordinary futures await

MSc Soils and Sustainability Study Tour



THE UNIVERSITY
of EDINBURGH

EDINBURGH
extraordinary futures await

MSc Soils and Sustainability

■ Cohort Activities:

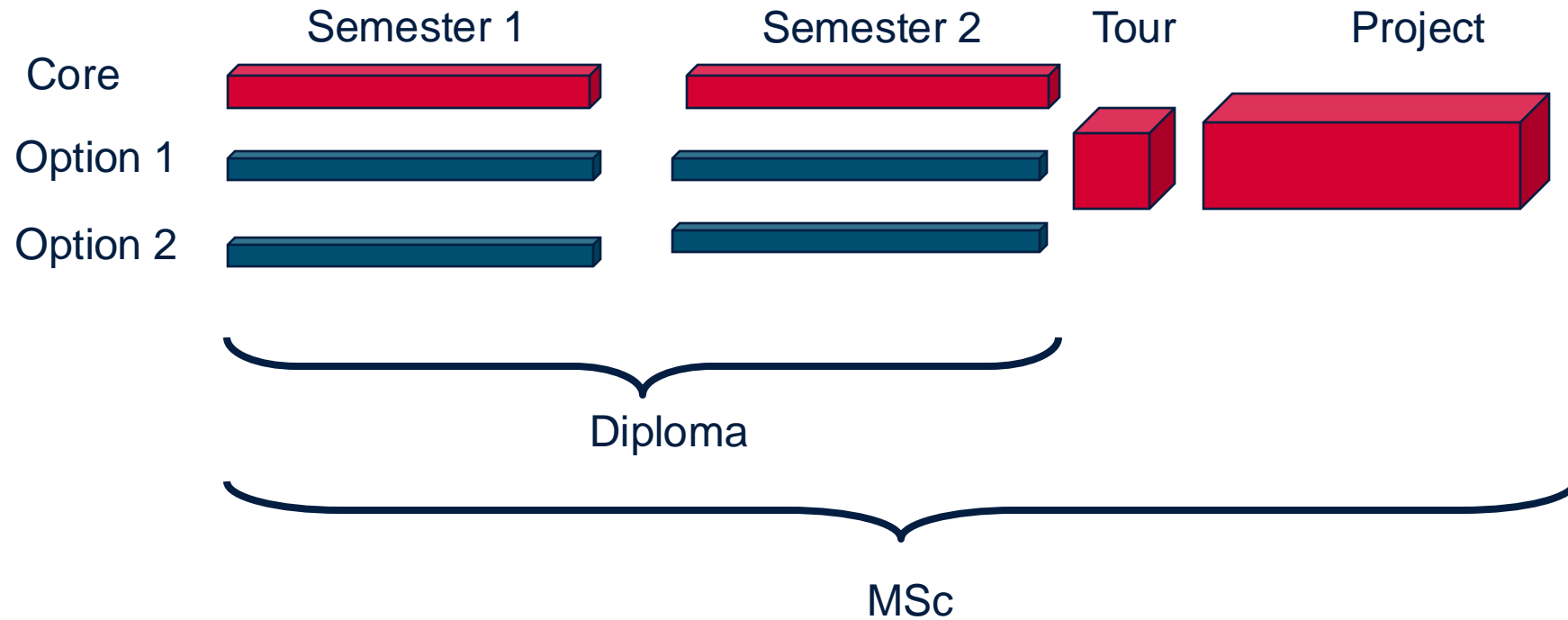
- Film Nights
- Fungal Foray
- Bowling
- Site Visits
- Soils events / workshops
- World Soils Day Competition



THE UNIVERSITY
of EDINBURGH

EDINBURGH
extraordinary futures await

Course structure



120 credits of taught work and 60 credit dissertation

Dissertation

- Undertake an original piece of research relating to environmental protection and management under the supervision of an experienced scientist



Case studies on Local Sustainable Agricultural Practices for Carbon Sequestration

An analysis of landscape preferences and levels of development on the Isle of Harris

Nutrient flows in a low input farm system

Greenhouse gas emissions from forest soils

Methane Flux from an Ombrotrophic Bog

Remediation of Hydrocarbon Contaminated Soils using sewage sludge

Investigating alternatives to mineral Phosphorus fertilisers

Impacts of beaver reintroduction on soil erosion

Peatland C Storage and the Carbon Market

Biochar experiments to remediate contaminated soil



THE UNIVERSITY
of EDINBURGH

EDINBURGH
xtraordinary futures await

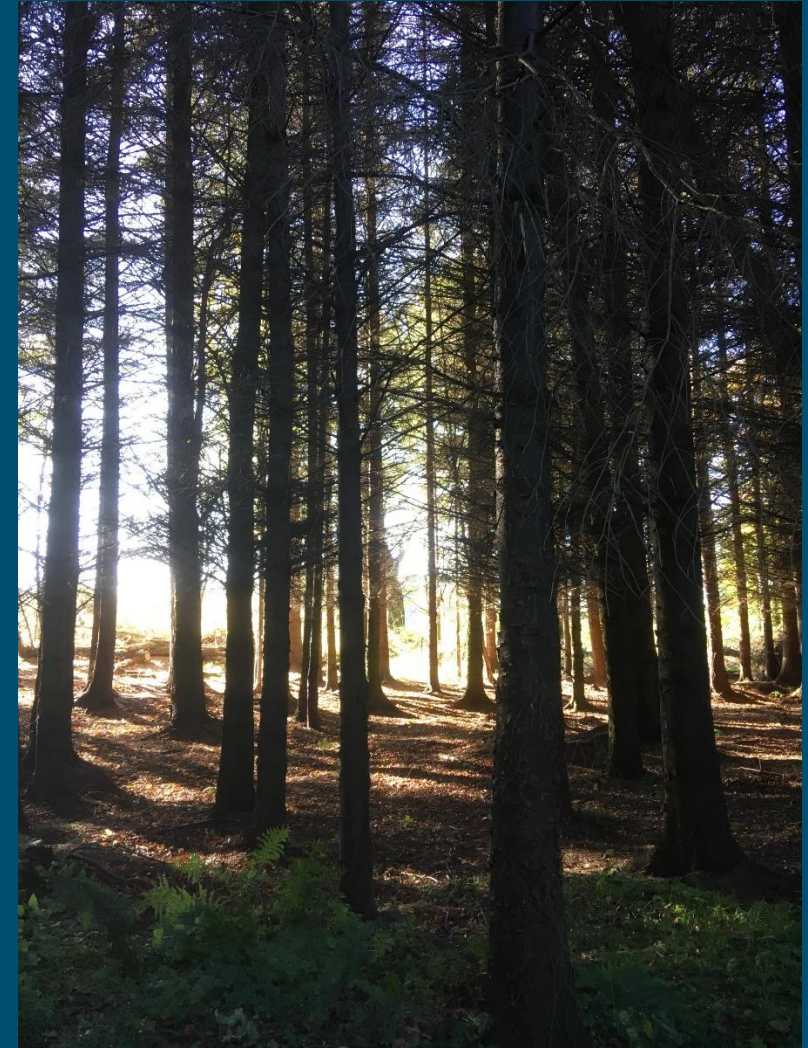
As an MSc student you are expected to:

- Manage your own independent learning.
- Complete your self-study as well as engage with lectures and discussions.
- Plan your time, read programme and course guidelines, and deliver assessments on time.
- Make use of academic literature, post-graduate resources, and the library services.
- Seek out and participate in seminars/webinars.
- Adhere to the University Student Code of Conduct <https://www.ed.ac.uk/academic-services/students/conduct/code-of-student-conduct>



Career opportunities

- The role of soils in sustainable food production and climate change mitigation is becoming more prevalent and is rising higher on the political agenda.
- Our graduates work in a variety of sectors, including academic research, land management, environmental consultancies, international and governmental agencies and NGOs.
- Examples of organisations our graduates have gained employment at include:
 - Scottish Government
 - SAC Consulting
 - Friends of the Earth
 - PhD scholarships (various institutes)
 - Private land management
 - and many more.



THE UNIVERSITY
of EDINBURGH

EDINBURGH
extraordinary futures await

Careers

- Forest and Land Scotland
- James Hutton
- Soils Association
- Environmental Education Centre, Ayrshire
- PhD studies (2-3 per year)
- Scottish Executive - shellfish and fish farming
- WWF in Athens
- Water of Leith Conservation Trust
- Environmental engineering company, Dessau-Soprin.
- Agri-environment consultancy, Dublin
- Environmental consultancy, Italy
- Scottish Environmental Protection Agency
- National Trust for Scotland
- Government service, Tanzania & Nigeria
- East of Scotland Water
- TEAGASC, Ireland
- Environmental Scientist with Babbie Group Ltd.
- Contaminated land consultancy work, Edinburgh
- Soils Consultant, Surrey



Alumni

- Part of a global community
- Diverse international cohort
- Soil and Land Management experts
- Join our Facebook group:

<https://www.facebook.com/SoilsAndSustainabilityMScEdinburgh>



THE UNIVERSITY
of EDINBURGH

EDINBURGH
extraordinary futures await

Scholarships and funding

- Featured funding
 - [ScottishPower Master Scholarships](#)
- School of GeoSciences scholarships
 - [See potential funding for GeoSciences students](#)
- Scotland's Rural College (SRUC) alumni discount
 - [Visit the SRUC website](#)
- You are encouraged to research the range of potential scholarships and other funding outside the University for which you may be eligible.
 - [Search for funding](#)

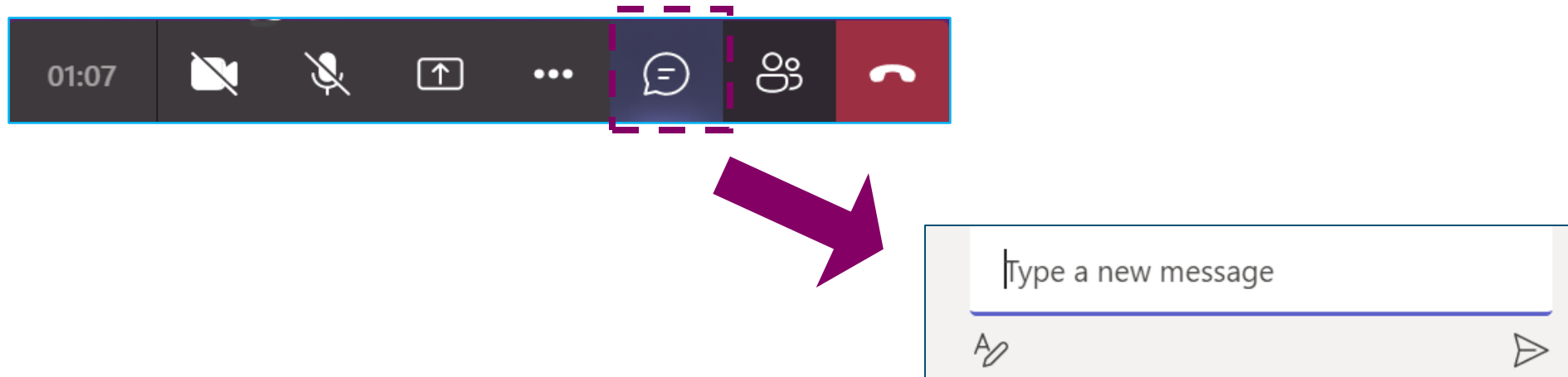


THE UNIVERSITY
of EDINBURGH

EDINBURGH
extraordinary futures await

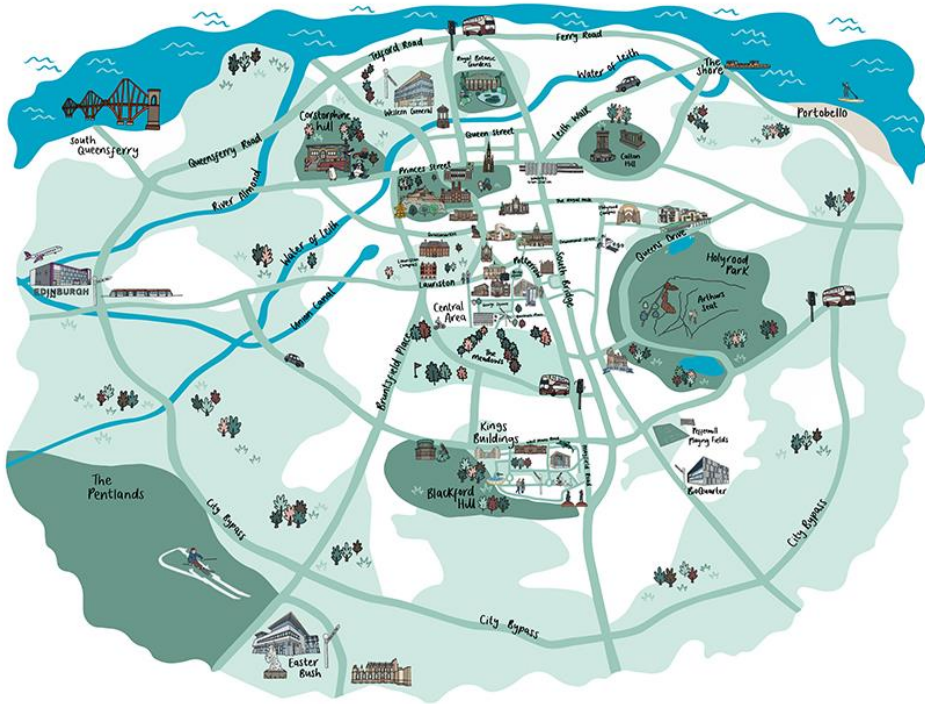
Asking questions

- Type your question into the Chat Area



Next steps...

<https://virtualvisits.ed.ac.uk/pg>



<https://edin.ac/student-chat-pg>



THE UNIVERSITY
of EDINBURGH

EDINBURGH
extraordinary futures await

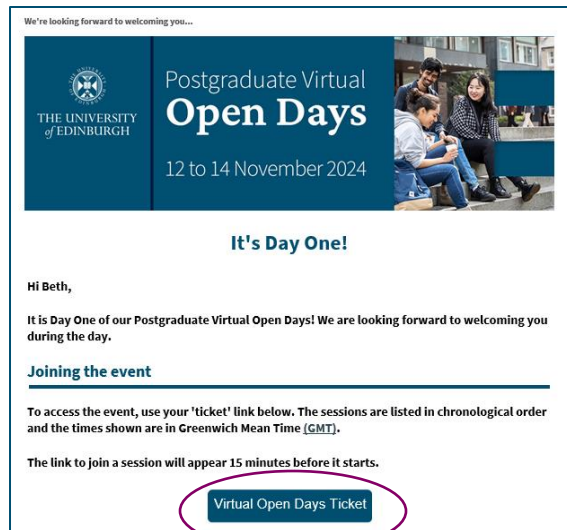
Contact details for follow-up questions

- We apologise if we did not get through all of your questions in the time allotted for this session. If you have further questions that have not been answered, please email: futurestudents@ed.ac.uk

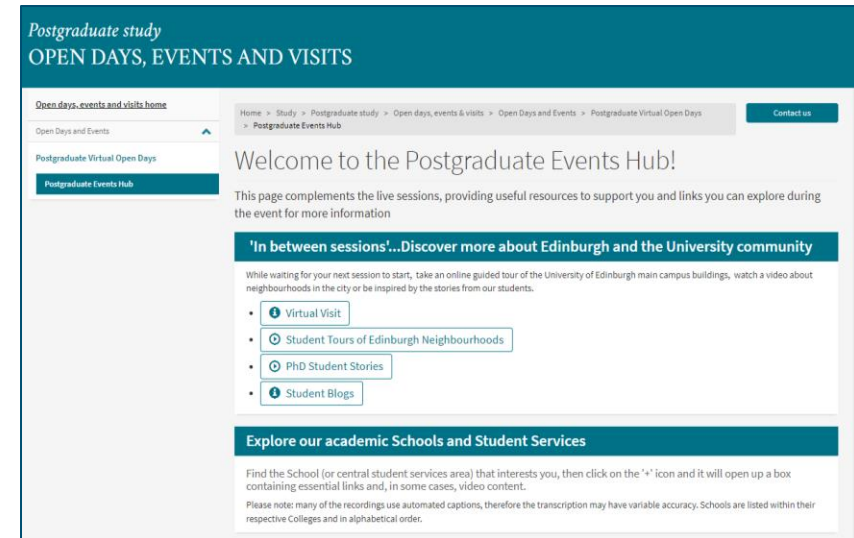


Thank you – click ‘Leave’ when the session ends

- Return to your ‘e-ticket’ to find and attend other sessions you’ve booked – by clicking on the button in the email we sent you...



- ...and visit the events hub:
- <https://edin.ac/4gZuP3G>



THE UNIVERSITY
of EDINBURGH

EDINBURGH
extraordinary futures await



THE UNIVERSITY
of EDINBURGH

Thank you

Jennifer Carfrae

Jennifer.Carfrae@sruc.ac.uk