The University of Edinburgh

Internal Periodic Review

School of Geosciences: Subject area of Ecological and Environmental Sciences

Undergraduate Provision

27-28 February 2023

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Executive summary

This report comprises the outcomes from the internal review of UG provision in the School of Geosciences for the subject area of Ecological and Environmental Sciences.

The review team found that the School has effective management of the quality of the student learning experience, academic standards, and enhancement and good practice.

The report provides commendations on the School's provision, recommendations for enhancement that the School will be asked to report progress on to the Senate Quality Assurance Committee and suggestions on how to support developments.

Key Commendations

The review team commended the School for its effective student community building, dedication of its academic and professional services staff, impressive postgraduate tutoring and demonstrator system and its open and adaptive communication. Further commendations are included in the report.

Key recommendations

The top three recommendations identified by the review team for the School to prioritise were:

- Transparency in planning for student numbers: increase transparency in the communication between the School management and Programme teams when considering the student numbers being admitted. This is to ensure there is a wider discussion with the staff delivering teaching and consider the consequences both positive and negative of a larger cohort.
- Review the level of assessment: carry out a strategic review of the assessment points throughout all years of the programmes. A review will look to avoid any repetition or overassessment and look to manage fixed resources for assessments.
- Improve formal mechanism for the student voice: look to increase student representation on all relevant School committees and Boards, for example, teaching committee and Board of Studies. Further to this, provide more transparent published information of the full loop of the student feedback process.

Commendations, recommendations and suggestions Commendations

Key strengths and areas of positive practice for sharing more widely across the institution.

No	Commendation	Section in report
1	The review team commends the School for the sense of community they have created amongst the students and staff. The Introduction to Ecological and Environmental Sciences (IEES) module has been positively received by the students for embedding a sense of cohort and the cohort-led activities like the Burns dinner have been greatly appreciated.	2.1
2	The review team commends the dedication of staff; all staff are open, adaptable and working towards the same goal of improving the course. Teaching staff, administrators, professional staff and postgraduate tutors and demonstrators should be commended for their support of students and the positive approach to the student experience. It is recognised that many staff are new appointments and have been appreciated additions to the team.	2.7
3	The review team highly commends the PG tutors and demonstrators (T&Ds) in the programme. It is clear that T&Ds feel part of the subject area team and they are committed and ambitious in improving teaching There is a good system in place for training and recruitment. Further to this, the review team commends the staff in place to support the T&Ds who are supportive and invested in improving the teaching experience.	2.7
4	The review team commends the open and responsive communication throughout the subject area. Staff, students and T&Ds were aware of who they should contact, felt comfortable getting in touch and were responded to quickly. Students, in particular, felt cared for by the School.	2.4
5	The review team commended the Academic Fair that is being organised for the students progressing from Years 1, 2 & 3. It is clear that the School has responded to the feedback from students and worked with them in planning their education and future career prospects.	2.6
6	The review team commends the large amount of field work available in the programmes. The review team felt it is a top offering for a practical course in the UK and is a key attraction to students.	2.1

Recommendations

Areas for development and enhancement – progress to be reported.

Priority	Recommendation	Section in	Responsibility of
		report	
1	The review team recommends that there is more transparency between the School management and Programme teams when discussing managing admission numbers on the programme. These discussions should involve all staff involved in delivering teaching and support to the cohort. Wider conversations should consider the positive and negative impacts and consequences that a larger cohort has on School staff and resources.	1.1	School Management and Programme Teams

	·		
2	The School should consider the feasibility and risk assessments required for larger numbers of students and in particular look at the maximum threshold of the field courses and cohort embedded courses. This will future proof the quality of the courses going forward. The review team recommends that the School	1.2	School
2	review the quantity of assessments for students. A strategic review of the assessment points through all years of the programmes will look to avoid repetitive assessment or overassessment and help to manage the fixed resources available for assessments.	1.2	Management and Programme Teams
3	The review team recommends that there needs to be a much better formal mechanism for the student voice within the School. The School should look to involve more student representation on all relevant School committees and Boards in particular, teaching committees and Board of Studies.	2.4	School Management
	The review team also recommends that there should be more transparent publishing of committee minutes relevant to all students. Further, the School should be highlighting the methods by which students can give feedback whilst ensuring that any actions taken are fed-back to the students to close the feedback loop e.g. "You Said, We Did."		
	The review team recognises that this recommendation follows on from Recommendations 6 & 7 from the previous 2017 review. The review team felt these recommendations were not sufficiently met in the School responses and should be reviewed and implemented.		
4	Given that the EES programme applications are moving to a selection process rather than rolling offers, the review team recommends the School uses its data to track the students that are being recruited and their level of attainment to allow for diversity of cohort. The School should look at gender, ethnicity, mature student status and widening access to ensure the course is in keeping with the University EDI vision. Furthermore, with the increasing student numbers, the School should look at what support	2.5	School Management
	can be provided for a greater diversity of student backgrounds.		

5	The review team recommends that the School	2.1	School
	provides guidance to incoming Year 1 students on		Management and
	course choices before they arrive, building upon		Programme Teams
	the Academic Fairs that run for continuing		
	students. Providing additional information, such as		
	a course prospectus suggesting recommended		
	education paths, pre-requisites, suitability for Year		
	1 or 2 students and possible career projections will		
	enable students to choose the most appropriate		
	courses.		
6	The review team recommends that staff should be	2.7	School
	encouraged to participate in the Postgraduate		Management
	Certificate of Academic Practice. The review team		Team
	felt that incoming staff should be enrolled into this		
	course as part of their initial training when their		
	teaching load is not as heavy.		

Suggestions

For noting – progress reporting is not required.

No	Suggestion	Section in report
1	The review team suggests that there is closer liaison between the Programme team and the external Schools e.g. Business and Biology, to better support EES students on their course choices.	2.1
2	The review team suggests that the School considers lecture-led education track appointments to future proof the practical delivery of the student experience. The review team felt there is clear evidence of the value these positions have for students.	2.7
3	The review team suggests that the School consider how best they can service students with summative and formative assessment. The programme team may want to consider the strategic potential of using formative assessments for early feedback opportunities. In addition, to address the perceived potential acute overloading of assessment marking and feedback raised by the teaching team, those activities associated with the 10-day field course could be scrutinised for potential efficiencies in assessment and subsequent feedback.	1.2
4	The review team suggest that the programme team consider the current operation of the "Buddy System" for new students and perhaps formalise the expectations of its use.	2.1
5	The review team suggests that the School considers using some individual short forms of feedback for the PG tutors and demonstrators to make these students aware of their individual contributions.	2.7
6	The review team suggests that the School considers the use of peer review for the PG tutors and demonstrators during their tutorials. The T&Ds are receptive to the usefulness of observation and feedback from their colleagues.	2.7
7	The review team suggests that there is better signposting of the different roles staff have to support students e.g. student advisors, cohort leads etc. This is to ensure students are best served by knowing who to contact with academic queries.	2.3

8	The review team suggests the School is conscious of the capacity of work	2.3
	for the Student Advisors, particularly at certain pinch points in the	
	academic year e.g. Welcome week or exam sessions. This is to ensure that	
	students are responded to in a timely manner and academic concerns are	
	handled efficiently.	

Section A – Introduction

Scope of review

Range of provision considered by the review (see Appendix 1).

The Internal Periodic Review of School of Geosciences in the subject area of Ecological and Environmental Sciences in 2022/23 consisted of:

- The University's remit for internal review (see Appendix 2)
- The subject specific remit items for the review:
 - How can we sustain the quality of teaching with the increased cohort sizes over the last three years?
 - In light of the forthcoming implementation of the School Course Delivery Framework (CDF), are there inefficiencies with the ways in which we deliver and assess our compulsory second year courses?
- The Reflective Report and additional material provided in advance of the review
- The meeting of the review team including consideration of further material (see Appendix 3)
- The final report produced by the review team
- Action by the School and others to whom recommendations were remitted following the review

Review Team Members

Convener	Professor Stephen Warrington	
External Member	Dr Jackie Pates (Lancaster University)	
External Member	Professor Robert Baxter (Durham University)	
Internal Member	Dr Annamaria Lilienkampt	
Student Member	Sandhya Behera	
Review Team Administrator	Amy Willis	
	Anastasia Mezecka (Shadowing)	

The School

The Ecological and Environmental Sciences sub unit is part of the School of GeoSciences, one of seven Schools within the College of Science and Engineering. Ecological and Environmental Science is one of three subject areas within the School of GeoSciences alongside Earth Sciences and Geography.

Physical location and summary of facilities

A significant proportion of teaching activity on the Ecological and Environmental Science degree programmes takes place within the School of GeoSciences, located within the University's King's Buildings campus. Students have access to the University's laboratories, computer facilities and

libraries across all University sites. In addition, during their time on the programme, students participate in fieldwork across Scotland.

Date of previous review

27 & 28 March 2017

Reflective Report

The reflective report was prepared by Dr. Gail Jackson (Degree Programme Convener). All EES staff, Director of Teaching, Director of Quality and Head of Student Services have had the opportunity to provide input to the report and their comments and suggestions incorporated. Student feedback was sought and views represented with the report.

The Head of School endorsed the report.

Section B – Main report

1 Strategic overview

The BSc (Hons) in Ecological and Environmental Sciences (EES) (including with Management) is located in the School of GeoSciences in the College of Science and Engineering. It is a unique Programme within the UK and was the first degree of its kind in the UK. EES have compulsory first and third year courses that are part of the BSc (Hons) Biological Sciences (Ecology) (and with Management) degree programmes offered by the School of Biological Sciences. The School has previously recruited a large amount of new staff, with more recruitment in progress. The review team heard that the School has established a working group to progress the accreditation of the two EES Degree Programmes by the Institution of Environmental Sciences, this is to put the programme in line with other Universities and will be used in future marketing materials to potential students.

The School asked the review team to consider two subject specific remit items which both were in regards to the strategic overview of the course: (1) How can we sustain the quality of teaching with the increased cohort sizes over the last three years? and (2) In light of the forthcoming implementation of the School Course Delivery Framework (CDF), are there inefficiencies with the ways in which we deliver and assess our compulsory second year courses?

1.1 In regards to subject specific remit item 1, due to Covid and Brexit, there had been an increase of both Scottish and Overseas students to the course in the last 3 years. There had been an overshoot in the number of expected students in 2020/21 and this had led to Year 1 course sizes of 60 – 70 which had to be accommodated. The School had no intention to grow student numbers further but instead to maintain and stabilise the current larger cohorts and ensure resources continuing in the future. This may mean running assessment or fieldwork courses twice to accommodate. The School detailed that they had also changed the sites for their fieldtrips to accommodate larger groups, they also confirmed they would be able to provide EES students with accommodation and food free of charge during the residential.

The review team met with the Head of Recruitment and Admissions for the College and were given a summary of the student journey and the breakdown of how the School interacted with the recruitment and admissions process. The review team heard how, whilst some University cultures, size and shape had changed with some monocultures being created, the School of Geosciences had a more balanced intake of students. The School had previously been making offers on a rolling basis as and when appropriate applications were made. Due to the popularity of the EES courses, the admissions team were now moving to a selection process which would grant greater control over who offers were made to. The panel felt the selection process would allow the School to begin thinking more about accessibility, inclusivity and Widening Participation for students. (Further discussed in 2.5)

The review team felt, following discussions with staff, that the School had coped well with the unexpected increased numbers from 2020/21 onwards and whilst the larger cohorts in the compulsory courses were over capacity, these had been catered to. The review team **recommends** that there is more transparency between the School management and Programme teams when discussing the increase in admissions numbers on the programme. These discussions should involve all staff involved in delivering teaching and support to the cohort. Wider conversations should consider both the positive and negative impacts and consequences that a larger cohort has on School staff and resources. The School should consider the feasibility and risk assessments required for larger numbers of students and in

particular look at the maximum threshold of the field courses and cohort embedded courses. This will future proof the quality of the courses going forward.

The review team panel also noted that, given the larger cohorts continuing, the School may wish to review the residential trips on offer throughout the course and perhaps when considering the resources required, number of assessments and what is gained, consider if the trips could be shortened while still achieving the learning outcomes.

1.2 When considering the subject specific remit item 2; the review team heard from the School that the School Course Delivery Framework was being used in Year 2 to enable consistency and transparency in the allocation of staff time to teaching, research and citizenship. The School had looked at the current work allocation model and found that some parts of the School had an uneven distribution of staff resource and effort and they wanted to adequately recognise where resource was required and cases made for new teaching positions.

The School detailed that due to the increased cohort sizes, many more hours of work by staff to provide effective assessment and individual feedback for the laboratory reports and field projects were needed for Year 2. The School was already looking at the Taught Assessment Guidelines to see if the current assessments for Year 2 met them. The review team felt the consideration of the CDF for Year 2 was an interesting idea and something that should be continued and reviewed to see the impact on both student experience and staff capacity.

The review team also felt that given the variation of the courses for EES and the number of assessments required in some courses e.g. Field Ecology, the School would benefit from looking further than Year 2 and at all assessments. The review team therefore **recommends** that the School review the quantity of assessments for students. A strategic review of the assessment points through all years of the programmes will look to avoid repetitive assessment or overassessment and help to manage the fixed resources needed for assessments.

Furthermore, the review team heard that there was some reluctance to use formative assessments more, as students were not as likely to engage as summative. However, the review team heard from students from various years who were open to formative assessments if it meant they could get helpful feedback fed forward before summative assessments. The review team **suggests** that the School consider how best they can service students with summative and formative assessment. The programme team may want to consider the strategic potential of using formative assessments for early feedback opportunities. In addition, to address the perceived potential acute overloading of assessment marking and feedback raised by the teaching team, those activities associated with the 10-day field course could be scrutinised for potential efficiencies in assessment and subsequent feedback.

2 Enhancing the student experience

2.1 The approach to enhancing Learning and Teaching

Through meeting with the two groups of students, it was very clear that the School's approach to their EES students was well received and the review team highly **commends** the School for the sense of community they had created amongst the students and staff. The Introduction to Ecological and Environmental Sciences (IEES) course has been positively received by the students for embedding a sense of cohort and the cohort led activities like the Burns Supper have been greatly appreciated. The students were aware of their peers and

felt connected to their class reps, the cohort embedded approach was an example of **good practice** and is something that will remain valuable for future students. The review team does **suggest** that the School may wish to revisit the Academic Family/Buddy System and consider its current use for new students and perhaps formalise the expectations as some students felt it didn't continue after the initial Welcome Week events.

The students commented that they had chosen the EES courses as they offered both Ecological and Environmental Sciences courses, which competing universities did not. Further to this, the variety of course choices was attractive to the students when deciding on their future career path. Some students commented that they would choose external courses, only to find that they clashed, so be forced to choose something else. Therefore, students did feel more support could be given to those choosing the non-EES courses, so the review team suggests that there is a closer liaison between the Programme team and the external Schools e.g. Business and Biology, to better support EES students on their course choices.

Fieldwork and practical assessment are clearly a key part of the learning and teaching design for the EES courses with field work featuring years and extensive residential trips for students. The review team was impressed with the focus on practical work and **commends** the large amount of fieldwork available in the programmes. The review team felt it is a top offering for a practical course in the UK and is a key attraction to students that sets this course apart from its competitors.

Whilst the extensive course choice is clearly an attraction for students building their careers and education in EES, the review team noted that it does come with its challenges. As detailed in 2.6, the students in the later years discussed the lack of recommended learning paths or details on what courses led to what careers had led to difficulties, this has been addressed through the introduction of the Academic Fair. However, the confusion over course choice was also echoed by the current Year 1 students who appreciated the flexibility of courses but wanted further guidance. The review team heard that Year 1 students were sent recommended course choices but they did not fit with the compulsory courses and the PATH platform did not perform well. It was clear that the students felt overwhelmed and lacked guidance when receiving the course choices before they entered the course in Year 1. Therefore, the review team **recommends** that the School provides guidance to incoming Year 1 students on course choices before they arrive. Providing additional information, such as a course prospectus, online sessions or videos suggesting recommended education paths, prerequisites, suitability for Year 1 or 2 students and possible career projections will enable students to choose the most appropriate courses.

2.2 Assessment and Feedback

The review team heard from the staff that Year 2 assessments are planned to be reviewed under the subject specific remit item 2 in line with the Taught Assessment framework to avoid overassessment. The review team has detailed its recommendation and suggestion under 1.2 in regards to assessment.

The review team heard from the School that they are aware through their NSS scores and students that the wait for feedback is a concern for students. This was echoed by the students the review team met with, who were very appreciative and positive regarding the quality of feedback they receive which they found very useful but were concerned with the gap in feedback. In particular, Year 1 students were concerned at the beginning of the

academic year where they had weekly assessments e.g. e-diaries, but did not receive timely feedback before the next submission so the students felt they continued to make the same mistakes.

The School has focused on managing student expectations and their expected turnaround time is 15 working days from submission to the return of marks and feedback, but this is now tempered by the understanding that sometimes, for good reason (for example large class sizes or excessive staff workload), this is not possible. In such cases, staff are now required to inform students when the marks and feedback will be returned and provide an explanation as to why this exceeds the 15-day norm. The School also acknowledged that the influx of extensions and/or special circumstances also impacts the moderation and feedback timescale.

The review team heard that the School shares its guidance on marking and feedback with staff and ensures they use the full range of marks and the common marking scheme and taught assessment principles from the University. The School explained their moderation process and the form used for summative assessments and they found that this process has led to lots of comments being given to students on how to improve, even for those at distinction level. Exam scripts are also made available for students to come and view following results release, students are able to photocopy or photograph the script but this has previously not been well attended.

2.3 Supporting students in their learning

The review panel heard that students felt there was good information provided to them prearrival at University, and despite the confusion with course choices, they felt welcomed and prepared for the course. The Introduction to Ecological and Environmental Sciences is well received and the students feel it is a key starting point for their course. As detailed in the commendation below in 2.4, students were confident in reaching out to the School and the responsive communication had made a good impression.

The review team met with the Teaching Office, Student Advisor, Cohort Leads and Student Experience Team. The Student support system is transitioning from Personal Tutors to a system of support where non-academic Student Advisors work alongside academic Cohort Leads. Student Advisor (Tamsin Taylor-Welch) was employed to support all first year EES and Earth Sciences and Environment students (approximately 100 students) and Gail Jackson and Stace Fairhurst became Cohort Leads for all EES first year students. A Student Experience Assistant (Gabriela Mizerska) and a Student Experience Manager (Chloe Cutler-Burton) are in the Student Experience Team based in the Student Experience Office in the Grant Institute, at King's Buildings. Student Advisors and Cohort leads are due to support Years 2, 3 & 4 from September 2023.

Whilst in its initial implementation, the review team heard that the first year students felt confident and knowledgeable in contacting their student advisor, Tamsin Taylor-Welch with issues. Many students detailed that they had contacted her in September 2022 with course choice queries and they did get a response. The review team noted that the students did not seem as aware of the Cohort Lead role and that they could contact Gail or Stace directly, particularly with academic queries. The review team **suggests** that there is better signposting of the different roles staff have to support students e.g. student advisors, cohort leads etc. This is to ensure students are best served by knowing whom to contact with academic queries.

Furthermore, the review team **suggests** the School is conscious of the capacity of work for the Student Advisors, particularly at certain pinch points in the academic year e.g. Welcome week or exam sessions. This is to ensure that students are responded to in a timely manner and academic concerns are handled efficiently.

2.4. Listening and responding to the Student Voice

The review team panel felt that the School is very open to communication and feedback from students and staff in ways to improve, as seen in the development of the Academic Fair (see 2.6). Throughout the review, the panel heard positive views from all staff and students on the responsiveness to emails or issues. Therefore, the review team **commends** the open and responsive communication throughout the School. Staff, students and T&Ds were aware of whom they should contact, felt comfortable getting in touch and were responded to quickly. Students, in particular, felt cared for by the School.

However, the review panel felt that the School could improve its formal mechanisms for recognising and responding to the student voice. The review panel met with students at various points on the courses, including student reps. whilst the student reps were aware of the feedback process via SSLCs, non-rep students were not very aware of the feedback processes available to them. Many students echoed the concern that when they do feedback that it does not go anywhere, suggesting an issue in closing the feedback loop. Furthermore, the review team panel felt that there was not enough student representation in the relevant teaching committees or Board of Studies within the School to demonstrate that the student voice is considered, in particular when changes are being considered for the courses. Therefore, the review team **recommends** that there needs to be a much better formal mechanism for the student voice within the School. The School should look to involve more student representation on all relevant School committees and Boards in particular, teaching committees and the Board of Studies.

The review team also **recommends** that there should be more transparent publishing of committee minutes relevant to students. Additionally, the School should be highlighting the methods students can give feedback whilst ensuring that any actions taken are fed-back to the students to close the feedback loop e.g. "You Said, We Did" and publishing online meeting agendas and minutes.

The review team recognises that this recommendation follows on from Recommendations 6 & 7 from the previous 2017 review. The review team felt these recommendations were not sufficiently met in the School responses and should be reviewed and implemented.

2.5 Accessibility, Inclusivity and Widening Participation

The review team noted that the School has not previously made widening participation a priority they have put support in place in regards to funding fieldtrips and considering more accessible conversion activities. The School noted they are also trying to focus on recruiting international students from countries where they could get scholarships or funding. The School were not aware of the WP flags or contextual offers that are made as this is made by the Admissions and Recruitment team and depends on various factors.

The review team heard from the School regarding a gender imbalance with 71.4% of students identified as female, 5.9% identified as BAME backgrounds and it was not clear how many widening participation students the School currently has. The School also currently holds a Bronze Athena Swan Award. The School noted that the staff balance is more 50/50 in gender but there was no data on the ethnicity make-up of the staffing.

As detailed in 1.1, the review team was informed of the recruitment process and given that the EES programme applications are moving to a selection process rather than rolling offers, the review felt it was the opportune time to **recommend** that the School uses its data to track the students that are being recruited and their level of attainment in order to diversify the cohort. The School should look at gender, ethnicity, mature student status and widening access to ensure the course is in keeping with the University EDI vision. Furthermore, with the increasing student numbers, the School should look at what additional support can be provided to support students from diverse backgrounds.

2.6 Development of Employability and Graduate Attributes

The review team met with two groups of students from all years of the course and across both programmes. Some later year students expressed that as there were no recommended course paths or combinations suggested in their early years, they felt it had been difficult to establish their career path and if the courses were complimentary to that. It was clear that the School was already working with students on their concerns and the review team **commended** the Academic Fair that is being organised for the students progressing from Years 1, 2 & 3. It is clear that the School has responded to the feedback from students and worked with them to help plan their education and future career prospects.

The review team also heard from students on the newly implemented mentoring scheme for Year 3 students, paired with recently graduated EES alumni. Whilst this programme was only beginning, the students were excited to be involved and looking forward to the help with their CVs and the experience they would gain. Students undertaking the consultancy modules praised the experience they were gaining but felt it could be promoted more to the EES students as a non-science option that would give them greater professional skills.

2.7 Supporting and developing staff

As noted in 1.1, the School had gone through a significant change with staffing, with many new staff hired in the previous year alongside the new Student Advisor system and Student Experience teams being implemented. Both new and existing staff had to cope with the increased student numbers and the additional pressures that the Covid pandemic had brought to the School. The review team met with various staff from all areas of the School and was impressed with the positive attitude and openness to embrace change with a student-led approach. The review team **commended** the dedication of staff, as all staff are open, adaptable and working towards the same goal of improving the course. Teaching staff, administrators, professional staff and postgraduate tutors and demonstrators should be commended for their support of students and positive approach to the student experience. It is recognised that many staff are new appointments and have been appreciated additions to the team.

Whilst the review panel appreciated that the positive of certain teaching appointments will depend on the direction the University wants to take, they **suggest** that the School considers

teaching-led education track appointments to future proof the practical delivery of the student experience. The review team felt there is clear evidence of the value these positions have on students.

The review panel heard that the School has a robust induction in place with new staff to get them trained and well-functioning with guidance given on marking and teaching and new staff usually having a long period of time before being required to organise and run teaching on their own. The review panel noted that the principle of remit item 2, is to lessen the workload on staff teaching to allow more consistency whilst also ring-fencing time for research and citizenships. The review panel heard that only a small number of staff in the School have chosen to complete any continuing professional development like Postgraduate Certificate in Academic Practice (PgCAP). The review panel felt that this is a missed opportunity for the staff and the School should look to increase the number of staff taking the course. The review team recommends that staff should be encouraged to participate in the Postgraduate Certificate of Academic Practice. The review team felt that incoming staff should be enrolled on this course as part of their initial training when their teaching load is not as heavy.

The review panel met with the Postgraduate Tutors and Demonstrators (T&Ds) and also with the professional staff that support them. The review panel was impressed by the extensive induction and recruitment that T&Ds received and this was well appreciated by the T&Ds. The students are paid for their induction but also for their logged hours on LEARN and their training courses linked to IAD. The T&Ds appreciated that during the induction they had the chance to meet with experienced tutors in break out rooms without the School staff and this is an example of **good practice**. The T&Ds felt integral and supported by the staff so the review team highly **commends** the PG tutors and demonstrators (T&Ds) in the programme. It is clear that T&Ds feel part of the School team and they are committed and ambitious in improving teaching. There is a good system in place for training and recruitment. Further to this, the review team **commends** the staff in place to support the T&Ds who are supportive and invested in improving the teaching experience.

Further to the above, the review team felt some additional suggestions would be useful in helping the T&Ds develop further and there is a want from T&Ds for more individual feedback. Therefore, the review team **suggests** that the School considers using some individual short forms of feedback for the PG T&Ds to make these students aware of their individual contributions. Also, the review team **suggests** that the School considers the use of peer review for the PG tutors and demonstrators during their tutorials. The T&Ds are receptive to the usefulness of observation and feedback from their colleagues.

2.8 Learning environment (physical and virtual)

Teaching is mostly delivered across the Kings Building's campus, with classes sometimes scheduled across Central campus but this is avoided when possible due to the travel and to improve student experience. Teaching and computer spaces are used in the Crew building, laboratory spaces in the Ashworth Building and the new Nucleus Building will be open for room bookings.

The review team heard from staff in the Teaching Office who noted that they had been working with the timetabling and modelling teams to gain more insight into timetable building and room use. A more flexible approach to when lectures and tutorials are being booked to avoid peak teams is being adopted and the School will have priority over the rooms

in their buildings. Whilst the computer spaces remain limited, the School is working on an initiative for students to bring their own devices and the School can provide them with the appropriate software or virtual desktops to enable working. The School is continuing to use the library loan system for students without laptops and looking to find other innovative ways to reduce the need for computer spaces.

The School appear to be managing with the learning spaces they have available but the review team felt they are at capacity. The review team commented that room resource is a key consideration for subject specific remit items when considering maintaining quality with larger student cohorts.

3 Assurance and enhancement of provision

The School operates within the University's Quality Framework and the review team is confident that academic standards are high. The School's approach to setting, maintaining and reviewing academic standards is appropriate. Standards are continually reviewed through External Examiner reports, student feedback and annual monitoring.

Appendices

Appendix 1: Range of provision considered by the review

BSc (Hons) Ecological and Environmental Sciences and BSc (Hons) Ecological and Environmental Sciences with Management

Appendix 2: University remit

The University remit provides consistent coverage of key elements across all of the University's internal reviews (undergraduate and postgraduate).

It covers all credit bearing provision within the scope of the review, including:

- Provision delivered in collaboration with others
- Transnational education
- Work-based provision and placements
- Online and distance learning
- Continuing Professional Development (CPD)
- Postgraduate Professional Development (PPD)
- Provision which provides only small volumes of credit
- Joint/Dual Degrees
- Massive Open Online Courses MOOCs (even if non-credit bearing)

1. Strategic overview

The strategic approach to:

- The management and resourcing of learning and teaching experience,
- The forward direction and the structures in place to support this.
- Developing business cases for new programmes and courses,
- Managing and reviewing its portfolio,
- Closing courses and programmes.

2. Enhancing the Student Experience

The approach to and effectiveness of:

- Supporting students in their learning
- Listening to and responding to the Student Voice
- Learning and Teaching
- Assessment and Feedback
- Accessibility, Inclusivity and Widening Participation
- Learning environment (physical and virtual)
- Development of Employability and Graduate Attributes
- Supporting and developing staff

3. Assurance and Enhancement of provision

The approach to and effectiveness of maintaining and enhancing academic standards and quality of provision in alignment with the University Quality Framework:

• Admissions and Recruitment

- Assessment, Progression and Achievement
- Programme and Course approval
- Annual Monitoring, Review and Reporting
- Operation of Boards of Studies, Exam Boards, Special Circumstances
- External Examining, themes and actions taken
- Alignment with SCQF (Scottish Credit and Qualifications Framework) level, relevant benchmark statements, UK Quality Code
- Accreditation and Collaborative activity and relationship with Professional/Accrediting bodies (if applicable)

Appendix 3: Additional information considered by review team

- Reflective Report
- Academic Standards Scrutiny Comments
- Careers Report
- Current Subject Area Information and Staffing
- Previous Review Report
- Programme Course List
- Links to Supporting documents:
 - Degree Programme Specification
 - Programme Handbooks LEARN
 - Quality Assurance
 - Equality and Diversity Student Report 2020
 - Learning and Teaching Strategy
 - Subject Benchmark Statement: Earth Sciences and Environmental Sciences
 - University Student Representation
 - University Student Voice
- Student Staff Liaison Committee meeting minutes (previous academic year)
 - October 2021
 - November 2021
 - February 2022
 - March 2022

Appendix 4: Number of students

Table below shows the student numbers in each Programme and each year group in the 2022-23 academic year. The EES degrees (including the w/m stream) are the second largest stream of undergraduate programmes in the School of GeoSciences, accounting for 22% of all undergraduate

admissions in 2022-23. The Geography stream is the largest, with 55% of admissions, followed by the Earth and Environmental Sciences degrees with 22%.

Year	Ecological and Environmental Sciences (EES)	EES with Management	Total by year
1	40	19	59
2	35	13	48
3	44	15	59
4	34	3	37
Total	153	50	203

Student numbers in each programme and year group in academic year 2022-23. Data extracted from Euclid on 01/12/2022

Table below shows entry numbers for both EES programmes by fee-based groupings for the last seven years. These are admissions data that do not capture students transferring into and out of the programmes. The increasing numbers of overseas students reflects weak recruitment in other programmes and pressure on the School to meet College quotas.

Year of Entry	Scotland	RUK	Overseas	Total
2015-16	96	19	24	139
2016-17	110	16	23	149
2017-18	111	14	18	143
2018-19	129	17	21	167
2019-20	131	21	18	170
2020-21	147	25	27	199
2021-22	142	33	33	208

Total student numbers for both EES Programmes by fee-based groupings for the last seven years based on admissions entry data