

**The University of Leeds**  
**EXTERNAL EXAMINER'S REPORT**  
**ACADEMIC YEAR: 2014– 2015**

**Part A: General Information****Subject area and awards being examined**

Faculty / School of:	Earth and Environment
Subject(s):	<i>Environmental Sciences</i>
Programme(s) / Module(s):	BSc Environmental Science (and Industrial/International variants) BSc Meteorology and Climate Science (and Industrial variant) MEnv Environmental Science (International) MEnv Meteorology and Climate Science (International)
Awards (e.g. BA/BSc/MSc etc):	BSc/MEnv

**Name and home Institution / affiliation of Examiner****Completed report**

The completed report should be attached to an e-mail and sent as soon as possible, and no later than six weeks after the relevant meeting of the Board of Examiners, to [exexadmin@leeds.ac.uk](mailto:exexadmin@leeds.ac.uk).

Alternatively you can post your report to: **Head of Quality Assurance**  
Room 12:81, EC Stoner Building  
The University of Leeds, Leeds LS2 9JT

**Part B: Comments for the Institution on the Examination Process and Standards****Matters for Urgent Attention**

*If there are any areas which you think require urgent attention before the programme is offered again please note them in this box*

None.

**Only applicable in first year of appointment**

*Were you provided with copies of previous relevant External Examiners' reports and the response of the School to these?*

Yes, I was provided with copies of the previous External Examiner's report for the 2013-14 academic year along with the response of the School to these comments.

**For Examiners completing their term of appointment**

*Please comment on your experience of the programme(s) over the period of your appointment, remarking in particular on changes from year to year and the progressive development and enhancement of the learning and teaching provision, on standards achieved, on marking and assessment and the procedures of the School*

N/A

## Standards

### 1. Please indicate the extent to which the programme Aims and Intended Learning Outcomes (ILOs) were commensurate with the level of the award

- *The appropriateness of the Intended Learning Outcomes for the programme(s)/modules and of the structure and content of the programme(s);*
- *The extent to which standards are appropriate for the award or award element under consideration.*

The programme learning outcomes are clearly defined in the degree programme catalogue; these appear appropriate, and are developed nicely on a year by year basis as the student progresses. The aims and learning outcomes for individual modules are tailored to the module content, building both academic understanding and key skills, and the standards appear fully appropriate.

### 2. Did the Aims and ILOs meet the expectations of the national subject benchmark (where relevant)?

- *The comparability of the programme(s) with similar programme(s) at other institutions and against national benchmarks and the Framework for Higher Education Qualifications.*

Yes, the aims and learning outcomes match those expected for environmental science programmes as outlined in the QAA's national benchmarks, and they are comparable with those at similar institutions.

### 3. Please comment on the assessment methods and the appropriateness of these to the ILOs

- *The design and structure of the assessment methods, and the arrangements for the marking of modules and the classification of awards;*
- *The quality of teaching, learning and assessment methods that may be indicated by student performance.*

There is a healthy diversity of approaches to assessment based around different combinations of exams and coursework, and it is particularly nice to see good use of assessed oral presentations, field work reports, wiki pages, description of model results, etc., which clearly enrich the student learning experience. The balance of coursework and exams appears appropriate across the programmes as a whole. The quality of assessment is consistently high across the modules, and the marking procedure is transparent, with coursework annotated with appropriate comments, feedback provided to the student through tailored feedback sheets, and moderation effective and traceable through well-designed moderation procedures.

### 4. Were students given adequate opportunity to demonstrate their achievement of the Aims and ILOs?

- *The academic standards demonstrated by the students and, where possible, their performance in relation to students on comparable courses;*
- *The strengths and weaknesses of the students as a cohort.*

The combination of assessment approaches gives students plenty of opportunity to demonstrate their understanding of what they learn across their modules. The academic standards are generally high, judging from the coursework and examination scripts I examined, and they appear fully comparable to those in other institutions. An appropriate quantity of feedback is provided to students to guide their learning. On speaking to the students, they were very positive about the tutorial system in its support of their learning, and praised the accessibility and helpfulness of staff.

### 5. For Examiners responsible for programmes that include clinical practice components, please comment on the learning and assessment of practice components of the curriculum

N/A

### 6. Please comment on the nature and effectiveness of enhancements to the programme(s) and modules since the previous year

*It would be particularly helpful if you could also identify areas of good practice which are worthy of wider dissemination.*

While I do not have first-hand experience of the programme from previous years, there have been a number of changes such as the introduction of the Environmental Research and Career Skills course (SOEE2700) which combined two previous modules. This covers a wide range of skills (statistics, practical skills, measurements, careers, and dissertation preparation), and while these are fairly disparate in nature, the new module appears to have been reasonably successful and student feedback was on the whole good.

### 7. Please comment on the influence of research on the curriculum and learning and teaching

*This may include examples of curriculum design informed by current research in the subject; practice informed by research; students undertaking research.*

There is a strong influence of research on the teaching, most notably in climate change courses and in the atmospheric sciences in general. The Level 3 Frontiers module covering topical areas of current research was singled out for praise in my discussions with students. I note a significant numerical modelling element in a number of L3 modules which reflects staff research expertise and is particularly valuable for developing student skills. Research activities influence students most strongly through choice of dissertation topics, where many of them work with staff at the current boundaries of knowledge. The students I talked to thought that the dissertation system worked very well; all had topics they were keen to pursue and were supervised by research-active staff. The quality of projects appears consistently high, and several of the dissertations I read were approaching the standards needed for publication in the scientific literature.

**8. Where the programme forms part of an Integrated PhD, please comment on the appropriateness of the programme as training for a PhD**

N/A

**For Examiners involved in mentoring arrangements**

**9. If you have acted as a mentor to a new External Examiner or have received mentor support please comment here on the arrangements**

I was given a mentor when I first took up my appointment. Although we made email contact at an early stage, I did not take advantage of this arrangement until meeting in person during the examination board period, as the guidance from the administrative staff in the School was more than sufficient.

**The Examination/Assessment Process**

**10. The University and its Schools provide guidance for External Examiners as to their roles, powers and responsibilities. Please indicate whether this material was sufficient for you to act effectively as an External Examiner.**

*Whether External Examiners have sufficient access to the material needed to make the required judgements and whether they are encouraged to request additional information.*

Both the University and the School provided documentation on the procedures to be followed, and the department provided full access to all assessment material and regulations. They were happy to chase up any additional material as and when needed.

**11. Did you receive appropriate documentation relating to the programmes and/or parts of programmes for which you have responsibility, e.g. programme specifications or module handbooks, marking criteria?**

*The coherence of the policies and procedures relating to External Examiners and whether they match the explicit roles they are asked to perform.*

Yes, module handbooks and programme specifications were provided, along with specimen answers for exam questions, etc. Much of the material was provided through the VLE which was very helpful (once I'd learnt my way around it).

**12. Were you provided with all draft examination papers/assessments? Was the nature and level of the questions appropriate? If not, were suitable arrangements made to consider your comments?**

I received copies of draft exam papers in November and then again in March. The questions (and solutions) appeared fully appropriate, and I provided feedback and requests for clarification. I verified that these changes had been taken on board when I checked over the examination papers during my visit in June, and was glad to see that they had.

**13. Was sufficient assessed / examined work made available to enable you to have confidence in your evaluation of the standard of student work? Were the scripts clearly marked/annotated?**

The School was very efficient in making all exam scripts and coursework available for evaluation when I visited, either in hardcopy or electronically. I examined these, and overall the marking was fair and appropriate throughout, with feedback provided for students in most cases. There were some nice examples of the use of electronic marking with feedback. I noticed one exam script where part of a question was missed during marking and moderation, but this was a one-off case and was remedied immediately. Marks were not entered on the exam scripts for one module (SOEE3610) which was unhelpful (they were circulated on a separate handwritten sheet, which is poor practice), but in other modules the marking was clear, with appropriate annotation in most cases.

**14. Was the choice of subjects for dissertations appropriate? Was the method and standard of assessment appropriate?**

The dissertation topics were interesting and relevant, and clearly drew from the wide research interests across the school. Many of the projects were well conceived and carried out effectively, with quite a few reaching potentially publishable quality. The dissertations were double-marked and the marks subsequently reconciled in a very open and transparent way, which is commendable. Appropriate comments and feedback were provided to the student with a clear and well-designed mark/feedback sheet. My only concern is with the strong clustering of dissertation marks at 70 on the 2:1/1<sup>st</sup> boundary; while this had already been singled out for attention by the module organisers, who moderated dissertations close to class boundaries, the existing marks were in most cases reaffirmed. I read a number of the dissertations on 70, and agree that they merit a 1<sup>st</sup> class grade.

**15. Were the administrative arrangements satisfactory for the whole process, including the operation of the Board of Examiners? Were you able to attend the meeting? Were you satisfied with the recommendations of the Board?**

The administrative arrangements were very good throughout, with all material readily available in hardcopy, e-copy or on the VLE. Guidance was provided where special attention was needed, e.g., with borderline dissertation marks. The board meeting was thorough and efficient.

**16. Were appropriate procedures in place to give due consideration to mitigating circumstances and medical evidence?**

Mitigating circumstances were given consideration on a case-by-case basis, and the approach appeared fully appropriate.

**Other comments**

**Please use this box if you wish to make any further comments not covered elsewhere on the form**

I include here a few general comments addressing particular aspects that caught my attention as a new, incoming external examiner:

The fieldwork element of the programmes appears strong, particularly for the very effective Arran field course which involves a wide range of hand-on activities and is rated highly by the students. A number of modules have a numerical modelling component, which gives students important new skills and is also well-received.

The students I met expressed some concern about the lack of practical lab-work activities in Environmental Science. This appears to be an ongoing problem (it was also raised by my predecessor), but it has not yet been resolved adequately. The gap could be addressed by including more lab skills in the new SOEE2700 Environmental Research and Career Skills module, or, perhaps better, by including lab work in discipline-specific modules (e.g., Water Quality). Teaching students about measurement methods is important, but does not replace the hands-on learning associated with practical activities.

The School has a strong and transparent moderation procedure in place, and there is good evidence of this from the standardization discussions on module review forms and from examples where irregularities were clearly identified by the moderator (e.g., exam scripts for SOEE2165 where the original adding of marks left something to be desired!)

The coursework feedback sheets used for many of the modules are worthy of commendation. The dissertation feedback sheet is particularly useful for students, combining clear categorized classification of different elements of the work with free text comments from the marker. These are clearest for students when completed electronically, although I appreciate that there may be some resistance to this from markers.

I would like to see more standardization in the format of exams. Exams appear to be devised independently for different modules and there is great diversity in styles and mark allocations, some of which fit the assessment weighting (e.g., marking out of 50 when the exam is 50%), and some of which don't. Marking questions out of 17 appears particularly abstruse, and makes it difficult for students to work out how much time to spend on different parts of a question. It would be useful to have a School-wide policy on how this should be addressed, and consider marking questions out of a standard amount (with sufficient granularity) or simply as a percentage. If course marks are aggregated on a percentage basis, then the latter makes sense.

Examples of good pedagogical practice:

- Short videos were used during lectures in SOEE3610 to support learning and provide a change of activity, and this was singled out by students as aiding their learning.
- While the use of electronic submission is becoming common, it is good to see that online marking is being trialled very effectively in a number of modules.

Particular issues to address:

- SOEE3700 Practical Weather Forecasting – this module was very well-received by students, who valued the activities involved and the skills they developed, but they found the coursework very time consuming and not fully in line with the credits awarded. Some further thought is needed on how a better balance could be achieved without compromising the effectiveness of what is clearly a very useful and valued course.
- SOEE3760 Terrestrial Biosphere – this module, in its second year, adds diversity to the programme and is welcomed by students, but student attainment is rather high, with more than half of the cohort achieving a 1<sup>st</sup> class mark. The coursework was certainly good, but the exam was perhaps a little too straight-forward; while I am prepared to accept the organiser's conclusion that this was a good cohort this year, I would flag this module up for closer scrutiny next year.

Lecture capture gets very positive comments from students but rather less positive comments from staff (where it was variously blamed on the module forms for poor lecture attendance and for better than expected exam performance). It is important to remind students/staff that this is for reinforcement of learning and an aid to revision rather than an excuse for not attending lectures in person.

Capturing student feedback on modules is important, and this was missing for some modules. While I appreciate that it is challenging to get students to provide this feedback, doing so electronically makes the procedure both simpler and clearer (and the free text comments more legible) – some further thought on how best to do this may be needed here.

**School of Earth and Environment**

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**UNIVERSITY OF LEEDS**

28 August 2015

**RE: Response to External Examiner's Report - BA Environmental Sustainability; BA Environmental Management; BA Environmental Management (Industry); BSc Sustainability and Environmental Management; BSc Sustainability and Environmental Management (Industry); 2014-15**

Dear

We thank you for your external examining this year. We are glad that you are pleased with the quality of the programmes in terms of national subject benchmarks, diversity of teaching and assessment, moderation processes, use of Turnitin and use of research in teaching.

We note your concern about some 10 credit modules which have one single summative assignment. In two of these modules identified (SOEE2670, second year Environmental Impact Assessment module, and SOEE3112, third year Environmental Risk module), students are given the opportunity to submit an outline or plan of their assignment. In the other (SOEE2680, second year Environmental Politics and Governance) students are required to submit an abstract of their essay. In all instances, students are given detailed feedback on their outline or abstract to help them develop their summative assignment, and there is further opportunity to meet and discuss the outline or abstract in a one to one meeting with the module leader or through email. For such small modules, we are reluctant to either have two summative assignments or to add a formative assignment, to avoid over-assessing students and to give them the chance to write a substantive and detailed longer piece of work rather than shorter but more superficial pieces.

We note your comment on assessment of group work and group presentations. At present we do not have any formal school guidelines on group work or assessment, however this has already been noted as a priority as across the school there is a diversity of practice and we have just launched a project called 'Making Group Work Work' led by the DSE. As part of this we plan to interview module leaders and students and to look at course rubrics and identify good practice in order to develop school guidance. We aim for this new guidance to be ready for academic year 2016-17, but a conversation about good practice in group work will be ongoing in the coming academic year.

We note that students have raised concerns about the pathways structure of the BSc Sustainability and Environmental Management degree. The cohort of students graduating in 2015 were the first to take this degree, and therefore the first to take the pathways structure. Pathways were introduced to minimise timetabling clashes, to bring coherence to the suite of optional modules taken, and to ensure that students took appropriate pre-requisite modules for courses in the second and third year of study. Students were advised to follow the structure, but were also told that they could change one quarter of their pathway modules, subject to

permission of the programme leader. Students are expected to provide a clear reason for wanting to take modules from outside of their pathway (for example, for careers aspirations), to identify which pathway modules they would drop to create space for the outside module, and to be aware of any consequences for later years. Students are very strongly encouraged not to drop modules that are pre-requisites for modules in later years of study. As the University module choice system allows students to select their own modules through a central system rather than through the school, there were some incidents when the graduating cohort were in their first year of study where some students deviated from this model without the programme leader's permission. In response to this, the Student Education Service team now audit all student module choices at the start of semester to ensure that all students are following the pathway structure, or have the programme leader's permission to deviate. This has worked well.

For the academic year 2015/16, we have worked to improve the process of choosing modules, to make things clearer and easier. Firstly, we have created a flow chart for incoming first year undergraduates which guides them through the process, explaining whether they need to take refresher modules in maths and chemistry, and providing guidance on how to choose pathways. This is now included in the information packs sent out to students prior to their arrival in Leeds. Secondly, we have created a programme planner that quickly and easily illustrates how module choices in one year may affect subsequent years of study, and how the pathways progress from year to year. This is available for incoming and current students. Thirdly, we are in the process of creating a school-wide alternative module catalogue, to supplement the official module catalogue, where students can write descriptions of modules they have studied to help guide future students in their module choice, as surveys have found that the official module catalogue does not necessarily contain the kind of information that students are seeking.

We have been reconsidering the pathway structure, and it is likely to have minimal changes – changes to a pollution and climate change module in third year to make it less dependent on prior advanced scientific knowledge means we can now include this in our Environmental Science and Management Pathway. We did consider broadening the compulsory modules and reducing pathway modules in first year so that students would not be limiting their choices for subsequent years of study at such an early stage. This has proven impossible as there are so many first year pathway modules which are pre-requisites for subsequent modules, so it is inevitable that students will have to limit their choices in their first year. However, students can take either two or three pathways (from four) in their first year, depending on their A-levels, and narrowing this down to one in their second year, so this is not a significant issue.

We also appreciate that you were pleased with the support that you were provided with by the School's Student Education Service administration team, and the manner in which work had been organised in preparation for scrutiny. We will continue to refine these processes over the course of the next session, and hope that it will be possible for you to meet with a greater number of students next year.

Yours sincerely,

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