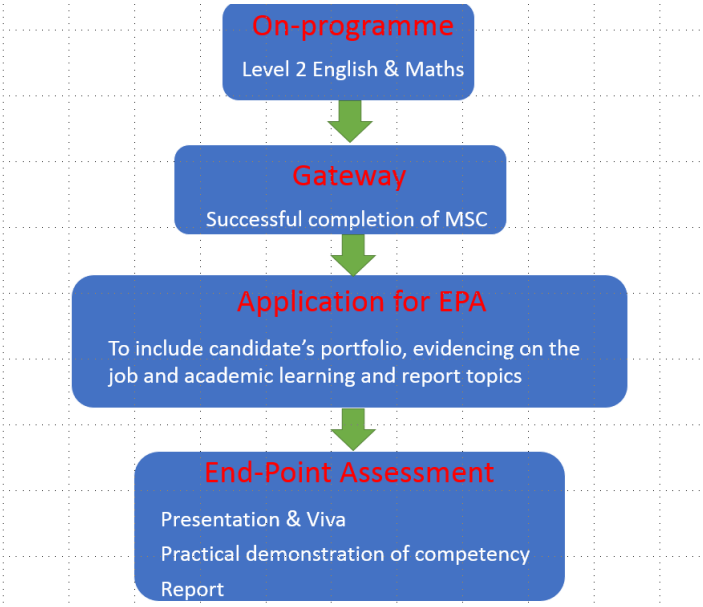
End Point Assessment Plan: Level 7 Non-integrated Degree Apprenticship ECOLOGIST ST0577

CONTENTS

1 Summary

This Level 7 Degree Apprenticeship will be completed in 36 months and has three options, Ecological Consultant, Ecological Scientist and Landscape Ecologist. It is not integrated and the MSc must be completed before application for End-point Assessment is made.



Please note:

- While the on-programme portfolio may have been completed during the degree it is not being assessed directly in this process but can provide the basis for questioning in the viva
- Similarly the report, which is a component of End-point Assessment, will not have been completed during the degree but is a separate document. It will be submitted to the assessor prior to the EPA event to enable it to provide the basis for questioning.

2 End Point Assessment Overview

The presentation and viva has been given more weight that the other assessment methods as this demonstrates the breadth of skills, knowledge and behaviurs in which the candidate has developed competency while the other two methods are more focused on the detailed level of competency in specific areas.

ASSESSMENT METHOD	AREA ASSESSED	ASSESSED BY	GRADING	WEIGHTING
Presentation and viva	Behaviours, skills and knowledge	End-point Assessment Organisation	Fail/Pass/Merit/ Distinction	40%
Practical demonstration of competency	Skills, knowledge and behaviours	End-point Assessment Organisation	Fail/Pass/Merit/ Distinction	30%
Critical evaluation of a current 'best practice' ecological survey technique	Knowledge, skills and behaviour	End-point Assessment Organisation	Fail/Pass/Merit/ Distinction	30%

3 Assessment Gateway

The trigger for the apprentice being put forward for the EPA by the employer will be the successful achievement of an MSc degree (L7) in an ecological discipline relevant to their job role, for example Ecology, Environmental Conservation or Conservation Biology. This will inclide preparation of a portfolio describing the apprentice's learning both during the formal and on the job training. This is likely to include a variety of material such as, for example, photographs, videos, site plans/drawings, case studies, performance reports and witness testimonies, in addition to written accounts. The employer will ensure that the apprentice has achieved an appropriate standard during work based training, i.e. is occupationally competent.

Apprentices without a minimum Level 2 qualification in English and mathematics will be required to achieve this level prior to being put forward for EPA.

This stage is known as passing through the Assessment Gateway.

4 End Point Assessment

The EPA, which can only take place afte the completion of an MSc of 36 months duration covers the broad areas of knowledge, skills and behaviours identified in the Standard.

It is anticipated that the EPA process will be conducted within 6 months of the apprentice completing the gateway requirement. It will be a single event but, depending on the number of candidates in a specific location this may extend over more than one day, but will not exceed two days, which will be consecutive.

Three separate assessment methods are set out in the overview (section 2). Full details are given below.

4.1 Details of what is each method is assessing and how this will be done

4.1.1 Presentation and viva: the apprentice will have prepared a portfolio, which forms the basis for the Portfolio Presentation and Viva, to evidence the skills, knowledge and behaviours gained during both work based training and while studying for their MSc. This will include reflections, as is a stand requirement of learning at post-graduate level and by the professional body; these will not be assessed as evidence of competency. It is envisaged that the work-place learning supervisor will validate entries. The document, which may be electronic, will be submitted as part of the application for End-point Assessment to provide the assessor with information regarding the scope of study and occupational experience as a basis for the examination by viva of specific areas. The apprentice will be asked to explain the competence gained (this will not exceed 2 minutes) and the viva will comprise detailed questioning in an interview style setting. The apprentice will be expected to respond demonstrating their knowledge, skills and behaviours (as appropriate) corresponding to the requirements of the Standard. The assessment criteria will be based on a checklist approach to enable assessors to record the testing of the following:

4 of the 8 core requirements for knowledge
5 of the 10 core requirements for skills
4 of the 7 required behaviours

Further information will be recorded to show level of competence in each case, based on full competence (pass), competence in excess of that required by the standard (merit) or significantly in excess of the requirement (distinction). Details of grading are included in Section 8.

The Viva will take 50 minutes (with a 10% tolerance)

4.1.2 Practical test to enable apprentices to demonstrate competency:
Ten core skills are identified in the Standard and the assessor will select three at random and ask the apprentice to demonstrate their competence during the EPA.. EPAOs must develop 'practical specification banks' of sufficient size to prevent predictability and review them regularly (and at least once a year) to ensure they, and the specifications they contain, are fit for purpose

The apprentice will be required to take a practical test to demonstrate three skills, selected by the assessor with reference to the material covered in the other assessment methods and the option identified, to ensure competency, verbally explaining clearly and concisely how the procedure should be carried out according to current standards and identifying when this would be appropriate. This may involve demonstrating how specific items of equipment or software are used; these will be provided by the assessor; the apprentice will have no prior knowledge of what these will be.

The procedure should be carried out according to current standards of good practice, including those for health and safety and biosecurity.

The practical test will take 60 minutes (+/- 10%). There may be breaks between tasks and change of location from field to indoors as appropriate; these will not be included in the specified duration.

4.1.3 Critical evaluation of a current 'best practice' ecological survey technique: all ecologists will use survey data, either working in the field to acquire it, analysing data produced by others or interpreting it to inform future plans. The apprentice will be asked to prepare an in-depth evaluation of a current 'best practice' survey technique of their choice, but with prior approval by the assessor. The apprentice will provide three suggestions for the topic to be included when the employer informs the EPAO that the apprentice is ready for End-point Assessment and the assessor will confirm which they feel is appropriate, providing two weeks for the apprentice to prepare the report.

The report, which will not exceed 2000 words (+/- 10%) will comprise the following

(i) A short report outlining the methods of surveying and monitoring the chosen feature.

(ii) Identification of any constraints that apply to specific methods and the advantages and/or disadvantages of alternative approaches.

(iii) A method statement describing step by step how the survey method you have selected should be carried out

This must be submitted to the assessor at least two weeks prior to the date of the End-point Assessment to enable the assessor to read it prior to the assessment event.

The candidate will communicate the findings of their research and summarising the evaluation report, of 15 minutes duration, with a further 15 minutes for questioning by the assessor (i.e. a professional discussion to ensure that the report is the apprentices own work. This should be directly related to the option requirements.

4.2 Where will the assessment take place?

The EPA will be held at a suitable venue (i.e. one providing outdoor as well as indoor facilities). Where possible the location will minimise travel distance for both the apprentice(s) and their assessors.

4.3 Details of who will carry out the assessment

The EPA will be carried out by an assessor who will be fully independent of both the training provider and the employer and have had no prior contact with, or knowledge of, the apprentice(s) to be assessed.

The assessor is required to be a professionally qualified ecologist and must also have been trained to carry out their role in assessment. Applicants for this role must either be working in the industry or, if not currently working in the industry will be required to demonstrate that they have maintained links with the industry and current practices. Each application to become an assessor will be evaluated on its own merits. The evaluation process will consider all relevant factors such as a minimum of three years industry experience, academic qualification to MSc level, be a full member of a relevant professional body such as CIEEM, and having post-professional qualification experience. Once appointed, the assessor will undertake training as required and be subject to quality assurance process including maintaining appropriate Continuing Professional Development (CPD) and submitting evidence of this on request. The required training will include how to undertake assessments, marking standardisation, questioning techniques, and observing interviews. All assessors will be required to confirm their current industry specialism, and the areas of expertise that they are competent to assess, i.e. the option the apprentice has identified in the Standard.

The End-point Assessment Organisation will be selected by the employer from the RoEPAO (the Register of End-point Assessment Organisations).

4.4 EPA Proceedure
Following notification from the employer that the apprentice has passed the assessment gateway and is ready for assessment, the End-point Assessment Organisation appointed will check that documentation is complete, and then appoint the assessor. The potential for any conflict of interest will be evaluated and if any is identified then an alternative assessor will be appointed.

Both the assessor and the apprentice(s) will be informed of the details of the assessment, the date and location, at least four weeks in advance.

To be successful the apprentice must demonstrate that they have met all the knowledge, skills and behaviours in the standard, in accordance with the descriptors and grading criteria. The assessors will record their findings on an Assessment Form marking each assessment method as pass or fail, and recording merit or distinction if appropriate, and justifying their decision in the form of notes on the various elements of the End Point Assessment.

5 End point – final judgement
An independent assessor must combine the grades of all the assessment metohds to determine the overall EPA grade. To achieve an overall EPA pass apprentices must achieve a pass in all three assessment methds. The average percentage across th three elements (after weigting has been applied) will determine th final grade.

If the apprentice has been unsuccessful they will be allowed to retake or resit the entire End-point Assessment and will be provided with assessor feedback on the area(s) where they did not demonstrate competence, as evidenced in the summary report on the Assessment Form; this will include a supportive action plan to enable the apprentice to prepare for re-assessment. This feedback will be provided in writing at the same time as the apprentice is informed that they have failed. The EPA must be retaken within 6 months of the original End Point Assessment and the apprentice's employer must agree that a re-sit or re-take is an appropriate course of action

5.1 Resits/Retakes
Candidates are able to retake/resit any of the assessment elements up to two times if they fail at the first attempt. (A re-take will require additional learning whereas a re-sit is simply a second (or third) attempt).

- Apprentices should have a supportive action plan to prepare them for a re-take.
- Only the element(s) that have failed are required to be re-sat.
- Any assessment method re-sit or re-take must be taken during the maximum EPA period, otherwise the entire EPA must be retaken, unless it is the opinion of the assessor and employer that exceptional circumstances outside the control of the apprentice or their employer apply.
- Re-sits and re-takes will be awarded a maximum of a pass and this is not an option to enable apprentices who have passed to increase their grade.

6 Independence
The Assessor will be appointed from the ESFA Register of End-Point Assessment Organisations and be listed on the Register of End Point Assessment Organisations (RoEPAO). The entire End Point Assessment process will be conducted completely independently of employers and training providers. The assessors appointed have no relationship to the apprentice's employer, the training provider or be related to the apprentice in any way.

6.1 How is this deliverable for all employers?
The Standard includes options, and this might be considered to limit the pool of potential assessors. However, as soon as the Standard and EPA are approved, the End-point Assessment Organisation will ensure that trained assessors are available including those able to assess specialist areas.

7. End point – grading

Details of the grade descriptors are given in the following table.

OVERALL EPA grade	Portfolio presentation and viva (40% of total)	Practical demonstration of competency (30% of total)	Critical evaluation of a current survey technique (30% of total)	FOR THIS GRADE TO BE ACHIEVED:
FAIL	The level of occupational competence defined in the standard has not been reached. Personal/professional skills and good working practices within the context of the work-based and on-programme have not been demonstrated.	The level of occupational competence defined in the standard has not been reached. Failure to complete tasks, explain rational for good practice or the relevant health and safety and biosecurity protocols.	The level of occupational competence defined in the standard has not been reached. Failure to effectively communicate the scope, aim and objectives of the survey and any constraints/limitations to implementation.	The candidate has failed to achieve a score of 50%
PASS Mark awarded	A portfolio of evidence based on work place and theoretical learning and responded appropriately in the viva evidencing 4 of the core requirements for knowledge, 5 of the core requirements for skills and 4 of the required behaviours.	Practical competency has been demonstrated in three skills, with appropriate risk management. How and when these would be used explained and evidence of good practice in recording data appropriately.	Evidence of effective evaluation of techniques, preparation of an appropriate and technically robust method statement, with clearly articulated aim/objectives.	50-59% averaged across all three assessment items (weighting applied)
MERIT Mark awarded	In addition to the above the portfolio demonstrates personal and professional skills and good working practice. Critical thinking to supplement descriptive narrative is apparent in the viva.	In addition to the above awareness of predicted and unforeseen outcomes, and constraints, is apparent.	In addition to the above understanding of any constraints/limitations that may affect implementation of the selected survey method and mitigation strategies are demonstrated.	60-69% averaged across all three assessment items (weighting applied)
DISTINCTION Mark awarded	In addition to the above professionalism, for example in managing client relationships, representing the employer, team work, confidentiality, and the ability to constructively reflect on peer feedback is demonstrated.	In addition to the above the potential impact of emerging technologies that may affect current best practice is demonstrated combined with an exemplary, professional, approach in interacting with the assessor.	In addition to the above outstanding written and oral communication skills, are demonstrated with robust justification of the method identified as 'best practice', and the importance of working to protocols in the business context.	An average of more than 70% and a minimum of 60% in each element of assessment (weighting applied).

The portfolio presentation and viva is weighted slightly higher than the other two assessment methods as it covers a selection of skills, knowledge and behaviours and marks will be awarded on the basis of a standardised checklist derived from the Standard and developed by the EPAO. At Level 7 a high degree of critical analysis is required with the emphasis on demonstrating self-awareness, so as likely to include

shortcomings as well as areas of excellence, and an element of future planning for career/professional development. It is the portfolio, presented to the assessor as the basis for examination by viva, that provides greatest scope for apprentices to demonstrate competency over the full range of knowledge, skills and behaviours to the level required.

To be successful in passing the EPA the apprentice is expected to demonstrate evidence of competency, as defined below. While the assessors will be trained and experienced in assigning marks and overall grade the following table provides descriptors of the grade requirements for each of the three assessment methods. In order to satisfactorily achieve EPA a pass much be gainined in all three elements. This table should be read in conjunction with the map of KSBs in the stand to the assessment methods (se Annex).

The End-point Assessment Organisation will provide an assessor who will recommend the grade to be awarded and this will be confirmed after review by the EPAO A sample of reprtos will be randomly selected for moderation during internal quality assurance.

The criteria used during EPA will be focused on the skills, knowledge and behaviours set out in the Standard and the grade will reflect the extent to which the portfolio presentation and viva demonstrate that these have been achieved. Assessment will require that the apprentice presents specific areas, selected by the assessors, using the portfolio pages to illustrate their competency. The assessors will interrogate as appropriate to ensure that the candidate has demonstrated the required Skills, Knowledge and Behaviours.

7.1 **Grading criteria**

To award a grade of merit or distinction the assessor must document in their report that the apprentice has provided evidence of competency above that required as set out in the table/standard. Checklists will be developed by the EPAO to ensure that grading is consistent.

It is likely that the complete EPA will take place over one or two days and results of all the elements will be communicated, together, in the assessor's report. Apprentices are required to achieve a minimum of a pass in all elements to be successful.

8 Professional Body Recognition

The Chartered Institute of Ecology and Environmental Management (CIEEM) have confirmed that an apprentice successfully completing the apprenticeship would be eligible for recognition at Graduate level or above of CIEEM. While undertaking the apprenticeship they will be able to benefit from student membership of CIEEM.

9 Roles and responsibilities of those on involved in the assessment

	Role
The Employer	• Monitor the 'on the job' training and ensure this has been completed satisfactorily. • Liaise with the nominated contact in the training providing organisation to ensure the apprentice is attending off the job training and that progress is being monitored and achieving the required standard.
The Training Provider	• Assess progress according to in house and external QA standards and, if appropriate, award an MSc
The Assessment Organisation	• Request evidence that the candidate apprentice has achieved the 'gateway' requirement, i.e. an MSc in an appropriate subject and demonstrated an appropriate level of occupational competency. • Perform the End Point Assessment as set out in the preceding sections of this document. • Submit a brief report to the employer detailing the performance of the apprentice against the requirements of the Standard and the grade achieved. • Inform the apprentice of the grade achieved • Submit a copy of the report for external quality assurance (EQA)

10 Internal Quality Assurance

The End-point Assessment Organisation will, as required by all such independent organisations, have its own internal quality assurance procedures to ensure that the assessment process is robust and consistent so that valid and reliable assessment decisions are made.

The End Point Assessment will be conducted by Assessors who are trained, approved, and listed on the ESFA Register of End-Point Assessment Organisations and the Register of End Point Assessment Organisations (RoEPAO). These will carry out the EPA against the requirements set out in the Apprenticeship Standard and the internal quality assurance preceedures will include:

- Production of assessment guides and supporting material specific to the standard and conforming to best practice. These on the grading descriptors above and provide a checklist based of stand method statements and the KSBs listed in the standard.
- Training for assessors in the use of these quides, particularly regarding grading
- Evaluation of the results of assessment to verify consistency between assessors by examining a sample of the material assessed and the assessor's reports; this should include failures as well as passes at all grades
- Holding standardisation events to include assessment exercises and moderation of examples of submissions with all assessors required to attend annually.
- Meetings with assessors to provide updates and feedback on the assessment process.
- An appeals process will be established if an apprentice wishes to challenge the assessment.

11 **External quality assurance (EQA)**

As this is not an integrated apprenticeship External Quality Assurance will be delivered by the Institute for Apprenticeships

12 **Implementation**

12.1 Affordability:

Costs will be kept to a minimum and will not exceed 15% of the total cost of the apprenticeship. This will be ensured by identifying appropriate venues and allocating candidates for assessment to one as close to their place of work as possible. If appropriate employer's premises may be used, particularly if there are several apprentices from the same company. The assements maybe carried out in any order ensuring efficiency of assessment and maximising the number of candidates that can assessed on any one day.

Although not ideal the potential for carrying out assessment via skype or video conferencing may be considered in agreement with the empoyer and the EPAO.

12.2 Volumes:

It is envisaged that there will be 10 starters in the first year, 30 second and potentially 50 once fully established.

13 Annex

MAPPING OF THE EPA METHODOLOGY TO THE STANDARD

Key	Assessment Method
PPV	Portfolio presentation and Viva (including the testing of the portfolio)
PDC	Practical demonstration of competency
CEST	Critical evaluation of a current 'best practice' ecological survey technique: report & presentation

Mapping Grid

Ref	Core Knowledge to be Assessed	PPV	PDC	CEST
K1	the underlying scientific principles in ecology and how to work in accordance with 'best practice' in the literature or input from colleagues.	√	√	
K2	the principles underlying ecological techniques, such as Preliminary Ecological Appraisal, Phase 1 Habitat survey, 'best practice' in species survey/monitoring, and of the role of evaluation to inform future projects.	√	√	√
K3	the theoretical knowledge of the advanced science and technology required to progress in the job role and relevant area of specialism and the importance of emerging evidence.	√		
K4	project management procedures and the importance of these in the working environment, both in the office and in the field in collaboration with multidisciplinary team members.	√		√
K5	the internal/in-house policies, for example those relating to safe practice, lone working, and professional conduct, as well as record keeping, traceability and confidentiality		√	
K6	the external regulations/legislation, those pertinent to the sector and organisation, such as those relating to specific species, protected areas and habitats and the importance of minimising disturbance during site-based investigations as well as that relating to Health and Safety		√	√
K7	the business environment in which the company operates including personal role within the organisation, ethical practice and codes of conduct.	√		
K8	the requirements of internal/external customers and the appropriate workflows, improvements and/or scientific solutions for specific projects.	√		

Ref	**Core Skills to be Assessed**	PPV	PDC	CEST
S1	Good verbal and written communication skills, ability to plan and execute well-structured fieldwork, produce clear and concise technical reports, with appropriate interpretation and presentation of data; ability to summarise for a wider, non-technical, audience if appropriate.			√
S2	Working safely within in both the office and on site, maintaining excellent housekeeping whilst following appropriate safety, environment and risk management systems.		√	
S3	Preparing for and performing risk assessment, desk study, Preliminary Ecological Appraisal, and field survey tasks using the appropriate 'best practice' techniques, procedures and methods of relevance to the activity being undertaken, for example the formulation of species and habitat management plans.	√	√	√
S4	Promoting and ensuring the application of quality standards relevant to the workplace/environment, including in report writing and communication.	√		√
S5	Carry out field surveys, with basic botanical identification skills to the standard to enable recognized techniques, such as Phase 1 Habitat surveys to be carried out.		√	
S6	Perform analysis, interpretation and evaluation of scientific data both gathered from existing sources and primary data generated during Preliminary Ecological Appraisal and fieldwork such as Phase 1 Habitat surveys, and extended/Phase 2 surveys as appropriate		√	
S7	Use creative thinking to solve problems, innovate, make new proposals (for example for ecological mitigation) and challenge the assumption that environmental factors are necessarily barriers to development where necessary.	√		
S8	Manage projects by planning and prioritising tasks, reviewing and evaluating progress against stakeholder objectives, and preparing appropriate reports.	√		
S9	Support senior staff in the management and development of stakeholder relationships, explaining factors such as the seasonal restrictions that may apply to ecological surveys.	√		√
S10	Use standard IT packages and currently used applications including GIS mapping software, such as QGIS		√	

Ref	**Core Behaviours to be Assessed**	PPV	PDC	CEST
B1	Self-motivation including effective time management, project management, planning and completing work to schedule.	√		
B2	Willingness to listen, learn, and show initiative.	√		
B3	Work safely within in both the office and on site, maintaining excellent housekeeping whilst following appropriate safety, environment and risk management systems.	√	√	
B4	Working autonomously as well as interacting efficiently within a professional multi-disciplinary team environment.	√		
B5	Respect for confidentiality on work related and personal matters, including the need for appropriate use of social media and information systems.	√		
B6	Understand the impact of work on others, especially where related to diversity and equality.	√		
B7	Handle change and respond to change management processes.	√		
B8	Take responsibility for personal development, demonstrating commitment to learning, self-improvement and to continual development of technical skills.	√		

Options will be assessed in addition to the core knowledge, skills and behaviours

Ref	**Ecological Scientist**	PPV	PDC	CEST
ESK1	the scientific theory and practice of ecological principles and how these are applied in conservation biology	√		√
ESK2	modelling and prediction techniques, for example those used in population modelling and scenario evaluation	√		
ESK3	the management of large data sets and appropriate methods of analysis and representation	√	√	
ESK4	the range of statistical analysis packages available and how and when to apply them	√	√	
ESK5	the need for robust research-based policy/strategy development	√		
ESS1	statistical analysis using packages such as 'R'	√	√	
ESS2	identify the appropriate analysis to transform data into ecologically relevant information	√		√
ESS3	communication of research finding to a non-technical audience, both in reports and direct presentations	√		√

Ref	**Ecological Consultant**	PPV	PDC	CEST
ECK1	the specific land use planning legislation applying to all habitats and wildlife, including those with protected status	√		√
ECK2	the biosecurity protocols that need to be implemented when conducting fieldwork	√	√	
ECK3	the requirements of licensing procedures for works affecting protected species	√	√	
ECK4	the appropriate solutions to problems, such as conflict of interest between the aims of the client and the statutory requirements to protect wildlife	√	√	
ECK5	mitigation methods and how and when these should be applied	√		√
ECS1	the range of specific survey techniques that can be applied to determine if protected species are using a particular site and how and when these can be applied, (i.e. seasonality)	√	√	
ECS2	use of the current standard equipment used in, for example, bat surveys	√	√	
ECS3	accurate data collection and recording in the field for later analysis	√	√	√
ECS4	identify when a project will require a project specific licence and demonstrate the ability to produce an appropriate method statement	√	√	

Continued overleaf

Ref	**Landscape Ecologist**	PPV	PDC	CEST
LEK1	the underlying scientific principles of representing ecological data in a spatial format	√		√
LEK2	the drivers for landscape, rather than single site based, research for long term planning, policy and strategy formulation	√		√
LEK3	current software, such as QGIS and the specific plugins relating to ecological analysis (e.g. TomBio)	√	√	
LEK4	the analytical techniques that can be used to identify opportunities for ecological enhancement, for example mapping Biodiversity Opportunity Areas	√	√	
LEK5	the role of spatially represented material in effective communication to both technical and non-technical audiences	√		
LES1	technical competency with Geographic Information System (GIS) software including QGIS	√	√	
LES2	identifying sources of existing data that can contribute to and contextualise specific projects	√		√
LES3	prioritise data according to designations, Red List/Biodiversity Action Plan status	√		√
LES4	be aware of emerging requirements such as Natural Capital Audits and Ecosystem Service mapping	√		
LES5	perform spatial analyses and produce maps that communicate data effectively	√	√	