

AG03: Module Development – Practical Nature Conservation

The University of Reading has two off-site farm and field facilities, the Centre for Dairy Research (CEDAR) based at Hall Farm, Arborfield and the Crops Research Unit at Sonning. Both have historically have been under-used, in large part due to a lack of teaching facilities and inadequate transport. CETL-AURS has invested in teaching facilities at both sites with a view to encouraging staff to teach off-campus. New transport in the form of a minibus will allow the students to be taken to the sites and the purchase of equipment will provide greater scope for practical teaching and learning. While these resources have been purchased with the Habitat creation module in mind, other related modules will also benefit.

This project has been an enormous success. The new field equipment purchased as part of this project has provided students with the opportunity to gain important research and employability skills through hands-on experience. The feedback from both the students and the module convenor has been very positive:

'the incorporation of a range of field visits makes the lectures more relevant'

'We spend a large part of the module away from the classroom, giving students hands-on experience'.

Already, the target number of students taking this course has been exceeded, and the revised module has now become core for Part 2 students, demonstrating clearly that this module has been embedded with the curriculum.

Project Code: AG-03 **Discipline:** School of Agriculture, Policy and Development **Project Title:** Enhancement of Part 2 module ‘Habitat Creation and Maintenance’
Description: The University of Reading has two off-site farm and field facilities, the Centre for Dairy Research (CEDAR) based at Hall Farm, Arborfield and the Crops Research Unit at Sonning. Both have historically have been under-used, in large part due to a lack of teaching facilities and inadequate transport. CETL-AURS will invest in teaching facilities at both sites with a view to encouraging staff to teach off-campus. New transport in the form of a minibus will allow the students to be taken to the sites and the purchase of equipment will provide greater scope for practical teaching and learning. While these resources have been purchased with the Habitat creation module in mind, other related modules will also benefit.

<p>A</p> <p>What is the perceived problem or challenge?</p>	<p>B</p> <p>Enabling Factors</p> <p>What resources will facilitate the project?</p>	<p>C</p> <p>Processes</p> <p>How is this project going to be achieved?</p>	<p>D</p> <p>Objectives</p> <p>What is the end product or result of the project?</p>	<p>E</p> <p>Evaluation Data</p> <p>What methods can be used to demonstrate the success or impact of this project?</p>	<p>F</p> <p>Unintended consequences</p> <p>What have been the unintended consequences of enacting this project?</p>
<p>Staff Perspective: Challenge: ‘Habitat Creation and Maintenance’ is a practical-based module with good scope for using the off-site University farms (Sonning and CEDAR). However, lack of teaching resources at these sites, inadequate transport and lack of practical equipment has historically inhibited the practical teaching element in a range of modules.</p> <p>The student perspective Problem: The quality of learning is diminished by inability to visit suitable habitat sites. Poor transport prevents easy access to suitable habitat sites.</p>	<p>Facilities Teaching rooms will be identified at Crops Research Unit, Sonning and the Centre for Dairy Research, Arborfield.</p> <p>Capital Capital money will be use to purchase: IT equipment to support teaching – desktop PCs and projectors Suitable furniture – tables, chairs and whiteboards Field equipment e.g. quadrats, surveying poles, waders etc. Minibus to aid transport to the field sites</p> <p>Staffing Support will be provided by technicians at both field sites and a Teaching Associate (in turn supported by the AURS Director and Agriculture Fellow).</p>	<p>The teaching rooms will be equipped with the necessary furniture and IT equipment</p> <p>The minibus will allow easy transport to the required sites</p> <p>The field equipment will provide more scope for the practical aspects of the module.</p>	<p>The student perspective The students can now get out into the field and gain hands-on experience using the equipment provided. This will develop their practical and transferable skills and equip them with a variety of specific skills sought by employers.</p> <p>The staff perspective Staff can use the teaching facilities at the field sites and easily transport the students to the desired location. The scope for skills teaching has been greatly increased by the provision of equipment.</p>	<p>Availability of teaching rooms A booking diary will allow us to track how often the rooms are used and by whom.</p> <p>End of module questionnaires These can be used to gauge the student perspective of the off-site facilities.</p> <p>Engaging in Practicals Module convenors can be approached to determine if there has been an increase in the practical element of the module as a result of having easier access to the facilities</p>	<p>Several other modules e.g. Introduction to Organic Farming and Practical Rural Environmental Science have benefited from the interaction between teaching and practical skills that the teaching rooms have allowed.</p>

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1. Project Progress and Timeline

1.1 Timeline

Done	Project stage post	planned end date	actual date
	Start September 2005		
<input checked="" type="checkbox"/>	Review group meets to consider module revamp	June 05	June 05
<input checked="" type="checkbox"/>	Revised module description agreed	July 05	July 05
<input checked="" type="checkbox"/>	Module runs for the first time	Spring 06	Spring 06
<input checked="" type="checkbox"/>	Modification and reflection based on experience and module evaluations.	Summer 06	Summer 06
<input checked="" type="checkbox"/>	Module runs for the second time	Spring 07	Spring 07

1.2 Enabling Factors: State the resources used in this L&T-enhancement project

This project has been delivered by two main strands of CETL-AURS funding: capital funds and staff time. The development of the module has utilised facilities at the refurbished Crops Research lab at Sonning, some distance from the University campus, and a selection of the experimental equipment purchased by the CETL. The minibus purchased from CETL capital funds has been used where appropriate. It is very difficult to accurately state the monetary input from the above, but the minibus cost just under £25,000, and the refurbishment at Sonning plus the equipment was approximately £26,000. Staff time, including resource from the *Teaching Associate*, was used to revise the module and deliver the revised curricula.

1.3 Processes: What were the key challenges in delivering this project?

The module is a practical based one, using the off-site University farms. However, lack of teaching resources at these sites along with the lack of practical equipment plus inadequate transport historically inhibited the practical teaching element in the module. The challenges involved in this project therefore centred around using capital funds to equip the Research lab at Sonning, solve the transport problem, and then to agree a revised curriculum and market the module outside of the School.

Following the successful introduction in spring 2006 (30 students), numbers in 2007 rose to 55 and are expected to rise further in 2008. A key challenge in the future is examining how we take and work with larger numbers of students in the field.

2. Outputs and Evaluation

2.1 List the evaluation evidence/data collected

Date	Quantitative or qualitative	Evaluation by	Description / Method
Jan- 06	quantitative	RISIS	Numbers of students enrolling on module in 2006
May-06	both	Pt 2 Students 05/06	Module evaluation forms (includes convenor's report)
Jan -07	quantitative	RISIS	Numbers of students enrolling on module in 2007
May-07	both	Pt 2 Students 06/07	Module evaluation forms (includes convenor's report)

2.2 Summarise the key results from your data

Feedback from the module evaluation data from 2007 (55 Students) is generally positive:

On a scale of 0 to 10

Was the module relevant to your study?	8.1
Did I learn a great deal from the module?	8.0
Did it explain the principles of nature conservation?	8.2
Management and restoration of habitats	7.9

The following are a range of quotes from the students:

'the incorporation of a range of field visits makes the lectures more relevant'

'the teaching methods were diverse, good and definitely effective'

'writing the habitat management plan was very useful'

'good balance between theory and practice'

2.3 How would you, as the PI, summarise the success of this project?

"AP2A37 Practical Nature Conservation" replaced a historic module called "Countryside and Environment 2". It was offered in the spring term of 2006 for the first time, and from both the staff and student viewpoint was deemed as a success, with about 30 students enrolling on the module.

This success is reflected in the fact that for 2006/7 it has become a core module for Part 2 BSc Environmental Sciences and this year 55 students took the module. This is an increase of over 100% on the first of running this module. The module has a very applied focus, and has therefore benefited from the field equipment purchased for this project, as students visit several important local habitats (Chalk grassland and heathland) and are required to draw up and present management plans, thus gaining important research and employability skills through hands-on experience.

Dr Andy Wilby, module convenor: *'This module has been very popular with undergraduate students primarily because of the degree of practical work that we engage with. We spend a large part of the module away from the classroom, giving students hands-on experience.'*

3. Impact and Consequences

3.1 How many students (and at what level and in which programme areas) has this L&T enhancement project impacted on?

This project impacted on 30 students in 2005/6 and 55 in 2006/7

In 2006/7 this included Part 2 students on the following programmes:

Agricultural Business Management	Applied Biology
Botany	Environmental Science
Environmental Science with Professional Experience	Horticulture
Landscape Management	Rural Environmental Sciences
Rural Environmental Sciences (with Industrial Training)	Rural Resource Management
Study Abroad (Visiting Student)	

3.2 Has this project positively contributed to the teaching environment and satisfaction of the academic staff delivering this provision?

Yes, this module has strengthened the general provision of agri-environmental provision in APD and raised the profile of APD teaching in this area across the university.

3.3 Summarise the unforeseen consequences of this project

Several positive knock-on effects have occurred

1. Programme directors from outside the APD now are now including our “agri-environmental modules” in their programmes
2. We are developing a new Part 3 module related to skills in environmental management for the Autumn of 2007. We expect 40 students on this module in the first year
3. Drs Park, Dorward and Wilby were awarded a University team teaching award in 2006 for their curricula development in the Agri-environment area which in part included the *Practical Nature Conservation* module (along with 4 other modules).

4. Dissemination

4.1 Log dissemination activities relating to this L&T Project

The main dissemination activities relating to this project have been in raising awareness of the availability of this module to Programme Directors in other Schools across the University.

4.2 Beyond this evaluation, do you see any scope for pedagogic research in this area of learning?

No

Project Developer's names:

Julian Park
Andrew Wilby
Gillian Fraser

Appendix 1: AP2A37: Practical Nature Conservation Module Description Form

Module Provider: Agriculture Number of credits: 10 [5 ECTS credits]

Level: I (Intermediate) Terms in which taught: Spring

Module Convenor: Dr A Wilby

Pre-requisites: Co-requisites:

Modules excluded: Module version for: 2006/7

Aims:

This module aims to provide an understanding of the basic principles of nature conservation and the role of management and management planning for conservation in the countryside. In addition, the students will gain practical experience of habitat protection and restoration. The module will develop awareness and understanding of factors and influences that need to be taken into account in management for conservation and develop the ability to write management plans.

Assessable learning outcomes:

By the end of the module it is expected that students will be able to:

- Explain the basic principles of, and motivations for, nature conservation
- Explain how habitats are protected, and describe the principal sources of legal and fiscal support for habitat protection in the UK
- Explain theories of succession and fragmentation and their relevance to habitat management
- Describe at least one major habitat and its management and restoration
- Describe the process of management planning
- Write a management plan for specific features on a nature reserve

Additional outcomes:

Outline content:

This module is designed to develop an understanding of the principles and practice of habitat conservation.

The Lecture Content covers:

- Principles of nature conservation
- Ecological science and its application to habitat management
- Habitat protection in the UK, and its legal and fiscal support
- Farming and conservation - Agri-Environment Schemes
- Planning for habitat management
- Habitat restoration

The Practical Content covers:

- Study visit to a local nature reserve, followed by preparation and presentation of a management plan
- Study visit to chalk grassland restoration project and essay report

Invertebrate sampling on field margins

Brief description of teaching and learning methods:

The module will include lectures, a project on developing a management plan for a conservation site / nature reserve, and a study visit to a restoration project.

Contact hours:

	Autumn	Spring	Summer
Lectures		12	
Tutorials/seminars		4	
Practicals		12	
Other contact (e.g. study visits)			
Total hours		28	
Number of essays or assignments		2	
Other (e.g. major seminar paper)			

Assessment:

Coursework

Students will develop a management plan for a feature of a local nature reserve (70%)

A report of a local restoration project (30%)

Relative percentage of coursework: 50%

Penalties for late submission

Standard University rule applies: 10% marks deducted for work submitted up to one week late. Work submitted more than one week late will be awarded a zero mark.

Examinations

A one hour examination, answer one question from four choices.

Relative percentage of examination: 50%

Requirements for a pass

A mark of 40% overall.

Reassessment arrangements

Re-examination in August/September only.