WBP ACADEMIC/VOLUNTEER RESEARCH PROJECT PROPOSAL 2

Project title:	What are the implications of long-term heathland burning regimes on vegetation structure and composition, associated biodiversity(flora and fauna) and soil characteristics (chemical biological and structural including carbon storage)		
Lead Organisation:	CCW/NRW	**Project leader:** Jan Sherry	
Address: Maes-y-Ffynnon, Penrhosgarnedd, Bangor		**Email:** Jan.Sherry@cyfoethnaturiolcymru.gov.uk **Tel:** 01248 3857268 **Mob:**	
Collaborating institutions:	RSPB, NT, other NGOs		
Location:	All Wales		
Start date:	No set date	**Completion required by:**	No set date

Project rational/ What is the specific question being asked?

Burning is used as a tool for managing heathland throughout the uplands and lowlands of Wales. However little information is available on the long-term impacts of different burning regimes on vegetation structure and composition, associated biodiversity and soil characteristics

A Systematic Review of Burning by the Centre for Evidence Based Conservation in 2004 found only one study which assessed the impacts of more than one burning rotation and the results were not conclusive. CCW commissioned research in 2004 to look at the effects of burning and mowing on vegetation structure, species diversity and soil characteristic and whilst this was described as a long-term study it looked only at vegetation which had been burnt or mowed over a four year period.

There is therefore a need to establish long-term field-based experimental research to investigate impacts of serial burning to help inform management decisions.

Can this project be divided into more than one project? *If yes, clarify above*

This is a substantial and long-term piece of research which could be divided into more manageable projects. Studies could focus on particular heathland types e.g. upland and lowland or wet and dry heath:

- Impact of rotation length (typically 8 -20 years) on biodiversity and soils
- Impact on vegetation composition and structure
- Impact on fire-sensitive plant species (higher and lower plants)
- Impact on invertebrates
- Impact on birds
- Impact on other taxonomic grups
- Impact on soil chemistry, biology and structure

Scale of project?	**Site-specific?**	**Range of sites? *Name sites & any/***	**Suggested site/s/locations?**

	Name site & any designation.	***designation.***	
This is potentially a very large project which could encompass a a wide range of sites and taxonomic groups		There are numerous upland and lowland sites where the research could take place. Site location could be tailored to suit individual students	

Access to previous data/reports on site?		YES	**RA[1] attached**	NO
Logistics managed by:	Lead Organization	YES joint	Researcher	YES joint

Opportunity for follow-on student placement with Lead Organisation?	Unknown

Training element/skills required:

- Taxonomic skills
- Vegetation survey skills(NVC)
- Soil survey and analysis

Expected deliverables:

Resources required:
Vegetation survey equipment;quadrats
Species surveys; depending on taxonomic group e.g. pitfall traps etc.
Soil survey equipment; corers etc
Soil chemistry - analytical facilities

Any special considerations:

Return completed form to Tracey.Lovering@cyfoethnaturiolcymru.gov.uk
Tel: 01970 631177 / 07779 010580

[1] RA: Risk Assessment