



Countryside and Community Research Institute

# **Review of the Exmoor Mires Restoration Project**

**Final Report**

**by**

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## Executive Summary

### 1. Introduction

The Exmoor Mire Restoration Project (EMRP) 2006-2010 aimed to restore the natural hydrology of degraded blanket bogs on Exmoor by blocking up the network of old drainage ditches. This project will shortly finish and funding has been secured from South West Water for a new and larger 'Mires on the Moors' project which could potentially rewet up to 2,500 hectares of peatland on Exmoor. The EMRP Steering Group commissioned the Countryside and Community Research Institute (CCRI) to undertake an external and independent review of peatland restoration work on Exmoor to help guide future activity.

The two main aims of the review were:

- i) to conduct a review of peatland restoration on Exmoor to date; and
- ii) to give guidance to the Steering Group on how best to proceed with peatland restoration, while furthering National Park purposes, and having regard to the economic and social well being of the local community.

### 2. Methodology

The research used both desk based methods and the collection of primary data, involving:

- *Review of existing data* held by the EMRP, including monitoring reports, site plans, project progress reports, a future hydrological plan and future project plans.
- *Review of 22 UK peatland restoration projects* highlighting examples of best practice with respect to community and stakeholder engagement which might be transferable to Exmoor.

In total, the review team interviewed and consulted with 60 experts, land managers and stakeholders

- *Expert interviews* - in-depth, semi-structured interviews with 11 Steering Group representatives and other experts within the partner organisations.
- *Land manager interviews* - in-depth, semi-structured, mostly face-to-face interviews with 19 land managers, including current participants and those managing land with potential for rewetting, to identify: the impacts of project activity on existing farm management and the farm business; farmers' experience of and attitudes to the project; and to elicit views on future project work involving the farming community.
- *Stakeholder workshop and interviews* - facilitation of a stakeholder workshop and interviews with 18 stakeholders to explore the achievements of the mire restoration on Exmoor to date, and discuss ideas for future activity.

### 3. Key Findings

**Ditch blocking** – The EMRP has developed a good understanding of ditch blocking techniques most appropriate to Exmoor. The EMRP almost doubled its original target for ditch blocking, blocking, 49,967 m of ditches on 12 sites, resulting in the restoration of 313 ha, exceeding the original target of 250 ha.

**Biodiversity** – Extensive vegetation monitoring by the EMRP has revealed that ditch blocking has successfully encouraged an increase in abundance and richness of plant species associated with wetter conditions. Aquatic invertebrates have also benefited from increased pools of water.

**Hydrology** – Limited resources and difficulties encountered with the hydrological monitoring equipment impacted on the quality of hydrological data obtained. Analysis of the dipwell data by the Project Officer and visual observations revealed a rise in the water table at Exe Head since 1998, with a less evident rise in the water table at Blackpitts. To date, changing flow patterns have not been analysed so the impact of ditch blocking on downstream flows is unclear. Lessons learnt from EMRP hydrological monitoring have been incorporated into a new and comprehensive hydrological monitoring plan for the Mires on the Moors project which has been reviewed and endorsed by UK academics.

**Historic Environment** - The actual extent of the impacts on the historic environment resulting from mire restoration activity is difficult to ascertain: to a great extent concern has been and continues to be about the potential for damage. Recommendations focused on the need to continue integrating the historic environment into all aspects of project activity.

**Landscape** - No major concerns about the long-term, landscape-scale impact of the project on the Exmoor moorland landscape were identified. A number of minor visual impacts, such loose bales in the water, were observed and should be avoided in the future.

**Access** – Project procedures are in place to consider recreational access issues on each proposed site. Some limited access restrictions for the hunt due to mire restoration were identified, but overall the impact on access for recreationalists was low. Landowners were concerned about public liability issues on mire restoration sites and required some legal clarification.

**Agriculture** - The impact of mire restoration on farm management varied: for some it improved grassland quality; for others it ran in conjunction with their agri-environment scheme and had little impact, whilst others saw it as reducing the long-term agricultural quality of their land with inadequate compensation. Some specific concerns related to possible hindrance to general farming access and stock checking and increases in ticks and liver fluke.

**Communication** - The EMRP achieved widespread promotional press coverage, but was less effective at communicating and engaging with the local community, resulting in some local concerns and misunderstandings about the project. Ideas for

future potential communication mechanisms were proposed by stakeholders. Land managers appreciated the one-to-one approach adopted by the Project Officer.

**Education** - Educational outreach was not one of the original objectives of the EMRP, nevertheless the Project Officer has spent some time on educational visits in order to further the understanding of the project. At a national level the EMRP has contributed to the understanding of peatland restoration through presentations and national reports. More locally the educational impact has been limited and the review presents ideas as to how the educational benefits of the project can be enhanced.

**Local community involvement** – The EMRP has used volunteers to help with project activities and has focused on using local contractors to construct ditch blocks and cut bales, although there are relatively few contractors available locally to undertake this specialist work.

**Governance and decision-making** - some stakeholders felt excluded from the decision-making process and thought their views should be incorporated into the project. The proposed governance structure for the Mires on Moors project offers opportunities for more inclusive decision-making incorporating an Advisory Board of local representatives who will give strategic direction to the project and a Project Delivery Group with a responsibility for project management.

#### 4. Conclusions and Recommendations

The review concluded that the EMRP has achieved a substantial amount of ditch blocking on Exmoor within a short period. It suggested that lessons learnt from the EMRP will provide a firm basis on which to develop and implement the larger and more ambitious Mires on the Moors project. To provide guidance in the development of the new project, 49 recommendations were presented covering all aspects of project activity.

#### Summary of the review recommendations

<b>Biodiversity and Peat Restoration</b>
Recommendation 1: Clearly state the aims of ditch blocking and decision variables used in selecting ditches to block
Recommendation 2: Clearly state biodiversity goals and targets against which success can be measured
Recommendation 3: Consider using palaeoecological work as a guide to the potential <i>range</i> of plant assemblages that might be set as targets for the subsequent restoration work
Recommendation 4: Continue and enhance the vegetation monitoring programme
Recommendation 5: Consider further research into bryophyte species as indicators of change
Recommendation 6: Consider further invertebrate surveys

<b>Hydrology</b>
Recommendation 7: Implement the proposed hydrological monitoring plan
Recommendation 8: Document lessons learnt from monitoring in the earlier project
Recommendation 9: Continuously check monitoring data for problems
Recommendation 10: Check water quantity monitoring equipment reliability against costs
Recommendation 11: Consider some local volunteer hydrological monitoring
Recommendation 12: Monitor for a minimum of 5 years

<b>Historic Environment</b>
Recommendation 13: Undertake a comprehensive appraisal for each piece of work based on the model of an EIA.
Recommendation 14: Enable a strategic approach to rewetting works, rather than a site by site approach.
Recommendation 15: Continue and enhance the current historic environment mitigation strategy
Recommendation 16: Ensure good communication by historic environment professionals as to the potential of sites
Recommendation 17: Ensure work undertaken by contractors is precisely specified and appropriately supervised and monitored.
Recommendation 18: Ensure practical considerations are observed
Recommendation 19: Favour the use of ditch spoil for ditch blocking over undisturbed peat
Recommendation 20: Take strategic palaeoecological samples where resources permit
Recommendation 21: Consider post-work monitoring of the historic environment
Recommendation 22: Consider incorporating further historic environment investigations and research into the project

<b>Landscape</b>
Recommendation 23: Continue to minimise local visual impacts on sites
Recommendation 24: Avoid the creation of large pools
Recommendation 25: Continue to limit the use of signage on the moor itself
Recommendation 26: Continue to keep photographic records of project sites

<b>Access</b>
Recommendation 27: Continue to avoid making access routes on proposed sites wetter
Recommendation 28: Consider wider crossings as part of new ditch blocks
Recommendation 29: Produce an advisory map identifying sensitive areas on the mires
Recommendation 30: Monitor tripping hazard risks from wooden boards used in ditch blocks
Recommendation 31: Clarify public liability issues

<b>Agriculture</b>
Recommendation 32: Embed the systematic and routine encouragement of land manager's direct involvement in carrying out restoration related activities and subsequent monitoring
Recommendation 33: Continue to discuss access issues with land managers
Recommendation 34: Consider forming a Mire Farmers Group/Forum of project farmers
Recommendation 35: Improve farmer representation on the project Delivery Group
Recommendation 36: Monitor for any increases in livestock parasites.

**Communication**

Recommendation 37: Ensure communication of project aims and monitoring results is understandable and widespread

Recommendation 38: Communicate 'lessons learnt' before proceeding with the new project

Recommendation 39: Consider communication mechanisms raised in the workshop

Recommendation 40: Forge better links with other moorland organisations and projects

Recommendation 41: Continue good communication between Mire Restoration projects on Exmoor and Dartmoor and other peat restoration projects.

**Education**

Recommendation 42: Develop a programme of educational outreach with schools

**Community Involvement**

Recommendation 43: Increase the use of volunteers for monitoring and restoration work to encourage stakeholder participation and ownership

Recommendation 44: Train and use more local contractors in project work.

**Governance and decision-making**

Recommendation 45: Implement the proposed governance structure but expand Project Delivery Group with representations from farming and voluntary sectors and academia

Recommendation 46: Ensure clear lines of communication and responsibility

Recommendation 47: Invest time before the new project in achieving stakeholder buy-in

Recommendation 48: Encourage a process of iterative problem-solving

Recommendation 49: Consider an on-going external evaluation to ensure relationships are working