

Blanket Bog Restoration Monitoring Task & Finish Group

Report

1 Highlights

- 1.1 The main aim of this work was to consider the scope for practitioner-based monitoring of peatland restoration.
- 1.2 A two-tiered monitoring system is proposed: higher levels of detail will be provided by researchers, and lower levels by land managers - the information collected at each level will be complementary.
- 1.3 Monitoring must be simple, quick and repeatable.
- 1.4 Experts agreed that abundance of *Sphagnum* mosses and Water Table Depth were the key measures to determine blanket bog health, and therefore, the delivery of ecosystem services.
- 1.5 Land managers expressed a willingness to carry out fixed point photography and record peat depth. More technical monitoring will require specialist input.
- 1.6 Monitoring must take account of the slow-moving nature of upland systems. The impact from interventions today will not be seen for >5 years.
- 1.7 The monitoring should make use of existing equipment, wherever possible.
- 1.8 Information should be stored on a central database, with input being achieved through an app developed by Natural England.
- 1.9 Suitable support and training for practitioners should be made available.
- 1.10 The use of volunteers to assist with data collection should be investigated.

2 Background

- 2.1 In support of the implementation of the ‘Strategy for the restoration of Blanket Bog in England’ the Uplands Management Group (UMG) established two Task & Finish Groups that:
 - 2.1.1 Used site visits to gather the best information (practitioner evidence) available about the different techniques that could be used by land managers to enhance the functionality of deep peat, and then
 - 2.1.2 Produced guidance for practitioners¹: the Blanket Bog Land Management Guidance.

¹ In this report, practitioner refers to anyone who owns, manages or has an input into the management of peatland, regardless of their management objectives.

- 2.2 This Monitoring Task & Finish (T&F) Group represents a third phase of the process. The aim is to establish a system that will allow practitioners to record the impact of their restoration management in a way that will supplement more formal monitoring carried out by specialist surveyors, engaged by Natural England, or other organisations.

3 Introduction

- 3.1 The brief agreed for the work of the T&F Group is at Enclosure 1.
- 3.2 The conclusion of the work of the T&F Group has been delayed by other events:
- 3.2.1 In February 2019, the publication of Natural England's Position Statement: *Burning as a Tool for the Restoration of Upland Blanket Bog*.
 - 3.2.2 The consultation by Defra about Rotational Burning on Blanket Bog, that started in August 2019.
- 3.3 The approach to monitoring being promoted by the NE Position Statement was not supported in the views expressed during the interviews. This difference was discussed with members of the Uplands Stakeholder Forum (USF) in a conference call on 29th April 2019.
- 3.3.1 Although offering a different approach to the Position Statement, it was agreed that the report from the T&F Group should reflect the views that were expressed during the interviews.
 - 3.3.2 This Report will be submitted to the USF for discussion at the next meeting of the Forum.
- 3.4 The consultation about rotational burning on blanket bog may introduce further restrictions on burning and if these restrictions reduce the amount of burning taking place, this will have an impact on the ability of practitioners to carry out monitoring.
- 3.5 Although it is now over a year since the interviews took place, the members of the T&F Group who produced the Report (which excludes input by Natural England) believe that the findings of this work have become even more highly relevant than before.
- 3.6 It was clear from the interviews that there is support to develop an effective monitoring protocol that will provide an indication of progress along a trajectory towards the achievement of the objectives for the uplands agreed between stakeholders.

4 Objectives for the T&F Group

- 4.1 In summary, the main objective of this work was to consider the scope for practitioner-based monitoring of peatland restoration.
- 4.2 Review the options for developing a monitoring system for upland blanket bogs that can be carried out by practitioners.

- 4.3 Consider how this proposed system could enhance the information available from other sources, including scientific monitoring carried out by, or on behalf of, Natural England or other organisations.
- 4.4 Make recommendations to the UMG about the next step, or steps, in the process.

5 T&F Group Members

- 5.1 The members of the T&F Group are listed below, and as this work is unfunded, the support from the organisations that the members represent is gratefully acknowledged.

Amanda	Anderson	Chair Moorland Association
Simon	Thorp	The Heather Trust
Dave	Key	Natural England (interviews only)
Emma	Taylor	Northumberland NPA

- 5.2 Dave Key was fully involved in the interviews, but following the publication of the Position Statement (see para 3.2.1), he had no further input into the preparation of this report.

INTERVIEWS

6 Organisation

- 6.1 Telephone interviews took place on: 13th, 21st and 23rd November 2018 and gathered a wide range of views from peatland restoration experts, research scientists and practitioners on four questions:
 - 6.1.1 What blanket bog features need to be monitored?
 - 6.1.2 What is already being monitored, and with what equipment/techniques?
 - 6.1.3 What monitoring are practitioners willing and able to carry out?
 - 6.1.4 What platform can all the data be stored and shared on to be most useful?
- 6.2 A list of people interviewed, and who provided input by other means, is included in Appendix 1.
- 6.3 The input from all those who contributed their views to the T&F Group is gratefully acknowledged.

7 Output

- 7.1 The conclusions from the interviews are summarised below.
- 7.2 More details about the issues that were raised are at Appendix 2.

CONCLUSIONS AND RECOMMENDATIONS FROM THE INTERVIEWS

8 Objectives of Monitoring

- 8.1 It is important that practitioners obtain feedback about the progress their efforts are achieving along the trajectory towards the better condition of their own blanket bog.
- 8.2 Clear and agreed objectives are needed to focus monitoring efforts. For example, it is unclear if monitoring of blanket bogs is to:
 - 8.2.1 Allow carbon budgets to be established and kept up to date, (is the bog a source or sink?),
 - 8.2.2 Assess the structure and function,
 - 8.2.3 Establish the site integrity,
 - 8.2.4 Assess favourable condition, or
 - 8.2.5 Demonstrate other ecosystem services, such as water quality and reduced overland flow?

9 Monitoring

- 9.1 The full scientific monitoring of blanket bog condition is wide ranging, expensive, highly technical and resource heavy. The T&F Group agreed that such monitoring is beyond the scope of practitioners.
- 9.2 The amount of monitoring work that it is reasonable to expect practitioners to carry out needs to be agreed.
 - 9.2.1 There is concern that expectations are too high about the amount and quality of the data that practitioners will be able to provide.
 - 9.2.2 Ideally, monitoring by practitioners should provide the evidence necessary to allow for adaptation and variation to management at the estate level. However, it might not be possible for practitioners to collect the required quantity and quality of data.
- 9.3 Regardless of the end use for the data, practitioners will need training if they are to collect any data that has value. Resources to provide this need to be allocated.
- 9.4 Monitoring should be simple, quick, repeatable, and comparable with sites elsewhere.
- 9.5 Practitioners should be able to generate data that can be used to demonstrate progress with blanket bog restoration at a local level, and that informs the national picture.
- 9.6 Monitoring should make use of the tools readily available to the practitioners (e.g. smartphone, peat stick, handheld GPS).

- 9.7 Appropriate data for practitioners to record consistently is considered to include: fixed point photography, GPS data, date, peat depth, wet knee test. It may be possible to include recording of broad scale heather / moss abundance, if an appropriate protocol can be agreed.
- 9.8 An App used by all would aid consistent data collection and analysis.
- 9.9 In some areas, volunteers may be available to help with data collection. This should be encouraged whenever possible.

10 Two-Tier Approach

10.1 A two-tier approach to data collection is recommended.

10.2 Basic Level - Practitioners

- 10.2.1 All practitioners should be asked to record data regularly that they can collect with little training and with minimal impact on their normal routine, such as:
- Practitioner's assessment of the site,
 - The reasons they decided that intervention was appropriate², and
 - Ongoing monitoring of change.

10.3 Higher Level – Specialist Surveyors

- 10.3.1 Specialist surveyors should be commissioned to carry out more detailed surveys, less frequently.
- 10.3.2 The area covered by more detailed surveys is likely to be less than the area covered by the basic surveys.
- The total area would be dictated by the resources available, and
 - The locations for the surveys would need to be selected to be as representative as possible.
- 10.3.3 It may be possible to combine the higher level surveys with the statutory Site Common Standards Programme, or any scheme more focused on ecosystems services (public goods) that may replace it.

10.4 Natural England should provide the funding for the specialist surveyors.

- 10.4.1 Site integrity and condition assessment is the statutory role of NE, not practitioners.
- 10.4.2 Landowners and managers will already be incurring additional costs associated with collecting the basic level information.
- 10.4.3 It is unrealistic that Landowners and managers should also be required to cover the costs of the specialist surveyors.

² See the [Decision Making Toolkit](#) which outlines the process practitioners should follow ahead of intervention – it is part of the Blanket Bog Land Management Guidance.

- 10.5 The importance of hydrology is recognised, and if a simple proxy can be developed, practitioners may be able to record appropriate data. For example, in future it may be possible to use Earth Observation data as a means of measuring wetness.
- 10.6 The basic level data should be compatible with the data collected by the specialist surveyors so that the data are complementary.

11 Data Storage

- 11.1 Many options for long-term data storage platforms were proposed during the interviews. Further work is required to consider the advantages and disadvantages of each option.
- 11.2 A funded, long-term data storage solution is required, before data starts to be collected.

12 Natural England's Position Statement

- 12.1 Natural England published a Position Statement: *Burning as a Tool for the Restoration of Upland Blanket Bog* on 11th February 2019. This included two annexes: a Decision Making Framework and a Monitoring Protocol.
- 12.2 During the preparations for the interviews by the T&F Group, NE's proposals for detailed monitoring were outlined. These appeared in Annex 2 to the Position Statement.
- 12.3 It is recognised that the monitoring protocol only applies when restoration management is agreed. A concern widely expressed to the T&F Group during the interviews is that the approach to monitoring, since set out in the Position Statement, is far too burdensome on practitioners.
- 12.3.1 Practitioners do not have the training, expertise, time or equipment to implement the detail and frequency of the prescribed regime.
- 12.3.2 If implemented as described, the result is likely to be an enormous amount of poor data of little value.
- 12.4 Natural England and the Game & Wildlife Conservation Trust subsequently discussed a power analysis³ and have agreed that the 25 quadrats stipulated in the Position Statement Monitoring protocol refer to the intervention type and not per intervention plot. Where data from more than one plot are pooled to make up the required 25 samples, to avoid introducing another variable, the plots must have been subject to the same management at the same time and in the same habitat.

³ A Power Analysis allows the determination of the sample size required to detect an effect of a given size with a given degree of confidence.

13 Recommendations

13.1 The T&F Group will discuss this report with members of the UMG and USF.

13.2 It is recommended that:

13.2.1 Further discussion takes place with Defra and Natural England to clarify concerns of practitioners and establish how the views obtained from peatland specialists, researchers and practitioners, as part of this work, can be incorporated into the development of an appropriate approach to monitoring of blanket bog restoration work.

- A further T&F Group could be formed to develop a monitoring protocol.

13.2.2 Agree the purpose of monitoring so that agreement can be reached on exactly what features should be measured (see paragraph 8.2).

13.2.3 Establish the best approach to establishing broad scale heather / moss abundance (see paragraph 9.7). A protocol could be developed between Natural England and the UMG to test the capacity of non-specialists to apply a selection of methods.

13.2.4 Investigate options to provide training for practitioners in the required data collection skills.

13.2.5 Encourage the use of volunteers to collect data.

13.2.6 Identify the best App, or if necessary develop one, to collect, collate and store data (see paragraph 9.8).

13.2.7 Discuss funding for the higher level of monitoring by specialist surveyors as part of Government statutory duty, especially in the light of recent announcements on NetZero and the development of the England Peatland Strategy (see paragraph 10.4).

13.2.8 In recognition of the importance of hydrology, develop a simple proxy that would allow practitioners to record appropriate data (see paragraph 10.5).

14 Conclusions

14.1 Developments in the last 12 months, have served to highlight the importance of monitoring the response of blanket bog in response to management change. However, these developments have served to confuse practitioners who can be excused for not knowing what is expected of them.

14.2 The UMG is asked to press for clarity on the issues highlighted in this report so that clear guidance can be given to practitioners, whose support is essential, if the objectives set by Defra and Natural England are to be achieved.

Amanda Anderson

Chair

Monitoring Task & Finish Group

Appendices

1. List of people interviewed / who contributed to the review.
2. Summary of the Interviews.

Enclosures

1. T&F Group Brief