



The Peatlands Partnership

Newsletter

Issue Number 2. September 2008

Welcome to the second edition of The Peatlands Partnership Newsletter.

Since our first edition was published back in November 2007 we have seen some important and interesting developments covering a range of peatland issues. We take a look back at our first Forum event at Strathy, report on keeping bogs

healthy and also address windfarms on blanket bog - our newsletter takes you through the issues.

We hope you enjoy this edition and would welcome any comments or suggestions you have for future newsletters.

Linda Hutton, Peatlands Project Officer

A GUIDE TO THE PEATLANDS PARTNERSHIP



Now that the Partnership is well underway, we thought it would be useful to provide a quick overview of the structure and functions of the Partnership.

Management Team

The core management team of the Partnership is made up of representatives from Scottish Natural Heritage, Forestry Commission Scotland, Forest Enterprise Scotland and the RSPB, and is chaired by John Henderson who farms at Scrabster. The management team will lead on the delivery of their objectives, as detailed in 'The Peatlands of Caithness & Sutherland Management Strategy 2005-2015'. Currently, the team are working towards completion of a formal constitution.

Working Groups

Working groups will be selected by the management team and established for deliverable programmes of work that are consistent with the aim of the Partnership. Upon completion of each programme, working groups will be terminated.

Forum

The Forum is the public face of the Partnership and the platform for reporting. The Partnership recently hosted their first Forum at Strathy Hall in Sutherland which we have reported on below. The Forum, which is open to the public, allows for an exchange of views and for the Partnership to report on their progress to date and future plans. Forums are expected to take place approximately once per year.

STRATHY FORUM REVIEW

Tuesday, 24th June was the date for the first Peatlands Partnership Forum event which was held at Strathy Hall in Sutherland.

There was a good turnout on the day which was chaired by John Henderson, and a range of subjects were covered by guest speakers.

Andrew Coupar and Lesley Cranna of SNH reported on the progress of the Partnership and its future plans, and Norrie Russell provided an informative talk about the progress at Forsinard since the end of the LIFE Peatlands Project. Other speakers were

Adhair McIvor, RPID, who described the

application process for SRDP, local and national objectives for FCS were presented by Bob Dunsmore, and Jon Priddy of HI-Community Energy, now Community Energy Scotland, provided an insight into their funding and advisory services supporting community energy initiatives.

The audience was offered the opportunity to discuss the morning's business and other peatland related topics in a question and answer session.

The weather was perfect for the guests who joined us for the walk round the four mile Forsinain Trail in the afternoon.

NATIONAL NATURE RESERVE UPDATE

A Look at Developments at Forsinard written by Norrie Russell

Live Images a Big Hit

Nesting hen harriers were once again on view to visitors at Forsinard with live pictures being beamed in from a nest on the reserve to new screens in the visitor centre.

The original transmission equipment which allowed the pictures to be beamed up to 10 miles to the centre, depending which nest was used, reached the end of its life in 2006 after 10 years of service. Visitors have again much appreciated having the chance of this insight into the home life of this rare bird of prey and increases in visitor numbers from May to July when the birds were nesting were recorded. Visitors can still enjoy recorded images now that the three young have successfully fledged the nest and also have a good chance of seeing adult and young harriers flying on the reserve with over 20 fledged from nests within our monitoring area.



Nests in felled forestry being restored back to open bog were particularly successful this year. Funding from SNH also allowed purchase of a second radio-link and moveable camera capable of being controlled from the visitor centre. We hope to trial use of this camera over the rest of the year so that it can be best located next year to add images of other peatland wildlife including birds, red deer and possibly water voles.

New Displays at Visitor Centre

Back at the visitor centre the main display room will be completely replaced with new layout and interpretation, and a new low energy lighting system will be installed at the same time to reduce the carbon footprint of the traditional station building. Draft interpretive ideas and layouts are well advanced and are looking exciting and fresh. Installation is due to take place once we close for this season. Outside, the car park will be surfaced and re-designed with smart new stone 'welcome' signs.

If visitors want to remember their visit, from next season they will be able to take home a copy of the Forsinard film, 'The Undiscovered Country', which shows in the audio-visual room and is being transferred onto DVD from its current video format.

Outdoor Classroom



The Dubh Lochan Trail at Forsinard which has allowed thousands of people to walk safely through bog pools each year will be extended in the coming months to create an area where school children (and big kids too!) can safely study the pools and their inhabitants and plants.

Caithness flagstone will again be used to provide lying stones on the edges of pools where kids can use periscopes to look below the surface. Nearby there will be a crafted table and seating adorned with

stone carvings designed by local children. Two sections of the current trail on peat banks will also be surfaced in flagstone to improve the surface.

LOOKING BACK TO LOOK FORWARD

written by Althea Davies

Peat preserves an archive of its own history and of wider environmental change by trapping pollen, plant remains, insects, charcoal and pollutants as it accumulates. Since most blanket peats, especially in northern Scotland, have taken thousands of years to reach their current depth and spread, peat archives can provide unique insights into long-term ecological, land use and environmental change. These records can be used to assess how biodiversity, patterns of vegetation and burning on peatlands have changed over far longer timescales than is possible through even the longest observational records.

For example, the open pools and peat hummocks in the Flow Country are not just distinctive, they are intrinsic to the survival of this ecosystem, with pools and hummocks expanding or contracting in response to climate change over centuries and millennia. This variability must be expected and accommodated for the system to thrive as a wildlife habitat and significant carbon store.

By contrast, the pine stumps preserved in bogs across most of the Highlands represent much shorter episodes of scattered tree growth during drier phases. Drier conditions in future may favour trees, but this could be offset by increased climatic variability, particularly increased wetness, which caused stress and mortality in bog-grown trees on northerly peatlands, leading to their widespread disappearance some 4,000 years ago.

This contrasts with assertions that extensive over-exploitation of Highland woods in the past justifies their planting on peatlands; this was one of the arguments used to justify the afforestation of the Flow Country – a mistake few people would want to repeat! The extent to which people have influenced peatlands

remains a constant area of debate, especially when it comes to burning, and the past shows that there is no simple answer. Fires were more common at times of greater climatic aridity, but for thousands of years people have burned drier heaths and peatlands to manage them as a grazing resource. However, in many areas levels of burning have increased over the last c.100-250 years.

Consequently, these peat archives indicate how ecosystems respond to change and what levels of variability are ‘normal’, so they can be used as a reference to help set baselines and targets, and so help shape monitoring and management strategies that will contribute to the continued diversity and functioning of peatlands. However, at present not much of this longer-term information feeds into current management strategies.

I am currently working on a project to look at ways to increase awareness of this natural archive and its potential value in upland management. Similar long-term ecological and environmental information can be recovered from peat accumulations in many other habitats in addition to blanket peats, including floodplains, fens, flushes (common in many birchwoods), loch sediments and salt marshes.

If you are interested to hear more about this work or become involved, please let me know. A review of many of the historical environmental changes relevant to current management and policy in the uplands can be found on my web page at www.sbes.stir.ac.uk/people/davies.

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WIND FARMS IN CAITHNESS & SUTHERLAND

written by Andrew Coupar

In November 2007 the Scottish Government revised its renewable energy targets. The aim now is for 50% of the country's electricity to come from renewable sources by 2020, with an interim target of 31% by 2011.

Although a recent report suggests that there is scope to increase the contribution from hydro-electric schemes, other technologies are generally less well advanced and wind farms will be the main means by which these targets are reached.

It can sometimes appear that remote areas in general and the north of Scotland in particular, get more than their 'fair share' of wind farms, and hence of the advantages (e.g. employment, community benefits) and disadvantages (e.g. scenic impacts, damage to habitats and species) that they bring. As with so many things, there is some truth in this, but it is not the whole story. For example, some 11-12% of Scotland is covered by blanket bog, yet around 40% of wind farms are sited wholly or partly on blanket bog. This is perhaps not surprising given that most of our blanket bog is in the uplands and uplands areas, generally, are windier than lowland areas and thus more attractive to the wind energy industry.

There are numerous ways of considering how the north of Scotland fares in comparison with other areas. For example, do you compare numbers of wind farms, or numbers of turbines? Should the comparison be against some 'average' Scottish wind farm density, or against particular areas of similar size?

Attention also has to be paid to the various stages in the planning process, as not all those schemes which are proposed make it all the way to construction and operation. The three key stages which are considered here are; scoping, application and approval/installation. The 'scoping' stage is where a preliminary proposal is considered, the issues relevant to it identified and the means of assessing potential impacts determined. This can then lead to an Environmental Impact Assessment being carried out, with the findings being reported in the Environmental Statement which accompanies the planning application. Should the application be successful it is approved by the relevant planning authority and can then be installed by the developer.

	Caithness and Sutherland	Scotland
Scoping	13	50*
Application	14	88
Approved/Installed	10	124
Total	37	262

Table 1: Number of wind farms at different stages in the planning process

*This figure less up-to-date than that for Caithness and Sutherland and may be an underestimate.



Wind Farms in Caithness & Sutherland Cont.d

	Total number of wind farms	Area (sq km)	Wind farm density (wind farms per 100 sq km)
Caithness and Sutherland	37	7,641	0.48
Scotland	262	78,762	0.33

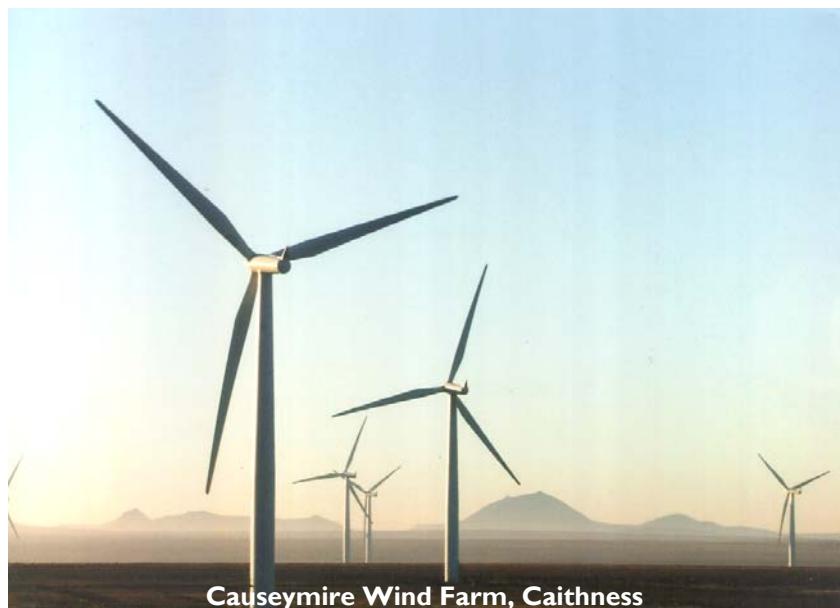
Table 2: Wind farm densities in Caithness and Sutherland and Scotland

From Table 2 it appears that Caithness and Sutherland have rather more than an equal share of the wind farms in Scotland. This is perhaps not surprising as large areas lack many of the constraints (e.g. remoteness, steep ground, access to the grid) that are present in, for example, much of the western highlands. Also, they do not have the large urban areas of the central belt. Then again, the northern wind farms are relatively modest in size compared with, for example the 140 turbines at Whitelee, south of Glasgow.

WIND FARMS ON BLANKET BOG

written by Andrew Coupar

Blanket bogs are the biggest store of terrestrial carbon in Scotland. Wind farms are promoted because when they produce electricity the carbon emissions are considerably lower than when electricity is produced using fossil fuels. It is therefore often perceived that there is something rather anomalous about building wind farms on blanket bogs – carbon is lost from the store to accommodate a carbon saving device.



A recent report to Scottish Government indicates that the ‘carbon payback time’ for a wind farm on peatland, i.e. the time it takes the carbon savings from a wind farm to compensate for the carbon lost from the peat store, together with the carbon cost of building the wind farm, was typically 2 – 5 years. Much depends, of course, on the depth of the peat, the condition of the vegetation, and the success of habitat restoration measures.

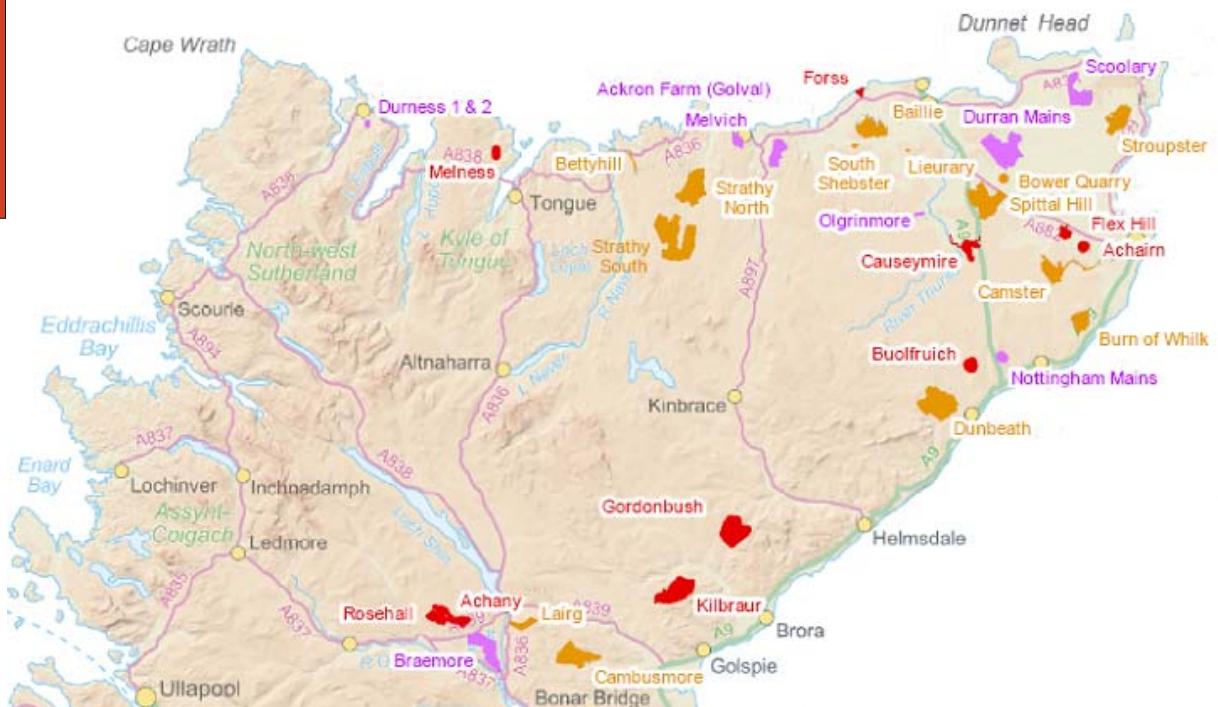


Wind Farms on Blanket Bog Cont.d

The total extent of blanket bog lost to or damaged by a wind farm is both variable and hard to predict. However, on the basis of typical infrastructure – tracks, turbine bases, crane hardstandings etc – a reasonable rule of thumb is 2 hectares per turbine.

On this basis, those wind farms in Caithness and Sutherland which are installed, approved or at the application stage will result in the loss of, or damage to, around 400 hectares of blanket bog – just over 0.1% of the total resource in the area.

It should be noted that some wind farms, or parts of wind farms, are planned for peatland areas currently supporting forestry. There will be no major direct loss of blanket bog habitat in these areas, indeed there can be opportunities for habitat restoration. However, there is still the potential for loss of carbon stored in the peat.



Map I: Planned and installed wind farms in Caithness and Sutherland

Key to footprints:

Installed or Approved Application Scoping

To conclude, wind farms are, and will continue for some time to be, built on existing and former blanket bog. This will inevitably result in some local loss of habitat. The challenge is to ensure that the areas of highest quality are safeguarded and that suitable mitigation and compensation measures are applied elsewhere to minimise habitat loss and, where possible, reverse previous losses.

Of course the above just deals with the habitat issues, not the birds and other animals that live in and around the peatlands. That is another story.

FORSINAIN TRAIL OPENING

Spring 2009 will be the date for the official opening of the four mile Forsinain Trail. The trail head is approximately four miles north of the RSPB Reserve office at Forsinard which lies within the RSPB Forsinard Flows National Nature Reserve. The trail continues through Forestry Commission Scotland's Forsinain Forest and then along the picturesque, privately owned, River Halladale salmon river.

The trail is self-guided with way markers along the route and will have an accompanying trail leaflet complete with map and narrative highlighting interesting points along the way.

The trail takes in farm fields which provide feeding and breeding grounds for birds and, further on, a flagstone path across the blanket bog takes in numerous bog pools featuring some excellent examples of bog plants. The bog leads to a pleasant woodland walk emerging at Loch Bad a Bhothain which is used as a breeding ground for red throated divers. A bird hide has been constructed to provide an optimum and discreet view.



Bird hide at Loch Bad a Bhothain

The trail then follows the forest track down to the River Halladale, which provides an excellent vantage point for wildlife viewing, before returning back to the trail head and car park.

THE PEATLANDS PARTNERSHIP WEBSITE

The Peatlands Partnership will soon have a web presence. The current proposal is that the domain will direct people automatically to a section within the Scottish Natural Heritage website. By doing this we can ensure that all information published on the site is managed appropriately and that Partnership information continues to be accessible and relevant.

We will be in touch again when the website goes live.

LAUNCH DATE ON THE HORIZON

The eagerly awaited opening of Caithness Horizons is scheduled for December 2008.



The refurbishment will take in Thurso Town Hall and the adjacent Carnegie Library and will house a permanent exhibition, tourist information centre, shop, gallery and café. Provision will also be made for temporary exhibitions, an open learning centre and general community use.

SNH is a major funder in the project and is being consulted on various issues including the Flow Country which will be represented in the Main Hall.

Further information and anticipated floor layouts are available for download from the Caithness Horizons website at: www.caithnesshorizons.co.uk

Keeping the Bogs Healthy

written by Norrie Russell

So just how do you go about making sure that your internationally important peatlands are as healthy as they should be and that you are getting the management right?

There are many questions that we would like to know the answer to. Here are just a few: How is the restoration of the bogs progressing where we have dammed the hill drains? Are the numbers of deer and grazing stock in balance with the habitat? Is climate change affecting the bogs? What habitat conditions do key plants, birds and other wildlife select for? No easy task anywhere in the peatlands given their vastness, difficulty of access and as yet poorly studied dynamics.

RSPB already puts a large amount of time and effort into monitoring bird populations and one or two key plant species. But eight years ago we realised that to understand the habitat and how birds relate to it we had to set up a long-term habitat monitoring programme that would pick up fine scale changes and inform our management decisions. In order to relate habitat to bird information this involved collecting data from walked transects and quadrats spread evenly across the whole reserve.

Painstaking and time consuming work was carried out in the height of midge season in all weathers with the original baseline carried out over 5 years ago. This year a team from our research and reserve staff led by Bridget England are repeating a sample of over 1,000 transects and quadrats which will be analysed over the winter to look at change in around 40 attributes measured in the field. These include measures of key bog plants such as sphagnum moss, cotton grass, deer grass and heather as well as bare peat and signs of browsing and trampling.

We hope that the information gained will not only inform management on the reserve but also be useful to other owners and managers within the Flows. SNH have supported this work as it will both inform the management of The Flows NNR and the designations in this area of the Flows.

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