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Pàrlamaid na h-Alba

Official Report

RURAL AFFAIRS, CLIMATE CHANGE AND ENVIRONMENT COMMITTEE

Wednesday 6 June 2012

Session 4

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RURAL AFFAIRS, CLIMATE CHANGE AND ENVIRONMENT COMMITTEE
15th Meeting 2012, Session 4

CONVENER

*Rob Gibson (Caithness, Sutherland and Ross) (SNP)

DEPUTY CONVENER

*Annabelle Ewing (Mid Scotland and Fife) (SNP)

COMMITTEE MEMBERS

*Claudia Beamish (South Scotland) (Lab)
*Graeme Dey (Angus South) (SNP)
*Alex Fergusson (Galloway and West Dumfries) (Con)
*Jim Hume (South Scotland) (LD)
*Richard Lyle (Central Scotland) (SNP)
*Margaret McDougall (West Scotland) (Lab)
*Dennis Robertson (Aberdeenshire West) (SNP)

*attended

THE FOLLOWING ALSO PARTICIPATED:

Mandy Gloyer (Scottish Power Renewables)
Jonathan Hughes (Scottish Wildlife Trust)
Norrie Russell (Royal Society for the Protection of Birds)
Simon Thorp (Scotland's Moorland Forum)

CLERK TO THE COMMITTEE

Lynn Tullis

LOCATION

Committee Room 4

Scottish Parliament

Rural Affairs, Climate Change and Environment Committee

Wednesday 6 June 2012

[The Convener *opened the meeting at 10:05*]

Decision on Taking Business in Private

The Convener (Rob Gibson): Good morning, everybody, and welcome to the 15th meeting in 2012 of the Rural Affairs, Climate Change and Environment Committee. Members and the public should turn off their mobile phones and BlackBerrys, because leaving them in flight mode or on silent will affect the broadcasting system. There are no apologies—we are all present and correct.

Agenda item 1 is a decision on taking business in private. Do members agree to take items 4 and 5 and future consideration of the committee's approach to scrutiny of the Scottish Government's draft budget for 2013-14 in private?

Members *indicated agreement.*

Peatlands

10:06

The Convener: Agenda item 2 is further evidence on peatlands. Members will recall that, on 25 April, we took evidence from the International Union for Conservation of Nature, Scottish Natural Heritage, the Scottish Environment Protection Agency and academic experts. That evidence session focused on the IUCN United Kingdom peatland programme and the importance of peatlands for climate change mitigation. Today's follow-up session gives us a chance to focus on the practicalities that are involved in peatland management for the practitioners who work at the peatface, as I will call it.

I welcome Mandy Gloyer, policy manager at Scottish Power Renewables; Jonathan Hughes, director of conservation at the Scottish Wildlife Trust; Simon Thorp, director of Scotland's Moorland Forum; and Norrie Russell, senior site manager at Forsinard for the RSPB.

I do not know whether any of you wants to say a few words to kick off, but we would be happy if you did that. We have your submissions and we are all geared up, but if you would like to say anything following what we heard from the academic experts, you have an opportunity to give members a hint about where you are coming from.

Mandy Gloyer (Scottish Power Renewables): Scottish Power Renewables, at which I am policy manager, is the UK's largest onshore wind farm asset operator. We have 24 operational wind farms and more than 1,300 MW consented, with a big list of future projects in the pipeline.

The committee will know that, in order to achieve Scotland's renewables target, there will have to be a continued and increased focus on developing onshore wind. Members will also be aware of all the environmental constraints that surround onshore wind farm development.

As a developer, we have had a long-standing and increasing commitment to restoring peatlands on our wind farm sites. We have managed peatland since 2004 and we are now managing and restoring more than 8,000 hectares of peatland. Half of that was previously afforested, and it is at those sites that we find the greatest challenges in our peatland restoration programme.

Norrie Russell (Royal Society for the Protection of Birds): The RSPB has been involved in peatlands, and particularly in the restoration of bogs in the flow country, since about 1995. We manage a 21,000 hectare nature reserve at Forsinard, where we reckon the peat

contains about 26 million tonnes of carbon. Over that time, we have restored almost 15,000 hectares of open bog and 2,400 hectares of forestry, which we have removed and are in the process of restoring back to peatland.

Simon Thorp (Scotland's Moorland Forum): I will say a few words about the moorland forum. I am here to represent the forum's 30 member organisations. We work throughout Scotland and cover all the various issues. I chair a peatland working group in the forum. We see our role in the peatland debate as being to bring together all the various threads and to weave our way through the policy issues, the science issues and the practicalities. In particular, we look at how we can learn from work that is already being done, or which is planned, on peatlands, so that we can feed it back into the policy and research debates.

Jonathan Hughes (Scottish Wildlife Trust): I will quickly describe what the Scottish Wildlife Trust has been doing on lowland raised bogs, which are sometimes forgotten. The blanket mires of the uplands are incredibly important, but we have recently done a bit of work in the Scottish lowlands that involved looking at 58 lowland raised bogs that cover 4,000 hectares.

We got some extremely interesting results. We found that 97 per cent of the sites are affected in some way by artificial drainage, 74 per cent are affected by significant areas of woodland and scrub, and about 9 per cent are still subject to active peat cutting. I am talking about non-designated resource. I know that the committee has taken evidence on the condition of sites of special scientific interest and special areas of conservation, but the broader lowland raised bog resource is in pretty poor condition.

We looked at site depth measurements and estimated that more than 10 million tonnes of carbon are stored in the lowland raised bog resource. If we extrapolate that, we find that about 60 million tonnes of carbon are stored in the entire resource.

We also questioned landowners and got an interesting result—95 per cent of them were very supportive or broadly supportive of grant-aided restoration measures being carried out on their sites, so it is clear that there is an appetite to do something. We estimate the capital cost to be £1,280 per hectare, after which the annual management cost would be £40 a year. That work gives us a good basis for developing a strategic plan of action for lowland raised bogs.

The Convener: Thanks for that.

I kick off our questions by asking about land management. Wind farm companies and users of moorland for shooting, hunting and grazing are major players in the interaction that takes place with peatland. It is clear from the picture that we have from the flows that there is an opportunity to improve things when stock numbers are kept in control and the peat is given a chance to recover. It would be useful to hear how land management can help with that.

Simon Thorp: As a land manager, I will take the lead on that question. I should say that, by background, I am a chartered surveyor.

The approach to management is key. We talk about large-scale restoration projects, but I believe that we can achieve improvements in large areas of Scotland by working with land managers in the various ways that have been suggested, such as by dealing with the grazing issues and focusing on the easy wins. We need a co-ordinated approach so that the land management community understands what is needed. We need better guidance and clearer instruction on how such improvements can be achieved, and the Scottish rural development programme schemes should provide an incentive for people to engage.

Land management is key. We can do a lot of talking, but without good management on the ground, no improvements will be made.

The Convener: It has been suggested that incentives to do with certain aspects of forestry have been provided through the present SRDP. Are you asking for specific incentives to be provided through the new SRDP?

Simon Thorp: We should be looking at that. I cannot claim to be an expert on the subject and I am not directly engaged in it, but landowners come to us to ask why they should do such work and what is in it for them. We need to be able to offer some inducement. There are longer-term benefits that everyone can gain, so we should be looking at how we can focus people's minds.

10:15

Jonathan Hughes: The SRDP is an important funding mechanism and we should be looking at its design to try to maximise its potential for peatland restoration.

We could say that peatlands, particularly blanket bogs or deep peats, are naturally unproductive in terms of crops and livestock but naturally productive in terms of their delivery of ecosystem services, for example water retention and water quality. Some of the water companies in the Pennines have had huge end-of-pipe clean-up costs because the peatlands are in poor condition. I think that the committee has taken evidence on that. We need to invest in securing the ecosystem services that peatlands can provide. In some ways, the SRDP has to make the leap—its approach has to be that it is paying for the

protection of those stocks of natural capital for the good of Scotland in general.

That is not to say that peatlands cannot be productive in the traditional sense of the word. The key to restoration measures is the water table. Keeping water on the bog is the key to it all. It is critical to get the ditches blocked up and the water table to rise. Although that can go hand in hand with certain rural activities, the most important thing is that we secure those ecosystem services.

Jim Hume (South Scotland) (LD): My question is on funding. The SRDP is a fairly small pot and it is pulled in many directions. Has any work been done on carbon trading and the restoration of peat? Do panel members believe that getting private money in to restore peatland is a way forward?

Jonathan Hughes: The voluntary market is still dwarfed by what is called the compliance market. We are talking about millions versus billions—there are billions in the compliance market, so regulation is clearly driving things in a big way.

That is not to say that the voluntary market cannot become a lot more important in future. We just need to get a few things sorted out first. In 2011, the verified carbon standard, which is the biggest of its kind in the world, published guidance on peatland rewetting and conservation. That is a really good start, but we need to develop proxies.

There could be half a dozen classes of vegetation on a bog. I brought a book along to demonstrate that. Norrie Russell will know it well. It is a little-known fact that every single vegetation community in the country is mapped and coded. There are about 25 peatland codes, and each of them could form the basis of classifying what happens on peatlands in terms of carbon fluxes. If we have half a dozen different types of vegetation, we can look at them and say almost immediately what is happening in terms of carbon flux.

We need to develop something like that before we can develop a healthy voluntary carbon market for peatlands. The IUCN peatland programme would like to take that forward in the next year or so. I am vice-chair of the programme and I am keen that we schedule something to that effect. It is a top priority if we are to exploit private investment from the voluntary markets.

Simon Thorp: We are looking at that. Jonny Hughes explained some of the scientific stuff behind it, but the international arrangements are pretty complex. The IUCN project is working towards it, and I am supporting that through the peatland working group in the forum. It is something that we have to take seriously. Private money is already going in to peatland restoration. The slight concern is that that will run ahead of there being proper standards, codes and guidance such that there is full accountability.

We need to be careful about running too fast, too soon and ruining the credibility of the schemes. We need an element of caution, although at the same time we need to ensure that we do not delay things. However, it is clear that we need to investigate private investment—there are potentially a lot of wins all round from it.

Mandy Gloyer: From our perspective as a land manager that operates outside the existing incentive system, we agree that bringing up the water table and restoring the ecosystem services is the way forward. Our approach to habitat management might shed some light on some of the barriers outside the existing incentive schemes. Our approach tends to involve developing a specific habitat management plan for a site in conjunction with a range of stakeholders, including RSPB Scotland, SNH and others.

One barrier that we find is a lack of consistency of approach between Government agencies on what they want us to do on the site. For example, we have had discussions with SNH and the Forestry Commission in which the different policy drivers under which they operate lead to a conflict of opinion on whether peatland sites that have previously been planted can or should be restored. In the Forestry Commission's view, sites should sometimes be replanted even if they are fairly deep peat sites.

As developers, we want to keep all our consultees and stakeholders happy so that we do not have objections through the planning system. We want to develop the best ecological solution. In some cases, that might be a peatland restoration programme, but there are barriers because forestry strategy and the control of woodland removal policy drive things slightly differently. At present, on more than a couple of our sites, those discussions are reaching a bit of a stalemate.

The Convener: On that point, when applications require the removal of forestry, perhaps because a wind farm will replace a forest, should we expect the agencies to suggest something in the way of peatland restoration?

Mandy Gloyer: It would be helpful if there was at least agreement between the agencies on when the benefits of restoration outweigh the benefits of replanting. There seems to be a different opinion in the agencies about what those circumstances are. I fully appreciate that, in many cases, the issue is site specific. The ideal balance between peatland restoration and replanting of whatever scale and form is site specific. However, there is a bigger policy issue in that the two agencies are being driven from different directions. That

manifests itself on the ground as a difficulty with deciding on the best habitat management solution.

Norrie Russell: We have that issue, too, particularly with the restoration in Forsinard. The private forestry sector has really picked up the cudgel and is looking to restore sites and take large areas of trees out of production. Clearly, that is where the trees are doing poorly and there will not be a great return from the crop or from a second crop. Just as we have a peat-depth criterion for new planting, it should be easy to come up with definitive guidance on a peat depth beyond which trees are removed and the area is restored to open bog. I hope that we can move towards that, although the two figures will not be the same. We need definitive guidance on that, which I guess should come from the Forestry Commission. It could be applied objectively to the whole of Scotland to identify the areas that will be restored to open bog and those where trees will remain.

Jonathan Hughes: I refer back to the wind farms and peatland good practice principles sheet that we put together a few years back with Scottish Renewables, RSPB Scotland, WWF Scotland and Friends of the Earth. Principle 1 states:

"Peatlands are recognised as environmentally valuable, and important stores of carbon. Areas of deep peat and those predominantly consisting of active"

blanket

"bog habitat"

should be

"recognised as higher constraints."

I would go slightly further than that and suggest that they should be off limits, regardless of whether there are trees on them. If there are trees on what was a deep blanket bog, the area should be restored to blanket bog—period. I think that the Forestry Commission has recognised that. Its policy statements certainly suggest that, over the past 15 years or so, it has come a long way and is moving towards that position. I repeat that, regardless of trees, the principle should be that deep peat is restored.

Alex Fergusson (Galloway and West Dumfries) (Con): Can you quantify that? How many hectares of deep bog have already been planted?

Jonathan Hughes: Norrie Russell might be better placed to answer that question, given that much of the planting has happened in the flow country.

Alex Fergusson: I really do not mind who quantifies it; I would simply be very grateful if someone could do so.

Jonathan Hughes: I do not have the figures to hand. I think that there are estimates, but I would have to dig them out.

Norrie Russell: I do not know the answer to that question—IUCN and some of those who deal with the issue at a policy level will be able to answer it better than I can—but people have talked about 60,000 hectares being planted in the flows themselves. Of course, the plantings will not all be in deep peat and, in any case, work on tying down peat depth under forestry has not really been carried out. There are estimates for Scotland, but no definitive figure.

That said, there were 15,000 hectares of forestry around Forsinard. We removed 2,400 hectares and the Forestry Commission removed 700 more, and we think that there are about another 6,000 hectares that we would see removed under current guidelines on removing negative edge effects on birds on Natura sites and restoring deep peat. In the flows, the planting is quite substantial; elsewhere, forest blocks tend to be on the edge of peatlands and form only a smaller proportion of a block.

Jonathan Hughes: It is really important to distinguish between wet heath, which is shallow, peaty, podsol soil, and deep peats, which are blanket bog and raised mire habitats. When you look at peatland maps of Scotland, you might think that most of Scotland is covered in peatland. A lot of that is shallow wet heath, much of which has wind farms on it. The principles that we signed up to certainly did not say that wet heath should be off limits and I feel that decisions to, say, locate a wind farm on wet heath should be made on a site-by-site basis. Deep peat, which is blanket bog, should be off limits.

Alex Fergusson: That is where I was coming from with my question. It would be useful to get those figures because we need to know what we are dealing with nationally.

The Convener: You can write to us about that.

Jonathan Hughes: I will do so.

Alex Fergusson: I believe that Jonathan Hughes suggested a rough figure of £1,280 per hectare for restoring lowland bogs. Obviously, as an unashamed lowlander, I have an interest in that, but is the figure for restoring bogs in the flow country and, indeed, elsewhere in Scotland similar to that?

Norrie Russell: The figure varies enormously. For example, our last hill drain blocking project, in which we used excavators to block drains, mainly with peat, raised the water table in the drains and diverted water out into the open bog, cost about £22 per hectare. However, with the forestry situation, we are looking at a net cost of about

£2,200 a hectare. Some of that is an extrapolation, because we have not yet extracted timber from bogs. We carried out a 2,000 hectare trial a year ago but proposals for a plant in the north—and the prospect of someone buying the material—have made it valid to extract timber from the site.

We are doing trials to look at brash removal as well because a site can be restored more quickly and efficiently if all the tree material is removed. We are looking at rolling up brash mats after the harvesters have been in and taken the timber out. There is an income from timber, and the material can be sold to offset some of the costs. Clearly, that creates a lot more jobs so it is a far more attractive proposition than simply mulching the trees to waste. The net cost looks like it is about the same as mulching the trees to waste, so we hope to extract as much material from the sites as we can, although the technology is barely there to allow that to happen. The net cost is in the region of £2,200 per hectare.

10:30

Alex Fergusson: Is that the process that involves the removal of forestry?

Norrie Russell: That involves the removal of trees, which takes into account taking down trees and removing fences to let deer back into the site to help control tree regeneration because, clearly, seedling regeneration goes on that must be controlled. We have done that by hand pulling and by using clearing saws, but ultimately deer that are managed correctly are an efficient way of controlling seedlings.

The process involves the tree seedling control, which would be carried out for four or five years after the tree felling. It also includes furrow blocking, which is something that we are only just getting into. So we are not just blocking the main collecting drains, but starting to block the furrows. If we want to raise the water table quickly and get a fast carbon and habitat return, the costs go up. A cheap and cheerful job can be done, in which the trees are felled and left on site and the furrows are not blocked, but the return takes longer.

Simon Thorp: We are painting forestry as being very bad news in this discussion. We should also bear in mind the policy in Scotland of expanding woodland cover, and the woodland advisory group is due to report shortly. Clearly, if we are removing trees from wind farm developments and from deep peat, replacing them and increasing the area of tree cover will put pressure on other areas of land, so it is important to find the right balance in where we put our trees.

There is a danger that we take the view that everywhere is like the flow country—that the deep peat covers vast areas. That is true for that particular area, but the rest of Scotland is very much more mixed and there are smaller areas of deep peat. We need to bear it in mind that we are talking about not just Caithness, but the whole of Scotland.

Alex Fergusson: I am sorry to extend the discussion, but I am very interested in what you say. I entirely agree that one of the issues that we face is competition for land in an ever more demanding market. I absolutely appreciate that, which is why I am interested in the definition of untouchable areas—areas that should not be touched by wind farm, forestry or whatever else it might be. That was what I was trying to get at in that previous discussion. If we can define the areas and the cost of restoration, we start to have a workable policy that one can try to fit in with other agencies and the other demands that there are. We very much appreciate that point, but the question is how that is balanced.

Simon Thorp: The word “restore” creeps into discussions, and it is defined—I know; I have had various debates with the IUCN project over it—in the land management terms. Some areas do not need to be restored; they just need to be managed sensitively. We need to attach the priorities to it, agree to make it a hands-off area and make people aware, but the areas do not necessarily need an enormous amount of work or input. It is just an understanding of what the areas require so that they remain productive for ecosystem services and the traditional land uses of sport and grazing.

The Convener: Simon Thorp talked about other areas of Scotland where the conditions are different. We well understand that, but there are other barriers to the development of peat rewetting, and, indeed, to forestry. If we look at a map of Scotland, areas with soils that are not so sensitive include areas in Angus and Perthshire where the difference is between grouse moors and forestry, or the development of peat restoration against grouse moors. Are there ways in which grouse moor owners could be part of the process and help with both forestry and peatland restoration?

Simon Thorp: The great danger in this complicated picture is that we will compartmentalise our approach and first start to think about peatland restoration, then pause before thinking about agriculture, then think about sporting activity. In fact, what we and the land management community across Scotland are doing is called, in the current jargon, integrated land management, which means bringing all the threads together.

Should grouse moor owners and managers be part of the picture? Yes. They are the managers and they own the land, so they need to be brought

into the picture. It is not all about just taking a nature reserve or a wind farm site and presenting that for peat; it is about trying to work with land managers across Scotland. Through an integrated approach we can have, for example, sheep enterprises, cattle enterprises and sporting enterprises working hand in hand with peatland management.

Dennis Robertson (Aberdeenshire West) (SNP): Is one of the barriers that was alluded to earlier the provision of appropriate incentives for land managers and some of the larger estates? If they do not have the appropriate incentive, they will not come on board. Is that what you are suggesting?

Simon Thorp: The incentives are an awareness-raising tool. As part of the general joined-up approach, we need to ensure that people understand the importance of peatland and see it as an asset across Scotland. Until recently, the peatland areas were generally regarded as large areas of wasteland. We are making big strides to improve that situation, but we need to go further. The incentives will help, but we also need to raise awareness about the importance of the peatland areas for the ecosystem and the natural benefits that they can provide.

Graeme Dey (Angus South) (SNP): I want to look at the nature of the approach to peatland restoration, particularly in the context of easy wins, to which someone referred earlier. The committee was told in a previous evidence session that some 1.8 million hectares of our blanket bog is slightly damaged and that 6 per cent of the peatland is heavily eroded. Given that the best short-term gain in carbon storage terms can be secured by repairing the least-damaged peatland, but that the better long-term dividends come from tackling the worst-damaged peatland, what balance is being struck at the moment between repairing the heavily eroded and the slightly damaged?

Jonathan Hughes: I read the *Official Report* of the previous evidence session and I noted that that topic came up. Frankly, however, we do not have a strategy for picking the sites that we want to restore first. There is no system of prioritisation; it is a question of trying to work with landowners who are open to the idea of peatland restoration. It is almost a bit ad hoc at the moment.

You are right to ask the question, however, because when resources are limited we need to deploy them in the best possible way. I suspect that we will try to rescue sites that are heavily damaged, as they have done quite successfully in the northern Pennines, where there were quite expensive re-vegetating projects for what were basically moonscapes. Those have been recovered, which is fantastic.

We are in a slightly different position in Scotland in that we have very large areas of blanket bog that, as Graeme Dey said, are in a slightly damaged state and that are probably shedding carbon at the moment because of that. With a bit of judicious damming and raising of the water table, and perhaps some scrub clearance, particularly on the lowland raised bogs, where that is a major issue, we could get the water levels back up to make the sites active again.

The key to it, though, is not just water tables but sphagnum growth. As soon as we get the sphagnum growth back, we have the keystone species there. Sphagnum is the peat builder and the thing that sucks the carbon out of the atmosphere and locks it up. When we develop the vegetation proxies, the few species of sphagnum—all sphagnum species are not the same, by the way—that we need to pick on will be the things that we will be looking for in terms of the voluntary code.

Graeme Dey: Earlier, Simon Thorp mentioned that private finance was going into the process. What is your experience in that regard? Is the private money going into the easy-win areas or is it also tackling the longer-term issue?

Simon Thorp: It would be fair to say that it is probably concentrated on the easy wins at the moment. These are slightly early days in this area, and some development is needed. We need a peatland carbon code. That is a first stepping stone, and we are working towards that at the moment. Until we have that, it will be difficult to harness the schemes and give them the credibility that they need if they are to be sold in a wider context.

There is interest from the private sector in the corporate social responsibility payments providing input into the estates in a way that will benefit our carbon and peatland targets. We are keen to work with them in that regard.

Mandy Gloyer: The private investment that is being used to restore peatland around wind farm sites is dictated by where our sites are, where the wind resource is and where the other environmental constraints lead us to develop. There is potential for a more strategic approach even to the restoration work that we do, which currently involves site-specific discussions about what it is possible to restore or replant. If there were a more strategic, joined-up national approach that allowed us to invest in some of the better peatlands to restore offsite, rather than developing convoluted, site-specific habitat management plans, developers would not have a problem with doing that. That would be a better approach.

Jonathan Hughes: My view reflects that. Last night, while I was boning up for this session, I wrote myself a note to say that we need a better system for setting and managing the levels and distribution of payments for onsite and offsite compensatory measures for carbon and biodiversity impacts. At the moment, the situation is rather arbitrary.

The point that Mandy Gloyer just made is critical. Obviously, there is a lot of potential for corporate money to come into peatland restoration in the future, should we get the peatland carbon code developed and so on. However, we need a system for prioritising the sites that we want to target and for standardising how we distribute that money and where we spend it.

Simon Thorp: On the incentives side, there is the issue of buying people's attention—which is what we are talking about—perhaps through SRDP and by providing an incentive for doing some work. However, we also need to think about the public awareness-raising side, which involves making people aware of the importance of the peatland areas. One area that we are considering through the peatland working group involves the encouragement of more pilot schemes and demonstration areas, which is a way of getting more people engaged. A lot of people go to see Norrie Russell's work in Forsinard but, as we know, it is not the easiest place to get to. We are looking for some other sites in Scotland where we can bring in wind farm companies, scientists and people who have been involved in the work before and can stand onsite, in their wellies, and talk to land managers about the benefits.

Norrie Russell: I want to make a point about priorities. Some types of damage to peatland are happening at a greater rate than others. A bog might have suffered low-level damage that has been caused by inappropriate management over the past 10 decades. However, forestry has impacted in more recent decades, and the drying effect of the trees on the peat—the transpiration of water by the trees—damages the peat at a far greater rate. There is an urgency about taking down those trees as soon as possible so we can shut off that source of damage to the peat mass. The longer those trees are left, the longer recovery will take. Tackling the trees on deep peat is a more urgent priority.

The Convener: It is easy enough to get to Forsinard—more than one train a week goes there. However, there are plenty of bogs that people can visit in the central belt; we have heard from witnesses about those near East Kilbride and in Edinburgh. It would be a good idea to put it on the record that it is possible for people to go and see peat bogs—mainly raised ones—locally.

10:45

Jonathan Hughes: I will certainly put it on the record that the Scottish Wildlife Trust reserve within the bounds of the city of Edinburgh is available to visit. We have a nice boardwalk and some dams, and people can see peat restoration in action on their doorstep.

The IUCN UK peatland programme report has just gone to print. It draws together a range of case studies—as Simon Thorp said—from different scenarios such as raised bogs, blanket bogs, wet heath and so on, in a compendium that will be published at the end of the month at the third peatland conference, which we are running in Bangor in north Wales. We can share the report with the committee when it is published.

The Convener: That would be excellent. Some of our members are putting on their wellies next week to go out and visit some lowland raised bogs, and we will get reports from them.

Claudia Beamish (South Scotland) (Lab): Part of my question has been answered, which is encouraging. It is about education and awareness, which has been mentioned.

I have experience of Braehead moss, which is not particularly large, and of Langlands moss to some degree. Can any of you comment on the ways in which it would be useful to make further community links, such as those at Langlands? Do we need more incentives for communities and schools to take those projects forward?

Norrie Russell: We are not involved so much at a very local community level, although that is part of our work. We are currently working on a Heritage Lottery Fund application—a big national one—for the flows. Our project would include a large element of off-site interpretation—such as online interpretation and education packs—to try to give the wider population, and particularly schools, access to the peatlands.

The Forsinard appeal was one of the best supported appeals that RSPB Scotland has ever run, and it still has that support. Our membership is still colossal—they own the area. Most of those people will never come to the peatlands, but they want to know that they are there, just as they want to know that the Antarctic or the rainforests are there.

There is a very small local population, but all the schools in the north of Scotland come to the reserve through our current teaching programme. There is far more opportunity for such public access and community involvement around the central belt bogs. Jonathan Hughes will probably have more to say about that.

Jonathan Hughes: Yes, there are some great examples—Claudia Beamish has mentioned

Braehead moss and Langlands moss. I once more cite Red moss at Balerno, which school groups visit on a regular basis. Commonhead moss in Glasgow is an example of where the local authority—in that case, Glasgow City Council—is interpreting the bog in what is a challenging environment, as there is quite a challenging neighbourhood close by.

I echo Norrie Russell's point that the bogs are national as well as local assets. There are communities of interest that take a great deal of interest in peatlands and what they can do in delivering ecosystem services at the national level as well as being a local asset.

The way to encourage local engagement is perhaps through the corporate route. I am thinking of local businesses sponsoring a site, for example, and getting involved in it, particularly where there is no non-governmental organisation involved. If a private landowner is open to the idea of restoring and interpreting a site, they could partner up with a local corporate organisation to do more in terms of intensive education, recreation, interpretation and so on. That would be a really good model. At present, most of the good examples involve NGOs, with the exception of some local authority sites such as Langlands moss.

Mandy Gloyer: You will be aware of Whitelee wind farm on Eaglesham moor, which is one of our sites. I think that the site is 50km^2. Half of it has a habitat management plan, so 25km^2 are under peatland management. We have a visitor centre at Whitelee that attracts a very large number of visitors each year, and there is an organised programme of school visits. People learn about the wind farm site and the associated habitat management through the education and awareness programme. Perhaps we could build on the integrated education on that site and other sites.

Annabelle Ewing (Mid Scotland and Fife) (SNP): Good morning. I have a question about research. I note from the interesting RSPB brochure that we were all supplied with this morning that it is recognised that we need to focus more on research. Research was mentioned a lot in our previous information-gathering exercise. It was said that there are huge opportunities for Scotland in academic excellence and maximising international interest. From your various perspectives, how do you see your roles in facilitating greater research on restoration or replanting and international carbon accounting? What can your organisations collectively bring to the table to promote and facilitate further research?

Norrie Russell: On the RSPB front, I seem to have spent more time talking about research than almost anything else—even more than on doing the work—in the past couple of years. I should record a huge thanks to the Scottish Government for its financial support in enabling us to support research.

There has always been tremendous interest in doing work in the peatlands. We have three new PhDs starting this year, and a PhD has just started in the University of Edinburgh, which is using a plane to measure gas fluxes as it flies across the whole landscape. The University of Stirling is doing gas chamber work, and the University of St Andrews is looking at flux tower work. Therefore, there is measuring at all three levels to come up with the answers that we all need to questions such as exactly how many tonnes of carbon and how much methane we are talking about. A PhD is also starting this year in the University of the Highlands and Islands. We have four PhDs starting on Forsinard alone in the year, which is quite astonishing. That is on top of the work of the centre for ecology and hydrology at the James Hutton Institute, where on-going research has been carried out for a number of years that has included the flux tower.

Our focus is very much on the forest-to-bog side of things, but the CEH is still very much looking at bog dam restoration work. We have been keen to facilitate that. As I said, the support from the Scottish Government has been crucial in allowing us to match fund the research institutes, and that is kicking off a real research platform that will be based up in the flows at Forsinard.

There are other elements of research. Other people are working on things that are associated with what is going on, such as deer management, but the core is related to carbon, the biodiversity side and vegetation recovery. We are importing expertise from work projects in which we have been involved in Belarus and Ukraine, where proxies have been developed for carbon accounting from vegetation recoveries. I hope that our internal expertise on that front can develop the same vegetation proxies that will allow us to start to predict carbon and greenhouse gas balances in the flows.

Jonathan Hughes: I refer the committee to pages 89 to 91 of the IUCN commission of inquiry report, in which we drew together the research suggestions of a broad range of peatland scientists from across the UK. They are neatly summarised on one and a half sides of A4. That is a useful start, although I will not go into that now.

The number 1 priority is to look at the fluxes in different types of peatlands. Germany has done that successfully—apparently, several German federal states have presented a detailed and comprehensive assessment of greenhouse gas fluxes in their entire peatland areas. We need to do the same in Scotland and match that to the

vegetation states, so that we can develop vegetation proxies. That will obviously free up money for the carbon markets—or, I should say, carbon and natural capital markets, as we are talking not just about carbon but about delivery of biodiversity, water regulation and even cultural heritage benefits and so on. We should look at the suite of services that peatlands provide and not just at carbon.

Simon Thorp: I take a slightly more pragmatic view. As the committee will have gathered, there are more PhDs on the subject than you can shake a stick at. An enormous amount of research is going on, which is excellent. That provides us with figures and output, and the report that the IUCN programme pulled together is really helping to put the issues on the map.

What can I do through Scotland's moorland forum? What am I trying to do and how are we trying to take things forward? That relates to integration. There are an awful lot of confusing messages from different scientific bodies, because an enormous amount of research is going on not just in Scotland and throughout the UK but internationally. Not all the answers that are coming out are consistent. That is probably healthy; the area is evolving and we are slowly teasing out the inconsistencies to come up with a clear picture. We are trying to find a way through all that. As such, we are making progress. Norrie Russell talked about trees causing damage. We can identify that easily and we need to move now. We do not have the luxury of sitting on our hands for a long time—we have to move forward.

The phrase "adaptive management" has been kicked around and I confess that I have locked on to it hard. Sometimes we have to get on with it and then let science tell us why something has or has not worked. That approach is positive and balanced and we should embrace it.

We need to get on with work such as restoration work and management work, including more sensitive management work where it is necessary. We need to pull together all the science and not wait for the cast-iron, clear solution to come out of it, as that is probably some way away. We need to encourage the science to keep going, but we need to move forward on the management front as well.

Jonathan Hughes: I strongly concur with that.

Mandy Gloyer: I agree with the rest of the panel on the integration of the information that is coming out. We have had monitoring in place for the restoration work that we have done since 2004. We are still at a learning stage. Landscape-scale restoration is largely still a process of trial and error and of working out the best techniques, which might be why there has not yet been the integrated approach to research that we might all hope for.

As time goes on, there will be the potential for us to integrate our individual monitoring programmes with the PhD work that takes place on our sites and other sites and to ensure that there is a better read-across going forward. However, that should not stop us managing at the moment in ways that we know work.

Annabelle Ewing: It is interesting that all the panel members stressed adaptive management. The committee may look at that in more detail in due course.

I will bring in a strand that was mentioned earlier—corporate social responsibility and leveraging in private sector money. I would have thought that research provided an excellent opportunity for that, as it is a concrete thing for the private sector to sponsor, in conjunction with looking at the international opportunities, such as student exchanges. To ensure consistency across all fora, there should be an international debate. Where better to study what is going on than here in Scotland? I hope that the panel members each take away that opportunity for the sector and for Scotland and consider it when looking at the wider science issues.

11:00

Margaret McDougall (West Scotland) (Lab): What guidance is available? The witnesses have spoken a few times about guidance and said that there should be guidance on certain issues. I get the impression that there is no clear guidance. Who should provide that guidance?

Is there any opportunity for social enterprise in the management of peatlands?

Simon Thorp: I have probably mentioned guidance more often than the other witnesses have, so I will lead. Because the science and the aim are not completely clear, it is rather difficult to produce clear guidance. We all need to work harder on that.

The guidance should come from many sources rather than one. Landowners need guidance about what they are managing. We need guidance from research organisations, through NGOs, on their particular specialist issues. We need a raft of guidance. We need to be clear about what we expect and want on the ground and what we want the management to achieve.

Margaret McDougall: Who would produce that guidance? Would you have to do it collectively?

Jonathan Hughes: There is quite a lot of guidance. The Scottish Wildlife Trust produced a bog management handbook back in the 1990s,

which is still highly relevant today and is still used. That was funded through the European Union's LIFE programme. A couple of years ago, SNH produced a fen management handbook, which sits alongside that. The bog management handbook covers blanket bogs and raised bogs, and shallow peat is covered by the fen management handbook. There is a lot of guidance. The case studies that are about to be published translate that guidance into practical examples on which people can draw. People could perhaps visit sites to see how things have been done and how they might do it.

The guidance issue should not be a barrier to getting on with restoration, just as the research issue should not be a barrier to that. We know enough about how to do it and we know enough of the science to get on with it.

Claudia Beamish: How do the peatland and land-use management strategies that we have discussed link and fit with the biodiversity targets? What connections are you or others making with the biodiversity action plans and how are you contributing to the targets?

Norrie Russell: Biodiversity was the reason why the RSPB originally became involved in peatlands. We have recently rewritten our management plan, in which it is obvious that carbon is now a much bigger issue, but the reason why we got involved is biodiversity—the birds and the bogs. That is probably why most of the organisations here became involved.

The targets in various biodiversity strategies have often seemed daunting just because of their sheer scale. Peatland is a large habitat that covers large areas. The good thing is that the costs of restoration are low per hectare, so it is feasible to deliver large areas of habitat restoration and biodiversity targets at fairly low cost. The hectarages that are reported in strategies have tended to be almost taken up by what has happened in the flows through various LIFE projects by the RSPB, the Forestry Commission and SNH. There is a clear need to extend that into other peatland areas in Scotland to start delivering the targets.

Margaret McDougall: I did not get an answer to the second part of my questions, which was on social enterprise. Is there any opportunity for social enterprise in the restoration or biodiversity activities?

Norrie Russell: For us, tree removal provides a clear opportunity. We are in an area of very low population density. We have about 120 hectares of trees that we would like to fell, but which we have retained to provide continued supply to the North Sutherland Community Forestry Trust sawmill, which is situated right in the middle of the reserve at Forsinard, to protect the jobs that are associated with that community development and to allow community involvement in the management.

We have retained all that; to be fair, we would like to expand it. After all, the wood-fuel market is constantly developing, with people putting in log-burning stoves and log boilers and the development of chip plants. Bettyhill swimming pool has been run on woodchip from the reserve for a number of years. There is obvious potential for community involvement in forestry restoration through community woodland-type initiatives and so on.

Jonathan Hughes: I am sorry that I did not cover what is a very important question. If we can have the community woodland network, which comprises community woodland owners throughout the country, why can we not have a community peatland network? Lowland raised bogs tend to be discrete and located close to the communities that could take charge of them. As suggested earlier, if local communities can partner with corporates to bring in funding, that might offer opportunities for social enterprise. That is a really good point.

On Claudia Beamish's questions, I think that, since the discovery of the incredible importance of peatlands with regard to carbon, there has been a tendency almost to forget that in the first place they were being restored to meet biodiversity targets. When we think of peatland restoration, we need to think about delivering a range of benefits. The biodiversity benefits are equally as important as the carbon benefits and, under the Convention on Biological Diversity and the targets agreed at Nagoya—the so-called Aichi targets—we have an international obligation to bring our habitats into good status by 2020. That is all part of what is a positive move to bring various agendas together in one place.

Jim Hume: To follow up on my original question and some of the remarks that have since been made, I note a lack of an agreed standard for measuring fluxes and carbon in peatlands. Germany was mentioned in that respect, but we need agreement on the matter if we are to be able to measure carbon levels towards meeting climate change targets and so on. What body would agree such a standard? Would that need to happen at an international level or can we drive that forward in Scotland?

Jonathan Hughes: Scotland has excellent expertise in wetlands and peatlands, particularly in research institutes such as the CEH and the James Hutton Institute. We can do the work in Scotland—we might even have the budget for it—but it is a question of co-ordinating efforts and getting on with it.

However, even with the best will in the world, the fact is that many peatland researchers are interested only in specific issues and do not always think about the applicability of their research. Through the commission of inquiry, we have been trying to steer researchers into a place where they deliver really useful stuff that can inform policy and mechanisms such as the peatland code and which will allow us to bring in private finance for site restoration. There is a disjunct, and we just need to ensure that the research community is joined up with the policy community. That is, of course, a common problem.

Jim Hume: Would an international body have to recognise that work?

Jonathan Hughes: The Intergovernmental Panel on Climate Change would certainly have to be involved.

Alex Fergusson: I want to come back to the question of guidance, which, interestingly, has been discussed in three different ways: Simon Thorp suggested that we needed clearer guidance; Jonathan Hughes said that there was already a plethora of guidance out there; and Mandy Gloyer pointed to conflicts between the different policy priorities of Government agencies—if I can put it that way—which, obviously, have not been entirely helpful in finding an agreed way forward on some of these issues. We have talked a lot about co-ordination and the need for an integrated approach, but I wonder whether the dichotomy of opinion on the matter of guidance highlights the need for any guidance to be clear. Does the Scottish Government have a role to play in that respect? I am not convinced that the witnesses think that there is a need for such guidance but will they respond to the question nevertheless?

Mandy Gloyer: I will, given my earlier comment about a lack of agreement on when we should carry out replanting and when we should carry out peatland restoration. I was giving a specific example of the differing positions of SNH and the Forestry Commission on replanting versus peatland restoration. That should be seen in the context, from wind farm developers' perspective, of the plethora of guidance that exists from different parts of Government on how to develop and interact with peatland. In a previous session, the committee will have heard about the carbon payback calculator. We have the Scottish Government's "Developments on Peatland: Site Surveys" guidance, we have guidance from SEPA on the treatment of peat as waste and we have "Good practice during windfarm construction" by, among others, SNH and SEPA. There is also the peat stability modelling that is required by the Scottish Government. For a developer who is looking to develop a wind farm on a peatland site there is a lot of guidance, but the information stops short of guidance on the restoration and management of peatland.

We certainly need clarity from the Government on which policy priority takes precedence. There is guidance on the technicalities and on which methods we should use to restore peatlands, and our ecologists and contractors know where to go to work out what is best to achieve whatever aim is trying to be achieved on peatland. As you say, it is more a case of co-ordinating and integrating the existing guidance and policy, which can be confusing for people on the ground.

Claudia Beamish: I have a specific point about raised bogs. I think that it was Jonathan Hughes who said that there were 58 such bogs, although I might have got that wrong. He mentioned that some of them were non-designated. My question is about the protection of areas that are not designated. Have they not been designated because they are too small to designate or because they are not regarded as being important enough?

Jonathan Hughes: The SSSI system is based not on how important a site is, but on representativeness—on having a representative suite of different types of habitat in Scotland. Most of the raised bog resource is not designated; only a small percentage of it is.

We surveyed a sample of 58 raised bogs, which covered 4,060 hectares. Estimates vary, but the lowland raised bog inventory would suggest that there are nearly 29,000 hectares of lowland raised bog area in Scotland. We looked at a sample of that, which gave us the figures on the condition of the non-designated resource that I mentioned. The designated resource has been invested in—most of those sites have undergone some kind of restoration—so looking at the designated resource gives a skewed picture of what is happening in the broader resource.

Claudia Beamish: I am trying to get at whether the non-designated raised bogs are adequately protected.

Jonathan Hughes: No, they are not.

Claudia Beamish: Is there a way of doing that, other than through education and raising communities' awareness of the fact that such bogs could gain better protection?

Jonathan Hughes: It could be done through the funding mechanisms that we have mentioned, particularly the SRDP and the voluntary carbon market. The decision in Durban to bring wetland management into the carbon reporting system for countries was quite encouraging; it could be a real boost for some sites, which will suddenly become financial assets as well as natural assets.

The Convener: Thank you.

We have heard pleas for Government agencies in Scotland to work together. Perhaps we could use our collective abilities to get the United Nations organisations to do the same. The Intergovernmental Panel on Climate Change and the United Nations Educational, Scientific and Cultural Organization should get their heads together to ensure that the flow country in the north of Scotland—which is one of 38 sites that the UK Government has proposed for world heritage status, but the only wildlife site—gets priority. It would be a tremendous public relations boost for peat if that were achieved soon. Perhaps Norrie Russell would like to say a little about the process.

11:15

Norrie Russell: Oh, heavens. I am not sure that I am the right person to do that. The process is long and surprisingly involved. At the moment, the flows have just gone through an internal UK round to vet them for being put on the list of potential sites that are then put forward. UNESCO then decides whether to ask the UK Government to make a full application. SNH is really the organisation that would carry out that process.

Many other people would be involved in the consultation process, ensuring that local communities and others had input into exactly where the boundaries were, how it would operate and so on. Andrew Coupar from SNH said that a round is due at the end of this year that will go to the application process. There would be an 18-month process after that, so at the earliest it would be more than six months before an application process would even start and then another year and a half after that. The consultation process will be an extraordinarily valuable mechanism, pulling together the views of people and communities on the peatlands and how they see them in the future.

The Convener: I thank the panel for their wide-ranging thoughts—it has been an informative morning. We will take up the issue of the peatlands with the minister and with other agencies in due course—certainly in relation to our climate change survey and the report on proposals and policies that comes round in the autumn with the budget.

11:17

Meeting suspended.

11:23

On resuming—

Subordinate Legislation

Rural Payments (Appeals) (Scotland) Amendment Regulations 2012 (SSI 2012/143)

The Convener: Agenda item 3 is consideration of a negative Scottish statutory instrument. I refer members to paper RACCE/S4/12/15/1. If no member wishes to contribute, are we agreed that we do not wish to make any recommendation in relation to the instrument?

Members *indicated agreement.*

11:24

Meeting continued in private until 11:43.

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