

RURAL ECONOMY AND CONNECTIVITY COMMITTEE

SUBMISSION FROM SCOTTISH NATURAL HERITAGE

THE DRAFT CLIMATE CHANGE PLAN (RPP3)

Scottish Natural Heritage (SNH) is a non-departmental public body funded by the Scottish Government through Grant-in-Aid. We are the Scottish Government's advisers on issues relating to nature and landscape. Our statutory purpose is to:

- secure the conservation and enhancement of nature and landscapes;
- foster understanding and facilitate their enjoyment of them; and,
- advise on their sustainable use and management.

Scotland's nature and landscapes are recognised internationally, and this natural capital plays an important role in supporting economic growth, improving people's health and wellbeing, adapting to climate change and strengthening communities. We work with partners both nationally and locally to maintain and enhance these assets and to improve the public benefits generated from their sustainable use, both now and in the future.

As a public body, Scottish Natural Heritage is identified as a 'major player' in delivering the statutory duties under the Climate Change (Scotland) Act 2009 to contribute to the delivery of Scotland's emissions reduction targets (and adaptation programme). Climate change represents one of the biggest challenges for Scotland's nature and landscapes. Our current priorities for responding to climate change are set out in [Climate Change and nature in Scotland](#) (updated March 2016).

The following information is provided to support the Committee's scrutiny of the draft Climate Change Plan. Please note that we will be providing comments to Scottish Government at a later date on the associated Environmental Report, in our role as Strategic Environmental Assessment consultation authority, and on the draft Energy Strategy, so our evidence here does not relate to these documents.

Marine Carbon

The ocean is the largest natural sink for carbon. Unlike the previous Report on Policies and Proposals, the current draft Plan does not mention the potential for carbon sequestration and storage in the marine environment – aka 'blue carbon'. An initial [assessment](#) of carbon budgets and potential blue carbon stores in Scotland's coastal and marine environment, carried out by The Scottish Association for Marine Science (SAMS) for SNH, suggested that there are large stores of carbon in a range of marine habitats. These include saltmarsh, seagrass beds, maerl beds and various other biogenic reefs as well as marine sediments. These initial assessments are based on a number of assumptions and further research on specific places, e.g. Loch Sunart and Wyre and Rousay Sounds have shown that they are probably gross underestimates of the blue carbon stores around Scotland. SNH has commissioned a further study which carried out more detailed assessments of the blue carbon

resources in Scotland's inshore Marine Protected Area (MPA) network which concluded that there was a minimum estimated 9.4 million tonnes organic carbon and 47.8million tonnes inorganic carbon (i.e. 1.6% and 2.7% respectively of total estimated carbon resources across Scotland's seas) stored in the inshore MPA network¹. This equates to 210.8 Mt CO₂e which equates to four years of Scotland's annual greenhouse gas emissions.

The main threat to organic carbon stores is from physical disturbance, for example from demersal fishing activities, deployment of mooring and installation of renewable energy devices. Climate change, specifically ocean acidification, is likely to have a negative impact on calcareous organisms and carbonate sediments resulting in carbon being released back into the atmosphere. Rising sea water temperatures could affect the viability of certain species to continue to sequester and store carbon. It is important to recognise the important ecosystem service provided by a range of marine species in sequestering and storing carbon and the threats that they face from climate change. Integrating the carbon value of marine habitats into decisions relating to marine management would potentially improve their protection and thus enhance their capacity to cope with climate change pressures whilst maintaining their ability to act as a carbon sink.

Further work is required to fully quantify the scale of the blue carbon resource in Scotland and to identify the distribution of the key stocks in order to ensure that they receive the necessary level of protection. A research framework should be developed to improve our understanding of the natural carbon capture and sequestration processes and the implications for these of climate change, which should be integrated with broader marine policy objectives.

Peatlands

We welcome the ambitious targets for peatland restoration (and the associated investment of a further £8 million for Peatland Action in 2017/18 announced by the Cabinet Secretary for Environment, Climate Change and Land Reform, Roseanna Cunningham). As well as reducing greenhouse gas emissions, this will bring many other benefits.

Peatland Action is one of the key projects helping to deliver the 2020 Challenge for Scotland's Biodiversity. Peatland restoration involves blocking miles and miles of ditches, as well as other measures, to reduce the rapid runoff of water from the bare peat surfaces. Peatland Action has worked closely with a wide range of land managers and communities. From this working relationship we have seen the importance of healthy peatlands, not only to wildlife, but also many industries including tourism, fisheries and the water industry.

More than 20% of Scotland is covered by peat. Healthy peatlands store carbon, but damaged peatlands can release their carbon into the atmosphere. Work exploring

¹ Burrows, M.T., Hughes, D.J., Austin, W.E.N., Smeaton, C., Hicks, N., Howe, J.A., Allen, C., Taylor, P. & Vare, L.L. 2017. Assessment of Blue Carbon Resources in Scotland's Inshore Marine Protected Area Network. *Scottish Natural Heritage Commissioned Report No. 957*. <http://www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-detail/?id=2453>

how we cope with the changes brought about by climate change, whilst limiting further change, is a top priority for SNH.

SNH, working with Scottish Government and a range of stakeholders, published a National Peatland Plan in 2016 to highlight the importance of Scotland's peatlands. This draws attention to the poor state of large areas, and proposes building on existing initiatives to secure their sustainable use, management and restoration. It also sets out proposals for research and awareness-raising.

A National Peatland Group, chaired by SNH, supports the Plan's implementation. A Research & Monitoring Group aims to ensure a sound basis for the management and restoration activities proposed and that these inform future work.

The draft Climate Change Plan includes ambitious targets for both woodland expansion and peatland restoration. We understand that the woodland creation targets do not cover second or third rotation forestry. However, some of the proposals for second or third rotation forestry may be on peatland that are capable of restoration. The desirability of these forestry proposals compared to peatland restoration will depend on a range of factors including the potential productivity of the forestry and the feasibility of peatland restoration. As well as being site-specific, these factors are likely to change over time.

While we clearly welcome the peatland restoration policies and commitment, they do not prevent ongoing loss and damage to peatland. Thus there is a risk that even as areas are restored, the area requiring restoration is increasing. Policies to prevent loss and damage are therefore required. For example, habitat management plans should be included as part of wind farm applications on peatland sites as part of their mitigation effort. This has not happened in a number of recent cases. (See further evidence below on **Renewable energy**).

Around 20% of Scotland's peatlands are protected within designated sites. Although designated for their biodiversity interest, these peatlands also provide many other benefits including carbon storage and sequestration. The other 80% of peatlands also provide these benefits, though probably to a lesser extent given that many tend to be in poorer condition and lack the protection of those in designated sites.

Woodland and trees

The targets for increasing the contribution of trees to emissions reduction focusses on **forestry** and woodland. This tends to exclude trees in urban areas, within farming systems (agro-forestry) or in linear patterns like hedgerows or stream and river margins. These can be very important to wider government aims (e.g. water quality and flood management, urban air quality and wellbeing). We therefore welcome the Policy (under **Agriculture**) to explore how best to increase the planting of trees and hedgerows on agricultural land. An equivalent Policy could look at increasing the planting of trees in urban areas which could also make a significant contribution, e.g. Manchester is proposing to plant an equivalent of >3000ha of urban trees. SNH is supporting these aspects of tree planting through a variety of measures, including the Central Scotland Green Network, and the Pearls in Peril LIFE project, but the links could be made clearer and reinforced in this Plan.

SNH is involved in the refreshing of the UK Forestry Standard, as mentioned in the Plan. However the scope of the refresh has been limited and in our view has not allowed for adequate consideration of future resilience against climate change and tree diseases. This is significant, because the projections for forest carbon sequestration are dependent on growth forecasts being accurate to 2030 and beyond. The recent increase in tree health problems emphasises the potential for those projections to be inaccurate, and hence we would like to see further work on risks and resilience.

Spatial planning of woodlands and forests - including landscape design, cumulative impacts, biodiversity of open and woodland habitats and deer management – are areas where SNH feels improvements could be made especially if afforestation rates increase. In particular, local forest and woodland strategies with which we engage tend to be based on sieve mapping processes which have limited ability to design woodland cover across landscapes. This does not seem to be consistent with the recommendations of the Woodland Expansion Advisory Group for woodland to be fully integrated with long-term view of the future direction for Scotland's land use and not seen in isolation, and for woodland creation to follow the Land Use Strategy principles. The proposal in the second Land Use Strategy for developing a strategic vision for the uplands may help to promote this integrated approach. SNH suggests that active landscape planning in the development of spatial strategies would be more helpful than the sieve-mapping approach of simply shading out unsuitable areas.

Active travel

SNH supports **green networks**, particularly as part of development plans, as a way to encourage active travel. Green networks link together areas of natural, semi-natural and man-made open spaces to create an interconnected network that provides opportunities for physical activity, increases accessibility within settlements and to the surrounding countryside while enhancing biodiversity and the quality of the external environment. In the Central Scotland Green Network area, SNH has worked with local authorities, SESplan and Clydeplan to create a [CSGN strategic routes map](#) and embed these routes in development plans.

The **National Walking and Cycling Network (NWCN)** vision is for a strategic network of well used and properly maintained long distance routes and cycleways that will connect towns and cities, link key destinations and transport hubs, provide recreation and active travel opportunities for residents and visitors and people of all ages and abilities, and comparable facilities to our Northern Europe neighbours. It will form an important part of the green infrastructure of our towns and cities, integrated into local path networks, linking effectively to public transport hubs and improving connectivity between places. Other key outcomes will be health, environmental, economic and tourism benefits.

As project leaders, SNH collaborate with Sustrans and Scottish Canals on the development of routes and network promotion and monitoring, including Scotland's Great Trails, the National Cycle Network and the Canal Towpath Network. The aim is to extend the existing network of routes from 6,000km to 8,000km by 2035.

Progress is good: new routes and links are being implemented, existing routes are being improved, a network monitoring baseline is being established, and promotional products include a short video (<https://youtu.be/hwU25J2xl8w>) and a [NWCN tube map](#). Additional information is available at www.snh.gov.uk/NWCN.

Renewable energy

We strongly welcome the target for 50% of all energy from renewables by 2030 and, based on current progress, we believe this target is achievable. We are committed to providing the resources to sustain our engagement in the development of the renewables sector and helping get the right development in the right place.

Given the central role that onshore wind will place in meeting these targets, it is important that onshore wind farms make the maximum contribution to carbon emissions reduction. Onshore wind farms must be developed in a way which minimises the disturbance of peatland and associated carbon emissions.

If the grid is to be decarbonised by 2025 (para 4.4.14) it is essential that new ways are found to construct wind farms on peatland that avoid the need to disturb peatland, and that the carbon calculator takes account of the decarbonisation of the grid. If not, there is a very real risk that onshore wind farms built on peatland could become net emitters of carbon emissions, which would conflict with the draft Climate Change Plan **Policy outcome 2: *By 2030, emissions from electricity generation are negative, providing a net reduction in energy system emissions.*** A significant proportion of upland wind farms are built on peatland.

We will respond in more detail to the policy around around renewable energy in our response to the Energy Strategy and Onshore Wind Policy Statement.

Scottish Natural Heritage
10 February 2017