

ISSUE 55

Autumn Issue 2015



SCOTTISH NATURAL HERITAGE

The Forum

## Scotland's Biodiversity: Atlas of Living Scotland

The Atlas of Living Scotland, a new online biodiversity database built to educate, to inform and to promote Scotland's remarkable natural world, has launched in beta form.

The Atlas will store data and information on all 25,000+ species in Scotland including the white-tailed eagle, primrose and the basking shark. It will also hold habitat data including woodlands, wetlands and dunes based on SNH's new EUNIS habitat map and classification. More than seven million species observations have already been committed to the platform that will also hold photographs and other types of biological data

Organisations already contributing data to the Atlas include national and regional biological recording schemes and societies, government and non-government organisations, research and educational institutions, Local Environmental Records Centres, ecological consultancies, museums, botanic gardens and community groups. Anyone can help grow the Atlas of Living Scotland with their own photographs or observations.



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### Contact details

Do you have a news story? Are you involved in a project? If so, then let the Biodiversity Team know! Ask for our article guidelines to help you make the most of your article.

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The views expressed in this newsletter are not necessarily the views of Biodiversity Scotland. The editors reserve the right to edit or exclude articles; the editors' decisions are final.

For further information about the Biodiversity Team, log on to:

[www.biodiversityscotland.gov.uk](http://www.biodiversityscotland.gov.uk)



**BIODIVERSITY SCOTLAND**

## – new biodiversity data infrastructure for Scotland

John Sawyer, Chief Executive of the National Biodiversity Network said: “This initiative would not be possible were it not for the work of the vast array of organisations that observe, record and document species and habitats in Scotland, most of which is done by volunteers and citizen scientists. From butterflies to birds, to fungi, mammals and plants, the Atlas of Living Scotland is a powerful new gateway to learning about every aspect of Scotland’s natural world”.

The Atlas brings together biological data, merges them with other environmental data such as spatial layers for soil, climate and habitats and allows online analysis and interrogation. Data are held under a creative commons license to encourage innovation and collaboration over data analysis and use. The Atlas will have a spatial portal with analysis tools to enable users to intersect environmental data and biological occurrence data and to generate in-depth site reports. Users will also be able to perform species distribution modelling to predict changes to the spatial ranges of species as a result of environmental changes.

The National Biodiversity Network’s new five-year strategy focuses on the collection and sharing of biological data to educate and inform. The biodiversity data infrastructure of the Atlas of Living Scotland is a major step forwards towards implementing that strategy in Scotland and is also a pilot for a potential initiative to develop the same data infrastructure for the entire United Kingdom.

The screenshot shows the Atlas of Living Scotland website interface. At the top, there is a navigation bar with the logo 'ATLAS OF LIVING SCOTLAND' and a search bar. Below the navigation bar, there are links for 'SPECIES', 'LOCATIONS', 'HABITATS', 'ANALYSE', 'GET INVOLVED', 'DATA PARTNERS', and 'ABOUT'. The main content area displays the species name 'Falco peregrinus Tunstall, 1771' and the common name 'Peregrine'. Below this, there are tabs for 'Overview', 'Gallery', 'Names', 'Classification', 'Records', 'Literature', 'Sequences', and 'Data Providers'. The 'Overview' tab is selected, showing a large image of a peregrine falcon perched on a rock. To the right of the image is a map of the United Kingdom with several blue dots indicating the locations of records. Below the map are two buttons: 'View Interactive Map' and 'View Locations'. The footer of the page contains the text 'ISSUE 55' on the left and 'Page 3' on the right.

# Atlas of Living Scotland – cont.

NATIONAL BIODIVERSITY NETWORK NBN FORUM NBN GATEWAY SCOTLAND'S ENVIRONMENT WEB

SEARCH CONTACT US LOG IN CHOOSE ATLAS

ATLAS OF LIVING SCOTLAND SPECIES LOCATIONS HABITATS ANALYSE GET INVOLVED DATA PARTNERS ABOUT

The Atlas of Living Scotland is your gateway to learning about Scotland's natural world

Search the Atlas of Living Scotland

**SEEN SOMETHING?**  
Identify, learn and record your own observations

**VIEW IMAGES**  
View the Atlas image gallery

**EXPLORE YOUR AREA**  
Search the atlas for information about a place

**ANALYSE DATA**  
Undertake your own analyses of atlas data

**FEATURED SPECIES**  
**ATLANTIC PUFFIN**  
*Fratercula arctica*  
distribution map species page

**FEATURED SPECIES**  
**PEREGRINE FALCON**  
*Falco peregrinus*  
distribution map species page

**FEATURED SPECIES**  
**BOG ASPHODEL**  
*Narthecium ossifragum*  
distribution map species page

**LATEST SIGHTINGS**

**Skylark**  
05/04/2015, 11:00:00  
On top of Dun-I but we saw others around the island.  
[Animals: Alaudidae Data set](#)

**Black Guillemot**  
28/03/2015, 08:13:00  
[Animals: Alcididae Data set](#)

**Blackbird**  
24/07/2015, 00:00:00  
[Animals: Muscicapidae Data set](#)

**Wren**  
21/07/2015, 00:00:00

## DATA PARTNERS

Learn about, be inspired by, and join the organisations contributing information to this atlas. Follow these links to learn about our Atlas

The Atlas was created by the Atlas of Living Australia team at Commonwealth Scientific and Industrial Research Organisation (CSIRO) in Australia using the open source code and biodiversity data infrastructure that they developed over the last five years. The user interface was created by a team in Scotland in conjunction with a user group of people across the country.

The project is a partnership between the Scottish Environment Protection Agency, Scottish Natural Heritage and the National Biodiversity Network. Significant funding support for this work came from the European Commission LIFE+ funding programme which is supporting SEPA to deliver a range of partnership initiatives in Scotland to provide a trusted gateway to data and information about the environment, and involve Scotland's citizens in discussion, monitoring and action to protect and improve the environment. The Atlas has been created as a daughter website to Scotland's Environment Web.

The beta version of the Atlas can be visited at [www.als.scot](http://www.als.scot) and the team developing it welcomes any feedback and suggestions for improvements. Feedback will be used to develop the site further before the official launch in early 2016.

If you would like to contribute to the Atlas as a Data Partner or would like more information about the site, please contact us at: [info@als.scot](mailto:info@als.scot). If you want to join the User Testing Group please contact us at [support@nbn.org.uk](mailto:support@nbn.org.uk) To give feedback on the site please visit [www.als.scot](http://www.als.scot) and email the team at: [info@als.scot](mailto:info@als.scot)

## You Won't Bee-lieve It! Rare Moth Buzzes into Lanarkshire

A rare and unusual moth that disguises itself as a bee has been unexpectedly discovered at a Lanarkshire nature reserve, Butterfly Conservation Scotland has confirmed. The Narrow-bordered Bee Hawk-moth is a day-flying moth that closely resembles a bumblebee – it buzzes like a bee and can even hover bee-like when feeding at flower heads.



Narrow-bordered Bee Hawk-moth – © John Knowler

The moth is nationally scarce and is rare in

Scotland where it is typically found in Argyll and the Highlands. The insect

was discovered by volunteers from Butterfly Conservation's Bog Squad – who were working to restore bogs at Kingshill Local Nature Reserve near Allanton village in North Lanarkshire.



The Bog Squad team have been working at Kingshill this summer to help restore the peatland habitats at the site. The team have been helped by another volunteer group from Greenhead Moss Community Nature Park in Wishaw. Together the volunteer teams have successfully cleared seedlings from half a hectare of bog and has created five ditch blocking dams.

David Hill, Bog Squad Project Officer for Butterfly Conservation Scotland said: "We were just about to begin our work when an eagle-eyed volunteer spotted the moth. It was a very exciting moment for everyone and an entirely unexpected discovery".

The Bog Squad team is a volunteer task force, created to carry out rehabilitation works on damaged peat bogs across the Scottish Central Belt, with funding from Scottish Natural Heritage's led-Peatland Action project.

Kingshill Bog Squad © Butterfly Conservation

Scottish Natural Heritage  
Dualchas Nàdair na h-Alba

**Peatland ACTION** Restoring Scotland's peatlands

Butterfly Conservation Scotland

# New National Nature Reserve will be UK's largest

The UK's newest and largest National Nature Reserve (NNR) – The Great Trossachs Forest – is a step closer to reality, after it was approved by the Board of Scottish Natural Heritage (SNH).

The Great Trossachs Forest NNR, which lies at the heart of the Loch Lomond & The Trossachs National Park, is home to magnificent wildlife in an area within an hour's drive for 80% of Scotland's population.



Speaking after the Board meeting, Ian Ross, the SNH chairman, said:

“I’m delighted that our Board has today given the go-ahead to the new Great Trossachs Forest NNR. Covering 16,500 hectares it will be Scotland’s largest reserve, with a variety of wildlife, habitats, and landforms, including some of national or international importance such as ancient woodland, wet woodland and upland wood pasture.

“However, as well as being such an ecologically important site, The Great Trossachs Forest NNR clearly displays the key features associated with a NNR – it is nationally important, well managed and is inspiring and accessible to the public, offering a host of attractions for visitors to experience, savour, and enjoy.



“This stunning location is an inspirational backdrop for people to responsibly enjoy Scotland’s outstanding natural heritage.”

Scotland's newest reserve covers a swathe of land from Inversnaid on the east bank of Loch Lomond, through Loch Katrine and Glen Finglas and almost as far as Callander.

The Great Trossachs Forest is owned and managed by RSPB Scotland, Forestry Commission Scotland (FCS) and the Woodland Trust Scotland. With support from the Heritage Lottery Fund, the partners are restoring the ground to a more natural mosaic of open hill ground and woodland.



The habitat restoration programme will help species in decline, such as black grouse, and allow for a richer diversity of wildlife and plants in years to come.

Wildlife in The Great Trossachs Forest includes black grouse, golden eagle, osprey, pine marten, red squirrel, water vole and otter.

Sue Morris, Project Manager for The Great Trossachs Forest said:

"This accolade reflects the hard work that the partner organisations have put in to creating a major new forest that successfully balances the needs of wildlife with opportunities for recreation and tourism in the area.



"We have a 200 year vision to create new woodland and other natural habitats on a landscape scale, ensuring that future generations can enjoy the outstanding natural heritage that the Trossachs have to offer."

For more information visit: [www.thegreattrossachsforest.co.uk](http://www.thegreattrossachsforest.co.uk)

## NASSTEC—€3 million project underway .....

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A new EU training-partnership will promote wild plant conservation underpinned by the use of native plant seeds. The programme will train a new generation of higher level researchers, improve the connections between research institutes and native seed producers and allow the provision of high quality seeds vital for environmental restoration.

The Native Seed Science Technology and Conservation (NASSTEC) initiative is funded by an EU-Marie Curie Initial Training Network (ITN) award made to two internationally-renowned UK research institutes - the Royal Botanic Gardens Kew and the James Hutton Institute – and to Scotia Seeds, the leading commercial partner. To complete the EU partnership, two Italian research institutions and a Spanish and a Dutch seed company are also awarded the funding. The National Trust for Scotland and seven other associate partners will help to integrate the resulting research, production and use of seeds of native plants.

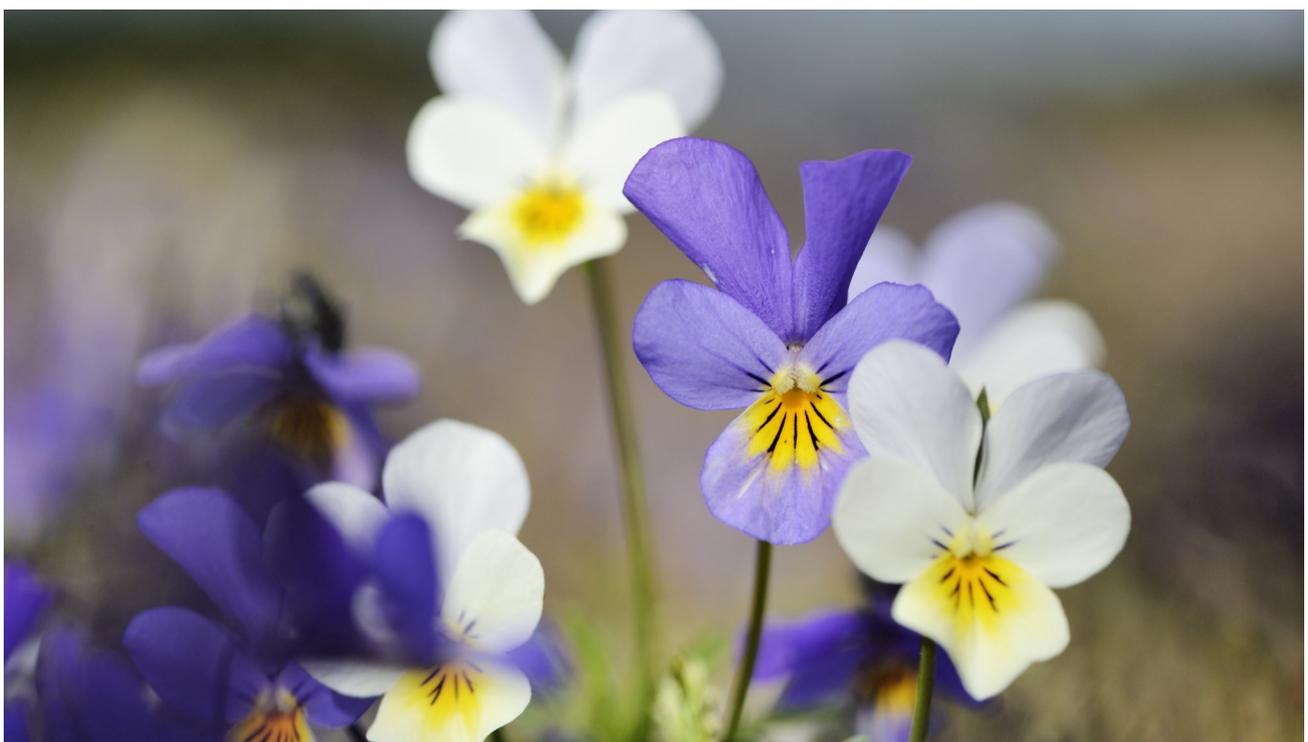
There is a growing understanding of the need to increase biodiversity by using the seeds of plants native to the area in which they are used. Projects using native plants range from agricultural settings to urbanised and industrial sites, from agri-environment schemes to the Olympic Park in London and the use of wildflowers by local authorities and community initiatives to encourage bees and butterflies. Large amounts of native seeds for wildflower meadows are needed for ecological restoration essential in developments such as road-building and wind farms. The availability of high quality native wildflower seed is vital to balance the impacts of land use and climate change, in particular the loss of wildflower grasslands that are so precious to Europe's environmental heritage. NASSTEC will ensure that there is native seed science in Europe that will support the production and use of native seed.

## .....to enhance wild plant seed industries



NASSTEC will run for four years and will create 11 generously funded Early Stage Researcher (ESR) positions, to be registered as PhD projects at the University of Pavia, Italy, but based with the project partners. An additional Experienced Researcher (ER) will support the dissemination of the research.

These new, highly trained experts will develop the understanding of native seed for conservation and restoration projects and will form an ongoing network and pool of expertise in native seed science which will form the basis of conservation projects across Europe.



## Featured Fungus: *Laetiporus Sulphureus* (Chicken of the woods)

*Laetiporus sulphureus* is a wood decay (saprotrophic) fungus causing brown rot found on oak and other hardwood trees, such as beech, chestnut, and cherry. It has also been reported on yew trees. Saprotrophic fungi decay dead stumps and logs and act as important recyclers of nutrients and minerals which can then be re-used by other organisms. It can however colonize both dead and living trees acting as a weak pathogen on living trees.



© Neville Kilkenny & Andy Taylor

*Laetiporus sulphureus* is said to be one of the easiest to recognise fungi, with its large size and striking sulphur-yellow to orange colour. A single tree can produce several kilos of this fungus. It is said that the fungus has a remarkably similar texture and taste to chicken, which is why it is also commonly known by the name, Chicken-of-the-Woods. It is advised to collect young specimens, (bright yellow to orange), as older specimens, (dull yellow to white), become woody with age, developing an acrid flavour. The Chicken-of-the-Woods is a fast growing fungus which, if just the outer edges (about 5 cm) are collected/cut, recovers quickly and allows for second harvest later during the season. However, around 20% of people show sensitivity to this mushroom becoming ill quickly after consumption. For this reason it is advised to only consume a small portion the first time it is tried. In addition, fruit bodies growing on yew trees are best avoided as the conifer itself contains toxins which apparently are taken up by the fungus.

The wavy-edged cap of the fruit body ranges 5 to 30 cm across, up to 20 cm deep and up to 3 cm thick, growing in a cluster that can reach up to 75 cm across. The Chicken-of-the-Woods belongs to the family of the Polyporaceae, and as suggested in the name *Laetiporus* meaning



'with bright pores' has small, pale yellow tubes, rather than the more commonly encountered gills, underneath the fruit bodies. The fruit body grows directly out of the tree trunk and therefore does not possess a stem. The flesh of the fruit body is thick, watery and soft when young and turns into a tough and woody like structure that becomes crumbly and cheese-like with age.

**Season:** Most commonly found from August till October but occasionally occurs as early as May.

**Habitat:** Found in tiers growing around living or dead tree stumps commonly with oak and other hardwoods.

**Distribution:** Widespread and common throughout Scotland and the north temperate zones.

Please remember to submit your records to your [local recording group](#) or via the Scottish Fungi online [recording form](#)

© Peggy Erhlich & Andy Taylor

# SRUC—Countryside Management Course

The factors affecting the wider environment are constantly increasing and range from agriculture and forestry to recreation, urban development and population growth. These in turn impact on climate change, water and food security, habitat and species loss and the impact of invasive species. In the context of this programme and the degree programme from which it has developed, the term countryside management encompasses a broad range of topics and land uses, ranging from estate and countryside management, to rural and urban land-use planning.

## Programme Structure

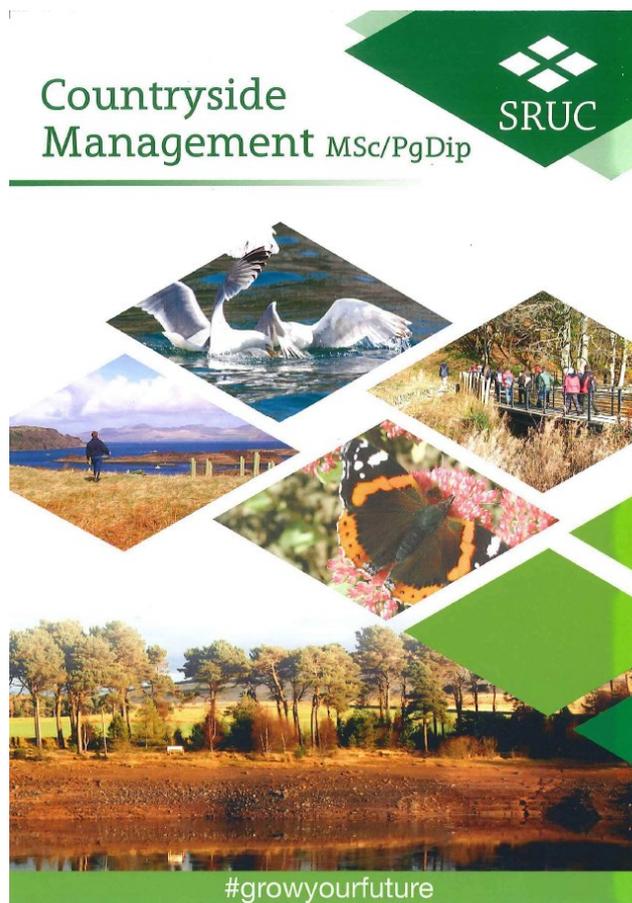
The course modules provide for the development of a range of technical, practical and professional skills. The MSc consists of eight taught modules, followed by a dissertation project. Modules may also be studied individually for general interest or for CPO purposes. Study weekends are used throughout the course for seminars, tutorials and site visits to local national parks, biospheres and reserves. There are normally three study weekends per year in years 1 and 2. The PgDip is assessed by a combination of coursework and practical or lab-based exercises. Coursework takes the form of essays, case studies, reports, portfolios etc. The emphasis on coursework for assessment reflects the vocational nature of the programme and encourages full development of integrative, analytical and inter-personal skills.

### Modules:

- Planning and the Legal Framework
- Habitat and Species Management
- Visitor Management
- Species Identification and Familiarity
- Project Management for Countryside Professionals
- Integrated Planning Management
- Production and Implementation of Management Plans
- Species and Habitat Evaluation
- MSc Project (taken following successful completion of taught modules)

For further information, please contact: Kev Theaker, Programme Leader  
SRUC Ayr, Riverside Campus, University Avenue, Ayr KA8 OSX Tel: 01292 886167 |  
Email: [kev.theaker@sruc.ac.uk](mailto:kev.theaker@sruc.ac.uk)

Apply now online: [www.sruc.ac.uk/pgcountryside](http://www.sruc.ac.uk/pgcountryside)



## Six-spot Burnet Moth found on Tiree

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Six-spot burnet moth – © John Bowler

A brightly coloured moth has been recorded for the first time on Tiree by RSPB Scotland. Although six-spot burnet moths are common across much of England, Wales and Ireland they are more thinly distributed across Scotland.

A team from RSPB Scotland carrying out insect survey work on the island came across the moth. Six-spot burnets are often mistaken for butterflies due to their colouring and because they are active during the day. The moths are a dark blue black colour with a metallic sheen. They have six bright red spots on each of their forewings, and their hind wings are completely red.

James Silvey, Nature Recovery Officer at RSPB Scotland said: “The moth was on the ground basking in the sunshine as we walked past so it was easy to see all six of the spots on each wing. Six-spot burnets are found in the Outer Hebrides and in some coastal areas of Scotland so it’s exciting that we’ve seen one on Tiree. They’re about during the summer between June and August and are attracted to a range of flowers including thistles.”

John Bowler, RSPB Scotland’s Tiree Officer added: “It’s great to see this moth on the island. Tiree has an amazing array of wildlife including lots of insects. Over the summer nine species of bumblebees buzz about the flowers, butterflies such as meadow browns and common blues flit about and both black and highland darter dragonflies can be seen on the wetlands. I’ll now be keeping my eye out for more six-spot burnets.”



## Scots scientists addressing conservation in Sarawak

Scottish-based scientists have become part of a vital vanguard preparing to advance conservation research in the rich biodiversity hotspot of Sarawak, home to such creatures as the enigmatic orang-utan. Flying the flag on behalf of the Royal Botanic Garden Edinburgh (RBGE) at the launch of a new strategy in the state capital Kuching, tropical botanist Dr Peter Wilkie spoke of the importance of this multi-discipline approach which has been created thanks to the Malaysian state opening-up its Totally Protected Areas (TPAs) to foreign researchers.



“The richness of Sarawak’s plant and animal life is internationally-renowned” said Dr Wilkie, who represented RBGE Regius Keeper Simon Milne at the signing of a five-way international Memorandum of Understanding (MOU). “However, while Sarawak’s landscape has changed rapidly as development has progressed in recent decades, our understanding of the impact of changes -such as deforestation - to natural areas has lagged behind. This new scientific initiative is an important step forward in looking at how scientific research can help refine the management of Sarawak’s forests, especially its biologically-rich TPAs, in the interests of conservation”.

As part of the initiative, four field sites have been selected for an intensified research programme. These include the lowland and hill forests of Nanga Segrak and Nanga Bloh in Lanjak-Entimau Wildlife Sanctuary, and Nanga Delok in Bantang Ai National Park in the interior; all possess and maintain fully developed, well-equipped, field stations. A fourth field station will be built in the newly gazetted Ulu Sebuyau National Park, located in one of Sarawak’s most extensive areas of peatland and kerangas forests.



The project will be led by a group of eminent international and regional scientists with field experience in the state. They include Sarawak Forestry, RBGE, the Smithsonian Conservation Biology Institute, the Lee Kong Chian Museum of Natural History, Singapore and the Wildlife Conservation Society.



Royal  
Botanic Garden  
Edinburgh

# Parliament Publications

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## Health & Climate Change Report

A new report entitled '[Good for Climate, Good for Health](#)' has been published by the Scottish Parliament Information Centre (SPICe). The report focuses on the links between climate change and health, and considers the benefits of climate change policy on public health.

Although the aims of the climate change policy to reduce emissions and policy aims for public health improvements can be disparate, there are occasions when one can contribute to the other, for example through improving air quality and reducing physical inactivity or poorly heated homes. The new SPICe briefing describes some example approaches and outlines to what extent the multiple benefits are considered within Scottish Government policy. The briefing focuses on three policy areas that offer climate and health benefits: active travel, diet and home energy efficiency. The examples show how policies in these areas can help address several issues of importance for the health of people in Scotland including heart disease, bowel cancer, obesity and aspects of mental health



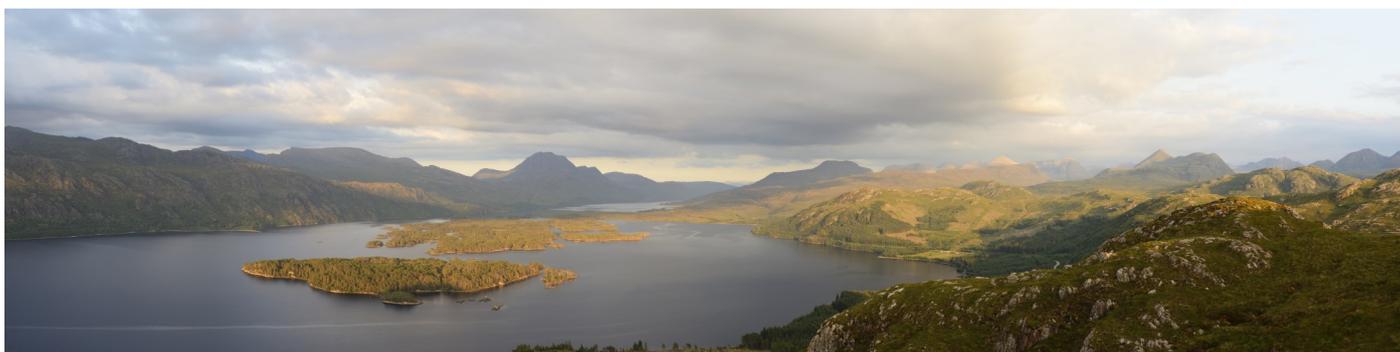
## Key Scottish Environment Statistics 2015

This publication aims to provide an easily accessible reference document which offers information on a wide range of environmental topics. It covers key datasets on the state of the environment in Scotland, with emphasis on the trends over time wherever possible.

The data are supplemented by text providing brief background information on environmental impacts and data source, a summary of the trend and brief information on the potential factors affecting the trend. An Excel spreadsheet containing the data sets and charts presented in this publication is also available on our website.

<http://www.gov.scot/Topics/Statistics/Browse/Environment/Publications>

This year, Key Scottish Environment Statistics includes two new pages. One showing trends in air pollutant emissions and one showing trends in the percentage of features on protected sites that are assessed as being in a favourable condition.



# TAYSIDE BIODIVERSITY ACTION PLAN

## CONSULTATIVE DRAFT – 2<sup>ND</sup> EDITION (FIRST PHASE )

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The 1<sup>st</sup> Edition of the Tayside Biodiversity Action Plan (TLBAP) was published in 2002, preceding both the Nature Conservation (Scotland) Act 2004 and the Scottish Biodiversity Strategy which was published by the Scottish Government that same year.

The 2020 Challenge for Scotland's Biodiversity was launched mid-2013 and is Scotland's response to the Aichi Targets set by the United Nations Convention on Biological Diversity, and the European Union's Biodiversity Strategy for 2020. It is a supplement to the Scotland's Biodiversity: It's in Your Hands (2004) and the two documents together comprise the Scottish Biodiversity Strategy.

With an emphasis on ecosystems, as well as habitats and species, and the many new Scottish targets to meet, it was clear the TLBAP needed reviewing and the full suite of Actions updated. There is much ongoing work in preparing the 2<sup>nd</sup> Edition, but those sections ready for consultation are now published on the website:

<http://www.taysidebiodiversity.co.uk/action-plan/action-plan-new-lbap-2015/> .

These include:

- **The Urban & Built Environment**
- **Water & Wetland**
- **Coasts & Marine**

Tayside Biodiversity Partnership



**BIODIVERSITY**  
THE VARIETY OF LIFE

Further sections will be uploaded in the autumn.

Your comments on these first three consultative drafts will be warmly welcomed. Brief questions are shown on each of the sections on the website, but you are welcome to respond in your own way via [taysidebiodiversity@pkc.gov.uk](mailto:taysidebiodiversity@pkc.gov.uk).

Please play a part in shaping the Tayside Biodiversity Action Plan and let your voice be heard for Tayside's biodiversity.

**The deadline for comments on the current Consultative Drafts is 18th October 2015**



# Trees For Life: Project to Boost Red Squirrel Numbers

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An innovative new project by conservation charities Trees for Life and the Highland Foundation for Wildlife aims to secure a major increase in the range of Scotland's red squirrel populations for the first time in decades.

The Caledonian Forest Wildlife

© Peter Cairns

Project has the ambitious goal of establishing 10 new populations of the species in the Highlands over the next three years, with the long-term aim of boosting red squirrel numbers in Scotland by more than 10 per cent. It will also provide a unique opportunity for volunteers, including those from remote communities, to take an active part in wildlife conservation. The project will involve conservation experts carefully relocating red squirrels from areas of Scotland where they are thriving to remote forests in the north-west Highlands where there are no squirrels at present, but good quality habitat for them.

It will build on pioneering work by Roy Dennis MBE of the Highland Foundation for Wildlife which has demonstrated impressive results – 40 red squirrels that he moved into woodlands at Dundonnell in 2008, for example, have already expanded into a thriving population of around 400, and two further translocations were also very successful.

“Through an effective and proven approach, this exciting initiative will help red squirrels return to the forests where they belong for the first time in decades – leading to significant new populations of this iconic species and offering real hope for its long-term survival. Increasing red squirrel numbers will also benefit our native forests and the many species that depend on them, because red squirrels are nature’s tree planters. They collect and bury thousands of tree seeds each autumn, but frequently forget these hoards – which in spring take root and so expand our woodlands,” said Alan Watson Featherstone, Trees for Life’s Executive Director.

The project has been made possible by a grant of more than £61,000 from the Heritage Lottery Fund.

Colin McLean, Head of the Heritage Lottery Fund in Scotland, said: “Thanks to National Lottery players, HLF grants have helped to protect an amazing range of landscapes, habitats, and species of plants and animals. The Heritage Lottery Fund is delighted to support the Caledonian Forest Wildlife Project – which will provide opportunities in both rural and urban communities for volunteers to learn about wildlife, as well as training in practical conservation skills. We are pleased to support projects that will stimulate an interest in our precious natural heritage and so help conserve it for future generations.”



Urgent conservation action is needed to secure the long-term future of the red squirrel, which is increasingly rare in Britain and is recognised in the UK Biodiversity Action Plan as a priority species. Only an estimated 138,000 reds are left in the UK, and their populations – devastated by disease and competition from the introduced grey squirrel – are still in decline. Red squirrel numbers have also been adversely affected by the loss of their forest homes, which have been reduced to isolated remnants. Although many forests in the north-west Highlands offer suitable habitat, red squirrels travel from tree to tree and do not usually cross open ground. This means they cannot spread back to areas of fragmented woodland from where they have disappeared.

The Caledonian Forest Wildlife Project will see squirrels transported to carefully selected release sites in specially constructed nest boxes, lined with hay for comfort and warmth, and provisioned with peanuts for food and apple for hydration. These nest boxes will then be nailed to trees and their exit holes filled with moss – so that the squirrels can find their way out in

their own time, once people have left, minimising stress for the animals. Food will be provided for several months after release, to help the squirrels settle easily into their new surroundings.

Situated far away from disease-carrying grey squirrels, the relocated reds will quickly establish new populations. Animal welfare measures will be central to the project. No more than two squirrels will be taken from any donor site, so that their removal does not negatively affect the donor population.

Volunteers – including those from remote communities and disadvantaged backgrounds – will be able to join training courses covering red squirrel surveys and conservation, and will be given the opportunity to help monitor the progress of the translocations. An online training programme will allow people to develop the skills to monitor red squirrels in their local area. The scheme will also involve the creation of partnerships with landowners, ongoing monitoring, and pioneering research to learn more about red squirrels, in order to strengthen conservation action. Talks and seminars will be held with communities to inspire people to get involved with the conservation of endangered wildlife.



## Scottish Natural Heritage (SNH) -

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2015 is a big year for action on climate change. The Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) meets in Paris in December. 'COP21' has a lofty goal: to produce a universal, legally binding agreement to combat climate change for the first time.

With all eyes on Paris, climate change is also at the forefront at Scottish Natural Heritage (SNH). In SNH's new [Corporate Plan](#) climate change mitigation and adaptation are a priority: *"Implementing measures to reduce emissions of greenhouse gases (mitigation) and guiding adaptation so that nature can, as far as possible, adapt to a changing climate, and so that people can make best use of natural processes in preparing for climate change."*

So far, we've made good progress on mitigation. Scotland is committed to a 42% reduction in emissions by 2020. SNH has met this target five years early, with a [49% reduction](#) in carbon emissions since 2000 reached earlier this year! We want to achieve a further 12% emission saving over the next three years to stay on track to meet the 2050 80% carbon reduction target.



Loch Leven NNR from above

Another important commitment is our work on peatlands. We have recently published the [National Peatland Plan](#), which is currently supported through the [Peatland ACTION](#) project. The project aims to restore peatlands to maintain and promote storage of carbon. When peatlands are healthy they not only support vibrant, diverse habitats, but also contribute to mitigating climate change.



## —Renewing Climate Change Priorities

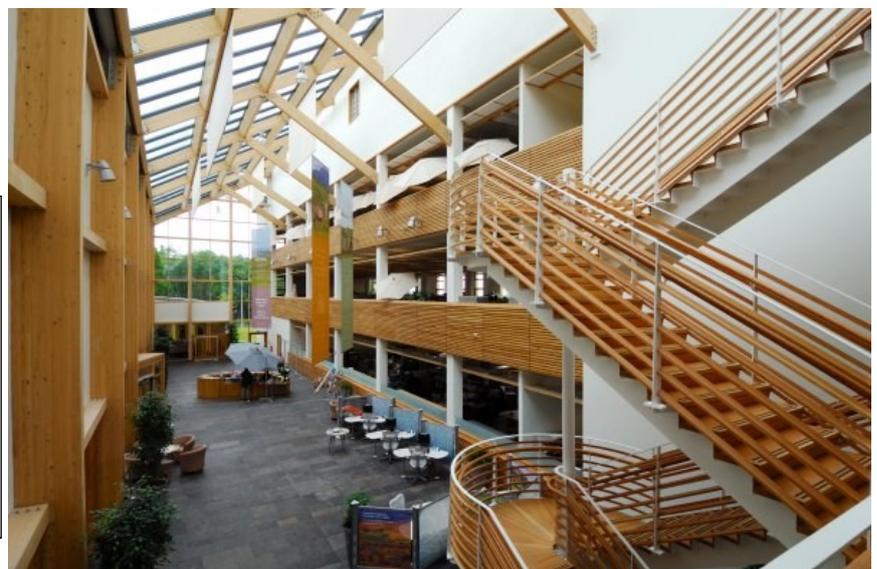


On adaptation, SNH adopted eight adaptation principles to help create more resilient ecosystems that can respond to a changing climate. A growing [suite of case studies](#) illustrates adaptation in National Nature Reserves. From restoring the raised bog at Blawhorn Moss to reversing water pollution at Loch Leven, the case studies show how we can give nature a better chance of remaining healthy and functioning in the face of climate change, providing benefits we all rely on.

Conserving biodiversity and tackling climate change go hand in hand. As we look to governments to agree global action on climate change in Paris, it's an opportunity for us to renew our actions here in Scotland. We can all take steps to make our environment more resilient, helping Scotland to be better prepared for the changing climate.

Collecting an 8m peat sample from Blawhorn Moss in 2008  
Dougie Barnett/SNH

Great Glen House in Inverness is designed for energy efficient heat and ventilation and to provide as much natural light as possible, emitting only 7 kg C/m<sup>2</sup>/year, compared to a "good" standard of 15 kg C/m<sup>2</sup>/year."



## Woodland Trust—

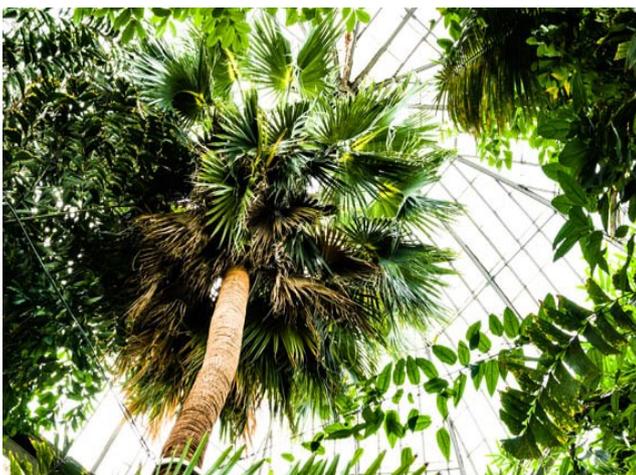
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These six trees are the finalists in Scotland's Tree of the Year, an annual search for the nation's best loved tree. The winner will compete against trees from all over the Continent for the title of European Tree of the Year, organised by the Environmental Partnership Association

### Benmore's Giant Redwood, Dunoon, Argyll and Bute

The tallest tree in the impressive entrance avenue of giant redwoods at Benmore, is also thought to be Europe's largest. The story of how these living monuments first reached British shores involves a competitive race in the 19th Century.

Scottish landowner Patrick Matthew (1790-1874) had three sons involved in the California Gold Rush and requested that seeds be sent back by steam packet. No-one knows for sure but it seems likely that the trees in the avenue grew from one of these original collections.



### Bibby Tree, Edinburgh

The Bibby tree is an historic centrepiece in the dark and steamy interior of the Tropical Palm House at the Royal Botanic Garden Edinburgh. It's the oldest known plant in the collection, which first grew in the Leith Walk Botanic Garden and was transported by horse to Inverleith in 1822. Due to the skilled care of generations of successive horticulturists it is still fascinating visitors to RBGE.

Sabal palms are endemic to Bermuda, where they are under threat in the wild from faster growing oriental palms.

### The Clachan Oak. Balfroun, Stirling

William Wallace is said to have rested against the oak and later Rob Roy Macgregor is supposed to have hidden here too. This venerable tree held together by wide iron bands has seen much history.

It has been held together for several hundred years by big iron rings to which criminals were chained as punishment. The oak survived a lightning strike in the 19th Century when it was thought to be 300 years old.

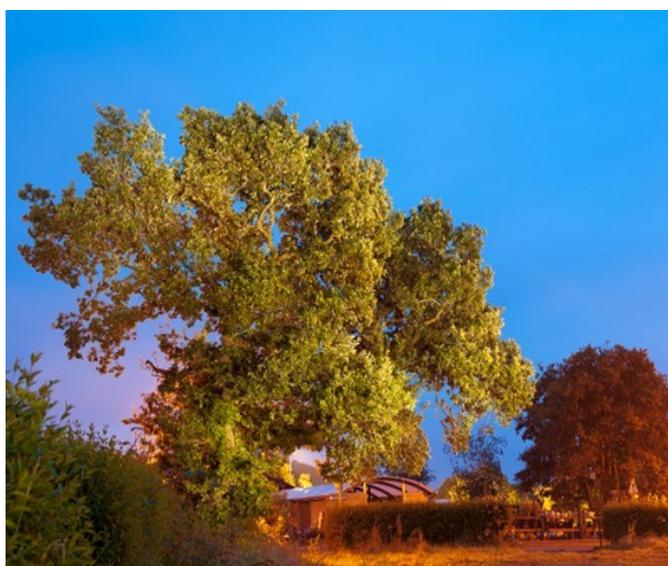


# -Scotland's Tree of the Year

## Suffragette Oak, Glasgow

This relatively young oak within Kelvingrove Park is a big part of the history of Glasgow's women. It was planted by suffrage organisations on 20 April 1918 to commemorate the granting of votes to women.

Beside the tree is a beautiful plaque, placed by Glasgow District Council in 1995. It is a favourite spot on the Glasgow Women's Library West End Women's Walk



## Poker Tree, Aberfoyle, Stirling

An iron poker embedded in this old oak recalls a violent incident in 1690. Bailie Nicol Jarvie travelled from Glasgow to visit his cousin Rob Roy stopping for refreshment at the inn at Clachan of Aberfoyle. A drunken highlander took exception to his presence and challenged him to a fight.

Jarvie tried to draw his sword but it was rusted shut. Instead he pulled a hot poker from the fire and in the ensuing melee set fire to the highlander's plaid at which he fled.

## Birnam Oak, Perthshire

The Birnam Oak and a neighbouring sycamore are thought to be the sole survivors of an ancient forest that once straddled the banks and hillsides of the River Tay, celebrated in Shakespeare's Macbeth as the famous Birnam Wood.

As prophesied by Shakespeare's three witches, the branches from this great wood camouflaged an advancing army against Macbeth almost 1000 years ago. It is thought that the Bard took inspiration for this section of his 'Scottish Play' during a visit to Perth, Birnam and Aberdeen arranged by Elizabeth the First in 1599.



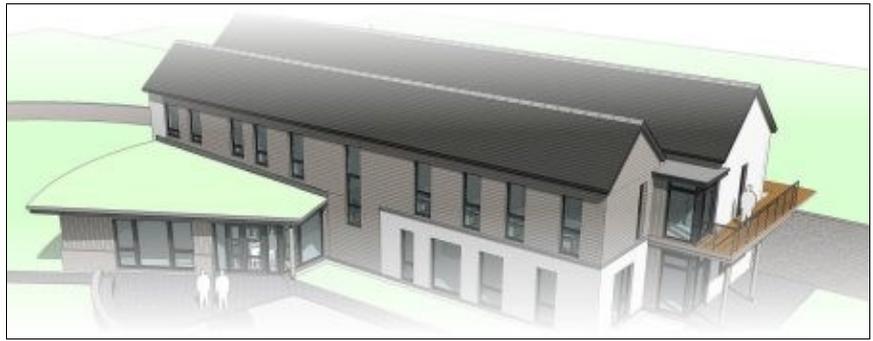
**Vote now**



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## Peatlands Partnership—HLF Funding for ...

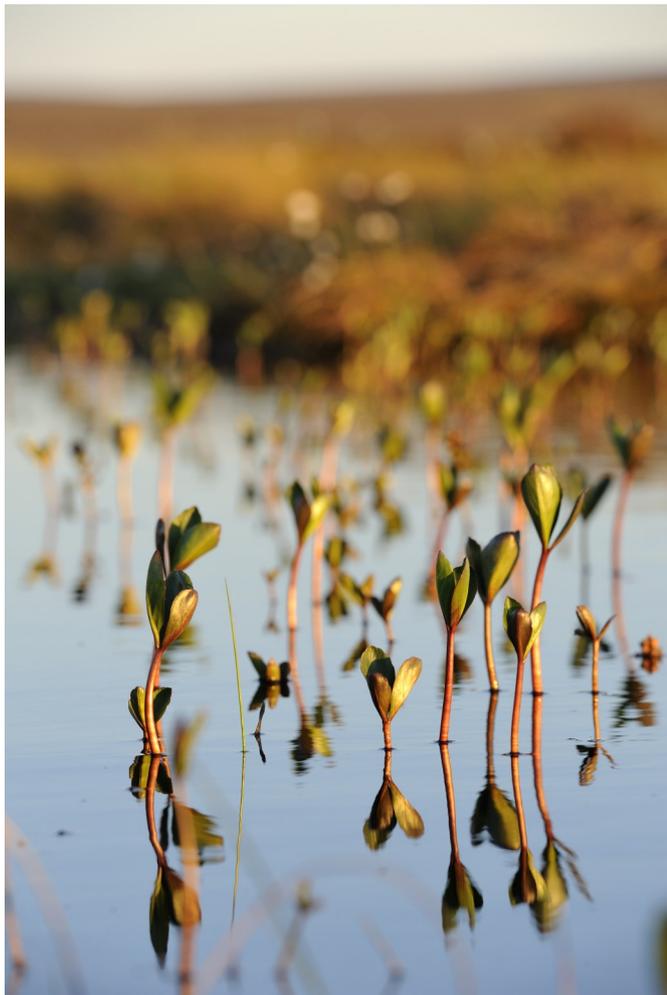
The pioneering vision of the Peatlands Partnership to make the dramatic and extensive flow country a centre of European research and innovation excellence has taken a significant step forward. Thurso-based contractor O'Brien Construction Ltd has been awarded a major contract to build a new bespoke field centre at Forsinard in Sutherland.



The £1.9m state-of-the-art field centre will offer accommodation and facilities for research students, long term volunteers and university groups to study peatlands in the Flow Country and the effects of the ground-breaking peatland restoration techniques being led by RSPB Scotland, The Forestry Commission Scotland and private partners.

This will contribute significantly to placing Scotland at the heart of science and good practice around peatlands, which are vital carbon stores, as well as being wonderful places for wildlife.

Stuart Housden, Director of RSPB Scotland, said: “We have been working here in the Flows for over 20 years restoring the peatlands, blocking drainage ditches and felling inappropriately



planted trees on a major scale to bring this habitat back to its former glory. But the next phase is the most exciting of all. I am very proud of the local team and very grateful indeed to all of the Peatland Partnership, and particularly to HLF that have really helped us to realise this fantastic idea and bring it to reality.”

Also welcoming the news was Professor Stuart Gibb, Director of the Environmental Research Institute at North Highland College, Thurso. Professor Gibb said, “This is excellent news. The peatlands of the ‘The Flow Country’ of Caithness and Sutherland are globally important from an environmental perspective. Moreover, the new field centre will transform our ability to deliver learning and training on issues from peatland biodiversity to water quality, and from carbon cycling to rural sustainability. Moreover, the field centre play a pivotal role in establishing the area as a national and international, focal point for excellence in peatland research and thus in attracting grants and funding that will make a significant contribution to the local economy.”

The field centre is part of the Heritage Lottery Fund supported Flows to the Future Project, which RSPB Scotland leads on behalf of the Peatlands Partnership.

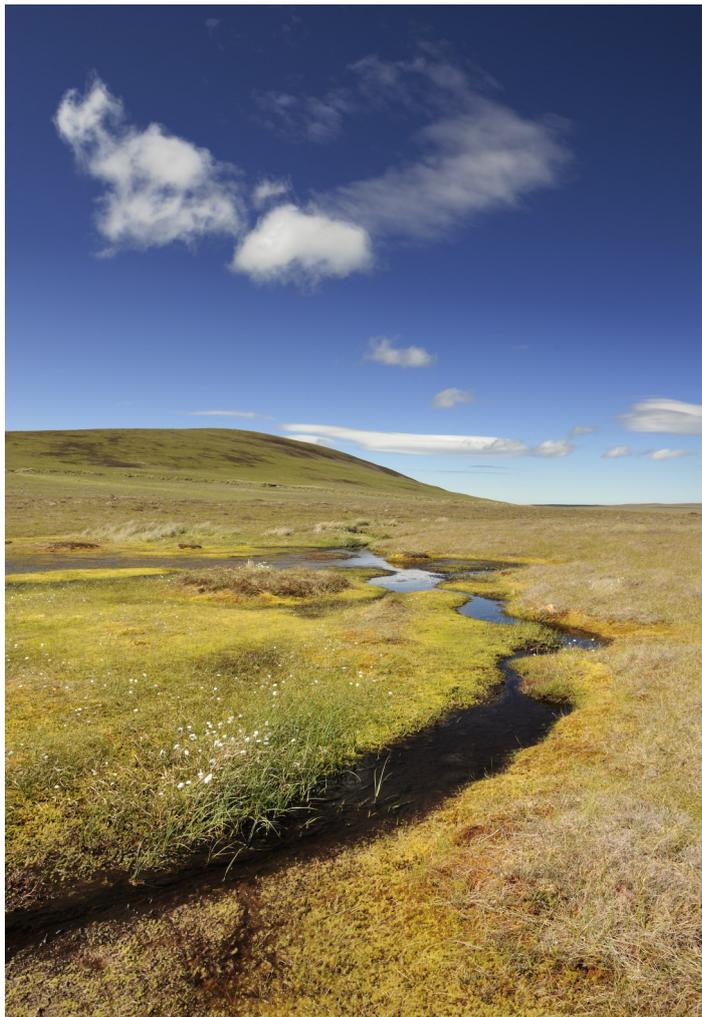
When construction is finished the field centre will greatly increase the opportunities for volunteering and research in the Flow Country. It will provide much needed bunkhouse-type accommodation for volunteers, researchers and students, an education/community room, a small field laboratory and offices. The existing facilities at Forsinard are inadequate, but the new building will enable all the organisations working on peatland management and research in the Flows to work more effectively and also to increase the scale of work going on.

Donald Chambers, from O'Brien Construction, said: "We are pleased to have secured this prestigious contract and to be once again working together with the RSPB and the Peatlands Partnership."

The building has been designed by Colin Armstrong Associates in Inverness and gained unanimous support from councillors when presented for approval to the North Planning Applications Committee of the Highland Council. It is being built on land owned by RSPB Scotland between the existing railway line and the A897. To minimise its environmental impact the field centre has been designed following Passivhaus principles, which involve very high insulation specifications. Wood fuel will provide the heating, which will again reduce its carbon footprint.

Caroline Eccles, project manager responsible for the development delivery, said: "This is an exciting time. Forsinard has already become a focal point on a UK level for both practical peatland restoration and associated research looking at the significance of the peatlands for storing carbon. There are already many universities and organisations working at Forsinard, including Thurso's Environmental Research Institute, who are looking forward to using the new facilities. Many local schools and youth groups are also keen to use the building."

Ms Eccles stressed that the field centre will only be providing accommodation for those working on or studying the Flows and will not be operating in the wider tourism market. It is envisaged that the increase in people to the area will bring benefits to local businesses providing services. As part of the project's submission to the Heritage Lottery Fund, an Economic Impact study was carried out, and this highlighted the potential benefits to local businesses not only from the people using the field centre but also those coming to see the recently completed Flows Lookout viewing tower which is predicted to lead to a doubling of tourist numbers coming to Forsinard.



## Golden Eagles in Southern Scotland

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Following a report published by Scottish Natural Heritage last year, there is a new project to increase the number of golden eagles in the South of Scotland. The project will focus on what further work is needed to revive the population of these birds in the south.

Minister for Environment, Climate Change and Land Reform, Dr Aileen McLeod, formally launched the South of Scotland Golden Eagle Project at Langholm Moor on the 14<sup>th</sup> August. The importance of such conservation projects has been underlined by recent incidences of raptor persecution.

Dr McLeod commented:

“Golden eagles are truly magnificent birds and it is very exciting that the South of Scotland could potentially support more than a dozen pairs. This new project at Langholm Moor is a great opportunity to re-establish this species in this area along with all the environmental and economic benefits that brings. It is particularly encouraging to see so many partners working hard to return golden eagles to the skies above the South of Scotland, in a way that enables grouse

shooting to co-exist alongside birds of prey. I am absolutely determined that the persecution of raptors will not be tolerated under any circumstances. The Scottish Government has already taken action to put an end to the illegal killing of wild birds and I will continue to take whatever steps are necessary, which could include further tightening the law.”

The project has its roots in a joint initiative between Scottish Land & Estates and RSPB Scotland who wanted to find the cause of what was limiting the golden eagle population in the South of Scotland. This resulted, last year, in a Scottish Natural Heritage (SNH) published report ‘Golden Eagles in the South of Scotland: an overview’. This new project builds on that report, which found that Southern Scotland could potentially support up to 11 to 13 pairs. Presently, there are no more than two to four pairs of golden eagles in Southern Scotland, with limited nesting success.

After an approach was made to the Minister last year, Scottish Land & Estates, RSPB Scotland and Buccleuch Estates, formed a partnership to take the work forward, along with SNH. The partnership is currently looking to involve a wider range of stakeholders.



Golden eagle © Laurie Campbell

## New Project to Increase Numbers

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Speaking as Chairman of the Group, Mark Oddy commented: "A revived population of golden eagles offers wonderful opportunities for tourism and wider benefits for the south of Scotland. And of course, it would be thrilling to see more golden eagles in this wonderful part of Scotland."

Douglas McAdam, Chief Executive of Scottish Land & Estates, welcomed the new project: "With the 2014 report, we now have a solid basis on which to move on to a second phase. We are delighted now to be working with our partners towards increasing the number of golden eagles in the South of Scotland."

Duncan Orr-Ewing, of RSPB Scotland commented: "We are delighted to be working in partnership with SNH, Scottish Land & Estates and Buccleuch Estates to help reinforce the population of one of Scotland's most iconic species, the golden eagle, in the south of Scotland. The initial scoping work by the partnership is showing healthy prospects for a thriving golden eagle population in the future in this area. We hope to secure official approval in due course to make this project a reality, following engagement with local community and other interests to secure their support. This project will contribute to the delivery of the emerging Scottish Biodiversity Strategy".

Roy Dennis, a world expert on raptor reintroductions and a member of the National Species Reintroduction Forum for Scotland, said "Golden eagle recovery in southern Scotland is an essential part of large ecosystem restoration and I congratulate the Minister on this exciting and important initiative, and I wish the project all success."

Dr Cat Barlow has been appointed as project manager to take the work forward and a project team has now been formed. The team will focus on further assessing the viability of the golden eagle population, and identifying areas/sites and management measures which could benefit the birds. Guided by the National Species Reintroduction Code, the team will undertake a formal assessment of habitat and other management measures to reinforce the population.



# Diary Dates



**4-8 October 2015:** Centre For Mountain Studies; International Conference in Perth.  
Perth III: Mountains of our Future Earth.  
[Further information at Perth College](#)

**8th October 2015:** SGP Event - Controlling Invasive Non-Native Species - Secrets of Success. Venue Battleby Conference Centre. For further information:  
<http://www.biodiversityscotland.gov.uk/news-and-events/events/>

**14th October 2014:** Conference for Students; Ecology, Environment and conservation. At the Royal Society of Edinburgh. **FULLY BOOKED**  
<http://www.biodiversityscotland.gov.uk/news-and-events/events/>

**23-24 November 2015—**World Forum on Natural Capital in Edinburgh. For more information: <http://www.naturalcapitalforum.com/about>

