

Biodiversity News

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From *the* Editor

Welcome to the summer edition of Biodiversity News.

As ever, this edition of Biodiversity News is filled with a great range of articles for you to enjoy. A big thank you to Marcia Rea for her beautiful photo of a cuckoo flower which is featured as this edition's front cover. The full article can be seen on page 17 where she discusses a new project that aims to assess the ability of Inverness Sustainable Drainage Systems to support amphibian populations.

In the Features section, we have an interesting article on managing transport corridors for biodiversity and climate resilience to help achieve the Government's Biodiversity 2020 outcomes, the National Pollinator Strategy and Water Framework Directive objectives.

Please head to page 13, as Gethin Davies draws attention to the issue of excessive lighting and encourages more people to venture out during darkness to enjoy the outdoors.

On page 29, Central Scotland Green Network Trust and South Lanarkshire Council have extended the range of "Your Nature Space" cards, which provide handy pocket guides that anyone can use to assess the biodiversity quality of their local environment.

This is my final newsletter as editor of Biodiversity News as my placement finishes at the end of the week. It has been motivating to see so many examples of people passionate about conserving the environment and I look forward to following the work of the nature community for many years to come.

Best wishes,

Katie

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biodiversitynews@defra.gsi.gov.uk



Improvement programme for England's Natura 2000 sites: new report



Report on how to improve Natura 2000 sites in England published.

A report published by Natural England's [improvement programme for England's Natura 2000 sites](#) (IPENS) project sets out a blueprint for the long-term management of 338 of England's important nature sites. [Natura 2000](#) is a European designation (including [Special Protection Areas](#) and [Special Areas of Conservation](#)) that protects important natural habitats and species. Natura 2000 sites include some of the country's most familiar landscapes including the Northumberland coast, the New Forest, the Norfolk Broads and Salisbury Plain.

Improvement Programme for
England's Natura 2000 Sites (IPENS)
Planning for the future

Programme Report – a summary of the programme findings



www.gov.uk/natural-england

There are 338 Natura 2000 sites in England, in both marine and terrestrial locations, covering more than 2 million hectares. These are sites that have been designated either as a Special Protection Area due to the rare, vulnerable or migratory birds present or as a Special Area of Conservation, which protect a variety of wild animals, plants and habitats. Where these are on land they are also notified as [Sites of Special Scientific Interest](#).

Many Natura 2000 sites are being adequately conserved and meet their conservation objectives. However, others are not yet in a healthy state due to a number of pressures. The 2-year IPENS project involved more than 650 different organisations and has significantly improved the understanding of what needs to be done to protect and enhance the Natura 2000 network in England.

This is the first time that this information has been drawn together for all of England's Natura 2000 sites.

The achievements of the project so far have included:

- ◆ producing a [site improvement plan](#) for each Natura 2000 network site
- ◆ developing [strategic plans](#) to address issues that affect multiple sites
- ◆ outlining priority actions needed to achieve favourable condition
- ◆ identifying gaps in [Natura 2000 evidence](#)

A site improvement plan has been produced covering every Natura 2000 site in England. The plans present the best available evidence in support of actions required to achieve and maintain sites in a good condition. More than 3,000 specific actions have been identified in the individual plans.

Dr Andy Clements, Natural England Board Member and Director of the British Trust for Ornithology, said:

“England has a diverse range of habitats resulting in a wonderfully rich and varied wildlife. The IPENS project has enabled Natural England, the Environment Agency and other partners to more effectively target our conservation efforts on Natura 2000 network sites and surrounding areas.” “A wide range of organisations and individuals own, manage or have an interest in England's Natura 2000 sites. This includes government agencies, voluntary bodies, private companies and individuals and collectively there is a wealth of knowledge, experience and interest in Natura 2000. We are grateful to everyone who has been involved with this important and far reaching project.”



Marsh fritillary *Euphydryas aurinia*
© Natural England/Allan DREWITT

By drawing together information for the complete set of marine and terrestrial Natura 2000 network sites in England, the project has given decision-makers a much improved understanding of the priority actions required to improve the condition of England's sites, including who might help make this a reality and how. The evidence produced by the IPENS project team supports the [Biodiversity 2020](#) strategy for England's wildlife and ecosystem services. The strategy was published in 2011 and sets out the government's ambition to halt overall loss of England's biodiversity by 2020, support healthy well functioning ecosystems and establish



coherent ecological networks; with more and better places for nature for the benefit of wildlife and people.

The improvement programme for England's Natura 2000 project was supported by EU LIFE+ funding and was run by Natural England in partnership with the Environment Agency.

The [summary report](#) and more [detailed technical report](#) from the IPENS project are available for download from the Natural England publications catalogue. The reports were published to coincide with [European Natura 2000 Day](#).

Rebecca Smith

Life+ Programme Coordinator, Improvement Programme for England's Natura 2000 Sites (IPENS)

Warm weather boost for butterflies

Despite variable weather in the spring, all it takes is a few days of warm sunshine for butterfly numbers to rocket. The British Trust for Ornithology's (BTO) Garden BirdWatch results show that this is exactly what happened at the beginning of April, with new records reached for some species.

The numbers and time of year that butterflies emerge from hibernation is dependent on the weather, and this spring was no exception. Unsettled weather throughout March meant that reports of butterflies were much lower than in previous years. However, when a spell of dry, warm weather happened at the beginning of April the butterflies took advantage of it and reports shot through the roof.

Both Brimstone and Small Tortoiseshell butterflies were reported from about a quarter of BTO Garden BirdWatch gardens at the beginning of April 2014, but this year Small Tortoiseshell was seen in almost 40% of gardens, a record for April, and Brimstone was seen in a third of gardens – the highest proportion of gardens since recording started in 2003.

However Peacock was the biggest surprise seen in over half of BTO Garden BirdWatch gardens compared to only a third in April 2014, and another record for butterfly reports in April. Sadly the good weather did not last, however, and reports of butterflies dropped off quickly.

Clare Simm from the BTO Garden BirdWatch team commented, "As you can see, the BTO Garden BirdWatch is not just about birds. Our volunteers provide us with vital information on other taxa too, helping us to understand how important gardens are as a habitat for all wildlife. If this unsettled weather continues, it may be bad news for butterflies so we need to keep an eye on how they fare over the rest of the year."



© Dawn Balmer/BTO

Was the short spell of sunshine in April enough for our butterflies, or will the unsettled weather affect their numbers this year? Help BTO find out!

To find out more about taking part in BTO Garden BirdWatch, including a free enquiry pack and magazine, please get in touch by emailing gbw@bto.org, telephoning 01842 750050, write to GBW, BTO, The Nunnery, Thetford, Norfolk, IP24 2PU or visit www.bto.org/gbw.



Giants spotted off the North West coast

Sightings of some of the ocean's bigger animals in the Irish Sea are evidence that smaller creatures are thriving off the North West Coast.

In the last month there have been sightings of a giant humpback whale and a pod of more than 100 bottlenose dolphins off Otterspool, close to Liverpool city centre.

And the increased activity is all down to a seasonal upsurge in tiny animals like plankton and smaller fish, like herring, in the muddy depths of the Irish Sea.

This is delighting experts from The North West Living Seas group of the Wildlife Trusts, Marine Conservation Officer Emily Baxter said: "This year, we have even been spoilt with numerous sightings of humpback whales around the UK – this charismatic species was even spotted off Liverpool.



© Mike Snelle

"Humpbacks migrate thousands of miles to breed and feed. They spend much of their time close to shore but migrate across deeper waters on their way from wintering and breeding grounds off the coasts of Africa, to feeding grounds around Iceland."

Humpback whales are not normally a common sight in our waters but they are occasionally encountered off the west coast of Ireland and northern Scotland in summer as the head north.

Emily said: "This year it appears that several whales - two were also spotted off Northern Ireland - have taken a detour through the Irish Sea, perhaps an indicator that there is particularly good food - small fish like herring - at the moment.

"We have also had recent sightings of a pod of 100 bottlenose dolphins off Liverpool. Each year we look forward to a summer of exciting sightings, from whales and dolphins, to the world's largest turtle - the leatherback - and the heaviest known bony fish - the ocean sunfish."

A dozen species of whale and dolphin have been recorded off the North West. Despite their size, they are superbly adapted for the life aquatic; powerful swimmers, some are even amazingly acrobatic – playfully jumping out of the water or slapping their fins on the surface. It's only when they surface to breathe or play that we get a glimpse into their extraordinary lives.

Harbour porpoises, bottlenose dolphins and short-beaked common dolphins are present in our waters year-round, though sightings normally increase when the weather is good and people are out and about. Seasonal visitors to our waters include mink whales, Risso's dolphins, and fin whales, the second largest animal on the planet reaching whopping 120 tonnes and 27m in length.

Emily said: "Unlike the crystal clear waters of tropical reefs, the waters off our coast are nutrient-rich and highly productive. Productivity in our oceans is increased in areas of upwellings or frontal systems, where different water bodies meet and cold nutrient-rich water is brought up from depth to the sea surface.

"The upwelling nutrients kick off the bottom of the food-web; widespread algal blooms (phytoplankton) in spring and summer are followed by massive blooms in zooplankton (tiny animals) that feed on the algae. Following the zooplankton come the plankton feeders and others: fish, whales, dolphins, porpoises, seals, seabirds and turtles. It's the cold, productive waters of the seas around the UK that support some of the largest animals that have ever lived – our ocean giants."



© Whaleriot

Alan Wright
Senior Communications and Campaigns Officer



Lancashire,
Manchester &
N Merseyside



Managing transport corridors for biodiversity and climate resilience

An innovative and collaborative research project could change the way vegetation along British roads and railways is managed, delivering biodiversity gain and ecological connectivity as well as improving the resilience of transport infrastructure to climate change. In particular, the project highlights the very real opportunity that linear networks present to contribute towards the Government's Biodiversity 2020 outcomes, the National Pollinator Strategy and Water Framework Directive objectives.

A UK Government commitment in the Natural Environment White Paper to "work with transport agencies and key delivery partners to contribute to the creation of coherent and resilient ecological networks" led to a project commissioned by Natural England in partnership with Network Rail and Highways England, and delivered by ADAS UK Ltd. The project was piloted in the Nature Improvement Areas (NIAs) of the Humberhead Levels and Morecambe Bay.

Comprising an international literature review and accompanying opportunity mapping methodology and suggested vegetation management options, the recently published reports will be of interest to anyone managing or researching linear green infrastructure networks.

Drawing on the findings of the literature review, discussions with transport operators and GIS analysis of various environmental datasets, five broad Management Aims (A to E) were developed. These reflected the extent to which the soft estate was wooded (either > 50% or <50% woodland cover) and whether the surrounding land itself was predominantly woodland, grassland or wetland. The selection method for determining management aims is shown in Table 1.

Soft Estate Woodland Cover	> 50%			< 50%	
Surrounding Land Use	Woodland	Wetland	Grassland	Wetland	Grassland
Management Aim	A	B	C	D	E

Table 1: Management Aim Selection Criteria

Each management aim has a number of potentially suitable management options that can be undertaken on-the-ground to achieve ecological and climate resilience outcomes. The choice of options also reflects the objective to maximise delivery of multiple ecosystem services: regular cutting of verges can improve biodiversity, pollination services, aesthetics, and even potentially provide a source of biomass; SuDS can improve both water quality and reduce flood severity. The management options identified along a section of the M62 in the Humberhead Levels NIA are shown in Figure 1.



Figure 1: Management Options for a section of the M62

The ecosystem services approach to vegetation management developed in this project is novel and considers transport soft estate from a different perspective, taking into account up to date scientific and practi-



cal knowledge. Compared to previous approaches to managing biodiversity and amenity value this one will be more:

Holistic – considering not just one service / habitat at a time, but all the services that can be delivered by the soft estate;

Spatially integrated – considering how the soft estate can contribute to and enhance the services and ecological connectivity provided by the surrounding landscape;

Strategic – focussing management on hotspots where improving ecosystem service delivery and ecological connectivity would be most beneficial, and not just at SSSI and other designated sites; and

Collaborative – it is being delivered through a partnership between Natural England, Network Rail, Highways England and the NIA Partnerships.

The approach is also highly systematic, with a clear and transparent methodology that can be easily applied more widely to other areas of the transport network or to other linear corridors where there is potential for enhancing ecological connectivity and ecosystem services delivery such as cycleways, canals and rivers, and the national grid. Local Authorities could apply the technique to select the most appropriate vegetation management options for local roads under their control. Through taking an ecosystems approach to transport soft estate management, this project can help to drive change and long term environmental benefits at a national scale. Furthermore, managing the soft estate in this way should also increase the resilience of the transport network itself – thus delivering win-wins for both the economy and the environment.

The second phase of the project has now launched and will trial new management approaches on the transport soft estate in the two NIAs over a period of two-three years. This work is being undertaken in conjunction with the Cumbria Wildlife Trust and Yorkshire Wildlife Trust.



Soft estate and surrounding land along the M6 in Cumbria © visitcumbria.com



Soft estate and surrounding land along the Cumbrian Coast Line © Network Rail

The lessons learnt from the pilots will be used to inform operational good practice for Highways England and Network Rail and it is proposed that the approach will be rolled out across other Nature Improvement Areas and protected landscapes.

The work has already helped inform priorities under the Department for Transport's Road Investment Strategy (RIS) for the new Strategic Highways Company (established in April 2015). Under the RIS there is a new £300m ring fenced Environment Fund (for the period 2015-2021) which will enable action beyond business as usual and will help the company invest in retrofitting measures to improve the existing road network as well as maximising the opportunities offered by new road schemes to deliver additional improvements at the same time.

The project reports can be downloaded from <http://publications.naturalengland.org.uk/publication/5485064148221952?category=10006>

For more information please contact Helen.Davies@adas.co.uk or Nick.White@naturalengland.org.uk

Helen Davies (ADAS UK Ltd) and Nick White (Natural England)



People power to help tackle tree disease

New tree health 'early warning system' established

Citizen science and new technology are being combined in the fight against tree disease¹ as part of Observatree, a new project launched this spring aiming to help protect the UK's trees, woods and forests from harmful pests and diseases – existing or new.

Over the past 12 months more than 200 volunteers across the UK have been trained as part of the collaboration between Forest Research, the Forestry Commission, Defra and Natural Resources Wales, Fera, Apha, the National Trust and the Woodland Trust, funded by the EU's Life+ programme.

The volunteers will, amongst other tasks, verify cases of tree disease recorded via the Forestry Commission's Tree Alert, an online reporting tool which allows anyone to report trees showing signs of ill-health.

Reporting through Tree Alert is the fastest way to get tree health concerns to scientists. Tree health officers and forestry professionals are especially being encouraged to use Tree Alert to report possible sightings of pests and diseases at an early stage.



© WTML/Observatree

Chief Plant Health Officer, Professor Nicola Spence, said: "Protecting our trees from the threat of pests and diseases is vitally important to us all, and this project is an excellent example of volunteers, NGOs and government working together to achieve more than we could alone.

"The forestry sector, with its wealth of expertise, has a particularly important role to play in protecting the future of our trees through keeping a look out for signs of tree pests and diseases, and reporting sightings through Tree Alert. Early warning systems such as this will give us the best chance of eradicating and controlling these threats."

By focusing on pests and diseases which are of highest concern, the volunteers will support Government agencies such as Forest Research, enabling them to take appropriate action at locations of significance identified by the volunteers and Tree health officers as quickly as possible.

Dr Joan Webber, Principal Pathologist at Forest Research, added: "Observatree's network of trained volunteers gives Forest Research's scientists many more eyes on the lookout for new threats to tree health. They provide quality reports that let our experts focus on the most urgent cases."

Two volunteer roles have been created: the Tree Health Surveyors spot the presence of specific pests and diseases on common tree species, and the Tree Health Triage Verifiers contact landowners to collect additional information for tree disease records submitted through Tree Alert by the public and Tree Health Surveyors. Further opportunities to become a trained volunteer will be available during the course of the project, which runs until the end of 2017.

Adam Coole, Observatree volunteer, said: "This project is all about being aware of what is happening to trees across the UK, and as a gardener and arborist, this is very important to me. All of us see trees everyday, whether on the roadside, in the park or outside the school gates. If everyone engages with Observatree it has the potential to be a hugely significant early warning system."

For further information about the project visit www.observatree.org.uk

Anna O'Connor
Observatree Communications Officer



Success at the Steart Marshes

A group of enthusiastic volunteers at the Department of Environment, Food and Rural Affairs (DEFRA) travelled to the Steart Peninsula in Bridgwater, Somerset to help the Wildfowl & Wetland Trust with the aquatics planting programme for the Steart Coastal Management Project. The area boasted mudflats and a wide range of migratory birds but the area was not always like this...

So what is the Steart Coastal Management Project?

In July 2010 the Environment Agency spotted an opportunity to manage coastal change to protect Steart Village and create a huge new area of intertidal habitat – as the Steart peninsula's position in the landscape makes it both enticing for migrating birds and puts it at the mercy of one of the biggest tidal forces in the world.

They presented the options to the communities in and around Steart and asked what they would like to happen. The local community came out in support of managing the change and taking the opportunity to create habitat.

The Project has created a major new wetland, including intertidal salt marsh, transitional brackish habitat, coastal grazing marsh, brackish and saline lagoons, freshwater lagoon, reedbed and numerous ponds and ditches.

The project benefits plant diversity, animals such as wetland birds and offsets the losses of intertidal habitat that are occurring elsewhere in the Severn Estuary as a result of rising sea levels. At the same time it provides a way to manage risks to people who live on the peninsula and the infrastructure that they need. Through the project, they are able to manage current flood risks to people and property and provide more opportunity for those living and working in the area to adapt to sea level rise and plan for the future.

The project was completed in September 2014 and the benefits for wildlife are already apparent when visiting the Steart Marshes, and will continue to become an important wildlife haven into the future. Volunteers are always invaluable to the work at the Steart, and it's a great way to get out the office and see the benefits of the Steart Marshes for nature!

Overall, the Defra volunteers had a great day out and successfully planted at least 1000 plants!

Katie Hawkins
Defra



© Sacha Dench WWT



© Sarah Webster



© Greylag flock JSLees WWT



© Sarah Webster



Let's stick together – MoorLIFE conference demonstrates benefits of partnership working

Results from the successful MoorLIFE project show the benefits of partnership working. The well-attended final conference, 'An Integrated Approach to Upland Biodiversity Conservation' in March, highlighted the impressive results of the five year project, which restored four areas of Europe's most degraded blanket bog – Turley Holes, Rishworth Common, Black Hill and Bleaklow.

Co-funded by the European Commission's LIFE+ Programme, project partners include Environment Agency, Natural England, National Trust, United Utilities and Yorkshire Water. Working in partnership has brought benefits to all. Water companies now have scientific evidence that restoration can have a positive effect on water quality, and landowners can see the potential for flood mitigation.

The scale of works – over 886 hectares of moorland – provided incentive for contractors to come up with innovations. "Improvements over the five year project included new ways of distributing Sphagnum mosses and native moorland plant species, which will be useful for the partnership in future projects," said MoorLIFE Contracts Manager Brendon Wittram.

One of MoorLIFE's key missions was to protect moorlands by educating the public about the risk of wildfires. The 'Be Fire Aware' campaign, developed with University of Manchester, Wide Sky Design and Peak District Fire Operations group, took an innovative approach – using science and weather data to demonstrate real-time wildfire risk, combined with games, interactive maps and videos. There has been interest in setting up something similar in the Netherlands.

Sarah Fowler, Chief Executive of Peak District National Park explained how important financial support from the LIFE programme has been: "European funding helps broaden our scope beyond just England or the UK and work closer with partners. And that's been critical to the global element, the global innovation and the science revolution we are doing here."

MoorLIFE achieved its goals, but work continues. Partnership Manager Chris Dean said "Our original objectives still apply. Science-led, evidence based conservation allows methods to continually evolve and improve. We need to maintain scientific momentum, and our partnerships are the key to that."

*Debra Wilson
MoorLIFE Communications Officer
Moors for the Future*

Accessing Nature Fund – coming soon

The natural environment continues to face many challenges and there is growing recognition that it will only be fully valued and appreciated if people are given compelling opportunities to experience and enjoy it first hand. With this in mind, this summer SITA Trust will launch its new Accessing Nature programme which will fund capital works to increase and improve opportunities to access to the great outdoors. It will be accepting England wide applications for a wide range of projects including, but not limited to: providing access to nature reserves and wildlife areas, creating community pond dipping areas or bird watching hides and installing wildlife interpretation.

The SITA Trust team is currently working on building this programme and hope to open application process to not for profit organisations across England this August.

*Jools Granville MCIPR (Accredited Practitioner)
Communications Manager
SITA Trust*



A healthy connection



The connection between access to the natural outdoors and people's health is well recognised in some quarters. Green Gyms, the NHS Forest and Walking for Health schemes have, for instance, delivered tangible benefits to thousands of people over many years. Working relationships between those who care for land, water and nature, and those who care for our health are, however, not yet the norm.

There are signs that practical responses to this agenda are likely to be increasing rapidly in coming years. The research evidence base is strong and public policy (such as the Natural Environment White Paper) gives clear recognition of the benefits for health of access to the natural outdoors. Changes to health services in England present new opportunities for partnerships between the health and biodiversity sectors.

New schemes are being developed to promote health and reduce health inequality across local communities. The Llynfi Valley woodland creation project in Wales is an excellent example. Others – sometimes under the banner of 'green prescriptions' and 'ecotherapy' – seek to help people with specific health issues after they have been identified within the health system. Branching Out, led by Forestry Commission Scotland is a prime example.

All this presents a challenge to those whose traditional focus has been the conservation of biodiversity. How can the 'health value' from any one natural outdoor space be communicated in ways that are meaningful to those who work in the core of the healthcare system? How much do the outcomes depend on biodiversity in the strict sense of the word? How might new partnerships with the health sector be initiated and funded?

These are questions that the Ecosystems Knowledge Network is addressing by working with the Centre for Sustainable Healthcare. We are arranging a series of workshops for the health sector and for those managing natural outdoor spaces. The first is in Cambridge on 8th July, organised in association with Natural Cambridgeshire, the Local Nature Partnership for Cambridgeshire and Peterborough.

If interested, or if you have a partnership with the health sector that you would like others to know about, do get in touch via info@ecosystemsknowledge.net

For links to information on this topic see <http://ecosystemsknowledge.net/resources/tools-guidelines/health>

Bruce Howard, Co-ordinator, Ecosystems Knowledge Network

Rachel Stancliffe, Director, Centre for Sustainable Healthcare



Snowdonia Seeing Stars Campaign

If asked to give examples of pollution, we would most likely describe the pollution of water as a result of an oil spill, or of air pollution due to contamination of the atmosphere with unwanted gases. However, far fewer people would cite light pollution, which can be defined as *the disruptive brightening of the sky as a result of excessive, misdirected or intrusive artificial lighting*. This is despite the fact that it's on the increase globally. But why is it a problem? Well, there are several reasons.

Firstly, various human health effects have been ascribed to excessive artificial lighting, including sleep deprivation which in turn can cause stress and also an increased risk of cancer as a result of decreased melatonin production. It can also have significant adverse impacts on the nocturnal landscape and thus on our ability to see the stars, which is highly unwelcomed amongst stargazers! Excessive lighting can also be both unsustainable and expensive to run, and in a time of economical and climatic uncertainty, such effects are unwelcomed. Lastly, excessive or unsuitable lighting can have major adverse impacts on the natural world, and therefore we, at Snowdonia National Park Authority, are hoping to improve the situation for our nocturnal wildlife.



© Keith O'Brien

For millions of years, there has been a continuous natural cycle of day and night on Earth as it orbits the sun. Consequently, the vast majority of species have evolved to survive in these conditions, which is why in most organisms we see a distinct split between diurnal and nocturnal lifestyles. As predominantly diurnal species, humans could be accused of forgetting some of our nocturnal relations, or at least pay less attention to them. However, it might surprise you to know that approximately 60% of vertebrates and 30% of invertebrates are considered to be nocturnal. These would include, for example, bats, of which it is thought there are twelve species residing in and around Snowdonia.



© Keith O'Brien

The impacts of artificial lighting on nocturnal wildlife is a subject that has been studied for several decades, with some of the earliest references that we could find dating back to 1950 when the Robinson Brothers studied the impacts that high levels of illumination can have on night-flying insects. Subsequent studies have since shed further light (pardon the pun!) on the extent of the impacts that artificial lighting can have on the behaviour of nocturnal species, as artificial lighting is quite simply not programmed into the evolutionary make-up of life on Earth.

But whilst examples are numerous, much is still unknown. This would include such things as the potential impacts of excessive lighting on species populations, or to what extent light pollution has contributed towards the population declines recorded for moths in the UK over the last few decades. Furthermore, the majority of research focuses solely on a limited range of species groups, and that the true extent of adversity associated with excessive lighting in a wider environmental context is still uncertain. Consequently, we can only assume that further research would only go to demonstrate this point.

Whilst we are lucky enough to be relatively free of excessive artificial lighting here in Snowdonia, we do not want to get complacent, and therefore want to conserve the dark skies we have for future generations. Consequently, the Snowdonia National Park Authority is now following in the footsteps of our compatriots in the south, the Brecon Beacons National Park Authority, by striving to become the second International Dark Skies Reserve (IDSR) in Wales. The Brecon Beacons were awarded bronze status back in 2013, the first area in Wales to receive the designation. Their continued support and assistance whilst we compile our own application has been invaluable, and is a perfect example of collaborative working amongst the National Parks in Wales. If we are successful with our application, it would mean that approximately 1,342 miles² of Wales would be officially designated as an IDSR, which equates to 16.72% of the country's land area. This would



© Keith O'Brien

make it the country with the largest percentage of land area officially designated as an IDSR in the world!

To promote and celebrate our Seeing Stars campaign, we held a conference at Plas Tan y Bwlch in February this year, where a host of guest speakers gave presentations on the various reasons for which we are striving to achieve this prestigious designation. The event was well attended with over 80 individuals from a host of stakeholder groups, including lighting engineers from local Authorities, ecologists, astronomers and those involved in the tourism industry. For me, one of the highlights of the conference were the words of Bob Mizon from the Campaign for Dark Skies, who said:

"It's now too late for most of England, which is now blighted with light pollution in the majority of areas. But you're still lucky enough here in Wales to have large areas which are still relatively free of light pollution, and thus have exceptional night time sky quality. These must be preserved for all to enjoy in future generations."

His words reinforced our belief that what we are trying to achieve is valid and worthwhile.

Our aim of protecting the dark skies that we already have in Snowdonia will only be achieved by working alongside relevant stakeholders to improve the situation where needed. We don't expect people to turn off their lights altogether, as we acknowledge that human safety is of paramount importance, and that having the support of the local communities is vital in achieving our goal. **What we do wish to promote however, is the use of appropriate lighting, of good design, both where and when it is needed.**

Discussions have already taken place with the relevant local Authorities in respect of street lighting. As a result, we hope, that over time, a programme of works can be undertaken which introduces lighting of a more suitable design and spectra into the National Park, particularly along ecologically sensitive areas e.g. bat commuting corridors and foraging areas.

By working alongside residents and business owners, we also aim to minimise light spillage from residential properties, holiday accommodation, outdoor activity centres and commercial properties. Not only would such changes improve the situation for our nocturnal wildlife, but they would also deliver many other benefits such as making our communities more sustainable (modern LED lighting are up to 70% more efficient than traditional sodium burning lamps) and providing new opportunities in the tourism industry by attracting stargazers from nearby urban areas, particular in the winter, when things tend to be a little quieter.

With light pollution on the increase globally and with no clear indication of a change in this situation, impacts on nocturnal wildlife are inevitable.

Furthermore, we live in an age where society is becoming increasingly urbanised and disengaged with the environment. It is hoped that projects such as this will draw attention to the issue of excessive lighting whilst conserving an area of Wales that is relatively free from intrusive lighting, for the benefit of all. It's a project that delivers a host of advantages, both environmentally and from a socio-economic perspective, meeting the holistic approach to conservation which is now being encouraged. And if nothing else, it will hopefully encourage more people to venture out during darkness to enjoy the outdoors. You never know, we might even see some of you stargazing in Snowdonia in years to come!

Gethin J Davies

Swyddog Ecosystemau a Newid Hinsawdd/Ecosystems and Climate Change Officer



© Keith O'Brien



A Welsh farmer-led moorland project could turn the colours of the landscape

The purple moorlands of Wales have been slowly disappearing as a result of changes in grouse moor management from the '80s, but a new Welsh Government (WG) initiative has started to change that.

Since the end of the Second World War the amount of heather lost from the Welsh uplands has been dramatic: and so with it the decline in habitats; home to many of our iconic birds now under serious threat of extinction such as the golden plover, the lapwing and the curlews.

Following the State of Nature report, put together by 25 different UK conservation and research groups in the Spring of 2013, that stated there was an alarming loss of bird life and habitats particularly in the uplands of Wales, Welsh Government responded with a Nature Fund initiative.



Curlew close up © Moorland Association



Primary school children from New Radnor up to a moor to hear about the importance of heather © Catherine Hughes/CLA

CLA Cymru, FWAG Cymru & Game and Wildlife Conservation Trust (GWCT) joined forces and pulled together a group of 10 moorland managers/owners from the Black Mountains in the south, to the Berwyns in the north, who had an appetite to change the picture on the uplands and for many, turn an eerie bare and silent ground to one that would once again be full of mosaics of heather giving food and shelter to a range of ground nesting birds.

The overall ambition of the group, known as The Berwyn, Migneint, Black Mountains & Radnor Upland Recovery Project is one of 20 projects awarded funds from the Nature Fund is covers 60,000 acres. Its ambition is to create a truly collaborative bottom-up landscape-scale project and engage with communities along the way so that the wider benefits of the work could be shared and better understood.

With each moor having its different challenges, the project generated as many conversations as possible to make sure all aspects of moorland was discussed with as many user groups as possible. In so doing the idea was to ensure that everyone involved felt part of the same vision.

The northern moors area within the project has in many ways bigger challenges to face with the number of special site designations such as SSSI, SAC, SPA etc which has meant even closer relationships with Natural Resources Wales in particular who have been instrumental in getting the appropriate licences and consents in place for any works to begin.

Ticks are also a problem on the northern moors and the project includes research into a tick collar experiment so that sheep can be better protected. Sheep gatherings on the moors have become more of a challenge with less farm hands available and an ageing farmer population which has seen tick numbers spiral in certain areas.

Community events have taken place across the moorland group which have included school visits, community choirs, and local user groups to come and see for themselves the inspiration of the moors that surround them, and the work being done and the importance for wider human activity. Whether it is restoring peat bogs for carbon sequestration,



© Catherine Hughes/CLA



water retention for flood risk alleviation, the recovery of heather habitat, this is all part of our ecosystem service delivery.

Although the Nature Fund project has now ended (30 June) it was only ever intended as seed funding. We have been greatly encouraged by the initiative which we feel was brave of the Welsh Government. Engaging with communities has also been a positive experience in that it shows the power of involving all interested parties. The most important question from now is what's next?

Part of the project has also been to explore future funding options, particularly from outside Wales. LIFE and INTERREG in particular are both EU funds that will be fully investigated to see if the project can be extended as a moorland scheme throughout Wales.

Information on all the Nature Fund projects is available from the Welsh Government website (<http://gov.wales/topics/environmentcountryside/consmanagement/natural-resources-management/nature-fund/?lang=en>)

Catherine Hughes, CLA

A Starring Role for Denbighshire's Lesser Horseshoe Bats

Nantclwyd y Dre is an historic timber town house in Ruthin, North East Wales, managed by Denbighshire County Council's Heritage Service as a visitor attraction. Not only is the Grade I listed building home to a wealth of history, it also houses a breeding colony of lesser horseshoe bats. Female bats return to the attics each spring and summer to give birth and raise their young.

The council's Countryside Service secured grant funding from Chester Zoo to enable a new camera system, monitor and recording equipment to be installed. Footage will be streamed live online at chesterzoo.org/batcam thanks to sponsorship from NW Systems Group and members of the public will also be able to watch up to four roost cameras as part of the visitor experience at Nantclwyd y Dre.



© Mike Castle

The main aim of the project is increasing awareness and understanding of lesser horseshoes (and bats in general) amongst the general public. Bats are often misunderstood creatures; people may be frightened of them or dislike them for no good reason. The 'bat cam' will be an important tool in engaging with members of the public, enabling people to see bats up-close – something which they generally don't have to opportunity to do. With bats living closely alongside people in many cases, it is so important that they are valued and appreciated by society and we hope that this project will contribute towards this.

In addition, footage is being recorded for analysis by Bangor University students, which will hopefully reveal some interesting and useful results.

Dawn Thomas and Lizzy Webster
Denbighshire County Council



South West Peak – a Landscape at a Crossroads

The South West Peak area of the Peak District is a 'landscape at a crossroads' – spatially (where the uplands & lowlands meet), temporally (where tradition & innovation can be at odds) and intellectually (as decisions about its future need to be made). This is the forgotten part of the Peak District, yet is a diverse & distinctive setting, comprising nine discrete landscape character types from open moors to upland pastures, each defined by their patterns of natural elements and cultural factors.

The three counties of Staffordshire, Cheshire and Derbyshire meet in the middle of the South West Peak at Three Shires Head, where a distinctive packhorse bridge still marks an ancient trade route.

This landscape is heavily influenced by centuries of low key human industry (mining, quarrying and farming); the agriculturally marginal land means that farming is largely unprofitable. Traditional low intensity land management supports species-rich habitats, yet internationally important habitats and species are still at risk of fragmentation and decline. Dispersed rural communities are relatively isolated and local amenities are closing.

In May 2014 the South West Peak Landscape Partnership (headed by the Peak District National Park Authority and championed by the Local Nature Partnership) submitted a bid to the Heritage Lottery Fund's Landscape Partnership Scheme for an ambitious programme to tackle some of these issues.

A key part of the bid to HLF was the 150 word summary, uncertain how to capture such a complexity of issues, the partners took the unusual approach of submitting a poem:

"A weather-hardened traveller
Bearing the weight of generations,
Rests awhile at a crossroads.
His grandfather's wisdom of the seasons,
The coal-black hands of winter
And hayseed fingernails of summer,
Tell the story of his childhood beginning.
Through land of myths and legends,
Along hollow-way and turnpike road;
Past collapsed coal-mine shafts
And rubble-filled old lime kilns;
Forgotten relicts of landscape past.
His proud field barn, once shelter
To hardy cattle after the hay cut,
Now tumbledown and empty
Even of summers swallows.
Which path to take through watershed moors
And fading echoes of the curlew's cry?
Visiting travellers from silk towns around,
Drink from this land, yet
Have been oblivious to his struggle.
Now they will join and lend a hand
On the path where wisdom and innovation
Meet to pave a smoother road."



Three shires head © Karen Shelley-Jones



© Andy McGraw (Peak District National Park Authority).

It obviously worked, and the success of the bid was announced in November. Since then the partnership has been moving on with its development phase where plans will be finalised for a five year delivery phase. This will see a series of inter-related projects delivering outcomes for heritage, people and communities.



The overall aim of the partnership?

To enhance and support a healthier and better functioning landscape for people, wildlife and heritage; a widely valued place where everyone can make a true connection with their environment and a living landscape where opportunities exist for present and future generations.

Ways to get involved

Visit www.southwestpeak.co.uk to find out more about the place and the partnership and to contribute your memories of visits there. Follow us on Twitter [@SouthWestPeak](https://twitter.com/SouthWestPeak), or like our Facebook page <https://www.facebook.com/swpeak>



Karen Shelley-Jones
South West Peak Landscape Partnership Development Officer
Peak District National Park Authority

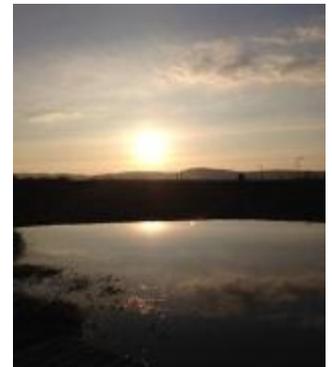
Amphibians in Inverness SuDS Study

A new project aims to assess the ability of Inverness Sustainable Drainage Systems (SuDS) to support amphibian populations. Developers are now required to produce a combination of ponds, wetland areas, detention basins, permeable pavements or swales instead of traditional underground systems. This statutory requirement shows a shift in planning and development towards a more natural solution to run-off management.

The year long study is funded by Scottish Natural Heritage and the Highland Council and is based on a previous three year study by O'Brien (2014) which found Amphibians present in 8 of 12 Inverness ponds surveyed. A graduate intern Marcia Rae has been employed to undertake the research and has set out to locate all of the SuDS within the city for the first time. She has identified a further 28, bringing the total to 40 and initial results show Common Frog (*Rana temporaria*) breeding in 28 and Common Toad (*Bufo bufo*) in 10. The previous study recorded a breeding pair of Palmate Newt (*Lissotriton helveticus*) at one site but this year they have been recorded in 11.

These sites will continue to be assessed and an integrated habitat connectivity map created. This will act as a tool to identify how increased amphibian movement can be facilitated between the sites and guide future development, it is hoped this will ensure even greater connectivity between the ponds. Frog DNA samples have been collected to establish their genetic diversity, as higher diversity may indicate less isolated populations. It is thought that SuDS may show lower genetic diversity than natural ponds but higher diversity than other urban ponds, which are generally isolated. This could indicate that SuDS increase the health of Frog populations by allowing increased movement between ponds and increasing genetic diversity.

Another aspect is community engagement; the launch for the project was an event at a local public park with a SuDS pond. There was pond dipping and information provided on the project. Over 100 people participated throughout the day, learning about the habitat, having fun and marvelling at the creatures found there. There is currently little awareness or understanding of SuDS amongst the public despite their requirement in new developments. Although they have the potential to be of high amenity value this is seldom the case and some sites hold a high volume of litter, which appears to be of little concern to amphibians but is a barrier to realising their amenity value. The new project hopes to address this.



© Marcia Rae



Cuckoo flower © Marcia Rae



Frogspawn © Marcia Rae



It is clear amphibians are breeding in Inverness SuDS and as these features increase in the urban landscape it is important to assess how they are supporting them. This study is primarily focussing on presence or absence of amphibians but the issues associated with these sites will also need to be addressed, such as the risk of pollution or their proximity to roads which may be a barrier to amphibian movement and increase mortality. As urban expansion increases it is important that every opportunity is taken to increase biodiversity and maximise the connection between biodiversity rich areas. This will not only benefit urban wildlife but provide many benefits to people living in these areas.



© Marcia Rae

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Cold-blooded and Spineless creatures will be loved in the North Pennines



Male emperor moth (c) Anne Kelly Hamsterley

Have you ever stopped to think what our world would be like if insects were as large as mammals or birds?

Over 320 million years ago in the carboniferous period, dragonflies were as artful predators as they are today but back then they were over half a meter long! If they were it's likely that insects and other invertebrates would receive similar interest to that of raptors or mammals. Yet their diminutive size means that often this kingdom of spectacular, mysterious and vitally important creatures is woefully overlooked.

The good news is that the North Pennines AONB Partnership's new project, Cold-blooded and Spineless aims to put invertebrates squarely in the spotlight. According to the State of Nature report, 66% of known invertebrates have declined in the last 50 years, and we are particularly lacking information about species that live in the uplands. Invertebrates are underappreciated for their contribution to biodiversity and the healthy function of our landscape, from soil nutrient cycling and pest control, through to pollination. Many invertebrates are a vital food source for all kinds of birds and mammals.

Thanks to a £500,000, five-year grant from the Heritage Lottery Fund, these unsung heroes are to be celebrated in the North Pennines through research, education and monitoring and since its launch this spring hundreds of people have already got involved. The launch was a biohunt where volunteers recorded the hardy wintering Satellite moth *Eupsilia transversa* and the litter chomping white-legged millipede *Tachypodoiulus niger* (pictured). At the event the project's ambitious and progressive programme of training was presented. In a matter of weeks all of the project's 120 training places for this year were taken and on these people will get to survey day-flying moths and hunt out hoverflies in hay meadows.



Frosterley bug club © Samantha Tranter.

Fortunately, there are many ways people of all ages can contribute. A community and schools programme has launched at the AONB Partnership's Bowlees Visitor Centre in Teesdale. The aim is to teach children that insects, slugs and snails are vital to the health of people and the countryside. On 22nd July the first of our five annual invertebrate art installations will be unveiled along the Pennine Way at Low Force. Pupils from Teesdale Comprehensive are helping inspire the design for stone carvings (pictured) highlighting the small creatures that flourish in the Tees. These invertebrates are fascinating in their own right but are also an important food source for our fish and wading birds. The arts programme will move around the AONB in subsequent years from Derwent Reservoir to Allenheads and on to Cumbria.

Teachers and youth groups can also take advantage of a unique bug trolley (pictured) that is free to loan. It is filled with equipment designed to focus outdoor sessions on identifying animals in the undergrowth and uncover their amazing life stories. From the young of violet oil beetles hitching a lift from a solitary mining beetle, to caterpillars that mimic bird droppings, children in the North Pennines will be encouraged to discover and celebrate their local invertebrates.



Millipede © Phil Gates

By motivating interest and participation through education events we hope to increase the data we have for smaller creatures in the uplands. Ultimately this citizen science programme is intended to create a surge of invertebrate recording in the North Pennines and help map important sites for their conservation. Informal survey days will encourage volunteers to form a group of invertebrate champions in the region. The North Pennines AONB Partnership's WildWatch website has been enhanced to offer features to help budding entomologists. Recorders can upload im-



ages of their observations, join a forum to get expert advice and share their interest in important local sites. Already invertebrate records and photos are flooding in. We hope to add thousands more.

To register and add your wildlife observations go to www.northpennines.org.uk/wildwatch

Samantha Tranter. Cold-blooded and Spineless Project Coordinator.
North Pennines AONB Partnership.



© Stone fly Peter Graham

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WATER living water

Saving our peat bogs with slime, beads, hummocks and plug-plants

Walkers on Kinder Scout should not be alarmed to see spaceman-like figures spraying green slime all over areas of Peak District moor.

They are part of a team of conservationists conducting scientific trials on the best way to re-introduce sphagnum moss onto peat moors devastated by environmental changes over the past 150 years.

The reintroduction of sphagnum moss is key to rebuilding blanket bogs by preventing erosion and helping to:

- ◆ improve our drinking water quality
- ◆ reduce flood risk
- ◆ restrict wildfires
- ◆ mitigate climate change by storing carbon dioxide
- ◆ regenerate wildlife habitats.

The Moors for the Future Partnership is working with the Environment Agency and National Trust, as part of the Peatland Restoration Project, to pioneer these globally important trials on an 80-hectare site on Kinder Scout, the highest plateau in the Peak District National Park.



Sphagnum gel - which looks like a "green slime", is an innovative technique being used to re-introduce sphagnum moss onto peat moors © Moors for the Future Partnership

Damaged peat bogs have been termed "a climate time bomb", as climate change is likely to increase the rate at which they break down.

Without their protective sphagnum based vegetation, lost during 150 years of atmospheric pollution and wildfires, bogs release more carbon into the atmosphere instead of storing it, send sediment downstream into our reservoirs, don't hold back downpours that can flood our towns and countryside and increase the likelihood of more wildfires, accelerating the whole process.

Re-introducing sphagnum, and increasing the wetness of the bog, reverses that process, and the Kinder trials aim to establish the best way to do that over the next three to five years – providing evidence for use on other damaged sites worldwide.

The scientists are testing four different methods on the northern edge of Kinder Scout:



- ◆ SoluMoss – the “green slime” – an innovative technique developed with specialist firm Micropropagation Services which embeds sphagnum in strands of nutritious gel to be sprayed from a backpack.
- ◆ BeadaMoss – sphagnum embedded in thousands of gel-beads, a technique developed several years ago for Moors for the Future, scattered by hand.
- ◆ PlugaMoss – sphagnum cultivated as plug-plants for individual planting by hand.
- ◆ Hummocks – handfuls of wild sphagnum, collected sustainably from other sites and replanted by hand, a technique developed by the RSPB.

The partners are also leaving one patch untouched to see what nature does on its own, and assessing the cost-effectiveness of the different methods.

In addition they are trying to find the best source for sphagnum hummocks – using sites nearby, or from conifer plantations where it grows as a by-product, or from pristine healthy blanket bog on Sites of Special Scientific Interest elsewhere in the UK.

And on one site they are monitoring the effect of 35,000 sphagnum plug-plants on water run-off, measuring its impact on the flow and volume of storm down-pours downstream.

The Moors for the Future Partnership is carrying out the work, funded by the Environment Agency, on behalf of the National Trust who care for the land.

Sphagnum cultivated as plug plants are being planted by hand on Kinder as part of scientific trials on the best way to re-introduce sphagnum moss onto peat moors © Moors for the Future Partnership



These are key partners, although they are also working with the RSPB, United Utilities, Natural England and Yorkshire Water.

Matt Buckler, conservation programme manager for Moors for the Future, said: “These trials are the culmination of six years research and development with our partners. Together we are leading the way to establishing sphagnum moss, which is the key activity for sustainable moorland restoration in this country and many countries around the world.”

Jon Stewart, General Manager for the Peak District National Trust, said: “Kinder Scout is a National Nature Reserve and the site of a pioneering mass trespass in the 1930s that led the way to open access to the moors. It is fitting that it is pioneering once again as the site of these trials which are of global importance to moorland restoration.”

Mark Haslam, Environment Manager for the Environment Agency, said: “We hope the trials will provide vital scientific evidence on the best way to rebuild these lost eco-systems which have wide-reaching benefits for society. We believe that working with nature, along with man-made defences, will give us the greatest resilience to flooding, fires and climate change.”

And as for those walkers pondering the point of the space-suit clad figure with the backpack, they can look forward to views of green moors, vibrant with wildlife, instead of barren wastelands.



Volunteer to help the landscape come alive

The Alun and Chwiler living landscape project has been running since November 2014, it is funded by WREN and Dŵr Cymru/Welsh Water along with generous donations from members of the public for three years. WREN is a not-for-profit business that awards grants through the Landfill Communities Fund from funds generated by FCC Environment, delivering community, environmental and heritage projects countrywide. North Wales Wildlife Trust are delivering the project through a full-time project officer who is working in partnership with other conservation organisations in the area including Clwydian Range and Dee Valley AONB, Natural Resources Wales, British Association of Shooting and Conservation, Denbighshire and Flintshire local authorities and North East Wales Wildlife.

The project area is centred on two rivers that have long been known locally as important wildlife hotspots as they support a huge variety of species and habitats, some highly protected. However, changes in management practices over a long time have created less than ideal conditions in the rivers and the surrounding environment for supporting this biodiversity. The living landscape project aims to create more ideal habitat as well as restoring some of the existing habitat to an improved status, the result being an even better ecologically functioning network in the two river corridors and surrounding landscape. Kristian Dales, Sales & Marketing Director at FCC Environment said: "FCC Environment and WREN are together committed to supporting projects which protect, maintain and expand some of the country's most unique ecosystems. We're looking forward to seeing how the Alun and Chwiler Living Landscape Project progresses and will help the UK meet government targets to improve and increase biodiversity."



© North Wales Wildlife Trust

The project has a strong focus on working with landholders to improve the landscape for wildlife and people, the landholders vary from those who have a back garden to farmers with larger areas to utilise but something can be done everywhere. The project also incorporates volunteers to assist with surveys and undertake practical work. The survey results may steer some of the improvements which have been influenced already by past projects based on species such as water voles and dormice. For example; the Wheeler water vole project found signs of water vole on some sites along the river Chwiler and we aim to resurvey the area to see if anything has changed and also to better inform management plans, already some ditches have been fenced to prevent damage by livestock through poaching and overgrazing. The survey area may also extend into the Alun valley as field signs of water vole have been found here too.

The main focus for volunteer work starting now is Himalayan balsam, it is found on the banks of both rivers and some tributaries and has been the subject of a volunteer project on the Alun for the past 8 years. Himalayan balsam is an invasive non-native species which is causing problems across the UK, it outcompetes our native wildflowers and leaves riverbanks exposed and susceptible to erosion over the winter months. However it has been controlled with great effect on the river Alun where the efforts of staff and dedicated volunteers have managed to clear the banks from the source in Llandegla to Rhydymwyn which is 18 miles downstream to the point where there are now only a few isolated plants found each year and our native wildflowers are slowly reappearing. This year there is a balsam pulling event on the river Alun followed by a buffet nearby on 2nd July in Mold at 18:00-21:00.



© North Wales Wildlife Trust

In terms of practical habitat improvement work so far, a hedgerow has been planted and fenced off (with plenty of room!) to connect some small pockets of woodland at a site with a known lesser horseshoe bat maternity roost, this species is known to rely on linear features such as hedgerows to navigate and forages



in and around woodland. A SSSI has had some fencing replaced to prevent cattle from venturing into this special woodland, and the water vole ditches have been fenced to prevent poaching and overgrazing as well as some bird and bat boxes being installed and some old and damaged dormouse boxes being replaced in order to maintain these important nesting sites. Future plans include Himalayan balsam removal on both rivers by a combination of contractors, staff and volunteers; pond creation on several sites; and woodland management to return areas to prime habitat for Dormice in an area where recent records have been in decline.

For more information please contact Amy at amygreen@wildlifetrustswales.org you can also follow the projects progress on twitter @ACLLproject. To help create a Living Landscape in the Alun & Chwiler Valleys, you can donate to our fundraising efforts via www.justgiving.com/alun-chwiler

*Amy Green
Living Landscapes Project Officer (Alyn and Wheeler)
North Wales Wildlife Trust*



Warwickshire Mammal Group



The dormouse that came to stay © Louise Sherwell

The launch of the [Warwickshire Mammal Group](#) at **Brandon Marsh Nature Centre** on **May 9th 2015** provided the unique opportunity to offer B&B to a dormouse - I and its owner, Roger Trout, before the event. Acquired as a 'pinkie', that is a new born, whose nest had been knocked to the ground during rhododendron bashing, he had had to feed it every 2 hours from a dropper. Today it had just come out of hibernation and was being fed on oak flowers - it didn't seem to mind being in a plastic bag, probably less scary than being handled! This would be the first dormouse most members would see and it stole the show.

Roger's first talk 'Mammals Matter' was a tour of the main groups of mammals present in the county - which surprisingly boasts a seal - illustrated with mammal skulls and nests. Although mammals fulfil many roles - prey, predators and grazers - they are difficult to see alive and some are under-recorded - there are apparently no rabbits or moles in many parts of Warwickshire! Roger implored us to get better at looking for their signs and send more records to the Local Biological Record Centre. Collecting wildlife records enables us to find key areas for particular species and target effective conservation work.



Roger Trout demonstrating a Longworth trap © Tanya Carey

The group then split, one half seeing how footprint tunnels can record mammals and revisiting the traps set out the night before and checked early that morning - the common shrew, pygmy shrew, bank vole and wood mouse that had been caught overnight were fed again to keep them happy until shown off to members! The second group enjoyed dissecting barn owl pellets - field voles won the day by at least 5-1 with wood mice and common shrews!

After swapping activities, members heard about forthcoming events - bat walks, more pellet analyses, tracks and signs workshops, the opportunity for volunteers to take part in the current Save the Hedgehog campaign and forthcoming harvest mouse and water vole surveys, visits to monitor the edible dormice in the Chilterns..... a whole year's activities!

Back to Roger to hear about his consultancy work to resolve conflicts between mammals and people - sometimes a balance has to be achieved between mammal conservation and the control of their numbers. Some mammals, particularly deer, rabbits, squirrels and moles, can cause a lot of damage to structures and in farming and forestry.



Looking for signs of mammals on the reserve © Ruth Moffatt



Common shrew from the traps © Louise Sherwell

The day ended with a walk around the reserve to look for signs of mammals - new to most members were badger hair at a sett and a nearby latrine, otter spraint and fox scat (droppings) and the shells of mussels eaten by otters; 11 species were recorded, not including the dormouse! Heard about but not seen were bats, with a demonstration of the use of several boxes to cater for the needs of different species. The group was delighted with Roger's gift of dormouse nest tubes, a wild life camera and more Longworth traps.



Finding badger hair at the sett © Louise Sherwell

Ruth Moffatt
Warwickshire Dormouse Conservation Group



What barn owls had been eating © Louise Sherwell



Greenwich's Community Nursery

The Conservation Volunteers (TCV) developed a community nursery in 2013 within the Greenwich Village creating a new and unique project utilising vacant development land to create a community resource for nature conservation, biodiversity and sustainability. The Meantime Nursery is now up and running with growing and raised beds constructed, a compost area and infrastructure installed such as irrigation, storage and propagation growing space with help from Royal Bank of Scotland staff who have participated in a volunteering programme between May and September 2014.

The next stage is activities and programme development ensuring community use, education activities and to explore further our Remarkable Trees Project. TCV would like to employ a new Meantime Nursery Project Officer who would take the nursery to the next stage, promoting the project and involving the local community in activities and investigate options for where the nursery would go next and how it can operate in the future. The total cost for a new part time officer post for one year is £20k and we are applying to Re:LEAF for half of the funding which is £10k. TCV would match fund the remaining half of the project costs.



Community Involvement

The Meantime Nursery was created to be a community resource for the Greenwich Village residents many who are moving into the area due to new housing becoming available and need to develop new community links and networks. This project would link into the existing activities being run at the nearby Greenwich Peninsular Ecology Park (GPEP) where the TCV staff are based and provide an extra day of community activities. Currently the school programme at the GPEP is fully booked at least six months in advance so an extra day a week provided at the Meantime Nursery will help to meet this demand as well as getting children involved in growing activities and learning about plants and the environment.

British Standards

TCV would like to provide trees at much lower costs than commercial tree nurseries but we need to have good quality stock therefore we will aim to meet British Standards such as *Nursery stock: specification for trees and shrubs BS 3936-1:1992* and *Trees: from nursery to independence in the landscape recommendations BS 8545:2014* and will have to make sure we follow good practise recommendations outlined in the standards. The new officer would be responsible for researching what is required and then introduce the requirements at the nursery. Alongside improving our stock, we would start exploring potential partners and 'customers' who could be interested in trees provided by the Meantime Nursery.

Remarkable Trees Project

TCV initial ideas for this new project is to grow-on from seed or cuttings many of remarkable, historic and curious trees found within London working in partnership with landowners to create heritage tree stock for legacy planting. TCV would also like to propagate a range of trees available for planting in schools, community projects and on the Greenwich Peninsula as part of the new housing developments. At the Meantime Nursery there is space to grow thousands of trees both in containers and beds and as mentioned above we want to have stock grown to British Standards.



Meantime Nursery Project Officer



The role would have a number of tasks such as:

- Education and Growing Activities – working with GPEP programme develop workshops and deliver a day per week of activities with local schools and community groups
- Support any Environmental Action Days and volunteering activities
- Introduce British Standard growing practises to ensure quality stock
- Remarkable Trees Project – investigate whether there is a market or need for the project such as identifying partners who need legacy tree stock for their sites, establish a business plan and research funding options to ensure the project can continue for five to ten years
- Work with the Business Development Manager to find a new site for nursery

Develop content for a new Meantime Nursery web page working with the TCV Marketing Team

Project Budget

TCV will provide a Meantime Nursery Project Report on the activities in December 2015 supplying financial information as required.

	Estimated Cost
Meantime Officer Salary and staff on-costs	£14,500
Recruitment costs	£500
Staff training costs	£1,000
Premises costs (rent, rates, gas, electric etc.)	£2,500
Project management and support functions (IT, finance, HR)	£1,500
Total	£20,000

Summary

London's population is expected to increase to 8.5 million by 2025 and through the Meantime Nursery Project TCV will contribute towards the Mayor of London's 5% tree cover increase target by 2025. Through the TCV Community Network and links such as the Millennium Seed Bank at Kew Gardens and Re:LEAF partners Trees for Cities, The Woodland Trust and the Urban Orchard Project etc. we will aim to provide community grown trees at lower costs and good quality. The Remarkable Trees Project has the potential to create an important resource for local provenance, legacy and biodiversity. The sheer range and diversity of trees found in London is remarkable and reflects London's multi-cultural make up and TCV would like to support maintaining these trees for future generations.

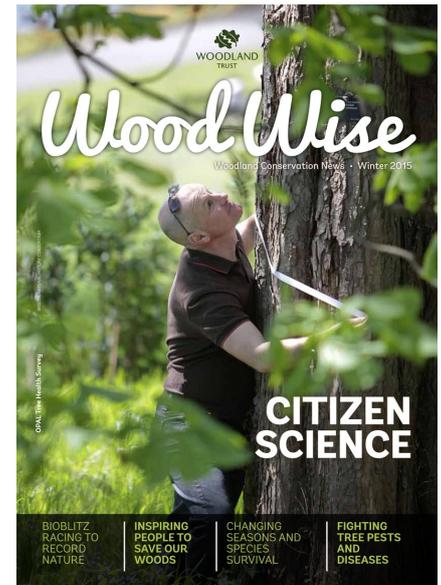


Wood Wise – citizen science

While 'citizen science' may be a fairly new concept for some, it's really one of the oldest forms of scientific knowledge-gathering...

This issue looks at a variety of inclusive citizen science projects; like high-energy Bioblitz events, monitoring climate change impacts, recording seasonal change and activities to protect our trees from pests and disease. Find out more, look at best practice, get involved or maybe even start your own.

To read current and past issues of Wood Wise please just follow this [link](#) .If you would like to subscribe to future Wood Wise issues, please email conservation@woodlandtrust.org.uk



New stakeholder document calls for a co-ordinated approach to minerals planning in the Trent & Tame River Valleys

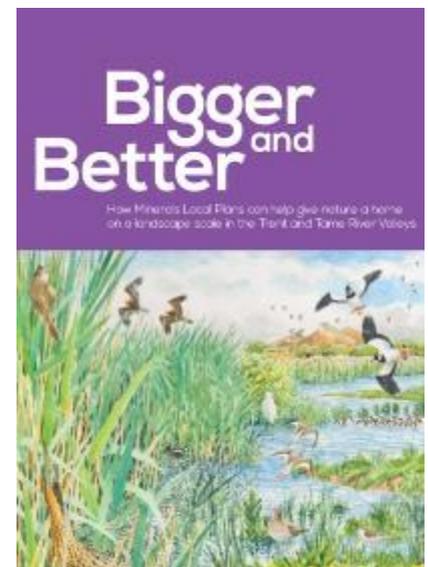
In June, a new document – produced as a colourful, eye-catching leaflet - was released by a number of stakeholder organisations (including Nature After Minerals, the RSPB/Natural England partnership) calling for a strategic and joined-up approach to the restoration of mineral sites in the Trent & Tame River Valleys, in the heart of England. It highlights the role Minerals Local Plans (MLPs) could play in helping in to provide for people and wildlife on a truly landscape scale, through a visionary approach to priority wetland habitat creation in the region.

Entitled **Bigger and Better: How Minerals Local Plans can help give nature a home on a landscape scale in the Trent and Tame River Valleys**, the leaflet draws attention to the impending consultation on all six of the draft Minerals Local Plans (MLPs) for Derbyshire, Leicestershire, Lincolnshire, Nottinghamshire, Staffordshire and Warwickshire.

It spells out the opportunity afforded by this minerals planning consultation period right across the river valleys' region, to build in **bigger, better and joined-up** measures for nature and people, at an early stage. The content of the document was developed by stakeholders following discussion within two minerals planning workshops held in 2013 and 2014, facilitated by Nature After Minerals' own Planning Adviser. It was compiled with input from a wide range of organisations, with funding from the EU Life+ Communications Programme, through the RSPB's Futurescapes programme.

The document can be viewed on the [Nature After Minerals](#), [RSPB](#) or [Central Rivers Initiative](#) websites.

Debra Royal, NAM Events & Communications Officer





Your Nature Space guides

Central Scotland Green Network Trust and South Lanarkshire Council, on behalf of the South Lanarkshire Biodiversity Partnership have recently extended their range of habitat assessment cards to include 4 more habitats found in South Lanarkshire.

The "Your Nature Space" cards are handy pocket guides that anyone can use to assess the biodiversity quality of their local environment. They also give hints and tips on species identification, how to improve nature spaces for biodiversity, as well as other citizen science surveys to take part in.

The set of 8 cards now cover: Woodlands, Ponds, Bog, Meadows, Orchards, Parks and Greenspaces, River and Streams and Brownfield sites.

Copies of all 8 can be downloaded from the South Lanarkshire Biodiversity website: <http://www.southlanarkshirebiodiversity.co.uk/Press/press.html>

Hard copies are available from SLC and CSGNT, and will be available to pick up at events throughout the year.

Funding for these cards has come from the Developing Local Communities Fund which operates under the Renewable Energy Fund.

*Emilie Wadsworth
Biodiversity & Heritage Officer
Central Scotland Green Network Trust*



South Lanarkshire
BIODIVERSITY
PARTNERSHIP



*Bridgeness Scrap Yard ©
Buglife*



Meet the Bog Plants: Cotton Grass and Mosses – 1st August at Thorne Moors near Doncaster, & 2nd in the Peak District. Both supported by the BES Peatland SIG

These two 1-day events are being organised with the Thorne & Hatfield Moors Conservation Forum and JBA Consulting. They will introduce people firstly to the wildflowers of the peat bog and then to *Sphagnum* mosses and their importance in conservation.

More information on these will be available on the www.ukeconet.org website and from the Thorne & Hatfield Moors Conservation Forum.

Wild Thing? Managing Landscape Change & Future Ecologies: Cultural Severance & Continuity 9th to 11th September 2015 at Sheffield Showroom & Workstation, Sheffield, UK

Following the highly successful meeting in May 2014, Ian Rotherham and colleagues are organising a major, international, 3-day conference on the theme of '**wilder by design**'. The 2014 event raised fundamental issues including the following:

- Understanding concepts of 'wild', 're-wilding' and 'wilderness' in urban and rural settings, as individuals and for different communities;
- The language used to discuss concepts and how they are represented and communicated to the wider world;
- The political, economic and social contexts and drivers for change;
- The short and longer-term impacts of change;
- How underlying change affects ability to create, manage and sustain future landscapes.
- What wild and wilderness mean to individuals.

There will be a strong international dimension to this conference. However, we welcome displays and posters from local community heritage groups as well as from regional, national and international bodies. We also welcome posters from early-career researchers as well as the more established. Please contact christine@hallamec.plus.com to discuss your ideas in the first instance, as space is limited.

Confirmed speakers include Adrian Newton, Alastair Driver, Peter Bridgewater, Ted Green, Keith Alexander, Jill Butler, Della Hooke, Ian Rotherham, Peter Taylor, Rob Lambert, James Fenton, George Peterken, Sue Everett, Chris Spray, Jim McAdam, Mauro Agnoletti, Tomasz Samojlik, Frans Vera, Kenneth Olwig and Tom Williamson. Chris and Anne-Marie Smout will be attending as guests of honour.

Conference proceedings on cd-rom. will be available at the event; and a major book will be published post-conference. The event is sponsored and supported by BES, IPS, IUFRO, ESEH, Sheffield Hallam University, the Ancient Tree Forum, JBA Consulting and the Landscape Conservation Forum.

An outline programme and a booking form are available on the website www.ukeconet.org/event/ via email, info@hallamec.plus.com or telephone 0114 2724227.



Flora locale Training Programme 2015

The *Flora locale* training programme is created for people involved in the design, management and restoration of wild plants and landscapes for biodiversity, whether on a farm, smallholding, village green or city park. Each event is led by an individual with practical experience and provides an informal opportunity for participants to learn from an expert and each other.

- For full details and to book click on the event title
- All events must be booked in advance
- Fees are £100 p/p per event £75 p/p for employees/volunteers of charities parish councils, students and those not economically active, unless otherwise stated
- Flora locale Associates benefit from a 10% discount on the booking fee
- Payment by credit card or invoice is available through the website

[Using wild seed for grassland creation projects](#)

Wednesday 22 July Location **Carlisle, Cumbria**

Facilitator: Chris Dunt, Cumbria Wildflowers*

[Scything for Improvers](#)

Wednesday 15 July Location: **Stroud, Gloucestershire**

Facilitator: Clive Leeke

[Constructed wetland systems: a biodiverse, low-entropy alternative to conventional reedbed and mechanical systems](#)

Thursday 23 July Location: **Ledbury, Herefordshire**

Facilitator: Jay Abrahams, Biologic Design*

[Pond creation and conservation](#)

Wednesday 1 July Location: **Oxford**

Facilitators: Rod d' Ayala and Rob Aquilina

[Using horses to manage woodland sites](#)

Tuesday 6 October Location : **Chippenham, Wiltshire**

Facilitator : Kate Mobbs-Morgan, Rowan Working Horses*

[Managing woodlands and gardens for wildlife and sustainability](#)

Wednesday 15th July 10am – 3.30pm. Location: **Betws y Coed, Conwy**

Facilitator: John Harold, Director, Snowdonia Society

[Seed collecting and use for restoration and re-introduction](#)

Thursday 9 July Location: **Wakehurst Place, West Sussex**

Facilitator: Michael Way, Millennium Seed Bank (Royal Botanic Gardens Kew)