Potential Threats to the Landscape and Opportunities to Address Them

Field barn with rushes © *PDNPA*

Potential Threats to the Landscape and Opportunities to Address Them

Layers of landscape and conservation designation together with successive suites of agri-environment schemes should have placed this landscape in a position of strength and protection. There have been successes where conservation priorities are highest, but farmers struggle to make ends meet and the pressure continues to increase productivity. As a result, fields continue to be drained and fertilised, resulting in losses of biodiversity, character and colour. Wildflower or waxcap-rich fields, marshes and wet areas continue to be lost. Herbicides along roadsides often result in loss of flowers and nectar sources for insects. Non-point sources of pollution are still present, although reduced in places. With the added pressure of climate change, our wildlife, our communities and the landscapes they occupy are at a crossroads.

Broader Political Issues and Policy Changes

The most significant potential political and policy threat to the landscape and its heritage is the result of the UK referendum to leave the European Union which occurred on 23 June 2016. At the time of writing and no doubt for some time to come, it is unclear what the wider implications of this outcome will be.

Most of the UK's wildlife and environmental legislation is based on EU directives and there is no certainty as to how and if these will be replaced once the UK leaves the EU. As a member state the UK benefited from the European legislation that gave protection to the environment. This included an international framework for protection of wildlife habitats and species and rigorous standards for control of pollution, including air and water quality and the use of agricultural pesticides. These EU directives are now enshrined in UK law, so it will be dependent upon the Government to decide whether these laws remain in place as they stand or whether to revise them. The UK will still abide by international laws covering environmental protection.

Common Agricultural Policy

Until the procedure for leaving the EU and the subsequent arrangements for agricultural subsidies, farmers and land managers are currently working within the existing Rural Development Programme for England (RDPE) agri-environment schemes – Environmental Stewardship and the new Countryside Stewardship. Since its introduction in 2015 a number of concerns about the practicalities of the new scheme (divided into higher tier and mid tier) and its application, notably in the uplands, have been raised and some amendments are being made.

Unlike previous RDPE schemes, applications for most elements of Countryside Stewardship (particularly in mid tier) are competitive, which means that applications are scored against criteria, so that not everyone who applies will be successful. Targeting and scoring is used to encourage applicants to choose options that help achieve the environmental priorities in their local area (Natural England, 2015). Farmers need to choose the appropriate options for their holding from a set of available ones according to where they are in the country.

However, differences in option availability and value between the lowlands and Severely Disadvantaged Areas (SDAs) mean that upland farmers can expect grant payments to be significantly lower than under previous schemes. For instance, the option for permanent grassland with very low inputs receives a grant of £95 per hectare outside SDAs and only £16 per hectare within SDAs. This compares to the payment under Environmental Stewardship of £60 per hectare, so a notable reduction in farm income in the uplands will result. On many upland farms the option for very low input grassland is the only one available to them, but small farms of 20 hectares are not big enough to meet the minimum annual payment of £5,000 so are excluded from the scheme.

At present, certain options are not available in the uplands which would be appropriate in the South West Peak; for instance, there are no options available for haymaking, wild pollinator and farm wildlife package or stone

wall maintenance. Traditional farm buildings are a high priority in all upland areas and appear in all the associated Statements of Priority. However, they do not contribute to scoring in mid-tier, which gives rise to the perverse situation where including the option to manage high priority buildings can reduce the chances of being accepted for an agreement (Morley, 2016).

Whether or not amendments are made to increase availability of options in the uplands, the total amount of funding available is far lower than before, with priority given to higher-tier agreements which are only available for SSSIs and some sites in existing Higher Level Environmental Stewardship.

The implications of such reductions in scheme payments and availability, coupled with the complexity of the application process and the suspicion with which it is viewed by many means that far fewer farms in the area will enter into Countryside Stewardship agreements. The potential implication of this is for farmers to seek alternative ways of gaining income from their land which may include increasing the intensity of management by the application of fertilisers or drainage of wet land. Such practices will have a negative impact on wildlife and species diversity.

Social and Economic Changes

Some changes apparently unrelated to heritage can pose a threat to the landscape, by impacting upon the people who manage it.

Planning and development
Planning and development ranks highly as a concern amongst respondents to our surveys; development pressure was mentioned 23 times as a threat to the landscape and eight times as a threat to the community. Conversely the lack of affordable housing and the association with lack of jobs, particularly for young people, was raised as a considerable concern for local communities and the landscape.

"Development on rural fields e.g. small plots of land which people put caravans on in the hope of getting permission for housing/accommodation."

"Wind turbines and barns being built that are not sympathetic to their surroundings."

"Again the lack of jobs and affordable housing is pushing the younger generation away, there are no opportunities for young people in the area."

There is a certain amount of misunderstanding and distrust of the planning process with people concerned that the planning process favours 'incomers' over local people. Concern is often expressed about the changes to communities which result from lack of affordable housing and an increase in second homes.

"Villages full of second homes and holiday cottages putting nothing back into the community, they are becoming ghost villages due to the policy of the Peak Park and outside money."

"Lack of ability to make a living and to find accommodation in the area. So many properties are now used as second homes or for self-catering which affects the housing stock for people born in the area. The new comers want to live in the area but to bring the town with them and not join in activities like WI, schools etc."

"Tourism, as many buildings/barns have been given permission to use as holiday homes/lets, thus bringing more tourists into the area, and locals unable to afford housing and stay thus moving into nearby towns or further then folk move in and commute and the village breaks down all its history will be lost."

"The lack of new families in the area due to the expense of property which leads to the demise of shops, schools and community life. This leads to a community of older middle class people which is not a good thing for the future."

Decline in skills
Decline in traditional skills often goes hand in hand with economic decline. There was a feeling amongst the farmers we interviewed that there was a lot of walling that was in need of repair due to having dropped down the list of priorities as a result of other time and money pressures.

Training in individual skills and short term grants for capital work like drystone walling is not the solution; to achieve sustainability and long-term employment, individuals need to have a set of complementary skills.

"I used to make a living out of building dry stone walls. What they've got to be careful of is not just dry stone walling, it's tradesmen. They put a grant there to get things done. Then all of a sudden they say there's no more money... Where do them dry stone wallers go? Where do the tradesmen go? And then they wonder why they're losing the art of doing such jobs."

Farming is traditionally a practical hands-on occupation where skills are learned through experience and observation. Increasingly, the amount of 'paperwork' and the move to online communication with Defra and the Rural Payments Agency have put farmers at a disadvantage. Many do not have the numeracy or literacy skills required to cope with the bureaucracy, yet are having to somehow become computer literate and invest in computer hardware (Syson-Nibbs, 2001).

The proportion of people receiving job-related training in general is low in the Staffordshire Moorlands compared to the national average (Pates, 2015). There are concerns that locally, some people in more remote rural areas have not shared in the recovery upturn of the economy, particularly where they have historically been dependent upon the public sector for employment and lack alternative employment options or do not have the skills required by local industries.

Changes in land management or ownership
There is a strong emotional attachment to farms and a corresponding desire to keep them in the family; however, the marginal nature of upland farming and the limited financial returns have seen young people leave the area for work elsewhere.

Some older farmers without any succession plans have reduced the amount of stock they farm to a bare minimum and rent out much of their land for other farmers' livestock to graze. Some consider selling up their farms. As older farmers pass away with no offspring to carry on the farm, the holding often is sold off, either as a whole or as separate units. The change of ownership leads to discontinuity of management, particularly when the farmland is sold off in separate lots to different owners. Some of the larger more intensive farmers are well placed to purchase smaller farms, so increasing their holdings. A concern amongst the smaller farmers is that this would result in the loss of trees, hedges and walls as more intensive farmers would seek to enlarge their fields to maximise profit.

Farmers who have a child lined up to take over the farm are very conscious that they want to hand the farm over in a good state and with as much land as possible. Keeping the farm alive and in the family appears to be a strong driver amongst the farmers we interviewed.

"We have three sons... we keep this farm running and ticking over just in case one of them has a change of heart and comes back. That's something else we think about."

In the sheep shed © *Christine Gregory*

Loss of services
Evidence of the changes to the communities in the South West Peak can be seen in the closure of pubs, schools, shops and other services such as doctor's surgeries, libraries and public transport. The primary school in Flash closed in 2012 due to lack of pupils (in the previous school year it had an attendance of just seven). Other village schools in the area also have small numbers; at Longnor there are only eight pupils on the school roll, in other villages the numbers are between 33 and 57, with Rainow primary having the largest number of pupils at 169. When these children reach secondary age they are then well served with schools in the surrounding towns; these, however, require travel of up to ten miles.

A few country pubs remain open and profitable while others have mixed fortunes; the Greyhound Inn in Warslow, for instance, repeatedly closes due to lack of trade, whilst the nearby Manifold Inn less than two miles away at Hulme End draws regular custom from the village campsite and passing trade.

The decline and loss of local services impacts on communities; when combined with the effect of increasing house prices and fewer jobs, families and younger people in particular have been leaving the area. With smaller communities, more newcomers, a higher proportion of holiday homes and more people working away, the shops, pubs, village halls and community groups have fewer customers. There are fewer people to care for rural villages and to keep traditions like well dressing and wakes week alive.

Along with the decline of services such as shops, pubs and schools, it's also important to note the decline of the rural church and Methodist chapels. There are small groups of dedicated volunteers that are currently keeping these institutions alive and for a generation (say 60-80 years of age) they have been a constant mainstay in the life of the villages. With congregations of only half a dozen or fewer, it is difficult to see how any of these churches will continue into the future once the current generation of volunteers and attendees dies out.

Local Issues and Attitudes

Attitudes to the countryside
Whilst there is a strong connection to the landscape amongst residents and visitors, there can be a lack of understanding about the special value of the natural and cultural heritage and how these features are managed and protected. There is still a strong view that the countryside is free to use; this is evidenced by people refusing to pay and display in rural car parks, preferring to park on the highway instead.

Damage to heritage can either be wilful or coincidental caused by neglect, lack of understanding or difference of opinion. The use of recreational motor vehicles on green lanes, byways open to all traffic and illegally on footpaths and bridleways has been a source of controversy in certain parts of the Peak District and some Traffic Regulation Orders have had to be enacted, working with the police and the highways authorities.

Scramblers erosion near Knotbury © *Nick Mott*

Action plans are being developed in association with the Peak District Local Access Forum Green Lanes Sub-Group for those routes identified as being in most urgent need of improved management. In the South West Peak, the current priority routes are: Charity Lane, Macclesfield Forest; Cumberland Lane, Wildboarclough; Rake Head Lane, Hollinsclough; Swan and Limer Rakes, Hollinsclough; Three Shire Heads and Washgate, Hartington Upper Quarter.

Generally the issues here are around route condition and erosion, uncertainty over legal status and conflicts between different users. Simple measures such as monitoring vehicle use and condition of the routes, clarifying legal status and improving signage are planned for some routes.

Three routes are suffering notable impact: Swan and Limer Rakes in Hollinsclough are suffering considerable damage from vehicle use, parts are impassable and a number of complaints have been received about damage to the route and disturbance to residents. There is a risk of accident here and urgent repairs are needed. At Three Shire Heads the route is popular with a lot of users and passes through a SSSI, some vehicles are illegally using an adjacent footpath, there is damage to routes including a landslip and there have been complaints. At Washgate Track near Hollinsclough, some sections of the route are difficult to use, 4-wheel-drive vehicles having reportedly frequently damaged or demolished adjacent boundary walls to ensure continuation. The route utilises a grade two listed bridge and vehicles have been leaving the highway and fording a river to access the route. This route is now subject to a Traffic Regulation Order. Honeypot sites do suffer from overuse and

the resulting damage to paths and habitats. The Roaches, for instance, is popular for its variety of gritstone climbing and bouldering routes, the views which can be gained from the ridge path and the fascination of Lud's Church. Certain parts of the site do show damage caused by the number of visitors, and erosion is making paths impassable in many places. Visitors find it hard to walk on sections of footpath, so they chose to walk on areas of heather, which quickly turn to peaty mud, which in turn rapidly erode, making the scar wider. As well as making access harder, these scars are damaging the wildlife and heritage of the Roaches and look ugly on the landscape. They are allowing blanket bogs to dry out as water drains quickly away through rapid erosion. The scars are so wide they can be seen on aerial photographs. The erosion from visitors to the trig point on the ridge path has caused damage to the scheduled Bronze Age burial mound.

Erosion on the Roaches ridge path © *PDNPA*

However, it has been shown that visitors can and do give something back to the sites that they visit, the Roaches 'Just Giving' footpath having appeal raised nearly £40,000 over two years towards the repair of footpaths. The now annual peregrine watch at Hen Cloud, adjacent to the Roaches, attracted over 5,000 visits during the 2015 season, providing opportunities for people to view the birds from a safe distance, find out more about them and donate to their conservation. The public viewing of these birds is carefully balanced with their protection; in earlier years, instances of nest and fledgling disturbance and even nest robbing occurred. Tighter security, including the use of smart water to deter criminal or foolhardy activity, is now employed and will need to continue for the foreseeable future.

Relationships
During our consultations we heard of difficulties and misunderstandings between different parties; for instance, famers can often hold a negative view of tourists. Whilst some gain from tourism by providing accommodation and other services, for many, there is a feeling that tourists bring relatively little income to the area and cause congestion on the roads.

For a few farmers interviewed who had footpaths going across their land, walkers (particularly those on Duke of Edinburgh expeditions) were perceived to: take liberties as to where they could walk; often get lost/have poor map reading skills; and be guilty of leaving farm gates open. A few farmers also mentioned that walkers were not doing enough to keep dogs under control when near to farm animals (Brook Lyndhurst, 2015). One farmer clearly felt that tourists were viewed as more important to the National Park Authority than farmers:

> *"They've [The National Park Authority have] got a mindset in the South West Peak that it's for the tourists and nothing else. They don't realise that it's the farmers that have created the countryside that the tourists want to come and see."*

During our visitor survey, farmers and farming weren't mentioned in regard to what made the place special, what benefits they got from visiting or what could be improved. Only one person referred to "beautiful scenery, farmland and clear pathways and good signage about when to keep dogs on leads". Maybe this was due to the particular locations chosen for surveys – places where there were congregations of people, so 'honeypot' sites rather than the wider countryside, or perhaps the way in which the land is managed just isn't considered by visitors unless they have a specific problem like muddy footpaths or bulls in the fields.

We heard a mix of both supportive and negative views of farmers and farming from our community e-survey and roadshows. Negative comments were mostly about intensive farming, lack of maintenance and eyesores in the countryside. Other people were more understanding of the challenges that farmers face and the importance of their role in managing the landscape and its heritage features like dry stone walls, barns and meadows.

Natural heritage features
High quality grasslands are now fragmented in the landscape; however, there are still a number

of lower quality and less species-rich grasslands (particularly meadows) that collectively provide an important and substantial resource. Grasslands such as these are rapidly being lost and there is a high risk that the rate of loss will accelerate in the short term as farm resources and subsidies are subject to increasing pressures.

Breeding waders in the South West Peak have experienced both short and long-term population declines. The 2009 South West Peak breeding bird survey found population declines between 2004 and 2009 of -27% for lapwing, -40% for snipe and -17% for curlew. The long-term trends in key hotspots for the species from 1985 are more severe, showing declines, of -81% for lapwing, -89% for snipe and -75% for curlew. Whilst considerable conservation effort has been put into their recovery these declines have not been arrested, and a refreshed approach is needed.

Changes in habitat quality and land management practices, increases in mammalian and avian predators, extreme weather events and food availability all impact on the breeding success of ground nesting waders. There is an urgent need to understand how conservation interventions can be delivered at a landscape scale to better understand wader distribution, population trends, productivity, causes of failure and the impacts of land management.

Cultural heritage features

The many changes in agricultural practice over the last 150 years – the development of machinery, animal husbandry and welfare and cropping - has meant that many field barns have fallen out of use and into disrepair because they are considered no longer to have a viable agricultural use. They remain, nevertheless, a key landscape characteristic. They are also significant heritage and wildlife assets and repositories of a range of traditional skills, from lime mortar use, stone walling and carpentry to roofing. Their continued degradation and, ultimately, loss will have a significant impact on landscape character, wildlife, local traditional skill bases and provision and on an understanding of how the landscape of the South West Peak has developed and been managed over time.

Collapsed field barn © *PDNPA*

Smaller features such as lime kilns, stone troughs and waymarkers reflect the ways in which people have interacted with their landscapes in the past and the present. Developments in agriculture, settlement, communications, transport and other activities have meant that features have become redundant over time. Some features remain as vestigial elements of the landscape but many are not recognised, understood or cherished. These features risk loss through neglect, ignorance and damage. With keen interest in local history amongst village groups and the resurgence in popularity of archaeology from television programmes and the local HLF-funded 'Peeling back the layers' project there is an opportunity to identify, promote and protect these fading heritage features.

Plant and Animal Diseases and Non-native Species

The impact of diseases on natural heritage is potentially significant for individual species and habitats and across areas of the landscape.

Species-specific threats include crayfish plague, which is a fungal spore carried by non-native signal crayfish, transmittable via water, mud and fishing equipment and lethal to our native white-clawed crayfish. With the continuing increase in signal crayfish populations around the country and in some instances wilful release of animals, it is an ongoing battle to ensure biosecurity and protect our native crayfish. Crayfish plague has wiped out most of the native crayfish in the South West Peak already; a tiny remnant population remains and there is potential for populations to be increased; this will require ongoing vigilance and public awareness.

Signal Crayfish © *Karen Shelley-Jones*

Plant diseases of the genus Phytophthora can have widespread impacts; *Phythophthora. ramorum* is a notifiable disease which affects trees including larch, northern red oak, Turkey oak, holm oak, beech, sweet chestnut and horse chestnut. There were outbreaks in the South West Peak in 2012 and 2013 where statutory Plant Health Notices were served on woodland owners requiring their infected trees to be felled. Further outbreaks would impact on the natural heritage and landscape value of woodlands.

Phytophthora pseudosyringae is a pathogen which affects bilberry and was found on the Roaches estate in 2011. With potential to kill off swathes of bilberry (as had happened in Cannock Chase in Staffordshire) there was concern about the condition of the SSSI within which the disease was found and the long term impacts. The disease did not have a significant impact in 2011; however, it is thought that fungal pathogens such as this one could benefit from changes in the climate to warmer, damper conditions and thus could be more significant in future.

Chalara dieback is a serious disease of ash trees caused by a fungus which was previously called *Chalara fraxinea*, now known as *Hymenoscyphus fraxineus*. The disease causes leaf loss and crown dieback in affected trees, and is usually fatal. Infection was confirmed in areas of the South West Peak in 2015. We don't yet know what the full impact of Chalara will be in Britain. Evidence from continental Europe suggests that older, mature ash trees can survive infection and continue to provide their landscape and wildlife benefits for some time. The best hope for the long term future of Britain's ash trees lies in identifying the genetic factors which enable some ash trees to tolerate or resist infection, and using these to breed new generations of tolerant ash trees for the future (Forestry Commission, 2016). While ash trees are a component of the South West Peak landscape, ash-dominated woodlands are not; losses are more likely to be evident amongst individual trees and hedgerow trees that in woodlands.

Heather beetle is a widespread and common insect species found across the uplands of Britain. The larvae (and to a lesser extent the adult beetles) feed on the leaves of heather plants, stripping them bare and damaging the health of the heather. In a normal year, small patches of heather will be "beetled", but it is usually the case that the plants recover in a few months. Periodically, heather beetle populations expand into huge outbreaks, in which millions of beetle grubs can decimate hundreds of hectares of heather (The Heather Trust, 2014).

In December 2012, the Heather Trust identified two moors in the Peak District as sites for a scientific study into heather recovery after a beetle outbreak: Combs Moss near Chapel-en-le Frith and the Crag Estate a few miles south-west of Combs above the Goyt reservoir. Both moors have become the subject of a study carried out by consultant ecologists based in nearby Buxton. Identical plots have been identified and the initial phase of monitoring is now complete. Within the restrictions caused by extreme weather, plots of beetle damage on both estates have been burnt and cut, and the heather's response will continue to be closely monitored.

While heather beetle undoubtedly can cause widespread damage to heather, there is no appropriate preventative treatment and the heather can recover of its own accord. The beetle can reduce the competitiveness of the heather enabling other coarse grasses to take hold, which can alter the vegetation community.

An introduced non-native plant species of particular relevance to the South West Peak is Himalayan balsam, a prolific-seeding, showy plant which grows mostly alongside watercourses; this species can dominate vast swathes of river bank entirely, out-shading and out-competing native species with knock-on impacts on native pollinators. The showiness of the blooms makes them attractive to bees and it has been known for bee-keepers to deliberately encourage this invasive plant.

Bee at Himalayan balsam © *Paul Hobson*

Climate Change

With a mean global temperature increase of 2°C the South West Peak is projected to experience an annual increase of 2–3.5°C. The greatest variance is likely to be in the summer and winter temperatures. With regards to precipitation, under a 2°C scenario, the area is projected to experience an annual increase of between 0 and +10% precipitation. Again, the greatest variance is likely to be felt during summer and winter. During the summer months rainfall could be up to 30% less or 20% more; in winter, rainfall is projected to increase by between 0 and 30%. It is only during the summer months that a potential decrease in rainfall is projected.

The implications of climate change are difficult to predict; the range of impacts can be both direct – loss of species when temperatures change – or indirect – how people's behaviour changes and the effect this has on heritage.

Table 4 shows just some of the range of the consequences for heritage which result from climate change effects and what opportunities we may have to mitigate or adapt to them.

Table 4. The potential implications of climate change, the consequences for heritage and opportunities for adaptation and mitigation

Climate change effect	Consequences for heritage	Opportunities to mitigate or adapt
More extreme weather events - flooding	Damage to riparian and floodplain habitats and species	Adapt land management to promote suitable floodplain habitats and riparian tree planting. Installation of woody debris and natural flood management measures.
	Damage to packhorse bridges	Slowing the flow measures or 'working with natural processes'.
More extreme weather events - drought	Drying out of peat, particularly on less vegetated areas – loss of sphagnum and species diversity	Gully and grip blocking, re-vegetation of bare peat, cessation of burning on moorlands.
	Seasonal drying of streams – habitat unavailable for fish and invertebrates	Enhance aquatic habitat by providing more variation in substrate, in-stream features such as woody debris and pools. Riparian planting for shading effect.
	Soil erosion causing sedimentation in rivers and streams or damage around archaeological features	Management practices to promote vegetation cover such as roughening riparian zones; visitor management to avoid sensitive sites.
More extreme weather – rainfall extremes	Deterioration of footpaths due to extreme weather episodes	Increased need/cost of maintenance, repair and management. May require visitor management to protect vulnerable locations.
	Potential for high run-off (pollution) and soil erosion impacting on water quality and soil quantity (notably in areas with thinner more friable soils)	Work with farmers on better storage of slurry, manure, chemicals etc. Buffering of watercourses. Opportunity to slow and store water from high rainfall events in the catchment and in headwaters with 'slowing the flow' measures.
Warmer wetter springs	Greater water availability in rivers and reservoirs to store for drier periods.	Ensure reservoirs are well-maintained and able to cope with extra capacity.
	More difficult to get onto land for harrowing etc	May benefit some species through lack of disturbance.
	Better feeding conditions for wading birds with damper ground	Alter timing of land management to avoid disturbance.

cont...	Earlier growing season, lush sward may benefit some species but be detrimental to others. Increased stock grazing levels would cause trampling of ground nesting birds	More flexibility needed in timing of land management to achieve desired outcomes on a site-by-site basis.
	Invertebrate phenology may be out of sequence with predator species, therefore problems with food availability, e.g. pied flycatcher, curlew	More flexibility needed in management activities to achieve healthy soil structure and diversity of flora and maximise potential for diversity of invertebrates.
	Greater incidence of plant diseases such as heather beetle	No realistic preventative measures, post-disease management only.
Warmer drier summers	Less productive grass growth for stock grazing, hay, haylage and silage production – increase inputs of fertiliser to compensate	Promote nutritional benefits of species-diverse grassland above species-poor grassland.
	Longer growing season and better opportunity for hay-making with dry weather	Take advantage of better conditions for hay making and promote above silage/haylage.
	Increased fire risk on moorlands, grasslands, woodlands	Education of the public. Expand Fire Operation Group.
	Reduced water flows, less available oxygen and higher temperatures – impact on aquatic life, fewer species able to thrive, potential losses	Enhance aquatic habitat by providing more variation in substrate, in-stream features such as woody debris and pools. Riparian tree planting for shading effect.
	Threat to existing tourist 'honeypots' becoming overwhelmed and subsequent environmental degradation	Opportunity to create a wider array of recreational open spaces; spreading prosperity.
	Threat from increased traffic and congestion (air quality as an indirect impact)	Opportunity to improve transport infrastructure in order to encourage tourism in the 'right' locations.
Warmer, wetter autumns	Extended grazing season may reduce biodiversity through over-grazing and trampling. Opportunity to graze more productive stock with resultant reduction in native and hill breeds	Flexibility of management prescriptions required. Continue support for native breeds, consider opportunities for building market premium for native breed produce.
Warmer conditions generally	Loss of cold-adapted Arctic-alpine aquatic species such as southern iron-blue mayfly and upland summer mayfly	Woody debris installation and riparian tree planting for shade to reduce water temperature.

cont...	Loss of sphagnum from blanket bog and mire due to temperature increase and drying effect	Either put more effort into hydrological management of blanket bog communities or accept that change is inevitable and follow adaptive management practices.

Eroding peat at Danehead © *Nick Mott*

Need for Long Term Management

Long term management of the heritage features of this landscape is crucial to their persistence and the qualities which residents and visitors value. Designated sites all have management plans with a series of outcomes which are overseen by Natural England. Farm holdings which are entered into agri-environment schemes are signed up to agreements lasting for 5 to 10 years. While these are relatively short periods, the high quality and important sites have typically remained in agreements for much longer as new versions come into operation, so moving from ESA to Higher or Entry Level Environmental Stewardship. The current change to Countryside Stewardship is likely to see a break in that continuity with fewer farms entering the scheme.

Management and maintenance of heritage does not rely solely on agricultural subsidies; farmers themselves take pride in managing their land well and in seeing wildlife. A central aim of this partnership is to improve working relationships to build on this pride in the heritage and landscape. As with the current Countryside Stewardship, it is likely that any new national scheme (likely to be developed following the UK exit from the EU) will focus on paying landowners for delivering public goods and services. Developing a greater understanding of the value and benefits which we get from the natural environment will be a focus of this partnership as we work with beneficiary communities within and outside of the South West Peak. We will learn from pilot Payment for Ecosystem Services (PES) schemes elsewhere and explore possibilities for developing them here as a means of securing some sustainability.

Site-specific capital work during the delivery phase will be carried out to high standards, utilising appropriate and robust materials and techniques. Path improvements on the Roaches will be designed to last for over 25 years. By using skilled contractors to carry out the work and train volunteers at the same time, a high standard of work will be delivered together with a team of people to help with any ongoing maintenance requirements. Other capital works on privately owned land will be subject to a written agreement between the accountable body and the grant recipient, covering the initial capital works, any annual payments, plus a commitment on the part of the landowner to a ten year period of management and maintenance.

Through our Small Heritage Adoption project we will enthuse members of the public, both resident and visitor, about the importance of these heritage features to the story of the landscape and its communities. By generating interest and understanding and developing skills through training sessions we will encourage people to adopt a piece of heritage and take care of it into the future.

Limekiln © *Eric Wood*