

CONFLICTS OF LAND USE

There will probably always be conflicts of interest between the different users of any piece of land. Most of these can be endured with a little tolerance and consideration. Detailed below are two conflicts specific to Northumberland National Park, overleaf are more general conflicts affecting National Parks.

1. Footpath Erosion - e.g. Pennine Way

CONFLICT: The phenomenal numbers of feet walking on popular sections of footpath have caused the ground vegetation to die and the soil to be exposed and then eroded. This problem is particularly bad along the spectacular section of Hadrian's Wall between Steel Rigg and Housesteads where the Pennine Way follows the Wall. (Also see Cheviot Summit Case Study)

MANAGEMENT: Originally the Right of Way (RoW), the legal footpath, ran along the top of Hadrian's Wall. This was damaging the archaeological quality of the monument. The RoW was moved to run on the ground, along side the Wall away from other important archaeology buried under the soil. This second route has eroded. Consequently Northumberland National Park in partnership with the land owners, The National Trust, have resurfaced the footpath in the most sympathetic way we can. On level sections we have used stone chippings and on the slopes we have used stone pitching (rather like cobbles, but using larger irregular shaped stones) to create a hard, sustainable surface to resist erosion. The blocks and chipping used were Whinstone, this occurs locally as the ridge along which Hadrian's Wall runs. Over time the soil around these new surfaces revegetates, blending the new paths into the landscape. Because Hadrian's Wall is in both the National Park and the World Heritage Site special care had to be taken with the aesthetic appearance in addition to the functionality of the work.

2. Military Use - e.g. Otterburn Training Area (OTA)

CONFLICT: The National Parks Authority's purposes are to "*Conserve and enhance*" and to "*promote the understanding and enjoyment*" of the National Park. It is apparent that the movement of troops and artillery and the firing of live weapons by the military is conflicting with these purposes. However, military forces have been a presence in the Borders since Roman times, and the Ministry of Defence (MoD) have owned training grounds in Redesdale since 1911. Northumberland National Park came into existence in 1956.

The MoD submitted a request for the expansion of infrastructure and training in OTA in 1994. It was objected to by the Northumberland National Park Committee in 1996, even after the MoD made many compensating measures to the proposal. The MoD then appealed to the Secretary of State for the Environment. The resulting Inquiry ended in October 1997. Permission was granted to the MoD to develop the OTA. The Inquiry served to highlight the conflicting priorities of two Government bodies protecting national concerns.

MANAGEMENT: The MoD has allowed a low-input, low-output system of farming to continue by generous financial arrangements with its tenant farmers. This is valuable for wildlife conservation and has added benefits for archaeological conservation, especially with the excellent photographic records and consolidation work the military have undertaken. In addition there has been extensive tree planting schemes within OTA. As a result of the Public Enquiry, the MoD has appointed Conservation and Recreation officers to work with the National Park Authority. The MoD has also invested in tourism facilities in and around the ranges.

OTHER CONCERNS

The effects of visitors are one of the main concerns of the people who live and work in National Parks, and also to the people who manage the area for conservation.

CONFLICTS:

1 Litter

Litter can be life threatening to grazing stock and wildlife and can damage farm machinery.

2 Disturbance and intrusion

Visitors wandering off the Rights of Way can lead to disturbance of stock and the daily life of people living and working in the countryside. Noise and the presence of people and dogs can disturb nesting birds and frighten other animals from the area. Walkers and cyclists break up the soil every time their boot or tyre touches the ground, allowing it to be more easily washed or blown away. Trampling of the vegetation can damage sensitive plant communities and so their dependent wildlife. Visitors may be tempted to pick wild flowers.

3 Uncontrolled dogs

Sheep are accustomed to running away from dogs, that's how the collie rounds up the flock. If an uncontrolled dog is nearby, the sheep may be scared away from where they are feeding or sheltering. If they are stressed at lambing time the ewe may abort, giving birth to a dead lamb. In severe cases sheep have been killed by dogs. An individual sheep may be worth hundreds of pounds, so the loss of a lamb, a ewe or tup (ram) may be financially serious to a farmer.

4 Damage to walls and fences

Visitors can cause damage to walls and fences by climbing over them, especially to the unmortared drystone walls which are characteristic to the area. Broken walls and fences allow stock to roam, leading to crop damage, road fatalities and the mixing of livestock belonging to different farms.

MANAGEMENT:

One of Northumberland National Park's main tools in managing these problems is by informing and educating visitors. The National Park Centres perform a vital role in this by distributing of leaflets and copies of "The Curlew Country Code", showing slide and video presentations and by having well informed Information Assistants to talk to the visitors. Northumberland National Park Voluntary Wardens are invaluable, enhancing the Ranger Service patrols by providing on site, up-to-date, one-to-one information for visitors at "honeypot" locations (usually car parks near popular attractions) at peak visitor times.

In addition we place information panels at important sites and car parks, giving specific details about a site and advice on access. We construct ladder stiles over walls and step stiles through fences where Rights of Way cross these boundaries. We are working towards total signing of all public footpaths and bridleways in the National Park, and post specific notices during lambing and haymaking to ask visitors to be especially considerate of farmers' needs.

Northumberland National Park Authority has to balance the many needs of the people within the Park: helping visitors to enjoy, appreciate and understand the unique character of Northumberland, whilst working with local people to conserve their livelihoods and the landscape, wildlife and cultural heritage of Northumberland National Park. This is achievable only with mutual consideration and understanding coupled with long term planning and the investment of money and time.

SAVING CHEVIOT SUMMIT: A CASE STUDY

HABITAT

The Cheviot Hills are in the north of the National Park and they are a popular destination for walkers.

The soil on Cheviot summit is blanket peat bog. Peat is formed when dead plant material falling to the ground only partially breaks down in wet, acidic and aerobic conditions. In 5000BC the climate in the Cheviot Hills was warm and wet. The high rainfall and slow run-off on the flat plateau of Cheviot summit provided the conditions necessary for the formation of peat.

Exposed peat is fragile and the high, flat summit plateau has always been subject to a certain degree of natural erosion. Any exposed peat is easily washed away in wet weather or blown away in dry conditions. In low temperatures, frost action can damage exposed peat when pools of surface water freeze and expand.

On the edges of the summit plateau, this natural erosion of the blanket bog leads to the development of peat hags and gullies, with luxuriant vegetation on the tops of the hags and exposed peat in the gullies.

The peat bog eco-system on Cheviot contains some of the most important natural history of the area. Plant communities and individual species of international importance exist here and have a restricted distribution in Northumberland on Cheviot. Plants typically occurring in relatively undisturbed areas include: cloudberry; bilberry and crowberry; hares tail cotton grass; common cotton grass; stiff sedge; a variety of lichens such as clodonia lichen and mosses.

Cheviot summit is not only important for plant species. The area contains a number of rare upland beetles. It is one of the only English sites where the broad-bordered white underwing moth is found. It supports a population of golden plover and the site is one of the few remaining breeding locations for dunlin in Northumberland.

THE PROBLEM:

WALKERS, WEATHER, SHEEP

By 1995, this fragile eco-system was the worst eroded area anywhere within Northumberland National Park. The trig point was erected on the summit in 1864. The original base of the trig point is now level with walkers' heads. Ground level is now well below this, showing that over 2 metres of peat have been eroded from the surface. A combination of factors has caused the erosion problem.

WALKERS: The summit of Cheviot is the highest point in Northumberland and has been popular with walkers for many years. The Pennine Way, the most heavily used of the National Trails, has a spur to the summit of Cheviot. Many walkers using the Pennine Way take a detour from the main route to reach the Summit. As the summit is flat, the trig point can be seen from quite a distance and walkers use any route to reach it, wandering off the designated rights of way, so that the whole of the summit is subject to trampling. Although the peat bog eco-system undergoes a certain rate of erosion due to natural processes, excessive trampling by people artificially accelerates the process to a point where the vegetation is unable to sustain itself naturally. The pressure exerted by walkers damages existing vegetation and impedes the growth of new plants.

WEATHER: As well as damage caused by walkers, weather contributes to the erosion. Wind dries out the exposed peat and blows it away. High levels of rainfall result in excess run-off which removes peat from the surface. This is called sheet wash.

Low temperatures result in frost damage which causes the peat to break apart and become fluffy, making it difficult for new plants to establish themselves.

SHEEP: Another factor contributing to the erosion problem is sheep grazing. This is a crucial factor because it can affect seed production and therefore natural re-generation of the plants on the summit. Sheep eat the flower heads of plants, resulting in a reduced seed bank.

THE SOLUTION: **MITIGATION, RE-GENERATION**

Northumberland National Park Authority wanted to find a solution to this serious erosion problem.

They realised that there were two discrete stages involved:

The first was mitigation: how to prevent further damage to existing vegetation

The second was regeneration: how to promote the growth of new vegetation in the eroded areas.

The cause of the problem had to be managed to allow the second stage to take place.

MITIGATION

During 1995 and 96, the footpath leading to Cheviot summit from the Pennine Way had already been laid with flagstones.

The flagstones provided a sustainable walking surface, enabling walkers to remain on the designated route without having to negotiate boggy patches within the exposed peat.

The decision was taken to lay similar flagstones on the Cheviot summit plateau. It was thought that once the problem of excessive trampling by walkers had been removed, the area of erosion around the path would soon begin to regenerate naturally, as it had in other parts of the Pennine Way.

However, it was thought that even if this did occur, it would take a long time for the vegetation to re-establish over the whole of the summit area, as the extent of the erosion and the peat acidity was so severe. The pH was 2.9 which is similar to the acidity of vinegar.

REGENERATION

The National Park Authority decided to conduct a re-vegetation experiment.

An area of the summit of approximately 300 metres was fenced off within which the re-vegetation trials could take place. This area incorporates some of the worst eroded areas on the summit as well as a section of the re-surfaced path. The fence protected the experimental area from the effect of grazing and the existence of the flagstone path reduced the effect of trampling by walkers. The existing vegetation was recorded. This was essential to monitor changes in future. Signs were erected asking the walkers to remain on the flagged path where possible.

Over a two year period, a variety of trials took place, with vegetation being transplanted from relatively healthy areas to the severely eroded areas. It was found that the most successful method of re-establishing vegetation was to plant single plugs of Common Cotton grass as this was the species that seemed most able to withstand the extreme boggy conditions in the eroded areas. It was also found that a single application of fertiliser and limestone dust was needed to promote the growth of these individual plugs.

RE-PLANTING THE SUMMIT

By 1998, following the trials, a structured re-vegetation programme using volunteers to carry out the work, was well under way.

By then, some natural re-vegetation was starting to occur next to the slabs laid along the footpath but the area of erosion on the summit was so large that artificial re-vegetation had to take place in order to stabilise the peat as quickly as possible.

IN THE FUTURE

Even with the slabs in place, people still leave the main footpath to walk over the whole summit area so pressure from walkers could still inhibit natural re-vegetation. Single short-term events, such as sponsored walks and fell races, can cause as much erosion in one day as a year or more of normal use.

If the re-vegetation work on Cheviot is to be successful, visitors need to be more aware of the environmental issues and walk on the flagged areas as far as possible when visiting this fragile ecosystem.