National Character Area profile:

51. Dark Peak

Supporting documents

NATURAL ENGLAND

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Introduction

As part of Natural England's responsibilities as set out in the Natural Environment White Paper,[1] Biodiversity 2020[2] and the European Landscape Convention,[3] we are revising profiles for England's 159 National Character Areas (NCAs). These are areas that share similar landscape characteristics, and which follow natural lines in the landscape rather than administrative boundaries, making them a good decision-making framework for the natural environment.

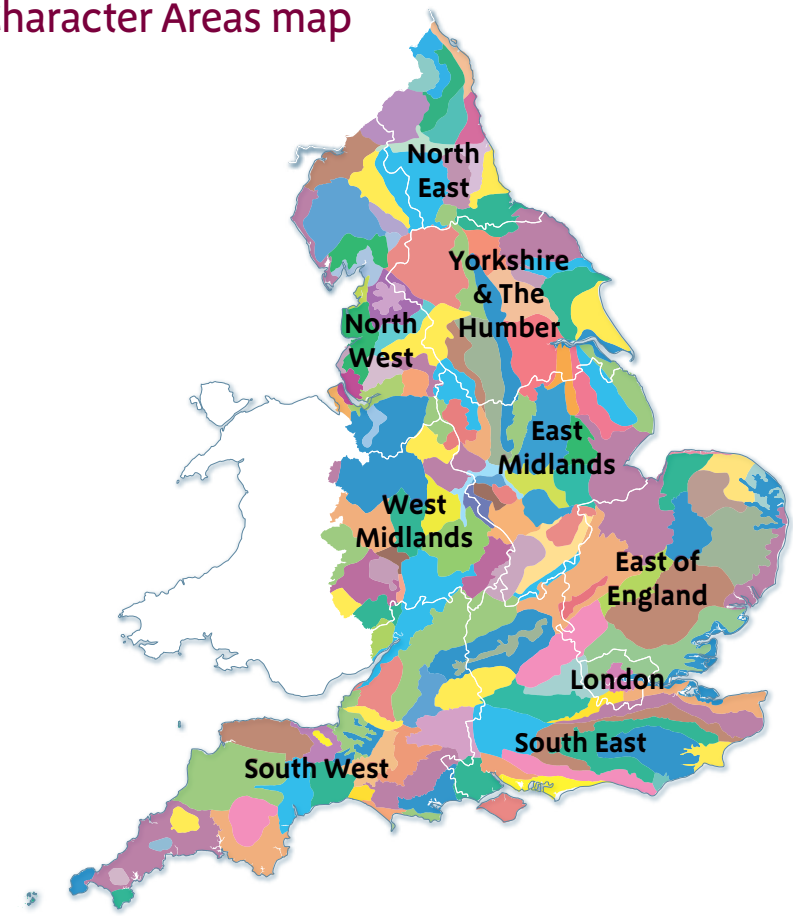
NCA profiles are guidance documents which can help communities to inform their decision-making about the places that they live in and care for. The information they contain will support the planning of conservation initiatives at a landscape scale, inform the delivery of Nature Improvement Areas and encourage broader partnership working through Local Nature Partnerships. The profiles will also help to inform choices about how land is managed and can change.

Each profile includes a description of the natural and cultural features that shape our landscapes, how the landscape has changed over time, the current key drivers for ongoing change, and a broad analysis of each area's characteristics and ecosystem services. Statements of Environmental Opportunity (SEOs) are suggested, which draw on this integrated information. The SEOs offer guidance on the critical issues, which could help to achieve sustainable growth and a more secure environmental future.

NCA profiles are working documents which draw on current evidence and knowledge. We will aim to refresh and update them periodically as new information becomes available to us.

We would like to hear how useful the NCA profiles are to you. You can contact the NCA team by emailing ncaprofiles@naturalengland.org.uk.

National Character Areas map



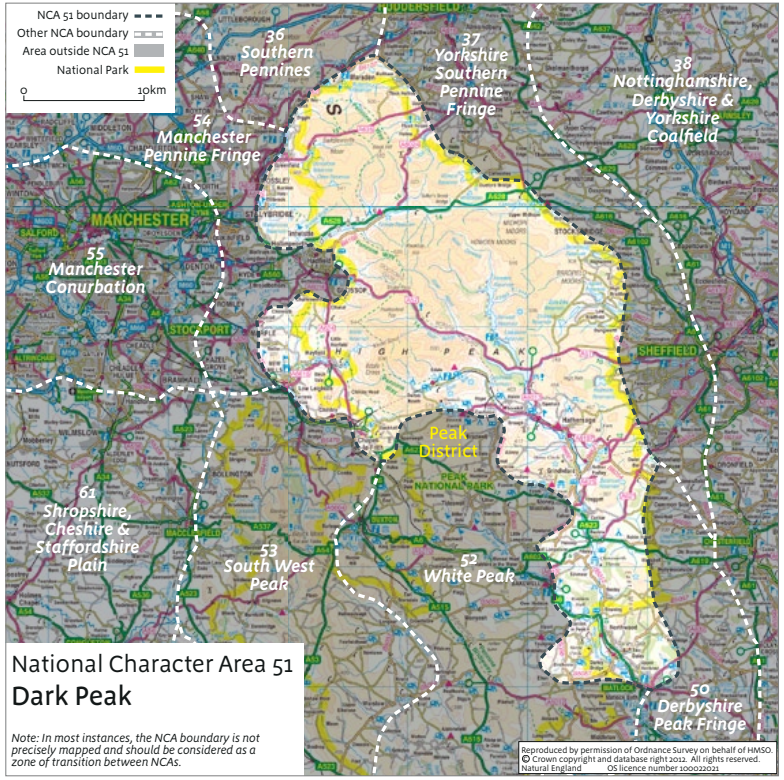
[1] The Natural Choice: Securing the Value of Nature, Defra (2011; URL: www.official-documents.gov.uk/document/cm80/8082/8082.pdf)
[2] Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services, Defra (2011; URL: www.defra.gov.uk/publications/files/pb13583-biodiversity-strategy-2020-111111.pdf)
[3] European Landscape Convention, Council of Europe (2000; URL: http://conventions.coe.int/Treaty/en/Treaties/Html/176.htm)

Summary

The Dark Peak is a landscape of large-scale sweeping moorlands, in-bye pastures enclosed by drystone walls, and gritstone settlements, within the Pennine chain. It falls almost entirely within, and forms a large part of, the Peak District National Park. Approximately 57 per cent of the area has been designated as a Special Protection Area and Special Area of Conservation, both being the highest forms of environmental protection afforded by European Law. Some 46 per cent of the National Character Area (NCA) has also been designated as Sites of Special Scientific Interest (SSSI) and the range of different SSSI, from the Eastern Peak District Moors to Chatsworth Old Park and clough woodlands to geological formations, demonstrates the variation of important characteristics and landscapes within the NCA.

The area supports internationally important mosaics of habitats including blanket bog, upland heathland, upland oak woodland and hay meadows, and these in turn support a number of rare species including birds such as merlin, short-eared owl, twite and golden plover. It also includes nationally and internationally important historic landscapes and heritage assets.
The predominantly peat soils also provide other significant benefits, when in good condition, by storing significant volumes of carbon and water. With its high rainfall and impervious rocks it is an important area for water supply, with many reservoirs supplying water to nearby conurbations. The Dark Peak, with a strong association with the right to roam and the access movement, is also important for recreation owing to the extensive open access areas and footpaths, and the sense of escapism that they offer, along with the ease of access from adjacent cities and large towns.

Future challenges for the area include the management of water and flooding, the restoration of blanket bog, the restoration and continued management of species-rich grassland, an increase in native woodland cover especially on steep valley sides, managing heritage assets, increased tourism and recreational demand while retaining the sense of tranquillity and remoteness, and the potential threats posed by climate change.



Click map to enlarge; click again to reduce

Statements of Environmental Opportunities:

- **SEO 1:** Safeguard, manage, restore and enhance the large areas of open, expansive moorland and the internationally important habitats and species that they support, protecting both soils and water resources.

- **SEO 2:** Manage and enhance the moorland fringes and valleys, with their mosaics of pastures and meadows, and their strong field patterns defined by drystone walls, to improve ecological networks and strengthen landscape character.

- **SEO 3:** Improve opportunities for the enjoyment and understanding of the National Park landscape, and to experience the sense of escapism and inspiration offered by the wide, open moorlands, while also conserving the qualities of the landscape and its valuable historic, geological and wildlife features.

- **SEO 4:** Increase the extent of native woodland, scrub and trees, and manage existing tree cover to provide a range of benefits including helping to assimilate new infrastructure, restore lost habitats and landscape features, store carbon, reduce run-off and provide fuel, shelter and recreational opportunities.

Redicarr Clough and characteristic heather moorland with areas of bracken, Dark Peak.

Description

Physical and functional links to other National Character Areas

Forming the southernmost limit of the Pennines, this National Character Area (NCA) forms part of an important ecological and geological network with the greater mass of the Pennines to the north. There are strong physical and ecological links between this upland NCA and the adjacent lowlands, in particular through the rivers and streams which drain the upland plateau and provide water to major rivers and river systems and flood mitigation to urban areas in downstream NCAs such as the Mersey Valley and the Trent Valley Washlands.

From the upland areas there are expansive views in all directions. These create visual links to surrounding NCAs such as the Southern Pennines, South West Peak and the Yorkshire Southern Pennine Fringe. It is also possible to see over to various non-contiguous NCAs such as the Nottinghamshire, Derbyshire and Yorkshire Coalfield. A real characteristic feature of the NCA is the views towards (and from) the surrounding urban conurbations of Manchester, Sheffield and West Yorkshire. The views into and out from the NCA provide a clear illustration of the way in which this NCA 'fits into' the surrounding countryside and directly links to nearby centres of population.

This NCA provides many services and benefits to its residents, as well as the surrounding urban areas. For example, the expansive uplands supply drinking water, flood mitigation and carbon sequestration, as well as extensive opportunities for open-air recreation in a dramatic landscape. Its historic development is closely linked to the physical resources available, and these helped to kick-start the Industrial Revolution and the development of modern factory industry, especially in the Derwent Valley.

Mam Tor near Castleton and its famous landslide. Repeated slips caused the final closure of the road in 1979.

Key characteristics

- Sharply defined, elevated and vast plateau with gritstone ridges and edges and long, uninterrupted views.
- Wild and remote semi-natural character created by blanket bog, dwarf shrub heath and heather moorland which support internationally important habitats and assemblages of upland birds and breeding waders.
- Contrasting valley heads created by a combination of sheltered, deeply-incised cloughs with fast-flowing streams around the plateau margins, with their greater diversity of vegetation, including semi-natural broadleaved woodland.
- Pastoral character of margins created by in-bye land with dispersed farmsteads, gritstone wall boundaries (hedgerows in valley bottoms) and the small scale of enclosure.
- Major valleys, some of which are dominated by coniferous woodland and reservoirs; these supply drinking water to distant urban conurbations including Derby and Nottingham. The wider valleys also provide habitats for wintering and breeding birds and other important species such as fungi, as well as high-quality recreational experiences for visitors.
- Durable and stocky architectural style to dispersed buildings and settlements constructed from local gritstone with typical blackened appearance.
- Extensive prehistoric field systems and settlement behind the gritstone edges, with early post-glacial occupation beneath the higher, deeper peats.
- Historic routes traverse the moorland as well as more modern trails such as the Pennine Bridleway and Pennine Way. More recent road and rail routes are located along valley bottoms.

Curbar Edge with oak woodland and inbye pasture land below.

Dark Peak today

The Dark Peak is a landscape characterised by relatively homogeneous expanses of unenclosed heather and grass moorland on the rolling upland plateau, with meadow and pasture on the lower in-bye land. Areas of semi-natural broadleaved tree cover exist in the steep-sided cloughs and gullies. The distinction between land covers has become less obvious in recent years as grassland management has been intensified on the lower accessible land and reduced towards the moor. This has resulted in moorland vegetation and rough grassland spreading into previously enclosed in-bye land, creating a gradation of intensity of use down the slopes.

Valley reservoirs, lined by the underlying impermeable geology, are a characteristic feature of the Dark Peak. The main valleys of Longdendale and the Upper Derwent Valley, and many smaller valleys, have all been heavily modified from the late 19th century to create man-made reservoirs, the majority with extensive conifer plantations on the valley sides surrounding these water bodies.

The moorland plateau is dissected and drained by many small, fast-flowing streams which join to form the main rivers within the NCA. Most of the valleys are narrow and steep sided, although there are a number of broader, shallower valleys, most notably the Derwent. These tend to be where settlements are located as well as more frequent instances of improved pastures and meadows, utilising the fertile and sheltered valley floors. Numerous streams draining east off the high moors give rise to distinctive east–west oriented valleys and intervening ridges of upland farmland, ranging from the Ramsden–Yateholme chain in the north through Langsett, Ewden and Dale Dike to Rivelin and Redmires in the south.

Agriculture is largely limited to livestock grazing on upland pastures, with some small-scale dairy farming in the valley bottoms. Dry gritstone walls, built from local stone, are the only traditional form of field enclosure. Enclosures are generally irregular to regular in shape on flatter, lower margins, displaying a long history of enclosure from the medieval period, and larger in scale towards higher ground. Improved pastures are found on the relatively better quality land on lower moorland fringes and in the wider valleys, and in places (for example the Hope Valley) there are extensive strong, regular patterns of walled fields. Many of the farms hold rights, which they actively exercise, to graze livestock on the moorlands.

Cattle grazing on upland pastures of Bradfield Moors.

On higher land, there are extensive areas of semi-natural habitats with the different types of moorland vegetation fluctuating in response to grazing regimes, exposure, hydrology and management for grouse. In places the effects of enclosure, grazing, uncontrolled burning and atmospheric pollution have resulted in vegetation dominated by purple moor grass, mat grass and cotton grass.

The core of the area, however, supports a rich variety of upland habitats including internationally important blanket bogs and upland heathland, much of it designated as a Special Area of Conservation (SAC), which form an intimate mosaic with species-rich flushes and acid grassland. These habitats support a number of bird species, including internationally important assemblages of merlin, short-eared owl and golden plover. The number of breeding pairs of these species has resulted in almost 40,000 ha of the NCA receiving the European designation of Special Protection Area (SPA).

These upland habitats contrast with the grasslands of the moorland fringes, which are generally under less extensive agricultural management, giving rise to a patchwork of fields, with varied texture and colour. The wetter rushy pastures provide feeding and nesting areas for birds such as lapwing, snipe and curlew while drier unimproved pastures can support a diverse flora and outstanding populations of grassland fungi.

Considering the percentage of open moorland in the NCA there is a reasonable amount of semi-natural woodland, typically in cloughs or smaller blocks on the valley sides below the plateau, which from at least the medieval period has been exploited for a wide variety of purposes including fuel for smelting lead.

Much of the NCA is unpopulated and devoid of buildings and man-made structures, with the few settlements present found mostly along the valley bottoms where they lie adjacent to the main roads which cross the NCA. Scattered farmsteads can be found around the more sheltered and lower margins of the plateau. There is evidence of an increase in housing density around some of the main population centres such as New Mills, Chapel-en-le-Frith and Hathersage. The majority of buildings and settlements are constructed and detailed in local gritstone and the vernacular style is robust with a low profile, often set into the landscape.

The NCA's position between several large urban conurbations results in very high visitor numbers looking to utilise assets such as Stanage Edge, Chatsworth House, Kinder Scout National Nature Reserve and the Longdendale Valley. In addition, the NCA contains the Trans Pennine Trail, a multi-user route, part of the National Cycle Network and E8 European Long Distance Walking Route, as well as the Dark Peak Link route which links areas of population with the National Trail network.

Stanage Edge, famous as a popular rock climbing and rambling destination.

The landscape through time

The Dark Peak is dominated by scenery produced through the erosion of the underlying Carboniferous (Namurian, 333–318 million years bp) Millstone Grit Group. The Millstone Grit is part of a great arch-like structure in the rocks, which forms the backbone for the Southern Pennines at this point. In the south of the area, around Matlock, limestones, lavas and sills of the Peak Limestone Group crop out.

The Millstone Grit consists of a cyclic succession of marine banks in mudstones, siltstones and cross-bedded sandstones, with some thin coals and seatearths. These represent river sediments deposited onto both delta slopes during delta migration and delta tops, with some development of rainforests resulting in the coal seams. Periodic marine incursions occurred, depositing layers of fossiliferous mudstone. Further delta migration deposited large gritstone masses which now characterise much of the area in the form of edges and tors.

The NCA was covered by glaciations in the early Quaternary (the last 2 million years). The Anglian glaciation peaked around 440,000 years ago but no deposits from this glaciation are preserved in the Dark Peak area. The later Devensian glaciations, peaking around 20,000–15,000 years ago, just encroached into the Dark Peak and there are scattered deposits of till around the Mossley area, but there is little landform evidence of this episode. There is evidence of intense periglacial conditions in the form of ice wedge casts, sediment wedge polygons, solifluction and slope deposits (head), and landslides. Today, vast areas of the Dark Peak plateau are covered by peat deposits up to 3 m or more in depth. The peats developed in blanket bogs during the Holocene (the last 10,000 years). The blanket bog gives a slightly domed shape to the landform in places.

Tors and gritstone edges are a highly characteristic feature of the Dark Peak, reflecting the development of the landscape under the harsh conditions at the edge of the ice sheet during the last period of glaciation. Tors formed on many summits as a result of deep chemical weathering in preglacial and interglacial times. Weathering has also left vertical cliff faces known as 'edges', up to 20 m high and 19 km long, including the famous rock-climbing edge at Stanage.

A feature of many of the gritstone edges is the development of large screes and massive landslides (for example Mam Tor), many of which are still active. The landslides are controlled by the impervious and incompetent nature of the mudstones and siltstones that underlie the gritstone.

The NCA contains some very interesting geological formations including one of the largest inland landslides in England, involving a whole valley side, from the crest to the river, at Alport Castles, and Mam Tor, which is one of the best examples of a large-scale rotational landslide affecting hard rocks in inland England. The Woodhead landslide is one of the largest multiple landslides in England.

The archaeological importance of the area dates from prehistoric times with Mesolithic remains found beneath the high blanket bog. Extensive woodland clearance on moorlands by the Bronze Age caused slopewash, the formation of peat and the growth of more impermeable and waterlogged areas. There is extensive evidence, especially on gritstone uplands to the east of the Derwent Valley, of Romano-British and earlier settlement in the form of circles and ring cairns with field systems and associated cairnfields; sufficient evidence of burial activity in the form of barrows survives to indicate that they relate to whole farming communities rather than being high status.

The moors have for centuries been utilised by surrounding communities for summer grazing, with peat, heather and bracken cut for fuel, bedding, roofing and fodder. In the medieval period much of the moors served as hunting forest for manors established by the 10th century in the Hope Valley and further afield.

Management, notably periodic burning and regular grazing, has played a key role in influencing the characteristic land cover and appearance of these moorland areas. Originally management would have been for livestock grazing, but the open heather moorland areas have also been managed for grouse shooting since the early 19th century in addition to sheep grazing. Shooting rights on the grouse moors are held separately from grazing rights although management of the heather involves all tenants.

The gritstone uplands to the east of the Derwent have dense concentrations of industrial remains relating to coal mining and the production of millstones from the medieval period, and lead smelting. These developed in combination with the exploitation of the woodlands for charcoal and white coal (for smelting lead) and agriculture, largely in contrast to later industrial development concentrated in the western industrial fringe and the Middle Derwent Valley, southwards from Froggatt to Matlock. Here there are more villages in valley bottoms, many the result of late-18th and 19th-century expansion, with cottages and terraced housing. Water power was used in the Derwent and its tributaries from the medieval period, notably for powering the bellows of smelting mills and, from the mid-18th century, cotton mills (the world's first cotton factory was built at Cromford in 1771). The rivers Goyt and Etherow to the west powered cotton mills and gritstone mills.

Much of the predominant pattern of dispersed settlement dates from the medieval period, with some farmsteads representing intakes from the moor in the 14th–17th centuries. There are some traces of medieval strip fields retained in patterns of enclosure around valley settlements (for example at Castleton in the Hope Valley), and some survival (as at Chatsworth Park) of fossilised ridge and furrow.

From the middle of the 19th to the early 20th century, several of the broader valleys were flooded to form reservoirs, the most notable being those in the Upper Derwent and the Longdendale chain. Within these valleys, the landform provides a strong sense of containment.

Recent changes in agricultural practices, including the intensification of lower pasture land and the reduction in management of land adjacent to the moorland, have led to a blurring of the boundaries between semi-natural and improved land as moorland vegetation and rough grassland spread into previously enclosed in-bye land. There has also been localised large-scale afforestation which has affected the moorland habitat and open landscape but has provided recreational opportunities.

Historic grazing regimes, coupled with air pollution and artificial drainage, have all had a significant effect on the blanket bog, mire and wet-heath communities. As a result, very large scale projects have focused on the restoration and improvement of degraded habitats, usually on deep peat, within the NCA. Funding opportunities from the Heritage Lottery Fund and EU Life+, among others, have been effectively utilised to start to deliver landscape-scale moorland conservation programmes in the SAC and SPA.

Ecosystem services

The Dark Peak NCA provides a wide range of benefits to society. Each is derived from the attributes and processes (both natural and cultural features) within the area. These benefits are known collectively as 'ecosystem services'. The predominant services are summarised below. Further information on ecosystem services provided in the Dark Peak NCA is contained in the 'Analysis' section of this document.

Provisioning services (food, fibre and water supply)

- **Food provision**: The generally low-grade agricultural land found within the NCA is predominantly used for rearing sheep and some cattle. Livestock numbers remain relatively high, although they have dropped significantly since 2000.

- **Timber provision**: Approximately 10 per cent of the NCA is woodland and woodland cover benefits a wide range of other services such as climate, flooding and soil erosion regulation.

- **Water availability**: This NCA provides a valuable water catchment area for the East Midlands, Manchester and Sheffield. This is owing to the high levels of rainfall received, and the underlying impervious rock making it suitable for large-scale reservoirs such as can be found in the Longdendale Valley and other valleys. The Dark Peak is situated on the watershed and as a result is the source of many major rivers that flow to both the east and west, including tributaries of the rivers Mersey and Trent. The reservoirs and rivers provide a source of freshwater to many neighbouring NCAs.

Regulating services (water purification, air quality maintenance and climate regulation)

- **Climate regulation:** The organic peaty soils of the Dark Peak generally have high carbon content (usually around 20–50 per cent) and are associated with the large expanses of blanket bog and wet-heath habitats. This offers significant climate regulation where the habitats are in good condition. Historic damage to blanket bog habitats has reduced the level of value attached to this service, but large-scale habitat restoration within this NCA offers a significant opportunity to enhance climate change regulation. Soil carbon will also be high under areas of woodland and carbon storage is also provided by the woodland itself, especially where it is under appropriate management.

- **Regulating soil erosion**: A significant proportion of the soils covering this NCA are of high peat content and prone to erosion, especially gullying and hagging (and loss of particulate organic matter), where the covering of semi-natural vegetation has been lost. Bare soils are also vulnerable to occasional mass flow events and can be affected by wind erosion.

- **Regulating soil quality**: The extensive nature of the blanket bog peat soils and the slowly permeable, wet, very acid upland soils make this a key service for the NCA. These soils contain significant volumes of organic matter which is at risk from soil erosion and climate change (from potential extreme weather events). Where vegetation cover still exists, and where extensive grazing and sustainable burning regimes are in place, soils are well protected and provide a functioning service, although they can still be easily damaged.

- **Regulating water quality**: The majority of rivers in the NCA have been assessed as being of 'moderate' ecological quality, though there are also a few that have been assessed as 'good'. The chemical status of surface water is generally good or has not been assessed, while that of groundwater is poor. Many of the rivers within the NCA have suffered from heavy modification, and physical modifications for the supply and storage of water and flood protection are key reasons for failures in the catchment. Degraded peatland habitats can lead to a reduction in the value of the potable water resource, often resulting in increased water treatment costs (for example, to treat water discoloured by sediment). However, there are significant opportunities to restore these habitats and increase the value of this service within the NCA.

- **Regulating water flow (flooding):** The high rainfall and generally steep topography of the NCA mean that watercourses tend to respond rapidly to rainfall events and can cause fluvial flooding along the valleys where settlements have typically developed. There is scope to improve flood mitigation by intercepting and retaining water for longer within key locations in river catchments. This may be achieved in the Dark Peak through implementing a combination of good moorland habitat management and selective woodland planting. These measures may reduce the degree of flood risk within this NCA and mitigate the severity of flood events which occur downstream in adjacent NCAs.

Cultural services (inspiration, education and wellbeing)

- **Sense of place/inspiration**: The dramatic landform of the moorland plateau, with gritstone ridges and edges, and long, uninterrupted views, hills and narrow valleys, has given rise to a distinctive upland pastoral landscape, with gritstone farmsteads, small settlements and a backdrop of woodlands on steep slopes. This landscape creates a strong sense of place, and feelings of escapism and inspiration are often expressed in relation to the open moorlands with their expansive views and strong sense of isolation and wildness.

- **Sense of history**: This is evident in the rich level of historic evidence, from prehistoric features on the moorlands and hills, to the farmsteads and enclosed landscapes and the valley settlements displaying the influence of estates as well as industrial development that marks the early phase of the Industrial Revolution. There is a rich tradition of farmstead, domestic and industrial architecture built from the local stone. The area also has a very strong cultural significance for outdoor recreation in Britain. For example, the Kinder Trespass in 1932 remains a highly symbolic event in the formation of National Parks and the campaign for public access to open country, while sites such as Stanage Edge are iconic places for rock climbing.

- **Tranquillity**: The area is an important resource for tranquillity and provides an area of escape and experiences of wild open spaces for many people, including those living in the adjacent urban conurbations such as Huddersfield, Manchester, Chesterfield and Sheffield. A sense of tranquillity is likely to be particularly associated with the open moorland of the plateau and hills as well as the softer, rolling upland farmland with long-distance views, historic villages, a network of country lanes, and a mosaic of woodland, unimproved meadows and pastures.

- **Recreation**: There are over 1,300 km of public rights of way and 46,000 ha (around 50 per cent of the total area of the NCA) of open access land

within the NCA, as well as the Pennine Way and the Pennine Bridleway National Trails, and extensive routes across the moorland plateau. In addition, the NCA is popular with rock climbers, paragliders, cyclists and water sports enthusiasts as well as visitors to sites such as Chatsworth House, Mam Tor, the Longdendale Trail and Stanage Edge. Finally, 84 per cent of the NCA falls within the Peak District National Park which receives approximately 22 million day visits a year.

- **Biodiversity**: A significant area of the NCA is covered by international and national nature designations (approximately 45 per cent is designated as an SPA, SAC or SSSI) and Biodiversity Action Plan priority habitats including 21,200 ha of blanket bog and 15,900 ha of upland heathland. Wading birds, such as lapwing, snipe and curlew, arrive in spring to nest and rear their young on the open farmland and moors while approximately 4 per cent of the breeding merlin population and 2 per cent of the total population of short-eared owl in Britain can be found nesting within the NCA. In addition, this is an important area for a range of other species including mountain hare, water vole, upland oakwood birds, internationally important grassland fungi assemblages, plant species at or near the limits of their range (for example cloudberry, ivy-leaved bellflower, northern bilberry and chickweed wintergreen) and a rich assemblage of upland invertebrates such as bilberry bumblebee, oil beetles and green hairstreak butterfly.

- **Geodiversity**: Gritstone tors and edges together with their boulder-strewn slopes and screes are particularly distinctive landscape features in the Dark Peak. In addition, the NCA contains some unique geological features including one of the largest inland landslides in England, involving a whole valley side, from the crest to the river, at Alport Castles and the most impressive example of 'tumbled ground' in England and Wales at Canyards Hills, while Mam Tor is one of the best examples of a large-scale rotational landslide affecting hard rocks in inland England. There are currently eight nationally designated geological sites within the NCA and a further five mixed- interest SSSI. A total of 75 local sites of geological interest have been designated within the NCA. The underlying geology also has an impact on the species and habitats found within the NCA as does the landscape character via the impermeable rocks which allowed for the construction of the reservoirs.

Landslips have caused road closure below Mam Tor.

Statements of Environmental Opportunity

SEO 1: Safeguard, manage, restore and enhance the large areas of open, expansive moorland and the internationally important habitats and species that they support, protecting both soils and water resources.

For example, by:

- Restoring and improving ecological links between moorland habitats – upland heathlands, blanket bog, species-rich flushes, woodland, scrub and grassland – to achieve a strong ecological network, reduce habitat fragmentation and increase resilience to environmental change.
- Restoring degraded areas of blanket bog through blocking grips, employing sustainable grazing, sensitive and sustainable managed burns and re-vegetation to facilitate peat formation, retention of water and reduction in run-off, increased carbon sequestration and species diversity, and achieving favourable ecological and hydrological condition of the moorland.
- Enhancing the full range of moorland habitats to achieve optimal conditions for the internationally important breeding bird populations, allowing the population size to be maintained and where possible increased, and a diverse moorland bird assemblage to be supported.
- Ensuring that management of moorland habitats is undertaken in a sympathetic manner for wildlife, geological interest archaeology, carbon storage and water quality and to mitigate flood risk.
- Maintaining open, undeveloped areas of moorland which retain panoramic views, visual connection with surrounding areas and a sense of wildness by encouraging maintenance of hefted flocks and discouraging new fencing and other man-made infrastructure.
- All partners working collaboratively to reduce fire risk and deal speedily and effectively with wildfires when they arise.

Millstone Grit tor at Surprise View near Hathersage.

SEO 2: Manage and enhance the moorland fringes and valleys, with their mosaics of pastures and meadows, and their strong field patterns defined by drystone walls, to improve ecological networks and strengthen landscape character.

For example, by:

- Maintaining pastoral land uses and encouraging the most appropriate grazing management.
- Enhancing moorland fringe habitats, to increase species-rich grasslands and scrub and support iconic species such as twite and curlew.
- Encouraging the creation and expansion of a more ecologically connected patchwork of grasslands – unimproved pastures, rushy pastures, species-rich pastures and meadows – in particular on the moorland fringes and higher shelves of land.
- Introducing flexibility into land management, including less intensive grazing regimes, to allow a more diverse range of habitats and vegetation types and structure to develop, thus enabling habitats to respond to climate change effects and species to move into more suitable locations.
- Retaining and restoring historic patterns of drystone walls on the moorland fringes and upland pastures, around farmsteads and settlements, and along tracks.

Grindsbrook Clough and first ascent of the Pennine Way National Trail.

SEO 3: Improve opportunities for the enjoyment and understanding of the National Park landscape, and to experience the sense of escapism and inspiration offered by the wide, open moorlands, while also conserving the qualities of the landscape and its valuable historic, geological and wildlife features.

For example, by:

- Maintaining the high level of public access with extensive areas of open access land and the dense network of rights of way, with clear but discreet signposting where necessary.
- Managing visitor pressures and ensuring that paths are appropriately maintained to prevent undue erosion.
- Encouraging more people to visit the distinctive open countryside for quiet enjoyment, to improve their health as well as to enjoy and understand their surroundings.
- Encouraging visitor access via sustainable transport options to reduce the pressures on the roads and congestion in villages and settlements.
- Managing and controlling wildfires and illegal off-roading through a co-ordinated approach.
- Providing interpretation of the many geodiversity features of the area, and the role that geology has played in the historic development and land uses of the area.
- Providing interpretation of historic buildings and other heritage assets to explain their role in the development of the landscape over time, facilitating access where appropriate.
- Maintaining key views of landform and geological features, and using semi-natural land cover to enhance and support biodiversity but not obscure landform features, such as rock outcrops and landslides.
- Where appropriate, keeping important geological exposures, such as edges, landslides, boulder slopes, quarry faces, tors and cloughs, visible and accessible.
- Using local stone, where available from appropriate sources, for field boundaries and farmsteads so that they reveal their relationship to the underlying geology.

The well-worn path along Froggatt Edge popular with walkers and birdwatchers.

SEO 4: Increase the extent of native woodland, scrub and trees, and manage existing tree cover to provide a range of benefits including helping to assimilate new infrastructure, restore lost habitats and landscape features, store carbon, reduce run-off and provide fuel, shelter and recreational opportunities.

For example by:

- Exploring opportunities to modify the overall structure of conifer plantations to create softer outlines, a more organic shape that responds to topography, and a higher broadleaved content; and/or to restore former landscapes and habitats such as open moorland or native woodland.
- Exploring the capacity to develop new native woodlands in cloughs and on the lower hills and moorland fringes without compromising the area's character.
- Supporting the natural regeneration and appropriate planting of new small-scale native woodlands, the expansion of existing woodlands (particularly small areas of ancient, semi-natural woodland) and planting of non-woodland trees especially within moorland cloughs and river valleys.
- Conserving, restoring and enhancing existing woodland boundary walls, banks and hedges, giving priority to those that are important for stock control, landscape value and habitat.
- Ensuring that moorland and clough woodlands are appropriately managed, which may include the absence of any active management, to deliver the full range of ecosystem services available.
- Expanding the potential for plantation-type forestry to be managed to accommodate recreational interest.

Open moors and inbye land, Hathersage.

Additional opportunity

1. Protect and appropriately manage the cultural heritage and its historic landscape setting for its intrinsic value, contribution to local character and sense of identity, and as a framework for habitat restoration and sustainable development.

For example by:

- Conserving through careful management the historic environment of this area, including its designated and undesignated historic assets, and the landscape's potential to reveal the prehistoric and later archaeology of land use and settlement.
- Retaining and protecting evidence of prehistoric and later features of the moorland, including its early packhorse trails, medieval boundary stones, and evidence of historic mining and quarrying activity.
- Maintaining the visible evidence of the historic environment of the moorland fringes and valleys, in particular through retaining historic field patterns defined by drystone walls and farmsteads, field barns, cottages, terraced houses and industrial buildings.
- Retaining the complex settlement pattern that reveals change over time, keeping the contrast between densely populated valleys and the backdrop of woodlands, pastures and moorland.
- Conserving archaeological features through management including sustainable grazing regimes and scrub clearance.
- Improving access and interpretation of historic sites and features to reveal their role in the development of the landscape over time, and for the enjoyment and understanding of the public.
- Appropriately manage the impact of visitor- and tourism-based business within the area, while understanding the importance of the cultural heritage to this industry, and its importance for the local economy.
- Ensuring that the repair, restoration or conversion of traditional buildings is carried out with due regard to their historic interest using local sandstones and appropriate styles and techniques.
- Ensuring that the historic environment and its assets are conserved and enhanced in future development and landscape change.

Moorland valleys from Mam Tor.

Supporting document 1: Key facts and data

Total area: 86,604 ha

1. Landscape and nature conservation designations

73,071 hectares (84 per cent) of the NCA lies within the Peak District National Park.

- The management plan can be downloaded at: **www.peakdistrict.gov.uk**

Source: Natural England (2011)

1.1 Designated nature conservation sites

The NCA includes the following statutory nature conservation designations:

Tier	Designation	Site(s)	Area (ha)	Percentage of NCA
International	n/a	n/a	0	0
European	Special Protection Area (SPA)	Peak District Moors (South Pennine Moors Phase 1) SPA; South Pennine Moors Phase 2 SPA	39,888	46
	Special Area of Conservation (SAC)	South Pennine Moors SAC	9,518	11
National	National Nature Reserve (NNR)	Kinder Scout NNR	856	1
National	Site of Special Scientific Interest (SSSI)	A total of 21 sites wholly or partly within the NCA	40,443	47

Source: Natural England (2011)

Please note: (i) Designated areas may overlap (ii) all figures are cut to Mean High Water Line, designations that span coastal areas/views below this line will not be included.

There are 106 local sites in Dark Peak covering 7,857 ha which is 9 per cent of the NCA.

Source: Natural England (2011)

- Details of individual Sites of Special Scientific Interest can be searched at: **http://www.sssi.naturalengland.org.uk/Special/sssi/search.cfm**
- Details of Local Nature Reserves (LNR) can be searched at: **http://www.lnr.naturalengland.org.uk/Special/lnr/lnr_search.asp**
- Maps showing locations of statutory sites can be found at: **http://magic.defra.gov.uk** – select 'Designations/Land-Based Designations/Statutory'

1.1.1 Condition of designated sites

Condition category	Area (ha)	Percentage of SSSI land in category condition
Unfavourable declining	1,181	3
Favourable	4,178	10
Unfavourable no change	2,871	7
Unfavourable recovering	32,214	80

Source: Natural England (March 2011)

- Details of SSSI condition can be searched at: **http://www.sssi.naturalengland.org.uk/Special/sssi/reportIndex.cfm**

2. Landform, geology and soils

2.1 Elevation

Elevation in the NCA ranges from 86 m AOD to a maximum of 636 m AOD. The mean average is 337 m AOD. The highest point in the NCA is Kinder Scout at 636 m AOD (Grid reference: 408555, 387560).

Source: Natural England 2010

2.2 Landform and process

The majority of the NCA is comprised of wild, open, elevated plateaux of broadly rolling terrain and steep slopes punctuated by 'gritstone' edges and rocky tors. The plateau tops are heavily dissected by drainage channels through peat. The blanket bog gives a slightly domed shape to the landform in places. The Millstone Grit consists of hard gritstone beds with softer shales between. Gritstone outcrops punctuate the extensive rolling moorland tops creating rocky tors. Vertical cliff-like faces of gritstones, known as edges, also occur. These can be up to 20 metres high and on the eastern side run for some 19 kilometres along the Derwent-Stanage Edge.

Source: The Dark Peak Natural Area Profile

2.3 Bedrock geology

The Dark Peak NCA is dominated by scenery produced through the erosion of the underlying Carboniferous (Namurian, 333-318 million years before present) Millstone Grit Series. The Millstone Grit is part of a great arch-like structure in the rocks, which forms the backbone for the Southern Pennines at this point.

The grit consists of a cyclic succession of marine banks in shales, siltstones, and cross-bedded sandstones. These represent river sediments deposited onto both delta slopes during delta migration and delta tops. Intermittent rises in sea level inundated these deposits, and the marine fossils, such as goniatites, which they contain, are important for the stratigraphical correlation of these rocks.

Following the marine inundation, further delta migration deposited large gritstone masses which now characterise much of the area in the form of edges and tors. The lower beds of the Coal Measures, which lie above the grits in the folded rock sequence, outcrop in small areas to the east and west of the area. These deposits were laid down on a wide, meandering river plain which was occasionally inundated by the seas.

Although the NCA was almost certainly covered by glaciations in the early Quaternary – the last 2 million years – there is little landform evidence of this episode. The area was not glaciated during the last (Devensian) glaciations, but shows evidence of intense periglacial conditions in the form of ice wedge casts, sediment wedge polygons, solifluction and slope deposits. Tors formed on many summits as a result of deep chemical weathering in preglacial and interglacial times. A feature of many of the gritstone edges is the development of large screes and massive land slips, many of which are still active. The land slips are controlled by the impervious and incompetent nature of the shales and siltstones which underlie the gritstone.

Source: Dark Peak Natural Area Profile, Natural England 2010

2.4 Superficial deposits

Widespread and often very deep blanket peat, formed during the last 10,000 years, overlies the gritstone. This covers 23 per cent of the NCA area. Clay, silt, sand & gravel and diamicton also occur in the NCA though only over approximately 13 per cent of the area.

Source: Natural England 2010

2.5 Designated geological sites

Tier	Designation	Number
National	Geological Site of Special Scientific Interest (SSSI)	9
National	Mixed interest SSSI	5
Local	Local Geological Site	76

Source: Natural England 2011

- Details of individual Sites of Special Scientific Interest can be searched at: http://www.sssi.naturalengland.org.uk/Special/sssi/search.cfm

2.6 Soils and Agricultural Land Classification

Peat is the predominant soil type within the NCA. Its acidity and general lack of nutrients has limited farming to the more sheltered and lower valleys where more silty soil types predominate.

Source: Dark Peak Countryside Character Area Description

The main grades of agricultural land in the NCA are broken down as follows (as a proportion of total land area):

Agricultural Land Classification	Area	Percentage of NCA
Grade 1	0	0
Grade 2	0	0
Grade 3	1,584	2
Grade 4	27,331	32
Grade 5	54,668	63
Non-agricultural	2,569	3
Urban	453	<1

Source: Natural England (2010)

Maps showing locations of sites can be found at:
http://magic.defra.gov.uk – select 'Landscape' (shows ALC and 27 types of soils).

Open moors and inbye land, Stanage.

3. Key waterbodies and catchments

3.1 Major rivers/canals

The following major rivers/canals (by length) have been identified in this NCA.

Name	Length (km)
Derwent	41
Noe	15
Ashop	12
Alport	7
Abbey Brook	6
Wye	6
Arnfield Brook	4
Goyt	4
Huddersfield Narrow Canal	3
Tame	3

Source: Natural England (2010)

Please note: other significant rivers (by volume) may also occur. These are not listed where the length within the NCA is short.

3.2 Water quality

The total area of Nitrate Vulnerable Zone is 86,605 ha, 100 per cent of NCA.

Source: Natural England (2010)

3.3 Water Framework Directive

Maps are available from the Environment Agency showing current and projected future status of water bodies at:
http://maps.environment-agency.gov.uk/wiyby/wiybyController?ep=maptopics&lang=_e

Wet flush with Sphagnum moss and cotton grass in the Bradfield Valley near Sheffield.

4. Trees and woodlands

4.1 Total woodland cover

The NCA contains 8,928 ha of woodland, 10 per cent of the total area, of which 1,285 ha is ancient woodland. South Yorkshire Forest Partnership Community Forest, one of twelve Community Forests established to demonstrate the contribution of environmental improvement to economic and social regeneration, covers 205 ha of this NCA, which is <1 per cent.

Source: Natural England (2010) & Forestry Commission (2011)

4.2 Distribution and size of woodland and trees in the landscape

The former extensive cover of woodland has declined over many centuries to a situation where most semi-natural woodland is restricted to cloughs and the steeper valley sides. Fragmentation has lead to the ecological isolation of some woods and a decline in tree and shrub diversity. Woodlands are often unfenced and thus open to grazing. This has prevented regeneration and removed the shrub layer leaving a poorly balanced structure and ground flora. Past management has left many woods with a lack of veteran trees and dead wood which has reduced opportunities for hole-nesting birds, bats and deadwood invertebrates. Commercial management of some woodland has lead to the replacement of native broadleaves by conifers with a consequent reduction in wildlife interest. Some woodland suffers from invasion by rhododendron with consequent loss of ground flora diversity and tree regeneration.

Source: Dark Peak Countryside Character Area Description, The Dark Peak Natural Area Profile

4.3 Woodland types

A statistical breakdown of the area and type of woodland found across the NCA is detailed below.

Area and proportion of different woodland types in the NCA (over 2 ha).

Type	Area (ha)	Percentage of NCA
Broadleaved	4,821	6
Coniferous	3,697	4
Mixed	156	<1
Other	254	<1

Source: Forestry Commission (2011)

Area and proportion of ancient woodland and planted ancient woodland within the NCA:

Type	Area (ha)	Percentage of NCA
Ancient semi-natural woodland	738	1
Ancient re-planted woodland (PAWS)	547	<1

Source: Natural England (2004)

5. Boundary features and patterns

5.1 Boundary features

The moorland tops are largely unenclosed. Dry, gritstone walls are the main form of field enclosure marking out the areas of 'in-bye' from the unenclosed plateau tops. Hedgerows are much rarer than in many other parts of the country mainly found only in the valley bottoms. Fences are not typical and interrupt the sweeping horizontal lines of the landform. Currently approximately 510 km of boundary features are managed under Environmental Stewardship.

Source: Dark Peak Countryside Character Area description; Countryside Quality Counts (2003)

5.2 Field patterns

The majority of the NCA is characterised by extensive tracts of unenclosed moorland with enclosed farmland in the sheltered valleys. Enclosures are generally regular in shape on flatter lower margins and larger in scale towards higher ground. Small-scale often older enclosures are associated with the in-bye of isolated farmsteads.

Source: Dark Peak Countryside Character Area description; Countryside Quality Counts (2003)

6. Agriculture

The following data has been taken from the Agricultural Census linked to this NCA.

6.1 Farm type

The upland nature of the NCA is demonstrated by the fact that the majority of farms (57 per cent) are primarily involved with grazing livestock in the Less Favourable Area (LFA). Survey data shows that between 2000 and 2009 there was very little change in the total number of farms with a decrease by just 11 (2 per cent) within the NCA. Survey data from 2000 to 2009 shows a significant decrease (46 per cent) in the number of dairy farms from 72 to 39.

Source: Agricultural Census, DEFRA (2010)

6.2 Farm size

Farms between 5 ha and 20 ha are the most common farm size, accounting for 236 units. However, these only account for 4 per cent of the NCA area. Holdings greater than 100ha only make up 16 per cent of the total number of farms but over 78 per cent of the total farmed area.

Source: Agricultural Census, DEFRA (2010)

6.3 Farm ownership

2009: Total farm area = 59,496 ha; owned land = 23,315 ha
2000: Total farm area = 60,981 ha; owned land = 28,922 ha

Source: Agricultural Census, DEFRA (2010)

6.4 Land use

Almost 98 per cent (59,000 ha) of the farmed area is grassland and uncropped reflecting the largely upland nature of the NCA.

Source: Agricultural Census, DEFRA (2010)

6.5 Livestock numbers

Sheep are the most numerous livestock within this landscape (a total of 175,500 animals) compared to a total of 22,000 cattle and 4,000 pigs. Between 2000 and 2009 there was a 22 per cent decline in the number of sheep (48,000 animals) and a 16 per cent decrease in the number of cattle (4,116). The number of pigs increased by 1,900 animals (46 per cent) over the same period.

Source: Agricultural Census, DEFRA (2010)

6.6 Farm labour

The figures suggest principle farmers (862) make up the largest group in the agricultural workforce accounting for 76 per cent of the total number. People employed in a part-time capacity are the next largest category with 121 workers or 11 per cent of the total agricultural workforce. Trends over the last decade show a marked decline in the number of people employed in agriculture across all categories, with the exception of part-time workers. This group has shown a very small increase (5) between 2000 and 2009.

Source: Agricultural Census, DEFRA (2010)

Please note: (i) Some of the Census data are estimated by Defra so may not present a precise assessment of agriculture within this area (ii) Data refers to commercial holdings only (iii) Data includes land outside of the NCA where it belongs to holdings whose centre point is recorded as being within the NCA.

7. Key habitats and species

7.1 Habitat distribution/coverage

Internationally important areas of upland heathland are one of the most extensive habitats in the Dark Peak. Much of the heath is species-poor, dominated by heather with some wavy hair-grass, though bilberry and heather are dominant in the cloughs. Areas of wet heath are characterised by cross-leaved heath and purple moor grass in addition to heather, with occasional hare's-tail cottongrass, deergrass, cranberry and bog asphodel. Green hairstreak butterfly and the bumble bee Bombus monticola feed on areas with abundant bilberry. This habitat supports birds such as merlin, short eared owl, red grouse, curlew and twite.

Blanket bog covers extensive areas of the highest parts of the moors and tend to be botanically poor. Hare's-tail cottongrass is the predominant species, often in a mix with heather and wavy hair-grass. In shallow peaty pools common cottongrass produces dense patches, spreading out into the adjacent vegetation. Golden plover and dunlin breed across the Dark Peak moors, while redshank and teal, breed in small numbers on the blanket bog.

Acid and basic flushes occur in the cloughs and along the river valleys of the moorland areas. Though small they have a specialised flora and fauna and make a great contribution to the diversity of the overall moorland habitat. Acidic flushes are the most widespread often with carpets of sphagnum bog moss and often frequent soft rush and small sedges such as star sedge and carnation sedge. These flushes also support cross-leaved heath, cranberry, round leaved sundew and bog asphodel.

Semi-natural woodland is generally very restricted to the cloughs and moorland fringes particularly on steeper slopes and abandoned quarries. Oaks, both sessile

and pedunculate, are the main tree species found. Other species tend to be more limited but usually include downy birch, silver birch and rowan. The woodlands support a wide range of nationally important invertebrates while veteran and ancient trees are important for various species of bat.

Conifer plantations provide the greatest proportion of woodland in the NCA. Typical species include, Scots pine, Corsican pine and sitka spruce, although larch has been used in some areas. Ground flora is limited due to the dense shade though ferns and grasses and even bilberry survive as a sparse cover in places.

Species-rich neutral pastures and hay fields are rare but relatively species rich where they do occur. Occasionally hay meadows, with yellow-rattle, common sorrel and meadow buttercup, provide attractive swards, rich in invertebrates including butterflies such as meadow brown, common blue and small heath. Wet or marshy pastures can provide important feeding and breeding grounds for wading birds even when not rich in wild flowers. Acid grassland is relatively common, though usually species poor, with purple moor-grass, mat-grass, wavy hair-grass and common bent typically dominant species. This habitat does provide value for upland birds such as curlew, lapwing, ring ouzel and snipe. These habitats also support the nationally notable beetle Meloe violaceous and the regionally scarce and declining plants fragrant agrimony, dyer's greenweed and sheep's-bit.

Source: The Dark Peak Natural Area Profile

7.2 Priority habitats

The Government's new strategy for biodiversity in England, Biodiversity 2020, replaces the previous Biodiversity Action Plan (BAP) led approach. Priority habitats and species are identified in Biodiversity 2020, but references to BAP priority habitats and species, and previous national targets have been removed. Biodiversity Action Plans remain a useful source of guidance and information. More information about Biodiversity 2020 can be found at; http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/englandsbiodiversitystrategy2011.aspx

The NCA contains the following areas of mapped priority habitats (as mapped by National Inventories). Footnotes denote local/expert interpretation. This will be used to inform future national inventory updates.

Priority habitat	Area (ha)	Percentage of NCA
Upland heath	16,038	19
Blanket bog	20,965	24
Broadleaved mixed & yew woodland (broad habitat)	2,964	3
Lowland meadows	377	<1
Fens	3,447	4
Lowland dry acid grassland	8,272	10
Purple moor grass and rush pasture	3,557	4
Coastal & floodplain grazing marsh	269	<1
Upland calcareous grassland	273	<1
Lowland heathland	33	<1

Source: Natural England (2011)

- Maps showing locations of priority habitats are available at: http://magic.defra.gov.uk - Select 'Habitats and Species/Habitats'

7.3 Key species and assemblages of species

- Maps showing locations of some key species are available at: http://magic.defra.gov.uk - Select 'Habitats and Species/Habitats'
- Maps showing locations of S41 species are available at: http://data.nbn.org.uk/

8. Settlement and development patterns

8.1 Settlement pattern

Much of the NCA is unpopulated and devoid of buildings and man-made structures, a characteristic of the wild upland moorland which constitutes the greater part of the area. The majority of settlements are found around the edge of the NCA especially to the west around New Mills and to the south around Matlock. Settlements are mostly villages and restricted to lower-lying valley bottoms and sides such as the Hope and Derwent Valleys. Farmsteads are scattered around the more sheltered and lower margins of the plateaux associated with the moorland edge or with small areas of enclosed in-bye land. There is evidence of an increase in housing density around some of the main population centres such as New Mills, Chapel-en-le-Frith and Hathersage.

Source: Dark Peak Countryside Character Area description; Countryside Quality Counts (2003)

8.2 Main settlements

Though surrounded by urban areas, large conurbations all lay outside this NCA. The main population centres include New Mills, Matlock, Hathersage, Hayfield, Hope, Castleton, Baslow and Grindleford. The total estimated population for this NCA (derived from ONS 2001 census data) is: 77,453.

Source: Dark Peak Countryside Character Area description; Countryside Quality Counts (2003)

8.3 Local vernacular and building materials

Traditional buildings are built and detailed in local gritstone, often solitary or in a compact cluster, there are also remnants of generally 16th century or earlier timber frame – the latter often surviving as cruck-framed buildings with later stone infill. Late 16th and 17th century gentry houses are a notable feature. In a national context the area has a medium density of pre-1750 farmstead buildings. These include three- or four-bay cruck-framed barns of 15th to 17th century date. The area also contains a small number of bank barns dating from late 18th century, and field barns with hay lofts above cow stalling.

Source: Dark Peak Countryside Character Area description; Countryside Quality Counts (2003)

9. Key historic sites and features

9.1 Origin of historic features

Extensive and well-preserved evidence for Bronze Age/Iron Age settlement extend across the gritstone uplands to the east of the Derwent valley in the form of circles and ringcairns with field systems and associated cairnfields; sufficient barrows survive to indicate that they relate to whole farming communities rather than being high status. Hillforts on the eastern moorland spurs are sited above areas of settlement on the limestone plateau. The visible fort (Navio) near Hope is an important indication of Roman movement through and exploitation of the Peak landscape. Late Saxon royal manors, including Hope in Hope valley, formed the core of extensive areas of medieval royal forest. Roads and tracks in the upland core – including those that linked upland grazing to lowland settlements – remain visible as hollow ways, superseded in 18th and 19th centuries by present road system. Gritstone uplands to the east of the Derwent have dense concentrations of industrial remains. These include coal mines from the medieval period to the early 19th century, around whose deep shafts, operated by horse-gins and later by steam power, lie waste heaps and causeways; 18th and 19th century reverbatory furnaces (cupolas) for smelting lead (exported via Hull), and the waste and scars lefty from the production of millstones which were also exported eastwards (via Hull) from the 13th century.

Source: Countryside Quality Counts Draft Historic Profile, Countryside Character Area description

9.2 Designated historic assets

This NCA has the following historic designations:

- 5 Registered Parks and Gardens covering 923 ha.
- 0 Registered Battlefield/s covering 0 ha.
- 217 Scheduled Monuments.
- 1,239 Listed Buildings.

Source: Natural England (2010)

- More information is available at the following address: **www.english-heritage.org.uk/caring/heritage-at-risk/**
- **www.english-heritage.org.uk/professional/protection/process/national-heritage-list-for-england/**

10. Recreation and access

10.1 Public access

- 88 per cent of the NCA, 78,343 ha, is classified as being publically accessible.
- There are 1,311 km of public rights of way at a density of 1.5 km per km^2.
- There is 1 National Trail (Pennine Way and the Pennine Bridleway) within the NCA. 104 km is found within the NCA.

Sources: Natural England (2010)

The following table shows the breakdown of land which is publically accessible in perpetuity:

Access Designation	Area (ha)	Percentage of NCA
National Trust (Accessible all year)	12,328	14
Common Land	1,530	1
Country Parks	617	<1
CROW Access Land (Section 4 and 16)	46,991	54
CROW Section 15	12,606	15
Village Greens	2	<1
Doorstep Greens	0	0
Forestry Commission Walkers Welcome Grants	749	<1
Local Nature Reserves (LNR)	22	<1
Millennium Greens	0	0
Accessible National Nature Reserves (NNR)	0	0
Agri-environment Scheme Access	12	<1
Woods for People	3,487	4

Sources: Natural England (2011)

Please note: Common Land refers to land included in the 1965 commons register; CROW = Countryside and Rights of Way Act 2000; OC and RCL = Open Country and Registered Common Land.

11. Experiential qualities

11.1 Tranquillity

Based on the CPRE map of tranquillity (2006) the highest scores for tranquillity are found on the moorland plateaus, away from centres of population and road corridors. The lowest scores for tranquillity are generally found along the western and north-western boundaries of the NCA where the main population centres are though it is clear that when compared to adjoining NCAs the tranquillity score remains relatively high.

A breakdown of tranquillity values for this NCA are detailed in the table below:

Tranquillity	Score
Highest value within NCA	54
Lowest value within NCA	-85
Mean value within NCA	4

Sources: CPRE (2006)

- More information is available at the following address: **www.cpre.org.uk/resources/countryside/tranquil-places**

11.2 Intrusion

The 2007 Intrusion Map (CPRE) shows the extent to which rural landscapes are 'intruded on' from urban development, noise (primarily traffic noise), and other sources of visual and auditory intrusion. This shows that the bulk of the upland and moorland areas remain relatively undisturbed, though there is a significant level of disturbance around the main urban areas to the west and south of the NCA. In addition, because the main road routes utilise the valley bottoms this has resulted in a significant level of disturbance along the Longdendale, Hope and Derwent Valleys. A breakdown of intrusion values for this NCA are detailed in the table below.

Intrusion category	1960s (%)	1990s (%)	2007 (%)	Percentage change (1960s-2007)
Disturbed	13	23	36	23
Undisturbed	87	77	63	-24
Urban	<1	<1	1	1

Sources: CPRE (2007)

Notable trends from the 1960s to 2007 are there has been a significant decrease (24 per cent) in the proportion of undisturbed land between the 1960s and 2007, matched by a corresponding increase in the area of disturbed and urban land.

- More information is available at the following address: **www.cpre.org.uk/resources/countryside/tranquil-places**

Losehill Ridge separating Edale and the Hope Valley.

12. Data sources

- British Geological Survey (2006)
- Natural Area Profiles, Natural England (published by English Nature 1993-1998)
- Countryside Character Descriptions, Natural England (regional volumes published by Countryside Commission/Countryside Agency 1998/1999)
- Joint Character Area GIS boundaries, Natural England (data created 2001)
- National Parks and AONBs GIS boundaries, Natural England (2006)
- Heritage Coast Boundaries, Natural England (2006)
- Agricultural Census June Survey, Defra (2000,2009)
- National Forest Inventory, Forestry Commission (2011)
- Countryside Quality Counts Draft Historic Profiles, English Heritage (2004)*
- Ancient Woodland Inventory, Natural England (2003)
- BAP Priority Habitats GIS data, Natural England (March 2011)
- Special Areas of Conservation data, Natural England (data accessed in March 2011)
- Special Protection Areas data, Natural England (data accessed in March 2011)
- Ramsar sites data, Natural England (data accessed in March 2011)
- Sites of Special Scientific Interest, Natural England (data accessed in March 2011)
- Detailed River Network, Environment Agency (2008)
- Source protection zones, Environment Agency (2005)
- Registered Common Land GIS data, Natural England (2004)
- Open Country GIS data, Natural England (2004)
- Public Rights of Way Density, Defra (2011)
- National Trails, Natural England (2006)
- National Tranquillity Mapping data, CPRE (2007)
- Intrusion map data, CPRE (2007)
- Registered Battlefields, English Heritage (2005)
- Record of Scheduled Monuments, English Heritage (2006)
- Registered Parks and Gardens, English Heritage (2006)
- World Heritage Sites, English Heritage (2006)
- Incorporates Historic Landscape Characterisation and work for preliminary Historic Farmstead Character Statements (English Heritage/Countryside Agency 2006)

Please note all figures contained within the report have been rounded to the nearest unit. For this reason proportion figures will not (in all) cases add up to 100%. The convention <1 has been used to denote values less than a whole unit.

The settlements of Castleton and Hope enclosed by gritstone upland and limestone hills (to right) of the White Peak.

Supporting document 2: Landscape change

Recent changes

Trees and woodlands

- The Countryside Quality Counts data indicates that there has been a significant increase in the amount of eligible woodland covered by Woodland Grant Schemes (WGS).
- There have been small amounts of planting of new woodland or replanting of woodland within the NCA, though this is increased on the Forestry Commission estate.
- From 1999 the proportion of ancient woodland sites covered by WGS increased to 48 per cent in 2003.

Boundary features

- It is estimated that there are approximately 3,140 km of boundaries within the NCA with approximately 510 km in an Environmental Stewardship agreement.
- Up to 2011, 442 km of stone wall restoration had been included in Environmental Stewardship agreements.
- Hedge management, hedge planting and restoration were included in far fewer agreements but this reflects the general scarcity of hedges in much of the NCA.

Agriculture

- Agriculture is dominated by livestock grazing with approximately 98 per cent of the NCA uncropped or given over to grassland, a figure which has stayed relatively stable. Grazing pressures have declined mainly as a result of the drop in sheep numbers. There is also evidence to suggest that dairying is declining shown by a 16 per cent drop in cattle numbers within the NCA.
- The uptake of agri-environment schemes is above the national average with options designed to enhance moorland and upland in-bye the most common.
- More recently, significant work by a number of organisations has gone into the restoration of moorland habitats on SSSI to improve their condition.
- Census data indicates that the number of farms and farm workers has remained fairly constant, though the number of principal farmers has declined by over 70 between 2000 and 2009. The number of farms and farmed area has also remained relatively stable over this period, though there is evidence to show that business diversification has been increasing to support farm income.

Settlement and development

- Average rates for development outside urban and fringe area is low, as might be expected given the largely rural, upland nature of the NCA. However, there is some development pressure locally in the west, especially around New Mills and other areas closer to Manchester, in the Derwent valley, around Hope and Castleton, and east of Darley Dale.

Semi-natural habitat

- There are wide expanses of unenclosed heather and grass moorland within the NCA however threats such as fire, pollution and grazing have seen the historic loss of shrub species, the degradation and erosion of blanket bog and/or replacement by species-poor short grasses. There is increasing evidence to suggest sensitive species such as Sphagnum mosses and some scarcer plants may be increasing on the moors, suggesting possible improvement in the condition of blanket bog due to a combination of reduced air pollution, more appropriate grazing levels and restoration work.

- There are 40,443 ha of SSSI within the NCA with approximately 36,400 ha (approximately 90 per cent) in favourable or unfavourable recovering condition. Positive changes to management have increased this figure from 21 per cent in 2003, demonstrating the value of agri-environment schemes and other landscape scale conservation initiatives, in delivering benefits in this NCA.

- Extensive restoration work is taking place across much of the NCA in an attempt to restore eroded areas of peat via gully blocking and re-vegetation using heather brash, plug planting and other techniques.

- Changes in agricultural practices since the Second World War have led to an increase in intensity of farm production which has brought about a decline of wet rushy pastures, herb-rich hay meadows, rough pasture and unimproved in-bye land.

Historic features

- In 1918 about 2 per cent of the NCA was historic parkland. By 1995 it is estimated that 20 per cent of the 1918 area had been lost. About 65 per cent of the remaining parkland is covered by an Historic Parkland Grant, and 46 per cent is included in an agri-environmental scheme.

- Between 1999 and 2003 there were 101 barn conversions. However in 2003 53 per cent of historic farm buildings remained unconverted and approximately 87 per cent were intact structurally. As a result, historic farm buildings remain a cause for concern (due to the large number that may be under threat of inappropriate development or neglect) but overall the character has probably been maintained.

Rivers

- In 2009 the majority of rivers within the NCA were classed as in either moderate or poor ecological condition.

Drivers of change

Climate change

- Extreme weather events are likely to occur more frequently, resulting in increased periods of heavy rain that may cause soil/peat erosion and sedimentation and dis-colouration of watercourses (and flooding) downstream. In addition, increased flows could cause rivers to change course, and may reactivate landslides and create new ones.

- There is the increased risk of prolonged periods of drought which is likely to have a negative impact on the peatland habitats, making them more prone to soil erosion and damage from wildfire.

- Climate change is likely to result in species migration and a loss of diversity associated with small or isolated habitats. In addition, modelling suggests that the Dark Peak may lie well south of the climatic envelope for many of the characteristic moorland birds such as merlin, golden plover, ring ouzel and red grouse by 2080, while others such as lapwing, snipe, curlew, short-eared owl and pied flycatcher may be at the climatic limits of their range.

- Climate change may play a role in the spread of significant plant pathogens such as Phytophthora, with potentially very significant consequences for trees and moorland dwarf-shrubs in particular.

- There is likely to be an increased demand for renewable energy installations, both small-scale for individual settlements/communities and larger scale wind farms on the moorland plateau. Also possible increased demand for pico-hydro (small-scale hydro) on the water courses around the fringe of the moorland.

Weathered gritstone outcrop near Hathersage with distinct current bedding.

Other key drivers

- There is likely to be increased pressure for housing within the NCA and this will bring opportunities to incorporate green infrastructure, accessible green space, sustainable drainage systems and new habitats into developments. There are also significant opportunities to form or enhance corridors linking urban areas with the open countryside beyond.

- Agri-environment schemes are to be reviewed in 2013 as part of CAP reform. The need for flexibility in land management, to address movement of species and changing habitats, will need to be addressed. There may be opportunities for improvements in the condition of habitats and historic buildings. There is likely to be a continuing high level of interest in agri-environment schemes particularly if there was a move to payment for ecosystem services, as they provide important support for small farms on marginal land, but the trend towards 'hobby farming' and diversification is expected to continue.

- The negotiation of appropriate moorland management regimes, to achieve good condition of the vegetation and water quality, including the restoration of bare peat and degraded blanket bog, between the various interests, including game production, livestock and water supply, will remain a key issue.

- The increased focus on ecosystem service delivery of carbon regulation, water quality, water provision and soil erosion should increase resources to manage these key areas from water management and carbon markets.

Bare peat in the Dark Peak.

Supporting document 3: Analysis supporting Statements of Environmental Opportunity

The following analysis section focuses on a selection of the key provisioning, regulating and cultural ecosystem goods and services for this NCA. These are underpinned by supporting services such as photosynthesis, nutrient cycling, soil formation and evapo-transpiration. Supporting services perform an essential role in ensuring the availability of all ecosystem services.

Biodiversity and geodiversity are crucial in supporting the full range of ecosystem services provided by this landscape. Wildlife and geologically-rich landscapes are also of cultural value and are included in this section of the analysis. This analysis shows the projected impact of Statements of Environmental Opportunity on the value of nominated ecosystem services within this landscape.

Chatsworth House and the cascades, a popular visitor attraction in the Derwent Valley.

Statement of Environmental Opportunity	Ecosystem Service																		
	Food Provision	Timber Provision	Biomass Energy	Water Availability	Genetic Diversity	Regulating climate change	Regultating Soil Erosion	Regulating Soil Qulaity	Regulating Water Quality	Regulating Water Flow	Pollination	Pest Regulation	Regulating Coastal Erosion	Sense of Place / Inspiration	Sense of history	Tranquility	Recreation	Biodiversity	Geodiversity
SEO 1: Safeguard, manage, restore and enhance the large areas of open, expansive moorland and the internationally important habitats and species that they support, protecting both soils and water resources.	↔ **	↔ *	↗ **	↗ **	↗ *	↑ ***	↑ ***	↑ ***	↑ ***	↗ **	↗ *	N/A	N/A	↗ **	↗ ***	↗ **	↗ **	↑ **	↗ **
SEO 2: Manage and enhance the moorland fringes and valleys, with their mosaics of pastures and meadows, and their strong field patterns defined by drystone walls, to improve ecological networks and strengthen landscape character.	↔ **	↔ **	↔ *	↗ **	N/A	↑ ***	↑ **	↗ **	↗ *	↑ *	↔ *	N/A	N/A	↑ **	↗ *	↗ **	↗ **	↑ *	↔ **
SEO 3: Improve opportunities for the enjoyment and understanding of the National Park landscape, and to experience the sense of escapism and inspiration offered by the wide, open moorlands, while also conserving the qualities of the landscape and its valuable historic, geological and wildlife features.	↔ **	↔ ***	↔ ***	↔ **	N/A	↘ **	↗ *	↔ **	↔ **	↔ **	↔ ***	N/A	N/A	↑ **	↑ **	↘ **	↑ **	↗ *	↑ *
SEO 4: Increase the extent of native woodland, scrub and trees, and manage existing tree cover to provide a range of benefits including helping to assimilate new infrastructure, restore lost habitats and landscape features, store carbon, reduce run-off and provide fuel, shelter and recreational opportunities.	↔ **	↑ *	↗ *	↔ *	N/A	↗ **	↑ **	↗ *	↗ **	↑ **	↔ *	N/A	N/A	↗ *	↗ **	↑ *	↗ *	↗ **	↔ **

Note: Arrows shown in the table above indicate anticipated impact on service delivery: ↑ = Increase ↗ = Slight Increase ↔ = No change ↘ = Slight Decrease ↓ = Decrease. Asterisks denote confidence in projection (*low **medium***high) ° symbol denotes where insufficient information on the likely impact is available.

National Importance; Regional Importance; Local Importance

Landscape attributes

Landscape attribute	Justification for selection
Sharply defined expansive upland area characterised by extensive elevated moors, punctuated by vertical gritstone 'edges' and dissected by a series of deep river valleys.	■ Forms the southerly point of the Pennine chain. With a maximum height of 636 m, the NCA dominates the wider region and provides the backdrop to adjacent urban areas such as Sheffield and Manchester. ■ Underlying geology has clearly contributed to land use and development, most noticeably through the use of the gritstone for housing, other buildings and the traditional stone walling found enclosing the in-bye land. ■ Large screes and massive landslides (for example Mam Tor) as well as gritstone 'tors' on the moorland plateau provide very visible evidence of the underlying geology and help define the landscape character of the NCA, as well as providing important habitats for breeding birds. ■ In addition to providing landscape character the gritstone 'edges' are popular recreational areas and consequently are known throughout the country as a defining characteristic of the Peak District.
The extensive moorland plateau is of international and national importance. The habitat mosaic within the NCA includes: moorland (blanket bog, flushes, wet and dry heaths and acid grasslands), contrasting with in-bye pastures (including remnant meadows) on the moorland fringes and valley bottoms. Clough woodland and broadleaved woodland are also found away from the plateau.	■ The extensive moorland plateau is designated as both Special Protection Area (SPA) and Special Area of Conservation (SCA) and these encompass approximately 56 per cent of the whole NCA. While generally poor in higher plants and bog mosses, as a result of atmospheric pollution and historic management, they support nationally important breeding populations of golden plover, dunlin, merlin, short-eared owl and twite and significant numbers of meadow pipit, curlew and other waders. ■ Clear contrast between the extensive tracts of wild moorland with the small-scale agricultural operations within the enclosed in-bye land around the margins. ■ 21 Sites of Special Scientific Interest (SSSIs) covering 40,444 ha are found within the NCA. These include a range of habitats from blanket bog to Chatsworth Old Park, quarries to Huddersfield Narrow Canal, clearly demonstrating the variation of important habitats and sites within the NCA. ■ The semi-natural habitats fringing the moorlands include important grassland areas that support iconic species such as twite and curlew and provide a strong visual character through their enclosure by traditional dry stone walls.

Landscape attribute	Justification for selection
A distinctive characteristic of the NCA is the concentrated pockets of extensive conifer plantations in those major river valleys associated with water catchment reservoirs. Blocks of semi-natural broadleaved woodland exist in more sheltered valleys and cloughs away from the moorland line.	■ Steep, wooded valleys are a distinctive feature of the NCA and are important in a largely upland NCA dominated by extensive tracts of moorland. ■ Woodlands provide a strong visual backdrop away from the moorland plateau, either through homogenous blocks of plantation woodland adjacent to water catchment reservoirs, as small areas of semi-natural woodland distinctive in the farmed landscape of dry stone walls and pastures, or as small stands associated with isolated farmsteads or settlements. ■ The majority of semi-natural woodland remaining in the NCA is upland oak woodland which is both a priority habitat and listed in the EU habitats directive.
Distinctive field boundaries, predominantly of local dry gritstone walls. Hedges make a much smaller contribution to the farmed landscape than many NCAs.	■ The distinctive field patterns and boundary types contribute to the sense of place and provide a link to historic land uses. Walls are almost entirely constructed from local gritstone further enhancing this. ■ Fences are unusual in the NCA because of the dominance of dry stone walls but hedges, a priority habitat, do exist, and the extensive use of holly in the north-west edge of the NCA is highly unusual characteristic feature.
Reservoirs to supply adjacent conurbations are frequent through the moorland area, and contribute to strong and distinctive character of these moorlands. The NCA has a network of rivers running through it, linking the upland watershed with urban areas downstream and forming an important part of the cultural and natural heritage.	■ The topography and sparse population have provided excellent sites for catching and holding water and reservoirs provide a distinctive and well known landscape character of this area. ■ Reservoirs are often popular focal points for recreation – walking, fishing, riding, biking and quiet enjoyment. ■ The River Derwent and the Derwent, Howden and Ladybower Reservoirs form important historical links to the historical and industrial past of the country.
Clear sense of place derived from the extensive use of local building materials creating a high degree of visual unity to towns, villages and farmsteads.	■ Local gritstone used as a building material is distinctive and provides clear landscape character and visual coherence. ■ The local distinctive vernacular consists of robust gritstone buildings with low profiles set into or against the surrounding landscape with very few man-made structures visible above the moorland line.
Elevated vantage points create a sense of space, expansiveness, openness and tranquillity, with panoramic views over moorland ridges, valleys, gritstone edges, the surrounding lowlands and urban areas.	■ The high altitude peaks and rolling moorland plateau dominate the surrounding area enabling long open views both into and out from the NCA. This is enhanced by the more or less total absence of large man-made structures on the moorland. ■ The Dark Peak NCA is clearly visible from the surrounding urban areas including, Sheffield, Manchester and Huddersfield and is highly valued as a wild and remote area away from these centres of population.

Landscape attribute	Justification for selection
Busy, well-used roads connecting towns, rural areas and crossing over the Pennines.	■ Both the A628 (Woodhead Pass) and the A57 (Snake Pass) are heavily used routes across the Pennines allowing people and materials to move through the NCA. These routes are so well known that the names evoke a sense of place, especially during bad weather when they are liable to closure. ■ The topography of the NCA has restricted main routes to the valley bottoms which can result in heavy traffic through settlements such as Hathersage, New Mills and Matlock but consequently allows much of the rest of the NCA to remain relatively undisturbed.
Extensive network of public rights of way enabling access to and enjoyment of the many natural and cultural features of the landscape.	■ The Pennine Way and Pennine Bridleway National Trails, as well as a number of local routes run through the NCA and are heavily used by walkers, mountain bikers and others. ■ Relatively high levels of tranquillity especially on moorlands and moorland fringes. ■ Wide distribution of historic features throughout the NCA, including the hill fort at Mam Tor. ■ Reservoirs attract day visitors for walking, fishing, biking, riding and quiet enjoyment. ■ Focal points of visitor interest notably Mam Tor, Kinder Scout, Chatsworth House, Ladybower Reservoir and the Longdendale Trail.
Rich evidence of the long history of human activity within the NCA demonstrating considerable activity from pre-historic times to the present day.	■ Extensive Mesolithic remains underlying the deep peat and evidence of burial activity in the form of pre-historic barrows. ■ Remains of the bronze age/iron age hill fort of Mam Tor and many other important heritage assets. ■ 217 Scheduled Monuments and 1,239 listed buildings within the NCA. ■ Evidence of former packhorse routes and Roman roads across the moorland plateau, now utilised as footpaths and access tracks. ■ Large numbers of defunct quarries, historically used for the extraction and working of stone to form the distinctive millstones. In some places for example in Longdendale and above Hathersage, worked millstones can be seen abandoned adjacent to quarry sites.

Landscape opportunities

- Conserve the open moorland plateau with its extensive views and its sense of tranquillity and remoteness, while maintaining accessibility from adjacent urban areas and the sense of ownership felt by local people.
- Manage the contrasts between enclosed lowland pasture, wooded valleys, upland enclosed pasture and the open moorland.
- Manage and promote the clear links between the land use and the underlying geology.
- Protect and conserve the archaeological evidence and historic features including burial barrows and other heritage assets, vernacular architecture and drystone walls and field patterns and seek a strong network of public rights of ways, linking key landscape features.
- Plan for the restoration of traditional buildings and drystone walls and ensure the unity of building materials and styles and traditional building techniques, especially in areas of new development.
- Conserve the mosaics of moorland habitats and areas of blanket bog in good condition and ensure water resources and water quality is maintained through appropriate management of habitats.
- Manage the visual impact of infrastructure such as overhead power lines, telecommunications and transport routes.
- Restore traditional buildings and drystone walls.
- Protect and expand as appropriate the existing broadleaved woodland, especially clough woodland.
- Manage the moorland habitats, including dwarf shrub heath, blanket bog, gritstone edges and boulder slopes, to enhance biodiversity and protect peat soils; and manage the important habitats away from the moorland plateau including, broadleaved woodland, upland meadows, flushes and other wetland habitats.
- Manage access, to allow people to enjoy the remoteness, tranquillity and general accessibility of the NCA while also ensuring the most sensitive sites and habitats improve their condition.
- Promote interpretation of the landscape and the surviving historic evidence from all periods and manage the extensive archaeological evidence and historic sites, especially where soil erosion and scrub and bracken threaten to damage or destroy the site.
- Restore blanket bog and eroded peat on the moorland plateau to enhance biodiversity, maintain and enhance carbon storage and improve water quality and safeguard the archaeological resource.
- Enhance and expand semi-natural woodland habitats and associated species where appropriate such as in cloughs, suitable areas of upland pasture, riparian zones and bracken beds.
- Increase area of in-bye pasture and lowland grassland under low intensity management to enhance breeding habitat for wading birds and restore traditional hay meadows and other species-rich grassland.
- Improve access by ensuring that paths are maintained and well signposted, and that some surfaced paths are provided for use by all levels of ability and interest at key locations.
- Maintain the diversity and integrity of geological and geomorphological features within the NCA and enhance their value for interpretation, education and visual amenity.

Ecosystem service analysis

The following section shows the analysis used to determine key Ecosystem Service opportunities within the area. These opportunities have been combined with the analysis of landscape opportunities to create Statements of Environmental Opportunity.

Please note that the following analysis is based upon available data and current understanding of ecosystem services. It does not represent a comprehensive local assessment. Quality and quantity of data for each service is variable locally and many of the services listed are not yet fully researched or understood. Therefore analysis and opportunities may change upon publication of further evidence and better understanding of the inter-relationship between services at a local level.

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Food provision	Sheep and cattle rearing	This is an important area for rearing livestock. Soils are poor and there is little opportunity for arable crops due to, climate, topography, altitude and steep slopes; 95 per cent of the land is Agricultural Grade 4 or 5[1].	Regional	Livestock production is the dominant agricultural system in this NCA and has a strong association with the area's cultural services. In many locations well managed livestock production systems have the potential to increase the overall food provision of this NCA while benefiting many of the other key ecosystem service. However, inappropriate stocking regimes (such as too many, or too few, livestock at periods within the grazing calendar), with insufficient management and husbandry may have a significant detrimental effect on many key environmental services including biodiversity, soil erosion, water quality and climate regulation.	There are opportunities to work with land managers and the farming community to consider how and where to increase the overall carrying capacity of livestock within the NCA, to afford increased food provision while avoiding adverse impacts on other services. In addition, opportunities exist through mechanisms such as the Peak District Environmental Quality Mark, to enhance the marketability of products through environmental standards.	**Food provision** **Climate regulation** **Biodiversity** **Regulating soil erosion** **Sense of place/ Inspiration**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Timber provision	Woodland cover	Though 10 per cent of the NCA is covered by woodland much of this is semi-natural on steep clough sides making it difficult to utilise. There are significant blocks of plantation woodland associated with water capture and storage in the adjacent reservoirs and these provide a source of timber.	Local	Most broadleaved woodland within the NCA is on steep valley sides or in cloughs which has contributed to the lack of management. With much of the land unsuitable for woodland (due to extent of other important habitats) or used for livestock rearing and sporting interests, there are limited places for woodland creation. However, opportunities have been identified to restore plantation on ancient woodland sites (PAWS) and extend cover of native woodland in appropriate locations, and to continue or reinstate traditional forms of woodland management. Woodland creation would need to avoid bodies of deep peat, and avoid impacting on habitats suitable for twite or other sites of biodiversity value. Land managers would also need to ensure that new woodlands are created where they sit well with landscape, biodiversity and historic environment interests.	There is an opportunity to increase woodland cover without negatively impacting on the protection of other attributes/services, and this could have positive benefits to some other services such as regulating climate change, water flow (flooding), soil erosion and biodiversity. Improving the management of the existing woodland resource would allow the extraction of useful timber and support and encourage traditional management practices (for example coppicing) while also increasing carbon sequestration and improving wildlife value.	**Timber provision** **Regulating water quality** **Climate regulation** **Regulating soil erosion** **Biodiversity**
Water availability	Upland streams Blanket bog High levels of precipitation. Reservoirs	This NCA is a valuable drinking water catchment area, and contains a large number of reservoirs, such as in the Longdendale and Derwent Valleys. These provide drinking water to adjacent NCAs and distant conurbations such as Manchester, Sheffield, Derby and Leicester. Many fast-flowing, streams drain the moorland plateau and the headwaters of many rivers including the Derwent, Don, Noe, Goyt and Etherow (the latter are both tributaries of the Mersey) rise in the NCA. In addition, the large expanses of blanket bog present in the NCA store and slowly release large quantities of water. Currently the contribution this service makes can be reduced when vegetation is damaged or removed preventing the bog habitat functioning correctly.	National	High rainfall combined with impervious rocks suitable for reservoir construction makes the area hugely important for providing clean drinking water for adjacent conurbations. Key to water availability is the upland habitats found within the NCA (for example blanket bog, and woodland) and ensuring land management practices are appropriate. There is significant scope for improving the quality and extent of correctly functioning blanket bog which will help in intercepting and storing increased volumes of water. Most abstraction in the NCA is for public water supplies and water available for other requirements is severely limited. For example, there is no water available in the rivers Alport and Ashop, and the Noe is over-abstracted. The River Derwent as a whole is over-licensed and as a result no water is available in all tributaries to protect flows in the Derwent[4]	Continue to restore peatland habitats on the moorland plateau and lowland wetlands to improve water storage capacity and mitigate flood risk, reduce soil erosion and improve water quality, climate regulation, habitat networks and ecosystem resilience to climate change. Seek opportunities to block moorland grips, to restore the hydrology and blanket bog habitat. Ensure that moorland habitats, especially blanket bog, are well vegetated and under good environmental management, increasing the capacity of habitats to retain water, while respecting heritage assets.	**Water availability** **Regulating water quality** **Biodiversity** **Sense of place/ inspiration** **Sense of history**

4 Environment Agency: The Derbyshire Derwent Catchment Abstraction Management Strategy (January 2006)

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Genetic diversity	Rare breeds	There is a number of Derbyshire Gritstone sheep flocks within the NCA. This breed is one of the oldest upland sheep breeds but is declining in number. In addition, many of the pedigree animals are found in other upland NCAs such as the South Pennines.	Local	Rearing rare breed livestock helps to conserve the native genetic resource: they are often required in conservation grazing to restore semi-natural habitats, and offer opportunities to market quality niche food products.	Support sustainable farming of rare breed livestock and enhance management of semi-natural habitats through maintaining and where appropriate increasing stock numbers within extensive grazing systems; develop local markets for rare breed food products.	**Food provision** **Genetic diversity** **Climate regulation** **Sense of place/** **Inspiration** **Biodiversity**
Biomass energy	Woodland cover	The existing woodland cover offers limited potential for the provision of biomass on a commercial scale, through bringing neglected woodland under management. There may however, be potential to use the by-products from commercial forestry management of plantation woodland. Physical constraints mean that the Dark Peak is largely unsuitable for growing energy crops.	Local	Generally the NCA is unsuitable for energy crops though small areas on shallow slopes or in sheltered valleys may present opportunities, provided the effects of scale and pattern are carefully considered. For information on the potential landscape impacts of biomass plantings within the NCA, refer to the tables on the Natural England website[5].	There are opportunities to increase the level of biomass production in the NCA by ensuring that existing woodlands are managed to produce surplus timber which could be used to provide local sources of environmentally sustainable timber products and fuel, though this is likely to be limited in scope due to the scale of woodlands and access issues. There are also limited opportunities to increase biomass production via energy crops but this would have to be small scale and take account of the wider landscape to ensure it did not have a negative impact on its character or key characteristics such as heritage assets (for example obscuring stone walls, standing out against pasture land).	**Biomass energy** **Biodiversity** **Sense of place/ inspiration**

5 www.naturalengland.org.uk/ourwork/farming/funding/ecs/sitings/areas/051.aspx

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Climate regulation	Carbon-rich deep peat soils Moderate woodland cover High percentage semi-natural vegetation cover	Significant climate regulation is provided by the large expanses of deep peat associated with the blanket bog and upland heath (37,000 ha or 43 per cent of the NCA) habitats which generally have a carbon content of 20-50 per cent[6] and provide particularly high levels of carbon storage. Other soils are also important for carbon storage, but these are much more limited in extent than peat and therefore are of lesser importance when considering climate regulation The existing woodlands perform a role in the sequestration and storage of carbon, though this is however limited due to the relatively low woodland cover of 10 per cent.	International	The vast expanses of deep peat soils within the NCA are very important because of their role in the storage of carbon and other greenhouse gases. Unfortunately these soils have been extensively damaged by atmospheric pollution and historical land use resulting in large areas of bare and actively eroding peat. This reduces the ability of habitats like blanket bog to store carbon. The ability of the habitat to actively store and sequester increased volumes of carbon dioxide from the atmosphere is currently impaired by the damage caused by historical pollution and loss of vegetation cover. This can be improved by restoration efforts aimed at recreating functioning blanket bog or other habitat types on un-vegetated ground. As a result, the conservation and management of soils and vegetation to increase carbon storage are hugely significant. Bare and eroded areas of peat need to be re-vegetated with appropriate flora and any activities which may damage these areas should be restricted, for example planting trees, the creation of tracks, soil compaction and unsustainable burning regimes. In addition, it is important to ensure that the existing woodlands are in good management so that their role in sequestering and storing carbon is enhanced. The area of woodland cover could be expanded where appropriate.	Ensure that all areas of blanket bog are under good environmental management which improves the habitat's ability to actively sequestrate CO2 from the atmosphere, while retaining significant volumes of green house gases in storage. Prioritise the restoration of bare and eroded peatland habitats. Encourage sustainable grazing regimes on permanent pasture with a low input of artificial fertiliser. Create new woodland where this sits well alongside landscape, biodiversity or historic environment interests. Seek opportunities to extend areas of floodplain, introducing permanent grassland and wet pastures.	**Climate regulation** **Regulating water quality** **Regulating water flow** **Biodiversity** **Regulating soil quality**

6 http://publications.environment-agency.gov.uk/PDF/SCHO1009BRDG-E-E.pdf

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating water quality	Rivers Soils Semi-natural habitats	The majority of rivers in the NCA have been assessed as either 'moderate' or 'poor' ecological quality, though some have also been assessed as 'good'. Many rivers suffer significantly from artificial modification which is one of the main reasons for the moderate or poor designations (under Water Framework Directive requirements). In addition, diffuse pollution from agricultural activities and other sources can impact the quality of the water The chemical status of surface waters is generally good or has not been assessed, whilst that of groundwater is poor[7]. The NCA does not fall within a Priority Catchment designated under Defra's ECSFDI[8].	Regional	The generally steep nature of the upland streams and watercourses running off the plateau, combined with significant areas of degraded habitats result in high levels of run-off, especially after heavy rainfall. High rainfall and bare peat both help to increase rates of erosion which result in increased sediment loading and dis-colouration of the downstream rivers. Blanket bog peat helps regulate water quality. Blanket bog vegetation helps prevent oxidation of bare peat which in turn causes the peat to be liable to erosion affecting water quality in rivers and causing discolouration of water. Increased sediment loading can cause problems with the water quality. For example, sediment can reduce the storage capacity of reservoirs and can hugely increase costs for water companies when they have to treat water to remove suspended sediment and colour prior to it entering the public water supply. Many of the rivers suffer from heavy modification, and physical modifications designed to help the supply and storage of water and for flood protection are key reasons for failures in the catchment[9]. Organisations are identifying and working at solutions (for example fish passes) that might help to alleviate some of these issues.	Re-vegetate all bare peat and improve the management of degraded peatland habitats, managing existing moorland vegetation to enhance its biological condition, reducing the degree of water colouration within associated watercourses. Establish permanent grassland (non-intensive,) scrub and woodland along cloughs, steep valley sides and near watercourses. There are also opportunities to undertake modifications of water bodies to improve their ecological status. For example, through the creation of fish passes.	**Regulating water quality** **Regulating soil erosion** **Regulating water flow** **Climate regulation** **Regulating soil quality** **Sense of place/ Inspiration** **Biodiversity**

7 http://publications.environment-agency.gov.uk/PDF/GENE0910BSQS-E-E.pdf
8 www.naturalengland.org.uk/ourwork/farming/csf/cgs/catchments.aspx#humber
9 http://publications.environment-agency.gov.uk/PDF/GENE0910BSQS-E-E.pdf

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating water flow	Rivers and watercourses Upland soils Semi-natural vegetation	Large areas of the moorland plateau currently suffer from degradation of functioning blanket bog which can result in rapid surface flow during periods of rainfall. As a result of this, the upland streams, which rise on the moorland edge, have a steep gradient, and as a result tend to be fast flowing, can show considerable variation in flow rates after heavy rain[8] This causes the River Derwent, and its upland tributaries, to respond quickly to rainfall events which can result in the rapid onset of flooding in downstream settlements. Impervious shales in the valley bottoms can also add to this problem preventing the percolation of water which results in greater levels of overland flow. The Environment Agency estimates that over the next 50 to 100 years, up to 445 properties will be at risk in a 1 per cent flood event as a result of climate change.	Regional	Currently areas of bare peat and degraded habitats, on the moorland plateau, limit how much water flow can be regulated from these areas as infiltration and a reduction in evapotranspiration does not usually occur. This can result in significant amounts of surface runoff from these areas. However, sensitive management of the upper catchment and the restoration of functioning habitats will increase storage capacity and will increase the time that water is held on the land. This will help to reduce the velocity and volume of floodwater in rivers as they flow off the high plateau. Improving the management and control of flood waters in this NCA will benefit urban areas and settlements both within the NCA and downstream, in other NCAs.	Slow down run-off from the moorlands by blocking grips to wet moorland areas and help restore functioning blanket bog and increasing the storage capacity of the habitats. Undertake tree planting in cloughs and steep sided valleys, where appropriate, to help stabilise soils and slow down run-off. Avoid inappropriate development in flood risk areas and minimise runoff from new development and minimise impacts on landscape and historic environment assets.	**Regulating water flow** **Regulating soil erosion** **Regulating water quality** **Water availability** **Climate regulation** **Regulating soil quality** **Biodiversity**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating soil quality	Blanket bogs, and other peat habitats Upland semi-natural woodland	The slowly permeable, wet, very acid upland soils and the blanket bog peat soils contain significant volumes of organic matter. This is retained where extensive grazing and sustainable burning regimes are in place. However, these soils. are at risk of losing their organic matter through a combination of unsustainable management practices, climate change and soil erosion.	Local	On the moorland plateau where peaty soils predominate, measures to restore the hydrological profile of peatland habitats should be prioritised. Increasing water retention in given locations will mitigate soil erosion, reduce the severity of flood events, and ensure good vegetative cover, and slowly increase the organic content of the soil. Unsustainable burning practices can also have a significant negative impact on soil quality. It is important to minimise compaction and / or capping risk on wet soils, which can arise from over-grazing, trafficking or other mechanised activities. These will tend to exacerbate run-off problems as well as damage soil structure.	There are opportunities to continue with the restoration of damaged and degraded areas of peat as well as manage functioning moorland habitats to safeguard the carbon-rich soil and encourage and re-introduce peat forming vegetation. There are also opportunities to continue with/instigate new sustainable management of pastures and meadows on the moorland fringes as this will encourage the build up of organic matter and can also help reduce the level of poaching by livestock. Avoid carrying out mechanised activities that will cause compaction of soils, especially in wet conditions.	**Regulating soil quality** **Regulating soil erosion** **Climate regulation** **Water availability** **Regulating water quality** **Regulating water flow** **Biodiversity** **Food provision** **Sense of place/ Inspiration** **Biodiversity**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating soil erosion	Peat soils Blanket bog, woodland and other semi-natural vegetation types High coverage of semi-natural habitats Low percentage cover of cultivated land. .	The extensive deep peat soils of the plateau are at risk of significant erosion and loss of particulate organic matter where surface vegetation is highly modified, damaged or lost, resulting in bare ground, which is then markedly more susceptible to the erosive effects of rainfall/water, frost and wind. Drainage of these soils can also result in the loss of increased amounts of material through oxidation which causes the organic matter of the soil to decompose rapidly. Also at risk of erosion are soils on the lower slopes of the moorland or away from the plateau, especially on moderately or steeply sloping ground where cultivated or bare soil is exposed. This is exacerbated where organic matter levels are low or where soils are compacted.	National	The critical issue for this service is to protect the peat soils on the upland plateau through appropriate management. Currently, where vegetation cover is still intact and where the underlying peat is wet enough, the contribution made by this service is significant. However, there are areas of the plateau with extensive bare peat which continues to erode at a rapid rate. Areas of bare or eroded peat and where blanket bog habitats no longer function effectively, impacts on the ability of this resource to provide other ecosystem services. To increase the contribution this service makes it is vital that the most appropriate types of vegetation are in-situ, especially on peat soils helping them to retain water and deliver a range of other ecosystems services. Retention of peat also protects underlying heritage assets, particularly Mesolithic remains on the high moors and bronze age remains on the lower shelves. In addition, it is important that all habitats are not overgrazed, under grazed, unsustainably burned or subjected to trampling, poaching or damage by mechanised activities to minimise soil erosion. Risks also arise with soils on steep slopes, which are vulnerable to rapid run-off during storm events, and to free draining soils near watercourses that are subject to vegetation loss and poaching or other damage but these are limited in extent.	Take steps to restore bare and eroded peat. Manage the moorlands to ensure good vegetative cover and reduce run-off rates by restoring the hydrology and ecology of peatland habitats and securing sustainable grazing and burning management. Seek opportunities to establish permanent grassland and woodland along cloughs, steep valley sides and near watercourses. Secure sustainable grazing and cutting management of in-bye land and lowland grasslands in order to maintain soil structure and organic matter, limit poaching and compaction, improve infiltration, reduce trampling of watercourse banks and prevent channelling, run-off and flooding. Manage recreational pressure and minimise erosion of footpaths and educate visitors to minimise the risk of wildfire events.	**Regulating soil erosion** **Regulating water quality** **Regulating water flow** **Regulating soil quality** **Biodiversity** **Climate regulation** **Sense of place/ Inspiration**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Pollination	Semi-natural habitats	With limited crops and orchards requiring pollination, this service is of limited importance for food production in this NCA.	Local	Of value largely to biodiversity rather than food production in this NCA.	Enhance fell habitats through appropriate grazing regimes, which increase the diversity of the habitat mosaic. Plan for creation of a connected habitat network, creating and restoring buffers, corridors and stepping stones to link valley grasslands, wetlands, woodlands and fells.	**Food provision** **Biodiversity**
Pest regulation	N/A	N/.A	N/A	N/A	N/A	**N/A**
Sense of place/ inspiration	Geology and landforms Historic assets Semi-natural habitats	The unique sense of place is defined by its strong landform with large scale, open and expansive upland landscape contrasting with moorland fringes of pastures, narrow valleys with wooded sides, and small towns and villages. The majority of the holdings also include areas of in-bye land which is characterised by small fields enclosed by stone walls, in direct contrast to the large open expanses of moorland. Feelings of inspiration and escapism are likely to be associated with the long distance, panoramic views from exposed upland moors and pasture. The open moorlands with the dramatic crags, the pastures and the deeply cut valleys are also inspiring, with the presence of birds such as curlew, snipe, golden plover, redshank, lapwing and twite contributing to the experience as well as to the wildlife richness of the area.	National	This NCA has a strong and distinctive character which can be maintained and enhanced through careful management of the natural and built environment. The NCA is valued for the sense of escapism it provides people, especially in the surrounding urban areas such as Sheffield and Greater Manchester.	There is scope to protect the contrast between open expansive moorlands, walled pastures of the moorland fringes, and enclosed wooded valleys. There are also opportunities to increase interpretation and understanding of the geology and landforms for visitors to the national park which will further enhance the sense of place service provided by the NCA. Opportunities exist to retain and restore patterns of drystone walls and the vernacular architecture of farmsteads and field barns. There are opportunities to ensure that development respects local settlement patterns and building materials, and to avoid the loss of historic evidence through insensitive development. There is scope to support upland farming that underpins the land uses of the area and sustain the archaeological and landscape resource.	**Sense of place/ Inspiration** **Recreation** **Sense of history**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Sense of history	Archaeological features	There is an abundance of prehistoric settlement sites on the open moors and moorland fringe: enclosed and unenclosed farmsteads, ring cairns, bowl barrows, small, irregular medieval fields surrounded by stone walls, strip fields, mine remains and linking ancient routeways. On the moors historic packhorse trails crossing moorland tops are still evident and form part of well-used trails, while on the moorland fringes strong patterns are created by the drystone walls that enclose the fields. Many buildings are constructed in characteristic local gritstone with slate roofs. There is evidence of local quarrying which contrasts with pre-industrial development such as older settlements and farmsteads on the moorland fringe. The large and well known water reservoirs contribute to a strong visible sense of history.	Regional	The strong character of this NCA is heightened by the clear evidence of past human use and visual links with this past use (settlement and field patterns, local building materials). Currently degradation of peat habitats is threatening this resource and protecting this link, with the past and enhancing our understanding of this will further strengthen the character of the area.	Retain the well-preserved archaeological resource by ensuring appropriate land management and development, managing the impacts of recreation and controlling encroachment of damaging scrub or bracken. Promote and retain traditional crafts and techniques. There are also opportunities to ensure that the restoration of vernacular buildings is carried out using local styles and appropriate materials, and that land management practices and developments such as tracks do not damage archaeological evidence or historic features. There are many opportunities to use the network of paths to gain access to, reveal and interpret the area's rich history.	**Sense of history** **Sense of place/ Inspiration** **Recreation**
Tranquillity	Landform Semi-natural vegetation	The area is an important resource for tranquillity with 63 per cent of the area classified as 'undisturbed' according to the CRPE Intrusion Map 2007 – though this is a decrease from 86 per cent in 1960. The NCA is an especially important resource in terms of tranquillity and provides an area of escape for many people including those from the surrounding heavily populated urban areas including Huddersfield, Manchester, Chesterfield and Sheffield.	National	Despite the reduction in tranquil areas, this NCA is extremely important in providing experiences of wild open spaces for the many people living in the adjacent conurbations. Although recent development has occurred in the valleys, there remain many quiet and secluded areas within the NCA.	There are opportunities to retain the open, remote and tranquil character of the moorland plateau and moorland fringes by protecting them from inappropriate development	**Tranquillity** **Sense of place/ Inspiration** **Recreation**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Recreation	Public rights of way network Open access land	The NCA offers a network of rights of way totalling 1,311 km, at a density of 1.5 km per km2 as well as a significant area of open access land covering 46,180 ha or 53 per cent of the NCA. Further opportunities for recreation are provided by the Pennine Bridleway and Pennine Way. In addition to this, the whole area is a major draw for recreation and tourism with the Peak District National Park accounting for 84 per cent of the NCA.	National	The NCA is surrounded by urban populations and with easy access by road, rail and bus, there are many opportunities for access and recreation. This is illustrated by the fact that the Peak District National Park (which constitutes approximately 84 per cent of the NCA) receives in the region of 22million day visits a year which is thought to make it the 2nd most visited national park in the world. There is still scope to improve the provision of a range of recreational opportunities here, and to provide interpretation of the many elements of the landscape.	There are opportunities to improve access by ensuring that paths are maintained and well signposted, and that some surfaced paths are provided for use by all levels of ability and interest at key locations. There are opportunities to provide interpretation of the landscape and its many features, especially historic features such as boundary stones, tracks, farms, canals, mills and reservoirs. There may also be opportunities to manage recreation to enhance other services, for example soil erosion, breeding bird numbers.	**Recreation**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Biodiversity	Habitats – Blanket bog Dwarf shrub Heath Semi-natural woodland Acid grassland Species Assemblages – Birds Lichens Invertebrates Vascular plants Bryophytes	SAC and SPA European designations currently cover approximately 49,406 ha or 57 per cent of the NCA while 40,443 ha (47 per cent) has been designated as SSSI. 55 per cent of the NCA or approximately 47,600 ha is currently recorded as being a priority habitat. Much of the nationally and internationally designated areas still suffer from historic atmospheric pollution and previous unsustainable management practices. In recent years however farmers, land owners and other organisations have been working over extensive areas of the NCA to restore affected habitats.	National	Improving the biological condition of the designated resource is likely to involve land management activities such as the restoration of the existing semi-natural habitats (especially blanket bog), restoration of natural hydrological systems and sustainable grazing regimes. These in turn have the potential to help increase regulating services such as regulating water quality and soil erosion, while also contributing to sense of place. In addition, the network of designated sites is the cornerstone of efforts to reduce fragmentation of habitats, create stronger ecological networks and allow our native habitats and species to adapt to climate change. Designated sites are also fundamental to long term monitoring and thus to our understanding of ecology and responses of organisms to environmental change.	Enhance habitats through appropriate grazing regimes, which increase the diversity of the habitat mosaic. Increase native woodland and tree cover across the range of woodland types and within conifer woodland. Plan for creation of a connected habitat network, creating and restoring buffers, corridors and stepping stones to link valley grasslands, wetlands, woodlands and the upland plateau. Restore rivers and their catchments to enhance water quality and resource, make space for natural development of rivers and control invasive non-native species. Enhance protected species populations through targeted habitat management and specific management measures, where needed. Integrate habitat restoration with actions to improve the state/supply of other key ecosystem services.	**Biodiversity** **Sense of place/ Inspiration** **Regulating soil erosion** **Regulating soil quality** **Regulating water quality** **Regulating water flow**
Geodiversity	Geological exposures and features Gritstone tors Gritstone edges Alport Castles and Mam Tor landslides	There are currently 8 nationally designated geological sites within the NCA and a further 5 mixed interest SSSI. 75 local sites of geological interest have been designated within the NCA.	National	Features and designated sites within the NCA (many of which are in the National Park) are exceptionally well used (including by schools and universities) and are very accessible allowing for interpretation, understanding and continued research into the geodiversity of the NCA. Exposure of these features also makes a positive contribution toward sense of place and sense of history.	Maintain views of geological features and exposures where appropriate, increase sympathetic interpretation of features, improve access to cuttings, quarries and other exposures of geological features, designate further Local Geological Sites as appropriate, to help improve understanding and enjoyment of geodiversity.	**Geodiversity** **Sense of place/ Inspiration** **Sense of history**

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