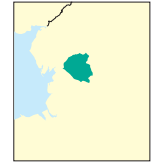


Yorkshire Dales



Key Characteristics

- Large-scale upland landscape of high, exposed moorland dissected by dales which are often deep.
- Striking contrasts between wild, remote moors and sheltered dales, each with its own distinctive character.
- Marginal agriculture arising from relatively high altitude and poor climate, creating a landscape of little or slow change.
- Visible evidence of historic land use arising from conservation of features from all periods.
- Millstone Grit plateaux of high moorland in the east contrasting with the Yoredale Series of alternating limestone, sandstone and shales in the north and west. The latter form typically stepped profiles to dalesides.
- Great Scar Limestone in the south and west giving rise to classic glacio-karst landscape with cave systems, outcrops, scars, gills, gorges and pavements.
- Pattern of bleak sweeping moorlands of heather or extensive blanket bog on plateaux, with rough grazing on upper slopes, permanent pastures on dales sides and fields cut for hay or silage on more fertile land in the bottom of the dales.
- Very strong patterns of dry stone walls, with very large rectilinear enclosures on most fell tops, much smaller enclosures in dales, and often older, irregular patterns around settlements.
- Numerous small, stone, field barns in all the dales but most notable in Swaledale, Wensleydale and upper Wharfedale.
- Vernacular character of gritstone and limestone buildings including also scattered farmsteads, particularly in the north and west, and small nuclear villages on valley floors, related to river crossing points and transport routes.

- Very limited tree cover, confined to villages, sycamore clumps around farmsteads, streamsides and steep slopes.
- Sparse, ancient, broadleaved woodlands on steep gill and dale sides.
- Widespread remains of historic mineral working especially lead mining.

Landscape Character

The Yorkshire Dales form part of the chain of Pennine uplands running up the centre of Northern England. The Dales are separated from the North Pennines by the Stainmore Trough faults and from the more industrialised Southern Pennines by the Craven faults. They differ from these adjacent Pennine uplands in that the influence of limestone is here greater than that of the acidic gritstone. From altitudes of over 600 metres, the land drops down towards the fertile Vales of York and Mowbray to the east, and to the low lying plains of Lancashire to the south-west, dividing the Dales from the Bowland Fells. To the north-west lie the older rock formations of the Lake District and surrounds.



CHARLES MEECHAM/COUNTRYSIDE COMMISSION

Malham Cove is probably the best known of the many limestone outcrops, cave systems, scars, gills, gorges and pavements which combine to create the classic glacio-karst landscape so characteristic of the Great Scar Limestone in the south and west of the character area.

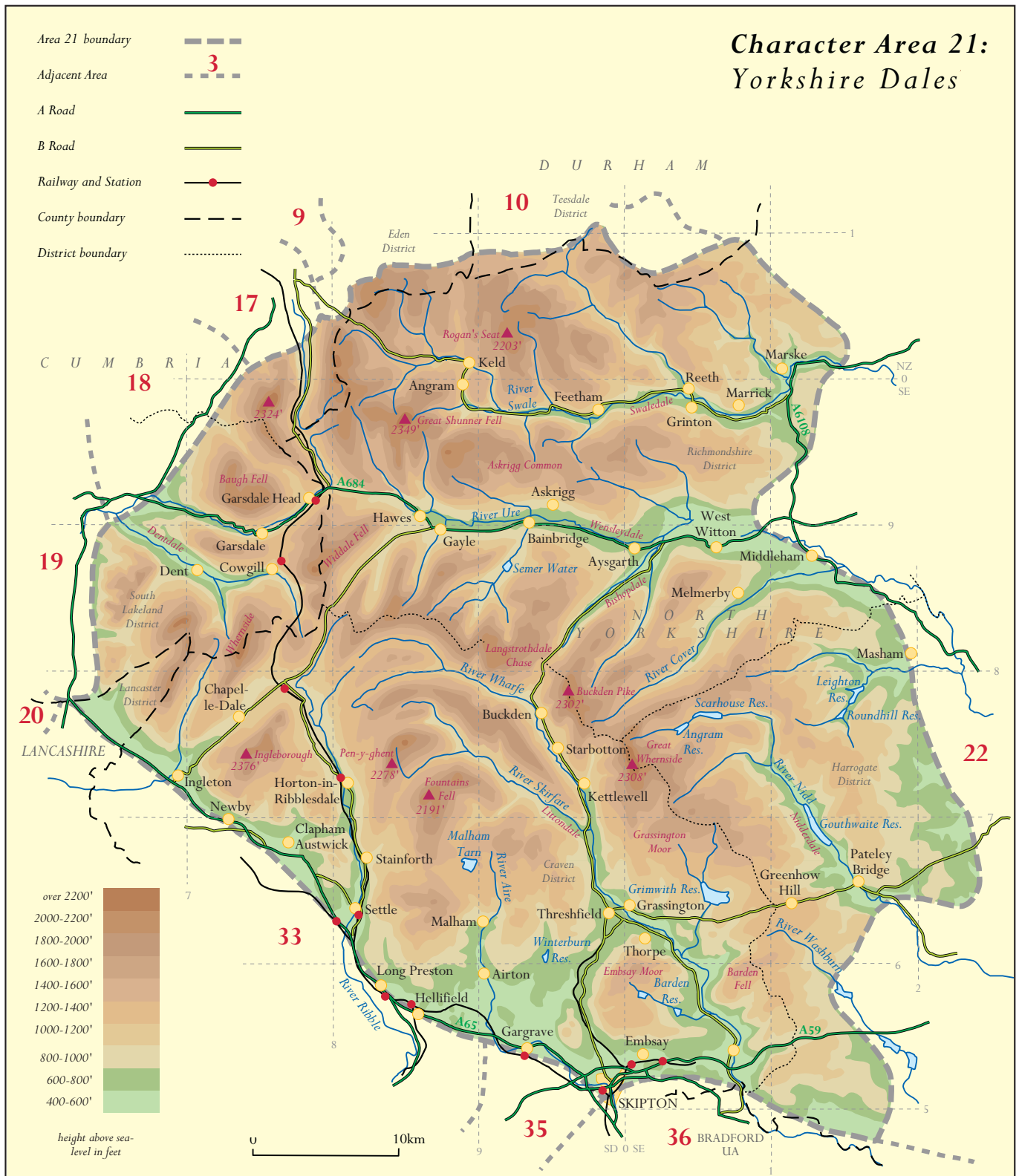


The unique character of the area stems from the characteristic pattern of underlying geology and a distinctive pattern of pastoral farming which has shaped the landscape for centuries. The relatively high altitude, short growing season and high rainfall has meant that the area has always had limited possibilities for agriculture, which is restricted to the rearing of livestock. A self-contained farming system, of small holdings based upon a flock of sheep and a few cattle, providing its own winter feed needs and using all grades of pasture, rough grazing and moorland to the fullest extent, has created the landscape and is an integral part of its character.

The close relationships between rock types, landform, climate and the resulting history of man's activities can be clearly seen in this landscape. Change has been slow and relatively limited in its effects and, as a result, evidence of man's activities has survived, from the earliest periods onwards, creating an overwhelming sense of continuity with the past.

The landscape is characterised by contrasts, especially between the dales below and the moors above. In the dales the environment is more sheltered and there are intricate patterns of walled fields, containing meadow grasses and

Character Area 21: Yorkshire Dales



wild flowers. Small villages and farmsteads, built of local stone, are tucked into sheltered corners often with clumps of trees protecting them from the worst of the elements. On the dalesides the network of walls continues with scattered stone field barns often appearing as distinctive features. The steepest slopes are frequently marked by the presence of sparse woodlands or sometimes open rock scree. Fast-flowing streams tumble down the slopes forming dramatic waterfalls where the harder rock is rougher and coarser. On the fell tops the grassland gives way to sweeps of heather moorland and cotton grass bog. Everywhere there are dramatic views of characteristic combinations of hillside, valley walls, and barns, punctuated by outcrops of rock, streams and trees, and enlivened by the colours and textures of wildflowers. This is the essence of the Dales landscape.

The area has a physical and cultural unity, and yet displays significant variation within its landscape. The glaciated karst landscape of the Great Scar Limestone dominates the landscape in the south and west notably around the Ingleborough area. The Craven faults are responsible for dramatic parallel scars in the south, giving rise to well-known features such as Giggleswick Scar and Malham Cove. The rocks of the 'Yoredale Facies' overlie the Carboniferous Limestone and form the moorland hills and plateaux which are divided by the intervening limestone dales.

The moors are high and wild, with extensive areas of rough grazing and very large, often hardly visible, walled enclosures. These high summits dominate the skyline above the dales, providing extensive views out over the enclosed land below and dividing one dale from another. There are extensive areas of heather moorland, especially in the south (Bolton Abbey), north (Swaledale) and in the east above Nidderdale. Here the Millstone Grit outcrops, notably in the unearthly shapes of Brimham Rocks where weathering has created almost sculptural features from the rock. The gritstone also influences the character of stone walls, barns and other buildings, distinguishing them from some of the more westerly moorland areas.

Each of the dales has its own distinctive character. In the north, Swaledale is perhaps the typical Yoredale valley, with its sweeps of heather moorland on the fell tops, its pattern of walls and field barns, flower-rich meadows and small tight-knit villages. Wensleydale is wider, with a more varied landform which creates some very enclosed areas. Bishopsdale is broad, with lines of trees and small plantations cutting across the dale, while Widdale has a rather bleak and forbidding character with rough grazing predominating and a number of rather incongruous conifer plantations. Wharfedale and Littondale demonstrate the typical Dales character of strong patterns of walls and field barns on the valley floors, with woodlands surviving on valley sides, and

compact villages of stone tucked into the hillsides next to winding rivers. Coverdale is quiet, dominated by rough grazing, with many small streams cutting down the hillsides while Dentdale, in the north west, shows the influence of wetter, milder conditions, with small fields bounded by hedges, rather than dry stone walls, contributing to a sheltered, softer, more domestic landscape.

Dales in the south and west reflect the influence of the underlying limestone. They are wide and open, with rugged outcrops of light coloured rock and pale green pastures, creating a distinctive combination of light and colour. Ribblesdale is affected by large quarries on the hillslopes, while Chapel-le-Dale reveals the underlying rock dramatically, with broad shelves of limestone on both sides. The hillsides, walls, and isolated buildings all have a unity of colour that creates a sense of openness and light.



A classic Yorkshire Dales landscape. The village of Kettlewell nestles in the sheltered, more fertile valley bottom of Wharfedale. A network of dry stone walled fields stretches up the hillside with small woodlands and occasional trees. Higher up, the grazing becomes rougher and there are patches of scree rock outcrops, etc before the high moorland plateau is reached.

Physical Influences

The predominant rock of the Dales is the Carboniferous Limestone, formed about 300 million years ago. This is overlain by 'Yoredale Facies' sedimentary rocks that are in turn overlain by Millstone Grit, which forms a capping to some of the highest hills. The region broadly coincides with the Askrigg Block in which Carboniferous strata are generally flat-lying, and not faulted or folded.

The Carboniferous Limestone comprises thick, strong, hard and compact beds of limestone interbedded with mudstone. The limestone is predominantly grey in colour, although it can vary from cream to dark grey and the familiar white colour of the exposed rock is due to the formation of a surface patina resulting from weathering. The prominent bedding planes of the rock can be seen in the locally extensive, but nationally rare limestone pavements along valley sides and in notable outcrops and crags.



CV CARTMAN/COUNTRYSIDE COMMISSION

Rivers such as the Skirfare, seen here at Arncliffe, form the focus for the many distinctive Dales which dissect the moorland landscape. Steep slopes are often well wooded but there is a need for good management and some potential for sensitive expansion of woodland cover in many Dales.

'Yoredale Facies' rocks (the name deriving from the rocks of this area) consist of repeating layers of alternating weak shales and hard sandstones and limestones, with thin coal seams. These give rise to the stepped topography, which is such a distinctive feature of dales such as Wensleydale, and creates the dramatic profiles of Ingleborough and Pen-y-Ghent. The bands of hard rock overlying softer rocks also give rise to numerous waterfalls often with large pools carved out in the softer rocks at their base. Further north, the sandstones are more prominent and are locally a source of flagstones.

The thick beds of hard sandstone in the Millstone Grit have resisted the forces of glaciation and form plateaux of high, exposed moorland, covered with heath and upland bog, including Grassington Moor, Barden Moor and Barden Fell in the south east, and Great Shunner Fell in the north-west.

With the predominance of limestone, there are few naturally occurring waterbodies. However, where the overlying Carboniferous rocks have been eroded away, inliers of the older rocks below occur often in the valley bottoms. These are the Silurian and Ordovician mudstones, siltstones and greywacke. They form the impermeable beds that underlie Malham Tarn and can be seen in part of Ribblesdale and Crummackdale.

All the different rocks have been eroded and smoothed by glacial activity; Wharfedale and Littondale show the classic

U-shape of glacial valleys. Deposits of moraine resulted in the creation of Semer Water while elsewhere boulder clay has been deposited and shaped into drumlins by the action of glaciers. The extensive drumlin field around Ribblesdale, for example, is a remarkable hummocky landscape.

Glacial activity over the underlying limestone has created the distinctive features of the classic glacio-karst landscape, with outcrops, scars, gorges (some with tufa deposits, as at Gordale Scar) and erratics. Underneath, revealed only by sinkholes and potholes, are some of the most extensive cave systems in Europe.

Ore deposits, principally of lead and barite, occur in fissure veins associated with faults in Carboniferous rocks. Mineralising occurs mainly between Settle and Pateley Bridge, along Wharfedale and Nidderdale to Wensleydale and Upper Swaledale.

Historical and Cultural Influences

Change in this landscape has been slow and of limited impact and as a result evidence remains of human activities from the earliest inhabitation onwards. Recent work has revealed the area to be extremely rich in archaeological remains, many of which are clearly visible within the landscape. Among the most obvious are the parallel strip lynchets on some dale sides which are of Anglo-Saxon or Roman origin.

The names of the villages and farmsteads give an indication of their origins. In the north and west Norse tribes, who invaded the area in the 9th and 10th centuries, set up large farmsteads with winter and summer pastures often indicated by the names *-sett*, *-thwaite*, and *-scale*. Examples include Appersett and Souther scales. Anglo-Danish names, ending in *-by*, *-thorpe*, *-ley*, *-ton*, *-ing*, such as Grassington, tend to predominate in the south and east of the area. These settlements were commonly small villages adjacent to the open fields which all villagers shared. Livestock were moved to higher ground during the summer, while the strip fields were cultivated, and evidence of this pattern can still be seen around Kettlewell and Starbotton in Wharfedale in the long, narrow, walled enclosures formed from the original strips.

The most obvious historic feature of the Dales is, however, the network of walled fields that spreads across all valleys and hillsides. The fields close to the settlements are small, often irregular, and date back to the 17th century or earlier when the open field system gave way to a system in which each villager farmed a smallholding. These smallholdings consisted of a few fields in the valley bottom and on the side slopes, with a barn for the over-wintering of a small herd of cattle, resulting in the numerous scattered field barns. Walled tracks were created, leading up from the valley bottom to the fell tops, giving access

to the open moorland for summer grazing. Larger enclosures resulted from the period of Parliamentary Enclosure, from the 18th century onwards, whilst the largest enclosures, defined by long, straight walls striding across the rugged hilltops, arose from later enclosures still, in the 19th century. These effectively enclosed the majority of land leaving only some fell tops as open grazing land, particularly in the north.

Activities other than farming have also influenced the landscape. Lead mining has long been an integral part of the primarily agricultural way of life in the Dales with records of mining in Roman times at Greenhow. In the 18th and 19th centuries, when the population was probably at its highest, many farmers combined working in the local mine with running a smallholding. The mining was always small-scale, but evidence of it can still be seen, from the ruins of smelting mills and chimneys to bell pits and spoil heaps, notably in Swaledale and Arkengarthdale and above Grassington in Wharfedale. Small lime kilns built into the hillside are also common. Thin coals in the Millstone Grit were worked locally on a small-scale, for example at Fountains Fell. Today, the primary mineral extraction is the quarrying of limestone and sandstone. Also reservoirs and water gathering grounds have had a major influence on the landscape primarily in Nidderdale.

Transport also played its part and today the remaining network of stone-wall lined roads and tracks is a legacy of the old routes of sheep droves, coal lanes and pack-horse tracks. The Settle-Carlisle railway, opened in 1876, runs up Ribblesdale and continues northwards through the landscape, often in steep cuttings but also passing over huge viaducts, the most spectacular being the 24-arch viaduct at Ribblehead.

Because of its unique landscape qualities, the area has long attracted artists and writers, the most famous being JM Turner, who toured and sketched here in 1816. There is also a striking painting of Gordale Scar, painted by James Ward in 1812. Adam Sedgewick (1785-1873), the geologist, was based in Dentdale, and Reginald Farrer (1880-1920) a botanist who brought many exotic plants to England, was born and brought up at Ingleborough Hall, Clapham.

Also, the poet Thomas Gray visited Gordale Scar in 1769 and the first tourist guide for the area (Aysgarth Falls) was written by Bishop Pocock as early as 1751.

Buildings and Settlement

As a result of its marginal agriculture, the area has always been sparsely populated. During the 12th and 13th centuries, the large northern monasteries, in particular Fountains and Jervaulx Abbeys, extended their influence and established outposts in the Dales from which to manage their extensive sheep runs. But it was not until their dissolution in the 16th century, and the establishment of freeholders who began to

prosper, that substantial farmsteads were built. It is the vernacular, domestic, stone buildings of the farmsteads and small villages from this period that give the area much of its character. Always built in local stone, Millstone Grit sandstone or Carboniferous limestone, with sandstone flags for roofing, the farms, barns and villages appear to have grown organically out of their landscape. Churches tend to be unobtrusive, with chapels a feature of many villages.

Land Cover

The traditional system of farming, which relies upon grazing spread between the fertile valley land and the upland rough grazing, has created the distinctive pattern of land cover. Flocks of sheep are grazed on the hill tops in the summer and brought down to the sheltered valley bottom in winter and for lambing in the spring. A few cattle are over-wintered in the field barns and fed with hay. Their manure is used to fertilise the hay meadows. Stock are moved out of the valley grassland onto the hills in late spring to allow crops of hay to be produced from the grassland. This system has resulted in the exceptionally beautiful, flower-rich meadows in the dales combined with the rough grazing and moorland at higher altitudes.



SIMON WARNER/COUNTRYSIDE COMMISSION

The famous Tan Hill Inn sits amid the bleaker and more exposed moorlands which are found on the harder Millstone Grit sandstones in the north and east of the character area.

Pressure of grazing, including the practice of allowing livestock to find shelter under trees where they graze out any regenerating trees or shrubs, has prevented the development of any substantial tree cover. Those woods which do occur are remnants of the formerly more extensive ancient, broadleaved woodland now confined to steep valley sides. In such difficult conditions, tree growth is slow and the canopy tends to be very open, allowing the development of a rich ground flora.

Extensive areas of moorland, particularly in the east around Nidderdale and in the north (Swaledale), are managed for

grouse shooting and are some of the prime grouse moors of England. Here the heather is carefully managed by controlled burning, creating a heather mosaic of different heights and ages. In the west where the rainfall is higher, the moors are covered by blanket bog, with the typical vegetation of heather and cottongrass.

On the limestone, pastures of close-cropped grass on thin soil support a range of flowers, including mountain pansy. Where underground water seeps out, flushes occur which give rise to a rich wetland flora.



SIMON WARNER

The valley bottoms are the most fertile land. Traditionally used as hay meadows, they are divided into small fields, many containing distinctive, small field barns. Changes in agricultural practice mean that this landscape now needs support from conservation schemes if we are to maintain it into the future.

The Changing Countryside

- Intensified management of enclosed grasslands in the dales, loss of floristic diversity and drainage of wetlands.
- Related dereliction of field barns, which may then be stripped of their roofing flags. A number are in critical condition and their loss will lead to a significant change in the landscape.
- Increasing numbers of livestock, combined with reduced management of grazing regimes, leading to conversion of heather moorland to grass moor and rough upland grazing, both by overgrazing and by lack of moorland management. ‘Ranching’ of stock also results in loss of internal stone walls and new fences on moor tops both to separate flocks and, increasingly, to exclude grazing in order to encourage heather regeneration.
- Unsatisfactory management of some moorlands, including gripping and localised over-burning.
- Decline and dereliction of small broadleaved woodlands through lack of management and use as winter shelter for livestock leading to lack of regeneration.

- Increase in the number of large farm buildings, especially to over-winter stock, and slurry tanks.
- Continuing pressure to quarry limestone for roadstone and more specialist uses in chemical and other industries.
- Increasing levels of tourism leading to more traffic and loss of character due to inappropriate road improvements, damage to verges, erosion of paths and surfacing of paths in remote upland areas.
- Decline in production of hay and its replacement by round bale silage.
- Conversions of farms and barns for residential and tourism use, which can have a suburbanising effect on the landscape as well as changing the character of the local community.
- Damage to limestone pavements due to overgrazing by stock and rabbits, and use in rockeries.

Shaping the Future

As the planning and management authority for most of the Character Area, the Yorkshire Dales National Park Authority is already addressing many of these changes to the landscape in a positive way. This is happening most notably through the implementation of the Dales Woodland Strategy; the Farm Conservation Scheme, which assists farmers to integrate their day-to-day activities with conservation measures, and the Barns and Walls Conservation Scheme. Nidderdale, in the south eastern part of the Character Area, is designated as an Area of Outstanding Natural Beauty and a Joint Advisory Committee is pursuing positive management through the development of a management strategy.

There is also additional intervention through agri-environment schemes such as the Pennine Dales Environmentally Sensitive Area Scheme, which covers some of the dales, through Countryside Stewardship and through English Nature’s Wildlife Enhancement Scheme.

Nevertheless, there is a continuing need to address the distinctive character of the landscape and, in particular, to consider:

- less intensive, more sustainable farming practices across the whole of the Character Area in order to integrate multi-purpose landscape, conservation, recreational and sporting objectives with agricultural production;
- the unique pattern of flower-rich meadows, walls and barns;
- grazing pressures on moorland associated with degraded areas of heather and a declining vegetation diversity;
- the improved management of some moors to ensure no further loss of heather and other dwarf shrubs;

- the management and regeneration of existing semi-natural broadleaved woodlands;
- the overall extent of woodland cover – to look at ways in which an increase would be consistent with the character of the area;
- locally prominent and incongruous conifer plantations to increase their landscape, nature conservation and recreation interest;
- more sustainable forms of ‘green’ tourism, including means of travel, to ensure that visitor aspirations, expectations and actual experiences can be met without damaging or destroying the very resources visitors come to enjoy;
- the effects of growing levels of commuters, and of second homes, both on the landscape and on local communities and to encourage rural employment and rural-based economic activity.

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Glossary

flush: pool; marshy place; sudden rush of water

gripping: creating ditches or channels for carrying off water

inlier: area of rock surrounded by rocks younger in age