

APPENDIX 8.4

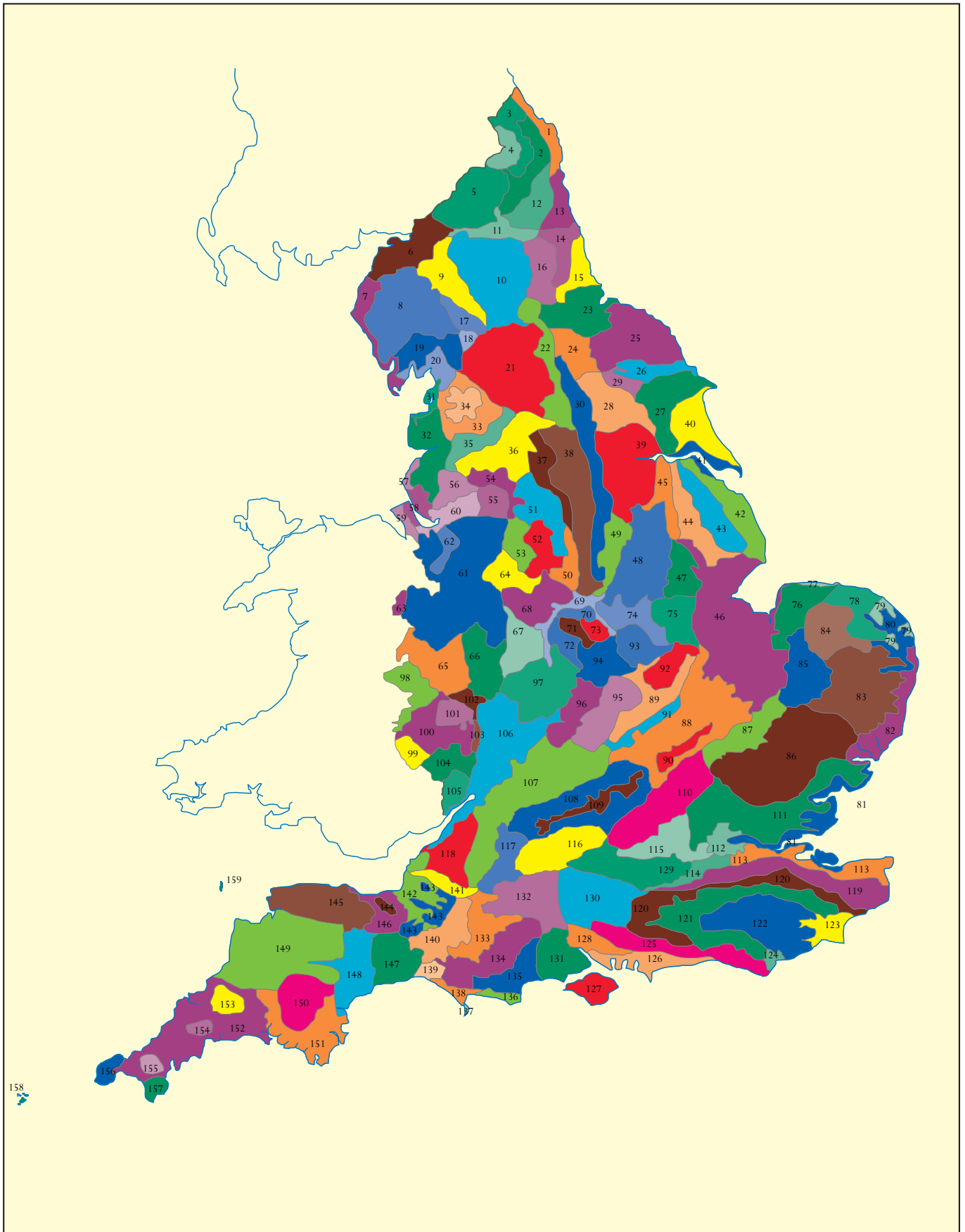
NORTH YORK MOORS NATIONAL PARK DESIGN GUIDE AND LANDSCAPE CHARACTER ASSESSMENTS EXTRACTS

Countryside Character

Volume 1: North East

*The character of
England's natural and
man-made landscape*

The Character of England: landscape, wildlife & natural features





Summary

The North York Moors and Cleveland Hills National Character Area (NCA) comprises a well-defined upland area, rising from the Tees Lowlands to the north, the Vale of Mowbray and Howardian Hills to the west and the Vale of Pickering to the south. To the east it is bordered by the North Sea, the extensive stretches of high coastal cliffs exposing the geology that shaped these uplands. Some 85 per cent of the area falls within the North York Moors National Park.

The North York Moors and Cleveland Hills are an elevated upland of sandstone geology, incised by valleys, which features the largest continuous expanse of upland heather moorland in England, internationally recognised for its important habitats and the moorland bird population it supports. The expansive, largely treeless, central moorland plateau contrasts strongly with the enclosed valleys; some are narrow and wooded, while others such as the Esk are wider, with an upland landscape of walled and hedged pastures. Over 25 per cent of the area is semi-natural moorland habitat (upland heathland and blanket bog), much of which is designated as Sites of Special Scientific Interest, with about 20 per cent woodland cover (mostly located to the south-west and south-east). It is largely unpopulated, with scattered farmsteads and small villages, and the main population centres lie along the coast and southern edge.

Sustainably managed uplands provide many ecosystem services of benefit to the wider area and its population which draws many visitors to this NCA, a substantial part of which forms the North York Moors National Park; and in both its natural and cultural heritage shaping a distinctive sense of place. These services include storing carbon in soils, preventing its loss to the air and water; holding rainfall in these wetland habitats and other vegetation, slowing its journey to major rivers

and thence regulating flow through more densely populated areas vulnerable to river flooding; providing an expansive, open landscape, long views and a sense of remoteness.

Providing functioning ecosystems and preventing fragmentation of habitats presents a real challenge, particularly in the face of environmental change, as we will increasingly depend on a resilient landscape supported by sustainable land management practices to 'buffer' and regulate natural processes. There are opportunities here to strengthen the networks of semi-natural habitats, particularly wetlands, native woodland and species-rich grassland, enhancing their regulation of natural processes and provision of the public benefits mentioned. At the coast the dynamic processes of erosion and accretion can be accommodated, thus creating a more resilient natural environment that is capable of both ameliorating and adapting to climate change. Sustainable management of these natural resources will ensure that the landscape continues to provide food, clean water, energy, and inspiration and enjoyment to people locally, regionally and beyond.

Click map to enlarge; click again to reduce.

Statements of Environmental Opportunities:

- **SEO 1:** Protect and positively manage the large areas of open, expansive moorland for the internationally important habitats and species that they support, for the sense of wildness and strong character of the areas, for their ability to sequester carbon, and for the benefits that well managed moorland brings for water quality and flood control.
- **SEO 2:** Conserve, enhance and promote the special qualities of the coast, inshore waters and sheltered harbours allowing the operation of natural coastal processes, the creation of new habitats. Manage the development and recreational needs of coastal settlements and secure a sustainable future for communities that are dependent on inshore fisheries.
- **SEO 3:** Protect and improve access to and quiet enjoyment of the countryside, particularly in the North York Moors National Park, conserving the sense of tranquillity and relative remoteness, maintaining public access to the landscape, encouraging specialist forms of recreation appropriate to the area, conserving and providing interpretation of its history and numerous archaeological, biological and geological assets, and protecting the strong sense of place.
- **SEO 4:** Seek opportunities to restore lowland fens, reedbeds, flood plain grazing marsh, flushes and riparian habitat to enhance biodiversity and contribute to regulating flood flows, enhancing water quality, aquifer recharge, carbon sequestration and storage, leading to benefits being experienced within the NCA and beyond to NCAs downstream.
- **SEO 5:** Positively manage woodlands, trees, wood pasture and historic parklands for their contribution to the characteristic landscapes of the area, their priority habitats and the species that they support, as well as their potential for carbon storage, regulation of peak flood flows and provision of renewable materials.

Description

Physical and functional links to other National Character Areas

Extensive views are often afforded from within the NCA outwards over adjacent lower-lying NCAs, across the Vale of Pickering to the south, the Vale of Mowbray to the west and the Tees Lowlands to the north. Equally, the North York Moors are recognised in views of the dramatic scarp slopes from the west, in particular the White Horse and Sutton Bank, and the distinctive form of the outlier Roseberry Topping. The rising slopes of the Tabular Hills form the backdrop of views north within the Vale of Pickering, and similarly the uplands form the backdrop in views to the south from the conurbations of Teesside. Views of the dramatic eastern cliffs from along the cliff-top paths and from the sea looking landward are also significant.

Many of the watercourses that arise in the hills of this NCA drain south into the Vale of Pickering and form part of the River Derwent catchment; the Esk and some smaller rivers flow into the North Sea. These rivers and their associated riparian habitats provide strong ecological links from the uplands into the surrounding lowlands. Management of the upper stretches of these rivers clearly has an impact on flood flows and sedimentation further downstream. The moorland and its fringes provide resources for surrounding areas, be it summer grazing, recreation or field sports. At the coast, dynamic processes of sediment supplied by longshore drift operate across NCA boundaries.

Distinct areas

- South Hambleton Hills and Tabular Hills



Ravenscar Moorland

Key characteristics

- Upland plateaux, generally below 400 m, dissected by a series of dales – some broad and sweeping but others narrow, steep sided and wooded – creating strong contrasts between open moors and enclosed valleys.
- Extensive areas of heather moorland on plateaux and hills, largely under sporting ownership, including large expanses of upland heathland and blanket bog habitats, creating a sense of space, expansiveness and openness.
- Upland plateau landscape underlain mainly by sandstone and mudstone of Middle Jurassic age and calcareous sandstone and limestone of Upper Jurassic age.
- Mosaics of upland heathland vegetation supporting internationally important populations of breeding merlin and golden plover.
- Some areas of extensive conifer and mixed plantations, especially in the south-east, and broadleaved woodland on steep valley sides.
- Valley landscapes characterised by pastoral farming, with a clear demarcation and strong visual contrast between the enclosed fields with some species-rich grasslands and wetlands, farms and settlements, and the bracken-fringed moorlands above.
- Drystone walls and hedgerows enclosing the small pastures and meadows in dales and fringing farmland, often replaced by fences in arable areas.
- Large-scale arable landscapes to the south and east.
- Jurassic sandstones, mudstones and limestone forming a dramatic coastal landscape of high cliffs, high vegetated maritime slopes, and small coves and bays, with coastal towns and compact fishing villages.
- Sparsely settled, with scattered farmsteads and small villages, and traditional buildings constructed of local sandstone or limestone and with red pantile roofs, creating a strong visual unity.
- A rich archaeological heritage from many different periods, especially on the moorland plateaux.
- Panoramic views over moorland plateaux, ridges and dales and out over surrounding lowland landscapes and the North Sea.

North York Moors and Cleveland Hills today

The North York Moors and Cleveland Hills are a very clearly demarcated block of high land in the north-east of Yorkshire and neighbouring Cleveland. The central moorland plateau is formed from Middle Jurassic sandstones and mudstones, with softer Lower Jurassic rocks being eroded in the west to form the western scarp above the Tees Valley and Vale of Mowbray. Here a curiously shaped, conical outlier of Lower Jurassic rocks, Roseberry Topping, has become a distinctive and well-known landmark.



Towards Robin Hood's Bay from Ravenscar

To the north-east the upland block meets the North Sea, resulting in dramatic coastal cliffs. The Cleveland Hills are the highest area, merging into the Hambleton Hills in the south-west – which in turn drop sharply down to the Vale of York. Along the southern margin the change in underlying rock is reflected in the distinct topography of the Tabular Hills, which dip gently to the south and east with a marked change in slope where the land drops down to the Vale of Pickering.

The expansive sweep of unenclosed heather moorland creates the most notable feature of this NCA. This has been created by centuries of stock husbandry and other land management practices. From these moorlands panoramic views in all directions give a strong feeling of wide open space, solitude and relative wildness and remoteness.

This feeling is enhanced by the relatively few roads and lack of settlements on the moorland plateau. This open moorland contrasts strongly with the more enclosed dales, with their scattered farmsteads and patterns of drystone walls enclosing small pastures. The moorland is the watershed: the dales that run south are broad and sweeping in their upper reaches, but narrow and steep sided where they cut through the limestone and calcareous sandstones of the Tabular Hills. The tributaries of the Esk in the northern dales are smaller and contained by hard shoulders of rock, while the Esk itself runs east to west through a wide upland valley.

The upland block extends eastwards to one of the highest stretches of cliff along England's North Sea coast. The proximity of the sea to the high moors and sheltered dales adds greatly to the diversity, drama and character of the landscape. Small fishing villages are tucked into sheltered locations where narrow valleys meet the coast, for example at Staithes and Robin Hood's Bay.

This dramatic coastline is widely known as the Dinosaur Coast, famous for its classic geological exposures and rich fossil resources. The unstable sea cliffs of the coastline support a range of vegetation from pioneer plant communities typical of the changing habitat to woodland where it is more resistant to erosion. Whitby jet can still be found on the shoreline, and the cliffs have had a history of quarrying for alum and other minerals.

The high moorland plateaux are largely treeless, but there are extensive coniferous plantations in the south-east, providing valuable habitat for nightjar and goshawk, and in the west and south-west. On the steep sides of narrow dales there are broadleaved woodlands, often of ancient origin, but in places replanted with productive timber species. The south-west of the area contains a nationally important concentration of ancient woodland sites and veteran trees.

The moorland represents the largest continuous expanse of upland heather moorland in England and supports internationally important areas of northern Atlantic wet heaths and European dry heaths, and blanket bog habitats. These habitats are dominated by ling heather and a range of other species, notably the bog mosses in wetter areas. Much of the moorland is managed for grouse and is of international significance for birds such as golden plover and merlin it also supports other moorland birds such as curlew.

Bracken is a significant feature on the higher land, forming a fringe to the moorlands and marking the transition from moor to valley pastures. Often there are strong colour contrasts – most notably the purple of the heather in late summer, the russet of the bracken through the winter months, the greens of the enclosed pastures in spring and early summer, and the darker conifers all year round. All these complement the grey or sandy colours of the walls, farms and hamlets, all built from local sandstone or limestone, creating a strong visual unity.

The valleys contain grasslands of varying degrees of agricultural improvement, to support the rearing of sheep and cattle. Some species-rich lowland meadows remain where agricultural management is less intensive, and wetlands occur where drainage is impeded or at upwellings and seepages of lime-rich groundwater on valley sides. Farndale is renowned for its extensive wild daffodils. Fields are bounded by drystone walls or in some lower valleys by hedges, often with hedgerow trees. Some older parklands notably Duncombe Park, contain a large number of magnificent veteran trees with their associated wildlife interest, supporting bat populations in the area. The southern fringe of the area holds isolated remnants of species-rich limestone grassland and calcareous fens. These grassland areas along with associated areas of shrub and woodland provide valuable habitat for the Duke of Burgundy butterfly and pearl-bordered fritillary.



Open moorland contrasts strongly with the enclosed dales, their scattered farmsteads and dry stone walls

In the south and east, where the soils are deeper and more fertile, there are extensive areas of arable cropping, with larger fields often bounded by fences. Sensitive management under Environmental Stewardship increases the importance of these areas for farmland birds such as tree sparrow and lapwing, and for rare arable flora. The arable landscape extends along the coastal strip, creating striking visual contrast where the farmed landscape meets the high cliff edge.

There is much evidence of early human activity in these uplands, for example in field systems, and in burial sites such as barrows and cairns. Particularly striking are the early Christian carved stone crosses that still stand out on remote moorland tracks. Walls, farms and villages are built of local stone, but roofed with red pantiles, which is unusual in upland areas, and thus very distinctive of this area.

Tucked in a twisting wooded valley is Rievaulx Abbey, the ruins of a 12th-century Cistercian monastery which has inspired many artists and poets. Medieval Whitby Abbey and Scarborough Castle are iconic features of the coast which have dominated their communities for centuries. More recently the railway line that winds its way through Newtondale between Pickering and Whitby has been preserved for recreational use. Large structures have a notable impact on the landscape, especially the chimney of the potash works at Boulby, the towering pyramid of the Ministry of Defence installation at Fylingdales, and the transmission mast at Bilsdale.

The landscape through time

This upland area is underlain by rocks of Jurassic age which rise sharply from the adjacent lowland regions. The oldest bedrock consists predominantly of sandstones and mudstones, found in valley bottoms, and also creates the precipitous cliffs along the coast from Kettlewell to Scarborough. Seams of iron ore within the Jurassic sandstones and mudstones once provided a source of ironstone which was extracted and used in the iron industry in the Esk Valley from the Middle Ages. More recently potash and associated halite salts have been extracted from the Permian rocks at great depth at the Boulby mine.



Limestone and calcareous sandstones have created the distinct form and character of the Tabular Hills and the Hambleton Hills

The fossiliferous limestone and calcareous sandstones of the Upper Jurassic have created the distinct form and character of the Tabular Hills in the south and the Hambleton Hills in the south-west. The limestone has been worked for building materials, and numerous active and disused quarries are found here. These rocks resisted glacial action to form scarps, for example at Sutton Bank and traversing the moors from west to east. The central moorlands are of Middle Jurassic sandstones which give rise to impervious, infertile sandy soils, overlain by peat in places.

During the Tertiary Period, a process known as cambering occurred in the Helmsley area, resulting in a number of rock fissures. These features are known locally as the Windy Pits and provide shelter for swarming bats.

The Cleveland Dyke, a hard, crystalline intrusive rock formed from molten magma 58 million years ago, cuts across the NCA from west to east. Its qualities make it useful for road and railway building, and remains of quarries can be traced in a line from Great Ayton in the west to Goathland Moor in the east. Glacial deposits of till and sandy gravels give rise to a more undulating landform in the north and along the coastal strip. Glacial action created the dramatic Western Scarp while outflow channels cut deep valleys such as the narrow gorges of Newtondale and Forge Valley, and the narrow valleys running south through the Tabular Hills.

The North York Moors retain a rich archaeological heritage revealed through burial sites, field systems, settlements and boundaries, which are especially evident on the heather-clad uplands and quarry sites on coastal cliffs. Once wooded, these uplands were cleared in pre-historic times and then grazed. Mesolithic occupation sites are known on the central moorland and neolithic

long barrows along the valley edges. The moors are also rich in bronze-age barrows, cairns and stone circles. Evidence of iron-age and Romano-British settlement is concentrated in the south and east, with several earthworks including Roulston Scar, the largest iron-age hill fort in northern England.

The present strong pattern of nucleated settlements developed between the 9th and 13th centuries. Carved stone crosses still remain from these early days of Christianity in Britain and form striking landmarks along the moorland tracks. A royal forest, centred upon Pickering, stretched far to the west and north with small villages within it. Planned linear and green settlements, with tofts to back lanes, are characteristic.

Major change came with the arrival of monasteries in the 12th century: Rievaulx and Byland abbeys were the most dominant, controlling extensive areas of moorland and establishing outlying granges. After the Dissolution of the Monasteries in the 1530s and 40s, prominent local families took over the monastic estates. Country houses and designed landscapes with ornamental trees were established, for instance at Rievaulx and Duncombe Park. Market towns developed at Helmsley, Pickering and Kirkbymoorside.

Common grazing lands were divided and enclosed in the late 18th and 19th centuries under local agreements and Parliamentary Acts, the former preserving the strip-field pattern, with clusters of common-field enclosures in the south and east. Larger, more regular enclosures are concentrated on the moorland fringes, mostly associated with arable farming in the late 18th and early 19th centuries. Common grazing continued on unenclosed moorland, and management for grouse shooting was introduced here from the late 19th century. More arable-based husbandry, combined with root crops,

was practised on the deeper soils of the south and east and along the northern escarpment of the Howardian Hills from the later 18th century.

Scarborough, a small medieval port, developed after the discovery of mineral springs in the early 17th century, and expanded from the late 18th century, while the port at Whitby is notable for its 18th-century architecture. Seaside resorts also developed in the late 19th century around Whitby and the port of Saltburn. The maritime heritage of the area is focused around Captain James Cook, who served his apprenticeship in the local merchant navy fleet of the 18th century.

From medieval times small-scale industrial workings exploiting the mineral resources of stone, coal and ironstone were economically significant, and spoil heaps, bell pits and disused railways are all still visible on the moors, coastal cliffs and hillsides. Jet has been extracted since the Bronze Age, reaching its peak as a major industry in the 19th century, and has very strong cultural associations in this area, with Whitby in particular. Alum, used in tanning and dyeing, was a major industry of the area and was extracted from open quarries from the 17th century, altering the local landform, especially along the coast.

The area retains a high proportion of ancient woodland. In the early-to-mid 20th century extensive coniferous plantations altered the character of the landscape, especially in the west and south-east. More recently there has been an increase in new broadleaved woodland.

Many of the drystone walls and hedges are now managed under agri-environment schemes, which have also achieved improved enhancement of moorland habitats. While there has been limited development in the area, intrusion from road traffic has increased, and the extent of dark skies has decreased since 1993.

Ecosystem services

The North York Moors and Cleveland Hills National Character Area (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 NCA is contained in the 'Analysis' section of this document.

Provisioning services (food, fibre and water supply)

- **Food provision:** The area is a major producer of lamb, beef and dairy products as well as crops such as cereals, and other produce such as honey.
- **Timber provision:** There is a well established forestry industry, with extensive conifer plantations and overall woodland cover of 20 per cent.
- **Biomass energy:** The high existing woodland cover in this area (around 20 per cent) offers significant potential for the provision of biomass through bringing unmanaged woodland under management and as a by-product of commercial forestry management.
- **Water availability:** Much of the NCA overlays the Corallian Limestone major aquifer, which gains significant quantities of water from the River Rye and River Derwent through swallow holes. The River Derwent is an important source of drinking water supply.

- **Genetic diversity:** There are a number of breeders of pedigree breeds at risk, who farm in the NCA. These include beef shorthorn, belted Galloway and highland cattle.

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

- **Regulating climate:** The upland soils in this NCA generally have a relatively high carbon content with more significant carbon storage provided by the moorland habitats. Climate regulation is also offered by the 20 per cent cover of woodland and wetlands – blanket bog, reedbeds, coastal and flood plain grazing marsh, fens, mudflats and saline lagoons along the coast (2 per cent of the area).
- **Regulating water quality:** Water quality in the Derwent catchment is affected by soil erosion and run-off, with consequent sedimentation and altered water chemistry of watercourses. This is largely attributable to the way in which the land is managed; improved water quality can be delivered by more sustainable management of upland peat, adopting best practice methods for conserving soils and measures to restrict nutrient input to watercourses.
- **Regulating water flow:** Many major rivers rise here, and are prone to flash floods, especially in the south of the area. The River Derwent and its upland tributaries also tend to respond quickly to rainfall events. Peak flow events can be regulated through managing moorlands to store more water, restoring and extending wetland zones, and carefully sited woodland creation.
- **Regulating soil quality:** Soil quality can be improved through extensive management of in-bye and lowland grasslands which will enhance soil structure, increase the organic content, reduce poaching and compaction, and improve infiltration.
- **Regulating soil erosion:** Careful management of moorland is required to achieve healthy vegetation in order to reduce erosion of peat soils. Soil erosion also often occurs in times of heavy rainfall on steeper slopes and woodland creation here can help to prevent this. There are also high levels of sediment run-off from agricultural land into the rivers Rye, Leven, Esk and Derwent. This can be addressed by securing sustainable grazing of grasslands and changes to management of arable land, such as grass buffer strips, uncropped land and tree planting alongside watercourses and on slopes, to reduce both run-off and wind erosion.
- **Pollination:** Heathlands, grassland and meadows cover 27 per cent of the NCA, including a 43,000-hectare expanse of open heather moorland, and provide important nectar sources and habitats for pollinating insects and beneficial predator species.
- **Regulating coastal processes:** Dynamic coastal processes operate along the coastline of this NCA, removing material from soft cliffs in one location and depositing it along the coast where these accretions are then fundamental to other natural processes, such as the development of beaches and intertidal areas which help to attenuate wave energy.

Cultural services (inspiration, education and wellbeing)

- **Sense of place/inspiration:** A sense of place is provided by the high moorland plateau with its extensive moorlands, dissected by a series of dales that narrow to form intimate, steep-sided valleys. Roseberry Topping is a distinctive landmark in the outlying hills to the north. The sense of place is enhanced by the distinctive and dramatic coastal landscape of high cliffs, sandy coves and bays which contrast with the arable farmland and parkland with veteran trees. The area is valued for the sense of escapism that it provides and as a source of inspiration for writers and artists, Whitby famously being used as the dramatic setting for Dracula's landfall in Bram Stoker's novel.
- **Tranquillity:** The NCA is an important resource for tranquillity with 80 per cent of the area classified as 'undisturbed' according to the Campaign to Protect Rural England Intrusion Map of 2007.
- **Sense of history:** A sense of history is evident in the rich archaeology dating back to prehistoric times. Features include rock art, barrows, cairns, standing stones, forts, historic tracks and ecclesiastical sites. Attractive small villages built from local materials, early Christian stone crosses and the ruins of the 12th-century Rievaulx Abbey, along with more recent features such as the railway, add to the sense of history.
- **Recreational opportunity:** The NCA provides a significant area of open access land (28 per cent), along with a network of rights of way, including the Coast to Coast path, the Cleveland Way and the Ebor Way. The special qualities of the area are a major draw for recreation and tourism with North York Moors National Park accounting for 85 per cent of the NCA, and the North Yorkshire and Cleveland Heritage Coast being a major attraction.

- **Biodiversity:** Some 65 Sites of Special Scientific Interest (SSSIs) have been designated in this NCA, a number of these having further levels of designation, including as European Special Protection Areas and Special Areas of Conservation, emphasising their importance.
- **Geodiversity:** A total of 29 SSSIs have been designated wholly or in part for their geological interest (20 purely for geological interest, 9 for mixed biological and geological interest) within this NCA. The dramatic coastline is widely known as the Dinosaur Coast, coastal processes revealing the classic geological exposures and rich fossil resources for which it is famous.



Late silage cut at Rosedalehead. The valleys contain grasslands of varying degrees of agricultural improvement, to support the rearing of sheep and cattle

Supporting document 2: Landscape change

Recent changes

Trees and woodlands

- Countryside Quality Counts data suggests changes to the farmed landscape and efforts to enhance semi-natural and woodland elements of the landscape strengthened the character of the area between 1999 and 2003.
- There was active woodland management and creation between 1999 and 2003, including the creation of new woodlands on the slopes of the valley sides within upper Bilsdale. This is just one site of many, over 500 ha new native woodland, that has been created in the NCA area since 1998.
- There has been an increase in the supply of wood biomass from the NCA. For example the Forestry Commission 2006 contract with Wilton Biomass Power Station to supply 80,000 tonnes from plantations in the North York Moors.
- Forest Design Plans for the Public Forest Estate have, and continue to, shape the landscape.

Boundary features

- For over 20 years the National Park Authority has operated an agri-environment grant scheme aimed at traditional boundary restoration. Introduced in the dales in 1990, this has had a significant impact on landscape quality. Boundary features have been managed under the Countryside Stewardship, continuing under Higher Level Stewardship –

the area has a large proportion of land managed under agri-environment schemes, and figures for 2011 reveal over 2,000,000 m of boundary features managed under such schemes.

Agriculture

- There was good uptake of agri-environment agreements between 1990 and 2010. Between 2005 and 2010, 616 Environmental Stewardship agreements were set up which included options to: manage or restore 40 per cent of hedges and stone walls; control 1,700 ha of bracken; plant 13,700 trees; create 38 ha of woodland.

Settlement and development

- Development pressures were limited between 1999 and 2003. There was some enhancement in industrial heritage and in 2003 some 92 per cent of historic buildings were intact structurally.
- The main pressure for development is around existing centres such as Scarborough. Other settlements include Whitby and Guisborough, with Helmsley and Pickering on the southern fringe.

Semi-natural habitat

- Some 80 per cent of SSSIs were in unfavourable condition in 2003, much of this being dwarf shrub heath. By 2010 over 98 per cent of SSSIs were in favourable or unfavourable recovering condition. Despite these achievements the Lawton Review in 2010 concluded that the national ecological network remains

in a fragmented state and the SSSI and local wildlife sites should form the cornerstone of efforts to reconnect across the landscape, increasing resilience of our native flora and fauna to environmental change.

- Breeding moorland waders are a prominent feature of the moors in spring and summer, their numbers remaining stable over the period, despite declines observed elsewhere in the country. There has been a decline in merlin, an interest feature of the North York Moors Special Protection Area.
- Species-rich grasslands were targeted for increased control of scrub and agricultural weeds between 2007 and 2009. Similar management has also taken place on selected road verges over the last ten years.
- It is considered that cover of invasive plant species, particularly bracken, Himalayan balsam and Japanese knotweed, has increased. There has been extensive bracken control in recent years, using private and government funding. Between 2008 and 2010 there have been coordinated efforts to control Himalayan balsam along the River Seph, and similar efforts since 2009 to control Himalayan balsam and Japanese knotweed along the Esk.

Historic features

- The Heritage at Risk register indicates that there are currently 844 designated monuments at risk in the NCA.

Coast and rivers

- Biological and chemical river water quality in 1995 was predominantly excellent and was maintained to 2003.

- Since 2007 the ecological status of waterbodies has been monitored under the Water Framework Directive (WFD). Ecological status is determined by biology, for example fish populations, physico-chemical elements, for example oxygen, concentrations of specific pollutants, and disturbance to hydromorphology. The ecological status for a water body is set at the worst scoring element. The rivers Rye, Derwent and Esk are considered 'heavily modified' and all have only a 'moderate' ecological potential. Tributaries to these main rivers generally have a 'poor' or 'moderate' ecological status, with a few stretches of river having good ecological status.
- Soil erosion from agricultural land and subsequent sedimentation of watercourses is a key pressure causing waterbodies to fail WFD objectives; there has been a considerable amount of river fencing to exclude livestock from water courses. Stretches of the River Esk are of poor or bad ecological condition, but since 2007/8 there has been substantial work to improve the condition of river under the Esk Pearl Mussel and Salmon Recovery Project, River Esk Regeneration Programme/Upper Derwent Enhancement Project and through the Catchment Sensitive Farming initiative. The chemical status of groundwater in the NCA is mostly 'good', however it is 'poor' in the north of the NCA around Guisborough.
- Estuarine and coastal waters in this NCA have 'good' ecological potential.
- Within the general area of the North York Moors, the coast is considered 'resilient' to erosion rates due to largely hard geology. There is greater local variability however, and around Whitby and Scarborough highly variable erosion rates combined with underlying instability of boulder clay coastal slope have caused significant landslips. Shoreline Management Plan no 2 for River Tyne and Flamborough Head seeks to work towards a more natural

functioning coastal system which will help to reduce coastal flooding. Coastal defences at larger settlements such as Staithes, Runswick, Whitby and Scarborough are currently managed to 'hold the line' - though even here there is always risk of landslip - but elsewhere the long term approach is generally for no active intervention.

- A number of small scale hydro-power generation projects have been set up in recent years, with several funded by the North York Moors National Park Sustainable Development Fund since 2003.

Minerals

- The largest and most prominent mineral exploitation is at Boulby Mine which has been producing potash and rock salt since 1973 with continuing pressure for expansion.

Drivers of change

Climate change

Climate change is likely to result in:

- Increased 'flashiness' and volume of flows within all river catchments with potential for more frequent winter flooding and summer drought, although there may be more summer flood events; increase in sediment loads and nutrient run-off from agricultural and moorland to streams and rivers.
- Summer droughts may lead to drying out of peat, wetland habitats and ditches, increased risk and severity of fire and pest attack on the moors, degradation of peat and an increase in drought-resistant species.
- Species extinction or migration and loss of small or isolated habitats, and continued decline of biodiversity in fragmented habitats such as woodlands; changes in species mix of pastures and meadows as growing season lengthens; warmer winters leading to increased tree and bracken growth.
- Possible loss of access to historic features due to re-wetting or through being obscured by vegetation.
- Scope for new species to be used for crops and timber, but risk of increase in pests and diseases. These will require modification of silvicultural systems to adapt to the changing climate, some commercial species becoming less suitable in the future.

Other key drivers

- The increased focus on the importance of upland peat soils for carbon storage may see increased resources being put towards protection and restoration of moorland and blanket bogs. This will also protect water quality from issues related to peat degeneration such as increased colour. Natural England supports measures to stabilise eroding peat soils and restore blanket bog habitat. We also recognise the importance of well managed woodlands within the upland environment, including wood pasture and scrub.
- Delivery of preferred flood risk management options for North York Moors policy units (Environment Agency Yorkshire CFMPs 2010) should reduce flood risk. Implementation of the Water Framework Directive should improve ecological status or potential of waterbodies; the Wetland Vision initiative aims for increased wetland creation/restoration by 2050.
- The Natural Environment White Paper (2011) calls for joined-up efforts across the conservation sector and working at a landscape scale, to establish a coherent and resilient ecological network capable of adapting to environmental change and halting losses in biodiversity. An increased focus on connectivity and resilience of habitats could lead to greater networks of habitats, a more diverse mosaic of vegetation and larger areas of semi-natural habitat. The funding mechanism for European-funded agri-environment schemes is to be reviewed in 2014. The success of efforts to establish a more cohesive ecological network which allows for species and habitat movement in response to environmental change, will require appropriate flexibility within these schemes.
- DEFRA's Uplands Policy Review (March 2011) identifies the need to develop strong partnerships with the hill farming and moorland management sector and rural communities to deliver a wide range of public goods and environmental benefits
- There is likely to be increased pressure for food production in the future as a result of a national drive for greater self-sufficiency in food. However, this is likely to be tempered by continuing negative pressures on farming such as a poor economic performance, and reduction in farm subsidies that may continue to result in loss of sheep from open moorland and loss of dairy farms.
- Changes in landownership could lead to further separation of farmsteads from their land and intensification of land and game management with associated introduction of artificial features, such as buildings and gravel tracks, in otherwise undeveloped landscapes.
- The 'sub regional' town of Scarborough and 'principal' town of Whitby will be strengthened as foci for housing, employment, shopping, leisure, education, health and cultural activities and facilities. Housing need, particularly for affordable housing, will see development pressure continue and increased pressure on supporting infrastructure such as sewerage and water supply systems.

- The Government's Low Carbon Transition Plan and the Regional Forestry Strategy indicate an increased rate of woodland creation over the next 15-20 years, alongside an increase in demand for timber and wood fuel. A requirement for increasing renewable energy generation could result in increased pressure for wind power, hydro power, wood fuel and biomass crops – DEFRA maps show some areas of high potential yield for short rotation coppice and medium potential for Miscanthus in this area.
- There is likely to be continued demand for resources of limestone found along the southern edge between Helmsley and Pickering, although no new quarries are likely within the National Park other than small scale supplying stone for local building and for production of potash. The demand for potash, currently mined at Boulby, is likely to increase. The current poor performance of the region in terms of recycling and recovery means there is likely to be an increasing need for waste management facilities, and the need for increase in landfill capacity has also been identified.
- Sustained pressure from tourism and recreation will need to be carefully managed to avoid problems such as inappropriate development, increased traffic, erosion along popular rights of way and irresponsible recreation (such as damaging use of 4x4s and motorbikes). The likely increase in woodland lodge and similar developments will need to be managed carefully.
- There is likely to be continued slow retreat of the coastline of approximately 0.1 to 0.2 m per year for most of the coast, with up to 0.3 m per year at Robin Hood's Bay and 0.7 m per year at Saltwick Nab, which might increase with the effects of climate change and higher sea levels (increased groundwater in boulder clay from more rainfall in some seasons leading to greater risk of landslide; sea level rise and increased storminess increasing cliff erosion) and which will require adaptation of infrastructure and wildlife habitats. The Marine and Coastal Access Act 2009 provides opportunities to protect the marine environment and ensure access to all parts of the coast. The Coastal Access trail, including the spreading room, will be created by working in partnership over the next 10 years: a key element of this implementation needs to increase the opportunity of 'roll-back' as described by the scheme.



Coastal defences at larger settlements such as Staithes (above), Runswick, Whitby and Scarborough are currently managed to 'hold the line'



Introduction

As part of Natural England's responsibilities as set out in the Natural Environment White Paper¹, Biodiversity 2020² and the European Landscape Convention³, 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.

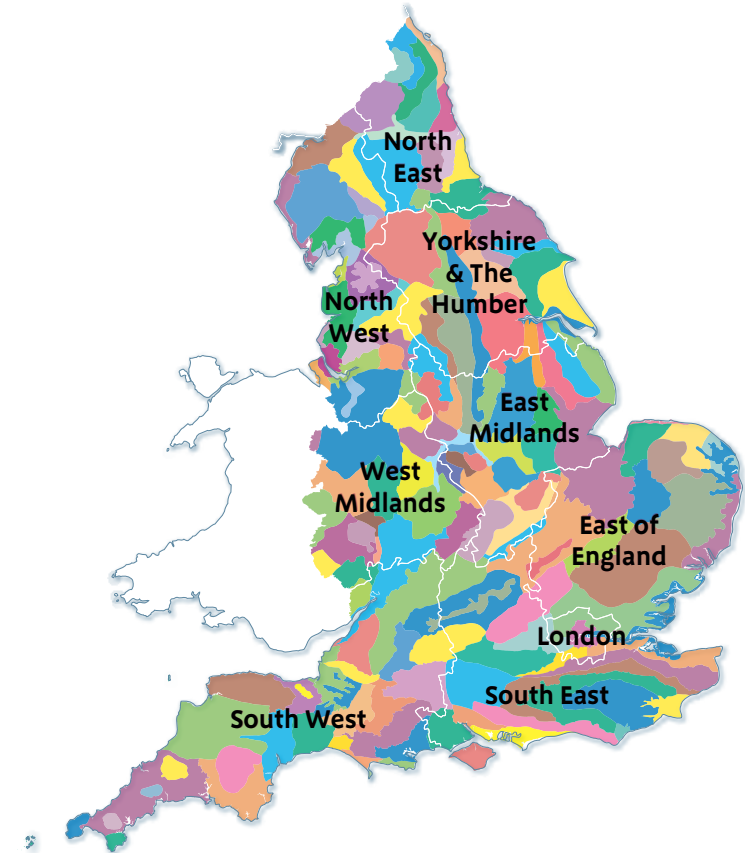
NCA profiles are guidance documents which can help communities to inform their decision-making about the places that they live in and care for. The information they contain will support the planning of conservation initiatives at a landscape scale, inform the delivery of Nature Improvement Areas and 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 Vale of Pickering is a low-lying basin of flat or gently undulating topography, lying between North Yorkshire's uplands to the north, west and south, and the Scarborough coast on its eastern side. As such it has physical links with many surrounding areas, particularly through river catchments.

Parts of the coastal area are designated as being of European importance as a Special Protection Area (Flamborough Head and Bempton Cliffs for birds) and as a Special Area of Conservation (SAC) (Flamborough Head for its chalk cliff grassland habitats). The National Character Area's (NCA's) main river, the River Derwent, is also an SAC. The archaeologically important Star Carr site is recognised by English Heritage as being of national and international significance for its completeness of record of human habitation: the Vale of Pickering was occupied by Lake Pickering during the last glacial period so its 'shores' are rich in evidence of human use from this period.

This is a landscape of rivers and wetlands which have been artificially drained and modified for productive farming. In providing essential ecosystem services, the most critical in the Vale is the regulation of water flows, through good catchment management to hold water on the land and prevent flooding in Pickering and Malton, towns which have experienced two 1-in-100-year flood events in recent years. Reconnecting the River Derwent with its flood plain and restoring wetland habitat offer opportunities to attenuate water and thus regulate flow, creating scope for climate change mitigation and adaptation, alongside food production. The uplands surrounding this NCA include substantial areas of protected landscapes in the North York Moors National Park and Howardian Hills Area of Outstanding Natural Beauty, the

latter extending into the south-western end of the Vale. The management of vegetation and soils in these uplands is also critical to regulating water flow downstream in the Vale, and thus a catchment-scale approach is needed to understand and address the severe flooding events experienced within this NCA. Preserving the archaeological record while restoring the hydrological integrity of the peat is a related issue of importance; understanding the interrelations between these, through an ecosystem services approach, enables fuller consideration of the associated costs and benefits.

Click map to enlarge; click again to reduce.



A landscape of rivers and wetlands which have been artificially drained and modified for productive farming.

Statements of Environmental Opportunity

- **SEO 1:** Enhance the network of wetland habitats in the Vale to provide public benefits in improved flood mitigation and improved water quality, and to reduce habitat fragmentation and increase the resilience of habitats and species to environmental change.
- **SEO 2:** Protect and enhance the historic landscape and geodiversity of the Vale, promoting greater understanding of this to inform current and future decisions on how the landscape is used.
- **SEO 3:** Manage the agricultural landscape to enhance the sustainable future of farming, strengthen landscape character, protect soils and water, and enhance biodiversity through improved connectivity of semi-natural habitats, creating ecological networks that are resilient to environmental change.
- **SEO 4:** Ensure that developments are successfully integrated into the landscape, making a contribution to biodiversity and habitat networks, and that they do not compromise the sense of tranquillity and openness of the rural landscape, or delivery of other important ecosystem services, including mitigating and adapting to climate change.

Description

Physical and functional links to other National Character Areas

There are strong visual links between the Vale of Pickering and its surrounding uplands: the North York Moors and Cleveland Hills to the north, the Howardian Hills to the west and the scarp of the Yorkshire Wolds to the south. There are also strong physical links with the surrounding hills, most notably as the rivers draining through the Vale of Pickering rise in these uplands, particularly the North York Moors. Flooding events within the Vale of Pickering often have their origin outside of the National Character Area (NCA). The coastal eastern edge of the Vale of Pickering creates a linear link with adjoining coastal NCAs.

The topography of the Vale has enabled the development of through transport links between the coast and hinterland: the A169, A170 and A64 and the railway between York and Scarborough. The market towns of Norton, Pickering and Helmsley provide a focal point for service provision and trade with surrounding areas.



The Vale of Pickering near Flixton, rising to the North York Moors.

Key characteristics

- A low-lying flat or gently undulating vale with land rising gently to the foothills of the North York Moors and Cleveland Hills in the north, and to the steep scarp of the Yorkshire Wolds and the Howardian Hills in the south and west.
- The Vale opens to the North Sea coast between Osgodby and Filey Bay, the Vale's coastal edge comprising extensive high cliffs dominated by Jurassic sediments to the north and sand and clay to the south, with chalk cliffs extending southwards towards Flamborough Head.



Looking south across Cayton Bay, with its soft cliffs of glacial till, towards the headland of Yons Nab.

- Glacial and lacustrine deposits from the former Lake Pickering give rise to largely fertile land which has been substantially drained through history for agricultural improvement.
- The Vale is a largely farmed landscape, predominantly arable and feed grains, with some livestock.
- Woodland and tree cover is sparse and comprised of predominantly modern plantations with other trees occurring in hedgerows and along riparian fringes, and in small farmstead copses.
- In the eastern part of the Vale fields are large and geometric in shape with boundaries of low hedges or fences with drainage ditches in the lowest-lying areas. To the west smaller and more irregular fields are generally earlier in date, with more grassland, and often enclosed by full hedges with hedgerow trees.
- Despite the small extent of semi-natural habitat within the Vale, this arable landscape supports a number of priority wetland and farmland bird species, and has areas of valuable flood plain grazing marsh. At the coast, the chalk cliffs support important calcareous grassland habitat.

Key characteristics

- The western part of the Vale is drained by the River Rye and its tributaries, and the eastern end by the River Derwent. Glacial deposits dammed the Derwent's natural outflow into the North Sea near Scarborough, resulting in the proglacial Lake Pickering which eventually outflowed at Kirkham Gorge, diverting the River Derwent inland west and south, where it meets the Rye at Malton and flows southwards out of the Vale. The River Derwent has been designated as being of European importance as a Special Area of Conservation.
- The Vale of Pickering contains an unbroken and exceptionally well preserved record of human occupation going back 11,000 years, including early evidence from the Mesolithic period at the important archaeological site of Star Carr and very high potential for further sites and finds in waterlogged deposits and areas covered by blown sand.
- Architecturally important churches and other upstanding structures (castles and monastic buildings) indicate human activity from the Anglo-Saxon period onwards.
- Settlement pattern of medieval nucleated settlement following spring lines, transport routes and slightly elevated ground, along the A170 on the northern boundary of the Vale and similarly along the A64 in the south and B1257 in the west. In the centre of the Vale settlements are more dispersed and tend to be on slightly higher ground, many being established after the enclosure and drainage of the land. To the west are concentrated remnants of earlier medieval villages, moated sites and grange farms.
- The A64 along the southern boundary of the Vale is a major route from Leeds and the other communities of West Yorkshire through York to the coast at Scarborough and Filey. During the summer months and on fine days throughout the year it is used extensively by visitors to the coast. This is also an important road freight corridor for minerals and agricultural produce.

The Vale of Pickering today

The Vale of Pickering is a flat or gently undulating, low-lying basin, at the foot of the surrounding uplands of the North York Moors and Cleveland Hills to the north, the Howardian Hills to the west and the scarp of the Yorkshire Wolds to the south. This bowl-shaped vale, the location of the former Lake Pickering which occupied much of the area during, and subsequent to, the last glaciations, provides a complete contrast to these surrounding areas and has a unique sense of place. The area is characterised by flat-lying glacial-lacustrine clay and sand, deposited in the former Lake; it is often the surrounding hills which dominate the landscape rather than the Vale itself.

The Vale is drained in the west by the River Rye, and its tributaries the Riccal, Dove and Seven. In the north and east it is drained by the rivers Derwent and Hertford. The River Rye joins the Derwent just north of Malton. During the last ice age Scandinavian ice advance blocked the flow of the River Derwent into the North Sea, pushing its discharge to the south-west and creating the ice-dammed Lake Pickering. This is a landscape of heavily modified drainage: the carrs, marshes, moors and wet meadows have largely been drained so that the landscape is now crossed by a network of canalised water courses, cuts and drainage dykes which regulate the water table.

Drainage has enabled the cultivation of fertile soils, with about two-thirds of the area in arable cultivation and one-third under pasture. There are flat, open pastures, areas of intensive arable production and more varied, undulating, enclosed landscapes which create diversity within the Vale as a whole. Woodland is sparse, the western area and the Vale fringes being the most wooded. Semi-natural habitat is limited, with flood plain

grazing marsh in the lower-lying parts of the Vale and calcareous grassland along the coastal cliffs. These cliffs are recognised as being of international importance for birds and for the habitats they support, being designated respectively as a Special Protection Area and a Special Area of Conservation.

There are subtle but discernible differences between the east and west of the Vale. To the east of Malton the valley floor is very flat and low lying with peaty soils and black peat fields in the carr areas south of Eastfield. Much of the landscape arises from the drainage and enclosure of the land during the 18th and 19th centuries. The resultant medium-to-large-sized rectilinear fields are mainly used for arable cropping and are bounded by low hedges, fences and drainage ditches and dykes. As a planned enclosure landscape in a flat vale, views are long and the landscape is generally open, with long, straight roads with wide verges and remote farmsteads. There are few river crossing points, making many of these roads cul-de-sacs, and many lanes terminate at the river, increasing a strong sense of remoteness characteristic of the central Vale. Many watercourses have been straightened and embanked to provide flood protection for adjoining farmland, but are not in themselves prominent features in the landscape. Settlement is nucleated, with villages occurring along the spring line and few isolated farmsteads which mostly date from the enclosure. Buildings are constructed of brick or imported stone, such as sandstone, many with pantile roofs, but many conceal evidence of earlier timber frame and cruck construction. The former wetlands contain the remnants of many prehistoric settlements and remains of international significance for what they have revealed and potentially can reveal about human settlement over the last 11,000 years.

To the west the underlying clays result in a more undulating topography, more tightly enclosed by the surrounding hills, where settlement is more dispersed, earlier settlements being associated with the higher ground. Arable remains the predominant land use here, but there is more pasture, fields being smaller than in the east and mainly bounded by thicker hedges and occasionally fences. The west is slightly more wooded with oak, ash and holly along field boundaries, alder and willow fringing watercourses, and some small copses and game coverts. The River Rye and its tributaries form a dense network of watercourses within the flood plain and are more natural in character than the rivers in the east.

At the coast, deposits of glacial till overlying clay have created a more hummocky, undulating landform inland from Filey Bay. From Filey Brigg to Osgodby the sequence of Jurassic sedimentary rocks meets the North Sea in high cliffs. There is significant coastal erosion here, caused by a combination of rock type, folding, faulting and drainage. Cayton Bay, Filey and the smaller communities in Filey Bay have among the highest rates of coastal erosion in England. North and south of Filey the influence of coastal tourism and recreation becomes much more apparent. Urban development, holiday villages, golf courses, and caravan and chalet sites combine with the presence of the sea, beaches, cliffs and short coastal stream valleys to create a distinctive coastal character. Inland from Filey the landscape is still relatively rural, a mixture of arable fields and pasture enclosed by hedges, although tree cover is fairly limited.

The Vale of Pickering provides a key transport route along the A64 from West Yorkshire and York to the coast and for travellers along the A1 and A19 from the north along the A170 to the coast. Settlements are strung

out along these two routes, which follow the flat, slightly elevated ground along the spring lines on the southern and northern Vale sides respectively, and enable passage into neighbouring hills. In the central Vale settlements tend to be post-enclosure while to the west are remnants of earlier medieval villages, moated sites and grange farms. The most remote and tranquil areas of the Vale are found in the central and western areas away from the busy A64 and A170 corridors and the coastal strip. With the B1257 road skirting the south-western limits along the low ridge of the Howardian Hills, the Vale is more or less encircled by transport routes around its edges.

The flat, open landscapes and the limited north-south through access contribute to the remoteness, tranquillity and sense of place in the Vale of Pickering. This is further enhanced by our increasing understanding of early human occupation in this landscape. The natural and cultural heritage has inspired artistic expression: Scarborough-based artist Kane Cunningham seeks inspiration from and with her surroundings. Others such as the printmaker Paul Musgrove are inspired by the archaeological 'traces' in geophysical surveys. The abstract artist Carmen Mills takes an archaeological approach to her art, inspired by Star Carr.

The landscape through time

The landform of the Vale of Pickering has been shaped by movement along its underlying east–west faults with uplift to the south during the Jurassic of the Market Weighton Block, creating the Jurassic Cleveland Basin and lower-lying area of the Vale of Pickering. Migration of extensive rivers from the north eventually giving way to sea level rise during the Upper Jurassic increased the dominance of marine sediments in the Vale’s geology; the Vale is underlain by Upper Jurassic (Kimmeridge) and Cretaceous (Speeton) marine clays which, though not exposed within the Vale, are visible at Filey Bay where the Speeton Clay forms particularly high cliffs overlain by glacial till. Chalk overlies the Speeton Clay and the Chalk Wolds mark the southern edge of the NCA; at the coast the chalk cliffs continue south-eastwards, eventually forming Flamborough Head, the erosive force of the sea on chalk and clay manifestly shaping this coastal landscape.

During the last glaciation, the Scandinavian Ice Sheet blocked the River Derwent’s flow into the North Sea, diverting it back inland and forming the ice-dammed Lake Pickering, which eventually outflowed southwards through Kirkham Gorge, influencing the Vale’s drainage pattern. Following the last glaciation, Lake Pickering gradually filled with sediment or peat, or drained away, leaving a complex of rivers and marshes. The frequently flooded and waterlogged land led to the development of a wide variety of mottled gley soils, reflecting the range of different sediments beneath, as well as areas of deep fen peat. Names in the area bear testimony to this, with frequent mention of carrs, ings, moors and marshes. Subsequently it has been shaped by, and still exhibits, a remarkable and complete sequence of human activity, starting in the late Palaeolithic with the flint assemblages discovered at Star Carr. Palaeo-environmental evidence adds to this picture: from within the

peat itself it indicates past changes in climate and vegetation from the early Holocene onwards; earlier sediments belonging to the warm Ipswichian interglacial 120,000 years ago have been found in Kirkdale Cave and contain a diverse vertebrate fauna, including the remains of a hyena den and the most northerly remains of hippopotamus. It is known that from at least around 9,000 BC humans were modifying the natural environment to improve the quality of their own lives. Every period from the late Palaeolithic to the present day is represented and recorded somewhere within the Vale.



Small settlements were established on the slightly elevated, drier ground. Red pantiles are characteristic.

eastern end of the Vale. Star Carr is significant for remarkable organic preservation, particularly of wood and bone objects, within waterlogged peat. Recent investigations here by the Universities of York and Manchester suggest that early sedentary hunting communities lived along the edge of, and on islands within, Lake Pickering. Later, from the Neolithic and early Bronze Age there is evidence of islands within the peat fen used for settlement and burial, with trackways linking communities across the valley. These early transhumance patterns established connections between the wet areas and the adjacent slopes and higher ground. A bronze-age Beaker settlement has been excavated at West Heslerton, and a Beaker kiln was found – the only known example in the world at the time of excavation. Geophysical survey and aerial photography have identified extensive evidence of enclosed and unenclosed farmsteads with round houses and distinctive ‘ladder settlement’ on the Vale slopes. They date from the Iron Age into the Roman period, and are located in particular under the wind-blown sands along the south of the Vale, for example between Malton and Hovingham. These ladder settlements are linear settlements characterised by enclosures on either side of a central trackway.

Roman military remains are also a feature in the landscape; for example, the Roman fort in Malton is associated with a Roman town on the banks of the Derwent and the Vale was the centre of a major pottery industry in the 3rd and 4th centuries. There is evidence of a shift of settlement in the 5th and 6th centuries, and Anglo-Saxon was followed by Anglo-Scandinavian settlement in the 9th and 10th centuries.

The Vale of Pickering is also the location (and possible focus) of a large number of very early Anglo-Saxon ecclesiastical establishments, and the kingdom of Deira. The nucleated settlement pattern of open field systems surrounding medieval villages was established by the 11th century, those on the Moors–Vale of Pickering border in particular having very long infield strips set between trackways leading to outfield areas and then rough moorland grazing in the North York Moors: these have 9th- or 11th-century origin, and relate to similar strips in adjacent parts of the North York Moors, the Yorkshire Wolds and Holderness. Parish geometries on both the north and south sides of the Vale therefore form characteristic transects of land linking the higher ground of the Wolds or the North York Moors, down the slope and extending to the low grounds in the centre of the flood plain. This recalls the tradition in older pastoral communities of the seasonal shift of livestock between the fertile but flood-prone low grounds and the drier hillsides. Many of these remained as open fields into the 18th century, much of the eastern Vale being subject to enclosure, drainage and the establishment of new and enlargement of existing farmsteads after 1750. The landscape to the west is a more anciently enclosed area with well-wooded hedgerows and areas of woodland, and here are the major concentrations of pre-18th-century dispersed settlement including moated sites and the former grange farms of medieval estates.

The 17th and 18th centuries saw the development of estates and grand country homes by wealthy landowners, such as at Nunnington Hall and Wykeham Abbey, much of this wealth being invested in agricultural improvement. Agricultural enclosure occurred from the 18th century onwards, consolidating strip fields into larger units, the land then being drained to improve it for farming, creating the agricultural landscape of today. The drainage system of interlinked cuts and ditches dates to the 1800 Drainage Act, the plan being to straighten the course of the Derwent and isolate water coming off the higher land from that in the Vale in order to improve the production of cereals and roots. Developments in drainage technique have developed through time, and since the latter half of the 20th century these have been under the management of the Internal Drainage Board, which oversaw significant drainage works from the 1970s onwards. These chronological changes can be 'read' through the landscape.

Discoveries within the Vale of Pickering have contributed to understanding of our human past, some providing important advances in the history of science; for example, William Buckland's discovery and analysis of fossil remains at Kirkdale Cave in the 1820s was central to providing evidence that the bones discovered were not the result of Noah's flood but the remains of a hyena den. In the 20th century work in the Vale of Pickering has defined and advanced the discipline of landscape archaeology.

The extension of the railway from York to Scarborough in 1845 opened the coast up to tourism, and began a phase of landscape change associated with leisure and sport: the Vale of Pickering is home to one of the oldest privately owned cricket pitches, one of the few 'inland links' golf courses, and one of the earliest zoological theme parks in the UK.

After the Second World War the use of larger agricultural machinery, neglect of some farmed land and the loss of farm labour led to field boundary and hedgerow tree loss, particularly on the northern and western edges of the Vale where hedges rather than ditches are characteristic. Many remaining hedges are neglected and gappy. As a result the landscape has become more open and dynamic in structure. Changes in farming since 2000 have seen reductions in the numbers of sheep and pigs, the loss of set aside (since the end of the compulsory requirement in 2009) and a general reduction in the numbers of mixed holdings. The condition of many historic farm buildings is slowly declining as their use declines and they are not actively maintained. Development pressure along the coastal zone is causing character to change locally and there is also new development around Pickering, Malton and Norton. Aggregates are actively quarried at Knapton, Wykeham, West Heslerton and other sites. The Vale has considerable natural gas resources, with facilities currently at Kirby Misperton, Marishes and Knapton, and other locations planned. There is a growing awareness of the related opportunities within the Vale of Pickering to understand and protect the historic environment, and to restore wetland habitats as an essential part of the functioning landscape, resilient to flooding. The Cayton and Flixton Carrs Wetland Project on the peatlands at the eastern end of the Vale has resulted in the restoration and re-creation of wetland habitat including flood plain grazing marsh, supporting wetland bird interests. Significant excavations are taking place at Star Carr to record what is there before it is lost to further peat shrinkage and erosion.

Ecosystem services

The Vale of Pickering 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 Vale of Pickering NCA is contained in the 'Analysis' section of this document.

Provisioning services (food, fibre and water supply)

- **Food provision:** The Vale contains productive land that produces good cereal yields, both for human consumption and for animal feed grains, oilseeds, stockfeed (including root crops, brassicas and fodder beet) and livestock (cattle, sheep and pigs) for the fat market. Outdoor pig production is a feature of the A64 corridor. Much of this produce is supplied to local food processors.
- **Water availability:** There is no major aquifer underlying the Vale itself; however, the Corallian Limestone forms a key aquifer locally for Scarborough, serving several bores in the Irton–Cayton area, and this is the subject of a groundwater protection zone. A significant portion of the upper Derwent's flow at East Ayton provides recharge of this aquifer just upstream of its entry point into the NCA boundary. The River Derwent is a major surface water source for public water supply with extraction points at Elvington and Loftsome Bridge 30 km downstream from Malton in the Humberhead Levels NCA.

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

- **Climate regulation:** Carbon sequestration can be increased in peat soils by re-establishing them as wetlands; in most of the area's mineral soils carbon storage may be improved by increasing organic matter inputs and/or by reducing the frequency and area of cultivation.
- **Regulating water quality:** The whole of the NCA is in the Yorkshire Derwent Priority Catchment. There are significant problems with phosphate and nitrate pollution and sedimentation, exacerbated by the high level of connectivity of the internal drainage system of the Vale. Land management practices in the catchment have a significant influence on the levels of nutrient and sediment input to watercourses.
- **Regulating water flow (flooding):** There is considerable flood risk throughout the NCA associated with both the rivers Derwent and Rye and their tributaries. Measures to increase surface roughness, infiltration and evapotranspiration will all slow surface flow across the land; preventing soil erosion reduces the sediment input which chokes watercourses, reducing their channel capacity.
- **Regulating soil erosion:** Soil erosion is particularly marked in the peat areas of the eastern end of the Vale where peat oxidation and erosion lead to significant shrinkage of the soils. Soil erosion is also a risk for the lighter sandy soils along the southern boundary of the Vale where arable production and outdoor pig rearing can lead to soil loss and the sedimentation of watercourses. Soil erosion in the upper catchment of the Rye (outside the NCA) impacts on water quality downstream within the Vale. Adopting best practice in soil management including shallow

cultivation on sandy soils, use of green manure crops, controlling livestock movement near watercourses and creating habitat buffer strips next to water can do much to reduce this, although oxidation can only be prevented by keeping peat waterlogged.

- **Regulating soil quality:** The main soil types of the Vale may be improved in quality through increasing levels of organic matter, improving peat soils by restoring the water table, and by careful timing of activities to reduce the likelihood of soil compaction where drainage is impeded and weak topsoil structure is easily damaged.
- **Regulating coastal flooding and erosion:** Cliff instability and erosion rates are particularly high at Cayton Bay, Filey and the smaller communities in Filey Bay. This erosion is one part of the natural dynamic processes operating along the east coast, which in turn supply eroded material downshore to other areas. The Environment Agency's coastal management policy is to pursue 'no active intervention' along the coast, with the exception of Filey where the policy is to 'hold the line' of existing defences for the long term (to 2105).

Cultural services (inspiration, education and wellbeing)

- **Sense of place/inspiration:** The basin-shaped topography of the Vale and its wetland landscape and the visible evidence and rich potential in the landscape for human habitation for at least the last 11,000 years all contribute to a strong sense of place. The flat, open landscapes and the limited north-south through access contribute to the remoteness, tranquillity and sense of place. The natural and cultural heritage has inspired artistic expression through time, continuing to the present day, for example in the work of the abstract artist Carmen Mills.
- **Sense of history:** The gathering of knowledge in the latter half of the 20th century in the Vale of Pickering allows us to start to understand a continuous sequence of human activity since the late Palaeolithic, making this area internationally important for its known and potential contribution to the development of communities from this period.
- **Biodiversity:** The River Derwent and parts of the Vale's coast are designated as being of international importance for their wildlife. These sites will be at the core of efforts to rebuild a resilient and functioning ecological network from which many other ecosystem services will be derived.
- **Geodiversity:** Geodiversity, both hidden and visible, has a strong influence on the cultural value of the Vale of Pickering. The contrasting landscapes of the low-lying Vale, the surrounding hills and dramatic coastal cliffs reflect its geological history. This intimately links to land use patterns and resources of today. There is a long and continuing history of research into the geology of the Vale which has been central to our local and wider geological understanding of Britain. Study of this onshore geology is also critical to understanding the offshore geology of the North Sea and its associated hydrocarbon reserves, and the Vale (particularly its coast) remains a critical area for learning about and teaching geology.

Statements of Environmental Opportunity

SEO 1: Enhance the network of wetland habitats in the Vale to provide public benefits in improved flood mitigation and improved water quality, and to reduce habitat fragmentation and increase the resilience of habitats and species to environmental change.

For example, by:

- Working at catchment scale, identifying habitat improvements within adjoining upland National Character Areas (NCAs), such as blocking of artificial drainage channels or woodland gill planting to stabilise slopes, in order to regulate the peak water flows originating in these hills which reach the Vale of Pickering, inundating properties and high-value crops.
- Restoring hydrological integrity and biodiversity of the peatlands by raising water levels within peat soils, thereby enhancing flood mitigation and protecting peat from desiccation, recording archaeological evidence where possible.
- Maintaining undeveloped flood plains as valuable wetland habitats with flood storage capacity and contributing to local landscape character, by increasing the area and connectivity of wet pastures and other wetland habitats such as reedbeds and fens, and the creation of willow and alder carrs in appropriate locations, protecting and enhancing flood plain grasslands for breeding and wintering birds, and ensuring that new winter storage reservoirs are designed to strengthen biodiversity and landscape assets.
- Restoring natural river morphology and dynamics where possible, reconnecting the River Derwent with its flood plain to absorb energy of water flows and thus reduce downstream flood events, while strengthening sense of place and increasing the opportunities for water storage and biodiversity.
- Managing the ditch network, particularly in the east of the Vale, to encourage emergent vegetation, thus supporting species such as water vole and otter, enhancing biodiversity and landscape character.
- Maintaining and extending permanent grassland and semi-natural habitats on peat soils in the east of the Vale, and seeking opportunities to revert arable farmland, re-creating wet grassland and fens especially on the peat.
- Improving the resilience of designated wildlife sites by ensuring that underlying contributors to site condition are understood and managed appropriately, including consideration of the predicted responses of species to environmental change, and building robust ecological networks around these core sites.
- Improving farm infrastructure and waste management, encouraging crops which require lower chemical input and smart use of nutrients and pesticides to avoid leaching of soil nutrients into watercourses, particularly on flood plains where the risk of pollution is greater.
- Employing best practice in soils management, use of low-pressure machinery, and careful management of livestock near watercourses and banksides, using grassland buffer strips and semi-natural habitats to enhance infiltration and protect the internationally important River Derwent and other watercourses from nutrient and sediment input.

SEO 2: Protect and enhance the historic landscape and geodiversity of the Vale, promoting greater understanding of this to inform current and future decisions on how the landscape is used.

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.
- Minimising disturbance and damage to archaeological sites resulting from cultivation, adopting shallow cultivation techniques in the sands and gravels around the edge of the former glacial lake (Lake Pickering) and the 'ladder settlement'.
- Minimising disturbance and damage to the peatland archaeology of the internationally important Star Carr site and surrounds by restoring hydrological integrity and preserving palaeo-environmental deposits in wetland areas, and hence contributing to climate mitigation, regulating water flow and restoring the wetland landscape.
- Using palaeo-environmental evidence of past climate and vegetation change in the Vale and human response to this to better inform current and future decision making on land use and landscape change.
- Developing approaches to interpret the varied soils of the Vale, explaining how these interacted with hydrology and vegetation, to tell the story of how soils have been adapted and changed by human intervention.
- Ensuring that successional vegetation on important geological exposures is actively managed so that the exposures remain visible.
- Where possible, maintaining natural coastal processes, allowing the natural 'balancing' of the coastline in line with its biodiversity and geological and recreational value, and ensuring the supply of sediment to downdrift coastlines, thus protecting both natural and man-made assets.
- Ensuring that new development respects historic settlement patterns and features, addressing the decline of historic buildings by repairing and restoring them using traditional materials.
- Strengthening historic field patterns through hedgerow or wet ditch restoration and management, especially of early enclosure field systems, hence strengthening wildlife corridors and other ecosystem services.
- Conserving through appropriate management local historic features such as traditional farmsteads, the ridge and furrow earthworks on upland fringe pasture, and the linear strip fields east and west of Pickering, thereby maintaining sense of place and understanding of cultural history, historic environment and land management.
- Taking opportunities to increase public awareness of the historic importance of the Vale, encouraging educational links with local schools and colleges, using activities such as the Star Carr Project excavations to spotlight the Vale's hidden past and interpret its drained landscape.
- Promoting awareness of geological, geomorphological and soils features including the former Lake Pickering, the nationally important exposures at High Red Cliffs, Red Cliff and Gristhorpe Bay, and the cliffs and foreshore between Scarborough and Cayton Bay, improving the long-term prognosis for these important geological sites by ensuring that underlying factors influencing their condition are properly understood and managed appropriately, for example dynamic coastal processes and scrub succession.

SEO 3: Manage the agricultural landscape to enhance the sustainable future of farming, strengthen landscape character, protect soils and water, and enhance biodiversity through improved connectivity of semi-natural habitats, creating ecological networks that are resilient to environmental change.

For example, by:

- Ensuring that greater self-sufficiency in food production is achieved in a manner which reinforces landscape character, and supports the provision of other public benefits such as protection of the soil resource and its storage of carbon, water quality and holding capacity of the land during peak flood events.
- Promoting good soil management so that the sandy soils of the Vale slopes and the fen peat soils are not depleted by erosion or damaged through compaction or needless loss of organic matter, and the archaeology held within is protected.
- Restoring and extending unimproved grasslands, particularly as buffer zones along watercourses, around existing grasslands, along cliff tops and on peat soils, to achieve a strong habitat network, increase soil quality and its carbon storage, and reduce the threats of fragmentation of these habitats.
- Managing the network of ditches to strengthen its role as a habitat network, dredging/cutting on rotation to maintain emergent vegetation, in order to support plants and animals, and to strengthen the network's contribution to landscape character.
- In arable areas encouraging increased habitat diversity, seeking opportunities to protect and enhance arable flora, and introducing permanent grassland field margins, linking these to the wider grassland resource where possible, using green manure crops within arable rotations, and creating mosaics of habitat to support farmland birds, pollinating insects and natural pest control.
- Creating small native broadleaf woodlands in appropriate locations, including characteristic copses by farmsteads, actively managing these to achieve a diverse age range and provide wider public benefits, for example by storing carbon, preventing soil erosion and attenuating peak flood waters; and within existing woodland considering reinstatement of traditional woodland management practices such as coppicing.
- Protecting, managing and thickening hedgerows, especially in the west of the Vale, to reduce cross-land flows of water during peak floods, enhance soil permeability and strengthen local landscape character and habitat networks.
- Develop opportunities for promotion of local and niche products, supporting traditional farming practices that are characteristic of the area.

SEO 4: Ensure that developments are successfully integrated into the landscape, making a contribution to biodiversity and habitat networks, and that they do not compromise the sense of tranquillity and openness of the rural landscape, or delivery of other important ecosystem services, including mitigating and adapting to climate change.

For example, by:

- Incorporating biomass crops such as miscanthus and short-rotation coppice on a small scale, particularly where they can realise multiple benefits for the environment, contributing to the local landscape character, while retaining the long views and open character of the area.
- Ensuring that developments and land use changes, from small farm scale to industrial scale including waste management facilities, minerals extraction and renewable energy, are successfully integrated, both individually and cumulatively, into the landscape, that they make a positive contribution to the character, sense of place and openness of this rural landscape, and that their location and operation can support the provision of other ecosystem services.
- Securing long-term restoration plans for sites that strengthen landscape character and achieve wider benefits, for example strengthening the wetland habitat network and enabling adaptation to climate change.
- Ensuring that water resource demands and water quality issues are adequately assessed in proposals for development or land use change, including the impact on provision of other ecosystem services, and by promoting sustainable drainage and water conservation measures.
- Ensuring that development to the south of Scarborough protects groundwater quality in the Corallian Limestone aquifer which serves the town; and working with authorities in the North York Moors and Cleveland Hills NCA to protect the upper Derwent's flow, a large part of which provides recharge of the Corallian Limestone aquifer at East Ayton.
- Planning coastal development and land use to accommodate predicted rates of coastal erosion so that essential dynamic coastal processes are allowed to continue without undue detriment to other interests.

Additional opportunities

1. Protect and enhance the natural and cultural environment of the Vale of Pickering and our understanding and enjoyment of the area.

For example, by:

- Protecting the sense of tranquillity and openness that is important to the rural character of the NCA, particularly in the centre of the Vale, on the flood plains and peat carrs, and maintaining key views across and out of the Vale to maintain the sense of expansiveness.
- Minimising light spill, particularly in areas classed as 'undisturbed' on Campaign to Protect Rural England intrusion maps.
- Supporting sustainable recreational and educational access to enable understanding and appreciation of the environment, in particular its clear evidence of historic change, establishing stronger links between recreation at the coast and recreational opportunities inland.
- Identifying opportunities to create new circular routes or links to existing rights of way, particularly to the Cleveland Way, Ebor Way and Wolds Way, and establishing the Coastal Access Trail, ensuring that the needs of under-represented groups and the less able are recognised.

Supporting document 2: Landscape change

Recent changes

Trees and woodlands

- Woodland cover is low at 1,180 ha, 3 per cent of this NCA, but there has been some expansion at the western end, west of Kirby Misperton.
- Planting in the east is generally associated with existing woodland blocks.
- There has been some increase in the area of Woodland Grant Scheme agreements for management.

Boundary features

- Modernisation of agriculture has led to field boundary and hedgerow tree loss, particularly on the northern and western edges of the vale, where hedges rather than ditches are characteristic. As a result the landscape has become more open in structure.
- The estimated boundary length for the NCA is about 3,471 km, but there has been a limited extent of Countryside Stewardship agreements for boundary management. Between 1999 and 2003 Countryside Stewardship agreements for linear features included fencing (17 km), hedge management (4 km), hedge planting and restoration (36 km), restored boundary protection (8 km), stone wall restoration (1 km).

Agriculture

- The overall ratio of arable to grassland has remained stable at approximately 2 to 1.
- From 2000 to 2009 there was an increase in the number of holdings under cereal production, a reduction in the area cultivated for cash root crops - potatoes and sugar beet - and an increase in the area under oilseeds and stock feed.
- The number of holdings classified as 'mixed' and 'general cropping' has continued to decline over the period 2000 to 2009.
- The period 2000 to 2009 has seen a notable reduction in the growing of vegetables, fruit and hardy nursery stock.
- Between 2000 and 2009 there has been a reduction in sheep and pig numbers and a slight increase in numbers of cattle.
- The most extensive annual Countryside Stewardship agreements in 2003 were for lowland pastures on neutral/acid soils and over-winter stubbles (212 ha). As a result, there has been some positive change or at least maintenance of the character of the farmed landscape.

Settlement and development

- Development outside major settlements is concentrated more to the eastern end of the NCA, and particularly along the coast, where it appears to be transforming the character locally where infill development impacting on the character of rural villages is most noticeable. Elsewhere, the character of villages is sustained through strict development control.
- Sites for residential development are also being considered around Malton and Norton, Kirby Moorside, Pickering and Helmsley.
- Industrial expansion around Scarborough and Seamer are likely to continue.
- Road improvements appear to be associated with increased levels of 'intrusion' in rural areas.
- Planned large-scale offshore windfarms may have their landfall and grid connections within the area.
- Aggregates are actively quarried at Knapton, Wykeham, West Heselton and other sites. The Vale has considerable potential for storage of hydrocarbons, with facilities currently at Kirby Misperton, Marishes and Knapton, and other locations planned.
- The Flamingoland theme park is becoming increasingly visible in the landscape of the Vale of Pickering.

Semi-natural habitat

- Between 2006 and 2011, 319 ha of wetland habitat such as floodplain grazing marsh was created or restored in the eastern end of the Vale

through the work of the Cayton and Flixton Carrs project and agri-environment agreements.

- Canalisation of rivers and streams, disconnection from their floodplains and extensive drainage of wetlands such as floodplain meadows and grazing, has resulted in reduction and fragmentation of wetland habitats; there is evidence of some recent reversal in this trend as wetland habitats have been restored resulting in an increased breeding success of wading birds through the work of the Cayton and Flixton Wetland Project and local farmers, supported by agri-environment payments.

Historic features

- The Vale's wetlands are rich in historic features including the remains of Mesolithic settlements, though some have been damaged by drainage and ploughing. Many other important archaeological and historic sites remain relatively unexplored and therefore potentially vulnerable to damage. Shrinkage of peat means that a critical point has been reached in preserving the archaeological record, such that in places a destructive survey is the best means of ensuring that a record of the remains is protected if not the remains themselves.
- The free-draining sandy soils on the southern edge of the Vale are key areas for potato growing and also for location of piggeries. This activity takes place on erodible soils which overlay the important 'ladder settlements'. Drought, drainage and deep ploughing for potatoes have caused some damage to archaeological sites in this area.
- About 64 per cent of historic farm buildings remain unconverted. Most are intact structurally. This aspect of the historic landscape appears to be eroding slowly.

Coast and rivers

- There is no evidence of Countryside Stewardship agreements (no data available for Higher Level Stewardship Scheme) for management of riparian habitats, which suggest that riparian features may not be actively managed.
- The Environment Agency classifies water quality under the Water Framework Directive. Groundwater quality has not been assessed across the majority of this NCA, but where it has it is classed as poor. The chemical quality of the River Derwent (and tributaries) is classed as good. The ecological quality of rivers in the area is mainly classed as moderate, with some stretches of good quality. The ecological potential and the chemical status of the coastline is 'good'.⁵
- Trees and wildlife habitats have been lost along river banks as a result of over engineering and river management, and drainage has caused shrinkage of peat in places, resulting in exposure of tree roots. These issues are mostly in the eastern part of the vale.

⁵ Environment Agency, *Humber River Basin Management Plan, Annex A: Current state of waters*, December 2009.

Drivers of change

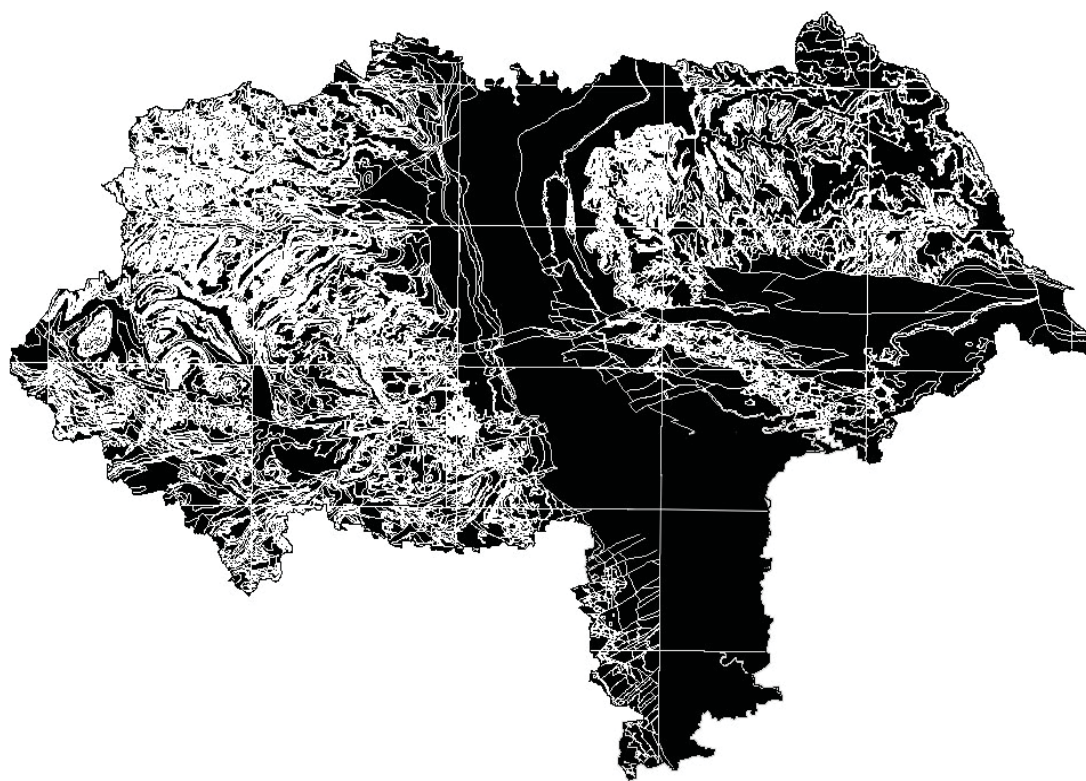
Climate change is likely to result in:

- A rise in sea levels and increased storminess leading to the deepening of bays and accelerated coastal erosion.
- Periods of heavy rain may destabilise slopes for example at Cayton Cliff and Knipe Point due to infiltration of water further inland.
- Increased flooding of small towns, villages and transport infrastructure within the Vale, associated with flooding following drought, and run-off from surrounding high ground.
- Flooding can increase rates of soil erosion and may impact on the course of rivers within the Vale.
- Summer droughts leading to increase in water demand for crop growth and contributing to drying out and erosion of peat soils.
- Summer flooding impacting on high-value food and feed crops.
- A longer growing season potentially leading to double cropping.
- New crops and crop rotations leading to changes in the farmed landscape and the biodiversity it supports.
- Species migration and range expansion of southern species may bring pests and diseases as well as expanding the range of native biodiversity; potential loss of small or isolated habitats.
- An increase in frequency of storm events and flooding.

Other key drivers

- Continued dynamic movement of the coastline, in particular the softer glacial till cliffs (moving back at a rate of 0.2-0.5 m per year)⁶.
 - There is likely to be increased pressure for food production in the future as a result of a national drive for greater self-sufficiency in food – this creates the opportunity to accommodate this in such a way that environmental features and other ecosystem services are not compromised.
 - Likely increase in demand for water supply from increased food production, housing expansion and new developments.
 - There is pressure for expansion of existing settlements, particularly Scarborough, with associated pressure to dual the A64, requiring increased amounts of sand and gravel which are extracted locally. Potential upgrading of the A64 may result in impacts on archaeology, visual impacts and loss of tranquillity. Sites for residential development are also being considered around Malton and Norton, Kirby Moorside, Pickering and Helmsley. Industrial expansion around Scarborough and Seamer are likely to continue.
 - A requirement for increasing renewable energy generation could result in increased pressure for onshore wind farms, landfall and grid connection for off-shore wind energy, growth of biomass crops (DEFRA's maps show potentially high miscanthus yields in this area⁷), and possible gas exploration.
 - The current poor performance of the region in terms of recycling and recovery means there is likely to be an increasing need for waste management facilities if this doesn't improve. The need for an increase in landfill capacity was previously identified by the Regional Spatial Strategy to 2026.
 - The Marine and Coastal Access Act 2009 provided opportunities to protect the marine environment and ensure access to all parts of the coast. The Coastal Access trail will be created over the next 10 years.
- ⁶ North East Coastal Authorities Group (2007) River Tyne to Flamborough Head Shoreline Management Plan 2
- ⁷ <http://archive.defra.gov.uk/foodfarm/growing/crops/industrial/energy/opportunities/yh.htm>

North Yorkshire County Council
**North Yorkshire and York
Landscape Characterisation Project**

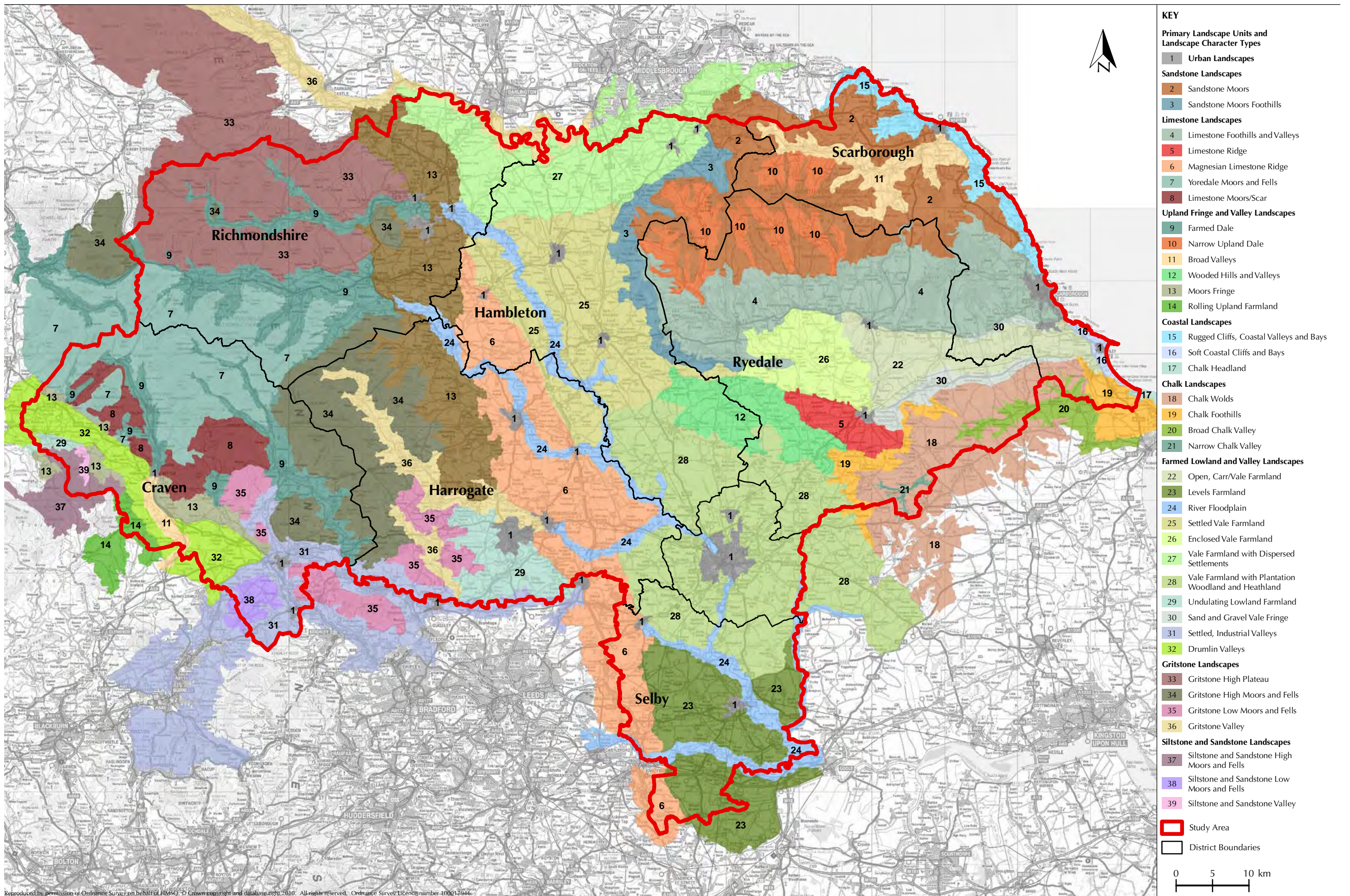


5.3 Limestone Landscapes

5.3.1 The Limestone Landscapes are situated in three main locations within the Study Area. They encompass a series of foothills and valleys at the southern edge of the North York Moors National Park; and also encompass a prominent ridge within the Howardian Hills AONB, to the south. Towards the centre of the Study Area, a broad ridge of magnesian limestone runs north south across the landscape. The third occurrence of Limestone Landscapes is within the Yorkshire Dales National Park, in the west of the Study Area, encompassing Moors and Fells; and Scar.

5.3.2 The following Landscape Character Types form the Limestone Landscapes Primary Landscape Unit:

- Limestone Foothills and Valleys (4)
- Limestone Ridge (5)
- Magnesian Limestone Ridge (6)
- Yoredale Moors and Fells (7)
- Limestone Moors/Scar (8)



LIMESTONE FOOTHILLS AND VALLEYS (4)



CHARACTERISATION

Key Characteristics

- Flat, open summits of the Tabular Hills;
- Ancient woodlands which occupy valley sides;
- Prehistoric mounds and burial sites preserved within moorland or woodland;
- Strong visual unity within settlements and sense of harmony with the surrounding landscape;
- Traditional farm buildings constructed of pale limestone walls and red pantile roofs;
- Distinctive cultural landscape with medieval villages located at the spring line, common arable fields at the base of the hill, and summer pastures above;
- Extensive coniferous plantations are a key feature of the current landscape;
- Contrast between the very narrow wooded valleys, giving a very strong sense of enclosure, with the open arable tops of the Tabular Hills.

Description

- 5.3.3 This Landscape Character Type is predominantly situated in the southern part of the North York Moors National Park. From the coast at Scarborough, it extends westwards along the northern edge of the Vale of Pickering before heading north-westwards to the peak of Black Hambleton. The upper Jurassic rocks of the coastline change to sandstone and limestone moving northwestwards. The Tabular Hills, so-called because of their distinctive 'table-top' shape, comprise limestone and calcareous gritstone and occupy the eastern and central parts of this Landscape Character Type. The northern edge of the Tabular Hills is generally defined by stream valleys that weave along the southern edges of the Sandstone Moors upland plateau (immediately to the north). These valleys coincide with softer 'Oxford Clay' geology, which frequently creates a spring line. Scarp slopes rise up from these valleys to merge with rounded hill tops. The southern sides of these hills have smooth, gently sloping profiles as the rocks dip southwards to drop below the clays of the adjacent Vale of Pickering. The Hambleton Hills

rise above the steep scarp slopes of the Sandstone Moors Foothills on their western edge. The limestone foothills are deeply dissected by densely wooded, intimate, narrow, twisting valleys or dales. Land cover comprises a mixture of arable and pasture farmland and there are large areas of coniferous plantations, particularly in the east (including Cropton, Dalby and Wykeham Forests). The steep valley slopes are wooded with a mixture of broadleaved woodland and coniferous plantations. Linear areas of predominantly ancient, semi-natural woodland occupy a high proportion of the valley sides and escarpments. Fields of medium to large size and regular shape are often bounded by wire fences or overgrown hedges, with occasional walls. There is a strong contrast between the elevated flat hill tops, which are predominantly open in character, and the valleys, which are densely wooded and provide a small scale, intimate and secluded landscape. The hill tops provide extensive long distance views, sometimes broken by coniferous plantations. Settlements in the area are predominantly constructed from local stone, resulting in strong visual unity and sense of harmony. Springline settlements are also sited on the lower dip slope and are generally linear in form. Dramatic, long distance views southwards across the Vale of Pickering and the Chalk Wolds contribute to recognisable sense of place.

Definitive Attributes

Geology	<ul style="list-style-type: none"> • Predominantly underlain by a bedrock of ooidal limestone, which is interspersed with bands of mudstone and sandstone • A superficial geology of clay and silt overlies the bedrock within the series of narrow river corridors which run north south
Topography & Drainage	<ul style="list-style-type: none"> • Topography slopes downwards from north to south from the upland Sandstone Moors, towards the Vale of Pickering • This broad east-west orientated slope is cut by a series of north-south running narrow river valleys which feed into the main corridor of the River Derwent within the Vale of Pickering to the south
Land Cover	<ul style="list-style-type: none"> • The lower slopes, within the south predominantly encompass arable fields, which are interspersed with pockets of improved grassland • Higher slopes in the north are predominantly improved grassland • Large patches of coniferous woodland are also located at the northern edge of this Landscape Character Type. The woodland is associated with areas of dwarf shrub heath in the west and open dwarf shrub heath in the east • Belts of almost continuous deciduous woodland clothe the narrow river valleys that run north south across the landscape
Enclosure / Field Pattern	<ul style="list-style-type: none"> • Several areas of large-scale modern improved fields in the south, on the lower slopes • Interspersed amongst the modern fields are medium to large-scale areas of planned parliamentary enclosure and piecemeal enclosure with an irregular field pattern • Areas of designed landscape, such as Duncombe Park, Ebberston Park and Nunnington are also landscape features
Settlement Pattern	<ul style="list-style-type: none"> • Larger settlements such as Kirkbymoorside, Helmsley, Pickering and East Ayton are situated at the base of the hills where they rise from the Vale of Pickering • Strings of small farmsteads line minor roads running north south through the landscape • Traditional farm buildings often display pale limestone walls and red pantile roofs • Villages tend to be small, linear settlements of ancient origin, (Appleton-le-Moors is a well-known example of a medieval planned village)
Visible Historic Features	<ul style="list-style-type: none"> • Villages are generally of ancient origin, place names show that many have Saxon origins, for example Appleton, Middleton and Sproxtun • Helmsley is a planned 12th century town • Visible features include castles, for example Helmsley, Pickering and

	<p>West Ayton</p> <ul style="list-style-type: none"> • Rievaulx Abbey, Cawthorn Camps, a Roman Road and section of Medieval trackway (known as the Portergate) are also key historic features • Saxon churches at Lastingham and Levisham • Designed landscapes (Historic Parks and Gardens) at Duncombe Park, Ebberston Park and Nunnington • Round barrows and cairns on Ebberston low moor
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EVALUATION

Forces for Change

Agricultural Change and Land Management

- Decline of woodland and wood pasture, due to neglect, changes in management and grazing pressure;
- Decline of boundary trees/hedgerow trees/individual trees/small groups of trees due to neglect and changes in management;
- Damage to geological/geomorphological features from agricultural operations and tree planting;
- Decline in historic agricultural/settlement features (e.g. ridge and furrow, earthworks) due to agricultural intensification and tree planting;
- Damage to archaeological features as a result of agricultural operations;
- Introduction of modern farm buildings, slurry tanks or grain towers which have the potential to be visually intrusive;
- Intensification of agricultural management especially in arable areas, leading to a decline in rough pasture/species rich and wet grasslands in favour of improved pasture, disrepair/loss of dry stone walls; erosion of strip field patterns and decline in or loss of hedgerows;
- Loss of species-rich calcareous grassland and hay meadows in the past (a few examples survive in nature reserves)

Development and Infrastructure

- Damage to the landscape as a result of increased traffic causing parking problems, bridge and verge damage, footpath and bridleway erosion, and off road vehicle/motorcycle/mountain bike activity;
- Potential for increasing commercialism within villages associated with tourist related development, resulting in a loss of vernacular character and change to settlement pattern;
- Pressure to increase the numbers of camping and caravanning sites;
- Potential for the introduction of telecommunications and mobile phone masts which could be visually intrusive, particularly if sited on higher slopes;
- Potential widening of or improvements to main road corridors with associated noise and visual intrusion.

Sensitivity to Change Issues

- Overall high visual sensitivity as a result of extensive long distance views to adjacent Landscape Character Types, strong intervisibility with surrounding landscapes and the flat open summits of the Tabular Hills;
- Views to and from this Landscape Character Types are sensitive to the introduction of tall vertical structures such as wind turbines or communications masts;
- High ecological sensitivity as a result of the numerous linear belts of ancient woodland lining the dale sides, coupled with numerous SSSI, including parts of the North York Moors, Caydale, Ryedale, Windy Pits, Duncombe, Sleightholme, Cawthorn Moor, Bridestones and Newtondale;
- These sites encompass a patchwork of ecological habitats which are sensitive to changing agricultural practices/potential new development/climate change;

- High landscape sensitivity as a result of the strong landscape and settlement pattern, with strong visual unity in settlement and distinctive cultural patterns comprising medieval villages located at spring lines.

GUIDANCE

Guidance for Managing Landscape Change

Physical and Ecological Character

- **Protect, manage** and **enhance** patches of semi-natural broadleaved ancient woodland to strengthen overall landscape character;
- **Seek** opportunities to better integrate existing conifer plantations into the landscape and improve their contribution to biodiversity;
- **Manage** coniferous plantations under continuous cover programmes, sympathetic rotation felling, retention of permanent open areas, ride widening and the clearance of conifers from around watercourses.

Cultural and Historic Character

- **Protect** the rich range of historic landscape features including designed landscapes archaeological sites (such as prehistoric remains within Wykeham Forest, round barrows and cairns) and historic buildings such as Rievaulx Abbey, castles (Helmsley, Pickering and West Ayton) and churches
- **Protect** the setting of historic designed landscapes at Duncombe Park, Eberston Park and Nunnington and also the setting of Helmsley, Pickering and West Ayton castles;
- **Protect** the nucleated settlement pattern and key historic buildings within historic settlements such as Appleton, Middleton and Sproxton;
- **Maintain** sustainable grazing intensities and scrub and bracken management on archaeological sites;
- **Encourage** heritage tourism;
- **Promote** the use of local building materials, such as pale limestone walls and red pantile roofs as appropriate for repairing traditional buildings and for new build.

Aesthetic and Perceptual Character

- **Maintain** public access to enable enjoyment of this landscape and the sense of ‘escapism’ and ‘inspiration’ it provides whilst protecting vulnerable habitats, through the network of public footpaths and open access land;
- **Protect** key views to Enclosed Vale Farmland (the Vale of Pickering) to the south, Sandstone Moors and Foothills to the north;
- **Conserve** the overall sense of tranquillity and relative remoteness;
- **Minimise** light spill at night through careful lighting design.

Signposts to Further Landscape Character Assessment Information

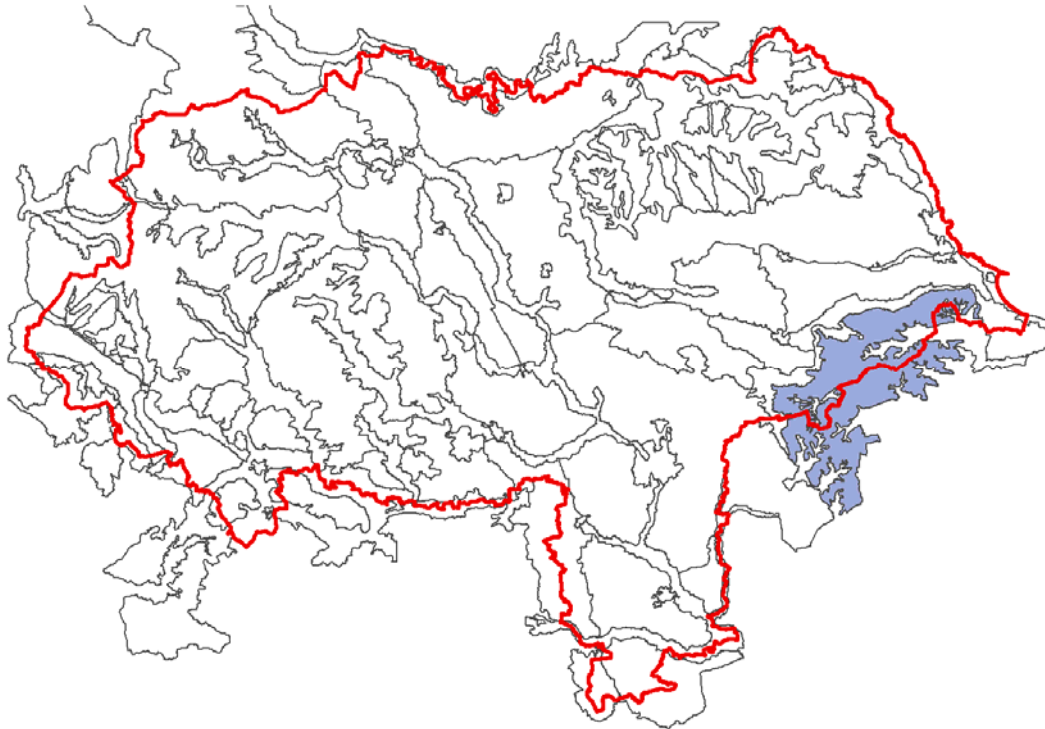
National Character Area

- NCA 25: North Yorkshire Moors and Cleveland Hills
http://www.naturalengland.org.uk/Images/jca25_tcm6-5621.pdf
- NCA 26: Vale of Pickering and NCA29: Howardian Hills
http://www.naturalengland.org.uk/Images/jca26_tcm6-5676.pdf

Local Landscape Character Assessments

- Ryedale Landscape Character Assessment (1999)
- North York Moors National Park Landscape Character Assessment (2003).
<http://www.northyorkmoors.org.uk/content.php?nID=372>
- Hambleton & Howardian Hills Landscape Character Assessment (2007)

Chalk Wolds (18)



CHARACTERISATION

Key Characteristics

- A series of prominent chalk hills which rise from surrounding lower landscapes and have a predominantly open character;
- Dispersed, nucleated farmsteads are a key feature of settlement pattern;
- Fertile soil supports a diverse pattern of arable farming;
- Winterbourne streams are a key feature, often lined with managed wet grassland;
- High concentration of historic sites, reflecting prehistoric habitation on the plateau;
- Visible evidence of medieval villages sites, medieval cultivation terraces and linear earthworks;
- Historic settlements constructed predominantly of brick or chalk with pantile roofs, often with ponds as central features;
- Parkland landscapes, estate villages and estate woodlands are a feature in places;
- Overall strong sense of tranquillity, remoteness and associated dark night skies.

Description

The Chalk Wolds Landscape Character Type is located in the far south-eastern part of the Study Area, to the south of the Vale of Pickering. It encompasses a large-scale elevated chalk landscape of rounded, rolling hills and plateaux that are dissected by occasional deep valleys. The open character of the hills contrasts with the enclosed character of the valleys. The underlying solid geology of the area is chalk laid down during the Cretaceous period. Soils are free draining due to sloping landform and the permeable chalk bedrock. There are no significant watercourses in the area due to the permeable nature of the bedrock and the sloping land. Village ponds are present in most villages. Fertile, chalky soils support mainly arable farming. Scattered small shelterbelt plantations are features, but woodland cover is sparse overall except around Sledmere Estate and Park. There is evidence of early human activity

dating back to prehistoric times on the Wolds, including visible evidence of medieval village sites, medieval cultivation terraces and linear earthworks. This is a generally lightly settled landscape, probably at least partly due to the lack of water courses in the area. There are occasional villages, mostly in sheltered locations and large scattered farmsteads on high ground. Estate and parkland landscapes with large country houses, estate villages and estate woodlands are key landscape features in places. Panoramic open views can be gained from the tops of hills and plateaux. There is also a strong sense of remoteness and tranquillity throughout much of the landscape, with associated dark night skies.

Definitive Attributes

Geology	<ul style="list-style-type: none"> Entirely underlain by chalk bedrock
Topography & Drainage	<ul style="list-style-type: none"> Generally, topography slopes downwards from west to east, towards the Broad Chalk Valley Landscape Character Type The highest hills are in the southwest
Land Cover	<ul style="list-style-type: none"> A patchwork of arable and improved grassland fields, interspersed with small pockets of deciduous woodland Chalk grassland
Enclosure / Field Pattern	<ul style="list-style-type: none"> The lower parts of this Landscape Character Type predominantly encompass modern improved fields, whilst the higher wolds have a historic field pattern of planned, large-scale parliamentary enclosure Pockets of species-rich chalk grasslands and road verges Small quarries are also landscape features
Settlement Pattern	<ul style="list-style-type: none"> A pattern of small scale, sparse settlement extends throughout this Landscape Character Type There are generally few villages. Where present, villages are small and compact, often having developed around crossroads Farm houses and adjacent farm buildings were built by prosperous farmers during the 18th and 19th Century, usually of brick, with pantile or slate roofs. These nucleated farmsteads are often located on high ground in exposed locations and many are surrounded by shelter belts. The farms tend to be widely dispersed
Visible Historic Features	<ul style="list-style-type: none"> Romano British Settlement at Foxholes Duggleby Howe round barrow, interrupted ditch enclosure and ring ditches Wharram Percy deserted medieval village Towthorpe Medieval settlement Thirkleby medieval settlement adjacent to Thirkleby Manor Hanging Grimston medieval settlement adjacent to Mount Pleasant Farm Mount Ferrant motte and bailey castle Sledmere House Historic park and garden

EVALUATION

Forces for Change

Agricultural Change and Land Management

- Hedges and hedgerow trees still remain an important feature of the landscape, but in some places, especially on the high wolds, they are over-managed, becoming low cut and gappy, while elsewhere they are suffering from lack of appropriate management;
- Arable production is characteristic of this area. Increasing use of winter crops is reducing the area of stubble which is having a negative effect on farmland bird populations;
- Decline in management of parkland within the area.

Development and Infrastructure

- Introduction of new visually intrusive large agricultural sheds;

- Introduction of telecommunication masts, overhead wires or other tall structures such as lighting columns.

Mineral Extraction

- There has been pressure for extension of chalk quarries;
- Extraction sites change the land use of the area, create artificial landforms and are often visually prominent due to the colour of the exposed rock. The long term effect of extraction sites on the landscape and environment should be considered. It is, however possible to restore sites to agricultural use or create nature reserves or recreation facilities;
- Increased volumes of traffic have the potential to introduce noise and congestion.

Sensitivity to Change Issues

- High visual sensitivity as a result of the Panoramic open views can be gained from the tops of hills and plateaux, predominantly open character; and strong intervisibility with adjacent Landscape Character Types (particularly the Chalk Foothills, Broad and Narrow Chalk Valleys);
- High ecological sensitivity as a result of the swathes of species rich chalk grassland which are a key habitat and small remnant quarries, several of which are designated as SSSIs;
- High landscape and cultural sensitivity as a result of the predominantly intact landscape pattern of parkland landscapes, interspersed with arable fields and a sparse settlement pattern of historic villages. This is coupled with several deserted medieval villages, historic houses and archaeological sites.

GUIDANCE

Guidance for Managing Landscape Change

Physical and Ecological Character

- **Protect** the open, large-scale, planned simplicity of the agricultural landscape;
- **Select** arable options, such as the creation of headlands to support rare arable weeds and farmland birds, and provide a strong habitat network;
- **Manage** and **enhance** semi-natural woodland (within historic parkland) and arable wildlife habitats, to provide a strong habitat network and build resilience to climate change;
- **Extend** and link remnant areas of chalk grassland on the steeper slopes and plateau tops to plan for a landscape-scale expansion of semi-natural chalk grassland;
- **Restore** and **enhance** the riverside wetland habitats, including retaining areas of extensively managed wet grassland across the floor of winterbourne channels.

Cultural and Historic Character

- **Protect** key historic landscape features including round barrows, deserted medieval villages and historic parks and gardens;
- **Protect** the setting of Sledmore historic park and garden;
- **Seek** reversion of arable to grassland where current land management threatens the integrity of earthworks and below ground archaeology.

Aesthetic and Perceptual Character

- **Maintain** panoramic views across this open landscape;
- **Encourage** access to and interpretation of the historic environment where possible;
- **Protect** the overall sense of tranquillity and remoteness;

- **Minimise** lighting and avoid light spill, particularly at the core the Chalk Wolds;
- **Manage** and **enhance** recreation and access provision by seeking additional routes to enhance the rights of way network and providing links to Open Access Land.

Signposts to Further Characterisation Information

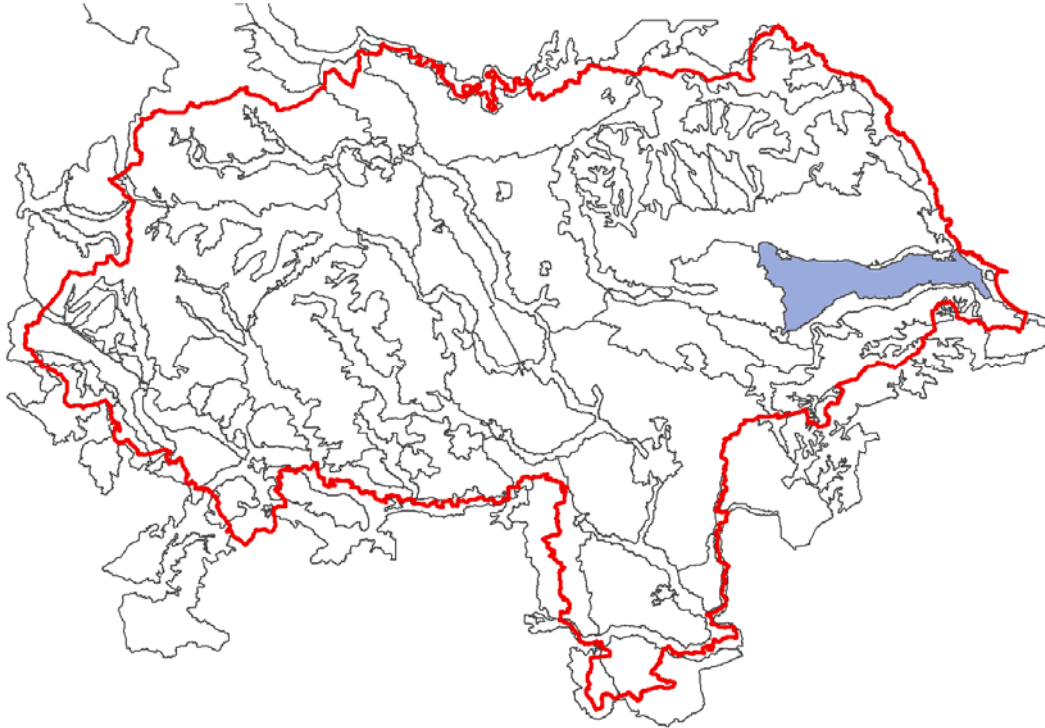
National Character Area

- NCA 27: North Yorkshire Wolds
http://www.naturalengland.org.uk/Images/jca27_tcm6-5685.pdf

Adjacent Landscape Character Assessments

- East Riding Landscape Character Assessment (2005)
<http://www.eastriding.gov.uk/corp-docs/forwardplanning/html/lca.html>

Open Carr Vale Farmland (22)



CHARACTERISATION

Key Characteristics

- Predominantly flat, arable farmland which encompasses medium to large scale rectangular fields;
- The River Derwent is a key feature, the course of which, gently meanders east-west through this Landscape Character Type;
- Underlain by predominantly peat soils;
- Fields are delineated by a network of drainage ditches and dykes which are often colonised by reeds and willows;
- Tree cover is relatively sparse, with few woodlands, other than isolated small plantations, resulting in a strong sense of openness;
- Historically this landscape would have dominated by a patchwork of carrs, ings, moors and marshes. The legacy of this is apparent within place names;
- Human influence is apparent, in the form of straightened drainage channels, cuts and ditches;
- Settlement pattern comprises isolated, scattered farmsteads.

Description

5.7.3 The Open Carr Vale Farmland is predominantly flat landscape at the foot of the Limestone Foothills and Valleys, which provide a sense of enclosure to the north. It is underlain by glacialacustrine clays and sands which were deposited by the former Lake Pickering which occupied much of the area during, and subsequent to, the last glaciation. Following the last glaciation, Lake Pickering drained away, leaving behind a complex of rivers and marshes. Names in the area bear testimony to this, with frequent mention of carrs, ings, moors and marshes. These features have now all been drained, resulting in landscape that is crossed by a network of canalised water courses, cuts and drainage dykes which regulate the water table. A

patchwork of arable and pastoral fields prevails. This landscape is crossed by network of relatively straight roads and wide verges, with all managed, predominantly thorn hedges. Settlement pattern is scattered, comprising scattered, relatively isolated farmsteads.

Definitive Attributes

Geology	<ul style="list-style-type: none"> • Small pockets of sandstone bedrock geology underlie this Landscape Character Type • Superficial geology (which covers this Landscape Character Type) comprises alternating bands of clay ,silt and sand and gravel
Topography & Drainage	<ul style="list-style-type: none"> • Predominantly flat and lies below 10 metres AOD; • Crossed by several rivers running west-east
Land Cover	<ul style="list-style-type: none"> • Covered by a patchwork of pastoral and arable fields; • Pockets of suburban land and relatively large areas of deciduous woodland are also scattered throughout this Landscape Character Type • Patches of remaining wetlands
Enclosure / Field Pattern	<ul style="list-style-type: none"> • A large proportion of the landscape within this Landscape Character Type is covered by large-scale modern improved fields which have suffered boundary loss • Situated amongst the modern fields there are also a couple of areas of planned parliamentary enclosure consisting of medium sized semi-irregular enclosure
Settlement Pattern	<ul style="list-style-type: none"> • Scattered pattern of dispersed farmsteads.
Visible Historic Features	<ul style="list-style-type: none"> • Wykeham Cistercian priory • Site of a medieval manor house to the west of Seamer • Yedingham Priory

EVALUATION

Forces for Change

Agricultural Change and Land Management

- Lowering of the water table in the floodplain as a result both of drainage and pumping to abstract water for irrigation, has led to loss of habitats and old water courses, and dried out peats, allowing wind erosion and damage to historic features. Warping drains have also been filled in and ploughed over;
- Agricultural intensification has led to loss of hedges, trees and small woods, resulting in a predominantly open character;
- Changes in agricultural practices threaten alluvial flood meadows (known as Ings) which are important for their wetland vegetation and as habitats for wintering and migrating birds;
- Ongoing management of ditches is important in this landscape;
- Drainage is causing the shrinkage of peat in places, resulting in the exposure of tree routes;
- Drainage and deep ploughing may be causing some damage to archaeological sites.

Development and Infrastructure

- Neglect of historical artefacts relating to drainage and pumping of the landscape;
- Pressure on farm businesses is likely to lead to changes in land management and diversification of farm businesses, which may lead to the creation of new landscape features, such as fishing ponds;
- Development pressures for road building and housing are a potential source of visual intrusion in the open landscape.

Climate Change

- This area is very low lying and is therefore vulnerable to flooding. Farmers could consider planting flood tolerant crops within flood plains to avoid losses;
- A range of options for river management are available. In some cases it will be most cost effective to maintain existing defences, in other cases it may be necessary to create new features such as wetlands and detention basins to manage flood water and protect urban areas such as Selby.

Mineral Extraction

- Pressure for the extraction of sand and gravels.

Sensitivity to Change Issues

- High visual sensitivity as a result of the predominantly open character and flat landform, which facilitates long distance open views across the landscape and promotes strong intervisibility with adjacent Landscape Character Types;
- Low ecological sensitivity, resulting from the fact that much of this Landscape Character Type encompasses improved agricultural land.
- Moderate landscape and cultural sensitivity as a result of the presence of a patchwork of historic drainage features (ditches and dykes), moated sites and grange sites.

GUIDANCE

Guidance for Managing Landscape Change

Physical and Ecological Character

- **Use** existing hedgerows and biomass planting to integrate built development in the landscape;
- **Maintain** high water tables to prevent the drying out of soils and damage to archaeological evidence;
- **Encourage** the re-creation of a wider range of habitats in arable areas, including the introduction of permanent grassland field margins, grass buffers along water courses, and linking them where possible to create a grassland habitat network;
- **Introduce** a wide range of arable options to enhance habitats for birds and insects;
- **Manage** watercourses to encourage emergent vegetation, including rare species and to improve habitats for water voles.

Cultural and Historic Character

- **Plan** and **site** development carefully to maintain the predominantly open character;
- **Conserve** drainage ditches and dykes which enable the landscape to be used for agriculture;
- **Conserve** the scattered settlement pattern and **enhance** the local vernacular through restoration of traditional farmsteads, farm buildings and associated features;
- **Minimise** disturbance and damage to archaeological sites resulting from cultivation and drainage;
- **Maintain** high water tables to prevent the drying out of soils and damage to archaeological evidence.

Aesthetic and Perceptual Character

- **Protect** the predominantly open character of this low-lying landscape by maintaining long and unbroken views to distant horizons;
- **Protect** and **enhance** public enjoyment of the landscape, including appreciation of the sense of escapism it provides, through identifying opportunities to create new circular routes or links to existing public rights of way.

Signposts to Further Characterisation Information

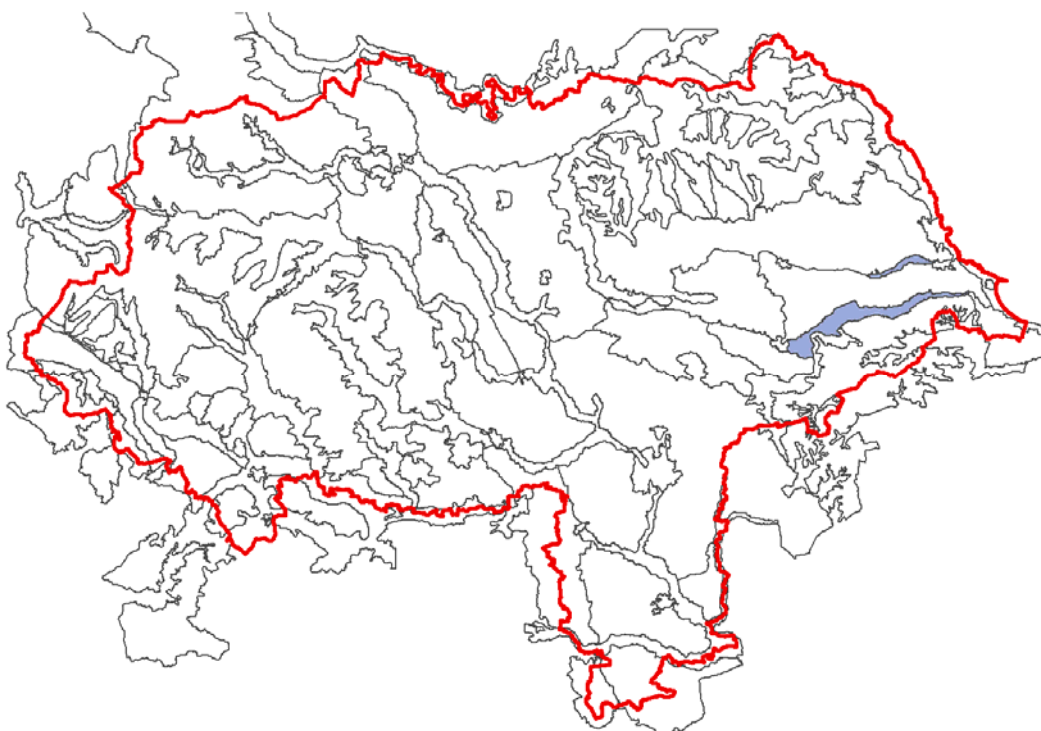
National Character Area

- NCA 26: Vale of Pickering
http://www.naturalengland.org.uk/Images/jca26_tcm6-4983.pdf

Local Landscape Character Assessments

- Scarborough Landscape Character Assessment (1994)

Sand and Gravel Vale Fringe (30)



CHARACTERISATION

Key Characteristics

- Pockets of sand and gravel deposits which form a transition zone between the Vale of Pickering to the north and the Chalk Wolds to the south;
- Striking settlement pattern with villages located along the spring line;
- Historic course of roads which are located at the scarp foot;
- Buildings are predominantly constructed from chalk, reflecting their location in close proximity to supply from the Chalk Wolds to the south;
- Numerous archaeological sites which attest to previous human activity;
- Strong intervisibility with adjacent Enclosed Vale Farmland Landscape Character Type.

Description

This flat to gently sloping Landscape Character Type encompasses a series of sand and gravel superficial deposits which mark the transition between the Vale of Pickering (Enclosed Vale Farmland) to the north and the rising Chalk Wolds to the south. The rising escarpment of the Wolds creates a prominent back drop to this landscape. The width of the vale fringe landscape varies but is most distinctively marked on the edge of the Vale of Pickering where the A1039 runs parallel with the slope serving Folkton, Flixton and other farmsteads at the foot of the scarp. The chalk construction of traditional buildings in these villages clearly reflects their location close to the source of supply. Some parkland and historic landscapes concentrated around the perimeter of this Landscape Character Type contribute to a varied landscape pattern. Historically, evidence suggests that there was also an extensive Anglo-Saxon settlement at Heselton. Settlement pattern is concentrated along main transport routes on higher ground. This landscape contains numerous archaeological sites which attest to previous use of this landscape for settlement and early industry.

Definitive Attributes

Geology	<ul style="list-style-type: none"> • Predominantly sand and gravel superficial deposits
Topography & Drainage	<ul style="list-style-type: none"> • Forms a fringe between the low lying vale floor and the steeply rising ground of the Yorkshire Wolds escarpment • Springs have often determined the location of settlements • The soils are lighter and freer draining than those in the vale floor
Land Cover	<ul style="list-style-type: none"> • Arable fields interspersed with improved grassland and small patches of neutral and calcareous grassland
Enclosure / Field Pattern	<ul style="list-style-type: none"> • Large regular parliamentary enclosures defined by straight hedges are common • A more complex pattern of unknown planned enclosures, parliamentary enclosures and modern improved fields is present elsewhere
Settlement Pattern	<ul style="list-style-type: none"> • On the northern side of the Vale, villages and towns appear in close proximity to each other just above the old lake margin and at the foot of the limestone dip-slope. In this location water was obtainable from springs and shallow wells and the villages stood above flood level at the meeting place of contrasting soils • Villages are often located along the spring line • Strip parishes are conspicuous features in this Landscape Character Type; some extend far to the north and incorporate sections of the adjacent moorlands. A similar distribution of fringe villages appears on the southern boundary
Visible Historic Features	<ul style="list-style-type: none"> • Scampston Hall and designed landscape • Settrington deserted village earthworks • Seamer manor house

EVALUATION

Forces for Change

Agricultural Change and Land Management

- Pasture improvement, arable expansion, and drainage and cultivation of peats threaten prehistoric deposits, areas of ridge and furrow and other historic earthworks. Remnant grasslands around farmsteads often contains relict field systems which are vulnerable to changes to arable land use;
- Use of the area for pig rearing has led to soil erosion through rapid run-off and damage to archaeological ground features;
- Intensification of agriculture has led to field boundary and hedgerow tree loss, particularly on the northern and western edges of the vale, where hedges rather than ditches are characteristic.

Development and Infrastructure

- New development within historic villages may not be consistent with the historic form of the village and the vernacular materials and design of buildings;
- Disrepair of traditional farm buildings is causing their gradual decay. Conversion may provide an active use for the building, but has the potential to introduce standardised suburban elements into this predominantly rural landscape.

Sensitivity to Change Issues

- High visual sensitivity as a result of strong intervisibility with the Enclosed Vale Farmland Landscape Character Type and open views along the Sand and Gravel Vale Fringe;
- Low ecological sensitivity resulting from the fact that this landscape predominantly consists of improved agricultural fields;

- High landscape sensitivity as a result of the striking settlement pattern of villages located along the spring line, archaeological sites and designed landscapes.

GUIDANCE

Guidance for Managing Landscape Change

Physical and ecological character

- **Manage, restore** and **thicken** hedgerows for landscape structure and biodiversity;
- **Encourage** conservation of existing key habitats and landscape features and expand the resource through habitat restoration and re-creation guided by ecological networks;
- **Seek** opportunities to revert arable farmland to permanent pasture, particularly in floodplains or areas of archaeological interest;
- **Create** small native broadleaf woodlands (including characteristic copses by farmsteads) and actively managing these to achieve a diverse age range;
- **Incorporate** biomass crops such as miscanthus and short rotation coppice on small scale, particularly where they can contribute to the local landscape character, whilst retaining the long views that are characteristic of the area.

Cultural and Historic Character

- **Protect** the dispersed settlement pattern of villages along the spring line and farmsteads;
- **Strengthen** historic field systems and patterns through hedgerow planting and management;
- **Minimise** disturbance and damage to archaeological sites resulting from cultivation;
- **Address** the decline of historic buildings throughout the vale by repairing and restoring using traditional materials (typically brick and sandstone imported from surrounding uplands).

Aesthetic and Perceptual Character

- **Protect** the predominantly rural character and associated sense of tranquillity;
- **Support** sustainable recreation and educational access to enable understanding and appreciation of the environment, in particular its clear evidence of historic change at sites such as Star Carr;
- **Maintain** key views to adjacent Landscape Character Types;
- **Identify** opportunities to create new circular routes or links to existing rights of way, particularly linking to the Cleveland Way, Ebor Way and the Wolds Way long distance routes;
- **Protect** and **enhance** public enjoyment of the landscape, including appreciation of the sense of escapism it provides, through identifying opportunities to create new circular routes or links to existing public rights of way.

Signposts to Further Characterisation Information

National Character Area

- NCA 26: Vale of Pickering
http://www.naturalengland.org.uk/ourwork/landscape/englands/character/areas/vale_of_pickering.aspx

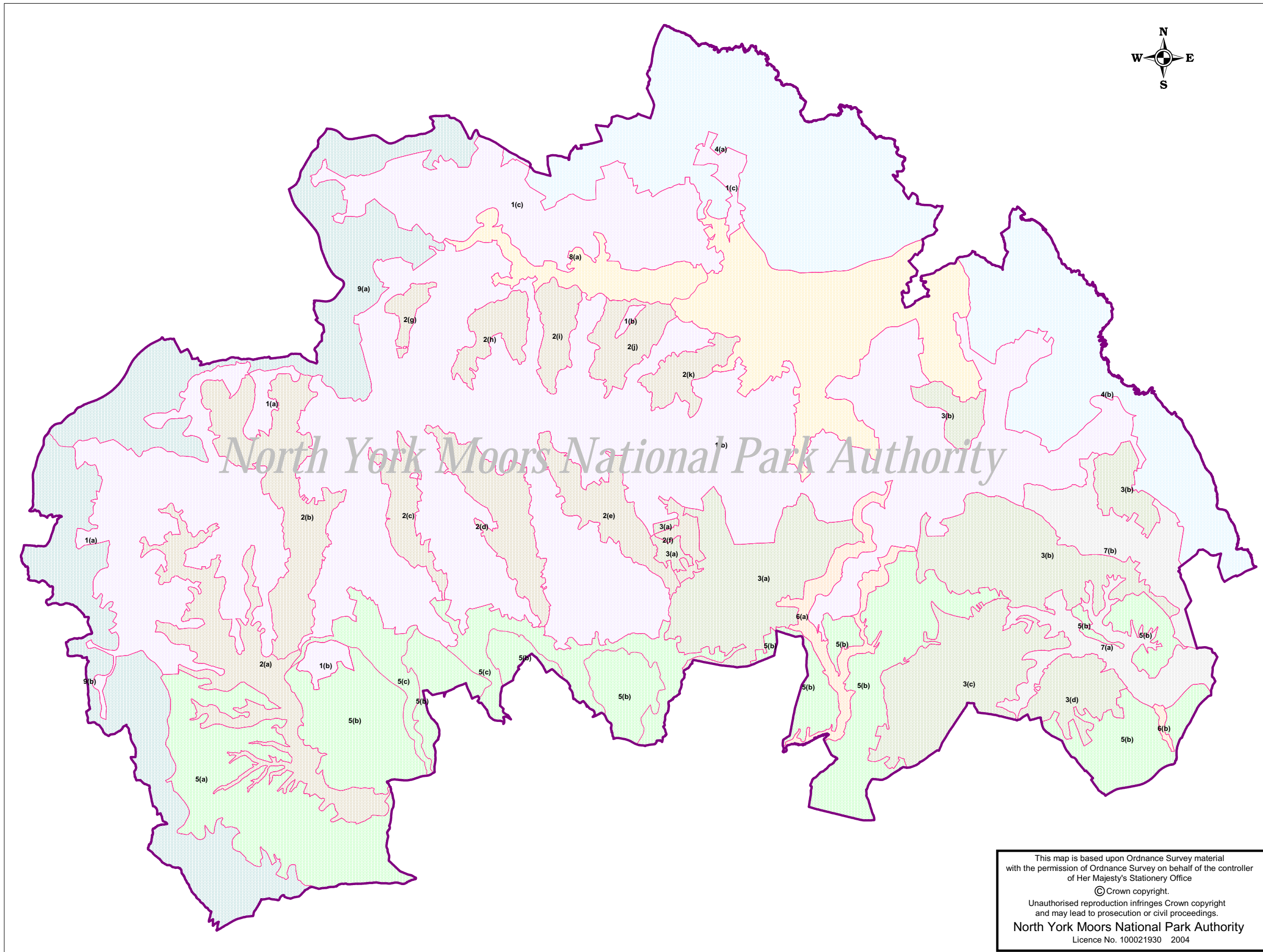
Local Landscape Character Assessments

- Ryedale Landscape Character Assessment (1999)
- Scarborough Landscape Character Assessment (1994)



**NORTH YORK MOORS NATIONAL PARK
LANDSCAPE CHARACTER ASSESSMENT**

DECEMBER 2003



- Legend**
- North York Moors National Park Boundary

 - Landscape Character Types & Areas**
 - Moorland
 - 1(a) Western Moors
 - 1(b) Central & Eastern Moors
 - 1(c) Northern Moors
 - Narrow Moorland Dale
 - 2(a) Ryedale
 - 2(b) Blisdale
 - 2(c) Bransdale
 - 2(d) Farnedale
 - 2(e) Rosedale
 - 2(f) Hartoft
 - 2(g) Baysdale
 - 2(h) Westerdale
 - 2(j) Danby Dale
 - 2(k) Fryup Dale
 - 2(l) Glaisdale
 - Forest
 - 3(a) Cropton
 - 3(b) Langdale/Harwood Dale/Newton House
 - 3(c) Dalby
 - 3(d) Wykeham
 - Coast and Coastal Hinterland
 - 4(a) Boulby - Whitby
 - 4(b) Whitby - Cloughton
 - Limestone Hills
 - 5(a) Southern Hambleton/Tabular Hills
 - 5(b) Tabular Hills - Pickering to Lockton
 - 5(c) Southern Dales and Southern Moor Foot
 - Narrow Glacial Channel & Griffs
 - 6(a) Newtondale and Hole of Horcum
 - 6(b) Forge Valley
 - Limestone Dale
 - 7(a) Hackness
 - 7(b) Upper Harwood Dale
 - Central Valley
 - 8(a) Comondale - Upper Eskdale
 - 8(b) Lower Esk Valley
 - Upland Fringe
 - 9(a) Cleveland Foothills
 - 9(b) Western Fringe

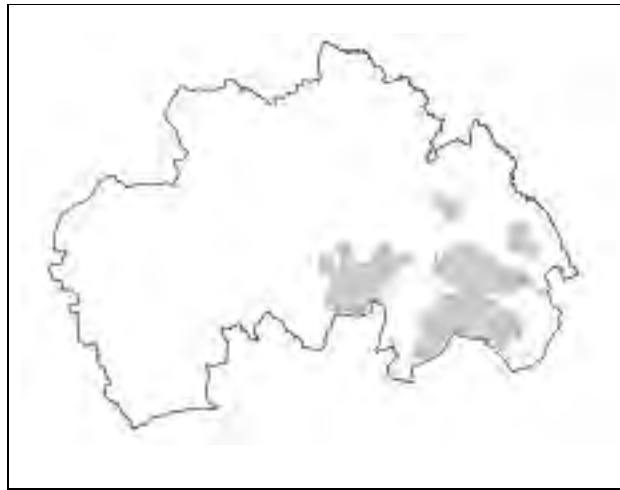
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Scale 1:190,000

NORTH YORK MOORS NATIONAL PARK
 LANDSCAPE CHARACTER ASSESSMENT

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3. Forest



■ Key Characteristics: Landscape Type

- Very extensive areas of forested land, overlying deltaic sandstones and mudstones, softer Oxford clay and Osgodby sandstone or Middle and Lower Calcareous Grit from the Corallian Group.
- Sited either within gradually rising upland areas on former moorland or moorland fringe areas, abutting open moorland and falling away towards the limestone escarpment in the south; or on the gently graded limestone plateau which falls away towards the lowland further south.
- The forests fall away steeply at the edge of the north facing scarp or into steep sided dales within the forests or within adjacent character areas, allowing views out from the forests in certain locations.
- Landcover is primarily coniferous forest; some areas planted in regular geometric blocks, separated by a grid iron pattern of unplanted rides and firebreaks, including large areas of recently felled or/and recently planted areas and other areas planted more sympathetically with irregular forms and edges reflecting the underlying topography. Deciduous species have been planted in some fringe areas e.g. adjacent to roads and the forests are interspersed by isolated pockets of ancient semi natural woodland within steeper areas or within valleys. In some areas there is an abrupt geometric edge to the forest.
- Areas of mainly replanted ancient woodland are present in blocks or linear belts, mainly associated with steeper valley side locations.
- A few farmsteads and areas of remnant farmland occur within openings in the forest. Fields of pasture are divided into a regular pattern of fields by both stone walls and fences.
- The forests are generally accessed by minor roads only or are inaccessible by road.
- Recreational provision within the forests varies; some have extensive provision while others are focused on intensive commercial timber production or research. All forests comprise Open Access land.

■ Pressures for Change

Pressures for Change	Predicted Consequence of Change to Landscape Feature	Degree of Pressure	Significance of Pressure to Landscape Character
Recreational Pressures			
Growth in visitor numbers	Increased traffic, parking problems, bridge and verge damage, footpath and bridleway erosion, off road vehicle/motorcycle/mountain bike damage, damage associated with other outdoor pursuits, disturbance to wildlife	Low	Low
	Increasing commercialism within villages, tourist related development, holiday homes, pressures to increase extent/number of camping/caravanning sites, potential pressure for large scale development	Low	Low
Development Pressures			
Infrastructure pressures	Telecom and mobile phone masts	Medium	Low
	Single wind turbines, overhead power and telephone lines	Low	Low
	Highway related changes, including road and bridge improvement, kerbing, parking controls, signage and lighting	Low	Low
	Increasing traffic	High	Medium
Development pressures generally	Reduction in tranquillity and solitude	Low	Low
	Loss of dark skies	Medium	Medium

Pressures for Change	Predicted Consequence of Change	Significance of Pressure to Landscape Character
Moves towards increase in native woodland cover, the reversal of fragmentation of existing woods through replanting, the creation of new woodlands and improved management of existing woodlands. Also increase in tree cover in non-wooded areas. (BAP, NYMMP, Peterken Report, England Forestry Strategy)	Increased deciduous woodland cover within forests would be a significant benefit to landscape character, providing diversity and reducing the impact of forestry on surrounding landscapes through improvement to forest edges and profiles. .	High
Move towards multi purpose forestry and more sensitive management of forested areas (BAP, NYMMP, Peterken Report, England Forestry Strategy)	Established plantations are not being increased in size and new plantations unlikely. Cropping offers opportunity for replacement with broadleaves or return to other habitats	High
Move towards general habitat improvement and reinstatement (BAP, English Nature, DEFRA etc)	Habitat improvement, diversification and reinstatement, providing adequate funding and incentives are available, leading to improved wildlife diversity.	High

■ Landscape Character Areas

(3a) Cropton

- Very extensive area of forested land forming part of the North Riding Forest Park. The forest overlies deltaic sandstones and mudstones to the west and softer oxford clay and Osgodby sandstone to the east.
- Sited on undulating upland rising to a high point at Brown Howe 267m, Wardle Rigg 262m and Leaf at 290m, and falling away towards the limestone escarpment in the south; the southern edge of the forest rising up the scarp slope and dropping away steeply into Newtondale and Rosedale to the west and east.
- Minor becks flow west into Rosedale and east into Newtondale; small waterfalls are a feature of a number of the becks. Occasional man made ditches occur in the central and southern parts of the forest. Elleron Lake, a man made feature, is situated at the base of the escarpment on the southern edge of the character area.

- Extensive areas of coniferous woodland, divided into a grid pattern by a network of forest rides, is often fringed by broadleaved trees including oak, birch and ash and interspersed by isolated pockets of ancient semi natural woodland within steeper areas. Scots pine are frequent. In some areas there is an abrupt geometric edge to the forest, particularly where it abuts moorland to the north.
- Pockets of grazing land, divided into a regular pattern of fields by wire fences, occur within the forest; the largest pocket being around the hamlet of Stape. A relatively dense pattern of farmsteads and occasional chapels interspersed by pockets of Scots pine and small pockets of upland heath and enclosed by forest create an unusual and distinctive character.
- The forest is crossed by a single minor road; other roads extend into the forest and stop. The Newtondale Forest Drive, a private road, allows views into Newtondale and the isolated Newtondale Halt on the North York Moors Railway below.
- Recreational provision within the forest includes a camping/caravan site, log cabins, outdoor centre, mountain bike, walking and horse trails, picnic areas and adventure playgrounds, although the facilities have only a very local influence.
- Cawthorn Camp Roman remains are located at the southern edge of the forest on the limestone escarpment -well presented earthworks reveal a camp and two forts situated side by side with panoramic views north across Cropton Forest to the moors beyond.
- Wooden pole electric lines and wire fences detract.

(3b) Langdale/ Harwood Dale

- Three separate areas of intensively managed coniferous forest, generally overlying deltaic mudstone and sandstone with local variations including a large area of Osgodby sandstone at Langdale Forest, and the Cleveland Dyke, cutting through the Newton House Plantation.
- Sited within gradually rising upland areas on former moorland or moorland fringe areas, abutting open moorland, at general elevations of between 180 and 280m; the larger Langdale Forest extends to incorporate steep sided v-shaped valleys which are at 80m AOD in the valley bottom.
- The River Derwent and a number of its tributaries drain Langdale Forest, cutting deeply incised valleys. Minor becks flow through Newton House Plantation, cutting shallow valleys with waterfalls at the forest edge. Both man-made channels and minor becks drain the Harwood Dale Forest.
- Landcover is primarily coniferous forest planted in regular geometric blocks, separated by a grid iron pattern of unplanted rides and firebreaks, including large areas of recently felled or/and recently planted areas. Deciduous species have been planted in some fringe areas e.g. adjacent to roads. Mixed woodland (replanted ancient woodland) is present along Barns Cliff, adjacent to the River Derwent. Other small areas of replanted ancient woodland occur within the east of the Langdale Forest. In some areas there is an abrupt geometric edge to the forest.
- The forests are very inaccessible by public road, access to Langdale Forest being limited to Reasty Road in the far east of the forest; the A171 providing access through the north of the Harwood Dale Forest. There are no roads through Newton House Plantation.
- Apart from isolated properties at High Langdale End and Birch Hall, settlement is almost completely absent from the area.
- Sites of archaeological importance are dotted throughout Langdale and Harwood Dale Forest.

(3c) Dalby Forest

- A large and diverse area of coniferous and deciduous forest, situated on the Tabular Hills and overlying Middle and Lower Calcareous Grit from the Corallian Group.
- Landform is typical of the Tabular Hills landscape; a gently graded plateau towards the north of the forest (at a maximum height of 240m) falls away towards the Vale of Pickering in the south. The plateau is deeply incised by river valleys with steep sides and occasional clifflines and by shallow dry valleys mainly orientated in a north east to south west direction. The forest extends down the edge of the north facing scarp with its irregular wavelike form, the top edge of which allows views across Langdale Forest to the north.
- The northern and western edges of the character area are bounded by deeply incised watercourses including Dalby Beck, Grain Beck and Crosscliffe Beck. The eastern edge of the area is bounded by a steep sided valley of Troutsdale, within the adjacent Hackness character area. The plateau itself is drained by minor becks that are steeply incised into the plateau edges and follow a winding dendritic pattern; surface drainage is largely absent on the plateau top.
- Two waterbodies are present; a small reservoir at Staindale Water (along the course of Grain Beck) and a waterbody of a similar size along the course of Crosscliffe Beck.
- The extensive forestry includes large area of recently felled and newly planted areas. The forest contains a diverse range of habitats, including sizable blocks and linear belts of deciduous woodland are present particularly within valleys and on steeper slopes. Species present include larch, Scots pine, birch, cherry, ash, rowan and oak. A small area of upland heath – Troutsdale Moor – is included to the east of the character area. Small areas of rough pasture and fen occur. In some areas there is an abrupt geometric edge to the forest.
- Areas of mainly replanted ancient woodland are present in linear belts to the edges of the character area, mainly associated with steeper valley side locations.
- Some areas of remnant farmland occur within openings in the forest. Fields of pasture are divided by both stone walls and fences.
- The public vehicular access to the forest is via Dalby Forest Drive, a toll road, with numerous car parking, picnic areas and other facilities for tourists located along its length, or via Eberston. Tracks through the woodland, in a loose grid pattern, provide access for forestry vehicles.
- The small hamlet of Low Dalby is the main settlement in the area situated in a narrow opening in the forest in the valley of Dalby Beck. Other settlements are limited to very occasional isolated farms within the open areas.
- The forest is strongly focused on carefully designed recreational provision and has a manicured appearance in places; facilities include picnic areas, orienteering points, car parks, the visitor centre and shop at Low Dalby, an astronomical centre and observatory and footpaths/ habitat trails. Adderstone Field adjacent to the Forest Drive is used for the staging of open air events and concerts. Motor rallies are also held in the forest.

3(d) Wykeham Forest

- A large area of mainly coniferous forest situated on the Tabular Hills and overlying Middle and Lower Calcareous Grit from the Corallian Group.
- Landform is typical of the Tabular Hills landscape; a gently graded plateau towards the north of the forest (at a maximum height of 222m) falls away towards the Vale of Pickering in the south. The forest extends down the edge of the north facing scarp which projects into Troutsdale and the Hackness valley; the top edge of the scarp at Highwood Brow allows views across the Hackness valley area and Langdale Forest to the north.

- The western, northern and eastern edges of the area are bounded by the steep sided valleys of Troutsdale and Hackness, within the adjacent character area. The plateau itself is drained by minor becks that are steeply incised into the plateau edges; surface drainage is largely absent on the plateau top. Two ponds are present in the Brompton Moor area.
- The forest of pine and other conifers planted in regular blocks in a grid pattern includes areas of recently felled and newly planted areas. An area of mixed plantation is present together with sizable blocks and linear belts of deciduous woodland (including areas of mainly replanted ancient woodland) located mainly within the valleys and on the steeper slopes. In some areas there is an abrupt geometric edge to the forest.
- The forest includes a tree nursery and is a centre for research into alternatives to clear felling. The nurseries feature strongly in the landscape; large cleared areas support regular lines of young trees separated by straight lines of hedging which act as shelterbelts.
- There are a large number of nationally important archaeological sites within the forest including burial mounds and other earthworks, mostly thought to be of Bronze and Iron Age origin.
- A few isolated houses occur towards the edges of the character area amongst small areas of remnant farmland.
- Minor roads access the western part of the forest; the eastern part is less accessible. A network of forest tracks form a rough grid pattern throughout the area and a number of footpaths access the forest.



THE LANDSCAPES OF NORTHERN RYEDALE

An Assessment of the Vale of Pickering and the Fringe of the North York Moors National Park,
with Management Guidelines for their Future



GILLESPIES

August 1999

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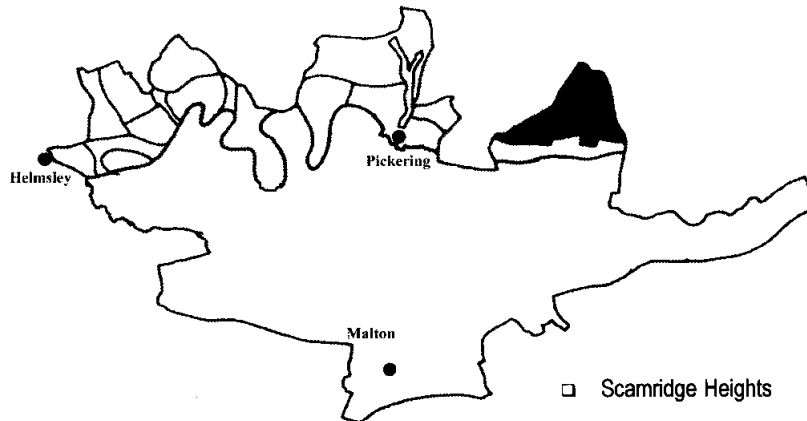
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THE LANDSCAPES OF NORTHERN RYEDALE
LANDSCAPE CHARACTER AREAS

- Study area boundary
- Boundary between Regional Landscapes Character Area
- Boundary between Local Landscape Types
- LOCAL LANDSCAPE CHARACTER TYPES**
- A Undulating Farmland (or a rise)
 - B Riverside Farmland (or a rise)
 - C Sloping Open Farmland (or a rise)
 - D Sloping Open Farmland (or a rise)
 - E Wooded Valley (or a rise)
 - F Linear Scarps Farmland (or a rise)
 - G High Eastern Farmland (or a rise)
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 - I Western Vale Farmland (or a rise)
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 - K Enclosed Linear Farmland (or a rise)
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 - M Wide Footslope (or a rise)
- Legend
- Local Planning Regional Character Area
 - Part of the North Regional Character Area
 - Part of the South Regional Character Area
 - Part of the West Regional Character Area



AREA G High Eastern Farmland**Key Characteristic Features**

- Elevated large scale sloping plateau dissected by dry valleys.
- Open rural landscape with generally expansive views.
- Extensive network of drystone walls.
- Isolated farms.
- Woodland generally follow the landform.
- Shallow and elevated valleys of pasture.

Landform and Context

High eastern farmland is found at the eastern end of the Tabular Hills and lies above 100m AOD with a high point at Givendale Head Farm that is 230m AOD. To the north and west the area is bounded by the North York Moors National Park, whilst to the east the area is bounded by the Ryedale District boundary and to the south by *linear scarp farmland* that abuts the Vale of Pickering.

Limestone and calcareous gritstones of the Tabular Hills dip slope underlie the area, which slopes fairly consistently to the Vale of Pickering, increasing in steepness only in the vicinity of the A170 due to the effects of the Helmsley – Filey fault line discussed previously. The *high eastern farmland* has been carved into sweeping forms by relatively broad dry valleys, which have eroded the upland to leave undulating ridges that extend southwards becoming progressively steeper and more indented down the dip slope.

Land Use and Landscape Pattern

This is a rural landscape in which arable farmland predominates, but which also includes some substantial areas of pasture particularly in the upper reaches of the dry valleys. Fields tend to be medium to large and regularly shaped. A defining feature of this landscape is that, in addition to hedgerows, drystone walls often bound the fields although many of these are now falling into disrepair. The field boundaries generally date back to the period of Parliamentary Enclosures. Even around the settlements, there is little evidence of the relic open-field medieval fields found elsewhere in the Fringe of the Moors. There has been a long standing tradition of sheep farming in the areas as evidenced by Malton Cote, which dates back to the medieval period when it was a grange or upland sheep farm, possibly under monastic influence.

The fields of improved pasture, mostly grazed by sheep, tend to be smaller sized and more elongated in response to the valley terrain along which they are associated. The use of post and wire fencing as stock proofing is increasingly common along these grassland valleys.

Although the grasslands in higher valleys are visually distinctive, most have been semi-improved and have lost the diversity of species more typical of unimproved calcareous grassland.

A noticeable characteristic of the scenery, particularly during ploughing and sowing, is the visible presence of limestone in the thin soil. Most of the land is classed as MAFF Grade 3 agricultural quality, although at altitude this gives way to Grade 4 quality land.

Woodlands generally follow the landform and are confined to the lower reaches of the dry valleys where the slope gradients are steeper and the valley profiles deeper and narrow. Although none of the woodlands in the valleys of the *high eastern farmland* can be classed as 'ancient' (i.e. continuously wooded since 1600) they are important ecological resources. In particular, Chafer Wood in Netherby Dale merits designation as a SINC. Like other woodlands locally, it is ash dominated and contains small pockets of calcareous scrub that includes a number of rare species.

Additional visual interest in this elevated farmland is provided by the Scamridge dyke system near Malton Cote. These earthworks sweep across the area in a series of embankments and ditches and are commonly associated with scrub and grassland. Both are SAM's and provide, together with the many tumuli, evidence of prehistoric use of the area dating from the Neolithic period and later Bronze Age. The northern end of the Scamridge system provides additional historic interest. Here it divides into many 'fingers', remnants of a commercial rabbit warren, dating back to medieval times. Similar to the grange at Malton Cote, this early farming was possibly under monastic influence.

Lanes through the area are orientated in a broadly north south direction extending into the hills from the A170. Many of the lanes are cul-de-sacs and are essentially private, providing access only to the isolated farmsteads. Typically, the lanes have narrow grass verges that are bounded by drystone walls.

There are a number of disused quarries scattered across the area. These are often geologically or ecologically important and some, such as Wilton Heights Quarry, have been designated as SINCS.

Coniferous plantations become increasingly more common with elevation. The most extensive of these is found around Given Dale in the west of the area. This serves to visually link Given Dale with Dalby Forest, which extends westwards and northwards into the North York Moors National Park.

Settlement

Settlement in this area comprises scattered farms. There are no villages or hamlets and the area has a remote, isolated quality.

The farms tend to be large and are constructed predominantly from locally quarried limestone. Traditionally roofs are constructed in red pantile although in places slate is also used. Walls around farms tend to be drystone, with characteristic shelterbelt plantations of mature ash. These associations serve to create an attractive more domestic scale, in an otherwise open and expansive landscape.

Subjective Response

An expansive, open landscape affording generally large scale panoramic views across a relatively harmonious scenery. The gently rolling terrain of more elevated areas produces many horizons and a strong sense of scale and distance. With increasing elevation and proximity to the National Park, the influence of the higher moorland becomes more pronounced, and there is a greater sense of enclosure despite the exposed setting of the area. On lower slopes, as the land becomes more dissected by deeper, steeper valleys, proximity to the Vale of Pickering creates a scenery that, whilst expansive and open, feels less elevated and exposed. A peculiar aspect of this landscape is that it feels remote, despite the relative proximity of urban areas and the intensity of agricultural production, which itself seems unusual at these altitudes.



Source: Environment Agency

Netherby Dale (GR 901 842)

Area G

High Eastern Farmland

Newer farm buildings are usually at a scale and style appropriate to their landscape setting and architectural context.

Shelter belts serve to provide local enclosure around farmsteads



Malton Cote Farm

Coniferous plantations often serve to contain more distant views

Steeper valley sides remain pasture and contrast with the predominantly arable land



Netherby Dale

Sensitivity to Change

The *high eastern farmland* has a large scale and sweeping character, which is likely to be highly sensitive to development. The broad, rolling form of the relief ensures that most of the landscape is highly visible, in foreground and middle ground views since any one area might be seen from a number of different aspects. Detailed visual analysis, which takes account of the full range of possible viewpoints is an essential prerequisite to any form of built development and should also be considered in relation to changing patterns of land use related to forestry and agricultural practice. Where present, woodlands tend to be linear in nature and restricted to the steeper valley slopes where they do not afford good screening potential. The coniferous plantations in the west of the area appear out of character and are more characteristic of the higher moorland of the National Park.

Landscape Guidelines

Landscape Strategy

This is a predominantly farming landscape that, despite pressures from agricultural intensification, retains a strongly rural character, comprising arable and pastoral fields cut across by broad dry valleys, which become strongly incised and densely wooded in their lower reaches. Drystone walls are an important feature of this landscape, setting it apart from areas of otherwise similar elevated farmland to the west. A further defining quality of this landscape is its sense of remoteness, imparted by virtue of its elevation, lack of settlement, and presence of densely wooded incised linear valleys. Landscape strategies should aim to conserve and enhance these existing qualities and seek to resist development or inappropriate land management.

Land Management

The visual structure of this landscape should be assessed from a distance to ensure that the relationship between the higher land and its adjacent landscapes is well balanced.

Land management practices should aim to conserve the existing pattern of fields, hedgerows and small woodlands. Further field enlargement should be avoided.

Management strategies should aim to emphasise the variations of scale within this landscape, for instance between the narrow, deeply incised valleys and the surrounding farmland, since these make an important contribution to the overall visual character.

Distant panoramic views from the higher land out across the Vale of Pickering are a feature of this landscape. This should be considered when planning landscape change.

Farm buildings, copses and hedgerows are valuable features adding complexity and diversity to this otherwise fairly uniform landscape. Attractive features should be conserved and those that have a negative visual influence should be identified as a priority for removal, upgrading or screening.

Priority should be given to the retention, protection and enhancement of the setting of the many archaeological features, which are an important characteristic of this landscape.

A further priority is the conservation and restoration of calcareous grassland on the south facing dry valley slopes and on sites of archaeological importance and in disused quarries. Management should discourage the improvement of species-rich calcareous grassland by the application of artificial fertilisers, and should seek to control overgrazing. Scrub clearance, thinning and appropriate grazing regimes should be considered as necessary. Any re-seeding of arable land should use a suitable grassland seed mix, of local provenance where possible, which reflects the species found in unimproved grasslands within the local area.

It is important that the tradition of quiet enjoyment of this countryside is maintained through the control of new recreational facilities. Inappropriate large scale facilities such as golf courses or large caravan parks could introduce a suburbanising influence and should be strictly controlled.

Specialist studies that take full account of geological, nature conservation and aesthetic issues are required to determine the best approach to quarry restoration, and ensure the conservation of rare or localised species. In some cases restoration might include the chamfering back of rock faces, elsewhere it may be preferable to retain quarries intact to preserve their already significant geological or nature conservation interests.

Field Boundaries

The scale of its patchwork of fields, hedgerows and drystone walls determines the visual structure of this landscape. Future management should ensure that the existing network is conserved and strengthened along current alignments. Traditional hedgerow management techniques should be promoted, avoiding mechanical over-flailing.

Field hedgerows and drystone walls should be reinstated along historic field boundaries where they have been removed due to agricultural intensification and field enlargement. New hedgerows should use locally occurring native species, whilst drystone walls should employ traditional materials and methods of construction.

Trees and Woodlands

All existing woodlands, copses and shelterbelts should be conserved.

The valley woodlands are visually important, they lend much to the area's aesthetic appeal, and should be conserved and managed to achieve a balanced age structure by thinning, coppicing and replanting as necessary. If no survey data is available, woodlands should be surveyed before any management work is carried out, to ensure any rare or localised species are conserved. Any work should take into account the impact on these species, and suitable mitigating measures should be taken.

Each woodland should be considered individually and, in some cases, a decision will need to be taken to conserve a rare species, possibly at the expense of biological diversity.

Ideally, ten year management plans should be prepared for the important sites, which take into account the objectives of conservation of rare species, and of biological diversity.

In areas of new planting, the species mix and the proportion of each species planted should reflect that found in existing ancient semi-natural woodlands in the area. The dominant species are ash, pedunculate oak, downy birch and wych elm, plus understory species including holly, field maple, guelder rose and blackthorn.

In keeping with the existing pattern, new woodland planting should be predominantly linear and should be confined to the valleys to ensure that the more open character of the surrounding farmland is maintained.

New planting should be of broad-leaved native species preferably of local provenance. Management practices should encourage the replacement of exotic conifers by native broad-leaved species.

Around Given Dale, the selective and progressive replanting of the large scale conifer plantations with native broad-leaved species should be considered to help restore a more natural landscape structure. The composition and form of plantation edges should be carefully controlled.

Clear fell areas should be designed with deeply indented edges and scattered groups of retained trees and woodland management techniques should be encouraged to promote visual and ecological diversity.

New planting, in small copses and as individual specimen trees should be considered in the vicinity of the some of the farmsteads, particularly where there is a need to integrate and partially screen new modern farm buildings.

Settlements and Buildings

To conserve the remote rural character of this landscape, development should be strongly resisted.

Traditional farm buildings should be conserved where possible. Although conversion of redundant buildings may be appropriate, this should be handled sensitively if the traditional architectural features and rural setting are to be retained. All efforts should be made to resist suburbanisation by inappropriate construction and detailing.

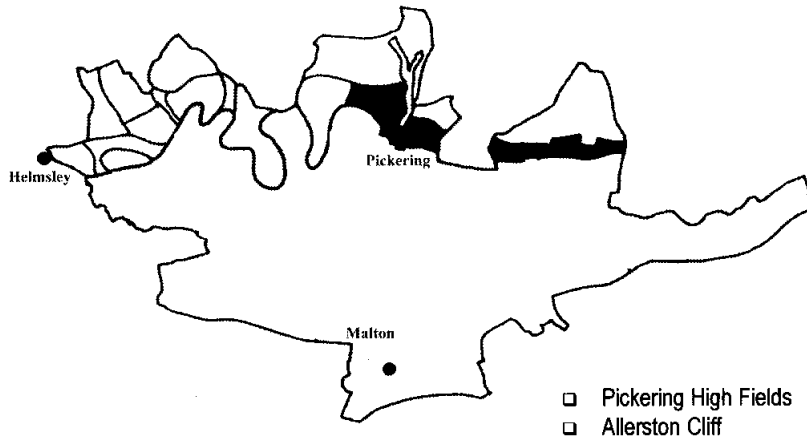
Wherever possible, the rationalisation of farm buildings and the removal of modern farm buildings that have become redundant should be considered.

Infrastructure

The small scale character of the rural lanes and tracks should be conserved and verges and banks managed to encourage native grassland and wildflower species.

Priorities for Action

- Resist development.
- Conserve the existing landscape pattern of medium to large scale fields, broad dry valleys and deeply incised wooded dales.
- Conserve and, in many places, construct new drystone walls and re-plant hedgerows.
- Conserve and restore calcareous grassland habitats, including disused quarries.
- Undertake specialist studies of quarries with a view to possible restoration to enhance their ecological value, where appropriate or necessary.
- Manage valley woodlands.
- Ensure the conservation of important archaeological sites.

AREA F Linear Scarp Farmland**Key Characteristic Features**

- Panoramic views from the escarpment ridge out across the Vale of Pickering to the south.
- Attractive rural qualities with a medium to large-scale field mosaic containing prominent hedgerows and woodland blocks.
- Settlements concentrated along the foot of the slope.
- Dynamic, rhythmic quality to the undulating relief.
- North south orientated dry valleys and roads.
- Strong medieval field pattern around Pickering.

Landform and Context

Lying to the east of Wreton, *linear scarp farmland* extends to the boundary of Ryedale District at Snainton. The area occurs in three contiguous, yet separate units, due to the interrupting effect of Pickering and Newton Dale, and the National Park Boundary, which at Thornton-le-Dale extends south of the A170.

The *linear scarp farmland* is underlain by the limestones and calcareous gritstones of the Tabular Hills dip slope that extends southwards from the North York Moors towards the Vale of Pickering. East of Pickering the sloping terrain becomes much steeper near the A170 where Kimmeridge clay deposits have been brought in close contact with more resistant Middle Jurassic rocks along the line of the Helmsley - Filey fault. Lying between 40 and 120m AOD, these steeper slopes emphasise the boundary between the Vale of Pickering and the Fringe of the Moors.

The relatively open character of this sloping landscape makes the landform immediately to the north of the A170 impressive because trees do not camouflage its strong, smoothly undulating profile. The indented dry valleys, that cut through the slope give the topography dynamic rhythmic quality, which is emphasised during low light conditions.

Land Use and Landscape Pattern

The arable fields of the Vale of Pickering extend across the regional character boundary up onto the *linear scarp farmland*. Indeed, there is little in the way of land use or landscape pattern to emphasise the transition from the Vale of Pickering to the Fringe of the Moors regional character areas. Field size, shape and orientation all remain remarkably similar. Fields are generally of medium size and are bounded

by hedgerows with few hedgerow trees other than the occasional ash. What little woodland is present, tends to closely follow the landform and is linearly arranged along the dry valleys.

An important characteristic of the escarpment's field mosaic can be seen close to settlements, particularly around Pickering and east of Thornton-le-Dale. Here there is a pattern of long linear fields, which are orientated north south up the slope and are a relic of the open-field cultivation system. The overall effect of these smaller fields, which are defined by a strong network of hedgerows and hedgerow trees, is to give the impression of a more enclosed and intimate landscape. However, an evaluation of aerial photographs and old OS maps reveals that this historic pattern is being progressively weakened through field enlargement and hedgerow removal. This is particularly the case close to Pickering.

Lanes cut across the escarpment farmland and tend to utilise the shallower gradients afforded by dry valleys. They are characterised by narrow grass verges and are enclosed by hedgerows with few hedgerow trees.

Settlement

The most significant settlement in the *linear scarp farmland* is the market town of Pickering, which is situated on Pickering Beck at the outlet of Gundaie and Haugh Dale. This town is built on a small delta of pro-glacial sands and gravel that were deposited by glacial waters discharging from the Newton Dale meltwater channel. It occupies a position on slightly rising ground and is set against the attractive backdrop of the Tabular Hills. Dating from Norman times, the town has played a vital strategic role located at the entrance of an important routeway through the North York Moors. It was particularly wealthy during the Saxon period. A castle dating back to the thirteenth century dominates the town, which has developed from an historic core, located alongside Pickering Beck. Much of this growth has been since the arrival of the railway in 1875 and has been focused to the south of the town, and in an east west direction along the A170. To the east of Pickering this road was diverted to make way for the park that was developed around Eberston Hall in the early eighteenth century. Weathered grey limestone and red pantile roofs are the typical building materials, although in places, newer development appears stark and incongruous against the undeveloped slopes of the Tabular Hills. The core of the town is attractive and popular to tourists who principally visit

the town, castle and the North York Moors Railway. Traffic in the town is congested, particularly in the summer. The centre of the town, including the castle, is designated as a Conservation Area.

To the north of Pickering is Newbridge quarry. This is the largest quarry in the area and is still active.

Subjective Response

At close quarters, the escarpment is a prominent landmark, however, when viewed from the south, and from a distance, it is less distinctive, merging with the more elevated, shallow sloping farmed landscape to the north. The escarpment has a pronounced sense of place, largely derived from the steepness of the slopes, the expansive outer views and proximity to the Vale of Pickering.

Sensitivity to Change

The south facing slopes of the open farmed escarpment are prominent in views across the Vale of Pickering. This landscape is therefore, extremely sensitive to change.

The elements of the escarpment landscape that are most vulnerable to change are the skyline of the escarpment ridge and the headlands created by the dry valleys that cut through the escarpment. It is important that skylines are uninterrupted by elements such as buildings, telecommunications masts and power lines and that their predominantly open character is retained. Elsewhere, modern farm buildings, pylons and badly sited fence lines can all detract from the natural qualities of this landscape. Changing patterns of land use on the escarpment should aim to minimise intensive arable farming and its associated hard edges and to encourage unified swathes of grassland. With its prominent eleventh century church spire and commanding thirteenth century castle overlooking the town, Pickering is visible across large parts of the Vale to the south. Any built development is likely to be visually intrusive across a wide area.



Source: Environment Agency

North East of Pickering (GR 805 843)

Area F Linear Scarp Farmland

Although trees and woodlands are present, there is a general sense of openness

Though locally undulating, this landscape is characterised by an escarpment location



View looking eastwards along Wilton Heights



Near Pickering



Wilton Heights

Landscape Guidelines

Landscape Strategy

This harmonious, steeply sloping rural landscape is dominated by views out across the Vale of Pickering. The character of the farmland derives from the historic field and hedgerow pattern and local variations in topography. Trees, woodlands and farmsteads are largely absent. Due to its visual prominence, the landscape strategy should seek to conserve and enhance landscape character and ensure that inappropriate development is strongly resisted. The visual structure of the landscape should be assessed from the Vale of Pickering to ensure that the relationship between the higher land and its adjacent landscapes is well balanced.

Land Management

An important visual characteristic of this landscape is the transition from a relatively large scale pattern of arable fields and shallow dry valleys typical of much of the slope, to a smaller scale, pre-parliamentary enclosure pattern of long linear, often pastoral fields near settlement fringes. The latter generally run in a north south orientation following the lie of the land. Management strategies should aim to strengthen this important characteristic and discourage further enlargement of arable fields particularly near the edges of settlement.

The conversion of arable fields to permanent pasture should be encouraged. Any re-seeding of arable land should use a suitable grassland seed mix, of local provenance where possible, which reflects the species found in unimproved grasslands within the local area. The well-managed rhythmic and 'smooth' appearance of this landscape should be maintained by avoiding land management practices that involve a long-term retention of unmanaged vegetation.

Newbridge quarry to the north of Pickering is the largest quarry in the area and is still active. Specialist studies that take full account of geological, nature conservation and aesthetic issues are required to determine the best approach to the restoration of this quarry to ensure the conservation of rare or localised species. In some cases restoration might include the chamfering back of rock faces, elsewhere it may be preferable to retain quarry faces intact to preserve their geological or nature conservation interests.

Field Boundaries

The scale and shape of its patchwork of fields and hedgerows determine the visual structure of this landscape. Future management should ensure that the existing hedgerow network is conserved and strengthened along existing alignments, particularly around Pickering and east of Thornton-le-Dale. Traditional hedgerow management techniques should be promoted, avoiding mechanical over-flailing.

Field hedgerows should be replanted along historic field boundaries where they have been removed due to agricultural intensification and field enlargement. New hedgerows should be designed to strengthen and restore the historic field pattern, using locally occurring native species. Close to settlements, such as Pickering, the restoration of a traditional small scale, linear field pattern should be considered a priority.

Settlements and Buildings

The principal settlement in the *linear scarp farmland* is the town of Pickering. Like other market towns in the District, it is under particular pressure to expand. In order to accommodate housing demand, current planning policy is designed to permit controlled expansion of market towns, including Pickering. However, open areas of the town, including Smiddy Hill, Beacon Hill and the environs of the castle make a significant contribution to the setting of the town particularly when viewed from the south. As a result there should be a general presumption against further growth on more elevated parts of the town and any future development allocations should be directed to controlled infill and expansion in areas south of the A170.

Some of the villages would benefit from specific planting schemes to strengthen their identity, particularly at points of entry along the A170. However, it is important that any such planting be designed strategically in response to a careful, detailed visual analysis that takes full account of variations in character between the settlements.

Although some small scale village infill development may be accommodated, this should be handled sensitively. All efforts should be made to resist suburbanisation by inappropriate construction and detailing.

Infrastructure

There is further scope to improve the setting of the A170, focusing in particular on hedgerow restoration and carefully sited tree planting to enhance views out across the Vale of Pickering. The suburbanising influence of swathes of ornamental bulb planting within the grass verges should be avoided. Management measures should instead concentrate on the diversification of grass and native wildflower species.

Attractive 'entrance' features could be provided on the approach to villages along the A170. Similar to those on the approach to Thornton-le-Dale. These could use vernacular materials and traditional methods of construction to reinforce and reflect the character of the individual settlements. By giving the appearance of narrowing the road corridor, they may also assist in the reduction of traffic speeds.

The existing character of the rural tracks should be maintained and their associated verges, banks and hedgerows managed to avoid erosion and encourage wildflower interest.

Priorities for Action

- ❑ *Conserve and restore the historic hedgerow network to enhance the structured, rhythmic quality of this landscape, particularly around Pickering and east of Thornton-le-Dale.*
- ❑ *Resist further field enlargement particularly near settlements and within the dry valleys.*
- ❑ *Upgrade the landscape of the A170, focusing on hedgerow restoration, tree planting schemes designed to frame views over the Vale of Pickering.*
- ❑ *Undertake a specialist study of Newbridge quarry with a view to possible restoration.*
- ❑ *Restrict expansion of Pickering north of the A170.*

AREA G High Eastern Farmland**Key Characteristic Features**

- Elevated large scale sloping plateau dissected by dry valleys.
- Open rural landscape with generally expansive views.
- Extensive network of drystone walls.
- Isolated farms.
- Woodland generally follow the landform.
- Shallow and elevated valleys of pasture.

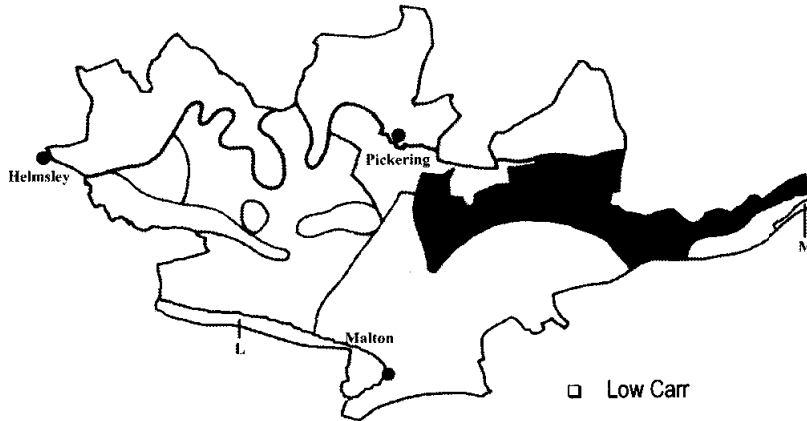
Landform and Context

High eastern farmland is found at the eastern end of the Tabular Hills and lies above 100m AOD with a high point at Givendale Head Farm that is 230m AOD. To the north and west the area is bounded by the North York Moors National Park, whilst to the east the area is bounded by the Ryedale District boundary and to the south by *linear scarp farmland* that abuts the Vale of Pickering.

Limestone and calcareous gritstones of the Tabular Hills dip slope underlie the area, which slopes fairly consistently to the Vale of Pickering, increasing in steepness only in the vicinity of the A170 due to the effects of the Helmsley – Filey fault line discussed previously. The *high eastern farmland* has been carved into sweeping forms by relatively broad dry valleys, which have eroded the upland to leave undulating ridges that extend southwards becoming progressively steeper and more indented down the dip slope.

Land Use and Landscape Pattern

This is a rural landscape in which arable farmland predominates, but which also includes some substantial areas of pasture particularly in the upper reaches of the dry valleys. Fields tend to be medium to large and regularly shaped. A defining feature of this landscape is that, in addition to hedgerows, drystone walls often bound the fields although many of these are now falling into disrepair. The field boundaries generally date back to the period of Parliamentary Enclosures. Even around the settlements, there is little evidence of the relic open-field medieval fields found elsewhere in the Fringe of the Moors. There has been a long standing tradition of sheep farming in the areas as evidenced by Malton Cote, which dates back to the medieval period when it was a grange or upland sheep farm, possibly under monastic influence.

AREA H Open Vale Farmland**Key Characteristic Features**

- Extremely flat terrain.
- Strongly rural character.
- Extensively drained landscape.
- Open and expansive.
- Sense of relative seclusion and inaccessibility.

Landform And Context

The *open vale farmland* is a geographically large area that covers much of the eastern Vale. Located to the east of Pickering and Thornton-le-Dale, it broadly follows the course of the rivers Derwent and Herford to the boundary of Ryedale District at the A64 near Staxton. Due to the configuration of Ryedale District's boundary, *open vale farmland* narrows considerably to the east. However, in reality this landscape character type ranges beyond the District boundary, particularly to the north, where it extends into Wykeham Carr and eastwards into Flixton and Starr Carrs.

Formed on the fluvial and lacustrine clays of the Vale floor, the landscape of the *open vale farmland* is extremely flat and low lying. The entire area lies at around 23 to 24 m AOD sea level. There is a strong topographical contrast between the flat landscape of the *open vale farmland* and the steeply rising chalk escarpment to the south.

Land Use And Landscape Pattern

This is an agricultural landscape with the dark peaty soils sustaining predominantly intensively farmed arable fields, although there are also some pastures, particularly closer to the rivers Derwent and Herford. The agricultural land quality in this part of the Vale of Pickering is high (MAFF Grades 2 and 3) and is generally of a better quality than seen in other parts of the Vale. This is largely due to the presence of deeper, peaty soils. Along the southern edge of the Vale between West Heslerton and Sherburn, the infertile sands and gravels of the A64 corridor are less suited to arable or pastoral cultivation and there are areas of dry pasture, pine plantations and both working and disused sandpits. Some of the sandpits are now piggeries.

Fields are large and field boundaries mostly follow ditch lines or access tracks. The landscape is open with few hedgerows and only occasional small, geometric blocks of woodland to punctuate views. Most of these occur on the poorer soils along the southern edge of the area where they comprise mixed deciduous and coniferous plantations. Minor tree groups tend to occur alongside the roads and access tracks or are grouped as shelterbelts around the isolated properties. Hedgerow trees are generally absent.

Narrow lanes, often running in a north south alignment across the farmland, give access to isolated groups of farm buildings. All routes tend to follow a straight alignment, but with definite kinks. They therefore respond to and accentuate the regimented, geometric pattern of fields.

In keeping with much of the Vale, this is a highly planned landscape, which has undergone extensive drainage to facilitate the intensive agricultural activity seen today. The principal watercourses are the rivers Derwent and Hertford, both of which have been substantially modified by drainage engineers. Between Brompton Beck and Ings Farm, the District boundary marks the line of the former course of the river Derwent before it was canalised in the nineteenth century. A comparison of the meandering and natural line of the former river course with the straightened channel seen today provides an indication of just how artificial the landscape has become.

In addition to the rivers, a network of dykes, cuts and canalised watercourses crosses the area. These regulate the water table and are visible but not prominent in the landscape.

Settlement

With the exception of Yedingham, which developed on the site of a Benedictine priory, most of the villages within the *open vale farmland* are concentrated on the rising land on its northern and southern margins. This pattern reflects the historically harsh conditions of the west, low lying Vale. Settlements such as Wilton, Allerston and Ebberston along the area's northern margin lie within the Fringe of the Moors.

Whilst larger settlements are largely absent, there are a number of scattered farmsteads throughout the area. These date back to the period of intensive drainage and the parliamentary enclosures of the eighteenth and nineteenth centuries. The relative

inaccessibility of these farmsteads, combined with the general lack of connecting roads in a north to south direction makes this part of the Vale seem remote and somewhat isolated.

Subjective Responses

Despite having been radically altered by land drainage, the *open vale farmland* retains a distinctive sense of place, which is notable less for its scenic quality, which is bleak and somewhat monotonous, than for its visual expansiveness and relative seclusion.

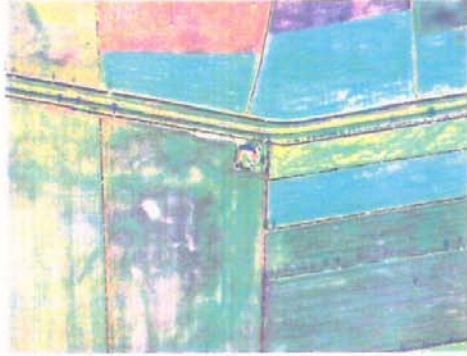
Views are long and the landscape generally open, punctuated by the occasional blocks of woodlands and by views of the surrounding hills beyond its boundaries. It is the latter views that give a sense of scale and security to a landscape that could, otherwise appear quite remote and threatening.

Sensitivity to Change

Extensive built development is unlikely to be a possibility in this flat, low lying landscape, but further engineering works related to the river channels, drainage ditches and transmission lines are all potential forces for change. Large scale vertical elements such as transmission lines represent the most significant threat to landscape character, as they would dominate the landscape and detract from its remote and open character.

The scenery is clearly the product of its agricultural management. The intensity of this management, and in particular, the effect of land drainage, has created a highly planned landscape and scenery with few notable or distinguishing features. Despite this, the landscape has a distinctive landscape pattern and a sense of rural isolation that could be easily eroded by inappropriate changes to the landscape, regardless of whether they are widely visible.

The landscape is clearly of variable quality; Many landscape features are in a relatively poor condition; those hedgerows that do occur are often broken or replaced by post and wire fences and there is strong evidence of hedgerow loss and field enlargement. Scrubby vegetation along ditches is regularly removed and the few woodland blocks tend to be of a similar age and lacking structural, species and age diversity.



Source: Environment Agency

Low Carr (GR 945 790)

Area H

Open Vale Farmland

Large, flat and open low-lying fields, are characteristic of Open Vale Farmland



Near Wilton Carr House

The landscape is extensively drained by a number of deep ditches and modified river channels



Binnington Carr

The strong contrast between the *open vale farmland* and the chalk escarpment to the south is a distinctive visual feature in this area and one that may be threatened by changes to the A64 corridor. The blocks of woodland which emphasise this contrast should be conserved and it is important that the landscape in this area remains unified and uncluttered by further development or atypical land uses.

Much of the *open vale farmland* is likely to contain sites of archaeological and cultural value. These are highly vulnerable to landscape change, particularly further desiccation of remaining peat.

Landscape Guidelines

Landscape Strategy

This is a flat and low lying landscape of dark peaty soils, which sustains intensively, farmed arable fields, small woodlands and scattered settlement. Fields are large and defined by a network of drainage ditches. Hedgerows are rare and the little woodland is concentrated along the rising ground along its southern fringes. It is a highly planned landscape that, despite having been radically altered by land drainage, retains a distinctive sense of place, which should be conserved and locally enhanced.

Land Management

Whilst any further field enlargement and loss of landscape structure or habitat should be discouraged, the main objective should be to maintain the open expansive character of this landscape whilst offering scope for localised landscape improvement and enhancement.

Between West Heslerton and Sherburn, the strong transition from the open landscape of the Vale to the more intimate and enclosed landscape of the Wolds escarpment should be maintained. There may be scope for new woodland planting to give greater emphasis to this boundary.

Hedgerows are conspicuous by their absence in this landscape. Those remaining should be protected, replanted and managed, particularly where they occur close to settlements, along lanes and within the A64 corridor. New hedgerow planting should not impinge on the predominantly open character of the wider area.

Although it is generally invisible in longer views, water is a key structuring element in this landscape. Specialist studies should be undertaken to ensure the best approach to maximise the visual, ecological and floodplain management requirements of all the watercourses in the area. Unless essential for flood control, no further rivers or stream channels should be modified by canalisation, diversion or changes to the banksides. Remaining areas of wetland should be protected from degradation by drainage or excessive erosion due to cattle trampling. Local enhancement measures should give priority to increasing the visual and ecological importance of the waterside landscapes, whilst maintaining the overall open quality of the landscape.

Wide uncultivated buffer margins should be created alongside drainage ditches where they abut arable land.

Linear riparian habitats are important as they provide food and necessary cover for a range of aquatic and semi-aquatic invertebrates, birds, and mammals in particular the water vole. Natural riparian habitats on the rivers Derwent and Hertford should be conserved, and priority should be given to the ecological improvement of these areas. This should include the conservation of marginal plant communities and of those on the banksides. A margin of uncultivated land should be left between the agricultural land and the tops of the banks and in areas of grazed pasture, stock should be prevented from causing bank erosion. Further tree planting of appropriate locally occurring wetland species, such as goat willow, crack willow and alder should be encouraged to provide cover for mammals especially water vole and otter.

Consideration should be given to the potential for management of local water tables for the creation of relatively large areas of wetland, which would have both visual and ecological value. This should include changes to the drainage systems to allow some areas to retain a high water table, control of pollution in particular agricultural run-off and control of non-native species. To increase the amount of wetland habitat, suitable arable fields close to existing wetland areas should be reinstated as wet grassland through changes to the drainage system and re-seeding with an appropriate grassland mix reflecting the species present in existing unimproved wet grassland areas.

These grasslands should include shallow pools to provide suitable habitat for invertebrates and birds. Important archaeological sites would also benefit from raised water table levels, since wet peat is important for palaeo-ecological and cultural preservation. Potential new sites should be identified before any major land management work is carried out. Methods for statutory protection of important sites should be sought for the most important sites.

Carr woodlands are an important wetland habitat providing cover for birds and mammals. Any areas of scrub or carr woodland should be conserved and enhanced with further planting of appropriate, locally occurring native species of tree and shrub. Some of the re-created wetland areas should be allowed to develop into carr woodland, either by natural succession or by planting indigenous wetland species such as downy birch, alder, goat willow or crack willow.

It is important that the remote, isolated character of much of this area should be maintained through the control of recreational facilities.

Along the southern edge of the *open vale farmland*, sandpit restoration schemes should be designed according to visual and ecological criteria. Ecologically, the aim should be to create a series of habitats. Visually, criteria relating to landform, edge characteristics and visual highlights are important. Other considerations may include access and leisure to maximise visitor and, therefore, income potential.

Field Boundaries

Existing hedgerows should be conserved along their original alignment, and improved by replanting the gaps with suitable, locally occurring, native species, in particular hawthorn and hazel. Hedge cutting should avoid mechanical over-flailing. Existing willow scrub along the ditches, which flank some of the hedgerows, should be retained wherever possible, to provide wildlife habitats within areas of intensive agriculture and to strengthen the wildlife corridors created by the hedgerows.

Hedgerow trees are not a conspicuous feature of this landscape. However, around villages particularly along the A64, new planting of hedgerow trees could significantly improve both the approaches to these villages and the road corridor. This should comprise locally occurring native species, with occasional hedgerow trees of ultimately statuesque proportions, such as oak and ash.

Trees and Woodlands

Except along the A64 corridor, woodlands are not characteristic of this landscape and it is important that the overall open character is maintained. However, small scale woodland planting would help to emphasise the southern boundary of the Vale between West Heslerton and Sherburn. This should reflect the existing geometric pattern of woodlands in terms of distribution, structure and composition. The existing small woodland blocks should be conserved and managed to improve their structure and species diversity. Management should include selective thinning of non-native species, particularly those that are invasive such as sycamore, since these tend to shade out some of the indigenous species. Any removal of mature trees due to disease or as part of a thinning regime, or any removal of dead trees, should take into account roosting bats and hole-nesting birds. Trees should be checked for both prior to felling or tree surgery. Any felled dead wood should be left on site to provide invertebrate habitat for detritivores.

Any new planting of woodlands or shelterbelts should comprise tree and shrub species native to the area to produce a good woodland mix. New woodlands would be most beneficial in areas where they can be used to extend the existing woodland cover or where there are robust hedgerows or scrub, to serve as wildlife corridors.

Settlements and Buildings

Because many of the scattered farms have undergone considerable expansion and amalgamation they often appear intrusive and out of character in the open countryside. Screen planting could reduce the visual impact of these buildings. Such screen planting should comprise locally occurring native species rather than exotic conifers.

Larger villages are concentrated along the southern edge of the area. Coalescence of these villages through ribbon development along the A64 should be strongly resisted. Attractive 'entrance' features could be provided on the approach to villages along the A64 similar to those on the approach to Thornton-le-Dale. These could use vernacular materials and traditional methods of construction to reinforce and reflect the character of the individual villages. By giving the appearance of narrowing the road corridor, they may also assist in the reduction of traffic speeds.

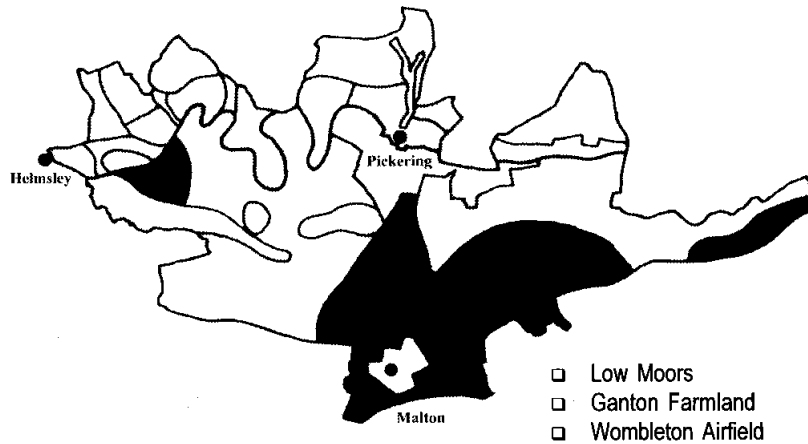
Settlement throughout the remainder of the area is sparse and typically scattered. Further development should be discouraged in order to retain the expansive, remote qualities that are so characteristic of the area.

Infrastructure

The A64 becomes increasingly urban in character in an eastern direction. There is scope to improve the setting of this road, focusing particularly on hedgerow restoration and avenue tree planting on the approach to villages.

Priorities for Action

- *Conserve and locally enhance the existing landscape pattern of large geometric fields with few hedgerows or woodlands.*
- *Locally restore and enhance the present wetlands in the area, so that they are more sympathetic to landscape and wildlife.*
- *Continue to protect important ecological sites.*
- *Seek methods of protection for prehistoric archaeological sites preserved in peat.*

AREA J Wooded Open Vale

- Low Moors
- Ganton Farmland
- Wombledon Airfield

Key Characteristic Features

- Flat, low lying terrain.
- Open countryside.
- Long views punctuated by geometric woodland blocks.

Landform and Context

Wooded vale farmland occurs in three discreet areas. The two southern areas abut the northern edge of the Yorkshire Wolds and have a boundary broadly defined by the A64 and the gently rising land that forms part of the lower slopes of the Wolds escarpment. The largest of these extends from the market town of Malton/Norton west to Amotherby, north to Kirby Misperton and east to West Heslerton. It includes the villages of Scagglethorpe, Rillington, Scampston, and the attractive well-wooded landscape of Scampston Park. The smaller of the southern areas comprises a relatively narrow strip of land, which runs parallel to the A64 between Sherburn and Ganton, extending east through Willerby Carr to the boundary of Ryedale District on the A64. The third area is found in the western Vale where it is associated with the former airfield at Wombledon.

The landscape of the *wooded vale farmland* is flat and low lying, generally around 23m AOD. In common with the *open vale farmland* found further east, it has few prominent landscape features. Its main differentiating characteristic is the higher concentration of woodland blocks and shelterbelts that it contains.

Land Use and Landscape Pattern

This is an agricultural landscape, on land mainly classified as MAFF Grades 2 and 3. There is a general improvement in agricultural land quality to the east, where soils become increasingly peaty and darker in colour. Most of the land is under a combination of intensive arable or grazing, although outdoor pig rearing is a locally prominent feature, particularly in the largest of the three areas.

This highly planned agricultural landscape derives much of its character from the period of eighteenth and nineteenth century enclosures with characteristically angular arable fields and pastures. Fields tend to be medium to large and bounded by hedgerows with few hedgerow trees. A particular characteristic of this flat, low lying agricultural landscape is the presence of regular, geometric woodlands, comprising mixed deciduous species with a high proportion of conifers. Most of these woodlands are relatively recent in origin and were planted for game covert and shelterbelt purposes. Many are still known as 'plantations' and are important landscape features in this landscape. In common with much of the eastern Vale, the *wooded vale farmland* has

been extensively drained. However, despite being crossed by a network of dykes, cuts and canalised watercourses, including sections of the rivers Rye and Derwent, these are not highly visible and do not contribute significantly to the character of the landscape, other than when they are in flood.

Although this is a predominantly agricultural landscape, a notable exception is the parkland that lies around Scampston Park and Knapton Hall to the east of Rillington. Capability Brown laid out Scampston Park in the eighteenth century, although the original design has since been significantly altered. Scampston Hall and village provide the focal point of the park. This is surrounded by a formal deer park that includes shelterbelts of mixed deciduous and coniferous trees, stands of mature trees that serve to frame and manipulate views, ornamental lakes and sweeping lawns and pasture, surrounds these. Characteristic metal strap 'estate' railings contain livestock. These landscape elements combine to create a highly attractive, enclosed and discrete landscape element that contributes significantly to the overall wooded character of the area.

Vertical elements are visually prominent in this flat, low lying landscape. A number of electricity power lines and transmission towers introduce an urban form into what is otherwise a rural landscape.

Settlement

The settlement pattern exhibited in the *wooded vale farmland* mirrors that seen across the wider Vale. Villages, such as Scagglethorpe, Rillington and West Heslerton tend to be restricted to the slightly elevated southern margin. Farmsteads and small hamlets are scattered across the lower lying farmland. Long narrow lanes and tracks with wide grass verges bounded by hawthorn hedgerows link these. Many of the lanes and tracks are 'no-through' roads and are often private, giving this part of the Vale a sense of seclusion and inaccessibility.

The largest settlement within the *wooded open vale* and, indeed within the wider area, is the market town of Malton/Norton, which lies at the junction of the Vale of Pickering, the calcareous Howardian Hills and the chalk escarpment of the Yorkshire Wolds. The river Derwent separates the two parts of the town, creating a visually important tract of open land along its corridor.

Malton is situated to the north of the river on gently sloping ground formed by the underlying limestones of the Howardian Hills. The latter extend into the Vale as a finger of more elevated terrain extending to Orchard Fields and Peaseny Hills. The B1248 (York Road), which links Malton to the A64 west of the town, runs along this higher ground and provides an attractive approach to the town, affording southerly views to Norton, the river Derwent and the low lying Vale landscape to the south of the town. Similar attractive views are available when entering Malton from the north west along the B1257 (Old Malton Road). Although this landscape has characteristics more typical of the Howardian Hills, for the purposes of this report, it is included within the Vale.

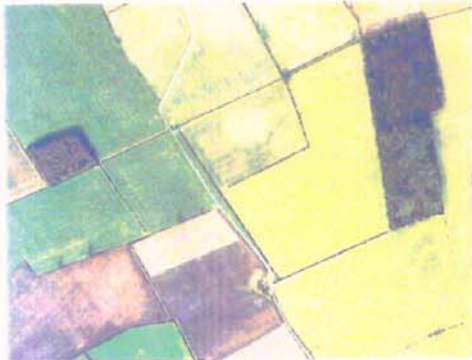
Norton is located on the generally flat land to the south of the river Derwent. Although containing a number of listed buildings, it is a less traditional town than Malton. It is larger than Malton, extending in a broadly radial pattern southwards and westwards from the railway and bus stations close to Railway Street Bridge and County Bridge, which are the central crossing points of the river.

In common with other settlements in the area, Malton/Norton is under continued pressure to accommodate the expanding employment and residential needs of the District. The Council currently adopts and will, for the near future, continue to adopt a general presumption permitting controlled development of market towns. However, development will only be allowed where it will not adversely affect either the character or appearance of these towns or their setting.

Subjective Responses

Whilst lacking any features of particular note and showing some evidence of local decline in landscape structure with field enlargement and loss of hedgerows, these parts of the Vale, nevertheless, have a distinctly rural character. The area is used for low-key recreation and has a somewhat secluded air, which is emphasised by the relative lack of through-roads.

East of Sherburn, the landscape of the A64 corridor becomes increasingly more suburban with proximity to Scarborough.



High and Redcarr Plantation (GR 855 774)

Source: Environment Agency

Area J

Wooded Open Vale

Mature woodland blocks, containing predominantly deciduous trees, typify Wooded Open Vale



Near Knapton Lodge

The landscape has a strong rural character and although open, includes a number of woodland blocks that serve to provide local enclosure



Riccal Moor



Riccal Moor

Sensitivity to Change

Development would be detrimental to the rural character of this area, which, although not intrinsically highly attractive, does possess a rural quality, seclusion and subdued charm. These important characteristics could easily be eroded through piecemeal development or through the imposition of further power lines or developments on a scale such as Pauls Maltings at Knapton.

This farmland is relatively open but the hedgerows and occasional woodlands also offer some scope for screening small scale development, provided that it is carefully sited and if associated planting is designed to integrate closely with the surrounding landscape pattern. However, care must be taken to ensure that piecemeal development does not erode the overall rural character.

Landscape Guidelines

Landscape Strategy

This is a predominantly low lying landscape of drained arable fields and pastures, bounded by hedgerows with few hedgerow trees. Tree cover is provided by the high number of woodland blocks and shelterbelts that are scattered throughout the area, with particularly high concentration found on the rising ground of the A64 corridor. The area has a secluded rural quality, which would benefit from enhancement with local restoration of wetlands.

Land Management

Wherever possible, the visual structure of the landscape should be assessed from the Wold's escarpment to ensure that the relatively open, structured character of this landscape, including the overall proportion and distribution of woodland to open farmland is maintained.

Any further field enlargement, removal or hedgerows and consequent loss of landscape should be avoided.

Water is an important feature of this landscape, yet it is generally invisible in longer views. Priority should be given to the conservation and enhancement of features associated with the margins of the water-courses to enhance their visual and ecological interest.

Unless essential for flood control, no river or stream channel should be modified by canalisation, diversion or changes to the banksides. Further drainage of the surrounding land should be avoided to prevent further damage to wetland habitats.

The riparian habitats on the rivers Rye and Derwent and their tributaries should be conserved and priority given to the ecological improvement of these areas. The riverbanks should not be overgrazed or subject to excessive erosion due to the movement of stock. The river Derwent is designated as an SSSI along much of its length and the section between Ryemouth and Malton, which lies within the Vale of Pickering, is part of this designation and subject to statutory protection. All proposed management work within this area must be agreed with English Nature. Parts of the river Rye are designated a SINCR, which underlines its importance in a local context. The aquatic and bankside plant communities should be conserved by preventing the further intrusion of arable land close to the river, preventing overgrazing of banksides and limiting the areas where stock have access to the banksides to control erosion.

Specialist studies should be undertaken to ensure the best approach to maximise the visual, ecological and drainage requirements of the drainage ditches. Wide uncultivated buffer margins should be created alongside drainage ditches where they abut arable land.

Along the A64 corridor, the contrast between the relatively large scale landscape patterns of the Vale to the more intimate, enclosed landscape of the Wolds escarpment to the south should be maintained. In places, there may be scope for new woodland planting to give greater emphasis to this boundary.

It is important that the tradition of quiet enjoyment of this countryside is maintained through the control of new recreational facilities. Inappropriate large scale facilities such as golf courses or caravan parks could introduce a suburbanising influence and should be resisted.

Field Boundaries

The scale of its patchwork of fields, hedgerows and woodlands determines the visual structure of this landscape. Future management should ensure that the existing hedgerow network is maintained and reinforced along its existing alignments. Linkage between hedgerows and woodlands should be encouraged to maximise visual and wildlife benefits.

Traditional hedgerow management should be encouraged, avoiding mechanical over-flailing. Any significant gaps should be replanted using locally occurring native species such as hawthorn, holly or hazel.

There is evidence to suggest that hedgerows have been removed to improve agricultural productivity. Wherever possible, replanting should be considered to strengthen the hedgerow network, defining the lane and field boundaries in areas where it has been depleted. Gaps should be replanted using locally occurring native species such as hawthorn, holly or hazel.

Although not a distinctive feature of this local landscape type, where hedgerow trees occur locally, they should be protected, replanted and managed. New hedgerow tree planting should be concentrated near villages and farms and along lanes. Such planting could enhance the sense of scale and distance in the Vale by improving sequences of views, but without detracting from the overall open character.

Along the A64, further planting of hedgerow trees using locally occurring native species of ultimately statuesque proportions, such as ash or oak should be encouraged to enhance both the setting of these villages and the road corridor.

Trees and Woodlands

Most of the woodlands within the area are plantations and shelter belts and there is little ancient semi-natural woodland. The existing woodlands should be conserved, with management being related to their original purpose where the woodland has been deliberately planted. Those areas planted as covert should retain their scrub cover, since this provides valuable bird and small mammal habitat. Where existing plantation woodlands or shelter belts are removed, the areas should be replanted with a suitable range of indigenous trees and shrubs to encourage an increase in biodiversity over that found in monoculture.

Management of the existing woodlands should also aim to increase species diversity by introducing a greater range of habitats. This should be done by thinning, opening up of glade areas and introduction of native tree and shrub species where appropriate. Before any removal of mature trees, particularly deciduous species, or tree surgery, trees should be checked for roosting bats or the presence of hole-nesting birds. Where possible, dead wood should be left on site to provide habitats for detritivores.

Along the A64 corridor, transition from the more geometric open landscape of the Vale to the more irregular and enclosed landscape of the Wolds escarpment should be maintained. There may be scope for new woodland planting to give greater emphasis to this boundary. New planting should be designed to reflect the existing scale and structure of the landscape. New woodlands should have bold, distinctive, geometric shapes and should be carefully sited so as not to disrupt the relatively open character of the landscape. Field corner planting should be avoided.

The landscapes of Knapton Hall and Scampston Park make an important visual and historic contribution to the landscape of the Vale, which should continue to be maintained. The parkland in the Scampston area should continue to be managed to conserve the stands of mature trees and maintain their species diversity. The conversion of arable land to permanent pasture should be encouraged in areas with parkland trees. Planting or woodland clearance schemes should seek to identify and enhance the best views of these parklands where they extend beyond their official boundaries.

Settlements and Buildings

The development limits around Malton/Norton have been drawn tightly around the settlement to protect the attractive setting of the town, which to the south is created by the Yorkshire Wolds 'Area of High Landscape Value', to the west by the Howardian Hills AONB and to the east by 'Old Malton Conservation Area' and the river Derwent corridor, which is important both in ecological and landscape terms. Expansion of the town will be difficult to accommodate and will require considerable attention to the siting, arrangement and architectural detailing to ensure that development is sympathetic to the character and landscape setting of the town. Recent development in the town, such as the Norton Grove Industrial Estate, serve as an illustration of how inappropriately sited large scale development can appear unsightly and out of place.

Whilst there may be some opportunity for limited and sensitive infill, this is unlikely to fulfil the long-term growth commitments required of the town. Some expansion on the fringes of Malton/Norton is therefore likely in the longer term.

From a landscape perspective, urban expansion would best be accommodated on the flat, low lying land to the south and east of the towns. This area is already affected by large scale development, notably the Norton Grove Industrial Estate, and would not impinge on the attractive landscape setting of the Howardian Hills footslope that lies to the west of the town. However, new development should only be accommodated through the introduction of large scale woodland planting.

Other settlement is concentrated in villages strung out along the southern edge of the area. Coalescence of these villages through ribbon development along the A64 should be strongly resisted.

Detailed landscape assessments should be carried out to identify scope for improving the landscape setting of visually prominent developments such as Pauls Malt at Knapton.

Any alterations to farm buildings should take into account their use by birds and by roosting bats. Buildings should be checked and work carried out avoiding the bird and bat breeding seasons.

Infrastructure

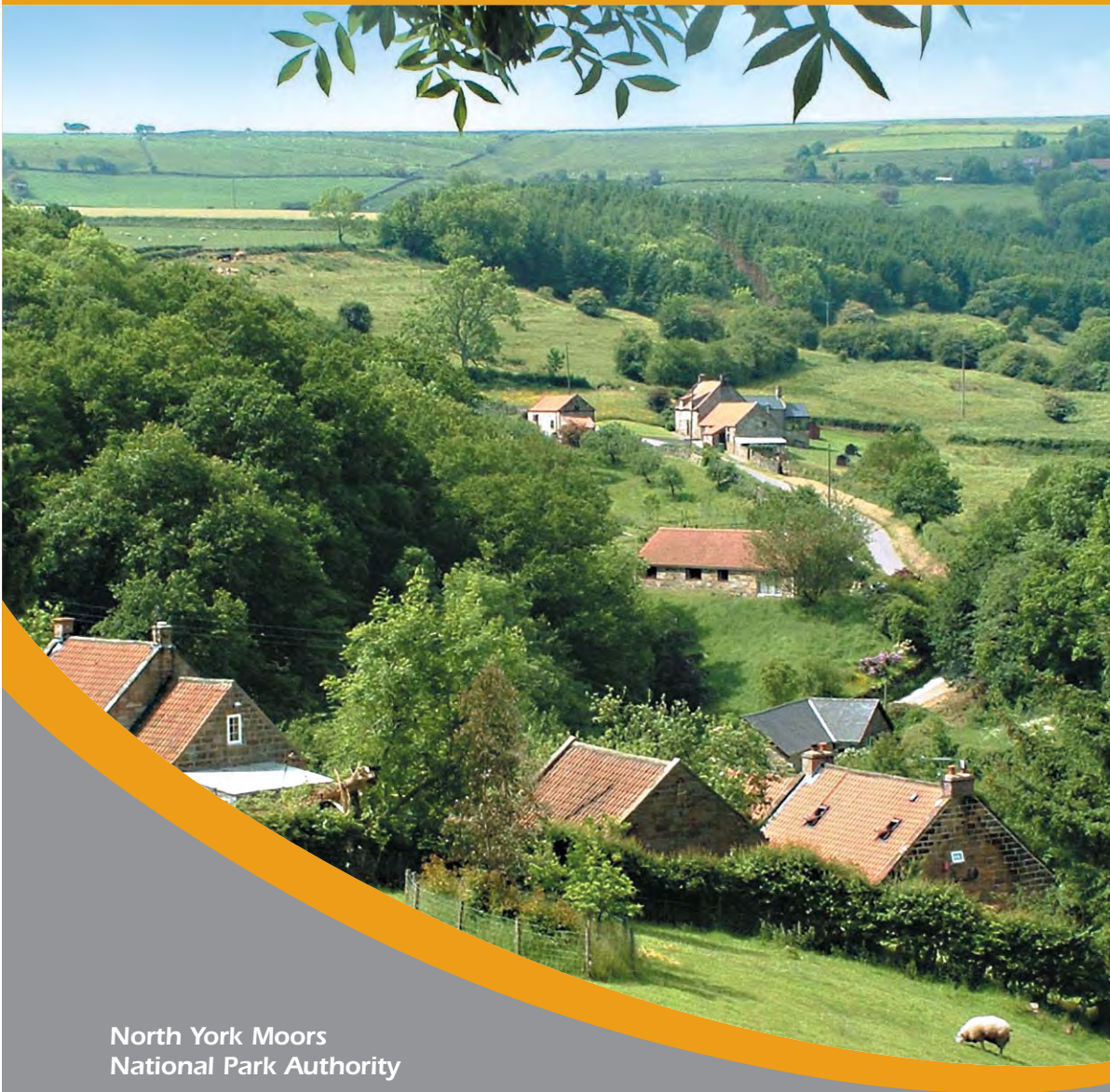
The existing character of the rural lanes should be maintained resisting upgrading schemes such as road widening or straightening and the introduction of kerbs, which can be a suburbanising influence. Informal car parking on grass verges, lay-bys and farm entrances should be controlled.

Detailed landscape assessments should be carried out to assess the scope for improving the A64 corridor, particularly to the east of Ganton where it becomes increasingly suburban with proximity to Scarborough.

The introduction of further transmission lines into the open countryside should be resisted.

Priorities for Action

- *Maintain the existing proportion and distribution of woodland to open farmland.*
- *Avoid any further field enlargement or hedge-row removal.*
- *Protect, manage and replant all existing hedge-rows.*
- *Locally restore and enhance wetlands in the area, so that they are more sympathetic to landscape and wildlife.*
- *Continue to maintain the attractive parkland landscapes around Scampston and Knapton Halls.*
- *Undertake a landscape assessment to identify opportunities for enhancing the A64 corridor.*



North York Moors
National Park Authority
Local Development Framework

Design Guide

Part 3: Trees and Landscape Supplementary Planning Document



Planting should be used to enhance good design rather than screen poor quality development



Locally collected acorns

2.6.1 Soft Landscaping

Soft landscaping refers to all 'growing' landscape features including earth modelling, soil and grass, trees and shrubs but also extends to streams, ponds, ditches and wetlands.

Soft landscaping can be employed to fulfil a number of functions including the definition of spaces and boundaries, creating 'soft edges' to development to integrate it into the surrounding landscape, providing green corridors and habitat links, encouraging biodiversity and enhancing the streetscape and road corridors.

In simple terms the choice of plants used for soft landscaping purposes should reflect its function, purpose and location.

Planting should be sympathetic and make a positive contribution to the existing local landscape character. It should also compliment the surrounding vegetation pattern and be used to encourage biodiversity on the site. **Proposed planting should never be used as a tool to mitigate or remedy poor design.**



When developing planting proposals, consideration should be given to the following points:

Species Choice

The use of locally native tree and shrub species can be important in some situations. They often reflect the native woodland types of the North York Moors and if used with care, can help to maintain local distinctiveness and enhance the landscape of the National Park. Local wildlife populations may be better adapted to native tree species and they are usually considered to have a higher wildlife value than other species. Generally, the planting of native trees and shrubs will be encouraged in planting proposals, particularly those that are situated outside of settlements or in the wider countryside.

Where possible, planting stock should be from local seed sources. Although our knowledge is still developing (and climate change may be a factor to consider in the future), local provenance trees and shrubs, which are growing well in the area, will usually be better adapted to the local environment and be preferred in a new landscape scheme. Using local origin stock (trees and shrubs which originated in the area) might be important for some of the less widely planted or more localised species to help conserve unique local characteristics (genotypes). For example, small-leaved lime, field maple, dogwood, spindle or juniper, particularly when sourced from ancient woodlands or trees, could have locally distinct populations. Planting local origin stock for some species such as these should be considered.

Many species of tree are now well established in the landscape and some, such as the spruces and larches, have been widely planted for timber and are important to the local economy. Where non-native tree species are to be used they should respect and enhance the surrounding landscape. Purple leaf plants such as copper beech, or some conifers can draw attention to the development and may increase the visual impact. Species such as Scot's pine and beech are not considered native to the area but if used with care can enhance a well designed scheme. Sycamore has been present in the North York Moors for centuries and can be a traditional and valued landscape feature, for example when planted around farmsteads (although its use near to some native woodlands might be discouraged if it is not already present).

Scale of Planting

The scale of planting is an important factor in determining how successfully a development integrates into and becomes part of the landscape and the surrounding vegetation pattern. Where large areas of woodland are a key feature of the landscape, larger planting schemes might be more appropriate.

In landscape character types where the landscape is made up of simple large scale components where the landform dominates (rather than the field pattern), small scale planting can be inappropriate. For example, large arable fields or where large coniferous woodlands are present a more bold approach would build on the existing landscape character. Conversely in more intimate landscapes where the field pattern is the dominant feature, woodland planting should reflect this scale.

There is a misconception that new development can be 'hidden' by planting belts of trees and shrubs to create a screen. However, caution should be exercised as the resultant screen can often be as intrusive in the landscape as the original development. In these instances, clumps of trees can often be more effective in reducing the visual impact of buildings.

Clumps of trees can be effective in reducing the visual impact of buildings



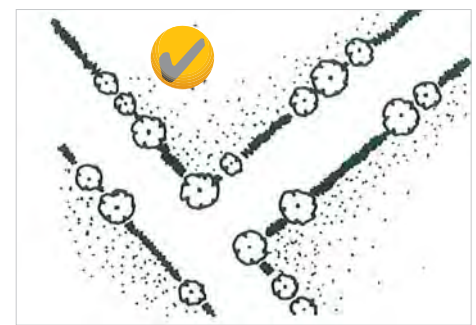
Planting Design

The way in which new vegetation is planted and the species chosen will have a strong influence on how a development fits into the landscape. Considering the existing vegetation pattern can provide clues about how to proceed.

Figure 4:
Planting Styles

Right: Regimented and formal style of tree planting along boundaries

Far Right: Irregular spacing for tree planting along boundaries



Observing which trees and shrubs already grow well in an area can indicate which species will grow well together in the local environment. For larger planting proposals, species choice can reflect natural groupings found in native woodland types and design might include variations of species across the site to reflect changes in soils and topography. Planting patterns can also introduce diversity and open spaces to increase 'naturalness' as the wood develops⁷.

Although innovative planting schemes will be encouraged in certain circumstances, generally formal styles of planting within open areas (outside of settlement boundaries and wider countryside) such as avenue planting along farm access tracks will be inappropriate (see Figure 4). Over-elaborate gardens are not features of farmsteads/buildings within these locations.

Areas of Grass and Lawns

Areas of grass can offer a variety of suitable habitats for animals as well as supporting wildflowers. Areas of long grass with a mowing regime around the traditional hay making calendar can provide suitable growing conditions for native wildflowers and grasses. For larger areas of grass/lawn, consideration should be given to setting aside areas for these purposes.

Native grassland with wild flowers can provide a wealth of colour and texture



Footnote:

⁷ Further information can be found in Rodwell and Patterson, 'Creating New Native Woodlands' or contact the National Park Authority's Conservation Officers for further advice.

Rivers, Streams and Ponds

The choice of plant species should reflect the underlying soil conditions. Where sites are adjacent to rivers, streams or ponds a selection of plant species more suitable for wet conditions will relate more successfully to the surrounding riparian vegetation pattern. Care should be taken to ensure important wetland habitats are not affected by planting and that the right balance of open and shaded habitats are maintained near to water.

Boundaries

Boundaries can provide a link with the surrounding landscape character and vegetation pattern. If hedgerows are characteristic of the surrounding landscape, they may be appropriate as a form of boundary treatment. Where boundary hedgerows exist, their retention and incorporation into a scheme is encouraged.

Sufficient space must be left for boundaries which are in keeping with the surrounding landscape. For example, it would be out of character to have a wooden close boarded fence as a boundary treatment for housing adjacent to an area of open countryside where a hedgerow or a belt of native tree and shrub planting might be more acceptable.

Additional information relating to boundary treatment can be found in Section 2.6.2 and Part 2 of the Design Guide – ‘Extensions and Alterations to Dwellings’.

Restoration and Management

All new planting should maintain and where necessary strengthen the diversity of habitats by encouraging restoration of native grassland, management of hedgerows and woodland and wildlife-friendly gardening.

Although there may be a number of older trees within a development site, new trees should also be planted to offer replacements for the future.

Occasionally a site may contain trees or woodland which has a valuable screening function, even though made up of poor specimens or inappropriate species. In these cases a management plan should set out planting proposals which will seek to provide replacement trees for those to be felled in the longer term.

Replacement tree planting provides an opportunity to strengthen the diversity of habitats



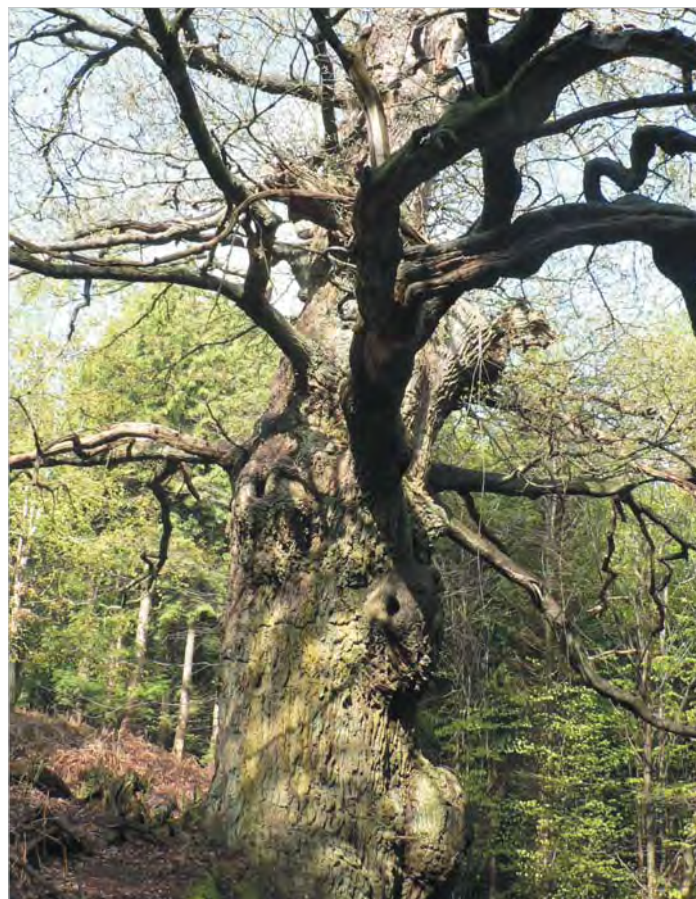
Veteran trees are implied to have 'gone through the wars'

Veteran and Large Trees

Large trees are an important feature in some settlements within the National Park and make a significant contribution to their character. There will be a strong presumption against the felling of such trees or development which will result in pressure for their removal or replacement with smaller trees.

Veteran trees are the oldest living plants in Britain. They can be many hundreds or even thousands of years old. Veteran trees are found throughout the National Park, but there are particular concentrations in certain landscapes. Ancient woodland is a good place to find huge small-leaved lime coppice stools, one of the less common native trees. Deer parks and wood pasture will often contain many impressive old pollards, particularly oaks. Hedgerows still contain an abundance of veteran trees, and old specimens of species such as oak and field maple may be found as field trees or on village greens.

Veteran trees should always be retained and where there are no young trees nearby, trees should be planted for their replacement.



'Aged or 'veteran' trees found outside ancient woodland are also particularly valuable for biodiversity and their loss should be avoided. Planning authorities should encourage the conservation of such trees as part of development proposals'.

Planning Policy Statement 9: Biodiversity and Geological Conservation (DCLG 2005)

Tree and Shrub Species Selection

In general, planting is likely to be more successful if a few well adapted and common species are planted. Although not exhaustive, the following list provides brief details about the more common native trees and shrubs of the North York Moors. In interpreting the list, consideration should also be given to the particular landscape character of the area within which the proposed planting is to be undertaken (see Section 2.3).

Alder	Has a wide distribution on neutral soils, especially wet areas near to watercourses.
Ash	Widespread, although prefers neutral or alkaline soils and will survive exposure quite well.
Aspen	Generally found in small groups on heavy neutral soils, although not particularly common in the North York Moors.
Crab apple	Occurs on a range of generally neutral soil types from light and dry to heavy.
Downy birch	Found on a range of damp, generally acidic soils (can hybridise with silver birch).
Silver birch	Generally prefers acidic dry soils and may establish on bare mineral soils.
Blackthorn	Found on a range of soil types including wet and dry (except very acidic sites) and tolerates exposed conditions. Can form dense thickets.
Bird cherry	Prefers generally wet, neutral sites in upland districts.
Wild cherry (Gean)	Favours heavy neutral to alkaline soils.
Gorse	Prefers light dry and acidic to neutral soils and tolerates exposure well but can be invasive once established.
Elder	Favours a range of neutral soil types, especially nutrient enriched soils.
Hazel	Prefers light dry soils although it is found in a wide range of conditions from acidic to alkaline. Present in most woodland types in the area.
Holly	Widespread and to be found on soils ranging from acidic to alkaline, but generally prefers lighter soils.
Hawthorn	Most soil types (except wet) are tolerated and can stand exposure. British provenance is preferred because European stock is less thorny and has been shown to come into leaf earlier than native stock.

Sessile oak	Generally prefers lighter drier soils than pedunculate oak and grows well on neutral to acidic soils as well as exposed sites. Some dale-head or moor edge woods contain pure sessile whose integrity should be preserved if planting nearby (many oaks in the North York Moors appear to be hybrid between pedunculate and sessile oaks).
Pedunculate oak	Found on a wide range of soil types from neutral to acidic and damp to dry and will survive some exposure.
Small-leaved lime	Has a localised distribution and is rarely planted so is generally a good indicator of ancient woodland (only plant if stock of local origin is available).
Field maple	Is at the northern edge of its range in the North York Moors and is locally distributed, usually on alkaline soils in ancient woodland and old hedgerows. Stock of local origin should be preferred.
Guelder rose	Prefers wet or heavy neutral to alkaline soils.
Rowan	Likes light, dry acidic soils and is resistant to exposure.
Goat willow	Prefers wet or damp, heavy neutral soils (although tolerates drier sites than other willows) and tolerates exposure well.
Grey willow	Generally as goat willow but prefers more acidic conditions.
Crack willow	Prefers neutral or alkaline wet sites, usually near to a watercourse. It can dominate wet sites and this should be considered before planting.

Plants to Avoid

Avoid planting invasive plant species, such as sea buckthorn in coastal grassland areas or *Rhododendron ponticum*. Where conditions are suitable, the latter will out-compete most native plants allowing very little light to penetrate through its thick leaf canopy eliminating other native plant species. This in turn can lead to the consequent loss of the associated native animals.

The planting of some tree species, such as *Leylandii*, is not recommended as a form of screening or hedge outside of villages (although within villages it can also be visually intrusive if not maintained properly). Alternatives such as a beech hedge, which if trimmed, will retain its leaves throughout the winter months and offer a semi-screen are more appropriate.

Rhododendron ponticum –
invasive species



Woodland Planting

New woodland planting should link with the surrounding vegetation pattern, reflect the landform and be suitable for the underlying soil conditions.

Where timber production is not a major objective, planting trees close together and uniformly across a site will be less important. In general, to provide successful establishment, trees should be planted at 2-3 metre spacing (2,500 to 1,100 per hectare). The closer spacing will help early canopy closure and weed suppression whereas wider spacing will allow trees to develop a spreading branch structure but will take longer for woodland conditions to be created. If trees are clumped in groups of one or two well-suited species they will not out-compete each other and glades and open space between groups will help provide stand diversity. Shrubs can be used to good effect if planted in groups or at the edges of plantations to create interest.

In some cases dense screen planting might be appropriate, although this should not be seen as a remedy for bad siting and poor design of a development. Generally an area of native planting will need to be 20m wide before it can offer all year screening. Species such as Scot's pine or holly can help provide winter cover.

Generally smaller plants will establish more quickly than larger plants. Therefore for instant effect and good long term success a number of larger trees (feathered, standards/semi-mature) could be planted at key locations, with smaller plants (such as transplants, undercuts or cell grown stock) making up the bulk in the planting.

Suggested Natural Woodland Groups

The following are general suggestions for species to plant in small woodlands as variations in soils, drainage and altitude will vary with each site.

1 Neutral brown earths sites (most farmland and other sites where soils are deep and relatively well drained)

<i>Main canopy trees</i>	Pedunculate oak Silver birch Ash
<i>Other trees and shrubs</i>	Hazel Hawthorn Rowan Holly Crab apple Wild cherry

2 Free draining calcareous soils (usually derived from limestone, shale or glacial drift).

<i>Main canopy trees</i>	Ash Sessile oak
<i>Other trees and shrubs</i>	Field maple Hazel Goat willow Hawthorn Rowan Birch (<i>both species</i>) Holly Crab apple Wild cherry Aspen

3 Acidic, upland sites (generally where sandstones underlie peaty or sandy soils).

<i>Main canopy trees</i>	Sessile oak
<i>Other trees and shrubs</i>	Silver birch Rowan Holly
<i>Occasionally present</i>	Downy birch Hawthorn Ash Bird cherry

4 Wet sites or wet areas within sites (care should be taken not to plant on sites of existing conservation interest).

<i>Main canopy trees</i>	Alder Downy birch Goat willow
<i>Other trees and shrubs</i>	Grey willow Bird cherry Blackthorn Guelder rose

5 Very exposed or coastal situations

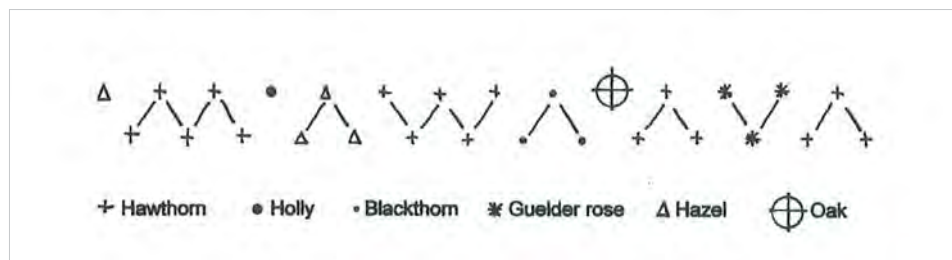
<i>Main trees and shrubs</i>	Sycamore Hawthorn Blackthorn Gorse (<i>although can be difficult to get established</i>)
<i>Other species to consider</i>	Ash Holly Hazel Rowan

Hedgerow Planting

As a boundary treatment, good hedgerows should be planted with small stock (for example 45-60cm) such as 'transplants' in two staggered rows at 30-50cm centres (6 plants per metre) (Refer to Figure 5). The closer the shrubs are planted the quicker they will establish and grow. In the North York Moors hawthorn should be the major species interspersed with two or three others planted in groups of 3-5. If holly is included it should be container grown and planted singly within the hedge.

Hedgerow trees should be planted at irregular intervals to avoid a formal design developing.

Figure 5:
Hedgerow
Planting Plan
for a Rural
Setting



New hedgerow
planting with stock
proof fencing as an
additional measure





The future growth of a tree should be considered when planting close to buildings

Planting Near Buildings and Building Near Trees

Trees, hedgerows and shrubs take moisture from the ground. In cohesive soils such as clays found within areas covered with glacial till (clays) this can cause volume changes resulting in ground movement and possible subsequent damage to buildings and structures.

The relationship between trees and buildings is inherently complex. The depth of foundations, the angle of slope of the land and the choice of plant species will all contribute to the site-specific circumstances. Where a complex situation arises, professional advice from an engineer and a specialist arboriculturist should be sought.

When planting trees close to buildings or other structures, consideration should be given to their future growth to avoid any direct damage or nuisance. Further advice is given in Section 3.

Topsoil and growing conditions

Plants need to be given enough space, both above and below ground to establish and perform their intended function. New planting requires sufficient soil to provide food and moisture to support healthy growth and planting should be on soils which have been protected during the development phase. Within farm sites or redundant industrial sites the underlying soil might be contaminated by oil, diesel fuel and/or toxic waste. Where contamination is apparent, the soils will need to be analysed for structure and content by an expert. If soils have been badly contaminated it is possible that they will need to be removed to the full planting depth and replaced with new soils.

Storage of topsoil

The re-use of topsoil from a site can be less expensive and more sustainable than importing topsoil.

Topsoil and subsoils should be carefully stripped and stockpiled in reasonably dry conditions to avoid unnecessary compaction and damage to soil structure. They should be stacked separately and strict precautions taken to prevent the mixing of subsoil and topsoil.

Topsoil heaps should not exceed 3m in height, including topsoil existing on site and should be used within 12 months. If greater time is required for stacking, special precautions and remedial procedures may be necessary.

Poor storage of topsoil can lead to a loss of the 'crumb' structure, usually as a result of compaction of wet topsoil when put into store, loss of aeration, waterlogging and anaerobic decay of organic matter.

Recommended topsoil depths for planting are as follows:

- 150mm for grass areas after firming
- 400mm for shrubs and small trees after firming

2.6.2 Hard Landscaping

Hard landscaping encompasses all hard surfaces to be retained or formed within the site including paved areas, car parking surfaces, driveways, steps, boundary walls, fences, contouring, remodeling of the ground and pathways.

The visual character and quality of a place is significantly affected by the nature of the surface materials, their longevity and the characteristics they develop with age. Natural materials such as stone, gravel and brick often last longer, weather better and suit localities more than artificial materials. Natural materials can be recycled and are more likely to be reused.

As a general rule, simple designs using a limited range of good quality and robust materials that suit the character of the locality and reflect local styles and traditions look and work better.

Where it is practical to do so, the re-use or retention of existing original features such as walls, fences and hedges – all of which contribute to local rural landscape character, is encouraged.

Hard landscape design should also take full account of the security and safety of all users and in particular, those of the disabled.

Where possible, all development sites should minimise areas of hard surfacing to reduce the rate of water run-off and the consequent need for drainage systems.

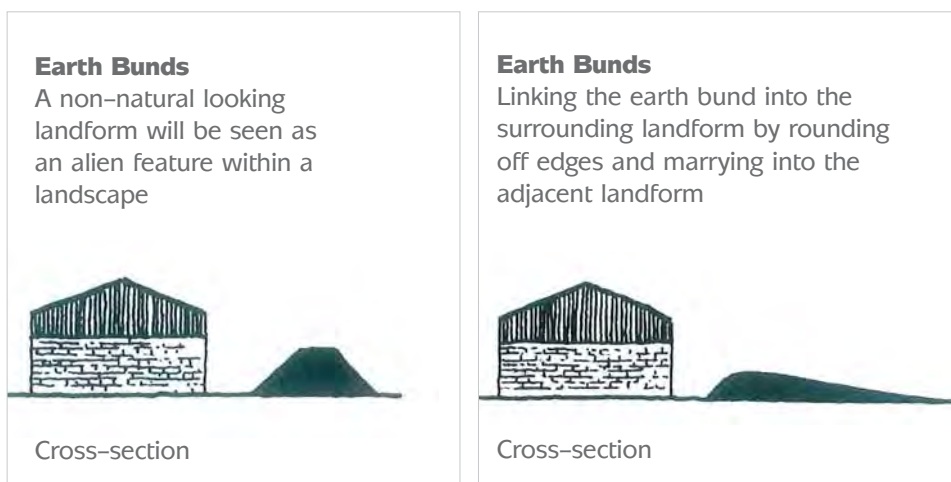
Landform

Landform features give a site its character. Attention should therefore be paid to the proposed scale of a development and the extent of remodelling of the existing levels that might be required.

A change in the landform may require the use of high retaining walls which have the potential to be visually intrusive in the wider landscape. Similarly, remodelling of the ground might produce excess fill, which will then need to be deposited elsewhere. It is important to consider issues like this at an early stage to address how excess can be dealt with.

If required, earth mounds (which historically have been used for screening) should 'marry' into the surrounding landform and avoid appearing as an alien or discordant feature in themselves (see Figure 6).

Figure 6:
Earth Bunds



Boundaries

Boundary features such as walls, fences and hedges can significantly contribute to the character of the wider landscape and should, where practical to do so, be retained or reinstated.

At a local level, poorly designed and sited boundaries can potentially detract from the overall qualities of a development, so it is important that the same time and effort is applied to the choice of boundary as to the design of the remainder of the scheme.

Boundaries should be sensitively designed to help the new development fit into the surrounding landscape. Their function must also be considered and can range from delineating the extent of land ownership, creating shelter and defining spaces to providing security and privacy. Boundaries should be sufficiently high to screen storage, parking areas, clutter, domestic sheds and other garden paraphernalia.

Within villages and towns, a lack of coordination and too many styles can fragment the unity of the streetscape. Conversely, too little variety and long lengths of unrelieved walling or fencing can lead to monotony.

Stone Walls

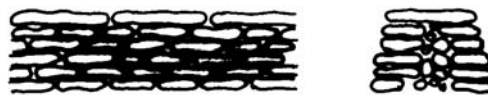
The availability of suitable building stone has led to dry stone boundary walls being a locally distinctive feature both within the landscape and the streetscape of many of the settlements within the Park. They often make a significant contribution to the unique character of the environment and can also have important historic significance.

Stone wall designs vary in style and intricacy, but generally include the following:

'FLAT'

The simplest type of coping is a flat top, which uses through-stones placed side by side along the entire length of the top of the wall.

Flat top coping is found within villages, where looks are important and disturbance minimal.



'TILTED'

The top stones vary at different angles, often responding to changes in slope.

Tilted coping is most commonly used as a field boundary and on walls associated with farmsteads.

