APPENDIX 8.4

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

Countryside Character

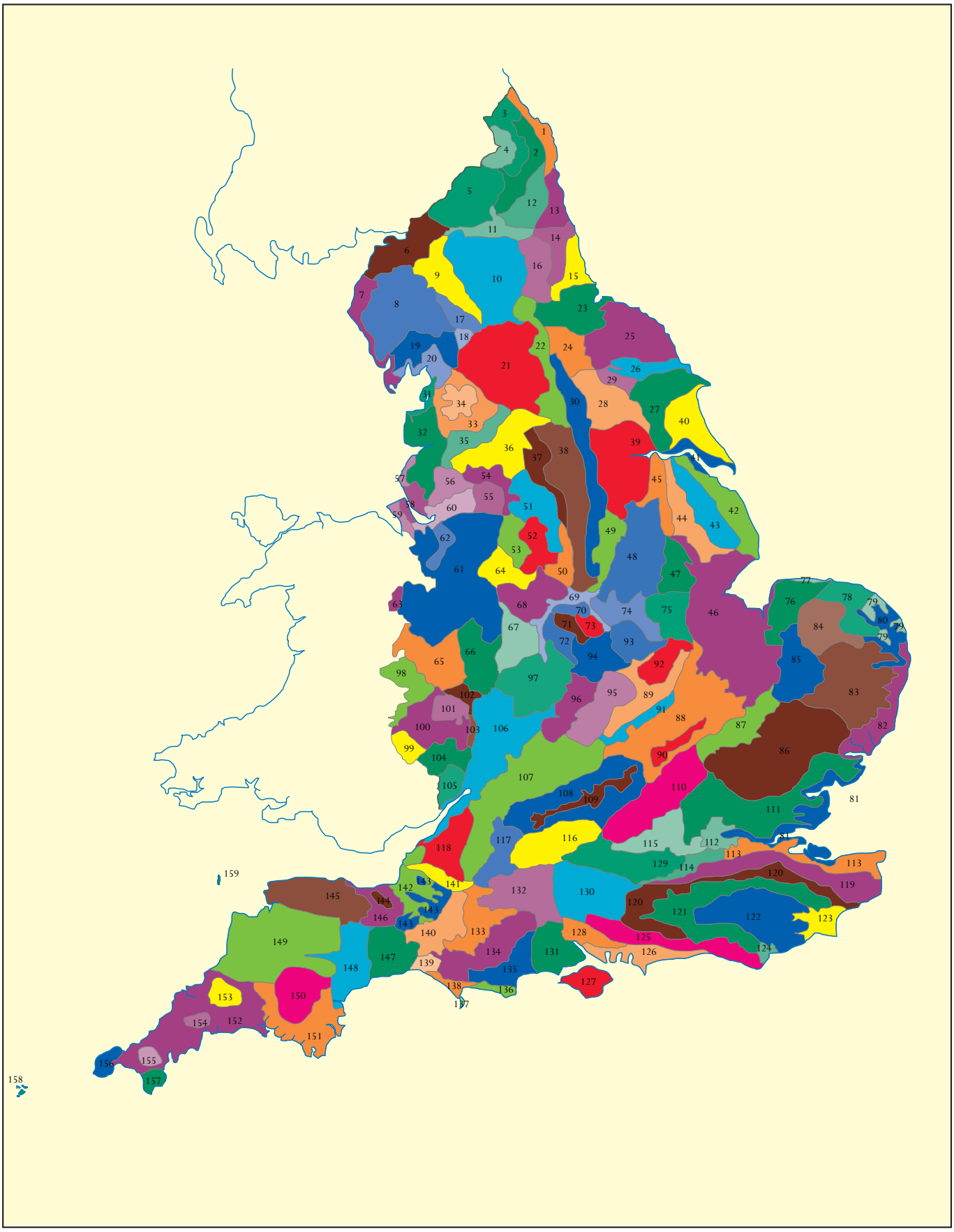
Volume 1: North East

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

COUNTRYSIDE COMMISSION

The Character of England:

landscape, wildlife & natural features



National Character Area profile:

25. North York Moors and Cleveland Hills

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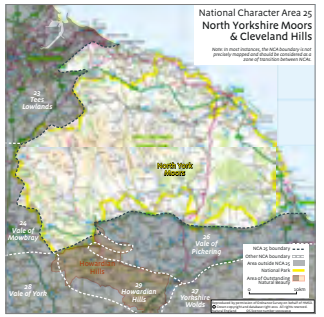
Summary

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 Kettleness 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, physic-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 landslip; 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'

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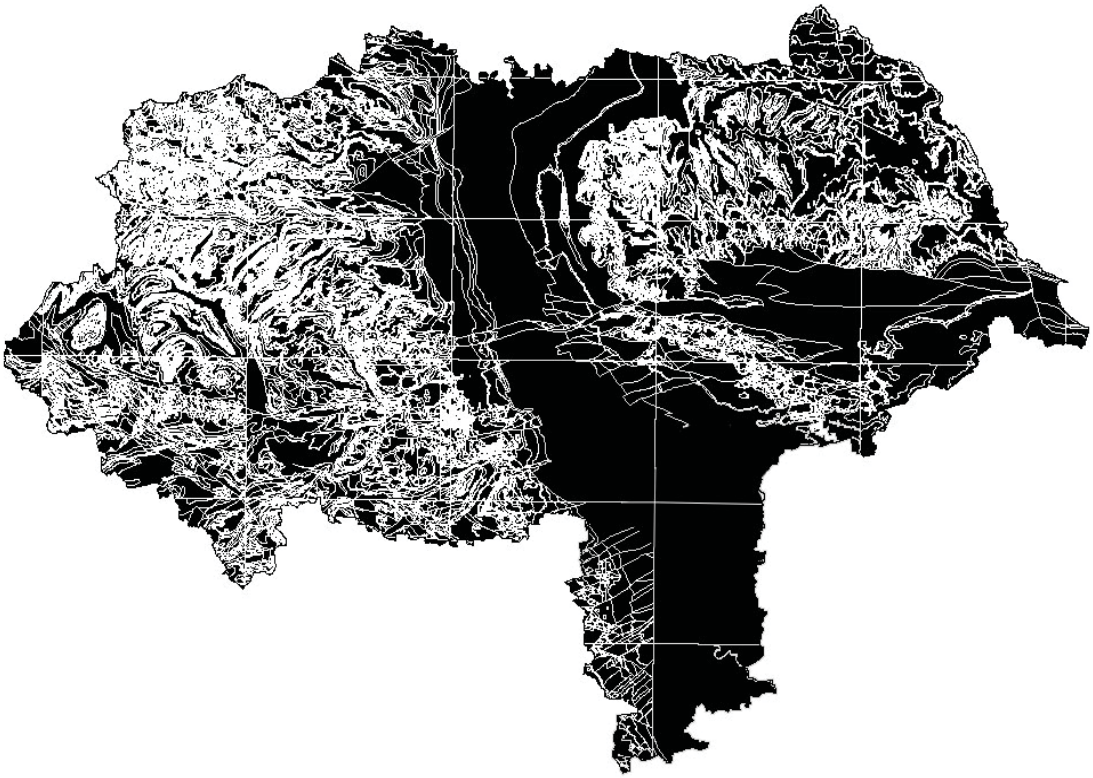
North Yorkshire County Council

North Yorkshire and York Landscape Characterisation Project



May 2011

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)

Richmondshire
Hambleton
Scarborough
Ryedale
Craven
Harrogate
Selby

KEY

Primary Landscape Units and Landscape Character Types

1 Urban Landscapes

Sandstone Landscapes

2 Sandstone Moors
3 Sandstone Moors Foothills

Limestone Landscapes

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

Upland Fringe and Valley Landscapes

9 Farmed Dale
10 Narrow Upland Dale
11 Broad Valleys
12 Wooded Hills and Valleys
13 Moors Fringe
14 Rolling Upland Farmland

Coastal Landscapes

15 Rugged Cliffs, Coastal Valleys and Bays
16 Soft Coastal Cliffs and Bays
17 Chalk Headland

Chalk Landscapes

18 Chalk Wolds
19 Chalk Foothills
20 Broad Chalk Valley
21 Narrow Chalk Valley

Farmed Lowland and Valley Landscapes

22 Open, Carr/Vale Farmland
23 Levels Farmland
24 River Floodplain
25 Settled Vale Farmland
26 Enclosed Vale Farmland
27 Vale Farmland with Dispersed Settlements
28 Vale Farmland with Plantation Woodland and Heathland
29 Undulating Lowland Farmland
30 Sand and Gravel Vale Fringe
31 Settled, Industrial Valleys
32 Drumlin Valleys

Gritstone Landscapes

33 Gritstone High Plateau
34 Gritstone High Moors and Fells
35 Gritstone Low Moors and Fells
36 Gritstone Valley

Siltstone and Sandstone Landscapes

37 Siltstone and Sandstone High Moors and Fells
38 Siltstone and Sandstone Low Moors and Fells
39 Siltstone and Sandstone Valley

Study Area

District Boundaries

0 5 10 km

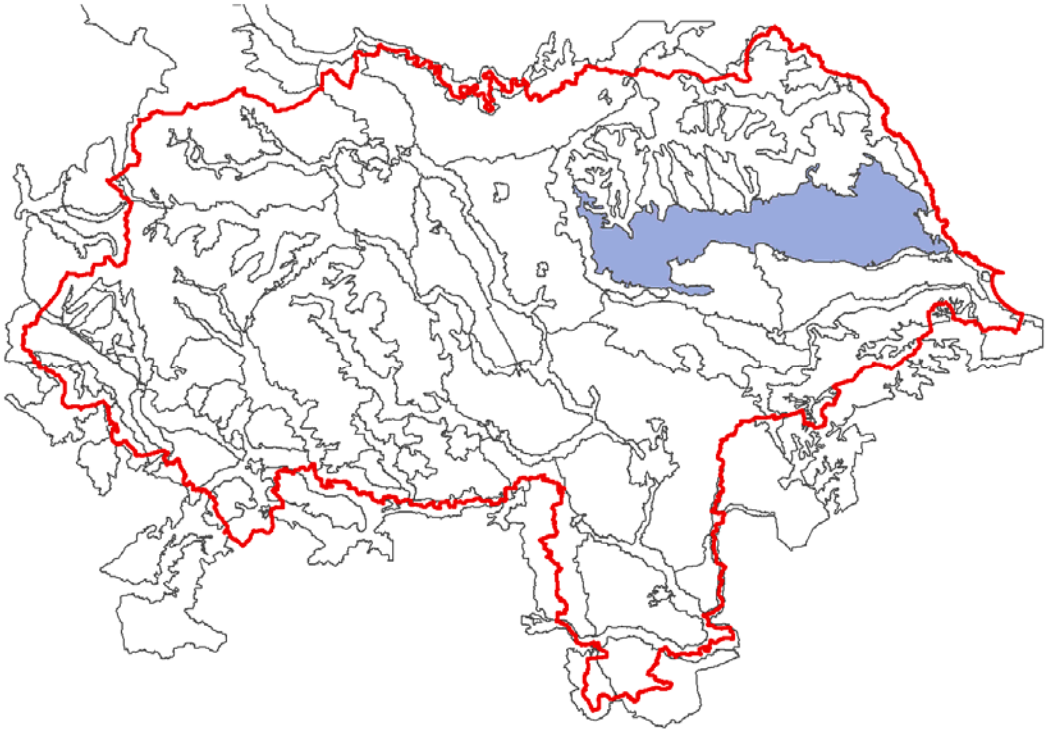
CHRIS BLANDFORD ASSOCIATES
environment landscape planning

February 2011

NORTH YORKSHIRE AND YORK LANDSCAPE CHARACTERISATION PROJECT

FIGURE 3.1
North Yorkshire and York Landscape Classification

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	• 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	• 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	• 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	• 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	• 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 thelandscape • 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	• Villages are generally of ancient origin, place names show that many have Saxon origins, for example Appleton, Middleton and Sproxton • Helmsley is a planned 12th century town • Visible features include castles, for example Helmsley, Pickering and

	West Ayton • 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

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, Ebberston 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

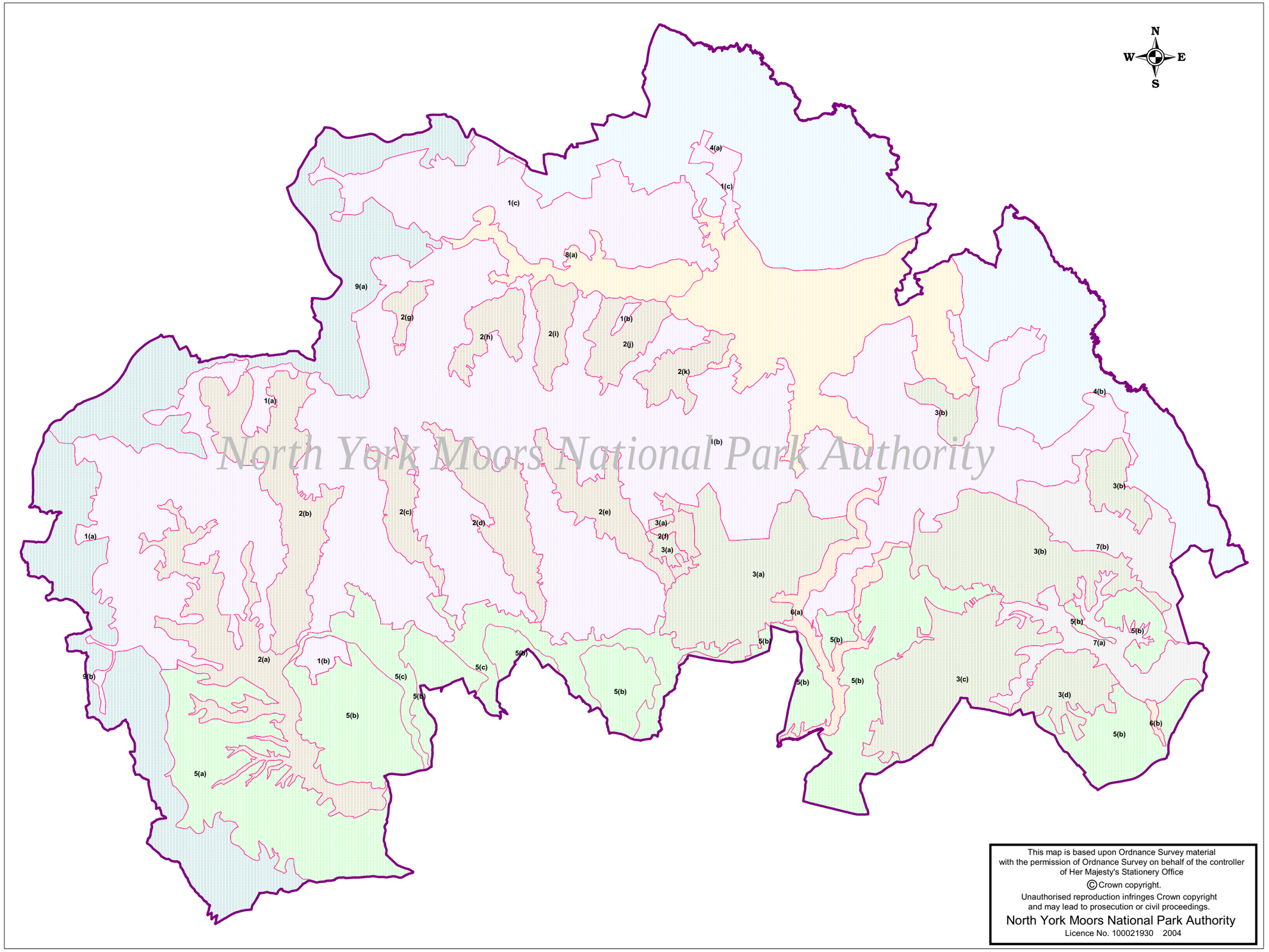
- Ryedale Landscape Character Assessment (1999)
- North York Moors National Park Landscape Character Assessment (2003).
  http://www.northyorkmoors.org.uk/content.php?nID=372
- Hambleton & Howardian Hills Landscape Character Assessment (2007)

White Young Green

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) Bilsdale
2(c) Bransdale
2(d) Farndale
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) Commondale - Upper Eskdale
8(b) Lower Esk Valley

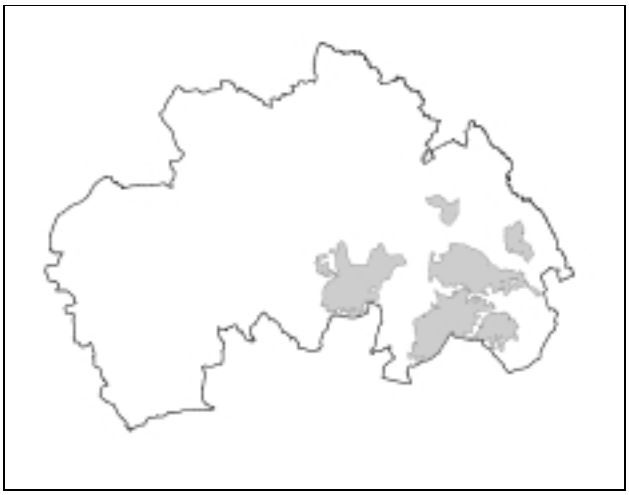
Upland Fringe

9(a) Cleveland Foothills
9(b) Western Fringe

Scale 1:190,000

NORTH YORK MOORS NATIONAL PARK
LANDSCAPE CHARACTER ASSESSMENT

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 and 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

Table 3A: Negative 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

Table 3B: Positive Pressures and Opportunities		
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 Ebberston. 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.

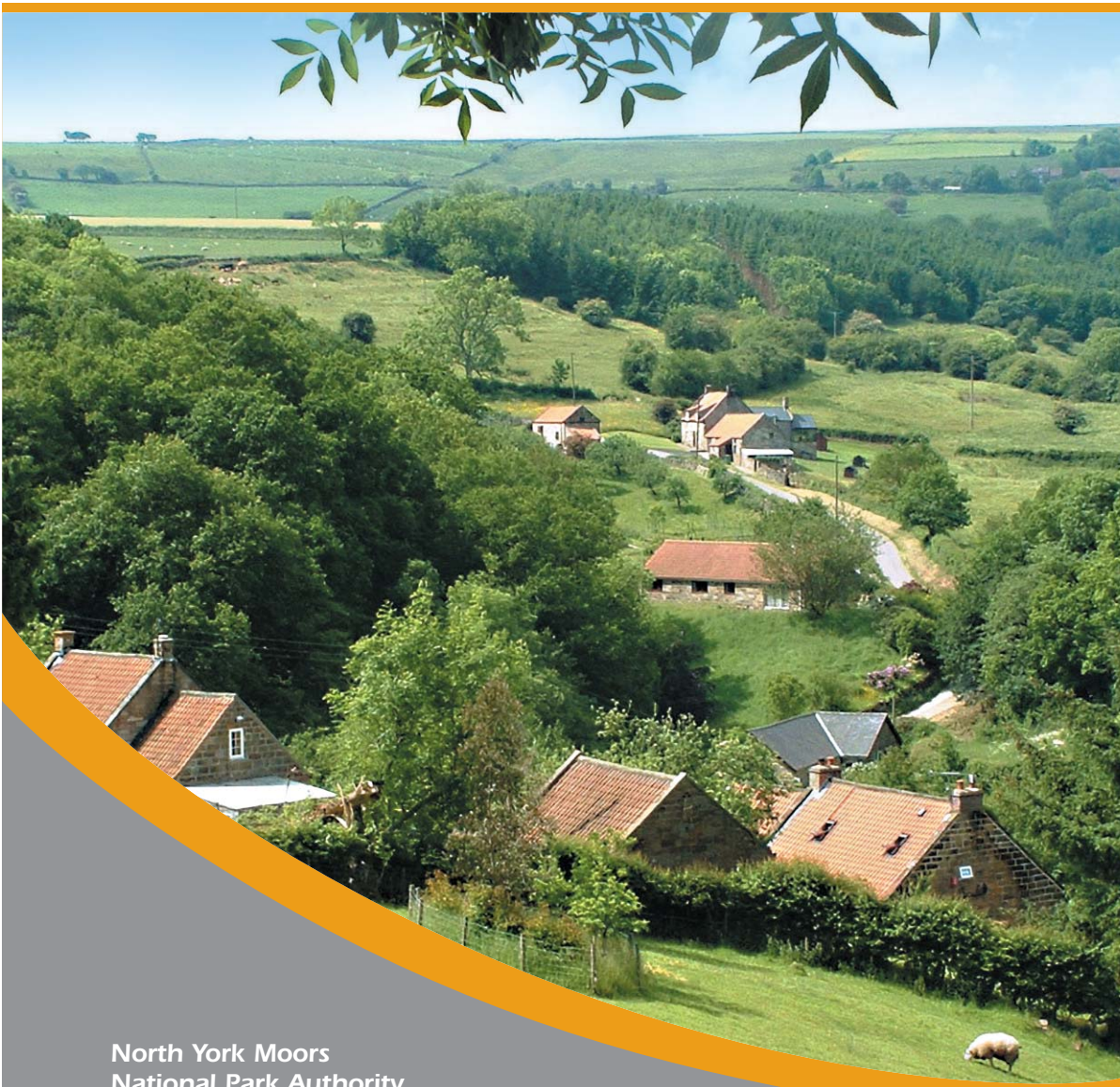
- The forest of pine and other conifers planted in regular blocks in a grid pattern includes areas of recently felled and newly planted areas. An area of mixed plantation is present together with sizable blocks and linear belts of deciduous woodland (including areas of mainly replanted ancient woodland) 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.



North York Moors
National Park Authority
Local Development Framework

Design Guide

Part 3: Trees and Landscape

Supplementary Planning Document

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.**

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

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.

Locally collected acorns

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.

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 develops[7].

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.

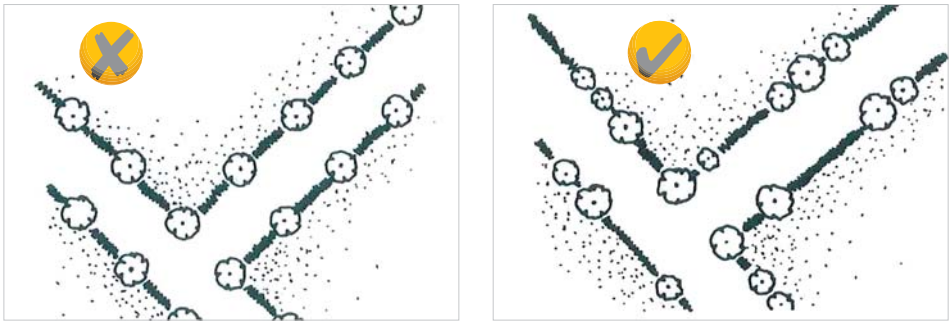


Figure 4:
Planting Styles

Right: Regimented and formal style of tree planting along boundaries

Far Right: Irregular spacing for tree planting along boundaries

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

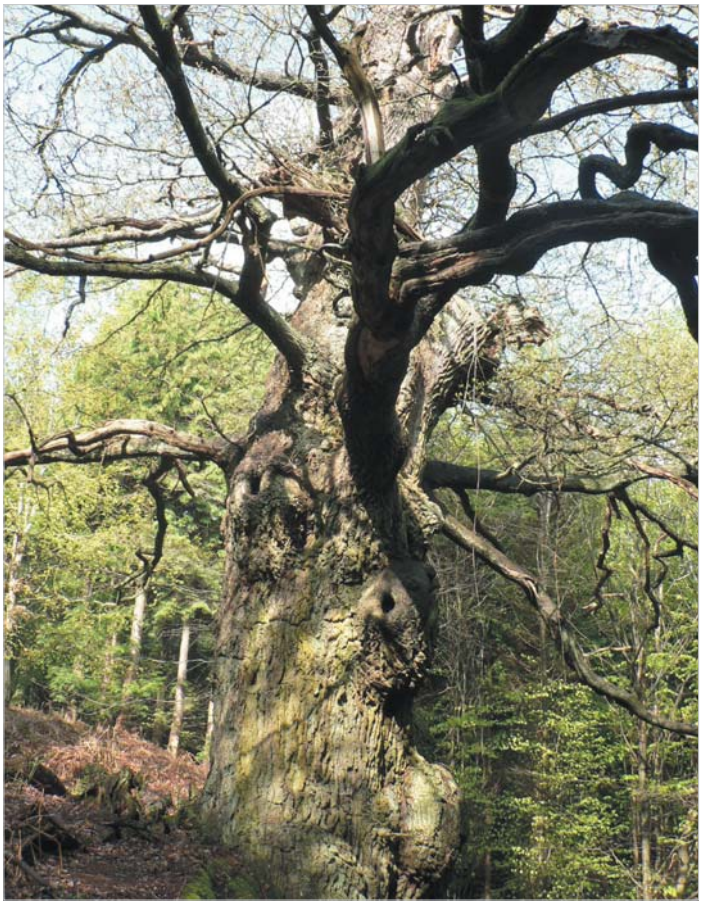
Veteran and Large Trees

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.

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



'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)**

Main canopy trees	Pedulculate oak Silver birch Ash
Other trees and shrubs	Hazel Hawthorn Rowan Holly Crab apple Wild cherry

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

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

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

Main canopy trees	Sessile oak
Other trees and shrubs	Silver birch Rowan Holly
Occasionally present	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).

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

5 Very exposed or coastal situations

Main trees and shrubs	Sycamore Hawthorn Blackthorn Gorse *(although can be difficult to get established)*
Other species to consider	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.

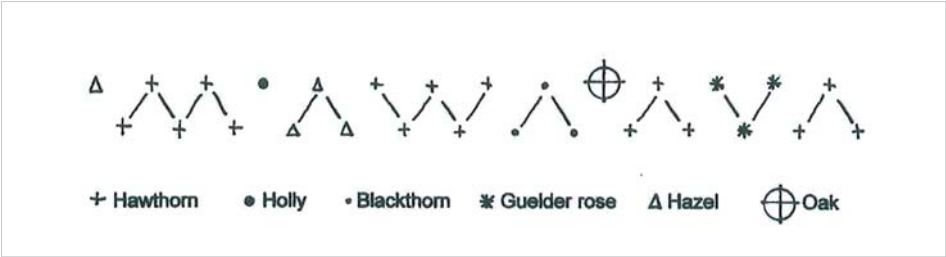


Figure 5: Hedgerow Planting Plan for a Rural Setting

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

Earth Bunds
A non–natural looking landform will be seen as an alien feature within a landscape

Cross–section

Earth Bunds
Linking the earth bund into the surrounding landform by rounding off edges and marrying into the adjacent landform

Cross–section

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.

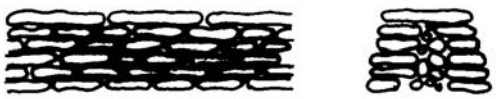
Stone Walls

The availability of suitable building stone has lead 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.