National Character Area profile:

93: High Leicestershire

Supporting documents

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Introduction

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

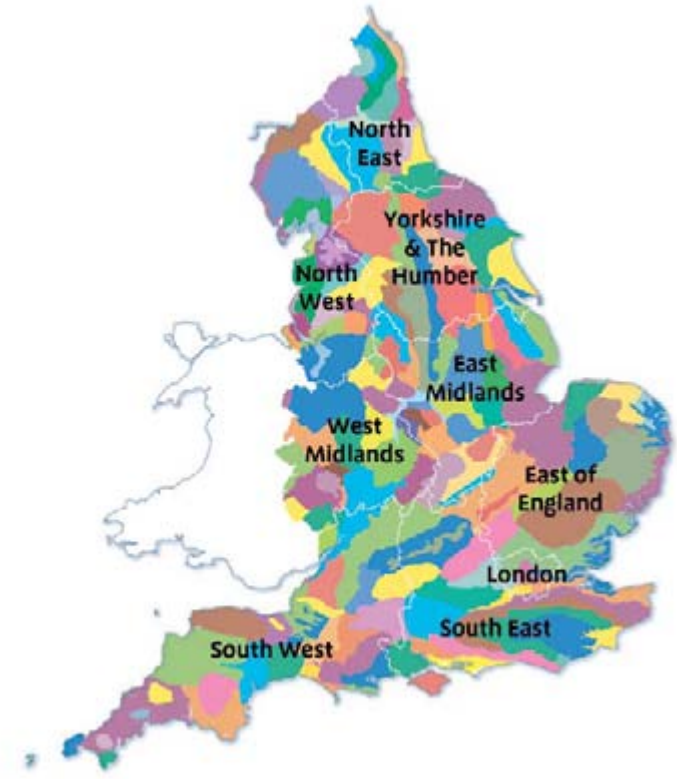
NCA profiles are guidance documents which can help communities to inform their decision-making about the places that they live in and care for. The information they contain will support the planning of conservation initiatives at a landscape scale, inform the delivery of Nature Improvement Areas and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

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

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

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

National Character Areas map



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

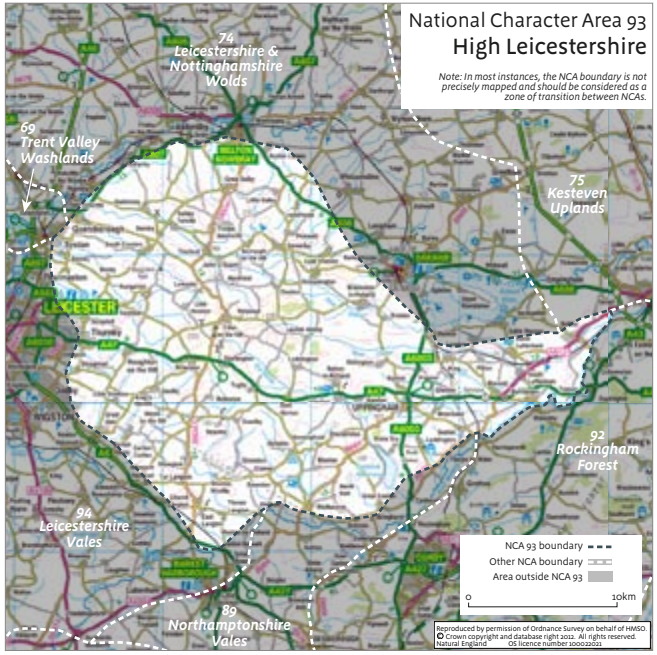
Summary

High Leicestershire National Character Area (NCA) rises out of the clay of the Leicestershire and Northamptonshire Vales on the western and southern sides and above the lowland plains of the Soar, Wreake and Welland valleys and the Vale of Belvoir. To the north and east the area abuts the Leicestershire and Nottinghamshire Wolds NCA, rising steeply out of the Wreake Valley, but with a more gradual transition towards the Vale of Catmose and Rutland Water towards the east over limestone lowlands. This landscape of broad, rolling ridges and secluded valleys has a quiet, remote and rural character with small villages and scattered farms. The predominantly rural character of the area comprises undulating fields with a mix of pasture on the higher, sloping land and arable farming on the lower, flatter land. Fields are divided by well-established hedgerows, with occasional mature hedgerow trees. A network of narrow country lanes, tracks and footpaths connect across the landscape interspersed by small thickets, copses and woodlands. Extensive views from the higher ground reveal a pattern of small attractive villages, hamlets and farm buildings set within an agricultural landscape, with traditional churches acting as distinctive features of the settlements.

Only a very small percentage of the NCA is classified as 'urban': the eastern edge of Leicester (including the suburbs of Thurmaston, Syston and Queniborough) and Uppingham, the only market town in the area, located close to the A47 which cuts horizontally across the middle of the NCA. The A6003 and B6047 provide the major north–south routes.

The area is important for agriculture, with a mix of arable farming in the lowlands and pasture on higher ground. The NCA also hosts important species such as otter, barn owl, yellow wagtail, skylark, lapwing, grey partridge and tree sparrow. The area contains less than a hectare of Rutland Water which has Special Protection Area and Ramsar designation. The reservoir also provides a recreational and biodiversity resource including habitat for birds such as the osprey. There is also an important water resource at Eyebrook Reservoir which has seen a marked increase in its recreational use, especially cycling. Past industries relating to geodiversity in the NCA include quarrying for iron ore at various localities; current industries include quarrying for sand and gravel near the Wreake Valley and for cement at Ketton. Local stones have been used extensively for building in the NCA, mainly Lincolnshire Limestone and the ironstone of the Marlstone Rock Formation.

The historic character of this area is also very important, in particular its ancient woodlands, deserted villages, veteran trees, historic parklands and areas of



Click map to enlarge; click again to reduce.

archaeological interest, including numerous sites of remnant ridge and furrow and the relatively complete large areas of Midland open field systems which are of national significance. There is a strong historic and cultural connection to the keeping and riding of horses and field sports. The long history of countryside management for game has done much to preserve the character of the area.

The NCA is facing significant challenges concerning the protection of its quiet, remote and rural character, as the city of Leicester is developed. At the same time, this provides potential to encourage urban communities to enjoy the quiet recreational opportunities available in the NCA.

Traditional churches act as distinctive features of the settlements.

Statements of Environmental Opportunity

SEO 1: Protect and appropriately manage the strong visual and historic character of this varied and sparsely settled rural landscape of broad rolling ridges and wide secluded valleys – maintaining the settlement pattern and features of High Leicestershire, in particular its areas and features of archaeological and heritage interest, including the field patterns, ridge and furrow, ancient woodlands, country houses and village churches – to enhance sense of place and history so that the area can be enjoyed by all for its tranquillity.

SEO 2: Sustainably manage the moderately fertile soils, arable crops, livestock, grassland, woodlands, coverts and spinneys that contribute to sense of place while maintaining viable food production, enhancing biodiversity networks and encouraging farmland birds and mammals and rarer arable plants.

SEO 3: Manage and enhance the recreational assets, such as the rights of way network, country parks such as Burrough Hill and waterbodies such as the Eyebrook Reservoir, and improve access to these assets and the open countryside from the city of Leicester and surrounding rural communities, to maintain a sense of place, enhance soil and water quality and have a beneficial effect on people's health and wellbeing.

SEO 4: Manage, conserve and enhance the woodlands, hedgerows, streams, rivers and field ponds – including the rivers Chater, Gwash and Eye Brook, their tributaries and the Eyebrook Reservoir – to enhance biodiversity and soil quality and improve water quality, flow and availability.

In the future, it will continue to be important to work with farmers and landowners to maintain the hedgerows in good condition in order to increase biodiversity connectivity and to ensure good soil and water quality.

Description

Physical and functional links to other National Character Areas

High Leicestershire National Character Area (NCA) rises out of the clay of the Leicestershire Vales and Northamptonshire Vales NCAs on its western and southern sides and above the lowland plains of the Soar, Wreake and Welland valleys and the Vale of Belvoir. To the north and east the area abuts the Leicestershire and Nottinghamshire Wolds NCA, rising steeply out of the Wreake Valley, but with a more gradual transition towards the Vale of Catmose and Rutland Water towards the east over limestone lowlands.

There is considerable variety in landform across the NCA. The elevated central plateau around Billesdon and Whatborough is the highest land. From here, streams radiate southwards, eastwards and westwards to the Sence and Welland, carving out narrow valleys and leaving broad ridgetops.

Panoramic views across open countryside can be found from high land, particularly at Tilton on the Hill and from the iron-age hill fort at Burrough Hill. The wide Wreake Valley separates the elevated ground from further high points at Burrough Hill. In this northern part, steep slopes capped by superficial deposits drop down towards Queniborough Brook and the Wreake Valley.

The main drainage pattern of the area is for water to flow south-eastwards towards the River Welland, northwards towards the River Wreake and eastwards towards the River Soar. The reservoir Rutland Water (a Special Protection Area and Ramsar site) is predominantly located in the adjoining Leicestershire and Nottinghamshire Wolds NCA to the east but shares ecological connectivity with this NCA.

Panoramic views across open countryside can be found from high land, particularly from the iron-age hill fort at Burrough Hill.

The Eye Brook and the Eyebrook Reservoir, which supplies water to Corby, are important sites for nature conservation, and the equally important Gwash Valley and River Chater are fed by the myriad freshwater systems concentrated here and feeding into surrounding NCAs. The Southern Lincolnshire Limestone aquifer, a small part of which is located in the far east of the area, links this NCA with those further to the east, providing an important source of public water supply.

The Macmillan Way long-distance trail runs north-west to south-east across the NCA from Boston across the Lincolnshire Fens via Stamford, and eventually to Abbotsbury on the Dorset coast. The area also includes part of the 160-kilometre Leicestershire Round trail which links several NCAs, including Charnwood and Leicestershire Vales.

Key characteristics

- A varied landform of geology and soils, predominantly a succession of Lias Group mudstones, largely cloaked by glacial tills and dissected to form a rolling landscape of ridges and valleys.
- High central plateau radiating streams south, east and west along wide and narrow valleys. There are also many associated waterbodies including rivers, reservoirs and field ponds.
- Mixed farming regime, with arable mainly on the ridgetops and the wide valley bottoms. Intact and well-managed hedgerow networks.
- Sense of many trees being present in the landscape arising from surviving concentrations of ancient woodland, abundant wide hedgerows, hedgerow trees, copses, spinneys and small woodlands, the last often sited on ridges.
- Ancient oak and ash woodlands and unimproved grassland provide important habitats for key species such as otter, barn owl, yellow wagtail, skylark, lapwing, grey partridge and tree sparrow.
- Sparse settlement of small villages with little modern development. Ironstone and limestone churches and vernacular buildings but also abundant red brick with some survival of timber frame and thatch.
- A rich historic landscape hosting iron-age hill forts, frequent and very prominent ridge and furrow, ancient woodland and veteran trees, fine landscape parkland and attractive country houses often associated with evidence of many deserted or shrunken medieval settlements.
- Network of quiet green lanes linking rural communities and a remote, sometimes empty character.

Mixed farmland of the Quenby Estate and typical of many parts of High Leicestershire.

High Leicestershire today

High Leicestershire's rolling hills and broad ridges accommodate the majority of its agricultural arable land. This elevated land contrasts with the varied lowland valleys that range from small, remote and enclosed to broad and quite intensively farmed, as along the A47 corridor. The gentler scarp slopes to the east have clay soils which can be heavy and unmanageable but, as a result, they host significant ancient woodlands. The southern edge is a more characteristically open landscape with very limited woodland cover.

The NCA is underlain by a series of geological formations: the ironstone-rich Jurassic Marlstone Rock Formation caps several hill tops in the central part of the area, with the Lincolnshire Limestone forming high ground in the east. A thick mantle of till is also present in the west of the NCA. Till has been eroded in some places and the more easily cultivated glacial sands and gravels are the favoured sites for small historic villages and scattered farms. Elsewhere, and on the Lias clays, the soils can be heavy and intractable.

There are three main rivers in the NCA – the Eye Brook, the River Chater and the River Gwash. There is also a small section at the north-eastern edge of the NCA which forms part of the catchment sensitive farming area for the River Eye Site of Special Scientific Interest (SSSI). The Eyebrook Reservoir was formed by the damming of the Eye Brook (a tributary of the River Welland). The reservoir was built in the 1930s for local industrial supply and now supplies potable water to Corby. During the 1940s the Eyebrook Reservoir was used as a practice site for the Dambusters raids. Rutland Water reservoir, one hectare of which sits just inside the north-eastern boundary of the NCA, is the largest reservoir in lowland England and is used as a strategic resource for water demand within the Anglian Water region. It is designated as internationally important for nature conservation, for its wintering populations of gadwall and shoveler, and it is also a major stronghold for the osprey. It has high recreational value, being an important regional visitor destination.

Woodland management at Launde Big Wood. Woodland tends to occur on the heaviest soils to the east of the NCA.

Arable agriculture of wheat, beans and oilseed rape predominates with pasture supplying lamb and beef and associated foods. Field sports have a long tradition within this landscape. Many woodlands, coverts and spinneys were

created and have been maintained for field sports such as the Quorn Hunt and to supply game.

Although relatively limited in woodland cover as a whole, the NCA has a well-wooded character derived mainly from wide hedgerows, hedgerow trees, copses, spinneys and small ridgetop woodlands which have benefited from good management associated with a well-established culture of keeping and riding horses and hunting in the area. The wooded character is enhanced by overgrown hedges and small fields, as well as many parks. The cluster of oak/ash woodlands on the undulating land around the Eye Brook and River Chater – for example, at Owston Woods and Launde Big Wood – are generally ancient and represent one of the highest concentrations of ancient woodland in the Midlands. They mark the remnants of the medieval Royal hunting area of Leighfield Forest, which is an SSSI. They are of significant regional and national nature conservation interest.

The unimproved grasslands are generally small and scattered.There are however more contiguous unimproved meadows such as these near Braunston-in-Rutland which are important for nature conservation.

The unimproved grasslands are generally small and scattered, for example at Ketton, Seaton, Launde and Burrough. There are, however, more contiguous unimproved meadows near Hungarton and Braunston-in-Rutland which are important for nature conservation. Other important habitats include woodlands and hedges, freshwater systems, arable and grass margins particularly along streams. Notable species include otter on the River Gwash and barn owl, yellow wagtail, skylark, lapwing, grey partridge and tree sparrow. While considerably different in scale, field ponds and the Eyebrook Reservoir, as locally distinctive landscape features, are also important for nature conservation.

Characteristic small historic villages, usually located on high ground, such as Kings Norton and Houghton on the Hill, comprise buildings clustered around prominent spired churches of limestone or ironstone, which can vary from deep orange through rust brown to a lighter golden brown. Sometimes limestone and ironstone are found banded in the same building, for decorative purposes – this is known as polychrome. In the western and central parts of the area, most of the older village buildings are of a subdued red brick with slate or tile roofs or occasional thatch but, towards the east, ironstone becomes

prominent for all buildings, so that the cores of settlements such as Uppingham are dominated by its tawny colours. These buildings act as evidence of extensive rebuilding in the 18th and 19th centuries following an earlier phase of rebuilding in the late 16th and early 17th centuries.

Areas of early enclosure have small and more irregular fields. Elsewhere there is extensive evidence, often in the form of sinuous boundaries to fields, of 18th-century and earlier piecemeal enclosure. The more strongly rectilinear pattern of later enclosure is found at the edges of the NCA, in the wider valley bottoms and in a band of higher ground towards the centre where mixed farming with open arable land is concentrated. Around villages there are sometimes smaller, linear fields indicative of ancient plots. Frequent red brick farmsteads, dating from the 18th and 19th centuries, tend to be isolated along narrow lanes and trackways.

An aspect of history that is likely to be particularly evident to the general public today is the well-preserved (and species-rich) ramparts of the Burrough Hill iron-age hill fort. The hill fort, which is a Scheduled Ancient Monument, is located on one of the highest points (210 m) in Leicestershire, in Burrough Hill Country Park. This strategic site continues to provide impressive views across the rural open countryside, and is the only area of Countryside and Rights of Way Act open access land in the NCA. Fine country houses from the 17th and 18th centuries, such as Quenby Hall and Noseley Hall, set within parkland on sheltered sites (often associated with a nearby deserted medieval settlement and deer parks), serve as further visible links to the past.

Disused railway lines are an occassional feature of the NCA, acting as a species refuge from a time when unimproved habitats were previously much more extensive. Surviving viaducts are also important features locally in High Leicestershire, for example at Marefield and Seaton. There are many minor remote and quiet green lanes and gated roads – some of which make up the Leicestershire Round long-distance trail – that wind down into sheltered valleys, connecting farmsteads and hamlets, but overall this area has few major settlements or roads and relatively low development pressure. This has maintained the historic, tranquil, remote and often empty rural character of this landscape.

Notable species within this NCA include the otter. Here a local farmer builds an otter holt next to the River Chater.

The landscape through time

The oldest rocks that underlie the NCA occur in the north-west corner. They are of Triassic age (around 215–201 million years old) and comprise the red mudstones of Branscombe Mudstone Formation, Mercia Mudstone Group. They were deposited in a desert and formed mainly of windblown dust, with thin beds deposited by heavy rainstorms that resulted in flash floods. At the end of the Triassic, the Blue Anchor Formation, a green mudstone, was the precursor to a major marine incursion which deposited the Penarth Group. This comprises mainly mudstones with some thin sandstones. The succeeding Lias Group mudstones of Lower Jurassic age (201–174 million years old) were deposited in a warm, tropical sea which covered much of England at the time. The earliest rocks of the Blue Lias Formation include common interbeds of limestone and were deposited in shallower seas. The succeeding Charmouth Mudstone Formation and later Whitby Mudstone Formation are mainly mudstones deposited in deeper water. In between, a period of shallowing seas saw deposition of siltstones and sandstones of the Dyrham Formation and ferruginous, ooidal limestones and ironstones of the Marlstone Rock Formation. The latter has been worked in a number of areas both for iron ore and as a building stone. The attractive orange-brown stone can be seen in many of the villages in the central part of the NCA.

The eastern part of the area is covered by rocks of Middle Jurassic age (around 174–169 million years old). They make up the Northampton Sand Formation, another bed of ironstone. Like Marlstone Rock Formation, this has been worked for building stone and iron ore. This is succeeded by the Grantham Formation, a thin sequence of sandstones, siltstones and mudstones with rare thin coals. The youngest rocks in the area are shallow marine limestones of the Lincolnshire Limestone Formation. These have been extensively worked as a building stone and many buildings in this part of the area are built from this local stone. The large Castle Cement Quarry at Ketton, in the far east of the NCA, provides one of the largest and most extensive continuous exposures of the Middle Jurassic rocks of the area.

An example of Middle Jurassic limestones found at Ketton in the far east of the area.

The oldest Quaternary deposits occur in the extreme north of the area, close to the River Wreake. Here, the pre-Anglian Bytham River deposited the Bytham Sand and Gravel Formation. This is currently quarried at Brooksby. Much of the land, particularly the eastern part, is covered by thick glacial deposits, all of Anglian age (about 440,000 years old). They comprise three types of till, with some glacio-fluvial sand and gravel and minor glacio-lacustrine clays. These are the Thrussington Till, a red-brown pebbly clay derived from the north-west, and the Bozeat and Oadby tills derived from the north and north-east. These two tills are both grey and distinctive: the Oadby Till is rich in chalk and flints from the Chalk whereas the Bozeat Till does not contain these erratics, showing only debris derived from the Jurassic.

River terrace deposits associated with the rivers Soar and Wreake occur in the extreme north-west of the NCA. More recent deposits of alluvium occur in the river valleys, with head and colluviums occurring on slopes and in valley bottoms. Head is particularly prevalent in the broad valley extending north-east from Little Dalby. Steep slopes capped by ironstone have resulted in unstable ground and landslides in some areas. The erosion of the Jurassic rocks has given rise to a ridge-and-valley landscape, where clays floor the valley and harder limestones and ironstones form the tops of hills and valley sides.

While there is evidence of prehistoric activity from at least the Neolithic period and there was an iron-age hill fort at Burrough which is still visible in the landscape today, the extent and pattern of prehistoric settlement is largely unknown. Roman activity appears to have been slight except at the edges along the Soar Valley and at Hallaton which is in the south of the NCA. The oldest Roman coin in Britain was found here, in 2000, along with a Roman helmet. It is likely that many parts of the NCA had been occupied and settled for centuries, if not millennia, before the Anglo-Saxons took over the area.

Their occupation is shown in the Saxon cemeteries at sites such as Ingarsby and Billesdon Coplow and evidence from place names, with many 'tons' in the south of the NCA. Evidence of later Scandinavian settlers can also be found, particularly in the north which has a number of 'bys' and 'thorps'.

By 1086 the area was quite densely populated, certainly much more so than Leicestershire west of the Soar Valley, and was already one of the heartlands of village-based settlement in England. The frequency of settlement then was greater than it is today. In the period up to the 14th century, there was an expansion of population and cultivated land affording increased prosperity which is reflected in the Early English churches, particularly in the east of the NCA where good limestones and ironstones were available.

Over the years, High Leicestershire was substantially cleared of large woodland. However, in the east in the Leighfield Forest – notably at Launde, Knossington and Cold Overton – the land was retained as forest when the rest of Leicestershire was exempted in 1235. The villages were surrounded by open fields, the ridge and furrow of which can still be seen in many areas. From about 1350, a steady decline set in, with abandonment and shrinkage of settlement down to recent times and migration to employment centres in west Leicestershire in the post-medieval period. The open fields were enclosed piecemeal in many areas before the Parliamentary enclosures of the 18th century. The more recent enclosures, with their more strongly rectilinear pattern, are characteristic of the southern and northern parts of the area and a band extending from Stoughton to Skeffington.

In the early modern period, the land market allowed the development of substantial estates. These were the basis of the grand country houses of the 17th and 18th centuries, of which Quenby Hall is the finest example. Landscape

parks were laid out at Lowesby, Launde, Baggrave and elsewhere. Today, the country house in a parkland setting with a deserted settlement within, or close to, the park is still a characteristic feature.

Apart from agricultural change in the form of field expansion and hedgerow removal, the growth and decline of railways (disused railway lines are an occasional feature of the NCA with localised plant and invertebrate interest), the construction of prominent post-war farm buildings and the rebuilding of many of the mud and cob village buildings in brick and stone, there has been much less 19th- and 20th-century change than in most of the Midlands. Overall, the NCA retains a strong historic character with tangible evidence of land use and settlement stretching back into the medieval period. Of particular significance are the quiet winding rural lanes, hummocky landform associated with ridge and furrow farming, and other medieval features such as deserted or shrunken villages, the relatively complete Midland open field systems of national significance and the manorial complexes preserved beneath areas of permanent pasture. Surviving viaducts are also important features locally in High Leicestershire, for example at Marefield and Seaton.

While this area has largely escaped the pressure to accommodate modern growth, there are potential development pressures in the west as a result of the expansion of Leicester. Quarrying continues at Ketton and Brooksby, and post-war farming practices have resulted in the loss of many field boundaries and the ploughing out of large areas of ridge and furrow and other earthworks. Maintaining existing grassland to prevent loss to arable production and agricultural improvement is a continuing challenge. There is a strong and continuing tradition of hunting and horses with associated frequent shooting estates and high occurrence of horse paddocks.

This parkland setting at Launde Abbey, which is now used as a retreat and conference centre, portrays a great sense of tranquillity. Levels of tranquillity are relatively high across the whole of this NCA.

Ecosystem services

High Leicestershire 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 High Leicestershire NCA is contained in the 'Analysis' section.

Provisioning services (food, fibre and water supply)

- **Food provision:** With its fertile soils and over 96 per cent of the NCA being Grade 2 and 3 agricultural land, this is a nationally important area for agricultural food provision including principally arable crops such as wheat, beans and oilseed rape; grassland supplying lamb, beef and associated foods; and woodlands, coverts and spinneys supplying game.

- **Water availability:** High ground in the NCA forms a watershed supplying numerous streams and rivers which drain outside the area. There are three main rivers in the NCA: the Eye Brook, the Chater and the Gwash. Tributaries flow towards the rivers Eye, Wreake and Sence. Although they are small streams, they do cover approximately one-third of the NCA. All these streams form part of the Soar Catchment Abstraction Management Strategy. The Eye Brook and River Gwash are currently at moderate potential ecological status, while the River Chater is currently at poor potential ecological status. There is also a small section at the north-eastern edge of the NCA which forms part of the catchment sensitive farming area for the River Eye SSSI. This river suffers from high phosphate levels and catchment sensitive farming is aiming to reduce these in the north of the NCA. The Eyebrook Reservoir supplies Corby with potable water. Good water levels are maintained all year round in the 201-hectare reservoir.[4] Rutland Water reservoir is located just outside the north-eastern boundary of the NCA. A small part of the southern Lincolnshire Limestone aquifer is located in the far east of the NCA. The aquifer is an important source for public water supply but currently has an 'over-abstracted' CAMS status.[5] Minor aquifers occur in the glacio-fluvial gravels, the Bytham Sand and Gravel Formation and river terraces at the Wreake–Soar confluence.

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

- **Regulating soil erosion:** Two-fifths of the area has soils with impeded drainage. Part of the River Eye England Catchment Sensitive Farming Delivery Initiative Priority Catchment is located in the north-east of the NCA. Soil erosion is identified as an issue within this catchment, particularly from bank erosion and direct deposition into watercourses from livestock (directly accessing watercourses) and erosion from mixed and livestock farming practices.

- **Regulating water quality:** The groundwater chemical status in the majority of the NCA is good and the only river subject to surface water chemical testing in the area is the Eyebrook, which currently has a good surface water chemical status. The potential ecological status of the River Gwash, Eye Brook and the Eyebrook Reservoir is moderate.

Cultural services (inspiration, education and wellbeing)

- **Sense of history:** A sense of history is evident in the survival of ridge and furrow patterns reflecting the workings of open field townships, for example at Hungarton. The historic character is further reinforced by clusters of ancient oak/ash woodland (surviving from the Leighfield Forest) on the undulating land around the Eyebrook Reservoir and River Chater. The area contains a wide variety of field patterns of diverse origins, including some remaining evidence of piecemeal enclosure reflected in the irregular hedged boundaries, nationally

[4] www.eyebrook.com/

[5] The Welland Catchment Abstraction Management Strategy, Environment Agency (2007)

rare and important remnants of ridge and furrow and winding ancient lanes along the river valleys of the limestone lowlands and rolling farmlands. Vernacular architecture is distinctive in its use of a subdued red brick in the western and central parts of the area which is replaced by deep orange to rust brown ironstone towards the east. Burrough Hill iron-age hill fort is located on one of the highest points in Leicestershire in Burrough Hill Country Park. There are also many fine country houses from the 17th and 18th centuries such as Quenby Hall and Noseley Hall set within parkland.

Landscape characteristics particularly important in conveying a sense of tranquillity are the secluded valleys and winding green lanes, which provide a quiet, empty and remote rural character in a sparsely settled landscape.

- **Tranquillity:** Tranquillity levels remain high in the NCA despite the notable decrease in undisturbed areas from 84 per cent in the 1960s to 63 per cent in 2007, largely attributable to growth in traffic on roads such as the A47, A6003 and B6047. Landscape characteristics particularly important in conveying a sense of tranquillity are the secluded valleys and winding green lanes which provide a quiet, empty, remote rural character in a sparsely settled landscape.

- **Recreation:** Located next to large populations such as Leicester in the east, this NCA offers a network of relatively extensive and evenly distributed rights of way, totalling 648 km at a density of 1.14 km per km2, as well as a small amount of open access land covering 31 ha or just 0.05 per cent of the NCA. The area includes a section of the Leicestershire Round walking route, the Macmillan Way, the Midshires Way (a long-distance route suitable for horse riders and cycle users) and the junction of two sections of the National Cycle Network (63 and 64) linking Burton upon Trent to Peterborough and Market Harborough to Lincoln. The reservoir at Eyebrook, a privately owned trout fishery, provides an important recreation resource with opportunities for birdwatching and fishing. It also provides an additional resource, to Rutland Water, for cycling. Quiet country lanes offer opportunities for walking and cycling while Burrough Hill Country Park includes a toposcope. There are a series of Wildlife Trust nature conservation sites including Prior's Coppice, Launde Big Wood, Launde Park Wood, Great Merrible Wood, the SSSI at Tilton Cutting and Ketton Quarry nature reserve. The area has a strong and continuing tradition of shooting, equestrian and hunting activities.

Statements of Environmental Opportunity

SEO 1: Protect and appropriately manage the strong visual and historic character of this varied and sparsely settled rural landscape of broad rolling ridges and wide secluded valleys – maintaining the settlement pattern and features of High Leicestershire, in particular its areas and features of archaeological and heritage interest, including the field patterns, ridge and furrow, ancient woodlands, country houses and village churches – to enhance sense of place and history so that the area can be enjoyed by all for its tranquillity.

For example by:

- Protecting and maintaining the long-distance views of historic villages and their prominent church spires and the panoramic vistas across the NCA, enjoyed from the prominent ramparts of Burrough Hill and the centrally elevated plateau around Billesdon and Tilton on the Hill.
- Protecting and maintaining the overall remote, empty, sparsely settled, dispersed rural sense of place, particularly the characteristic small historic villages, hamlets and farmsteads, their setting and their distinctive local vernacular.
- Maintaining and enhancing the strong hedgerow-bounded field pattern and mixed farming regime; the network of quiet green lanes, tracks and gated roads; the distinctive parklands and their veteran trees, ancient and semi-natural woodlands; and the pattern of the many streams and rivers carving through the landscape.
- Conserving more remote areas from inappropriate development by working to ensure that the historic settlement pattern is retained and the relatively high levels of tranquillity are maintained.
- Protecting and maintaining the remnant clusters of medieval woodland within Leighfield Forest at Launde, Knossington and Cold Overton for their significant contribution to nature conservation, historic landscape character and sense of place.
- Protecting and maintaining the fine examples of country houses such as Quenby Hall and Noseley Hall and ensuring sustainable management of their parkland settings, veteran trees and associated medieval features.
- Protecting remaining ridge and furrow, especially where it forms part of almost complete Midland open field systems, which are nationally rare.
- Conserving the character and views from and into historic villages by putting in place or following existing conservation and design guidance which ensures that the locally distinctive vernacular is respected and reflected in new development.
- Maintaining the abundant hedgerow networks and strength of historic and varied field patterns.
- Protecting and enhancing the rural network of quiet, ancient green lanes and often gated rural roads, lanes, deep hedgerows and verges.

SEO 2: Sustainably manage the moderately fertile soils, arable crops, livestock, grassland, woodlands, coverts and spinneys that contribute to sense of place while maintaining viable food production, enhancing biodiversity networks and encouraging farmland birds and mammals and rarer arable plants.

For example by:

- Managing soils to allow continued sustainable agricultural production by increasing soil organic content and water infiltration, for example use of grass buffers along watercourses and inclusion of fallow in crop rotation.
- Seeking to work with farmers to manage viable food production while encouraging rarer arable plants, farmland birds and mammals and creating grass margins around arable fields.
- Working with landowners and managers to maintain and enhance the woodlands, coverts and spinneys so that there is good provision of local game.
- Encouraging best farming practices to improve soil structure.
- Working with farmers and landowners to encourage well-timed cultivations and access onto land by low pressure machinery and stock to prevent compaction and poaching.
- Working with farmers and landowners to increase the population of pollinators, enabling a more diverse range of crops to be grown in the future and potentially expanding the range of food provision.
- Enhancing and expanding the network of semi-natural habitats that aid the movement of predatory species and bring benefits for pest regulation within food crops, as well as pollination and biodiversity.
- Managing unimproved species-rich grasslands and retaining ridge and furrow for their many functions, including their educational value.

Ridge and furrow with mixed grazing at Hungarton.

SEO 3: Manage and enhance the recreational assets, such as the rights of way network, country parks such as Burrough Hill and waterbodies such as Eyebrook Reservoir, and improve access to these assets and the open countryside from the city of Leicester and surrounding rural communities, to maintain a sense of place, enhance soil and water quality and have a beneficial effect on people's health and wellbeing.

For example by:

- Extending opportunities for access and recreation along the rights of way network and the quiet green lanes, for example by improving the fragmented bridleway network and through maintaining the integrity of the relatively extensive network of short- and long-distance trails, such as the Leicestershire Round and Macmillan Way.
- Continuing to work with stakeholders to manage Eyebrook Reservoir in a sustainable way so that people can enjoy the site while the benefits for biodiversity, soil and water quality are maintained and enhanced.
- Recognising the recreational use of the landscape and appropriate waterbodies for equestrian and country sports and seeking opportunities to enhance the infrastructure used to support the recreational use of the landscape.
- Maintaining and enhancing the attractiveness of country parks such as Burrough Hill and local nature sites such as Launde Big Wood, offering visitors and local communities opportunities to learn more and get involved with these sites, while enjoying the health and wellbeing benefits afforded by contact with the natural environment.
- Raising awareness of the recreational resources and increasing the number of recreational opportunities by implementing the local green infrastructure strategy to link the city of Leicester with the wider countryside.

SEO 4: Manage, conserve and enhance the woodlands, hedgerows, streams, rivers and field ponds – including the rivers Chater, Gwash and Eye Brook, their tributaries and the Eyebrook Reservoir – to enhance biodiversity and soil quality and improve water quality, flow and availability.

For example by:

- Expanding and managing – in favourable condition and in continuity with watercourses – wetland habitats and semi-natural flood plain habitats and promoting grassland management of flood plains where appropriate.
- Protecting watercourse banks from erosion by preventing direct access by livestock, particularly along the River Chater, and buffering where appropriate with permanent grassland margins.
- Strengthening the density of hedgerows, coppices, coverts and small woodlands and other semi-natural habitats to help impede cross-land flows of floodwaters and enable water infiltration.
- Using the River Welland Catchment Flood Management Plan in order to put in place a more sustainable approach to flood risk management.
- Re-establishing and restoring the characteristic field ponds which traditionally provide secluded wooded wetlands which are focal points in the corners of many clayland fields, particularly in the central and western parts of the NCA.

Supporting document 1: Key facts and data

Total area: 56,874 ha

1. Landscape and nature conservation designations

There are no landscape designations in this NCA.

Source: Natural England (2011)

1.1 Designated nature conservation sites

The NCA includes the following statutory nature conservation designations:

Tier	Designation	Name	Area (ha)	% of NCA
International	Ramsar	Rutland Water	<1 ha	<1
European	Special Protection Area (SPA)	Rutland Water	<1 ha	<1
	Special Area of Conservation (SAC)	n/a	0 ha	0
National	National Nature Reserve (NNR)	n/a	0 ha	0
National	Site of Special Scientific Interest (SSSI)	A total of 15 sites wholly or partly within the NCA	770 ha	1

Source: Natural England (2011)

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

There are 226 Local sites in High Leicestershire covering 605 ha which is 1 per cent of the NCA.

Source: Natural England (2011)

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

1.1.1 Condition of designated sites

SSSI condition category	Area (ha)	% of SSSI land in category condition
Unfavourable declining	46	6
Favourable	187	24
Unfavourable no change	23	3
Unfavourable recovering	513	67

Source: Natural England (March 2011)

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

2. Landform, geology and soils

2.1 Elevation

Elevation ranges from 23 m above sea level around to a maximum of 231 m at Billesdon. The average elevation of the landscape is 122 m above sea level.

Source: Natural England (2010)

2.2 Landform and process

The land rises to a central area of high ground at Billesdon, with steep scarp slopes on the northern aspect. From here, streams radiate southwards, eastwards and westwards to the Sence and Welland, carving out narrow valleys and leaving broad ridgetops.

The highest land is found around Houghton, Billesdon and Whatborough with steep slopes dropping down to Queniborough Brook and with views across open countryside. In the east there are more gentle scarp slopes. At the southern edge is a more open landscape. To the north a wide valley filled with boulder clay separates the elevated ground from further high points at Borough Hill and, in this northern part, the main drainage pattern is towards the River Wreake and Rutland Water. In many places, boulder clay has been eroded down to the more freely-draining and easily cultivated glacial sands and gravels.

Source: High Leicestershire Countryside Character Area Description

2.3 Bedrock geology

The area is underlain by Lias clays of Lower Jurassic age. Much of the land, particularly the eastern part, is covered by thick deposits of boulder clay (glacial till).

Source: High Leicestershire Countryside Character Area Description

2.4 Superficial deposits

Much of the land, particularly the eastern part, is covered by thick deposits of boulder clay (glacial till).

Source: High Leicestershire Countryside Character Area Description

2.5 Designated geological sites

Designation	Number of sites
Geological Site of Special Scientific Interest (SSSI)	2
Mixed interest SSSI	0

There are 11 Local Geological Sites within the NCA.

Source: Natural England (2011)

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

2.6 Soils and Agricultural Land Classification

In many places, boulder clay has been eroded down to the more freely-draining and easily cultivated glacial sands and gravels. Elsewhere, and on the Lias clays, the soils can be heavy and difficult to cultivate. In the Wreake Valley in the north of the NCA there are deep loamy soils. In the south and east of the NCA in the Welland Valley soils are chalk and limestone. The majority of the NCA has clay soils.

Source: High Leicestershire Countryside Character Area Description

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

Agricultural Land Classification	Area (ha)	% of NCA
Grade 1	0	0
Grade 2	4,041	7
Grade 3	50,515	89
Grade 4	1,712	3
Grade 5	0	0
Non-agricultural	258	<1
Urban	371	<1

Source: Natural England (2010)

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

3. Key water bodies and catchments

3.1 Major rivers/canals

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

Name	Length (km)
Eye Brook	16
River Chater	26
River Welland	12

Source: Natural England (2010)

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

The land drains via many streams from the central elevated area. Streams radiate southwards, eastwards and westwards to the Sence and Welland, carving out narrow valleys and leaving broad ridge tops. To the north a wide valley filled with boulder clay separates the elevated ground from further high points at Borough Hill. The main drainage pattern in the north is towards the river Wreake and Rutland Water.

3.2 Water quality

The total area of Nitrate Vulnerable Zone is 56,874, 100 per cent of NCA.

Source: Natural England (2010)

3.3 Water Framework Directive

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

4. Trees and woodlands

4.1 Total woodland cover

The NCA contains 2,809 ha of woodland over 2 ha in size (5 per cent of the total NCA area), of which 669 ha is ancient woodland.

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

4.2 Distribution and size of woodland and trees in the landscape

The area's well treed character is derived from hedgerows, hedgerow trees, copses, spinney and small ridgetop woodlands, rather than any great extent of large woodlands. The cluster of oak/ash woodlands on the undulating land around the Eye Brook and River Chater, which includes Owston Woods and Launde Big Wood, are generally ancient and survive from the Leighfield Forest. They are of significant nature conservation interest in an area with relatively limited woodland cover. Leighfield Forest once covered a significant area of High Leicestershire, but only fragments of the forest remain today. Leighfield Forest SSSI is a nationally important group of ancient woods of oak and ash which are valuable for its landscape value as well as being of biodiversity importance. These sites are situated on the eastern fringes of the elevated plateau. Owston Wood is the second largest area of ancient woodland in Leicestershire at 141 ha; other ancient woods in this NCA are located at Launde, Cold Overton, Priors Coppice and Knossington. Hedgerows, hedgerow trees and parkland trees contribute to the well treed character of this landscape. Landscape parks were laid out at Quenby Hall, Lowesby, Launde, Baggrave among others. A characteristic feature of the landscape is a country house, set in parkland with a deserted settlement nearby.

Source: High Leicestershire Countryside Character Area Description, Trent Valley and Rises Natural Area Profile

4.3 Woodland types

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

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

Woodland type	Area (ha)	% of NCA
Broadleaved	2,036	4
Coniferous	216	<1
Mixed	133	<1
Other	424	<1

Source: Forestry Commission (2011)

Area and proportion of Ancient Woodland and Planted Ancient Woodland within the NCA.

Woodland type	Area (ha)	% of NCA
Ancient semi-natural woodland	466	1
Ancient re-planted woodland (PAWS)	204	<1

Source: Natural England (2004)

5. Boundary features and patterns

5.1 Boundary features

In this NCA there has been a long tradition of hedgerow management as part of hunting country, with frequent hedgerow trees. The overall strong visual identity of the NCA largely arises from the mixed agricultural regime, widespread ridge and furrow and generally well maintained hedgerow networks. Overgrown hedges and small fields are a feature of the area.

Source: High Leicestershire Countryside Character Area description; Countryside Quality Counts (2003)

5.2 Field patterns

Early enclosure, small sub-rectangular fields can be found around the historic villages, which tend to be on the southern and northern parts of the area and a band extending from Stoughton to Skeffington. Elsewhere there is a more strongly rectilinear pattern of later enclosure. Around the villages are small, linear fields indicative of ancient plots. Areas of early enclosure with small sub-rectangular fields and the more strongly rectilinear patterns of later enclosure found at the edges and in a band of higher ground towards the centre.

Source: High Leicestershire Countryside Character Area description; Countryside Quality Counts (2003)

6. Agriculture

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

6.1 Farm type

The category with the largest number of holdings in this NCA in 2009 was grazing livestock farms with 176 (32 per cent) of all holdings. The category with the second largest number of holdings is cereal farms with 155 or 28 per cent.

Source: Agricultural Census, Defra (2010)

6.2 Farm size

In 2009, there were 144 holdings over 100 ha in size, which is 26 per cent of farms in this NCA. The second largest category is holdings between 5 ha and 20 ha which had 136 in total or 26 per cent of all holdings. Holdings over 100 ha in size account for over 75 per cent of the farmed area in this NCA. The number of over 100 ha holdings has dropped from 155 in 2000 to 144 in 2009.

Source: Agricultural Census, Defra (2010)

6.3 Farm ownership

2009: Total farm area = 51,137 ha; owned land = 32,681 ha
2000: Total farm area = 49,926 ha; owned land = 33,685 ha

Source: Agricultural Census, Defra (2010)

6.4 Land use

In 2009 155 commercial holdings grew cereals, there were 5 specialist poultry units.

Source: Agricultural Census, Defra (2010)

6.5 Livestock numbers

In 2009 127,400 sheep, 21,600 cattle and 18,400 pigs were recorded in this NCA. The number of sheep has decreased by 31,200 since 2000 a fall of 20 per cent. The number of pigs has increased since 2000, from 8,200 in 2000 to 18,400 in 2009 and increase of over 123 per cent.

Source: Agricultural Census, Defra (2010)

6.6 Farm labour

The number of part time farm workers has more than doubled since 2000 increasing from 72 in 2000 to 153 in 2009.

Source: Agricultural Census, Defra (2010)

Please note: (i) Some of the Census data is estimated by Defra so will not be accurate for every holding (ii) Data refers to Commercial Holdings only (iii) Data includes land outside of the NCA belonging to holdings whose centre point is within the NCA listed.

7. Key habitats and species

7.1 Habitat distribution/coverage

The cluster of oak/ash woodlands on the undulating land around the Eye Brook and River Chater (eg Owston Woods and Launde Big Wood) are generally ancient and survive from the Leighfield Forest. They are of significant nature conservation interest in an area with relatively limited woodland cover. Field ponds are notable local features. Due to extensive clearing only pockets of Leighfield Forest remain in Launde, Knossington and Cold Overton, although this still retains a relatively high percentage of woodland. The second most frequent habitat in this NCA is floodplain grazing marsh and which is mainly found along the river Welland in the south and east of the NCA.

Source: Trent Valley and Rises Natural Area Profile

7.2 Priority habitats

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

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

Priority habitat	Area (ha)	% of NCA
Broadleaved mixed and yew woodland (Broad habitat)	1,172	2
Coastal & floodplain grazing marsh	445	1
Lowland heathland	62	<1
Lowland dry acid grassland	58	<1
Lowland calcareous grassland	29	<1
Lowland meadows	20	<1
Purple moor grass and rush pasture	5	<1
Reedbeds	8	<1
Fens	8	<1

Source: Natural England (2011)

- Maps showing locations of Priority Habitats are available at: http://magic.defra.gov.uk/website/magic/ – select 'Habitat Inventories'

7.3 Key species and assemblages of species

- Maps showing locations of Priority Habitats are available at: http://magic.defra.gov.uk/website/magic/ – select 'Habitat Inventories'
- Maps showing locations of S41 species are available at: http://data.nbn.org.uk/

8. Settlement and development patterns

8.1 Settlement pattern

Characteristic small historic villages, made up of buildings clustered around prominent spired churches are often located on high ground such as Kings Norton and Houghton on the Hill. The area contains some fine country houses such as Quenby and Noseby set within parkland on sheltered sites. Some parkland landscapes are associated with nearby deserted medieval settlements. The green lanes, quiet countryside and an overall empty, remote characteristic rural landscape has largely escaped pressure from modern development. The market town of Uppingham is the only large settlement in this NCA. Landscape parks, some of which are successors to medieval deer parks, where isolated churches and shrunken villages or the earthworks of deserted settlements, sit within, or close to, parks and not far from the 17th and 18th century mansions

Source: High Leicestershire Countryside Character Area description; Countryside Quality Counts (2003)

8.2 Main settlements

Uppingham is the only major settlement within the High Leicestershire NCA. The total estimated population for this NCA (derived from ONS 2001 census data) is: 57,488.

Source: High Leicestershire Countryside Character Area description; Countryside Quality Counts (2003)

8.3 Local vernacular and building materials

In the western and central parts of the area, most of the older village buildings are of a subdued red brick with slate or tile roofs or occasional thatch but, towards the east, ironstone becomes prominent for all buildings, so that the cores of settlements like Uppingham are dominated by its tawny colours. Limestone and ironstone may be found banded in the same building. The churches are predominantly of grey limestone or tawny ironstone.

Source: High Leicestershire Countryside Character Area description; Countryside Quality Counts (2003)

9. Key historic sites and features

9.1 Origin of historic features

Prominent evidence of iron-age hill fort remains at Burrough on the Hill. Roman activity in the area appears to have been slight. Evidence of the presence of the Anglo-Saxons is present in the Saxon cemeteries at Ingarsby and Billesdon Coplow. Later Scandinavian settlement in the north of the area is evident in place names ending by and thorp. Remnant medieval royal hunting area of Leighfield Forest of national nature conservation importance. Leighfield Forest was retained as a forest when the rest of Leicestershire was exempted in 1235. Frequent and very prominent ridge and furrow, as well as many deserted settlements. Open fields were closed piecemeal in many areas before the parliamentary enclosures of the 18th century. The area contains some fine country houses such as Quenby and Noseby set within parkland on sheltered sites. Many parkland landscapes are associated with a nearby deserted medieval settlement. In this NCA there has been markedly less change during the 19th and 20th centuries than in most of the rest of the midlands.

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

9.2 Designated historic assets

This NCA has the following historic designations:

- 5 Registered Parks and Gardens covering 319 ha
- 0 Registered Battlefield/s covering 319 ha
- 62 Scheduled Monuments
- 1,364 Listed Buildings

Source: Natural England (2010)

More information is available at the following address:

- http://www.english-heritage.org.uk/caring/heritage-at-risk/
- http://www.english-heritage.org.uk/professional/protection/process/national-heritage-list-for-england/

10. Recreation and access

10.1 Public access

- 0.5 per cent of the NCA 255 ha is classified as being publically accessible.
- There are 647 km of public rights of way at a density of 1.1 km per km2.
- There are 0 National Trails within High Leicestershire NCA.

Sources: Natural England (2010)

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

Access designation	Area (ha)	% of NCA
National Trust (Accessible all year)	0	0
Common Land	n/a	n/a
Country Parks	<1	<1
CROW Access Land (Section 4 and 16)	97	<1
CROW Section 15	<1	<1
Village Greens	12	<1
Doorstep Greens	0	0
Forestry Commission Walkers Welcome Grants	1	<1
Local Nature Reserves (LNR)	14	<1
Millennium Greens	<1	<1
Accessible National Nature Reserves (NNR)	0	0
Agri-environment Scheme Access	81	<1
Woods for People	115	<1

Sources: Natural England (2011)

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

11. Experiential qualities

11.1 Tranquillity

Based on the CPRE map of Tranquillity (2006) the highest score is in the area of Burrough Hill, the lowest score is to the east of Leicester. The A47 corridor also has low scores.

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

Tranquillity	Tranquillity Score
Highest value within NCA	37
Lowest value within NCA	-55
Mean value within NCA	4

Sources: CPRE (2006)

More information is available at the following address:
http://www.cpre.org.uk/what-we-do/countryside/tranquil-places/in-depth/item/1688-how-we-mapped-tranquillity

11.2 Intrusion

The 2007 Intrusion Map (CPRE) shows the extent to which rural landscapes are 'intruded on' from urban development, noise (primarily traffic noise), and other sources of visual and auditory intrusion. This shows that the extent to which rural landscapes are 'intruded on' from urban development, noise (primarily traffic noise), and other sources of visual and auditory intrusion. This shows that levels of disturbance in this NCA are low compared with adjacent areas. The most disturbed and most urban area is in and around Uppingham, and along the A47. The area between Leicester in the west, Oakham in the east and Melton Mowbray in the north with the A47 along the southern boundary is the least disturbed area. A breakdown of intrusion values for this NCA are detailed in the table below.

Intrusion category	1960s (%)	1990s (%)	2007 (%)	Percentage change (1960s-2007)
Disturbed	15	24	36	21
Undisturbed	84	76	63	-21
Urban	<1	<1	1	n/a

Sources: CPRE (2007)

Notable trends from the 1960s to 2007 are that there has been a matched increase in disturbed area with a decrease in the percentage of undisturbed area. There has been relatively little urban growth.

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

12 Data sources

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

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

Supporting document 2: Landscape change

Recent changes and trends

Trees and woodlands

- The area is relatively limited in woodland cover as a whole but the area has a well-wooded character derived mainly from wide hedgerows, hedgerow trees, copses, spinneys and small ridgetop woodlands which have benefited from good management.

- Hedgerow trees form an important part of the woodland resource in this area and are generally well managed.

Boundary features

- Between 1999 and 2003 Countryside Stewardship capital agreements for linear features included fencing (73 km), hedge management (100 km), hedge planting and restoration (86 km) and restored boundary protection (39 km). The estimated boundary length for the NCA is about 3,726 km.

- Most of the hedgerows are well maintained, particularly along side roads. Some of the enclosure hedgerows have fallen into decline and become gappy. Some of the poorest boundaries (low-trimmed/gappy hedges) are on the eastern outskirts of Leicester and south of Melton Mowbray, visible from the A606.

The area is relatively limited in woodland cover but has the feeling of being well-wooded in character derived mainly from wide hedgerows, hedgerow trees, copses, spinneys and small ridgetop woodlands.

Agriculture

- Within the area there is mixed farming with open arable land concentrated on ridgetops and the wider valley bottoms. The grassland area has declined although the rate of loss has slowed. There has been some shift from cereals, mixed and general cropping, dairy and horticulture to lowland cattle and sheep.

- The Countryside Quality Counts assessment reports Countryside Stewardship agreements for lowland pasture on neutral/acid soils, regeneration of grassland/semi-natural vegetation and lowland hay meadows. The erosion of character has therefore probably slowed and character is now being maintained.

Settlement and development

- High Leicestershire has seen limited late 20th-century growth and development compared with other NCAs, much of the area remains remote and rural. Urban incursion into the area has occurred to the west with the eastern expansion of the city of Leicester, and to the north where the outskirts of Melton Mowbray lie on the edge of the NCA.

- The historic market town of Uppingham, at the crossroads of the A47 and A6003, may see some limited residential growth and similarly Oakham, beyond the boundary to the north-east, is likely to expand significantly into the area. Stamford lies to the east of the area where the A1 provides a strong barrier to development.

- Elsewhere a remote rural landscape of small villages and scattered farms survives with little modern development apart from small-scale village housing, agricultural sheds and some mobile telephone masts.

Semi-natural habitat

- There have been Countryside Stewardship agreements for traditional grassland management, targeted grassland re-creation, arable option management, orchard, pond and hedge restoration.

- The most extensive annual Countryside Stewardship agreements in 2003 were for lowland pastures on neutral/acid soils (1,248 ha) and regeneration of grassland/semi-natural vegetation (221 ha). Other Countryside Stewardship annual agreements included those for lowland hay meadows (182 ha). Overall the character of a semi-natural landscape has probably been maintained.

- As there has been relatively little recent development/land use change in the area many habitats have been retained. Hedgerows are a good example of this.

Historic features

- Ploughing out of ridge and furrow and damage to deserted settlements has occurred locally particularly on the elevated plateau and rolling farmland. There is a need to promote careful management of archaeological earthwork sites particularly on the fringes of the elevated plateau where there are particular concentrations.

- There have been about 120 ha of Countryside Stewardship agreements for management of historic landscapes since 1999. In 1918 about 2 per cent of the NCA was historic parkland. In terms of the share of the resource the NCA was ranked 101 out of 159. By 1995 it is estimated that 47 per cent had been lost. About 44 per cent of the remaining parkland is covered by Historic Parkland Grants, and about 34 per cent is included within an agri-environment scheme. Data suggests that resource has at least been maintained, although it should be noted that about only 64 per cent of historic farm buildings remain unconverted. However, about 90 per cent are intact structurally.

Coast and rivers

- There are three main rivers in the NCA: the Eye Brook, the Chater and the Gwash. The potential ecological status of the River Gwash, the Eye Brook and Eyebrook Reservoir is moderate. The River Chater has a poor ecological potential status due to sediments, nutrients and pesticides.

Minerals

- Ketton Quarry is an active limestone extraction site. Part of the old worked area has been transformed into a nature reserve and is managed by Leicestershire and Rutland Wildlife Trust who lease the land from Castle Cement.
- There is an active aggregates quarry (sand and gravel) at Brooksby.
- The area was once worked for iron ore and building stone.

Drivers of change

Climate change

- High Leicestershire has a wooded character which contributes significantly to sense of place, habitat networks and historic environment. Climate impacts may make subtle and varied changes to this landscape overall but it is likely that impacts in some places will be more significant. Therefore while it is likely that High Leicestershire will retain its characteristic wooded landscape, individual trees, groups of trees and hedgerows may be more at risk of loss and damage, notably due to pests/disease, wind-blow and fire.
- High Leicestershire's grasslands are valued for the pastoral farming they support, their habitats and the archaeological remains they preserve, including remnant earthworks associated with deserted villages and relatively complete Midland open field systems of national significance. Climate change may bring compositional changes to the grassland habitats or result in increased use of arable. Climate related agricultural pressures and opportunities, as well as climate change related impacts such as flooding and erosion may increasingly result in damage to and/or destruction of the earthworks.
- Climate change may bring increased risk of soil erosion and unstable ground (landslides). It may lead to increased risk of flooding and potentially alter watercourses within valleys.
- Increased summer temperatures may see an increase of incidents of algae bloom on some of the larger waterbodies.
- As air temperatures rise, so do water temperatures particularly in shallow stretches of rivers and the surface waters of lakes. The rivers, streams and reservoirs may become unsuitable for certain species of fish.
- When stream flow peaks earlier in the spring owing to warmer temperatures, low stream flow begins earlier in the summer and lasts longer in the autumn. These changes stress aquatic plants and animals that have adapted to specific flow conditions.

Other key drivers

- Protecting lowland grassland from loss to arable production and the impact of agricultural intensification resulting in the loss of landscape features such as hedgerows, hedgerow trees and field ponds.
- There is likely to be increased pressure for food production in the future as a result of a national drive for greater self-sufficiency.
- Lowland meadows and pasture within the flood plain will play an increasing role in retaining and storing floodwater and this traditional type of management should continue.
- The rolling and well-wooded character presents some opportunity for

small-scale biomass energy crop plantings such as miscanthus and short rotation coppice particularly on arable watersides and shallow valley sides. Some potential exists on ridgetops although large scale plantations should be avoided in this area of generally small woodlands and copses.

- Modern development and infrastructure pressure arising from the need to accommodate the expansion of urban areas on the edges of the NCA is likely to be experienced.

- Overall conservation and enhancement of habitats will help to maintain a varied landscape structure which will encourage a range of species to help buffer the effects of climate change.

While this area has largely escaped the pressure to accommodate modern growth there are areas, such as this arable farmland near Stoughton, that are subject to potential development pressures, as a result of the expansion of Leicester.

Supporting document 3: Analysis supporting Statements of Environmental Opportunity

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

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

Restored orchard at Launde. At one time every farmstead had a few orchard trees.

Statement of Environmental Opportunity	Food provision	Timber provision	Water availability	Genetic diversity	Biomass provision	Climate regulation	Regulating water quality	Regulating water flow	Regulating soil quality	Regulating soil erosion	Pollination	Pest regulation	Regulating coastal erosion	Sense of place / Inspiration	Sense of history	Tranquillity	Recreation	Biodiversity	Geodiversity
	Ecosystem service																		
SEO 1: Protect and appropriately manage the strong visual and historic character of this varied and sparsely settled rural landscape of broad rolling ridges and wide secluded valleys – maintaining the settlement pattern and features of High Leicestershire, in particular its areas and features of archaeological and heritage interest, including the field patterns, ridge and furrow, ancient woodlands, country houses and village churches – to enhance sense of place and history so that the area can be enjoyed by all for its tranquillity.	↗ *	↗ **	↗ **	↗ **	↗ ***	↗ ***	↗ **	↗ **	↗ **	↗ **	↗ *	↗ **	N/A	↑ ***	↑ **	↑ **	↗ **	↗ **	↗ *
SEO 2: Sustainably manage the moderately fertile soils, arable crops, livestock, grassland, woodlands, coverts and spinneys that contribute to sense of place while maintaining viable food production, enhancing biodiversity networks and encouraging farmland birds and mammals and rarer arable plants.	↗ *	↗ **	↗ **	↗ **	↗ *	↗ *	↗ *	↗ *	↗ **	↗ **	↗ *	↗ *	N/A	↑ ***	↑ ***	↑ *	↗ **	↗ **	↗ *
SEO 3: Manage and enhance the recreational assets, such as the rights of way network, country parks such as Burrough Hill and waterbodies such as the Eyebrook Reservoir, and improve access to these assets and the open countryside from the city of Leicester and surrounding rural communities, to maintain a sense of place, enhance soil and water quality and have a beneficial effect on people's health and wellbeing.	↔ *	↗ *	↗ **	↗ **	↗ **	↗ **	↗ **	↗ **	↗ **	↗ **	↗ **	↗ **	N/A	↗ **	↗ **	↗ **	↑ ***	↗ ***	↗ *
SEO 4: Manage, conserve and enhance the woodlands, hedgerows, streams, rivers and field ponds – including the rivers Chater, Gwash and Eye Brook, their tributaries and the Eyebrook Reservoir – to enhance biodiversity and soil quality and improve water quality, flow and availability.	↗ *	↗ **	↑ **	↔ **	↗ **	↗ **	↑ ***	↑ ***	↑ **	↑ **	↗ **	↗ **	N/A	↗ **	↗ *	↗ *	↗	↗ ***	↗ ***

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

Dark plum =National Importance; Mid plum =Regional Importance; Light plum =Local Importance

Landscape attributes

Landscape attribute	Justification for selection
Varied landform of complex geology and soils comprising broad rolling ridges and often steep sided valleys,	■ Ironstone-rich Jurassic Marlstone Rock and Northampton Sand cap several hill tops ,while Lincolnshire Limestone forms higher ground in east of area. All three are used extensively as building stones, giving a distinctive character to many areas. Thick mantles of till evident across much of western part of the area. Soils range from easily cultivated glacial sands and gravels with heavy intractable soils on Lias clays on gentle scarp slopes to the east. ■ Elevated land contrasts with varied valleys ranging from small, remote and enclosed to broad and quite intensively farmed. In the north steep scarp slopes drop down toward Queniborough Brook and the Wreake Valley.
Centrally elevated plateau radiating a myriad of freshwater streams south, east and westwards along sheltered secluded narrow and broader valleys.	■ From the elevated central plateau around Billesdon, streams carve out narrow valleys which drain to the Sence and Welland. ■ The main drainage pattern of the area is south toward the River Wreake and the River Welland. The Eye Brook and Eyebrook Reservoir are important features as are the streams feeding the Gwash valley and River Chater which are concentrated here and feed into surrounding NCAs including Rutland Water SPA to the east.
Well-wooded character arising from surviving concentrations of ancient woodland, abundant wide hedgerows, hedgerow trees, copses, spinneys and small woodlands.	■ Although relatively limited in woodland cover as a whole, the well wooded character is derived mainly from wide predominantly hawthorn hedgerows and hedgerow trees, copses, spinneys and small often ridgetop woodlands that have benefited from good management associated with a well established equestrian and hunting culture. ■ The wooded character is enhanced by overgrown hedges and small fields as well as frequent parkland associated with attractive country houses such as Quenby Hall, Noseley Hall and Lowesby Hall. ■ The clusters of oak/ash woodlands around the Eyebrook and River Chater are generally ancient and represent one of the highest concentrations of ancient woodland in the Midlands.
Strong visual identity from mixed farming regime, predominantly arable on ridgetops and wide valley bottoms with intact and well managed hedgerows.	■ Predominantly arable agriculture of wheat, beans and oilseed rape with pasture supplying sheep and beef and associated foods. A landscape with a long tradition of field sports with many woodlands, coverts and spinney's created and maintained to supply game. ■ Mixed field patterns, a strong rectilinear field pattern at the southern and northern edge and in a band extending from Stoughton to Skeffington with smaller linear fields around historic villages.

Landscape attribute	Justification for selection
Ancient oak and ash woodlands, freshwater systems and unimproved grassland are important habitats.	■ Remnant ancient woodlands often on undulating land around the Eyebrook and River Chater, for example at Owston Woods and Launde Big Wood are of national nature conservation significance. They mark the remnants of the medieval royal hunting area of Leighfield Forest (SSSI) and represent one of the highest concentrations of ancient woodlands in the Midlands. ■ Unimproved grasslands at Ketton and near Braunston-in-Rutland are also important for nature conservation as is the myriad of streams and networks of rivers and associated waterbodies, for example, Eyebrook Reservoir and Rutland Reservoir which lies just outside the NCA to the east. Field ponds in corners of clay fields are also characteristic.
A predominantly rural landscape with little modern development. Sparse settlement of small villages with distinctive local vernacular.	■ Small historic villages often located on high ground such as Kings Norton and Houghton on the Hill whose buildings cluster around prominent spired churches of grey limestone or ironstone which varies from deep orange to lighter golden brown. Sometimes limestone and ironstone are banded in the same building. Red brick is abundant in buildings some of which are thatched.
A rich historic landscape hosting a prominent iron-age hill fort, frequent and very prominent ridge and furrow, ancient woodland and veteran trees, fine landscape parkland and attractive country houses often associated with evidence of many deserted or shrunken medieval settlements. Abandoned industries of iron ore extraction and building stone. An area of rich geodiversity.	■ The iron-age hill fort at Burrough Hill Country Park is located on one of the highest points and continues to provide impressive views across the landscape. Fine country houses in parkland settings such as Quenby Hall, Noseley Hall and Lowesby Hall with a deserted settlement within or close to the park are a strong characteristic feature of this landscape. ■ Of particular significance are the quiet winding rural lanes, hummocky landform associated with ridge and furrow and other medieval features such as deserted or shrunken villages and manorial complexes preserved beneath areas of permanent pasture. ■ Remnant clusters of ancient woodlands survive to mark the medieval royal hunting area of Leighfield Forest (SSSI) and the Forest of Rutland. ■ Ploughing out of ridge and furrow and damage to deserted settlements has occurred locally. There is a need to promote careful management of archaeological earthwork sites especially in areas where there are particular concentrations. ■ Industrial heritage – iron ore extraction and building stones. ■ An area rich in geodiversity with exposures at former ironstone and building stone quarries, Tilton railway cutting SSSI and many good geomorphological landform features.

Landscape attribute	Justification for selection
Networks of quiet green lanes winding down sheltered valleys contribute to the overall tranquil, remote and often empty character of this landscape.	■ There are many minor remote quiet lanes and gated roads that often wind down into sheltered valleys connecting farmsteads and hamlets. ■ The landscape has and continues to experience low development pressure. Only a very small percentage of the NCA is classified as urban. Uppingham is the only market town. ■ Tranquillity remains a significant feature of this NCA despite the notable decrease in undisturbed areas from 84 per cent in the 1960s to 63 per cent in 2007.

Landscape opportunities

- Protect the varied, diverse and essentially rural character of the tranquil and sparsely settled broadly rolling landscape with its historic villages and farmsteads traditional vernacular and the network of quiet lanes and roads.

- Protect the strong visual identify derived from this landscape's mixed farming regime by preventing further loss of pasture to arable production. Manage high-quality patches of unimproved grassland by linking and buffering with lowland pasture, hay meadows and grass margins, and manage lowland grassland from fragmentation to improve habitat, encourage species diversity and resilience to climate change following appropriate management options under Environmental Stewardship.

- Protect from damage and appropriately manage the areas cultural heritage in particular the iron-age hill fort and deserted medieval settlements and earth works including areas of ridge and furrow, historic country houses and their settings in parkland landscapes including veteran trees and ancient winding lanes, hedgerows, verges and trackways.

- Plan to establish a strong landscape framework as a context to potential modern development expansion from Leicester and Melton Mowbray at the edges of the NCA ensuring that new development does not have a negative impact on landscape character. Consider the visual impact of any new modern development particularly from urban intrusion and manage road improvements to maintain the existing character of the rural road network.

- Encourage rare arable plants and range restricted farmland birds and mammals, following appropriate management options under Environmental Stewardship.

- Manage and conserve the distinctive field patterns and well wooded character of this landscape derived through its ancient, semi-natural and broadleaved woodland, hedgerow networks and hedgerow trees. Ensure each woodland can be managed as a single entity and include measures to reduce their fragmentation and restore structural diversity. Reintroduce active coppice management where this will enhance woodland habitat and wildlife interest and strengthen hedgerow networks particularly on the steep scarp and valley slopes and where hedgerows connect areas of woodland.

- Manage the network of streams and rivers to maintain them as distinctive features in the landscape and enhance their wildlife interest, while restoring, expanding and re-linking wetland habitats, bringing rivers back into continuity with their flood plains where this will help sustain these wetland habitats. Re-establish and restore the characteristic field ponds which traditionally provide secluded, wooded wetlands which are focal points in the corners of many clayland fields particularly in the central and western parts of this character area.

- Protect, manage, maintain and conserve the geodiversity of the area.

Ecosystem service analysis

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

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

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Food provision	Fertile soils Arable crops Grassland Livestock (sheep cattle) Woodlands, coverts and spinneys	This nationally important area for food production benefits from the fertile soils mainly Grade 3 which together with the Grade 2 soils make up nearly 96 per cent of the area. In many places, boulder clay has been eroded down to the more freely-draining and easily cultivated glacial sands. The majority of the NCA has clay soils. The principle arable crops are wheat, beans and oilseed rape. Grassland supplies grazing for sheep, beef and some of their associated food stuffs. The area supports high numbers of sheep but they have reduced by about a fifth between 2000 and 2009. Pig numbers have more than doubled in the same period. The woodlands, coverts and spinneys support the supply of game.	National	Intensively farmed soils can become vulnerable to compaction and erosion, so it will be important to maintain high levels of soil organic content and good soil structure to ensure soils remain productive. Arable farming could potentially provide multiple benefits in maintaining the level of food production, potentially enhancing biodiversity and preserving the historic landscape character. An increase in the number of livestock could potentially put pressure on the watercourses and soil quality and areas could become overgrazed. To achieve a balance and optimise food production, land managers could be encouraged into agri-environment schemes. Field sports have a long tradition within this landscape. Many woodlands, coverts and spinneys were created and have been maintained for field sports. Maintenance of this game resource would provide a quality food product directly linked to the landscape and ensure that sense of place is not lost.	Manage soils to allow continued sustainable agricultural production by increasing soil organic content and water infiltration, for example use of grass buffers along watercourses and inclusion of fallow in crop rotation. Seek to work with farmers to manage viable food production while managing arable cropping patterns to encourage rarer arable plants, farmland birds and mammals, and create grass margins around arable fields. Work with landowners and managers to maintain and enhance the woodlands, coverts and spinneys so that there is good provision of local game	**Food provision** **Biodiversity** **Sense of history** **Sense of place / inspiration** **Regulating water quality** **Regulating soil quality** **Regulating soil erosion**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Timber provision	Areas of existing woodlands Parkland areas with woodland	There is no significant commercial forestry interest. Timber from ancient woodlands is used locally for hedge laying material. Woodland covers around 5 per cent of this NCA around a quarter of which is ancient woodland.	Local	Bringing undermanaged woodland into management including the reintroduction of coppicing. This could increase the local source of timber in the future which will bring benefits for biodiversity, water quality, soil quality, and reducing soil erosion. Better management of the historic woodland within parkland areas could lead to the more efficient and sustainable harvesting of timber using techniques such as coppicing. A range of woodland management techniques are required, including non-intervention; dead wood is an important component of semi-natural woodlands for biodiversity as well as nutrient cycling and soil formation which supports the regulation of soil erosion, soil quality, climate and water quality.	Bring woodlands, including woodlands within parklands, into active management and reintroduce coppicing to increase timber provision.	**Timber provision** **Biodiversity** **Sense of place / inspiration** **Sense of history** **Climate regulation** **Regulating soil erosion** **Regulating soil quality** **Regulating water quality** **Regulating water flow** **Biomass energy**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Water availability	Rivers Eyebrook Reservoir Semi-natural habitats (Reservoirs, rivers, field ponds, woodlands, flood plain grazing marsh)	There are three main rivers in the NCA; the Eye Brook, the River Chater and the River Gwash. The Gwash currently has a Catchment Abstraction Management Strategy (CAMS) 'over-abstracted' status. The Eye Brook and the River Chater both have a 'no water available' CAMS status although the Water Resource Management Unit (WRMU) within which both of these rivers are located has a CAMS 'over-abstracted' status. The Eyebrook Reservoir supplies Corby with clean water. Good water levels are maintained all year round in the 201 hectare reservoir. Rutland Water reservoir is located just outside the northern boundary of the NCA but water pumped from the River Gwash (which currently has a CAMS 'over-abstracted' status) is used to sustain water levels in the reservoir. Rutland Water is the largest reservoir in lowland England and is used as a strategic resource for water demand within the Anglian Water region, as well as for its conservation and recreation value. A small part of the Southern Lincolnshire Limestone aquifer is located in the far east of the NCA and is an important source of water for public water supply but currently has an 'over-abstracted' CAMS status. Field ponds are found mainly in the central and western part of the NCA on the clayland fields. Flood plain grazing marsh is concentrated along the River Welland. Minor aquifers of glacio-fluvial gravels, Bytham Sand and Gravel Formation and river terrace deposits.	Regional	Water resources during dry months can be scarce and in severe cases, low flows and water levels can affect water supply to the public and businesses causing restrictions. Provision of water for livestock from rivers may also be compromised. There are concerns that there may be insufficient groundwater available to meet future demands. Although the recharge area for this aquifer is outside of this NCA semi-natural habitats in this area can still play an important role for water infiltration and storage. The ability of a catchment to maintain a constant flow rather than experience flood and drought episodes is improved by healthy soils and vegetative cover, which improves infiltration of rainfall. Climate change is likely to result in more intense precipitation events with warmer, drier summers in the long term, and future demand for water both for crop irrigation and public water supply is likely to increase. Water should be used sustainably and land management practices encouraged that will increase water infiltration. The Welland Valley Partnership is looking to implement much of the above. Its vision is that the River Welland, from its source at Sibbertoft near Leicester to the sea at Spalding in Lincolnshire, including all the watercourses which flow into it, will: ■ Be cleaner and healthier ■ Support more fish, birds, and other wildlife ■ Meet the needs of drinking-water suppliers and business ■ Provide a more attractive amenity for people to enjoy ■ Be sensitively managed by everyone whose activities affect it. The Welland Valley Partnership will work with everyone who wants to help realise this vision. This includes individuals, land managers, local communities, businesses, voluntary bodies, local authorities, and government agencies.	Seek opportunities to restore semi-natural habitats such as wet woodland and grazing marsh to improve water storage capacity while reducing flood risk and soil erosion, improving water quality, climate regulation, habitat networks and ecosystem resilience to climate change. Improve sustainable use of water and sympathetic land management practices such as storage reservoirs to increase sense of place and biodiversity interest. Encourage good soil management such as avoiding poaching, overgrazing, compaction, and promoting good soil structure to optimise infiltration. Work with other partners to implement the Welland Improvement Plan Objective to tackle water resource and flow issues.	**Water availability** **Regulating water quality** **Biodiversity** **Recreation** **Sense of place / inspiration** **Regulating soil erosion**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Genetic diversity	Leicester sheep	The Leicester sheep, (alternate names for the breed include: Leicester, Bakewell Leicester, Dishley Leicester, Improved Leicester, Leicester Longwool, and New Leicester), appears to have inhabited Leicestershire and neighbouring counties for a long period before it was 'improved'. It is now one of Britain's rarest breeds, categorised as 'endangered' by the Rare Breeds Survival Trust, since fewer than 500 registered breeding females remain in the UK and very few locally.	Regional	The Leicester sheep could be a commercial option for local graziers, and have commercial value as a local product for both its meat and wool. Its historic association with Leicestershire could be capitalized on linking the breed to the landscape through local grazing schemes and marketing as local produce. The small number of breeding ewes means this population remains fragile so encouraging the breed would help maintain numbers.	Seek to encourage viable flocks of Leicester sheep and the genetic basis of the breed to secure its future. Work with farmers and the local community to explore the potential to develop the brand and a local market for quality meat and wool from the breed. Seek to raise the profile of the breed and its historical significance with the area through branding. Promote its use as a grazing animal in local grazing schemes and conservation grazing.	**Genetic diversity** **Sense of place / inspiration** **Biodiversity** **Food provision** **Sense of history**
Biomass energy	Fertile soils Existing woodlands	The fertile soils could potentially accommodate increased yields of short rotation coppice (SRC) and miscanthus The existing woodland cover (5 per cent) offers some potential for the provision of biomass, through bringing unmanaged woodland under management.	Local	Generally the NCA has high potential for SRC but there is an area of medium potential SRC yield around South Luffenham and Ketton in the east of the NCA. The potential miscanthus yield in the NCA is generally medium. For information on the potential landscape impacts of biomass plantings within the NCA, refer to the tables on the Natural England website at: www.naturalengland.org.uk/ourwork/farming/funding/ecs/sitings/areas/default.aspx The rolling and well-wooded character of High Leicestershire presents opportunity for energy crop plantings, particularly on shallow valley sides. Some potential exists on ridgetops, although large scale plantations in this area of generally small woodlands and copses are uncommon as they would largely not be in keeping with intrinsic landscape character.	Ensure good soil management to keep soils fertile and increase biomass opportunities by increasing organic matter inputs. Bring unmanaged areas of woodland back into management to increase biomass production from existing areas of appropriate woodland. Seek opportunities to plant energy crops to increase biomass production while maintaining the overall character of the landscape.	**Biomass energy** **Climate regulation** **Regulating soil erosion** **Regulating soil quality** **Biodiversity** **Timber provision** **Sense of place / inspiration**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Climate regulation	Soils Existing woodlands Grazing marsh Pasture Woodland Field boundaries	The mineral soils over most of the NCA have a low carbon content (0–5 per cent) There are small pockets of soil with a higher carbon content (5–10 per cent) which may be associated with the loamy and clayey flood plain soils with naturally high groundwater. These are mainly mineral soils but some may be peaty at depth or include small areas of peaty soils. Higher carbon levels may also be associated with areas of flood plain grazing marsh and areas of woodland cover in the NCA.	Local	Carbon sequestration and storage in mineral soils could be raised by improving soil structure, steadily increasing organic matter inputs to cultivated soils, and by reducing the frequency/ area of cultivation (while avoiding the potential impacts on other ecosystem services such as water quality through diffuse pollution). Soil carbon and soil carbon storage will be higher under areas of woodland and permanent pasture. A range of woodland management techniques are required, including non-intervention. Dead wood is an important component of semi-natural woodland for biodiversity as well as nutrient cycling and soil formation which supports the regulation of soil erosion, soil quality, climate and water quality.	Encourage the maintenance of permanent pasture to increase soil carbon storage, with a subsequent improvement in soil quality. Maintain woodland in good condition to benefit carbon storage in soils. Encourage appropriate woodland management (such as coppicing and pollarding) to increase both sequestration and the resilience of woodlands to climate change. Ensure that any new woodland planting is generally appropriate, making a contribution to increasing the overall woodland coverage in the region and integrating and enhancing the landscape, as well as boosting carbon storage.	**Climate regulation** **Biodiversity** **Sense of place / inspiration** **Regulating soil quality**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating water quality	Rivers, streams , and reservoirs Woodlands and hedgerows Soils	The groundwater chemical status in the majority of the NCA is good. There are three main rivers in the NCA: the Eye Brook, the River Chater and the River Gwash. The potential ecological status of the River Gwash, the Eye Brook and the Eyebrook Reservoir is moderate. The River Chater has a poor ecological potential status due to sediments, nutrients and pesticides. The area is relatively limited in woodland cover as a whole but the area has a well wooded character derived mainly from wide hedgerows, hedgerow trees, copses, spinneys and small ridgetop woodlands which have benefited from good management. These help to improve water quality by slowing down the pathway of run -off. A third of the soils in the area have impeded drainage and suffer from soil compaction and increased soil erosion which then runs off into watercourses affecting quality.	Regional	The Environment Agency has carried out monitoring work and investigations which suggest the main impacts on water quality arise from sediment, nutrients and pesticides. These enter watercourses from many different sources (for example, run-off from fields, roads and developed land). Taken together, the collective impact of these sources of diffuse pollution is significant. It is exacerbated by pollutants from point sources such as sewage treatment works and industrial sites. Pollutants in the water bodies are of particular concern within this catchment as the water from the Eyebrook Reservoir is used as drinking water for residents in Corby and water from Rutland Reservoir, supplied from the River Gwash is used in the Anglian Water region. Agreements (Catchment Sensitive Farming) could be extended (so that they are not only available in the Eye Brook near Melton) with farmers to; ■ Reduce nutrient and pesticide losses to water from agricultural holdings: ■ Increase best practise storage, handling and use of pesticides to reduce the loss to groundwater or watercourse; ■ Improve soil and manure management on agricultural holdings; ■ Improve the management of drainage water and dirty water on farm yard and ■ Limit the pathways for pesticides and nutrients entering the river. Water quality can be enhanced by ensuring that Eyebrook Reservoir is kept in good condition. Semi-natural vegetation used as buffer strips and reedbeds would increase biodiversity and naturally filter the water enhancing the quality.	Appropriately manage the rivers, streams and reservoirs to support and protect their biodiversity and ensure good water quality. Promote the Welland Implementation Plan to domestic, agricultural and industrial stakeholders to improve the quality of the water in this catchment. Promote the Catchment Sensitive Farming Scheme to farmers and landowners. Ensure good management of woodlands and hedgerows so that they can act as natural barriers to run-off. Provide buffer strips of semi-natural vegetation around the reservoirs and along the river banks, and increase the quantity of reedbeds to naturally filter the water.	**Regulating water quality** **Biodiversity** **Water availability** **Regulating soil erosion** **Regulating soil quality** **Regulating water flow** **Sense of place / inspiration** **Recreation**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating water flow	Rivers and streams Soils Semi-natural habitats (woodlands, flood plain grazing marsh)	The main catchment within the NCA is the River Welland. The Environment Agency flood risk map indicates that for the majority of the NCA flooding is not an issue. Over half of the area is covered with permeable seasonally wet slightly acid but base-rich loamy and clayey soils. A cluster of oak/ash woodlands can be found on the undulating land around the Eye Brook and River Chater. Pockets of Leighfield Forest remain in Launde, Knossington and Cold Overton. Seaton Meadows SSSI is probably one of the last remaining examples of unimproved alluvial flood meadow in the NCA. Grassland management of the flood plains of the major rivers in the NCA helps attenuate run-off and flood alleviation and the Eyebrook Reservoir provides flood water storage in times of high flow. The River Welland Catchment Flood Management Plan (CFMP) also indicates that there is low risk to people and property in this rural NCA.	Local	This area has a low to moderate flood risk so the preferred approach includes ceasing bank and channel maintenance in some places to help increase continuity between the river and its flood plain and so improve wetland and aquatic habitats. New woodland planting schemes along banks and on the flood plain could also help slow down the flow of water thereby further reducing flooding events. Potentially the risk of major flood events could increase with climate change and there is a major opportunity to significantly enhance the regulation of water flow by restoring and creating multi-functional semi-natural habitats within the main river corridors to encourage the river to respond to varying levels of water flow naturally.	Work together with the Environment Agency and other stakeholders to implement the River Welland Catchment Flood Management Plan. Continue to manage the grasslands in the flood plain to help attenuate run-off. Where feasible renaturalise the rivers and restore them to their original courses. Cease bank and channel maintenance so that wetland habitats can help to regulate water flow.	**Regulating water flow** **Regulating soil quality** **Regulating soil erosion** **Regulating water quality** **Biodiversity** **Sense of place / inspiration**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating soil quality	Soils Areas of semi-natural habitat (woodlands, hedgerows)	Over half of the area is covered with permeable seasonally wet slightly acid but base-rich loamy and clayey soils. The clay soils can be heavy and unmanageable but as a result host significant ancient woodlands. On the Lias clays, the soils can be heavy and intractable. Woodland cover and semi-natural habitat, although only covering 4 per cent of the area, provides important organic matter to help maintain and improve soil quality. This NCA has some well maintained wide hedgerows however that are important to maintaining soil quality.	Local	Soils are easily damaged when wet and therefore it is important to minimise compaction which will tend to exacerbate run-off problems. To counter this, best farming practices could be encouraged such as reducing machinery operations on more vulnerable soils and during protracted wet periods, encourage permanent leys to improve soil structure and minimising cultivation. Stabilising the soil and increasing the organic matter could be achieved by continuing to manage the hedgerows and increasing the amount of semi-natural habitats this would also have multiple benefits for increasing biodiversity and the landscape features that contribute to sense of place.	Maintain good soil structural condition and enhance soil organic matter levels. Encourage best farming practices to improve soil structure. Where appropriate, work with partners to steadily increase cover of woodland and hedgerows.	**Regulating soil quality** **Regulating soil erosion** **Regulating water quality** **Biodiversity** **Water availability** **Food provision** **Sense of place / inspiration** **Geodiversity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating soil erosion	Soils Woodlands Hedgerows Pasture Semi-natural habitats	Around three-fifths of the area has a low risk of soil erosion as it is covered by slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils, and loamy and clayey flood plain soils. In contrast, the rest of the area has soils at risk of erosion as they have impeded drainage that suffers from soil compaction. Semi-natural habitats including woodlands (accounting for around 5 per cent of the area) and hedgerows increase water infiltration and impede cross land flows and soil erosion.	Local	Part of the River Eye England Catchment Sensitive Farming Delivery Initiative Priority Catchment is located in the north-east of the NCA. Soil erosion is identified as an issue within this catchment, particularly from bank erosion and erosion from farming practices. These soils, and the lime-rich loamy and clayey soils with impeded drainage are easily compacted by machinery or livestock if accessed when wet, increasing the risks of soil erosion by surface water run-off, especially on steeper slopes. Possible solutions could include an improvement in the condition of riparian habitats beside both small and major watercourses, reintroducing a strong network of habitats. These riparian habitats will capture increased volumes of migrating sediments before it can enter into the rivers and streams. Increasing the network of habitats would also strengthen the movement of species, increase landscape features that contribute to sense of place and tranquillity. Well-timed cultivations and access onto land by low grade pressure machinery and stock to prevent compaction and poaching would also contribute to regulating soil erosion and soil quality. Maintain good soil structural condition and enhance organic matter to improve structure and infiltration.	Work with partners across the NCA to increase woodland and shelter belts and restore 'gappy' hedgerows in poor condition to act as wind breaks and bind the soil. Improve the condition of riparian habitats beside both small and major watercourses, reintroducing a strong network of habitats. These riparian habitats will capture increased volumes of suspended sediment before it can enter into the rivers and streams. Work with landowners to encourage well-timed cultivations and access onto land by machinery and stock to prevent compaction and poaching.	**Regulating soil erosion** **Biodiversity** **Regulating water quality** **Water availability** **Regulating water flow** **Regulating soil quality** **Food provision** **Sense of place / inspiration** **Biomass energy** **Geodiversity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Pollination	Hedgerows Arable	The mature hedgerows throughout High Leicestershire define, enforce and enclose the regular agricultural field pattern. Hawthorn predominates (Midland hawthorn occasionally) with ash and oak as the most common hedgerow species. There are also some ancient hedgerows that are associated with the parish boundaries. Most of the hedgerows are well maintained, particularly along side roads. Some of the enclosure hedgerows have fallen into decline with gaps forming along them whereas others contain occasional mature trees within their length. The principle arable crops are wheat, beans and oilseed rape.	Local	Networks of species-rich hedgerows, managed to maintain a diverse range of flora, which flowers over a prolonged period of time provide a good habitat for pollinating invertebrates to move through and between food crops. The contribution of pollination services to commercial food production is an important service in the area. The area produces high volumes of crops which benefit from pollination including oilseed rape and beans. An increase to the populations of pollinators may facilitate an increase to the types of crops that could be grown in the future.	Continue to ensure the good management of the hedgerows to ensure that they provide a good network of habitat which supports good populations for pollinating invertebrates to move through and between food crops. Work together with farmers and landowners to increase the population of pollinators enabling a more diverse range of crops to be grown in the future expanding the range of food provision thus increasing resilience to the effects of climate change.	**Pollination** **Food provision** **Sense of history** **Biodiversity** **Sense of place / inspiration** **Regulating soil erosion** **Regulating soil quality** **Climate regulation**
Pest regulation	Woodland Hedgerows Arable margins	Many of the well-established semi-natural habitats in this area support a variety of predatory species, such as beetles, which can contribute to the regulation of populations of invertebrates like aphids which can be regarded as a pest species when it affects food crops.	Local	Semi-natural habitats and hedges proximal to areas of commercial agriculture may support species of predators which can regulate populations of pests that adversely affect food crops. Fragmentation and poor connectivity in the network of habitats may limit the movement and effectiveness of predatory species.	Enhance and expand the network of semi-natural habitats that aid the movement of predatory species and bring benefits for pest regulation within food crops, as well as pollination and biodiversity.	**Pest regulation** **Food provision** **Sense of place / inspiration** **Pollination** **Biodiversity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Sense of place/ inspiration	Remote rural landscape, broad rolling ridges Small villages with buildings clustered around a spired church of grey limestone or ironstone, scattered farms Well-wooded character, hedgerows, hedgerow trees, copses, spinneys and small ridgetop woodlands Contrasting valleys that range from small, remote and enclosed to broad wide and intensively farmed Green lanes and tranquil countryside	The sense of place in High Leicestershire has been well maintained. Throughout High Leicestershire there is a network of small villages, hamlets and farm buildings connected by narrow country lanes that are enclosed by mature hedgerows. A common feature within villages is the church tower which acts as a landmark on the approach to each village. Country lanes tend to run through the centre of the linear village settlements with small roads and tracks branching off to either side. Some of the smaller hamlets and farms are connected by the narrow gated roads that run through the open parkland areas to the north of the character area. Hedgerows are mature and have been well managed.	Local	Management to maintain locally distinctive features and elements is also likely to increase sense of history. Conserving and enhancing the distinct landscape character is likely to benefit biodiversity by enhancing the range of habitats, such as woodlands and riverine habitats. Development may have an adverse impact on topography and landform which are key defining features of the landscape character of this area. The landscape is particularly vulnerable to negative landscape and visual impacts. Traditional features and the form of smaller more rural and isolated villages may be particularly vulnerable to development pressure, even on a small scale. Inappropriate development may erode the defining characteristics of the landscape setting for smaller scattered villages across the landscape character area.	Manage and protect the locally distinctive features and elements of the area. Encourage the use of local building stone. Protect the area's distinctive character by maintaining and restoring the pattern of pasture, hedgerows, woodland, parkland and river valleys. Protect and manage woodlands, particularly ancient and semi-natural woodlands.	**Sense of place / inspiration** **Recreation** **Sense of history** **Biodiversity** **Tranquillity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Sense of history	Ridge and furrow Ancient woodland Field patterns Burrough Hill iron-age hill fort Country houses and deserted settlements Small villages with buildings clustered around a spired church of grey limestone or ironstone, scattered farms	A sense of history is evident in the survival of ridge and furrow patterns reflecting the workings of open field townships (at Owston and Newbold, Hungarton, Braunston-in-Rutand, Belton in Rutland, Stoke Dry, Hallaton and Welham). The historic character is further reinforced by clusters of ancient oak/ash woodland (surviving from the Leighfield Forest) on the undulating land around the Eyebrook Reservoir and River Chater. The area contains a wide variety of field patterns of diverse origins, including some remaining evidence of piecemeal enclosure reflected in the irregular hedged boundaries and winding lanes along the river valleys of the limestone lowlands and rolling farmlands. Older village dwellings are distinctive in their use of a subdued red brick in the western and central parts of the area which is replaced by deep orange to rust brown ironstone towards the east. An aspect of history that is likely to be particularly evident to the general public are the well-preserved ramparts of the Burrough Hill iron-age hill fort located on one of the highest points in Leicestershire in Burrough Hill Country Park. This strategic site continues to provide impressive views across the rural open countryside. Fine country houses from the 17th and 18th centuries such as Quenby Hall and Noseley Hall set within parkland on sheltered sites (often associated with a nearby deserted medieval settlement) serve as further visible links to the past.	National	Many of the historic assets such as the ridge and furrow and are potentially at risk from cultivation. By 1995 it was estimated that two-thirds of the historic parkland had been lost. The impact of development could lead to the expansion of the smaller villages that might be out of keeping with local character. Managing and enhancing these assets could increase recreational opportunities and sense of history and place.	Protect and maintain the ridge and furrow with good soil and land management. Maintain and protect historic buildings and landmarks which strongly reflect the traditional character of the area including country houses and churches. Use traditional building materials/ local stone for construction, extension and repair work. Protect and promote important heritage sites.	**Sense of history** **Sense of place/ inspiration** **Recreation** **Biodiversity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Tranquillity	Secluded valleys Winding green lanes Quiet rural character in a sparsely settled landscape	Tranquillity remains a significant feature of this NCA despite the notable decrease in undisturbed areas from 84 per cent in the 1960s to 63 per cent in 2007.	Regional	The decline in tranquillity is largely attributable to growth in traffic. In a national context the tranquillity in this area remains high. Pressures on tranquillity could come mainly in the west of the area with the development of Leicester.	Maintain the quiet rural character of the area by preserving the sparse settlements, secluded valleys and winding green lanes. Conserve more remote areas from development by working to ensure that traditional settlement patterns are retained and maintain relatively high levels of tranquillity.	**Tranquillity** **Sense of place / inspiration** **Biodiversity** **Sense of history**
Recreation	Rights of way network Open access Eyebrook Reservoir Country parks Field sports	The NCA offers a network of rights of way totalling 648 km at a density of 1.14 km per km^2 as well as a small amount of open access land covering 31 ha or just 0.05 per cent of the NCA. The Eyebrook Reservoir provides an important recreation resource with opportunities for birdwatching and fishing while the quiet country lanes offer opportunities for walking and cycling. Burrough Hill Country Park includes a toposcope. The area has a strong and continuing tradition of shooting, equestrian and hunting activities.	Regional	Awareness of the recreational resources in the area is low. It is likely that recreational opportunity could be increased without significant effects on other services particularly by increasing the green infrastructure linking the city of Leicester with the wider countryside. Sympathetic planning and management of sites such Eyebrook Reservoir, Local Nature Reserves and country parks should seek to lessen any negative effects of increased recreation on tranquillity and biodiversity and would offer local communities and visitors opportunities to engage with the natural environment.	Maintain and extend public access routes within the NCA, linking where possible with existing routes. Promote the recreational and educational opportunities afforded by the network of rights of way and improved access to the open countryside from the city of Leicester, which could have a beneficial effect on people's health and wellbeing and provide solutions for sustainable transport. Promote and add to recreational opportunities by implementing the local green infrastructure strategies. Continue to work with stakeholders to manage visitor access to, around and on Eyebrook Reservoir. Continue to work with estates and game keepers to maintain the traditional field pursuits.	**Recreation** **Sense of place/ inspiration** **Sense of history** **Biodiversity** **Regulating water quality** **Climate regulation**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Biodiversity	SPA/Ramsar site SSSI sites Local Wildlife Sites Reservoirs, rivers, field ponds Woodlands Hedgerows	There is less than 1 ha of SPA/Ramsar site in this NCA at Rutland Water. There are 15 SSSI sites, a quarter of them in favourable condition, with two thirds of the sites in unfavourable recovering condition. 226 Local Wildlife Sites cover 1 per cent of the NCA. There are 2 reservoirs; Eyebrook Reservoir and 1 ha of Rutland Water. There are three main rivers in the NCA; the Eye Brook, the River Chater and the River Gwash. The potential ecological status of the Rivers Gwash and Eye Brook and the Eyebrook Reservoir is moderate. The River Chater has a poor ecological potential status. Field ponds are found mainly in the central and western part of the NCA on the clayland fields. Five per cent of the area is woodland a third of which is ancient woodland. A large number of Biological SSSI are present in this region, mainly concentrated along its eastern fringe. A good hedgerow network that has overall been maintained in a good condition.	Regional	There is an opportunity in this area to work with partners and landowners to ensure that the SSSI sites are maintained in favourable condition this will not only help biodiversity but also soil quality and water quality as many of the SSSI are woodland or water based. Other pressures on the biodiversity resource include the effects of pollutants in the river systems and the reservoirs that affect water quality and quantity also. There are also the impacts of climate change that may cause fluctuation of water levels, drought and migration of species. The biodiversity resource occurs in specific areas such as SSSI along the eastern fringe. There is a need to look at the biological connectivity across the area so that networks can be maintained and established. This will have benefits not only for biodiversity but will reinforce sense of place and strengthen the assets that can assist with the regulation of soil erosion and water quality. There are building blocks there already with the strong hedgerow network that can be maintained and built upon.	Work with partners/landowners to maintain in favourable condition the SPA, Ramsar and SSSI sites and get the remaining sites also into good condition. Encourage local management and planning for local wildlife sites. Work with the water companies to manage the reservoirs to enhance biodiversity and recreation as well as maintaining water quality and quantity. Work with partners to build appropriate networks of habitats across the area to strengthen biodiversity, sense of place and assist in the regulation of soil erosion, soil quality and water quality.	**Biodiversity** **Sense of place / inspiration** **Regulating water quality** **Regulating soil erosion** **Recreation** **Climate regulation**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Geodiversity	Geology SSSI Local Geological Sites Soils	There are two geological SSSI; Tilton Cutting notified due to its exposures of the Marlstone Rock formation and Wing Water Treatment Works which is particularly important in providing the longest Ipswichian stage sequence recorded in Britain to date. There are 15 Local Geological Sites. The area is underlain mainly by Lias Group mudstones of Lower Jurassic age but with rocks ranging in age from Late Triassic Mercia Mudstone and Penarth Group up to the Middle Jurassic Lincolnshire Limestone formation. Larger parts of the area are covered by superficial deposits, mainly from the Anglian glaciation. Much of the land being easily cultivated with 96 per cent of the area as Grade 2 or 3 agricultural land.	Regional	With two SSSI and 15 local sites it is important to protect and enhance the features which are of geological interest. This could have additional benefits for biodiversity as well as soil and water quality. Other key benefits are education, scientific research, tourism and recreation. A good example of this happens in the area already, with Tilton Cutting geological SSSI on a disused railway line, which is an important wildlife corridor managed by the Leicestershire and Rutland Wildlife Trust as a nature reserve. The geological resources also provide a 'history' of how climate change throughout time has impacted on the rocks and soils of this area. This could be used to help inform future climate change impacts and prepare for them. It is important to retain the quality, structure and condition of the fertile soils in this NCA for the retention of the geological features and for maintaining food production.	Protect and enhance the local geological sites and bring them into good condition; improve access to key sites where possible. Encourage geological access and interpretation through for example, interpretation boards, leaflets and factsheets for schools. Create trails linking key sites. Support the the delivery of the Local Geodiversity Action Plan particularly opportunities to increase access to and interpretation of geological exposures. Use the geological resources to study previous climate change to support future adaptation. Support good soil and land management particularly to help stabilize the geological sites and bring them into better condition.	**Geodiversity** **Sense of place / inspiration** **Biodiversity** **Recreation** **Regulating water quality** **Regulating soil quality**

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