



Introduction

As part of Natural England's responsibilities as set out in the Natural Environment White Paper¹, Biodiversity 2020² and the European Landscape Convention³, we are revising profiles for England's 159 National Character Areas (NCAs). These are areas that share similar landscape characteristics, and which follow natural lines in the landscape rather than administrative boundaries, making them a good decision-making framework for the natural environment.

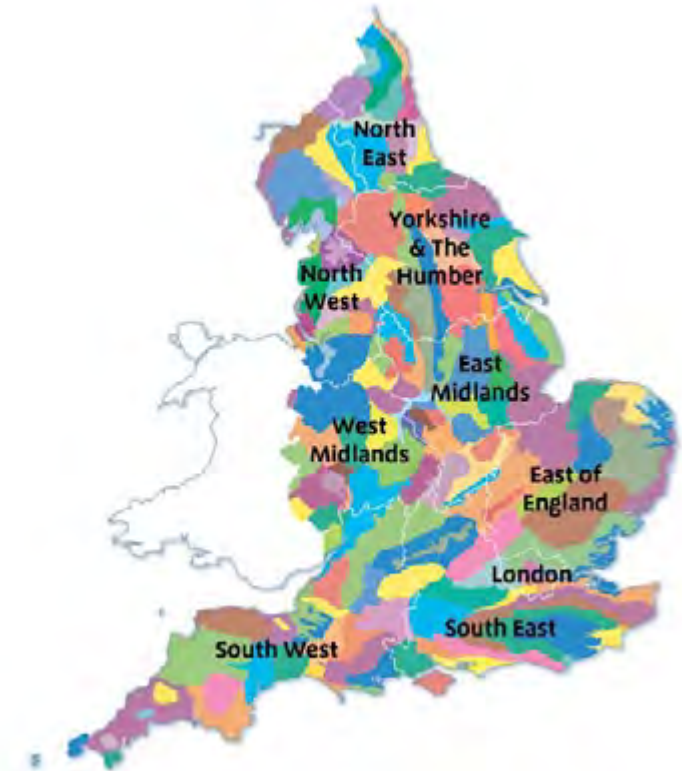
NCA profiles are guidance documents which can help communities to inform their decision-making about the places that they live in and care for. The information they contain will support the planning of conservation initiatives at a landscape scale, inform the delivery of Nature Improvement Areas and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

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

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

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

National Character Areas map



¹ The Natural Choice: Securing the Value of Nature, Defra (2011; URL: www.official-documents.gov.uk/document/cm80/8082/8082.pdf)

² Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services, Defra (2011; URL: www.defra.gov.uk/publications/files/pb13583-biodiversity-strategy-2020-111111.pdf)

³ European Landscape Convention, Council of Europe (2000; URL: <http://conventions.coe.int/Treaty/en/Treaties/Html/176.htm>)

Summary

Leicestershire Vales National Character Area (NCA) shares many characteristics with the neighbouring Northamptonshire Vales NCA. The Leicestershire Vales extend between the town of Hinckley in the west to Leicester in the north-east and southwards towards Market Harborough and Lutterworth. This is a large, relatively open, uniform landscape composed of low-lying clay vales interrupted by a range of varied river valleys. Its sense of place comes less from its overall landform and more from its visually dominant settlements and views towards surrounding higher ground. The city of Leicester dominates the north-eastern corner of the NCA.

Other large- to medium-sized settlements include the towns of Market Harborough, Lutterworth and Hinckley, with many attractive small towns, villages and buildings and features of historic interest in between. The north of the area has a predominance of settlements and a general lack of tranquillity; this contrasts strongly with the distinctly more rural feel in the southern part of the area, where a mixture of arable and pastoral farmland is found.

Country houses, historic designed parkland, waterside trees and meadows are common throughout. The area is rich in historic character, with country houses, parkland and surviving examples of ridge and furrow. There are numerous features and sites of historic interest such as the site of the Battle of Bosworth, near the village of Sutton Cheney, which is of national significance. It attracts many thousands of visitors each year as the location where the Wars of the Roses concluded.

Major road networks that traverse the area include motorways, notably the M1 and the M69. Other main roads include the A6 and the A5, both of which have ancient origins.

Other than the historic environment, most of the ecosystem services within this NCA are locally beneficial, but its river valleys – especially the River Soar and its tributaries – provide regional benefits for water flow and water quality.

There are ongoing challenges in this area, principally development growth of the city of Leicester and many of the smaller towns which has an impact on the rural parts of this NCA. However, development also provides opportunities to raise design standards, strengthen sense of place and increase resilience of some habitats, by improving habitat connectivity and networks through associated green infrastructure provision.

Statements of Environmental Opportunity

SEO 1: Protect and appropriately manage the strong historic character and heritage and the geological assets within the rural and urban landscapes, maintaining the evidence of past land use and connections between agriculture, settlement pattern and topography, as well as the significant places and events that took place within the area, so that the area can be enjoyed by all. Ensure that development is fully integrated into and informed by the landscape.

SEO 2: Manage, conserve and enhance the woodlands, hedgerows, streams and rivers – particularly the rivers Soar, Sence, Swift and Welland – in both rural and urban areas, to enhance biodiversity and recreation opportunities; improve water quality, flow and availability; benefit soil quality; and limit soil erosion.

SEO 3: Increase, manage and enhance the recreational assets, principally the rights of way network, country parks such as Watermead and historic linear features such as the canals. Improve access to these assets and the open countryside from the city of Leicester and surrounding rural communities and provide green infrastructure to help improve people's health and wellbeing.

SEO 4: Create new habitats where opportunities exist, such as woodlands and wetlands at old gravel extraction sites, to extend, link or buffer areas of existing habitat to reduce the impacts of fragmentation. Manage existing grassland, woodlands, coverts and spinneys that contribute to sense of place, enhancing biodiversity resilience and habitat networks.



There are several large to medium sized settlements such as Lutterworth with many buildings and features of historic interest.

Description

Physical and functional links to other National Character Areas

Leicestershire Vales National Character Area (NCA) consists of low-lying clay vales and river valleys and shares many characteristics with Northamptonshire Vales NCA to the south-east. The town of Market Harborough nestles between the Northamptonshire and Leicestershire Vales NCAs and the A4303 runs along the border. To the north-east lies the higher ground of High Leicestershire NCA, and further north lie Leicestershire and South Derbyshire Coalfield NCA and Charnwood NCA, which rise quite steeply from the low-lying land north-west of Leicester. To the north-west of the NCA there is a more gradual transition to the flat, glacial till-dominated edge of the Mease/Sence Lowlands NCA, while to the south-west there is an equally gradual transition to Dunsmore and Feldon NCA and Arden NCA. The Northamptonshire Uplands and Northamptonshire Vales NCAs are to the south.

The area is split geologically into two areas, with the western half underlain by the Mercia Mudstone Group and the eastern half by the Lias Group. The latter continues into the neighbouring Northamptonshire Vales NCA.

The main rivers are the Soar, Sence, Swift and Welland. The River Swift runs out of the area in the south-west into the neighbouring Dunsmore and Feldon NCA. The Soar is fed by the Wreake in the north-west, and the River Sence flows into the area in the south-east. The slightly higher ground around Market Harborough separates the Soar and Welland catchments. Saddington Reservoir provides water for the Grand Union Canal, the 'Leicester Line' of which runs



The Grand Union Canal. The 'Leicester Line' runs north from Norton Junction to Leicester where it joins the River Soar to provide a link to the River Trent and to the Trent and Mersey Canal.

north from Norton Junction in the Northamptonshire Uplands NCA to Leicester, where it joins the River Soar to provide a link to the River Trent and to the Trent and Mersey Canal.

Expansive views into the area are afforded from the fringes of the elevated clay wolds, with the large settlements of Leicester, Hinckley and Market Harborough dominating the views.

The M1 cuts through the middle of the NCA, linking London with the North, and the M69 links the NCA with Dunsmore and Feldon, and Arden in Warwickshire. The A5, historically known as the Roman road of Watling Street, and the Fosse Way (the Bath to Lincoln road) are strategic routes through the area, linking London with Holyhead in Wales and linking Bath to Lincoln. Rail routes run north-south through Leicester, going south to Kettering, Bedford, Luton and London; and north to Derby, Nottingham, Sheffield and Leeds. Junctions north of Leicester station go east to Peterborough and Cambridge and west to Nuneaton and Birmingham.

The area also includes part of the 160-kilometre Leicestershire Round trail, which links several NCAs including Charnwood and High Leicestershire, and National Cycle Routes 6 (London to the Lake District) and 63 (Burton upon Trent to Wisbech in Cambridgeshire).



Improved management of the rivers Soar, Sence, Swift and Welland could enhance biodiversity and improve the water quality, flow and availability.

Key characteristics

- An open landscape of gentle clay ridges and valleys underlain by Mercia Mudstone and Lias groups bedrock but with an extensive cover of superficial deposits occasionally giving rise to moderately steep scarp slopes. There is an overall visual uniformity to the landscape and settlement pattern.
- Land use characterised by a mixture of pasture and arable agriculture that has developed on the neutral clay soils.



The NCA's woodland character is derived largely from spinneys and copses on the ridges and more undulating land and hedgerow trees and hedgerows.

- Distinctive river valley of the Soar and Swift, with flat flood plains and gravel terraces together with tributaries including the Sence. Riverside meadows and waterside trees and shrubs are common, along with waterbodies resulting from gravel extraction.
- Woodland character derived largely from spinneys and copses on the ridges and the more undulating land and from waterside and hedgerow trees and hedgerows. The density, height and pattern of hedgerows varies throughout.
- Diverse levels of tranquillity associated with contrasts between busy urban areas and some deeply rural parts. Large settlements dominate the open character of the landscape. Leicester, Lutterworth, Hinckley and Market Harborough and related infrastructure, including major roads, are often visually dominant.
- Frequent small towns and large villages often characterised by red brick buildings and attractive stone buildings in older village centres and eastern towns and villages. Frequent, imposing spired churches are also characteristic, together with fine examples of individual historic buildings.
- Rich and varied historic landscape, with the nationally important Bosworth Battlefield near Sutton Cheney, prominent historic parklands and country houses, ridge-and-furrow earthworks and important medieval settlement remains, for example at Wistow Hall, Gumley, Knaptoft and Peatling Magna.

Leicestershire Vales today

This is a large, relatively open and uniform landscape composed of low-lying clay vales interrupted by varied river valleys. Its sense of place comes less from its overall landform and more from its visually dominant settlements and views of the surrounding higher ground, particularly to the north of Leicester. The north-eastern corner of the area is dominated by the city of Leicester. Other large- to medium-sized settlements include Market Harborough, Lutterworth and Hinckley, with many attractive small towns and villages, and buildings and features of historic interest in between. In the north of the area there is a predominance of built settlements and a general associated lack of tranquillity. This contrasts strongly with a distinctly rural and tranquil feel to the landscape in the south of the area, where a mixture of arable and pastoral farmland pervades. Country houses, historic designed parkland, waterside trees and meadows are common throughout.

The western part of this large and complex area is underlain by the Mercia Mudstone Group. To the east, the Lias Group mudstones crop out, with common interbedded limestones in the Blue Lias Formation forming a belt up to 5 km wide at the base. Between Market Harborough and Husbands Bosworth, ironstones of the Marlstone Rock Formation form pronounced topographic ridges, locally capped by the Whitby Mudstone Formation. The older, Ordovician age South Leicestershire Diorites form a line of hills from Enderby to Sapcote. These hard igneous rocks have been quarried for road and building stone. The whole area is covered by extensive glacial deposits, mainly of till but also with significant areas of sand and gravel and glaciolacustrine clays which begin to thin out to the south-east around Market Harborough.



Riverside meadows and waterside trees and shrubs are common along many of the rivers within the NCA.

The area is dominated by the river valleys of the Soar, Swift and Sence and their tributaries, with riverside meadows and waterside trees and shrubs common elements. The Soar Valley is dominated by urban development spreading and encroaching from Leicester. Tree cover is often low and localised, and fields are generally large to medium sized. In this open landscape, urban and suburban infrastructure and associated features such as pylons can be conspicuous. To the south of the valley, the hedgerow and woodland cover increases and the

urban influences diminish. A wide range of wildlife can be found in the flood plain wetlands, including otter and water vole and birds such as snipe, redshank and sand martin. Wetlands are also an important habitat for a wide range of invertebrate species; in particular, the Soar Valley contains known sites for a number of nationally rare beetles. Wetland habitat is associated with a few locally scarce plants; however, many watercourses are fringed by common, tall reed-like plants such as common club-rush, grey club-rush and reedmace. Many larger, open waterbodies can be found along the river valleys as a result of gravel extraction. These lakes and wetlands are important for wildfowl. Sites such as Watermead Country Park, on the northern side of Leicester, were initially farmland and then worked for gravel extraction before the disused gravel pits were restored and transformed into lakeside parks and wetlands.

Large woodlands are not a characteristic, but a wooded character derives from the many, usually small, woods, fox coverts and spinneys confined mainly to valley sides, on ridges and on more undulating land. Tree cover throughout the area has been substantially affected by Dutch elm disease and ash canker. Ash die-back has the potential to cause further change. A few larger wooded areas do exist, principally in parkland estates. Ancient woodland is scattered and fragmented but its distribution provides clues to the boundaries and margins of medieval and later open field townships. Mature trees, found across the area and often associated with ancient woodland, are an important habitat for many species. They provide roosting sites for seven species of bat, including Daubenton's, whiskered and Natterer's, as well as birds such as the stock dove, green woodpecker, redstart and barn owl. Mature trees are also particularly important for beetles and lichen species. The relatively low level of woodland in the area makes the remaining mature trees more prominent and influential in the landscape. Other important habitats include a number of small but mature broadleaved woodlands and spinneys, significant areas of grassland such as the

neutral grassland in Goss Meadows and Kirby Frith Local Nature Reserves, and the grassland around Aylestone and Birstall. There are seven Local Nature Reserves in the city of Leicester, many linked by the rivers and the canal flowing through the centre of the urban area.

The landscape contains a considerable variation in field pattern, although the initial impression is of a landscape dominated by enclosure of former medieval open fields. This took the form of both regular geometric patterns – with straight hedgerows and roads among which sit planned farmsteads – and sizeable areas of less regular, non-Parliamentary enclosure dating from the 16th century, which often preserve the curved boundaries of medieval strip fields. There is considerable variety in the distribution, condition and density of hedgerows and hedgerow tree cover. Hedgerows tend to be low and closely trimmed, and hedgerow trees are often in poor condition. There are substantial waterside trees and meadows, but generally the flatter areas are given over to arable, where hedgerows can be particularly low, broken and intermittent. The most common hedgerow shrub is hawthorn, but older hedgerows contain a wide variety of species that are often characteristic of woodland, including field maple, dogwood and buckthorn. Characteristic hedgerow butterfly species include brimstone, purple and white-letter hairstreaks and holly blue. Ridge-and-furrow earthworks, significant in a national context, survive under pasture and, even more importantly, open field patterns survive at Gumley, Saddington and Mowsley (Laughton Hills).

This is an area of mixed farming where, on the slopes of the many minor valleys, on more undulating ground generally and close to settlements, pasture in small fields tends to predominate. Arable land is found on the broader, flat river terraces, and there has been a noticeable recent expansion of arable cultivation within this NCA. Seeds from arable weeds are an important food source for many

species of farmland bird such as grey partridge, corn bunting and skylark. Arable farming also supports butterflies such as the small skipper, gatekeeper and ringlet.

Timber frame was the most common form of building material for domestic and farm buildings before the 18th century, and survives encased in later stone and brick rebuilding. In the town centres – and to some extent in the frequent small towns and villages in the south-eastern part of the area – the older buildings and walls are constructed in an attractive range of local stones. Brick predominates

and varies in colour from orange to deep red, with limestone and use of render adding variety, both in the older village cores and in the more regimented terraces of Leicester and Hinckley. The tradition of using brick as a building material in the area has resulted in many fine and prominent red brick buildings in the landscape. There are many large villages, but the frequent small ones show less 20th-century influence. This is particularly true in the south-east, where an older character of fine stone churches and mellow brick is present. As is the case in the neighbouring Northamptonshire Vales NCA, even when the landscape is not influenced by recent development, settlements are never very far apart and are prominent due to the imposing spired churches that punctuate the skyline. Lutterworth and Market Harborough have retained the character of older market towns and they are linked to the rural areas by a dense network of minor roads.

The area is rich in heritage assets, particularly late medieval buildings, such as Kirby Muxloe Castle, and groups of estate cottages, estate villages and planned farmsteads near the large country houses. There is a high survival of earlier timber-frame buildings in the west of the NCA, an area more notable for variety than uniformity, and also at Market Harborough. The NCA hosts the nationally important battlefield of Bosworth Field, where the last significant battle of the Wars of the Roses was fought in 1485.

In recent times there has been a relatively high rate of change from a more remote, rural character to an urban one. Pressure for development in the Leicestershire Vales is locally concentrated, such as the wind turbines around Lutterworth and at road junctions along the M69, around Hinckley and at Great Glen, as well as on the fringes of Leicester. Together with the presence and use of major transport routes, notably the M1 and M69 motorways and other major roads such as the A6 and A5, widespread development is challenging the rural and unspoilt character of much of the area and is further urbanising the road corridors.



Seeds from arable weeds are an important food source for many species of farmland bird such as the corn bunting.

The landscape through time

The geology of much of the western half of Leicestershire is dominated by the red mudstones of the Triassic-age Mercia Mudstone Group. These rocks were formed from wind-blown dust that settled into shallow saline lakes and mudflats within an extensive alluvial plain, with deposits up to 300 m thick. It was periodically inundated by flash floods that deposited thin beds of siltstone and sandstone. The Mercia Mudstone Group is quarried for brick making in Leicestershire. The older, Ordovician-age South Leicestershire Diorites form a line of low hills from Enderby to Sapcote; these hard, igneous rocks have been quarried for road and building stones. In the south-east of the area, between Leicester and Market Harborough, Triassic rocks are overlain by Jurassic-age limestones and clays. Deposits of glacial till (clay) are widespread throughout the NCA, covering much of the bedrock, along with areas of glacial sand and gravel which have been worked for aggregate.

The river valleys were a focus of settlement from at least Neolithic times and had become extensively settled by the Bronze Age. The gravel terraces of the Soar were thick with bronze-age occupation and ritual sites, and the valleys have been settled ever since. The surrounding land, however, was less densely occupied in prehistory, particularly in Leicestershire west of the Soar.

By the Iron Age, much of the better land had been cleared and there was major settlement in the valleys. Dense occupation of the Soar Valley continued into Roman times, with a major Roman centre established at Leicester (Ratae) on the site of an earlier iron-age ramparted settlement. The Roman roads of the Fosse Way (linking the early 'outpost' garrisons at Exeter and Lincoln and forming an early frontier in Roman-occupied Britain), Gartree Road and Watling Street form features that are still prominent in the

landscape. Romano-British settlement was dense, with villas and hamlets associated with centres such as Leicester.

Anglo-Saxons took over a landscape that was substantially cleared of woodland, except furthest from the river valleys. The '-tons' and '-hams' still dominate the place names, and a number of parish boundaries originate from 'Saxon' estate boundaries. Away from the river valleys, settlement was less dense. A scattering of Scandinavian settlements became established in the 9th century, particularly in the thick boulder clay of Leicestershire, west of the Soar. Leicester developed in this period as a significant Viking settlement. Important towns such as Market Harborough and Lutterworth also owe their origin to the pre-conquest period. As the population expanded and the land was re-organised, frequent nucleated villages developed, surrounded by open fields. Significant areas of ridge and furrow remain from these open fields.

On 22nd August 1485, the Battle of Bosworth was fought in the Leicestershire Vales. This was the last significant battle in the Wars of the Roses, the civil war between the Houses of Lancaster and York that raged across England in the latter half of the 15th century. The battle was won by the Lancastrians and their leader Henry Tudor, Earl of Richmond, by his victory became the first English monarch of the Tudor dynasty. His opponent, Richard III, the last king of the House of York, was killed in the battle. Richard's grave was found during an archaeological investigation in 2012 in a Leicester City Council car park, the former site of Grey Friars church.

From the 15th century onwards there was piecemeal enclosure, but much of the landscape remained unenclosed until much later. The landscape contains a considerable variety of field systems, largely, but not exclusively, related to the process of regular enclosure undertaken in the late 18th and 19th centuries.

There are many surviving ridge-and-furrow earthworks under pasture and, even more importantly, nationally significant open field patterns survive in the townships of Gumley, Saddington and Mowsley (Laughton Hills). With the exception of the parts of forests that extend into the area from neighbouring higher ground and seasonal wetlands, the medieval open field system was extensive across this area. Significant enclosure had certainly taken place before 1750, but many open fields remained and the dominant settlement type continued to be the linear village, with farms concentrated within it. Extensive enclosure, some achieved by private agreement but much formalised through Parliamentary acts, took place in the late 18th and 19th centuries. As it had in the 15th and 16th centuries, enclosure usually meant the conversion of ploughland to pasture. Fossilised cultivation strips, preserved from the last episode of ploughing, were once widespread across the pastoral landscapes of this area. Modern arable practice has dramatically altered this picture, and now most of the remaining areas of ridge and furrow are highly fragmented and vulnerable. Sizeable ridge-and-furrow earthworks occur in some parishes and are key historic features.

Agricultural production developed in relation to the expanding markets of the nearby industrial towns and was heavily biased towards livestock for meat and dairy. Wealthier farms were newly created among the surveyed fields and lanes, many with combination barns serving cattle courts. The poorer inheritors of the enclosed landscape clustered in the old village farmsteads, which gradually declined. As a result, the area contains a much-modified, but still highly significant, survival of 18th-century and earlier farm buildings within the villages, most of which are threshing barns.

Landscaped parks surrounding grand houses were developed between the 17th and 19th centuries when many of the area's fine manor houses, such as



Pressure for further growth continues and the impact of modern development is a major factor in the area, where 'out of town' retail and industrial parks are a common and widely visible feature.

Bosworth Hall, were constructed and villages were rebuilt, occasionally in local stone. The 18th and 19th centuries saw the rapid growth of Leicester as a red brick-dominated residential and manufacturing centre in which the textiles and footwear industries played a major part. These industries transformed settlements in the eastern part of the area, spurred by the development of the Leicester Arm of the Grand Union Canal and the Ashby Canal and later the railways. Visible reminders of the canal system can be found at Foxton

Locks, which is the largest flight of staircase locks on the English canal system. Alongside the locks is the Foxton Inclined Plane, built in 1900 as a solution to operational restrictions imposed by the lock flight. It remained in full-time operation for only ten years and was dismantled in 1928.

Gravel extraction has also left marks on the landscape, although many sites – such as Watermead Country Park – have now been transformed into wetlands, providing recreational and biodiversity benefits.

Leicester continued to expand through the 20th century, absorbing many of the surrounding villages. Pressure for further growth continues and the impact of modern development is clearly evident along the main transport routes and periphery of major settlements, where ‘out of town’ retail and industrial parks are a common and widely visible feature. Transport infrastructure developments – the M1 widening, the A14/M1/M6 junction, the M1/M69 junction and the park and ride at junction 21 of the M1 – are having a visual impact which is further urbanising the M1 corridor. More recently a Sustainable Urban Extension has been agreed at Lubbethorpe, near junction 21 of the M1. This will provide a mixed-use development for up to 4,250 dwellings and related land uses, including schools, open space and 21 ha of employment development.



The Leicestershire Vales settlement pattern formed in medieval times and remains evident where separate villages can be seen clustered around tall church spires.

Ecosystem services

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

Provisioning services (food, fibre and water supply)

■ **Water availability:** There are four main rivers in the NCA: the Soar, the Sence, the Swift and the Welland; and two canal systems: the Grand Union Canal and the Ashby Canal. Saddington Reservoir, a nationally designated Site of Special Scientific Interest, was built to supply water to the Grand Union Canal and is also located within the NCA. The River Soar rises to the east of Hinckley in the west of the NCA and flows north through Leicester. There are a number of tributaries that join the Soar, including the River Sence. There are few water resource pressures within the Soar catchment, partly because most of the public water supply is imported from neighbouring catchments and partly due to the decline of the textile trade in Leicester.

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

■ **Regulating water quality:** Good quality water is available in the River Sence, which currently has a good surface water chemical status. The River Soar is poor quality, while the Grand Union Canal and the River Sence have moderate ecological potential. The groundwater chemical status in most of the NCA is good.



This is an area of mixed farming where pasture in small fields tends to predominate close to settlements.

- **Regulating water flow:** Much of the NCA is located within the River Trent catchment, while an area in the east of the NCA (around Market Harborough) is within the River Welland catchment and in the south around Lutterworth, the River Swift is part of the Severn catchment. The woodland resource in the area helps to slow down the flow of water, and new areas of wetlands created by old gravel extraction sites help to balance water flows.

Cultural services (inspiration, education and wellbeing)

- **Sense of place/inspiration:** The area retains a quintessential East Midlands landscape of mixed farming. Areas of pasture, arable and ridge and furrow provide a strong sense of a medieval landscape. Other notable features that enhance a sense of place are the field patterns, country houses, canals and rivers. There are many villages and small towns, often attractive and with historic, vibrant centres featuring many notable older buildings. The city and county town of Leicester lies within the area and exerts a considerable influence over the surrounding landscape, being the focus of the transport networks, infrastructure, industry and development.
- **Sense of history:** A sense of history is evident in the bronze-age origin and continuity of settlement along the main valleys and a network of Roman roads that still influence the character of the area, not least the Fosse Way and Watling Street, the latter following the route of the modern-day A5. The settlement pattern formed in medieval times remains evident, with separate villages clustered around tall church spires. A long history of agricultural land use is evidenced by remaining examples of ridge and furrow overlaid by later phases of enclosure. The many historic country houses in the area, most of which are still surrounded by parkland, are visible reminders of a prosperous past, as is the canal system – especially the Foxton Locks and the Foxton Inclined Plane. The Battle of Bosworth was the last significant battle of the Wars of the Roses and the battlefield is a nationally significant historic site.



The narrow River Soar where flooding is associated with a lack of capacity in the river channel. It is anticipated that flood risk is likely to increase in the future in this NCA, with further urban growth.

Statements of Environmental Opportunity

SEO 1: Protect and appropriately manage the strong historic character and heritage and the geological assets within the rural and urban landscapes, maintaining the evidence of past land use and connections between agriculture, settlement pattern and topography, as well as the significant places and events that took place within the area, so that the area can be enjoyed by all. Ensure that development is fully integrated into and informed by the landscape.

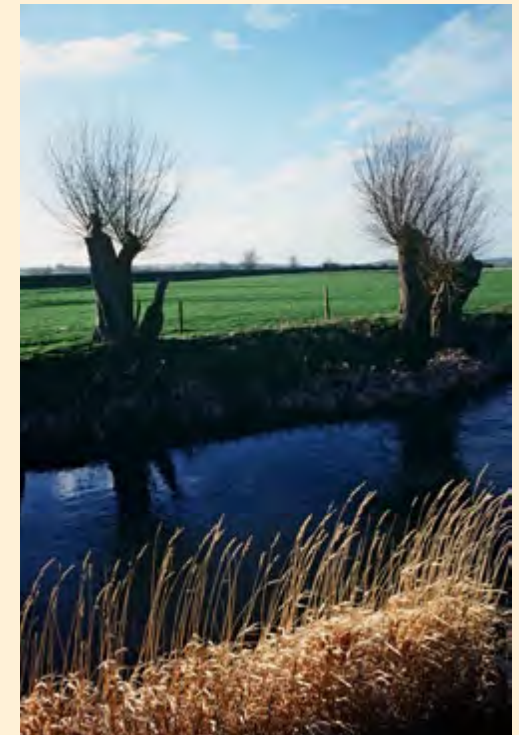
For example by:

- Conserving and maintaining evidence of ridge-and-furrow cultivation and important medieval settlement remains, for example at Wistow Hall, Gumley, Knaptoft and Peatling Magna, by working with farmers to avoid damaging cultivation and land management practices.
- Conserving remaining areas of historic designed parkland, typically on the edge of the area and next to the more wooded landscapes, for example around Wistow, Misterton and Cotesbach, by working with landowners to protect important features such as veteran trees and by planting replacement trees of appropriate species in keeping with historic landscape character.
- Maintaining remaining areas where Tudor and Parliamentary enclosure survives, in particular in the east where there is less 20th-century influence and where hedgerows are currently low but well maintained.
- Encouraging the use of traditional 'Midlands-style' hedgelaying to manage hedgerows, improving their structure and biodiversity value and strengthening landscape character.
- Maintaining and conserving the nationally important Bosworth Battlefield site by enhancing interpretation and minimising any potential damage caused by inappropriate land management and public access.
- Protecting, conserving and enhancing the fabric and understanding of the historic transport networks through the area, notably the Roman roads, the canal, and associated canal architecture and engineering features such as Foxton Locks and Foxton Inclined Plane.
- Using the understanding and knowledge of the distribution and location of settlements across the area to encourage and enable better-informed and complementary designs for development and urban expansion.
- Encouraging the use of locally sourced building materials in the repair and conservation of notable and historic buildings and in new developments within villages and smaller towns.
- Ensuring that green infrastructure is incorporated into new and existing development, providing accessible greenspace, protecting valuable heritage assets and increasing biodiversity in urban areas.
- Managing and interpreting the area's geology and geological sites.

SEO 2: Manage, conserve and enhance the woodlands, hedgerows, streams and rivers – particularly the rivers Soar, Sence, Swift and Welland – in both rural and urban areas, to enhance biodiversity and recreation opportunities; improve water quality, flow and availability; benefit soil quality; and limit soil erosion.

For example by:

- Conserving wet valley woods of alder and willow in the principal valleys of the rivers Soar, Sence, Swift and Welland by maintaining a diverse shrub layer, to provide good wildlife habitat and landscape interest
 - Conserving and maintaining water quality by working with farmers and other landowners to reduce diffuse pollution from agriculture and other land uses through best practice land management, such as the use of buffer strip management.
 - Seeking to introduce sustainable urban drainage systems in new and existing developments and next to the major roads throughout the area, to help regulate water flows (reducing the risk of flooding in urban areas) and to trap pollutants (preventing them from reaching main rivers and streams).
 - Maintaining watercourse corridors as a strategic resource for tourism and recreation, for example by extending informal, small-scale public access where appropriate.
 - Maintaining sustainable levels of recreational use of watercourses and waterbodies such as the Grand Union Canal and restored gravel extraction sites, to ensure benefits for water quality, biodiversity and recreation.
 - Maintaining and reinstating the traditional practice of pollarding riparian trees (mainly willows).
 - Maintaining the linear habitats, particularly the watercourses, which provide movement corridors for declining species such as water vole and also for otter.
- Conserving lowland meadows and pasture within the flood plains, recognising their increasing importance in the management of floodwater, by maintaining traditional management.
 - Removing barriers to fish migration and creating formal fish refuge areas where appropriate.
 - Encouraging best farming practices to improve soil structure and minimise soil erosion, thus improving water quality.



An opportunity for the area is to maintain and reinstate the traditional practice of pollarding riparian trees (mainly willows).

SEO 3: Increase, manage and enhance the recreational assets, principally the rights of way network, country parks such as Watermead and historic linear features such as the canals. Improve access to these assets and the open countryside from the city of Leicester and surrounding rural communities and provide green infrastructure to help improve people's health and wellbeing.

For example by:

- Identifying new opportunities for providing recreational assets such as gravel workings and new woodlands. Offer visitors and local communities opportunities to learn more about these assets and get involved through for example, volunteering, while enjoying the health and wellbeing benefits afforded by contact with the natural environment.
- Creating access to high-quality urban greenspace, linking with climate change adaptation, around the larger settlements on the edge of the National Character Area (NCA), in particular to the south of Leicester and the sub-regional centres of Hinckley and Market Harborough, and other locations that are under pressure for development.
- Creating natural links to the wider countryside to encourage the spread of species and thus enhance adaptation to climate change, in particular in the transportation and water corridors and alongside public rights of way such as the National Cycle Routes 6 and 63 and other local circular routes.
- Creating extensive new planting on the edges of residential and other development to mitigate visual impact, including realising the potential for growing energy crops, while avoiding sensitive sites.
- Enabling and encouraging fishing opportunities by improving recreational facilities in places such as Watermead.



The historical linear features such as the canals could be enhanced to help improve the health and wellbeing of local communities.

SEO 4: Create new habitats where opportunities exist, such as woodlands and wetlands at old gravel extraction sites, to extend, link or buffer areas of existing habitat to reduce the impacts of fragmentation. Manage existing grassland, woodlands, coverts and spinneys that contribute to sense of place, enhancing biodiversity resilience and habitat networks.

For example by:

- Extending links and creating new wildlife corridors with a varied structure and range of habitats, to minimise effects of climate change.
- Creating new and conserving existing notable habitats, in particular lowland wood pasture and parkland, wet woodland and grazing marsh.
- Working with landowners and managers to maintain and enhance existing woods, coverts and spinneys and to plant new woods where appropriate.
- 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 earthworks for their many functions, including their educational value.
- Encouraging the use, if feasible and appropriate, of Leicestershire sheep as a conservation grazing animal that is well-suited to lowland grazing, encouraging associated local branding and marketing of meat and wool and preserving the genetic diversity of this rare breed.
- Enhancing existing woodlands by removing and controlling invasive sycamore and rhododendron.
- Promoting the management and high-quality restoration of quarry wetlands and the creation of new wetland habitats. Improve interpretation and understanding of the local geological resource.

Supporting document 1: Key facts and data

Total area: 71,794 ha

1. Landscape and nature conservation designations

There are no landscape and nature conservation designation 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	n/a	n/a	0	0
European	Special Protection Area (SPA)	n/a	0	0
	Special Area of Conservation (SAC)	n/a	0	0
National	National Nature Reserve (NNR)	n/a	0	0
National	Site of Special Scientific Interest (SSSI)	A total of 15 sites wholly or partly within the NCA	175	<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 231 local sites in Leicestershire Vales NCA covering 1,400 ha, which is 2 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	6	4
Favourable	67	39
Unfavourable no change	57	33
Unfavourable recovering	41	24

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 47 m above sea level to a maximum of 176 m. The average elevation of the landscape is 105 m above sea level.

Source: Natural England (2010)

2.2 Landform and process

This large, complex and heterogeneous area comprises low-lying clay vales and river valleys extending between wold landscapes and other areas of higher ground, including the area known as High Cross Plateau in Warwickshire. In the north the Leicestershire and South Derbyshire Coalfields and Charnwood rise quite steeply from the low lying land west of Leicester. To the north-west there is a more gradual transition to the flat, glacial till dominated edge of the Mease/Sence Lowlands, while to the south of this there is an equally gradual transition to Dunsmore and Feldon.

Source: Leicestershire/Northamptonshire Vales
Countryside Character Area Description

2.3 Bedrock geology

The western part of this large and complex area is underlain by the Mercia Mudstone Group. To the east, the Jurassic Lias Group mudstones outcrop, with common interbedded limestones in the Blue Lias Formation forming a belt up to 5 km wide at the base. Between Market Harborough and Husbands Bosworth, ironstones of the Marlstone Rock Formation form pronounced topographic ridges, locally capped by the Whitby Mudstone Formation. The older, Ordovician age South Leicestershire Diorites form a line of hills from Enderby to Sapcote. These hard igneous rocks have been quarried for road and building stone. The whole area is covered by extensive glacial deposits, mainly of till but also with significant areas of sand and gravel and glaciolacustrine clays which begin to thin out to the south-east around Market Harborough.

These rocks give rise to a moderately undulating landscape characterised by mixed pasture and arable agricultural use that has developed on the neutral clay soils.

Source: Natural England (2010); Leicestershire/Northamptonshire Vales
Countryside Character Area Description

2.4 Superficial deposits

Deposits of glacial till (clay) are widespread throughout the NCA, along with areas of glacial sand and gravel. Along the valley of the Soar there are deposits of sands and gravel deposited by the more extensive river systems that would have been present following the melting of the last ice sheet some 12,000 years ago. These deposits have been commercially worked for aggregate in many locations and the working of these has in places had a significant effect on present day landscape character.

Source: Leicestershire/Northamptonshire Vales Countryside Character Area Description

2.5 Designated geological sites

Designation	Number of sites
Geological Site of Special Scientific Interest (SSSI)	3
Mixed interest SSSI	0

There are 11 Local Geological Sites within the NCA. These include key sites such as sand and gravel workings at Cadeby, Huncote and Shawell, the Arden Sandstone at Western Park, Leicester and in the nearby railway cutting, and the South Leicestershire Diorites at Croft and other localities.

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

Mudstones underlie this area and give rise to productive clay soils across much of the area. The area has fertile soils along the river corridors owing to the conditions produced by the alluvial and glacial drift deposits. Farmed land can be found across the area as a result of the fertile soils, predominately Grade 3 agricultural land. None of the area is classified as Grade 1. On steeper ground and where clays are heavier pasture farming is common.

Source: Natural England (2010); Leicestershire/Northamptonshire Vales 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	4,377	6
Grade 3	55,168	76
Grade 4	2,339	3
Grade 5	0	0
Non-agricultural	0	0
Urban	9,910	14

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 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)
River Soar	38
River Swift	18
River Sence	12
River Welland	11
River Anker	5
River Avon	2
Ashby-de-la-Zouch Canal	13
Coventry Canal	2
Grand Union Canal	47

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 area is dominated by the River Soar. The Soar is fed by the Wreake in the north-west and by the Sence in the south-east. The higher ground around Market Harborough separates the Soar and Welland catchments.

3.2 Water quality

The total area of Nitrate Vulnerable Zone is or 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 1,976 ha of woodland (3 per cent of the total area), of which 125 ha is ancient woodland.

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

4.2 Distribution and size of woodland and trees in the landscape

Woodlands are small and intermittent and are commonly spinneys, copses and game coverts. The majority of woodland is of broadleaved type with oak and ash predominating, and is found on heavier clay soils. Ancient woodlands, particularly in the clay valleys, include oak, ash and field maple. These are generally less than 50 ha in size. A number of veteran trees include ancient oaks. Willows and alders are found along watercourses.

Source: Trent Valley and Rises Natural Area profile; Leicestershire and Northamptonshire Vales Countryside Character Area description

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	1,555	2
Coniferous	171	<1
Mixed	78	<1
Other	172	<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	102	<1
Ancient re-planted woodland (PAWS)	23	<1

Source: Natural England (2004)

5. Boundary features and patterns

5.1 Boundary features

There is considerable variety in the distribution and extent of hedgerow and tree cover and the density of hedgerows. Enclosure is often with low hedgerows with variable densities of hedgerow trees that are often in poor condition. Some loss of hedgerows has resulted from the expansion of arable land and loss of ageing hedgerow trees.

Source: Leicestershire and Northamptonshire Vales Countryside Character Area description; Countryside Quality Counts (2003)

5.2 Field patterns

There is typically considerable variety of fields systems, largely, related to the process of regular enclosure undertaken in the late 18th and 19th centuries overlaying earlier open field systems. There is some survival of fragments of ridge and furrow under pasture and, most importantly, the survival of open field patterns in some nationally important townships at Gumley, Saddington, Mowsley, Sutton Bassett, Welham, Great Oxendon, Clipston, Easton Neston, and Bythorn and Keyston. There are regular geometric patterns formed by straight hedgerows and roads among which sit more recently created farmsteads and field barns. There also exist sizeable areas of earlier, less regular non-parliamentary enclosure such as in the vicinity of the Brampton Brook and River Ise, dating from the 16th and 17th centuries.

Source: Leicestershire and Northamptonshire Vales 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

Grazing livestock holdings are the most numerous in this NCA with 212, followed by 190 farms growing cereals. There was a 36 per cent reduction in the number of dairy farms between 2000 and 2009, falling from 115 farms to 74. There was a 22 per cent increase in the number of cereal farms since, up from 156 to 190 during the same period.

Source: Agricultural Census, Defra (2010)

6.2 Farm size

Holdings between 5 ha and 20 ha in size are the most numerous, with 195, closely followed by those between 20 ha and 50 ha with 193. There are 141 holdings over 100 ha in size. These account for nearly 59 per cent of the farmed area.

Source: Agricultural Census, Defra (2010)

6.3 Farm ownership

2009: Total farm area = 48,354 ha; owned land = 31,642 ha

2000: Total farm area = 48,373 ha owned land = 32,644 ha

Source: Agricultural Census, Defra (2010)

6.4 Land use

Just less than 50 per cent of the farmed land is grassland (23,959 ha), followed by 31 per cent used for growing cereal crops (14,868 ha). These figures remained similar between 2000 and 2009.

Source: Agricultural Census, Defra (2010)

6.5 Livestock numbers

Sheep are the most common livestock (73,600) followed by cattle (43,700) and pigs (19,700). Between 2000 and 2009 the number of sheep fell by 28 per cent (28,600). The number of cattle and pigs also fell during the same period, by 14 per cent (6,900) and 7 per cent (1,500) respectively.

Source: Agricultural Census, Defra (2010)

6.6 Farm labour

The number of full-time principal farmers fell slightly between 2000 and 2009, down from 1,219 to 1,107. The number of full-time farm workers also fell during this time from 271 to 198. The numbers of part-time workers increased (up by 29 to 206) during the same period, however the number of casual workers fell from 197 to 106.

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

Wildlife occurs throughout the area in a wide range of habitats found in both rural and urban areas. Farmed land is an important habitat and in common with much of lowland England, arable land and agriculturally improved pasture comprise a major proportion of the habitats now present within the NCA. These habitats give much of the character to the area and support a wide range of species, including some that have undergone dramatic declines such as skylark and grey partridge.

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)	723	1
Reedbeds	58	<1
Lowland dry acid grassland	37	<1
Flood plain grazing marsh	32	<1
Fens	27	<1
Lowland meadows	15	<1
Purple moor-grass and rush pasture	3	<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/>
- Maps showing locations of S41 species are available at <http://data.nbn.org.uk/>

8. Settlement and development patterns

8.1 Settlement pattern

Development is locally concentrated, such as around Lutterworth and Magna Park, at junctions along the M69, around Hinckley, as well as on the fringes of Leicester. Large villages are frequent and dominated by 19th and early 20th century brick buildings. They are linked by a dense network of minor roads. Villages can be seen clustered around tall church spires.

Source: Leicestershire and Northamptonshire Vales Countryside Character Area description; Countryside Quality Counts (2003)

8.2 Main settlements

Main towns/cities within the NCA are; Leicester, Market Harborough, Hinckley, Lutterworth, and Bulkington. The total estimated population for this NCA (derived from ONS 2001 census data) is: 599,229.

Source: Leicestershire and Northamptonshire Vales Countryside Character Area description; Countryside Quality Counts (2003), Natural England (2012)

8.3 Local vernacular and building materials

There are frequent small towns and large villages, often characterised by red brick buildings. Attractive stone buildings occur in older village centres and eastern towns and villages where an older character of mellow brick and fine stone churches is present. Even when the landscape is not influenced by prominent built up edges, settlements are never very far away and church towers and spires are the most characteristic features of rural areas. Market towns like Market Harborough, Lutterworth and Hinckley where there is a high density of 19th and 20th century red brick houses and buildings.

Source: Leicestershire and Northamptonshire Vales Countryside Character Area description; Countryside Quality Counts (2003)

9. Key historic sites and features

9.1 Origin of historic features

Within the Leicestershire Vales NCA there is the major Roman centre at Leicester and a network of Roman roads, such as Watling Street, which still influences the character of the area. Leicester was also a notable Viking settlement. Parkland remains a significant component of the valley landscapes.

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

9.2 Designated historic assets

This NCA has the following historic designations:

- 7 Registered Parks and Gardens covering 274 ha
- 1 Registered Battlefield covering 632 ha
- 76 Scheduled Monuments
- 1,473 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

- 0.8 per cent of the NCA, 599 ha, is classified as being publically accessible.
- There are 949 km of public rights of way at a density of 1.3 km per km².
- There are no National Trails within the Leicestershire Vales NCA.

Sources: Natural England (2010)

The following table 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	36	<1
Country Parks	241	<1
CROW Access Land (Section 4 and 16)	51	<1
CROW Section 15	63	<1
Village Greens	6	<1
Doorstep Greens	11	<1
Forestry Commission Walkers Welcome Grants	49	<1
Local Nature Reserves (LNR)	265	<1
Millennium Greens	0	0
Accessible National Nature Reserves (NNR)	0	0
Agri-environment Scheme Access	61	<1
Woods for People	127	<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 least tranquil areas correspond with the settlements and in particular the larger towns and cities in the NCA such as Leicester.

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

Tranquillity	Tranquillity Score
Highest value within NCA	28
Lowest value within NCA	-91
Mean value within NCA	-17

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 particularly around the city of Leicester areas are increasingly disturbed whereas in the more rural areas and villages they experience less intrusion. A breakdown of intrusion values for this NCA is detailed in the table below.

Intrusion category	1960s (%)	1990s (%)	2007 (%)	Percentage change (1960s-2007)
Disturbed	34	57	61	27
Undisturbed	52	29	21	-31
Urban	14	13	17	3

Sources: CPRE (2007)

Notable trends from the 1960s to 2007 are the increase in the degree of disturbance as fewer areas are categorised as 'undisturbed' over the same timescale.

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

- Dutch elm disease affected large parts of the area during the second half of the 20th century, resulting in the loss of hedgerow trees. Woodland cover is generally sparse, except for intermittent small woodlands and small valley-side woods, spinneys and copses on the ridges and more undulating land.
- Agricultural activities on land adjacent to woods in some areas have caused impoverishment of woodland flora, through eutrophication and spray drift, particularly on smaller sites. Conversion of pasture to arable land with close ploughing has also sometimes resulted in tree root damage.
- Habitat fragmentation is evident across the area. There is a lack of younger generations of trees producing an uneven age structure, leading to breaks in continuity of deadwood habitat and loss of specialised, dependent species.
- Mature trees have also been affected by urban development and agricultural practices, removal of trees for safety reasons or perceptions of tidiness and lack of management, for example pollarding, and unsympathetic lopping and topping.

Boundary features

- There is variety in the distribution and extent of hedgerow and tree cover and density of hedgerows. On some valley flood plains, such as that of the Welland, there are substantial waterside trees and meadows, but elsewhere

flatter areas are generally used as arable farmland with low, intermittent and often 'gappy' hedgerows.

- Traditional 'Midlands' style hedgelaying is still practised in places.

Agriculture

- There is a continuing trend to increase the area of arable cropping and for other changes in land use (farm reservoirs, equestrian facilities and associated infrastructure including fencing, training circles and stables) to replace traditional pasture.

Settlement and development

- There has been a relatively high rate of change from a rural character to urban character within this predominantly rural area. About 11 per cent of the area lies within green belt. Development is locally concentrated, such as around Lutterworth/Magna Park, at junctions along the M69, around the edges of the area in particular Market Harborough, Hinckley and Earl Shilton, as well as on the fringes of the city of Leicester, such as Oadby and Wigston. These changes in settlement pattern and commercial and retail developments, coupled with the intrusive nature of the major transport routes, namely the M1, M69, A5 and A6 passing through the NCA, have served to weaken the character of the area.
- High-density residential development at the edges of villages and towns has often been intrusive and there has often been a lack of screening vegetation to help assimilate new development. Such development may also be out of keeping with local character in its layout, design and materials.

Semi-natural habitat

- There is a lack of semi-natural habitat, which currently covers approximately 1 per cent of the NCA.
- With an increase in the area of arable cropping there have been impacts on pasture, woodlands and hedgerows.

Historic features

- Changes in land use threaten to diminish still further the area's important legacy of ridge-and-furrow earthworks under pasture, a particular feature in the Loughton Hills.
- In 1918 about 3 per cent of the area was historic parkland. By 1995 it is estimated that 60 per cent had been lost. About a fifth of the remaining parkland is covered by a Historic Parkland Grant.

Coast and rivers

- There are a number of changes that have affected the NCA's rivers including; infilling, siltation as a result of agricultural cultivation, various engineering schemes, road building and other developments which increase run-off and alter the catchment characteristics, and recreational pressures.
- The Grand Union and Ashby Canals have been subject to eutrophication from fertiliser run-off from surrounding land and increased recreational use, including boating and fishing, with associated dredging and management.

Minerals

- Several gravel extraction sites sit within this area such as at Ashby Parva, Lutterworth, Cadeby, Shawell, Huncote and Husbands Bosworth (on the

southern border of this NCA).

- Croft Quarry is also found within this area, one of Leicestershire's four main hard rock extraction sites.
- Some old worked-out minerals sites have been transformed into local nature reserves providing benefits for wildlife and people, such as Watermead Country Park to the north of Leicester.

Drivers of change

Climate change

- The Leicestershire Vales is un-wooded in character so what tree and woodland cover there is makes an important contribution to the landscape. Climate impacts may make subtle and varied changes to this component of the landscape character but locally impacts may be more significant. It is likely that individual trees, groups of trees and hedgerows may be more at risk of loss and damage, notably due to pests and disease, wind-blow and fire.
- Climate change may bring increased risk of soil erosion and unstable ground (landslides) as a result of long periods of drought followed by intense rain. It may lead to increased risk of flooding and potentially alter the courses of rivers and streams.
- Increased summer temperatures may see an increase in incidents of algal bloom on some of the larger waterbodies such as the Saddington Reservoir.
- As air temperatures rises, so do water temperatures particularly in shallow stretches of rivers and the surface waters of lakes, reducing levels of

dissolved oxygen. The rivers, streams and reservoirs may become unsuitable for certain species.

- When stream flows peak earlier in the spring, owing to warmer temperatures, low stream flows begin earlier in the summer and last longer into the autumn. These changes stress aquatic plants and animals that have adapted to specific flow conditions.

Other key drivers

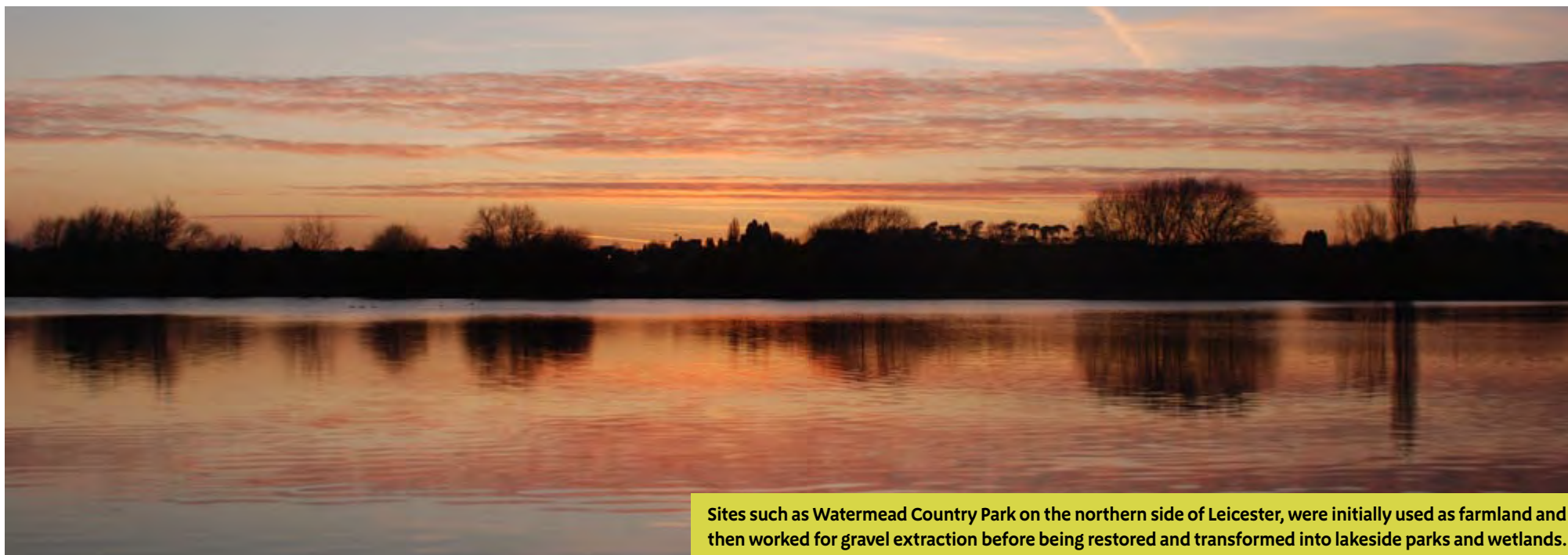
- There has already been a significant increase in arable farming in this NCA and with increased pressure for food production as a result of a national drive for greater self-sufficiency this trend is likely to continue resulting in continued pressure to convert grassland to arable use.
- Lowland meadows and pasture within the flood plain will play an increasing role in retaining and storing floodwater and this traditional type of management would further assist in flood risk regulation.

- Modern development and infrastructure pressure arising from the need to accommodate the expansion of Leicester, Hinckley and Market Harborough is likely to be experienced.
- The city of Leicester is identified as a principal urban area, with Hinckley and Market Harborough as sub-regional centres with the capacity for appropriate sustainable new growth and regeneration. Leicester and Hinckley are described as 'Growth Points' for receiving new development. Consequently the area is highly likely to come under considerable pressure for extensive new residential and other development.
- Recent wind turbine developments around Lutterworth.
- Continuing pressure for gravel extraction along the river valleys.

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.



Sites such as Watermead Country Park on the northern side of Leicester, were initially used as farmland and then worked for gravel extraction before being restored and transformed into lakeside parks and wetlands.

Statement of Environmental Opportunity	Ecosystem service																		
	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
SEO 1: Protect and appropriately manage the strong historic character and heritage and the geological assets within the rural and urban landscapes, maintaining the evidence of past land use and connections between agriculture, settlement pattern and topography, as well as the significant places and events that took place within the area, so that the area can be enjoyed by all. Ensure that development is fully integrated into and informed by the landscape.	↗*	↗*	↗*	↔*	↗**	↗**	↗**	↗**	↗**	↗**	↗*	↗*	n/a	↗***	↗***	↗*	↗**	↗**	↗*
SEO 2: Manage, conserve and enhance the woodlands, hedgerows, streams and rivers – particularly the rivers Soar, Sence, Swift and Welland – in both rural and urban areas, to enhance biodiversity and recreation opportunities; improve water quality, flow and availability; benefit soil quality; and limit soil erosion.	↔**	↗***	↗***	↗*	↗**	↗*	↗***	↗***	↗***	↗***	↗*	↗*	n/a	↗**	↗**	↗*	↗*	↗**	↗*
SEO 3: Increase, manage and enhance the recreational assets, principally the rights of way network, country parks such as Watermead and historic linear features such as the canals. Improve access to these assets and the open countryside from the city of Leicester and surrounding rural communities and provide green infrastructure to help improve people’s health and wellbeing.	↔**	↗**	↗**	↔*	↗**	↗**	↗**	↗**	↗**	↗**	↗**	↗*	n/a	↗**	↗*	↔*	↗***	↗**	↗*
SEO 4: Create new habitats where opportunities exist, such as woodlands and wetlands at old gravel extraction sites, to extend, link or buffer areas of existing habitat to reduce the impacts of fragmentation. Manage existing grassland, woodlands, coverts and spinneys that contribute to sense of place, enhancing biodiversity resilience and habitat networks.	↔**	↗**	↗***	↗*	↗**	↗**	↗***	↗***	↗***	↗***	↗**	↗*	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
<p>An undulating, open landscape of gentle clay ridges and valleys with occasional steeper scarp slopes.</p>	<ul style="list-style-type: none"> ■ Underlain mostly by Mercia Mudstones and Lias group rocks with an extensive covering of superficial deposits these give rise to a moderately undulating landscape characterised by mixed pasture and arable agricultural use that has developed on the neutral clay soils. ■ The valleys drain radially from the uplands and have a significant influence on the landscape where the streams have eroded convex sloped valleys that are in part responsible for creating the undulating landform. ■ A lack of tree cover and woodland results in the landform being prominent.
<p>Many historic features, particularly Roman roads, grand and vernacular buildings, canals, ridge and furrow and a nationally significant battlefield.</p>	<ul style="list-style-type: none"> ■ There is evidence of the bronze-age pattern of settlement along the main valleys and a network of Roman roads which still influence the character of the area, not least the Fosse Way and Watling Street followed by the current route of the A5. ■ The nucleated settlement pattern formed in medieval times remains evident where separate villages can be seen clustered around a church often with a tall spire. ■ A history of agricultural land use is evident in remaining examples of ridge and furrow in the south of the NCA, now overlaid with a strong rectilinear field pattern of medium to large fields as a result of Parliamentary enclosure. ■ Fragments of ridge and furrow survive under pasture and, most importantly, the survival of open field patterns at Gumley, Saddington and Mowsley (Laughton Hills). ■ The many historic country houses in the area, most of which are still surrounded by parkland, are visible reminders of a prosperous past, as are the canal systems and especially the engineering examples at Foxton Locks and the Foxton Inclined Plane. ■ The Battle of Bosworth was the last significant battle of the Wars of the Roses, the civil war between the Houses of Lancaster and York that raged across England in the latter half of the 15th century.

Landscape attribute	Justification for selection
Varied field and enclosure pattern.	<ul style="list-style-type: none"> ■ There is much variety in the distribution and extent of hedgerow and tree cover and density of hedgerows. On some valley flood plains, such as that of the Welland, there are substantial waterside trees and meadows, but elsewhere flatter areas are arable farmland with low and intermittent hedgerows. ■ In some areas, neglect of hedgerows and lack of management or over-management, has led to the decline of the overall structure of the landscape and an increase in the visual dominance of urban influences. ■ The patterns of medieval open fields, Tudor enclosure and Parliamentary enclosure can be found across the area. ■ A number of hedgerows are still managed by the traditional 'Midlands style' of hedgelaying.
Many urban areas and large, visually dominant settlements.	<ul style="list-style-type: none"> ■ As a result of an open character, the frequent large settlements tend to dominate the landscape. ■ The expanding city of Leicester, with its outer ring of enlarged villages dominates the north-east landscape. The main settlements also have extensive edges of commercial and retail buildings and out of town development spread along their respective river valleys. ■ Several smaller towns like Market Harborough and Lutterworth have a high density of 19th- and 20th-century red brick houses and buildings. ■ The city and county town of Leicester acts as a focal point in the landscape and has a strong influence on the local sense of place.
Distinctive river valley of the Soar with flat flood plains and gravel terraces together with its tributaries including the River Sence.	<ul style="list-style-type: none"> ■ The Soar is fed by the Sence in the south-east. The River Swift flows into and out of the neighbouring area of Dunsmore and Feldon in the south-west. ■ Higher ground around Market Harborough separates the Soar and Welland catchments. ■ Riverside meadows and waterside trees and shrubs are common. ■ River valleys have been the focus of settlements from Neolithic times. ■ Gravel extraction is prominent along the Soar Valley, often on land previously used as arable farmland.
Low percentage of woodland resource.	<ul style="list-style-type: none"> ■ Only 3 per cent of the NCA is woodland. ■ A wooded character is derived largely from spinneys and copses on the ridges and more undulating land and from waterside and hedgerow trees and hedgerows. ■ Dutch elm disease and ash canker have affected tree cover.

Landscape attribute	Justification for selection
<p>A settled landscape with 20th-century development, associated with major transport routes, connecting a few large towns, enlarged commuter villages and isolated farmhouses.</p>	<ul style="list-style-type: none"> ■ Settlements with a strong sense of place and a historic core are being diluted at their edges by modern development. Commuter villages near Cambridge, such as Sawston, or villages with railway stations that have grown since the Second World War, such as Foxton and Meldreth, have all been unable to retain their rural character. ■ Distinctive 19th-century white or yellow brick farmhouses, some of which have expanded into small rural enterprises. ■ 20th-century development of Stevenage, adjoining the NCA in the south-west, and Letchworth which is the world's first 'garden city'. ■ Cuttings alongside new road developments such as the Baldock bypass (A505) can be left unsprayed to encourage natural plant re-colonisation with associated invertebrate populations. ■ To the east of Newmarket the villages tucked into the more undulating terrain are often Georgian, built of red brick and flint with slate, pegtile or thatched roofs. ■ Further south there is a transitional zone around Saffron Walden onto the till which supports a series of attractive villages such as Barley, Barkway and the Chishills. ■ Although Cambridge lies to the northern boundary of the NCA it is one of the fastest-growing cities in Western Europe and its expanding southern developments in the green belt influence the developed character of this NCA.
<p>Historic archaeological features.</p>	<ul style="list-style-type: none"> ■ Significant linear features, such as Devil's Dyke, Fleam Dyke, Heydon/Bran Ditch, Brent Ditch, Icknield Way and some stretches of Roman roads. ■ Earthbanks – populated by hill forts and burial mounds, the latter being very noticeable at Therfield Heath.
<p>Mixed pasture and arable agricultural use that has developed on the neutral clay soils.</p>	<ul style="list-style-type: none"> ■ Neutral clay soils supporting three-quarters of the area as Grade 3 agricultural land. ■ An area of mixed farming where on the slopes of the many minor valleys, on more undulating ground generally and close to settlements, pasture in small fields tends to predominate. ■ There is a tendency for arable land on the broader flat river terraces and there has been a noticeable recent expansion of arable in the Leicestershire Vales. ■ Between 2000 and 2009 the area of land used for cereal farming increased by nearly a quarter.

Landscape opportunities

- Protect the open, undulating landscape of gentle clay ridges and valleys with occasional steeper scarp slopes with its rich and varied historic sites and its fragile but valuable woodland and hedgerow resource.
- Protect this landscape's mixed farming systems by working to prevent 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 protect lowland grassland from fragmentation to improve habitat condition, encourage species diversity and resilience to climate change following appropriate management options under Environmental Stewardship and its successor scheme.
- Protect from damage and appropriately manage the area's cultural and historical heritage in particular the Bosworth Battlefield, Foxton Locks, areas of ridge and furrow, historic country houses and the parkland landscapes such as those found at Wistow, Misterton and Cotesbach including veteran trees and hedgerows.
- Plan to establish a strong landscape framework as a context for further development expansion around Leicester and other larger settlements, for example Hinckley, ensuring that new development does not have a negative impact on landscape character. Consider the visual impact of any new development, particularly urban intrusion into rural areas, and manage road improvements to maintain the existing character of the rural road network.
- Manage arable cropping patterns and arable cultivation to maintain strong visual identity and encourage rare arable plants and range-restricted farmland birds and mammals, utilising appropriate agri-environment scheme management options.
- Manage and conserve the distinctive field patterns, hedgerow networks and hedgerow trees. Ensure woodlands can be managed as single entities 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 where hedgerows connect areas of woodland.
- Encourage the use of traditional hedgelaying techniques to bring hedgerows back into good condition.
- Manage the network of streams and rivers, such as the Soar, Swift and the Sence, 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 these will help sustain these wetland habitats.
- Plan for the opportunity to enhance the old workings of gravel extraction sites along the river valleys, creating new wetland habitats and providing recreational opportunities.
- Manage all Local Sites to ensure that they are in good condition and that suitable sites are accessible for recreation, education and research.

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	Soils Mixed farming regime – arable cropping with dairy, beef and lamb production	Underlain dominantly by superficial deposits, Mercia Mudstone and Lias group rocks, these give rise to a moderately undulating landscape characterised by mixed pasture and arable agricultural use that has developed on the neutral clay soils. Arable farming predominates across the area benefitting from around three quarters of the area being Grade 3 agricultural land. On steeper ground and where clays are heavier, pasture farming is common. Between 2000 and 2009 dairy farms have reduced by a third whereas cereal farming has increased by nearly a quarter.	Regional	Intensively farmed soils can become vulnerable to compaction and erosion, so it will be important to maintain high levels of organic content and good soil structure to ensure soils remain productive. Arable farming, following best cultivation and cropping practices, can provide multiple benefits in maintaining the level of food production and for potentially enhancing biodiversity and preserving the historic landscape character. Pressures include the reduction or loss of permanent pasture to arable and the potential effects of diffuse pollution on watercourses particularly along the River Mease. To achieve a balance and optimise food production, land managers and farmers could be encouraged into agri-environment schemes and the application of catchment sensitive farming techniques.	Manage soils to allow continued sustainable agricultural production by increasing organic content and water infiltration, for example use of grass buffers along watercourses and inclusion of fallow in crop rotation. Work with farmers to manage arable cropping patterns to encourage rarer arable plants, farmland birds and mammals and create grass margins around arable fields. Extend agri-environment agreements with farmers to minimise the effects of diffuse pollution by adopting buffer strip management particularly along the River Mease to help improve water quality and reduce total loss of pasture to arable.	Food provision Biodiversity Pollination 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	<p>Areas of existing woodlands</p> <p>Parkland areas with woods and trees</p>	<p>This area has a low hectarage (1,976 ha) of woodland covering 3 per cent of the NCA of which only 6 per cent is ancient woodland. There is no significant commercial forestry interest so current timber provision is low.</p>	Local	<p>Bringing undermanaged existing woodland into management could increase the local source of timber in the future, which will bring benefits for biodiversity, water quality, soil quality and reduce the risk of soil erosion.</p> <p>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.</p> <p>By reintroducing coppicing there will be an increase in timber available in the area and spin-off benefits for biodiversity with healthier and more diverse stock.</p> <p>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.</p> <p>Hedgerow trees were once an important source of local timber. Loss due to Dutch elm disease and ash canker has dramatically reduced tree stocks in the area.</p>	<p>Bring woodlands, including woodlands within parklands, into active management and re-introduce coppicing to increase timber provision.</p> <p>Encourage the planting of a new generation of hedgerow trees and positively manage existing hedgerow trees to reinstate a future local timber resource.</p> <p>Plan for and encourage the planting of new woodlands in and around urban fringe developments to better assimilate urban growth, providing valuable green space, increased biodiversity, reduced visual intrusion and a sustainable source of local timber.</p>	<p>Timber provision</p> <p>Biodiversity</p> <p>Sense of place/ inspiration</p> <p>Sense of history</p> <p>Climate regulation</p> <p>Regulating soil erosion</p> <p>Regulating soil quality</p> <p>Regulating water quality</p> <p>Regulating water flow</p> <p>Biomass energy</p>

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Water availability	<p>Rivers</p> <p>Reservoirs</p> <p>Semi-natural habitats; rivers and streams, woodlands, flood plain grazing marsh and other permanent pasture</p>	<p>There are four main rivers in the NCA (the rivers Soar, Sence, Swift and Welland) and two canal systems (the Grand Union and Ashby canals). Saddington Reservoir, a nationally designated SSSI, built to supply water to the Grand Union Canal is also located within the NCA.</p> <p>There are no major aquifers in the NCA.</p> <p>The River Welland currently has a Catchment Abstraction Management Strategy (CAMS) 'over abstracted' status.⁴ The River Soar rises to the east of Hinckley in the west of the NCA and flows north through Leicester. There are numerous tributaries that join the Soar including the River Sence. There are few water resource pressures within the Soar catchment as the vast majority of public water supply is imported from neighbouring catchments.</p> <p>The rivers Soar and Sence currently have a CAMS 'water available' status.⁵ The River Swift, which can suffer from low flows during the summer months due to public water supply demands and when used as a water resource for the Coventry Canal, currently has an 'over abstracted' CAMS status.⁶</p>	Regional	<p>Water resources during dry months can be scarce. In severe cases, low flows and water levels can affect water supply causing restrictions to people and business. Provision of water for livestock from rivers may also be compromised.</p> <p>The ability of a catchment to maintain a constant flow rather than experience flood and drought episodes is improved by healthy soils and suitable 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.</p> <p>Water should be used sustainably and land management practices encouraged that will increase water infiltration.</p> <p>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:</p>	<p>Appropriately manage the rivers Soar, Sence, Swift and Welland to protect the main water sources within the area and maintain and protect the Grand Union and Ashby canals as supplementary water and recreation sources.</p> <p>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.</p> <p>Work with other partners to implement the Welland Improvement Plan Objective to tackle water resource and flow issues.</p> <p>Work in collaboration with riparian land owners and managers, potentially through the Catchment Sensitive Farming Scheme, to manage watercourses to prevent diffuse pollution entering the watercourses and allow water table levels to rise where appropriate.</p>	<p>Water availability</p> <p>Regulating water quality</p> <p>Biodiversity</p> <p>Recreation</p> <p>Sense of place/ inspiration</p> <p>Regulating soil erosion</p>

⁵ *The Soar Catchment Abstraction Management Strategy*, Environment Agency (February 2013)

⁶ *The Warwickshire Avon Catchment Abstraction Management Strategy*, Environment Agency (June 2006)

- 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.

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Genetic diversity	Native breed sheep	The Leicester sheep 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 United Kingdom and very few locally.	Local	<p>The Leicester sheep, particularly well-suited to lowland grazing, could have commercial value as a local product for both its meat and wool. Its historic association with Leicestershire, and the textile industries associated with the city of Leicester, could be capitalised on linking the breed to the landscape through local grazing schemes and marketing as local produce.</p> <p>The small number of breeding ewes means this population remains fragile so encouraging the breed would help maintain numbers and genetic sources.</p>	<p>Encourage viable flocks of Leicester sheep and the genetic basis of the breed to secure its future.</p> <p>Work with farmers and the local community to explore the potential to develop a local brand and a local market for quality meat and wool from the breed.</p> <p>Seek to raise the profile of the Leicester sheep breed and its historical significance and connection with the area through branding. Promote its use as a grazing animal in local grazing schemes and conservation grazing.</p>	<p>Genetic diversity</p> <p>Sense of place/ inspiration</p> <p>Biodiversity</p> <p>Food provision</p> <p>Sense of history</p>

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Biomass energy	Soils Existing woodlands	Low lying clay vales containing large and expanding urban areas with soils that could potentially accommodate increased yields from short rotation coppice (SRC) and miscanthus. The existing woodland cover (3 per cent of the NCA) offers some potential for the provision of localised biomass, through bringing unmanaged woodland into management.	Local	<p>A large heterogeneous area where significant energy crop opportunities exist, albeit bringing a new character by creating some enclosure. The potential yield for SRC is varied spatially across the NCA; the area around the city of Leicester in the north of the NCA has low potential SRC yield as does the area around Hinckley (in the west of the NCA), while the central part of the NCA (to the south of Leicester and to the west of Market Harborough) has high potential yield.</p> <p>The existing woodland cover offers limited potential for the provision of biomass, both through bringing unmanaged woodland into management or as a by-product of commercial timber production.</p> <p>The potential miscanthus yield in the NCA is high around Leicester and in the centre of the NCA and medium around Market Harborough in the east and north-west. For information on the potential landscape impacts of biomass plantings within the NCA, refer to the tables on the Natural England website at: http://www.naturalengland.org.uk/ourwork/farming/funding/ecs/sitings/areas/default.aspx.</p>	<p>Ensure good soil management to keep soils fertile and maintain potential for biomass opportunities by increasing organic matter inputs.</p> <p>Where feasible, bring unmanaged areas of woodland back into management to increase localised biomass production.</p> <p>Seek opportunities to plant energy crops to increase biomass production while maintaining the overall character of the landscape.</p>	<p>Biomass energy</p> <p>Climate regulation</p> <p>Regulating soil erosion</p> <p>Regulating soil quality</p> <p>Biodiversity</p> <p>Timber provision</p> <p>Sense of place/ inspiration</p>

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 and field boundaries	<p>The mineral soils over most of the NCA have low carbon content (0 to 5 per cent) but carbon sequestration and storage can be increased by increasing organic matter inputs and by reducing the frequency/area of cultivation.</p> <p>There are small pockets of soil with higher carbon content (5 to 20 per cent) which may be associated with the loamy and clayey flood plain soils, under permanent pasture, with naturally high groundwater. These are mainly mineral soils but some may be peaty at depth or include small areas of peaty soils.</p> <p>Higher carbon content may also be associated with other areas of permanent grassland, grazing marsh, reedbeds and areas of woodland cover in the NCA.</p>	Local	<p>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 for example water quality through diffuse pollution). Soil carbon and soil carbon storage capacity will be higher under areas of woodland, permanent pasture and heathland.</p> <p>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.</p>	<p>Encouraging the maintenance of permanent pasture to increase soil carbon storage, with a subsequent improvement in soil quality.</p> <p>Maintain woodland in good condition to benefit carbon storage in soils.</p> <p>Increasing appropriate woodland management (such as coppicing and pollarding) to increase both sequestration and the resilience of woodlands to climate change.</p> <p>Ensuring that any new woodland planting is 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.</p>	<p>Climate regulation</p> <p>Biodiversity</p> <p>Sense of place/ inspiration</p> <p>Regulating soil quality</p>

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	<p>Saddington Reservoir has not been subject to water quality testing. The only river or canal subject to surface water chemical testing in the NCA is the River Sence, which currently has a good surface water chemical status. The potential ecological status of the River Soar is poor while the Grand Union Canal and the River Sence have moderate ecological potential. Although there are no major aquifers in the NCA, the groundwater chemical status in the majority of the NCA is good.</p> <p>Woodland cover, which helps to improve water quality by slowing down the pathway of run-off, is limited in the area. There is however, an extensive network of hedgerows. Gradients in the landscape tend to be shallow, both limiting the velocity of cross-land 'contaminated' water flows.</p> <p>A tenth 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.</p> <p>The large urban and suburban areas and some of the industrial activities in and around Leicester and the extensive major road network across the area present significant sources of pollutants.</p>	Regional	<p>Agreements (Catchment Sensitive Farming) could be extended with farmers to reduce nutrient and pesticide losses to water from agricultural holdings. Water quality can be enhanced by ensuring that Saddington Reservoir is kept in good condition, semi-natural vegetation used as buffer strips and reedbeds used to increase biodiversity and naturally filter the water entering the reservoir, enhancing the quality of water generally.</p> <p>Pressures affecting water quality include land use change, agricultural intensification and high levels of phosphorous from sewage treatment works and road run-off.</p> <p>Slowing the pathway of run-off could have significant impacts on regulating soil erosion and subsequent sedimentation, and impacts on biodiversity and soil.</p> <p>Himalayan balsam, a non-native invasive plant that colonises river banks, restricting native riverside plant species, which in turn increases the amount of fine sediment entering the channel through surface run-off.</p>	<p>Appropriately manage the rivers, streams and reservoirs to support and protect their biodiversity and ensure good water quality.</p> <p>Promote the Welland Implementation Plan to domestic, agricultural and industrial stakeholders to improve the quality of the water in this catchment.</p> <p>Promote the Catchment Sensitive Farming Scheme to farmers and landowners.</p> <p>Ensure good management of woodlands and hedgerows so that they can act as natural barriers to run-off.</p> <p>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.</p> <p>Identify and implement sustainable urban drainage systems and other green infrastructure techniques in and around urban areas and alongside major transport routes that will help to intercept polluted run-off before it reaches rivers, streams and other waterbodies.</p>	<p>Regulating water quality</p> <p>Biodiversity</p> <p>Water availability</p> <p>Regulating soil erosion</p> <p>Regulating soil quality</p> <p>Regulating water flow</p> <p>Sense of place/inspiration</p> <p>Recreation</p>

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating water flow	<p>Rivers and streams</p> <p>Soils</p> <p>Semi-natural habitats; woodlands, flood plain grazing marsh and hedgerows</p> <p>Gravel extraction sites</p>	<p>The majority of the NCA is located within the River Trent catchment while an area in the east of the NCA (around Market Harborough) is within the River Welland catchment. The Environment Agency flood risk map indicates that there is flood risk associated with the River Soar, the River Sence and the Grand Union Canal in and around Leicester where flooding results from a lack of capacity in the river channels and the consequent flooding of the river flood plains. It is anticipated that flood risk is likely to increase in future with further urban growth. Leicester is also susceptible to surface water flooding when the capacity of urban drainage systems is exceeded.</p> <p>The Welland Catchment Flood Management Plan (CFMP) identifies Market Harborough as at risk from flooding from the River Welland. The town has a history of river and surface water flooding, although flood risk is not expected to increase significantly in the future. The town centre has flood walls along the River Welland and in the short term the policy is to maintain these.</p> <p>In the rural areas to the west of Market Harborough that are within the River Welland catchment, the CFMP indicates that there is low flood risk to people and property.</p> <p>Gravel extraction sites are prominent along the Soar.</p>	Regional	<p>This area has a moderately low flood risk overall so the preferred approach includes ceasing bank and channel maintenance in some places to help increase continuity between rivers and their flood plains, which will also improve wetland and aquatic habitats.</p> <p>New woodland planting schemes along banks and on the flood plain could also help slow down the flow of water thereby further reduce flooding events.</p> <p>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 rivers to respond to varying levels of water flow naturally.</p> <p>Using the opportunity to take old workings of gravel extraction sites, especially along the Soar, and turn them into additional wetlands with multifunctional semi-natural habitats that can help balance water flows. This would also enhance biodiversity and recreation.</p> <p>The use of sustainable urban drainage systems and green infrastructure in and around urban areas, particularly Leicester, would significantly help with the management of water flows limiting risk to properties and improving both water quality and urban environments.</p>	<p>Work together with the Environment Agency and other stakeholders to implement the River Welland and the River Trent Catchment Flood Management Plans.</p> <p>Manage the aquatic habitats in the flood plains to help attenuate surface water run-off.</p> <p>Where feasible re-naturalise the rivers and restore to their original courses, cease bank and channel maintenance so that wetland habitats can help to regulate water flow.</p> <p>Explore opportunities for creating sustainable urban drainage systems and green corridors along watercourses through Leicester.</p> <p>Encourage management and restoration of quarry wetlands and the creation of new wetland habitats.</p>	<p>Regulating water flow</p> <p>Regulating soil quality</p> <p>Regulating soil erosion</p> <p>Regulating water quality</p> <p>Biodiversity</p> <p>Sense of place/ inspiration</p>

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, permanent pasture and hedgerows	<p>More than three-quarters of the NCA is covered by slightly acid loamy and clayey soils with impeded drainage.</p> <p>The clay soils can be heavy and unmanageable but as a result host pasture and occasionally ancient woodlands.</p> <p>Woodland cover and semi-natural habitat, although only covering less than four per cent of the area, provides important organic matter to help maintain and improve soil quality.</p> <p>Hedgerows in the area are in poor condition overall, however they are important in maintaining soil quality by preventing migration of surface material.</p>	Local	<p>Soils are easily damaged when wet and therefore it is important to minimise compaction which will tend to exacerbate run-off problems.</p> <p>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 minimise cultivation. Grassland and particularly permanent pasture supports better soil structure with greater deposition of organic matter and deeper root penetration.</p> <p>Stabilising the soil and increasing levels of organic matter could be achieved by enhancing and managing the hedgerows and increasing the amount of semi-natural habitats within the farmed environment. This would also have landscape and biodiversity benefits.</p>	<p>Maintain good soil structural condition and enhance soil organic matter levels, encouraging the retention of existing permanent pasture and the creation of new long-term grasslands.</p> <p>Encourage best farming practices to improve soil structure.</p> <p>Where appropriate, work with partners to steadily increase the cover of woodland and hedgerows within the farmed environment.</p>	<p>Regulating soil quality</p> <p>Regulating soil erosion</p> <p>Regulating water quality</p> <p>Biodiversity</p> <p>Water availability</p> <p>Food provision</p> <p>Sense of place/inspiration</p> <p>Geodiversity</p>

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating soil erosion	Soils	More than three-quarters 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.	Local	<p>The base-rich loamy and clayey 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.</p> <p>Possible solutions could include an increase 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 they can enter into the rivers and streams.</p> <p>Increasing the network of semi-natural habitats would also enable the free movement of species and increase landscape elements that contribute to sense of place and tranquillity.</p> <p>Well timed cultivations and access onto land by low ground pressure machinery and stock to prevent compaction and poaching would also contribute to regulating soil erosion and soil quality.</p> <p>Maintain good structural condition and enhance organic matter to improve structure and infiltration.</p>	<p>Working with partners across the NCA aim to increase woodland and shelter belts and restore hedgerows in poor condition to act as wind breaks and help bind soils.</p> <p>Improve the condition of riparian habitats beside both small and major watercourses; reinstating a strong network of such habitats will increase capture of suspended sediment before it can enter into the rivers and streams.</p> <p>Work with landowners to encourage well timed cultivations to prevent compaction and poaching.</p>	<p>Regulating soil erosion</p> <p>Biodiversity</p> <p>Regulating water quality</p> <p>Water availability</p> <p>Regulating water flow</p> <p>Regulating soil quality</p> <p>Food provision</p> <p>Sense of place/inspiration</p> <p>Biomass energy</p> <p>Geodiversity</p>
	Woodlands					
	Hedgerows					
	Pasture	In contrast, the rest of the area has soils at risk of erosion as they have impeded drainage as a result of soil compaction. There may also be wind erosion on some coarse textured cultivated variants.				
	Semi-natural habitats	Semi-natural habitats including woodlands and hedgerows increase water infiltration and impede cross land flows and subsequently soil erosion.				

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Pollination	Hedgerows Arable	The extent of semi-natural habitat supporting pollinating insects within this NCA is very limited. Hedgerows are often in poor condition and many are single-species (hawthorn) hedgerows.	Local	<p>Networks of species-rich hedgerows, managed to maintain a diverse range of flora which flower over a prolonged period of time provide a good habitat for pollinating invertebrates to move through and between food crops. This asset is limited in this area, the majority of hedgerows being single species, enclosure hedgerows. Identification of 'ancient' hedgerows, appropriate management and expansion of the resource is needed to benefit pollination services.</p> <p>The contribution of pollination services to commercial food production could be an important service in the area. The area produces increasingly higher volumes of crops which could benefit from pollination.</p> <p>An increase in pollinator populations may facilitate an increase in the types of crops that could be grown in the future.</p>	<p>Encourage good hedgerow management to ensure they provide a network of habitat which supports healthy populations of pollinating invertebrates able to move through and between food crops</p> <p>Work with farmers and land owners to identify both existing grassland sites and grass margins of high floristic diversity and opportunities to create new sites within the farmed environment.</p> <p>Work with farmers and landowners to increase the population of pollinators enabling a more diverse range of crops in the future, expanding the range of food provision thus increasing resilience to the effects of climate change.</p>	<p>Pollination</p> <p>Sense of history</p> <p>Biodiversity</p> <p>Sense of place / inspiration</p> <p>Regulating soil erosion</p> <p>Regulating soil quality</p> <p>Climate regulation</p> <p>Food provision</p>
Pest regulation	Woodland Hedgerows Arable margins	Many of the semi-natural habitats in this area support a variety of predatory species, such as beetles, which can contribute to the regulation of food crop pest species; however the extent of semi-natural habitat is extremely limited.	Local	<p>Semi-natural habitats and hedgerows proximal to areas of commercial agriculture may support species of predators which can regulate populations of pests that adversely affect food crops.</p> <p>Fragmentation and poor connectivity in the network of habitats may limit the movement and effectiveness of predatory species.</p>	<p>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.</p>	<p>Pest regulation</p> <p>Sense of place/ inspiration</p> <p>Pollination</p> <p>Biodiversity</p> <p>Food provision</p>

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Sense of place/ inspiration	<p>Pasture and arable farmland</p> <p>Hedgerow and field pattern</p> <p>River valleys</p> <p>Attractive village and town centres, and many notable buildings</p>	<p>The area retains its mixed farm character but there is a trend towards increasing levels of arable farming.</p> <p>There is variety in the distribution and extent of hedgerow and tree cover and density of hedgerows. On some valley flood plains, such as that of the Welland, there are substantial waterside trees and meadows, but elsewhere flatter areas are used for arable cropping with low and intermittent hedgerows.</p> <p>The river valleys are often the focus for settlement; however, many areas retain an undisturbed rural quality.</p> <p>Field patterns are varied and reflect multiple changes in land use and enclosure over many centuries of agricultural use. Over management and annual flailing has led to poor quality hedgerows their structure tending to be low and 'gappy' and hedgerow trees are often in poor condition.</p> <p>There are many villages and small towns, often attractive with historic, vibrant centres with many notable older buildings. Larger country houses and estate cottages are also characteristic.</p> <p>The city and county town of Leicester bears considerable influence over the surrounding landscape, being the focus of transport networks, infrastructure, industry and development.</p>	Regional	<p>The continuing trend towards arable expansion may result in further deterioration of the distinctive historical field pattern, boundary hedgerows and hedgerow trees.</p> <p>Development may have an adverse impact on the legibility of the topography and landform which are defining elements of the landscape. The open nature of the landscape is particularly vulnerable to negative landscape and visual impacts.</p> <p>There has been a relatively high rate of change from a rural to urban character within this predominantly rural area. About 11 per cent of the area lies within green belt. Development is locally concentrated, such as around Lutterworth/Magna Park, at junctions along the M69, around the edges of the area in particular Market Harborough, Hinckley and Earl Shilton, as well as on the fringes of the City of Leicester in Oadby and Wigston.</p> <p>Conserving and enhancing the distinct landscape character is likely to benefit biodiversity by enhancing the range of habitats, such as woodlands and riverine habitats.</p> <p>Management to maintain locally distinctive features and elements is also likely to increase sense of history.</p>	<p>Manage and protect the locally distinctive features and elements of the area.</p> <p>Protect the area's distinctive character by maintaining and restoring the pattern of pasture, hedgerows, small woods, parkland and river valleys.</p> <p>Protect and manage woodlands, particularly the few ancient and semi-natural woodlands.</p> <p>Encourage the creation of extensive new planting and urban greening on the edges of residential and other development to reduce visual intrusion and negative impacts.</p>	<p>Sense of place/ inspiration</p> <p>Recreation</p> <p>Sense of history</p> <p>Biodiversity</p> <p>Tranquillity</p> <p>Food provision</p>

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Sense of history	<p>Roman roads; Fosse Way and Watling Street</p> <p>Villages with dominant church spires</p> <p>City of Leicester</p> <p>Ridge and furrow</p> <p>Foxton Locks and other canal architecture and engineering features</p> <p>Historic country houses and parkland</p> <p>Bosworth Battlefield</p> <p>Richard III associations</p> <p>Former quarry operations for aggregate and building stone</p>	<p>The area contains large concentrations of ridge-and-furrow earthworks and important examples of former open field cultivation systems. The changing patterns of land use, cultivation and enclosure are a defining characteristic of the area.</p> <p>The area has a high density of settlements with many villages and small towns, many representing continuous settlement and occupation since prehistory. The villages and towns retain numerous buildings, architectural styles and building materials from a range of periods.</p> <p>The city of Leicester is of particular note; probably of iron-age origin, but with substantial Roman and other early building remains. The city saw dramatic expansion in the 18th and 19th centuries and became a manufacturing centre with particular connections to the textile industries. Connections to the existing road transport network, railways and canals aided this expansion and many features from the Industrial Revolution remain.</p> <p>In 1918 about 3 per cent of the area was historic parkland. By 1995 it is estimated that 60 per cent had been lost. About a fifth of the remaining parkland is covered by a Historic Parkland Grant, unconverted.</p> <p>In 2010, 49,000 visits were made to Bosworth Battlefield.</p>	National	<p>Many of the historic assets such as the ridge-and-furrow earthworks are potentially at risk from increases in cultivation.</p> <p>Development could lead to the expansion of the smaller villages that might be out of keeping with local character and impair the legibility of historical settlement patterns and enclosure.</p> <p>The connections between the fertile, productive agricultural land and the populations and industries of the numerous settlements, particularly Leicester and the larger towns, may be eroded or lost. For example the relationships between transport of agricultural produce, industry and settlements via the canal network may be lost as the network is increasingly seen as a leisure and recreation resource. Managing and enhancing these assets could increase recreation and sense of history and place.</p>	<p>Protect and maintain the remaining areas of ridge and furrow with good soil and land management.</p> <p>Maintain and protect historic buildings and landmarks which strongly reflect the traditional character of the area including country houses and churches.</p> <p>Encourage the use of traditional building materials for construction, extension and repair work.</p> <p>Protect and promote important heritage sites such as the Bosworth Battlefield (through the Bosworth Battlefield Heritage and Conservation plan) and the Foxton Locks (through the Foxton Locks Partnership).</p> <p>Seek to increase the knowledge and understanding of the historical relationship between the urban and rural parts of the area to ensure that heritage assets inform future development and resource management.</p>	<p>Sense of history</p> <p>Sense of place/inspiration</p> <p>Recreation</p> <p>Biodiversity</p> <p>Food provision</p>

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Tranquillity	Rural areas	This NCA has experienced a significant reduction in tranquillity over the last 50 years, with undisturbed areas decreasing by nearly a half between the 1960s and 2007 (CPRE Intrusion Map, 2007) Nevertheless, more rural areas provide important sources of tranquillity.	Local	<p>Tranquillity has been reduced as a result of urban expansion, road improvements and increased traffic levels, with the Vales crossed by a large number of trunk roads, not least the routes of the M1, M6, M69 and the A426, A4303, A47, A447, A5, A50 and A6.</p> <p>Pressures on tranquillity could come with more development around Leicester, Hinckley and Market Harborough.</p> <p>Light pollution from the towns and main transport routes is particularly intrusive in the open, level landscape.</p>	<p>Maintain the remaining quiet rural character of the area by preserving the sparse settlements, secluded valleys and winding green lanes.</p> <p>Conserve more remote areas from development by working to ensure traditional settlement patterns are retained and maintain relative high levels of tranquillity.</p> <p>Plan to incorporate green infrastructure measures into new and existing development on the fringes of urban areas to limit the impacts of both noise and light pollution.</p>	<p>Tranquillity</p> <p>Sense of place/ inspiration</p> <p>Biodiversity</p> <p>Sense of history</p>

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Recreation	<p>Rights of way network</p> <p>Country parks</p> <p>Rivers and canals and restored gravel workings</p>	<p>The NCA offers a network of rights of way totalling 949 km at a density of 1.32 km per km² as well as a small amount of open access land covering 50.8 ha or just 0.07 per cent of the NCA.</p> <p>There are a number of country parks in the area which provide a valuable recreational resource for Leicester and the other urban areas most notably Watermead Country Park (South) which is one of the most important sites for wildlife within Leicester.</p> <p>A number of former sand and gravel pits have been restored for informal recreation and wildlife conservation, such as at Watermead Country Park on the edge of Leicester.</p> <p>There are two canal systems (the Leicester Arm of the Grand Union Canal and the Ashby Canal).</p>	Local	<p>Currently the recreational opportunities and provision are low in relation to the population of the area. Recreational opportunities could be increased without significant effects on other services particularly by increasing the green infrastructure network linking Leicester with the wider countryside and by encouraging the management and restoration of old gravel workings and other extraction sites to wetlands.</p> <p>Sympathetic planning and management of sites such as the Country Parks and canals 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.</p>	<p>Maintain and extend public access routes within the NCA, linking where possible with existing routes.</p> <p>Promote the recreational and educational opportunities afforded by the network of rights of way, canals 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.</p> <p>Promote and add to recreational opportunities by implementing the local green infrastructure strategy.</p> <p>Encourage the management and restoration of quarry wetlands and the creation of new wetland habitats.</p>	<p>Recreation</p> <p>Sense of place/ inspiration</p> <p>Sense of history</p> <p>Biodiversity</p> <p>Regulating water quality</p> <p>Climate regulation</p>

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Biodiversity	<p>Local sites</p> <p>Flood plain grazing and other permanent pasture</p> <p>Reservoirs, rivers and other waterbodies</p> <p>Woodlands</p> <p>Hedgerows</p> <p>Urban green space</p>	<p>Less than 0.5 per cent of the NCA area is identified as priority habitat, which includes small areas of undetermined grassland, wet woodland, lowland mixed deciduous woodland, flood plain grazing marsh, fen, and lowland meadow.</p> <p>There are no SPAs, SAC or Ramsar sites in the NCA. Nationally designated SSSI account for 175 ha (0.2 per cent) of the total NCA area with over half of the area specified as being in unfavourable condition.</p> <p>Within Leicester there are a number of important green spaces, not least the corridor provided by the River Soar and there is a notable and valued urban wildlife resource present.</p>	Local	<p>There is an opportunity in this area to work with partners and landowners to ensure that the SSSI 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.</p> <p>Other pressures on the biodiversity resource include the effects of pollutants in the river systems and the reservoirs.</p> <p>There are also the impacts of climate change that may cause fluctuation of water levels, drought, and migration of species.</p> <p>New development in and around Leicester may provide opportunities for extending the network of urban green spaces and the connectivity with existing sites and corridors.</p>	<p>Work with partners and landowners to secure improvements in SSSI to 'good' condition.</p> <p>Encourage local management and planning for local wildlife sites.</p> <p>Work with the water companies to manage the reservoirs to enhance biodiversity and recreation as well as maintaining water quality and quantity.</p> <p>Conserve ancient trees, and replace the stock of ageing ancient trees in the country parks and hedgerows.</p> <p>Work with partners to build appropriate networks of habitats across the area and particularly within Leicester, to strengthen biodiversity, sense of place and assist in the regulation of soil erosion, soil quality and water quality.</p>	<p>Biodiversity</p> <p>Sense of place/inspiration</p> <p>Regulating water quality</p> <p>Regulating soil erosion</p> <p>Recreation</p> <p>Climate regulation</p>

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Geodiversity	Geology	There are 3 geological SSSI in the area and 11 local geological sites.	Local	<p>With only 3 geological SSSI and 11 local sites it is important to protect and enhance the features which are of geological interest. This could have additional benefits for biodiversity, recreation and scientific research as well as soil and water quality.</p> <p>The geological resource also provides a 'history' of how climate change throughout time has impacted on the rocks and soils of this area; this could be used to 'predict' future climate change impacts.</p> <p>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.</p> <p>Use of locally sourced building materials in the conservation of existing buildings and construction of new buildings, helps to support local distinctiveness and the connections between geology and place.</p>	<p>Protect local geological sites and bring them into good condition.</p> <p>Support the Local Geodiversity Action Plan, particularly opportunities to increase access to and interpretation of geological exposures.</p> <p>Use the geological resources for education, recreation and scientific research, linking them to industrial heritage.</p> <p>Use the geological resources to study previous climate change to support future adaptation.</p> <p>Support good soil and land management particularly to help stabilise the geological sites and bring them into better condition.</p> <p>Manage and restore quarry wetlands and the creation of new wetland habitats.</p> <p>Encourage the use of locally sourced building materials in building conservation works and new developments.</p> <p>Look for opportunities to develop new Local Geological Sites; work with quarry managers to preserve geodiversity features.</p>	<p>Geodiversity</p> <p>Sense of place/inspiration</p> <p>Sense of history</p> <p>Biodiversity</p> <p>Recreation</p> <p>Regulating water quality</p> <p>Regulating soil quality</p>
	Soils	Approximately half of the area is underlain by the Mercia Mudstone Group and half by the Lias Group. There are small areas of the coarse grained igneous intrusive South Leicestershire Diorites. These deposits have been worked for hard rock aggregate.				
	Aggregates					
	Local vernacular building materials	Two thirds of the area is recognised as Grade 3 agricultural land.				
	Local geological sites	<p>Superficial deposits of till (clay), glaciolacustrine clay glaciofluvial sand and gravel, river terrace gravels and alluvium cover most of the NCA. These deposits have been commercially worked for aggregate in many locations and the working of these has in places had a significant landscape impact</p> <p>Many local buildings are constructed from materials sourced from within the area, particularly locally made red bricks.</p>				

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