National Character Area profile:

143 Mid Somerset Hills

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Introduction

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

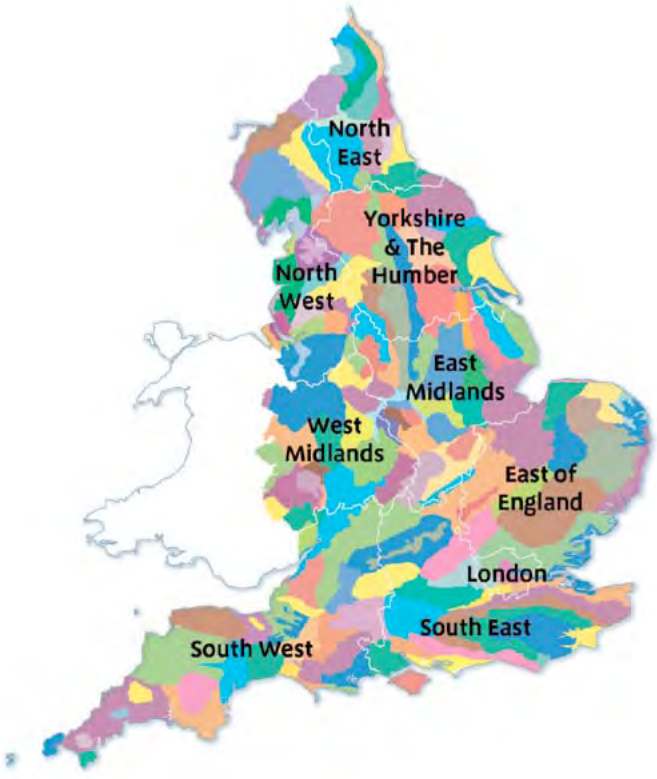
NCA profiles are guidance documents which can help communities to inform their decision-making about the places that they live in and care for. The information they contain will support the planning of conservation initiatives at a landscape scale, inform the delivery of Nature Improvement Areas and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

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

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

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

National Character Areas map



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

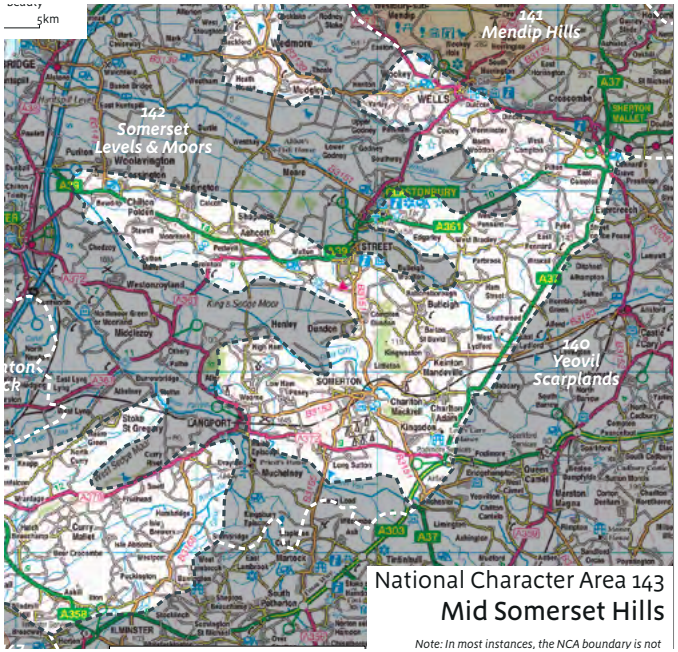
Summary

The Mid Somerset Hills form a number of low hills and ridges rising out of the Somerset Levels and Moors. They lie between the Blackdowns National Character Area (NCA) to the south and the Mendip Hills NCA to the north. The hills have a distinctive, predominantly pastoral character rich in hedgerows, farms and small villages, and often with expansive views over the flat Somerset Levels and Moors NCA to the west. Farming is now mixed, but the area was known for its sheep and leather used in connection with the shoe-making industry at Street.

Many settlements are on islands rising out of the wetlands, such as Wedmore, or at the wetland edge, such as Glastonbury. Small towns and villages such as Somerton and Street lie within the hills in sheltered sites, but other settlements such as Wookey, intermixed with small orchards and paddocks, have more of a wetland edge character, with winding roads closely following the form of the ridges. Many settlements retain a uniformity of building style and materials, perhaps most noticeable in the Lias limestone buildings of Somerton – where the stone is still quarried. Tall church towers are visible evidence of medieval wealth, but none is more dramatic than St Michael's on Glastonbury Tor, visible for miles across the flat wetlands. The Mid Somerset Hills have strong roots in the past, with most villages mentioned in Domesday Book; they are also celebrated in modern culture, with the internationally known Glastonbury Festival, and the Arthurian legend.

Historic links are particularly strong with the Somerset Levels and Moors. Marsh edge communities living in the Mid Somerset Hills used the Levels and Moors for summer grazing, moving livestock to drier, higher ground in the winter, evidenced by trackways and causeways. This link remains as many of the rivers, such as the Brue, Tone and Parrett, rise to the east or north, cut through this NCA and flow onwards into the Levels and Moors flood plain, where they are often a factor in flooding downstream and nutrient enrichment.

The Blackdown Hills Area of Outstanding Natural Beauty to the south dips into this NCA near Staple Fitzpaine. Ancient woodlands such as at Thurlbear or Swell, species-rich hedgerows with trees and veteran trees lend the area a wooded feel despite having little woodland cover. The NCA is strongly agricultural, but with a mosaic of calcareous grassland along the Polden Hills, neutral grassland and flood plain grazing marsh and woodland, to support species such as the large blue butterfly, lapwing and linnet.



Click map to enlarge; click again to reduce.

Statements of Environmental Opportunity

SEO 1: Safeguard and manage soil and water resources, notably the rivers Parrett, Brue and Tone, as part of the wider Somerset Levels and Moors Priority Catchment, allowing naturally functioning hydrological processes to maintain water quality and supply; work to reduce flooding; and manage land to reduce soil erosion and water pollution, and to retain and capture carbon.

SEO 2: Protect, manage and enhance the distinctive farmed landscape, retaining the balance of productive mixed farmland and diversity of habitats and associated species. Create and enhance connecting corridors of hedgerows, orchards, calcareous and neutral grasslands, ancient or newly planted woodland, hedgerow and riverside trees, and flood plain grazing marsh, for their contribution to sense of place and their positive role in reducing soil erosion and enhancing water quality and biodiversity.

SEO 3: Protect and positively manage the distinctive historic environment and geodiversity of the Mid Somerset Hills – including the many heritage assets such as the droves, small quarries, Roman and medieval monastic remains, and vernacular architecture – and the functional and cultural relationship with the adjacent Somerset Levels and Moors National Character Area.

Purple gromwell, commonly found on calcareous grassland on woodland edges.

Description

Physical and functional links to other National Character Areas

The Mid Somerset Hills National Character Area (NCA) has a strong physical and visual relationship with the Somerset Levels and Moors NCA and other surrounding NCAs through the complex series of watercourse and panoramic views that interlink these areas. The Mid Somerset Hills NCA divides and surrounds the Somerset Levels and Moors NCA, and forms the skyline to much of this low-lying area. The Mendip Hills NCA lies to the north, and these – higher – hills form the backdrop from the top of the Mid Somerset Hills across the Somerset Levels and Moors NCA. Yeovil Scarplands NCA lies to the south and east, the Vale of Taunton and Quantock Fringes NCA is to the west, and to the south is the Blackdowns NCA. The Blackdown Hills' slopes are a dramatic visual backdrop for views to the south and help to frame that part of the NCA.

This NCA draws its water from underlying post-Carboniferous aquifers which extend into the Mendips and Yeovil Scarplands NCAs to the north and east. Few rivers actually rise in this NCA, but flow into it predominantly from the NCAs to the east, and the land drains largely to the west, to the Somerset Levels and Moors. The many watercourses flowing in this NCA drain into the Levels, and thus the activities on the land here impact closely on the lower lands of the Levels.

Historic links with the Somerset Levels and Moors NCA are particularly strong. Marsh edge communities living in locations such as Glastonbury in the Mid Somerset Hills used the Somerset Levels and Moors for summer grazing, moving livestock to drier, higher ground in the winter, evidenced by trackways and causeways.

Entrance to the discount shopping centre in Street, which has taken over from shoe manufacturing in the town as a source of employment and is a modern major visitor attraction.

Transport links on a small scale have long been established to the Levels, along drove roads and tracks. The number of country roads is limited by the need for bridges across the many watercourses. Most substantial roads in this NCA run broadly east–west, such as from Langport to Taunton. Street and Glastonbury are connected by the A361 northwards to market towns through Wiltshire up to Oxfordshire. There are no motorways here, although the M5 passes just to the west of the NCA. One rail route passes through, running east–west through Taunton, with no stations in this NCA.

Key characteristics

- The Mid Somerset Hills are a series of low hills, islands and ridges dividing the Somerset Moors and Levels. They are formed from Jurassic limestones and mudstones, with the overlying younger sediments eroded away. The hills, such as the Poldens, are prominent and dramatic, rising above the surrounding landscape, forming a visual backdrop to the Somerset Levels and Moors and giving panoramic views across the lower lands surrounding them.
- Flatter landscapes to the eastern side of the NCA can be contrasted with the hillier west.
- Major rivers such as the Parrett and Brue cut through the hills but rise in surrounding NCAs to flow east to west, and are intimately linked to the internationally important and designated wetlands of the Somerset Levels and Moors Special Protection Area (SPA).
- There is a strong wooded feel to the landscape here from hedgerows and small woods, although only some 4 per cent of the landcover is woodland.
- Ash and maple woodlands, coppiced in the past but rarely so now, are common on ridgetops and on the steeper slopes. Orchards are long characteristic of the lower land, close to the wetland edge and settlements.
- Hedgerows, typically containing a wide range of species and hedgerow trees, are the most common field boundary, dividing small, irregular fields.
- Grazed pasture, mostly cattle with fewer dairy and sheep than has been the case even in the recent past, tends to be the main landcover.
- Remnant areas of species-rich calcareous and neutral grasslands can be found across the NCA, and these support species such as large blue butterfly.
- At the wetland edge there is much flood plain grazing marsh, a nationally rare habitat.
- The historic landscape illustrates continuous human occupation since prehistory closely linked to the farming and occupation of the Somerset Levels and Moors, with droves and farming systems reflecting this long association.
- Tall church towers associated with settlements are evidence of medieval wealth and are common across the area, with St Michael's on Glastonbury Tor and St Peter and St Paul at North Curry, overlooking the Levels, being the most visible landmarks.
- Blue Lias limestone from the Lower Jurassic is the dominant building material, as is notable in Somerton and its surroundings, near where it is quarried.

- Small nucleated settlements are common on the hills, ridges and islands that make up this NCA. Small towns such as (ancient) Somerton and (more modern) Street lie in sheltered sites, while other settlements lie on islands rising out of the wetlands (Wedmore) or at the wetland edge (such as Wookey) with characteristic tracks (droves) linking these settlements with the Levels. These are interspersed with high densities of medieval and later farmsteads and houses set in irregular enclosures.

View of Street far to the left from Glastonbury Tor, with the Polden Hills beyond and Glastonbury itself to the right.

Mid Somerset Hills today

The Mid Somerset Hills NCA runs from the southern edge of Wells and the Mendip Hills in the north, past Glastonbury and Street, through Somerton, down to the fringes of Taunton in the west and the Blackdown Hills to the south. The area is intimately linked to the Somerset Levels and Moors NCA, surrounding and dividing up the Levels by its series of low hills, ridges and islands.

The landscape is generally rural, rich in hedgerows and farmsteads dating from the medieval period, and frequent nucleated small villages, seemingly well wooded, and often with expansive views over the flat Levels and Moors to the west.

Land use is predominantly agricultural. The majority of soils are clayey and generally lime rich and versatile, with some areas of thinner limestone soils. Pasture and grazing are the dominant agricultural land use, although arable production is a relatively substantial element accounting for a quarter of landcover. The Mid Somerset Hills have a mild climate and, with many small rivers, there is no lack of water. This results in a sound mixed agricultural sector, with livestock and cereal production.

The Parrett, Axe and Brue rivers and smaller tributaries flow from adjoining NCAs westwards into the Somerset Levels and Moors SPA/Ramsar and wetlands. The two areas have a long association of summer grazing in the wetlands and winter retreat to the hills. There is evidence of trackways or droves allowing passage to low-lying pastures and similar farming patterns persist.

On the higher ground to the east, pasture tends to be the main landcover. Fields resulting from 17th-century and earlier enclosure are small and irregular, except where neighbouring planned settlements. Small areas of calcareous and neutral grasslands are also present, supporting species such as the re-introduced large blue butterfly and the rufous grasshopper. Orchards are, as they have long been, a particular feature of the land at the edge of the Levels. Lowland grazing marsh is also present on lower-lying land. Hedgerows are the dominant field boundary and typically contain trees and a wide range of species. On its arable land, the NCA supports assemblages of annual plants dependent on cultivation, for example species such as the broad-fruited corn salad; one site has been notified as a Site of Special Scientific Interest (SSSI). The limestone Polden Hills, much of which are designated as SSSI, are a finger of a ridge reaching towards the sea at the midline of the NCA.

Ash and maple woodlands are common on the ridgetops and steeper side slopes. While only 5 per cent of the NCA's landcover is in fact woodland, it has a wooded feel, possibly due to the high incidence of enclosure before the 17th century, especially when contrasted with the wetland areas it divides. Much of this is ancient woodland, such as at Thurlbear in the south, and is characterised by having high botanical diversity in canopy, shrub and ground layers. These woodlands are a habitat for dormouse, purple gromwell and a wide range of nationally rare or scarce invertebrate species, including the brown hairstreak butterfly.

Mid Somerset Hills is a sparsely settled NCA. Most settlement is on islands or ridges rising out of the former wetlands, such as Wedmore, while small towns such as Somerton lie in sheltered sites, or at the wetland edge such as Glastonbury. The settlements are linked by narrow but often straight roads, apart from along the ridgetops or leading (out of the NCA) to urban areas such as Bridgwater. Most settlements retain a uniformity of building style and material, notably the use of Blue Lias limestone, still being quarried near Somerton, which adds to its sense of place.

The area has strong roots in the past, with most settlements mentioned in Domesday Book. The influence of the medieval period is strong; architecture and settlement patterns of the period still dominate as a witness to the area's then prosperity. Tall church towers are prominent; St Michael's, on Glastonbury Tor, is the most visible.

A small part of the Blackdown Hills Area of Outstanding Natural Beauty extends into the NCA to the south near Staple Fitzpaine.

The area around Glastonbury Tor is known as the Isle of Avalon. It has a long association with the myth of King Arthur, and attracts large numbers of visitors, alongside features such as Glastonbury Abbey, Glastonbury Festival at Pilton and the more prosaic attraction of a designer outlet shopping centre at Street. Nature reserves such as Swell Wood, where the RSPB maintains a heronry, also appeal.

The area retains a deeply rural character with expansive views across the Somerset Levels and Moors, with little major urban development and transport corridors. This character adds to a sense of tranquillity and lack of intrusion, particularly around the Isle of Wedmore and south of Langport. Disturbance is confined to the routes of the A39, A37 and the towns, specifically Street and Glastonbury. Transport corridors are largely at the edge of the NCA, with a train line running across it and no stations.

Thurlbear Wood, an ancient woodland now in the care of the Somerset Wildlife Trust.

The landscape through time

The area is predominantly underlain by late Triassic/early Jurassic grey clays and limestones. The limestone and mudstone, known as Blue Lias, formed in the Jurassic period, 205–142 million years ago when the area was under a deep sea. The Blue Lias is rich in marine fossils such as ammonites and ichthyosaurs. This stone features strongly in local buildings. These sedimentary rocks have resulted, where not eroded later by rivers, in the gently undulating or flat land.

Many of the isolated low hills, such as Glastonbury Tor, are of the slightly younger Bridport Sands, deposited from an advancing offshore sand bank later in the Jurassic. The Isle of Wedmore and the Polden Hills are, however, of Jurassic limestone, with surrounding (mainly) mudstone deposits having eroded away.

Younger sediments – mainly peat, alluvium and gravels from the recent Quaternary Period – are less than 10,000 years old and were deposited under glacial and interglacial conditions. These deposits are of importance in determining environmental conditions of that time, when this area was not actually glaciated but did experience severe weather conditions.

The area has been occupied since prehistory, and is crossed by trackways providing access to the seasonal grazing on the Somerset Levels. Iron-age lake-villages are found on the wetland edge, and on the Levels. The Romans effected some land improvement and drainage, and later enjoyed agricultural prosperity in this NCA. There are traces of their many villas, such as at Low Ham, with major remains just outside this NCA to the east in the Babcary area, together with a substantial cemetery, and of a town at Ilchester, just to the east of the southern area of this NCA. Moreover, a hoard of some 10,000 second- and third-century Roman coins has been found at Shapwick at the foot of the Polden Hills.

The 17th century Butter Cross in Somerton, in Blue Lias limestone and ham stone. The use of local stone in much of the town provides a rich sense of place.

The present settlement pattern was established by the Saxon period, with settlements on the hills from which the marshlands were exploited. Somerton may have become the centre of the *Sumorsaete*, the Saxon people after whom Somerset may be named, and the numerous *-ton* and *-ey* settlements are evidence of this Saxon occupation.

Glastonbury Abbey was a royal establishment in 720 and played a major role in the transformation of the area's landscape and the drainage of the Levels through agricultural improvement from at least the 10th century. The abbey

was a major local landowner by the time of the Normans, and was then the richest abbey in the land. For the remainder of its existence, it was one of the wealthiest landowners in England, prospering from sheep and cereal farming. The monks also encouraged pilgrimage, with all the infrastructure and development that follows. They exploited the abbey's supposed connections with Joseph of Arimathea and his arrival with the Holy Grail in the first century (when Glastonbury was virtually a seaport) and, from the late 12th century, courtesy of medieval French literature, with King Arthur.

Stawell Church, a listed building from the 13th century with more modern alterations and showing local stone in use.

The NCA played a significant role in the national struggle between the Kingdom of Wessex and the Vikings under Guthrum, which saw the development of an increasing sense of the English people. King Alfred of Wessex took refuge in the Levels, where myth has it that he burnt the cakes, but after the Battle of Edington in 878 (to the east of this NCA, in Wiltshire) and the conclusion of peace terms, it was probably on the Isle of Wedmore in this NCA that many of the Viking leaders accepted Christianity. Settlement developed under the peace, and most of the current settlements are mentioned in *Domesday Book*.

During the medieval period the area grew more prosperous, largely due to sheep and cereal cultivation, as is evidenced by the fine barns at Pilton and Glastonbury and the high level of survival of pre-1550 houses across the area. This prosperity continued in the 16th and 17th centuries, after the Dissolution of the Monasteries as the monastic lands passed to a variety of lay families. Agriculture remained an important source of income, and markets such as that at Somerton developed. The Civil War came to Langport in 1645, when Sir Thomas Fairfax's victory for the forces of Parliament destroyed arguably the last field army of the Royalists and helped to end the Royalist hold on the South West. William Pitt the Elder, occasionally in national power in the late 18th century, inherited land at Burton Pynsent near Curry Rivel and may have valued it as a retreat.

From the 17th until the late 20th century, leatherwork – from sheepskins to shoes – was the basis for the economy of Street, a town once a satellite of Glastonbury and a source of its building stone. While boots and shoes are no longer produced, Street's economy now benefits from a designer outlet shopping village.

Industry developed in a small way in the 19th century, from the extraction of gypsum near Somerton to the extraction of the mineral celestine, for its strontium (used for various metal alloys), from Triassic rocks near Wells. These

industries did not survive the First World War. The closure of the substantial local brewer in Somerton in the later 20th century, and the prior decline of the glove makers in the NCA, added to the contemporary decline in the leather industries, resulting in the agricultural focus of the NCA being reinforced. Since the war, industry has declined, with just a few industrial units remaining.

The rail network came to this area in the 1840s, originally connected with the development of the route from Bristol to Exeter, and expanded across the NCA until the First World War. There have been stations across the NCA, and indeed the Levels, but none now remain. However, the line remains in operation linking Salisbury in the east to Taunton in the west.

The Second World War saw the construction of the Taunton Stop Line, one of the best preserved anti-invasion defences in England. This network of concrete obstacles was designed to limit any invasion to one part of the country. It skirted the Levels, with traces remaining near Ilminster. The airfield built during the war for bombers near Curry Mallet remains, now serving helicopters of the Royal Navy.

With better road transport, agriculture and the tourism and recreational sectors have flourished. The expansion of tourism in this period is based in part on alternative spirituality, as the Victorian interest in the Arthurian myth developed and grew with the belief that the Holy Grail was buried at Glastonbury Tor. The town of Glastonbury and Tor remain centres of interest for tourism based on these interests, and the town's commerce and culture remain distinctive.

This NCA is also the home of the farm location for the Glastonbury Festival at Pilton, one of the earlier established and best known open-air pop festivals, bringing substantial numbers of visitors to the area. This has brought money to Pilton in five years out of six – as the farm takes a fallow year.

Tourism in the NCA has also gained from the establishment of nature reserves such as Tannager and Swell Wood, in the centre and south of the NCA, and from the growth of walking and cycling as common forms of recreation. For example, the National Cycle Route from Weymouth to Bridgwater passes through the area via Somerton. Calcareous grasslands in the area have been restored to support the re-introduction in the late 20th century on Green Down of the large blue butterfly – with its parasitic relationship with *Myrmica* ants – to the NCA, indeed to England, following an earlier extinction.

Glastonbury Festival 2004, the Gloid site and a view of the surrounding area from the stone circle.

Ecosystem services

The Mid Somerset Hills 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 Mid Somerset Hills NCA is contained in the 'Analysis' section of this document.

Lytes Cary, a medieval manor house near Somerton, now a popular visitor attraction in the care of the National Trust

Provisioning services (food, fibre and water supply)

- **Food production:** This is an area concerned largely with livestock, notably cattle, with some dairy and arable production, mainly cereals. The area has long association with orchards, although in recent years numbers have declined. There is substantial potential to increase fruit production.

- **Genetic diversity:** This is an area rich in ancient woodlands, with a seed bank to be explored in the interests of general biodiversity and helpful in establishing resilience to climate change. It also shelters many orchards, some with local and rare species. Developing stocks of these would maintain genetic diversity and local cultural identity.

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

- **Regulating soil quality:** Soils are largely clayey and lime rich and versatile, supporting the area's agricultural production. They are susceptible to compaction and poaching, with consequences for water infiltration and flow, and a low contribution to carbon storage. There is a need to work on good practice in incorporating organic matter into the soil and on soil management generally and possibly to expand permanent grassland.

- **Regulating water quality:** The NCA falls within the River Brue Priority Catchment. This suffers from soil erosion, related nutrient leaching and sedimentation and phosphate pollution in watercourses. It is thought that agricultural run-off and sewage outputs contribute to these problems. There is a need to work with land managers in this area to reduce soil erosion and leaching of nutrients to help improve water quality and to improve the quality of sewerage output to reduce phosphate levels. Targeted woodland planting may assist here.

- **Regulating water flow:** There are no major flooding concerns in this NCA but, as much of the water in this area drains largely into the Somerset Levels and Moors where flooding is an issue, this area clearly plays a part in developing and implementing environmentally appropriate flood reduction measures. There is a need to work at a landscape scale with landowners, farmers, the Internal Drainage Board, statutory agencies and conservation bodies to increase the ability of the wider catchment to intercept and store increased volumes of precipitation to regulate the peak flows reaching settlements and farmland.

Cultural services (inspiration, education and wellbeing)

- **Sense of place/inspiration:** There is a longstanding cultural link to the adjacent Somerset Levels and Moors. A sense of place is also provided by the series of low hills, ridges and islands that form this NCA and provide distinctive skylines extending into and dividing the Somerset Levels and Moors. Glastonbury has been inspirational for centuries and its role within contemporary spirituality is established, likewise as a centre for Arthurian culture.

- **Sense of history:** The area has evidence of a long history of human use and settlement from the Palaeolithic. Its longstanding agricultural connection with the Somerset Levels and Moors represented by the ancient trackways (droves) from the Neolithic or later, linking the summer grazing lands to the farmsteads of the hills, highlight the importance of agriculture in this landscape. The scattered settlements, historic buildings and field pattern attest to this history alongside manors such as Lytes Cary Manor, now popular as a heritage visitor attraction. Glastonbury Abbey and the Glastonbury Tor have inspired pilgrimages since the early medieval period, and continue to do so today.

Blossom of a Glastonbury Thorn, a hawthorn bush being supposedly the result of planting Joseph of Arimathea's staff. It blooms twice each year, in late spring and in midwinter. Inset: 1986 Christmas stamp depicting the Glastonbury Thorn.

- **Tranquillity:** This NCA has experienced a significant decline in tranquillity, with undisturbed areas decreasing from 95 per cent in the 1960s to 57 per cent in 2007 (according to the Campaign to Protect Rural England Intrusion Map, 2007). Disturbance is largely confined to the routes of the A39, A37 and towns, specifically Somerton, Street and Glastonbury.

- **Recreation:** The area has a number of recreational assets: Glastonbury Festival; extensive rights of way and several routes on the National Cycle Network; many historic villages with access to local culture, foods and

heritage; many nature reserves and protected sites to visit. Many rights of way and permissive paths follow traditional droves – livestock tracks running to the Levels and Moors, highlighting the historic connection between these areas.

- **Geodiversity:** Although the geology of the area is relatively simple, it has a potential rich educational resource – for example, Pleistocene gravels that show the post-ice-age evolution of river routes. The celestine outcrop at Ben Knowle SSSI, west of Wells, was once part of the strontium export business in the 19th century. The use of locally sourced stone in vernacular architecture is an expression of the deeper, solid geology of the area, notably the use of Blue Lias Limestone and locally derived bricks.

The lapwing, often seen in this NCA and a species of conservation concern.

Common linnet, a bird species of conservation concern.

Statements of Environmental Opportunity

SEO 1: Safeguard and manage soil and water resources, notably the rivers Parrett, Brue and Tone, as part of the wider Somerset Levels and Moors Priority Catchment, allowing naturally functioning hydrological processes to maintain water quality and supply; work to reduce flooding; and manage land to reduce soil erosion and water pollution, and to retain and capture carbon.

For example by:

- Encouraging initiatives that seek to promote sustainable agriculture while retaining a mixed farming pattern that supports the mix of habitats and species found in the National Character Area (NCA) and utilising farming and farm infrastructure management methods which reduce sediment run-off.
- Continuing to support farming at a sustainable level with grazing and cropping levels that provide food, lead to improved soil quality, reduce soil erosion and minimise compaction, aid water infiltration, benefit biodiversity and reinforce a sense of place and current patterns of land use.
- Increasing the amount of farmland managed under principles established by the Catchment Sensitive Farming Programme, for the associated benefits that this will bring in relation to water flow management, water quality, reduction in nitrate and phosphate pollution from chemical inputs, prevention of soil erosion, and increased biodiversity that will also see positive benefits for the Somerset Levels and Moors Priority Catchment.
- Enabling the recommendations of relevant implementation measures under the Water Framework Directive and Catchment Flood Management Plans.
- Maintaining, restoring and planting new hedgerow boundaries, including hedgebanks and trees that are characteristic of the area and associated field patterns, especially where these help to control cross-land flows and prevent soil erosion and nutrient leaching.
- Creating woodland, including wet woodland, in appropriate locations to help to reduce the impact of flooding, and reduce siltation and agricultural run-off for the benefit to water quality, and to reinforce landscape setting.
- Restoring and enhancing remnant wetland habitats, including flood plain grazing marsh and wet woodland, for the benefit of flood storage, water quality, landscape diversity and biodiversity.
- Seeking opportunities to reinstate riverine habitats and connect rivers to their flood plains, for example along the River Parrett, to help to reduce flooding and increase water storage capacity in order to assist with reducing flood risk in the adjoining Somerset Levels and Moors NCA.
- Creating grassland buffer strip verges running across slopes to provide a buffer to soil erosion and nutrient run-off in areas of arable production, including the catchments of the River Parrett, and encouraging planting of bankside trees, where appropriate.
- Supporting the reversion to pasture of areas of arable land on slopes and adjacent to rivers, to slow run-off, assist biodiversity adaptation to changes in climate, reduce sedimentation issues and manage grasslands in favourable condition through extensive grazing.
- Explore the potential to retrofit green infrastructure to all developments, such as sustainable drainage systems, in the interests of water retention.

SEO 2: Protect, manage and enhance the distinctive farmed landscape, retaining the balance of productive mixed farmland and diversity of habitats and associated species. Create and enhance connecting corridors of hedgerows, orchards, calcareous and neutral grasslands, ancient and newly planted woodland, hedgerow and riverside trees, and flood plain grazing marsh, for their contribution to sense of place and their positive role in reducing soil erosion and enhancing water quality and biodiversity.

For example by:

- Promoting the maintenance of distinctive ancient farming patterns across the area, including the current field pattern bounded by thick hedgerows with trees, and working to prevent further hedgerow loss, in the interests of biodiversity and reinforcing the local landscape character.
- Working with farmers, land managers and local communities to engage with the systemic changes in farming and to positively shape the way in which land is managed into the future, innovating and diversifying to maintain the agricultural economy while simultaneously preserving and positively enhancing the physical, ecological and historic landscape that is so highly valued by local people and visitors alike.
- Identifying opportunities for managing, restoring, creating and reconnecting areas of habitat – including calcareous grassland, lowland meadows, flood plain grazing marsh, areas of woodland and trees – to strengthen the connectivity of these habitats across the area, providing a resilient network, supporting species movement and for the benefits that they will bring in managing soil erosion and for regulating water quality and flow.
- Enhancing the ecological permeability of the landscape through maintaining and encouraging areas of semi-natural grassland within designed parkland, promoting sympathetic management of species-rich grasslands there and on road verges and tracks, and encouraging the targeted uptake of agri-environment scheme options that promote legume and herb-rich swards, where possible, as a means of increasing the permeability of intensive agricultural land for the benefit of wildlife.
- Understanding and promoting the services provided through specific management of ecosystems by land managers and seeking financial mechanisms which reasonably reward and incentivise those practices.
- Maintaining, restoring and sympathetically enhancing the network of woodlands typical of the area, to help to manage soil erosion in order to bring them into positive management, and to provide hunting grounds for species such as bats.
- Maintaining and reinstating hedgerow management, including laying and coppicing existing hedgerows on slopes and in valley bottoms, to retain these important landscape features for the future and safeguard their role in supporting biodiversity.
- Securing the management and restoration of species-rich calcareous grassland to support populations of invertebrates, notably the large blue butterfly (re-introduced into England in this NCA in 1992) and other species of butterfly, and facilitate partnership working to seek to ensure that such sites – functionally connected where possible by 'stepping stones' – and networks are managed as appropriate.
- Implementing significant broadleaved woodland expansion as a national priority area for locally native broadleaved trees, and as a means of reducing soil erosion and greatly increasing water infiltration combined with enlarging, creating and re-linking existing ash and maple woodland, currently a common feature on ridgetops and steeper slopes, in the interests of biodiversity and reinforcement of local landscape character.

Continued over...

SEO 2 continued

For example, by:

- Identifying opportunities for managing, restoring and creating areas of parkland to retain veteran trees, reinforce current patterns of these habitats across the area, support species movement, for example bats, for the benefits that they will bring in managing soil erosion and water quality and flow, and maintain landscape character and support the sense of history.
- Retaining, enhancing and managing traditional orchards, characteristic of lower land and associated with settlements, which are in decline or neglected, particularly on the Isle of Wedmore and the Polden Hills, and encouraging new plantings to improve genetic diversity and increase high-value products.
- Restoring areas of ancient woodland currently under conifer, especially in the Polden Hills, to native woodland of ash and maple with coppice management to improve biodiversity planting of short rotation coppice within semi-enclosed areas containing willows and scrub and in areas in the interests of water infiltration and regulating soil erosion.

Dormouse present in local woodland - a rare mammal here seen in hibernation.

SEO 3: Protect and positively manage the distinctive cultural and geodiversity elements of the Mid Somerset Hills – including the many heritage assets such as the droves, small quarries, Roman and medieval monastic remains, and vernacular architecture – and the functional and cultural relationship with the adjacent Somerset Levels and Moors National Character Area.

For example by:

- Maintaining the nucleated settlement pattern of small towns and villages and its distinctive farmstead architecture, characterised by fine churches, a strong vernacular architecture and a small network of roads, and use opportunities to interrupt these features to help people understand the relationship between historic settlement patterns and the farmed landscape today.
- Providing high-quality interpretation and engagement activities to local people and visitors to the area about geodiversity and the local landscape character, and how it has influenced the development of the landscape and historic vernacular and features such as Glastonbury Tor.
- Using an understanding of the area's traditional and historical architecture, and its distinct patterns of settlement, to inform the appropriate conservation of historical buildings, and to plan for and inspire any environmentally beneficial new development which makes a positive contribution to local character.
- Encouraging the use of traditional local building materials in construction and conservation projects (notably Blue Lias limestone and sandstone) to ensure that the sense of place is maintained and reinforced by any new development and to enhance the local landscape character.
- Ensuring that the wealth of heritage features and assets – including above-ground and buried archaeological features such as earthwork remains, Roman remains, manors, parkland and traditional farm buildings found across the area – are protected, conserved and enhanced, by effective and appropriate management, not least by engaging as appropriate with the local community to foster this process of conservation.
- Managing the levels of grazing on historic features to prevent poaching and erosion damage, while also ensuring that scrub encroachment is prevented, while encouraging arable reversion, where appropriate.
- Supporting the reversion to pasture of areas of arable land containing significant archaeological sites, to prevent damage and ensure their long-term survival.
- Interpreting archaeological earthworks and sub-surface archaeology for the benefit of recreation and a sense of place and history, while recognising the potential for undiscovered remains.
- Promoting access for all to the natural environment across the area, managing access in a way which balances the desire of people to enjoy and experience the area while preventing damage to assets; and making the most of natural, historical, inspirational and tranquil places that are available to all, particularly incorporating sustainable multi-user access to settlements such as Glastonbury, Wells and Somerton.
- Promoting sustainable tourism initiatives that target a broad range of visitors and reduce car dependency, particularly in and around Glastonbury and Street, accommodating high visitor numbers while conserving the landscape and its perceived (site-specific) tranquillity, and seek to prevent inappropriate changes in land use.
- Developing multi-user routes and improved route connectivity characterised by high-quality surfacing and signage, and providing sustainable transport options wherever possible, to enable more people of varying abilities to enjoy the natural environment.

Supporting document 1: Key facts and data

Total area: 42,092 ha

1. Landscape and nature conservation designations

86 ha of Blackdown Hills Area of Outstanding Natural Beauty falls within the Mid Somerset Hills NCA (<1 per cent of the NCA).

Source: Natural England (2011)

1.1 Designated nature conservation sites

The NCA includes the following statutory nature conservation de1signations:

Tier	Designation	Name	Area (ha)	% of NCA
International	Ramsar	Somerset Levels and Moors	816	2
European	Special Protection Area (SPA)	Somerset Levels and Moors SPA	816	2
	Special Area of Conser-vation (SAC)	n/a	0	0
National	National Nature Re-serve (NNR)	Somerset Levels NNR, Bar-rington Hill NNR	68	<1
National	Site of Special Scientific Interest (SSSI)	A total of 23 sites wholly or partly within the NCA	1,218	3

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 253 local sites in the Mid Somerset Hills NCA covering 1,797 ha, which is 4 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	18	1
Favourable	173	14
Unfavourable no change	136	11
Unfavourable recovering	882	73

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 in the Mid Somerset Hills NCA ranges from a minimum of 0.2 m to a maximum elevation of 182 m above sea level.

Source: Natural England (2010)

2.2 Landform and process

The most characteristic features of the NCA are the steep hillsides rising above the Somerset Levels and Moors, most notably the Polden Hills ridge, and from the plain north of Yeovil in the Wessex Vales. These hills form the backdrop to the Levels and Moors and are visible on the skyline from virtually anywhere in this area.

Source: Natural England (2011)

2.3 Bedrock geology

The underlying geology is of late-Triassic and early-Jurassic grey clay and limestone underlain by red Mercia Mudstone.

Source: Countryside Quality Counts, Natural England (Countryside Agency 2003)

2.4 Superficial deposits

Younger sediments, mainly peat, alluvium and gravels, from the recent Quaternary Period are less than 50,000 years old and were deposited in periods of glacial and interglacial conditions. The fossils and structural features of these sediments are of particular importance in determining environmental conditions of that time.

Source: Natural England (2011)

2.5 Designated geological sites

Designation	Number of sites
Geological Site of Special Scientific Interest (SSSI)	4
Mixed interest SSSI	0

There are 19 Local Geological Sites within the NCA.

Source: Natural England (2011)

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

2.6 Soils and Agricultural Land Classification

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	23	<1
Grade 2	2,141	5
Grade 3	35,491	84
Grade 4	3,966	9
Grade 5	0	0
Urban	472	1

Source: Natural England (2010)

Maps showing locations of Statutory sites can be found at: http://magic.defra.gov.uk/website/magic/ – select 'Landscape' (shows ALC 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)
Axe	3
Brue	7
Cary	13
Isle	11
Parrett	1
Tone	1
Yeo	2
Whitelake	7

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.

3.2 Water quality

The total area of Nitrate Vulnerable Zone is 15,212 ha, which is 36 per cent of NCA.

Source: Source: Natural England (2010)

3.3 Water Framework Directive

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

4. Trees and woodlands

4.1 Total woodland cover

The NCA contains 2,201 ha of woodland (5 per cent of the total area), of which 816 ha is ancient woodland.

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

4.2 Distribution and size of woodland and trees in the landscape

The NCA is not a heavily wooded one generally and woodlands are scattered through it with a concentration in the Butleigh and Somerton area. Orchards are a particular feature of the land at the edge of the levels, such as the Polden Hills, though many are now neglected.

Source: Natural England (2011)

4.3 Woodland types

A statistical breakdown of the area and type of woodland found across the NCA is detailed in the following table.

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

Woodland type	Area (ha)	% of NCA
Broadleaved	1,713	4
Coniferous	191	<1
Mixed	159	<1
Other	138	<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	461	1
Ancient re-planted woodland (PAWS)	355	1

Source: Natural England (2004)

5. Boundary features and patterns

5.1 Boundary features

The flat, open landscape of wet pasture, arable and wetland divided up by wet ditches or 'rhynes' extends from the Levels and Moors into the fringes of the Mid Somerset Hills NCA. Hedgerows, typically containing a wide range of species and hedgerow trees are the common boundary feature of the area.

Source: Somerset Levels and Moors/Mid Somerset Hills Countryside Character Area Description; Countryside Quality Counts (2003)

5.2 Field patterns

Small, irregular fields except where there are planned settlements and areas of regularised enclosure.

Source: Somerset Levels and Moors/Mid Somerset Hills Countryside Character Area Description; Countryside Quality Counts (2003)

6. Agriculture

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

6.1 Farm type

The most notable change between 2000 and 2009 was a drop of 63 per cent in the number of dairy farms to 90 in 2009, but livestock remained the most common type of farm at 47 per cent of total number.

Source: Agricultural Census, Defra (2010)

6.2 Farm size

All farms showed a decrease in number between 2000 and 2009 by between 20 per cent (being small farms of under 5 ha) and 4 per cent, apart from large (over 100 ha) farms which increased by 8 per cent. In terms of area, small farms declined by only 9 per cent whereas large farms increased by 15 per cent between 2000 and 2009.

Source: Agricultural Census, Defra (2010)

6.3 Farm ownership

2009: Total farm area = 35,067 ha; owned land = 22,085 ha
2000: Total farm area = 34,729 ha; owned land = 24,129 ha

Source: Agricultural Census, Defra (2010)

6.4 Land use

Cash roots and oilseed growing declined by 82 per cent and 43 per cent respectively between 2000 and 2009. During the same period, other arable crops increased by 54 per cent and glasshouses by 44 per cent. Grass and uncropped land represented 68 per cent of total farmland.

Source: Agricultural Census, Defra (2010)

6.5 Livestock numbers

The numbers of both sheep and pigs fell by around a third between 2000 and 2009. Cattle numbers remained relatively stable, with a fall of only about 4 per cent and in 2009 made up 47 per cent of total livestock, rather than 37 per cent in 2000.

Source: Agricultural Census, Defra (2010)

6.6 Farm labour

Principal farmers made up 66 per cent of the total labour numbers, even though their actual number decreased by more than 100 between 2000 and 2009. The number of part-time and casual employees fell significantly, by 24 per cent and 58 per cent respectively.

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

There are three habitats highly characteristic of the area: ash–maple woodlands; calcareous grasslands; and neutral grasslands. These habitats are widespread throughout the NCA. In addition to these habitats there are a few arable fields which are of conservation importance supporting arable plants and farmland birds of note. These habitats are linked by a system of hedgerows and droves, which have a high conservation value as wildlife habitats and also serve as a link between the other habitats of high biodiversity value.

Source: Natural England (2011), Mid-Somerset Hills Natural Area Profile (1996)

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
Flood plain grazing marsh	4,207	10
Lowland meadows	418	1
Lowland calcareous grassland	237	<1
Lowland raised bog	144	<1
Purple moor grass and rush pasture	22	<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 Hhbitats 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

While small towns and villages like Somerton and Street lie in sheltered sites, other settlements like Glastonbury, Wedmore and Wookey lie on islands rising out of the wetlands or at the wetland edge with characteristic tracks (droves) linking these settlements with the traditional summer grazing provided by the Levels and Moors.

Source: Somerset Levels and Moors/Mid Somerset Hills Countryside Character Area Description; Countryside Quality Counts (2003)

8.2 Main settlements

The main settlements in the Mid Somerset Hills NCA are Street, Glastonbury, Wedmore and Somerton.

Source: Somerset Levels and Moors/Mid Somerset Hills Countryside Character Area Description; Countryside Quality Counts (2003)

8.3 Local vernacular and building materials

Although Blue Lias limestone is the dominant building material, there are a variety of other materials such as oolite, sandstone and conglomerate, contrasting with many 19th century buildings which are constructed in brick and pantile.

Source: Somerset Levels and Moors/Mid Somerset Hills Countryside Character Area Description; Countryside Quality Counts (2003)

9. Key historic sites and features

9.1 Origin of historic features

Glastonbury Abbey was founded or re-founded by King Ine of Wessex around 700 ad and became a major influence on settlement and agriculture. The town developed around its abbey from the late Saxon period. Villages and associated common fields on north side of the Polden Hills, on land owned by Glastonbury Abbey, could date from re-organisation of its estates in the late 10th century. The shoe-production centre of Street developed as a planned settlement by the Clark family in mid-19th century. There is low survival of pre-1750 farmstead buildings; the principal exception being the medieval barns of Glastonbury Abbey in and around Glastonbury. There are also late-17th and more commonly 19th century, cider houses, often integrated into combination ranges.

Source: Countryside quality counts draft historic profile, somerset levels and moors/ mid somerset hills countryside character area description

9.2 Designated historic assets

This NCA has the following historic designations:

- 5 Registered Parks and Gardens covering 119 ha.
- 1 Registered battlefield covering 65 ha.
- 30 Scheduled Monuments.
- 1,460 Listed Buildings.

Source: Natural England (2010)

More information is available at the following address:

- http://www.english-heritage.org.uk/caring/heritage-at-risk/

10. Recreation and access

10.1 Public access

- 1 per cent of the NCA, 357 ha, is classified as being publically accessible.
- There are 812 km of public rights of way at a density of per 1.9 km2.
- There are no National Trails within the Mid Somerset Hills NCA.

Sources: Natural England (2010)

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

Access designation	Area (ha)	% of NCA
National Trust (accessible all year)	47	<1
Common Land	9	<1
Country Parks	0	0
CROW Access Land (OC and RCL)	42	<1
CROW Section 15	2	<1
CROW Access Land (Section 16 Dedicated)	0	0
Village Greens	1	<1
Doorstep Greens	0	0
Forestry Commission Walkers Welcome Grants	26	<1
Local Nature Reserves (LNR)	38	<1
Millennium Greens	0	0
Accessible National Nature Reserves (NNR)	68	<1
Agri-environment Scheme Access	12	<1
Woods for People	225	<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), a breakdown of tranquillity values for this NCA is detailed in the following table:

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

Tranquillity	Tranquillity Score
Highest value within NCA	42
Lowest value within NCA	-68
Mean value within NCA	1

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 disturbance is confined to the routes of the A39 and A37 and towns, specifically Somerton, Street and Glastonbury. A breakdown of intrusion values for this NCA is detailed in the following table.

Intrusion category	1960s (%)	1990s (%)	2007 (%)	Percentage change (1960s-2007)
Disturbed	5	29	42	38
Undisturbed	95	71	57	-38
Urban	n/a	n/a	2	2

Sources: CPRE (2007)

Notable trends from the 1960s to 2007 were a decrease of 38 per cent in the amount of undisturbed land. Urban areas appear for the first time in the NCA by 2007.

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

- Data indicates that there has been limited new tree planting, mostly in small blocks scattered over the NCA, helping to strengthen and reinforce the character of this NCA.
- There has been a high uptake of management grants with an increase in the proportion of ancient woodland under a woodland grant scheme, rising from 26 per cent in 1999 to 52 per cent in 2003.
- Some woodlands are becoming neglected due to a lack of management, particularly on the ridges and 'islands' within the NCA. Their decline would have a significant impact on local landscape character.
- Old orchards have been lost from the area and many remaining orchards are neglected. Funding opportunities to restore and create traditional orchards are however being taken up 2013, to add to the maintenance also now undertaken.
- Hedgerow trees are key landscape features that were being lost. Trees are becoming old and are being lost through removal and decay. There is still limited new planting to replace these trees, and a risk that any planting does not take account of local character.

Boundary features

- Small fields and hedgerows, often with trees, are the characteristic boundaries within this NCA but were at risk of being lost due to neglect and removal. This trend has largely been reversed with approximately 32,500 km of hedgerow under some form of management under agri-environment schemes.
- English elms were a common feature in hedgerows. Dutch elm disease has meant that these have been all but lost from the landscape.
- Hedgerow trees were once a common feature of parts of the landscape, although are being lost as they become old and are not replaced. Some replanting has occurred under restoration of hedgerows under agri-environment schemes.

Agriculture

- There has been a shift from dairy to lowland cattle for meat, and a subsequent drop in the number of dairy units from 153 in 2000 to 90 in 2009, in line with national trends. Sheep and pig numbers also showed a decline in numbers.
- The cereal cropping area remained relatively stable in the NCA, however roots and oilseed rape showed large declines. Other crops (such as beans, for stock feed) are being grown more widely.
- Most farm sizes in this period were declining, save for the larger holdings over 100 ha, suggesting a trend towards larger farms with the subsequent loss of smaller units.

- There has been a loss of grassland in this area, and the extent of grassland remains below 1990 levels. This loss has slowed and has possibly reversed since the 2000 with the uptake of grasslands options under Environmental Stewardship include regeneration of grassland/semi-natural vegetation and lowland pastures, calcareous grasslands and lowland hay meadows.

Settlement and development

- There is some new development around the larger settlements, such as Somerton, and Langport, with more planned, and along the axes of the A39 and A358. However, these developments are currently only locally significant, and the overall rural and pastoral character of the area has been maintained.

- Evidence suggests the number of barn conversions has been relatively high.

- There is scope for further development envisaged in the NCA under current local plans.

- The impact of the M5, which runs to from north to south just outside the NCA to the west, is minimal, save for traffic on the Polden Ridge and the A39.

Semi-natural habitat

- In 2011, 98 per cent of SSSI in the area were in favourable or unfavourable recovering condition.

- Before 1990 there had been a loss of meadows and pastures in the area, although in recent years this loss has been arrested. The most extensive Environmental Stewardship options taken up were for regeneration of grassland/semi-natural vegetation and lowland pastures.

- Flood plain grazing marsh remains the area's most extensive priority habitat and management through various wet grassland options and low inputs through Environmental Stewardship are seeing benefits for wading birds in recent years.

- Evidence suggests that the condition of habitats outside of designated sites across the area is declining, due to lack of appropriate management.

Historic features

- In 1918 about 1.8 per cent of the NCA was historic parkland. In terms of its share of the resource the NCA was in the bottom third of the country. By 1995 it is estimated that 48 per cent of the 1918 area had been lost. About 20 per cent of the remaining parkland is covered by a Historic Parkland Grant, and 8 per cent is included in an agri-environment scheme. Evidence suggests that the character of this historic resource is probably neglected.

- There is low survival of pre-1750 farmstead buildings, the principal exception being medieval barns of Glastonbury Abbey in and around Glastonbury. There has however been an increasing trend towards barn conversion. However, over half the historic farm buildings remain unconverted, and some three quarters are structurally intact.

- The shoe-production centre of Street developed as a planned settlement by the Clark family in mid-19th century, growing from late 17th century works with sheepskin. Since production of shoes ceased in the early 20th century, a designer shopping outlet has developed at Street, building on the history of this area.

- Past pasture improvement and conversion of grassland to arable in some areas has seen a loss of areas of ridge and furrow and damage buried archaeology and other historic earthworks. As this trend has reduced since the war, it is likely that the integrity of buried archaeology remains intact.

Rivers

- This NCA falls entirely within priority catchment areas for Catchment Sensitive Farming Schemes, for the River Brue and the Somerset Levels and Moors.

- The biological water quality in 1995 was predominantly good and it has been maintained. The chemical water quality in 1995 was predominantly very good, and it has arguably been so maintained – although the data is now measured differently such as to make comparisons over time more difficult and the current phosphate levels are a major concern.

- The Upper Parrett and the River Brue, and indeed most rivers in this catchment have problems of soil erosion and run-off leading to increased nutrient losses, whereas the Upper Brue suffers from phosphate and sediment loss leading to nutrient enrichment of surface waters. Such issues have resulted from post war intensive dairy, pig, poultry and arable production, especially open field crops of maize and potatoes as well as diffuse agricultural pollution and sewage treatment works. The aim must be to protect watercourses vulnerable to silting and potential erosion, and to reduce diffuse pollution and nutrient inputs from sewage works.

- In 2012, 36 per cent of this NCA was designated a nitrate vulnerable zone.

Minerals

- The Somerset Minerals Plan of 2014 shows there to be several active building stone quarries for (Jurassic) Blue Lias limestones, mostly around Somerton. This remains a popular building stone in the region, as it has been for centuries.

- There are also dormant quarries, for both limestones and aggregates, but these are currently believed unlikely to be economic to reactivate.

- The Wells area also has a petroleum and exploration development licence – adjoining others for methane production, these being outside the NCA to the north.

Drivers of change

Climate change

- Increasing temperatures and altered patterns of rainfall may lead to changes in the hydrology of the catchment and run-off from the hills to lower-lying wetland areas.

- Intense rainfall in summer or winter months is likely to occur resulting in flooding events, as seen in 2012 and early 2014 affecting this and the Somerset Levels and Moors, with resultant impacts on fodder crops, grass ley and wildlife, notably ground nesting birds, invertebrates and soil flora and fauna.

- Winter and summer flooding are far from uncommon in the adjoining Levels and Moors. Prolonged periods of high rainfall will probably result in longer periods of floodwater coverage and associated impacts on towns, villages and transport infrastructure. Among other impacts, increased soil erosion and reduction in soil quality may result.

- Conversely summer droughts may lead to demands for increased water abstraction for irrigation of crops, and desiccation, oxidisation and erosion of the peaty soils at the wetland fringes. This may also cause difficulties

for maintaining water levels in adjoining areas such as the Levels with their existing ditches and wetland habitat, in the summer months, not least with the adverse effect on flow of the Levels' receiving rivers.

- Heavy rain may increase the extent of soil erosion on the hills' slopes, reducing soil quality and increase sedimentation and nutrient enrichment in rivers. Hotter drier summers, may also reduce river flow and water availability, concentrating nutrient enrichment and reducing available oxygen in the lower water levels and this will aggravate any adverse effects, potentially affecting water flora and fauna.

- The overall plant community in this NCA may change with altering precipitation levels and temperatures. Chalk species diversity in particular is at risk as drought tolerant species (for example, deep-rooted) may prosper preferentially.

- Species migration and range expansion of species may bring both increases in biodiversity and returning species, and more pests, diseases and some loss of habitats.

- Increased storminess combined with increased summer drought may lead to the loss of mature and/or veteran trees.

- A longer growing season with increasing temperatures may encourage the expansion of arable agriculture with the loss of pasture and traditional orchards to crops currently grown in southern Europe, and encourage a driver to increased field sizes resulting in the loss of small irregular fields characteristic of the NCA.

Other key drivers

- A number of rivers, including the Parrett and Brue, which rise on higher ground, cut through the Mid Somerset Hills draining into the flood plain of the Somerset Levels and Moors and affect flood levels and water quality. Flooding of the Somerset Levels (notably around the River Parrett) in 2012 and 2014, the Levels' designated status, and the demands of the Water Framework Directive, will make addressing these issues essential. Measures to reduce water flow management in the upper reaches of these catchments may be possible in this NCA to help reduce flow to the Somerset Levels.

- Expansion of Taunton to the west of this NCA and the M5 corridor is anticipated. Any such expansion may affect this NCA, including increasing the demand for water resources, and likely lead to an increase in recreational use of the countryside. The development itself may have an impact on the landscape character, especially to views from the hills.

- Increased pressure for food production as a result of a motivation for greater national food self-sufficiency may create opportunities to explore sustainable intensification and a move towards more arable production. This may increase pressure on farm and field size with a loss of hedgerows, habitats and on water quality.

- Ash trees are common in many ancient woodland sites in this area, in conjunction with maple. Should ash die-back disease spread, there may be major losses of ash trees, with a consequent impact on landscape and biodiversity. Disease patterns in general may alter with climate change. Developing robust ecological networks will be important to help build resilience to change in the wider landscape.

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.

The large blue butterfly, once nationally extinct but restored to England in this NCA, late in the 20th century.

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: Safeguard and manage soil and water resources, notably the rivers Parrett, Brue and Tone, as part of the wider Somerset Levels and Moors Priority Catchment, allowing naturally functioning hydrological processes to maintain water quality and supply; work to reduce flooding; and manage land to reduce soil erosion and water pollution, and to retain and capture carbon.	↔ *	↗ **	↔ **	↔ ***	↔ ***	↔ ***	↗ ***	↔ ***	↔ ***	↔ ***	↔ ***	↔ ***	n/a	↑ ***	↑ ***	↑ ***	↗ ***	↗ ***	↔ ***
SEO 2: Protect, manage and enhance the distinctive farmed landscape, retaining the balance of productive mixed farmland and diversity of habitats and associated species. Create and enhance connecting corridors of hedgerows, orchards, calcareous and neutral grasslands, ancient or newly planted woodland, hedgerow and riverside trees, and flood plain grazing marsh, for their contribution to sense of place and their positive role in reducing soil erosion and enhancing water quality and biodiversity.	↗ ***	↑ ***	↔ ***	↗ ***	↗ ***	↗ ***	↗ ***	↗ ***	↗ ***	↗ ***	↗ ***	↗ ***	n/a	↑ ***	↑ ***	↑ ***	↑ ***	↑ ***	↔ ***
SEO 3: Protect and positively manage the distinctive historic environment and geodiversity of the Mid Somerset Hills – including the many heritage assets such as the droves, small quarries, Roman and medieval monastic remains, and vernacular architecture – and the functional and cultural relationship with the adjacent Somerset Levels and Moors National Character Area.	↔ ***	↗ ***	↗ ***	↗ ***	↔ ***	↗ ***	↔ ***	↑ ***	↗ ***	↗ ***	↗ ***	↗ ***	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) O =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
Steep hillsides rising to low hills and ridges contrasting with the flat open landscape of the surrounding Somerset Levels and Moors.	■ The steep hillsides form a distinct backdrop to the adjacent Somerset Levels and Moors and are visible on the skyline throughout the area. ■ Wide views over the renowned Levels and Moors contribute significantly to the sense of place of the area with the Levels and Moors indelibly connected. ■ The link with the surrounding higher land is close, both geographically and historically, as communities moved between the higher ground of the hills and lower marshland of the moors.
The solid and underlying geology of late Triassic/early Jurassic grey clays – overlying red Mercia Mudstone – provide a sharply defined boundary to the west of the NCA.	■ The relief of the area has had significant influence on the land use and distribution of semi-natural habitats. The steep rising slopes have in general proved too difficult to intensively farm while the calcareous, clay-rich soils of the NCA are considered productive to farm. ■ The undulating hills beyond the steep slopes gives the Somerset Hills a more intimate feel than the expansive surroundings of the Levels. ■ The hills surrounding basins where substantial peatlands have formed and wetland conditions persist. ■ The late Triassic and early Jurassic sediments as well as younger sediments from the more recent Quaternary Period have considerable palaeo-ecological value in determining past environmental conditions.
The tree and shrub cover increases with the steep transition from the flat open levels to a landscape of woodland, hedges, farmsteads, villages and orchards as the land rises with the hills.	■ Woodlands of ash and maple are a common feature on the ridgetops and steeper side slopes and are characterised by having high botanical diversity in canopy, shrub and ground layers. ■ Orchards are a particular characteristic of lower land at the boundary of the Levels and Moors, close to settlements and are associated with unimproved grassland. ■ A high proportion of ancient, semi-natural woodlands exist in this NCA and are considered a principal habitat for dormouse, purple gromwell and a wide range of nationally rare or scarce invertebrate species.

Landscape attribute	Justification for selection
Predominately pastoral land use with small irregular fields bounded by hedgerows and hedgerow trees.	■ The drier ground of the Mid Somerset Hills would have been used for the overwintering of stock in the past creating historical agricultural links with the Somerset Levels and Moors. ■ Pasture tends to be the main landcover with remnant areas of calcareous and neutral grasslands. ■ Among the pastoral landscape, some arable fields persist that have retained a diverse arable-weed flora. ■ Near planned settlements, such as Street, fields are laid out in a more regular pattern. ■ Hedgerows form the main boundary type, many of which are ancient and botanically diverse with a structure that provides nesting and breeding sites for a variety of species as well linking other important semi-natural habitats. ■ Hedgerow trees are common and a feature of these is the abundance of associated mistletoe. ■ Hedgerows found along old tracks or droves can possess rich verge flora thought to represent remnants of vegetation once more widespread in adjacent fields.
The internationally and nationally important semi-natural habitats of flood plain grazing marsh, ash-maple woodland, calcareous grasslands and neutral grasslands are widespread along with hedgerows and several arable fields of conservation importance.	■ A substantial resource of flood plain grazing marsh, including an area of the Somerset Levels and Moors SPA, with large flocks of wading and other wetland birds benefiting from a rich food supply. ■ Ancient broadleaved semi-natural woodlands supplemented and linked by a network of hedgerows linking areas of high conservation. ■ Widespread calcareous grassland often associated with areas of calcareous scrub. This grassland / scrub mosaic is found extensively on the steep slopes of the NCA and provide excellent habitat for many invertebrate species. ■ Only a few pastures and meadows of mesotrophic grassland remain scattered through the NCA. ■ There are several arable fields retaining diverse arable-weed flora in the Mid Somerset Hills NCA with one designated an SSSI. ■ The greater historical diversity of farming in the hills relative to the Levels is reflected in the habitats of the NCA.
Nucleated towns and villages common along ridges and on hills or on the wetland edges with characteristic tracks linking settlements with the traditional summer grazing provided by the Levels and Moors.	■ Hills and ridges have been sites for settlement from early prehistoric times, linked across the wetlands by trackways. ■ Settlement of higher land continued throughout Roman times and by the time the Saxons arrived hills were relatively populated sites from where the marshlands were exploited. ■ A dense network of lanes and footpaths across the hills and rides connect numerous villages and hamlets. ■ Although Blue Lias limestone is the dominant building material, there are a variety of other materials such as oolite, sandstone and conglomerate, contrasting with many 19th-century buildings which are constructed in brick and pantile.

Landscape attribute	Justification for selection
Major rivers rise on the surrounding higher ground and cut through the Mid Somerset Hills to form an intricate series of ridges and islands.	■ Major rivers such as the Brue, Axe and Parrett, rise on surrounding ground and cut through the Mid Somerset Hills. ■ The hydromorphological influence of these rivers has created the complex views of flat land framed by varied skylines which are the NCA's most distinctive characteristic.
Evidence showing the development of settlement and farming on the hills and ridges, and the associated utilisation of the adjacent wetlands, from prehistoric times through to the present day.	■ Remains of Neolithic trackways linking the many communities on hills and ridges across the marshes. ■ Roman settlement was extensive on the Mid Somerset Hills, with villas extending northwards within the influence of important Roman centre of Ilminster (within Yeovil Scarplands NCA). ■ Extensive settlement by the Saxons is evident by the numerous towns and villages whose names end in -ton or -ey. ■ Glastonbury Abbey, founded or re-founded by King Ine of Wessex, controlled vast estates and was a major influence on settlement across the area. The abbots of Glastonbury were the driving force for reclamation of the Levels in the 13th century. ■ Medieval church towers showing evidence of past wealth, even in small settlements. ■ The dense network of established settlements across hills and ridges demonstrate the long appreciated need to make maximum use of drier land.
In part, an area of tranquillity and remoteness despite connection to wider world, and a sense of history pervades in the landscape due to the network of ancient settlements.	■ Transport corridors along edge and with little impact (outside Street) on wider countryside. ■ Expansive views over the adjacent Somerset Levels, contrasting with the intimate, more wooded rolling landscape to the east. ■ Semi-natural habitats widespread across the predominately pastoral landscape.

Landscape opportunities

- Protect the dramatic landscape of steep wooded hillsides rising above the Somerset Levels and Moors, most notably the Polden Hill Ridge, which form a backdrop and are visible on the skyline from virtually anywhere in this area.
- Promote and maintain the extensive management of the wetlands in the interests of biodiversity and water flow, in particular to the Levels and Moors.
- Manage the restoration and replanting of hedgerows and hedgerow trees both to reinforce the traditional field patterns and the local landscape character, and in the interests of biodiversity and habitat connectivity.
- Manage and conserve ancient woodlands while exploring opportunities to expand the area and number of small broadleaved woodlands throughout the farmed environment where site-appropriate (such expansion into the general agricultural landscape being encouraged by the Forestry Commission's plans) and restore areas of coniferised ancient woodland to native, broadleaved, ash-maple type.
- Enhance remaining semi-natural native woodlands using traditional methods such as coppicing to establish a diverse range of stand ages and benefit the associated species and increase the conservation value of these woodlands.
- Manage the agricultural landscape to enhance semi-natural habitats and species, notably the rare arable plants found here, and their resilience to climate change, as well as contributing to the management of soil erosion, flooding and water quality.
- Protect permanent pasture as a landscape feature which if well-managed will provide a number of important ecosystem services, such as storing carbon, stabilising soil erosion, regulating water flow and water quality, alongside food provision.
- Manage and enhance the widespread semi-natural habitats at the landscape scale, working with landowners, farmers, statutory agencies and conservation bodies, to increase the ability of the wider catchment to intercept and store increased volumes of precipitation to regulate the peak flows reaching settlements and farmland.
- Restore calcareous grassland through appropriate grazing routines and scrub control to further strengthen the connectivity of semi-natural habitats that are wide spread throughout this NCA in the interests of biodiversity and to enhance the mosaic of habitats that characterise the landscape.
- Restore the old orchards on the NCA's boundary with the Levels and bring them into positive management in the interests of food production, farm diversification and conserving cultural heritage.
- Protect the small well-established villages, with their historic settlement pattern and green spaces, and the ancient routes that connect them, aiming to retain their sense of tranquillity while ensuring viable and vibrant local communities, ensuring that improvements to infrastructure and other development is incorporated into the landscape and, where possible, that such developments make a positive contribution to the character of the NCA.
- Preserve for future interpretation, the area's archaeological resources, historic features and geological interests from damage and loss, directly and by maintaining the environmental conditions for such features to persist and plan for, where necessary the change of use of historic buildings to respect local character and distinctiveness.

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	Pasture Cereals Dairy products Sheep and cattle rearing Orchards	Sixty-eight per cent of the NCA is under pasture or is uncropped with livestock farming being the most popular type of farm at 47 per cent of the total number. Cash roots and oil seeds are declining, by 82 and 43 per cent respectively while arable crops have increased. The soils are fertile and versatile; 84 per cent are Grade 3 agricultural soils or better. Generally mixed farmland; in 2009 there were 44,426 cattle (46,223 in 2000), 27,549 sheep (42,300 in 2000) and 23,306 pigs (34,821 in 2000) – the decline here is as with national trends since foot and mouth disease.	Regional	There has been longstanding land use in the hills since prehistoric times with fertile soils, high rainfall and a mild climate beneficial to pasture and subsequent livestock production. Food production levels are fairly regular from the start of the 21st century, with a drop in dairy farming as is found nationally, from almost 20 per cent of the NCA's farmed area to only 12 per cent, and a rise in the role played by grazing livestock. The holding size tended to increase upwards, with fewer holdings of 20–100 ha but more above 100 ha. There has been a slight increase in the percentage of owned rather than tenanted land – and a more substantial drop in the use of casual and/or gang labour. Rising animal feed prices has seen a decline in livestock production and dairy and an associated rise in arable and cereal production. Ensuring appropriate and beneficial soil and nutrient management, avoiding sedimentation and diffuse pollution is minimised, will be essential both for the maintenance of food production levels and other services, notably soil quality, prevention of erosion, water quality and biodiversity. Orchards are a particular feature of the land at the edge of the Levels, such as the Polden Hills, though many are now neglected.	Seek to maintain the levels of grazing animals, particularly where they can be used to help improve the quality and condition of traditional, semi-natural grassland sites. Support should be available for sustainable expansion of food production, and opportunities for diversification explored. Work with the farming community (including farmers on the Levels and Moors, who are affected by the land use here) to ensure good soil and nutrient management, to secure a sustainable future for farming. Raise awareness of local apple varieties and link owners of orchards with local fruit and cider producers and suppliers.	**Food provision** **Sense of place/ inspiration** **Regulating soil quality** **Regulating soil erosion** **Biodiversity**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Timber provision	Woodland cover Ancient broadleaved semi-natural woodlands Orchards History of coppicing which has declined since the Second World War	Woodland cover of 2,201 ha (5 per cent of the total area) with 1,713 ha broadleaved, 191 ha coniferous and 159 ha mixed woodland. 816 ha are ancient or planted on ancient woodland sites. Only a very small area is given over to commercial planting.	Local	This NCA is not heavily wooded and woodlands are scattered through it with a concentration in the south, in the Butleigh and Somerton area. The ancient broadleaved semi-natural woodlands are typically ash-maple in their composition and are characterised by having high botanical diversity in canopy, shrub and ground layers. Much of the NCA's woodland is on steep slopes that have proved too difficult to farm intensively, retaining semi-natural vegetation that is not easily harvested. While the commercial viability of woodlands is limited, increasing its cover may deliver other benefits, such as biodiversity, and has been estimated at a potential area increase of 5 per cent. The decline in coppicing since 1945 has substantially altered the character of woodlands. Species associated with open are have declined while other associated with late stage coppice growth have benefited. Orchards are a particular feature of the land at the edge of the Levels, such as the Polden Hills, though many are now neglected.	Seek opportunities to increase woodlands, where site-appropriate, to reinforce the timbered character of the landscape relative to the levels and moors adjacent. Explore opportunities to bring ancient semi-natural woodlands back into positive and traditional management, using methods such as coppicing, to provide timber for local wood fuel supply and increase their conservation value by re-establishing a diverse range of stand ages to benefit the associated fauna. Seek to develop orchards where possible in the interests of food production and farm diversification.	**Timber provision** **Biodiversity** **Food production** **Sense of place/ inspiration** **Climate regulation**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Water availability	Rivers Parrett, Axe, Tone and Brue, and their tributaries Carboniferous Limestone aquifer of the Mendips that is the NCA adjoining to north-east	The main rivers that run through the Mid Somerset Hills are the rivers Axe, Brue and Parrett (and its tributaries the Cary and Isle) that rise outside the Mid Somerset Hills in adjacent NCAs. The Axe rises at the springline of the Mendips near Wells close to the boundary of this NCA while both the Brue and Parrett, with its tributaries the Cary and Isle, rise in the Yeovil Scarplands (the Brue in clay near Bruton and the Parrett south of Crewkerne at Chiddington). These main rivers are joined by tributaries rising as limestone springs in the Mid Somerset Hills.	Regional	Water is available for further abstraction throughout the NCA apart from an area to the south where 'no water is available'.[4] Most of the water abstracted is used for public water supply in urban areas around the NCA, although the primary supplies come from the limestone aquifer. Significant quantities of water are also abstracted for the few fish farms and hydropower generation (popular in the upper reaches of the River Isle) but then returned back to the watercourse downstream.	Work in partnership to develop the Catchment Management Strategy, in particular work with land managers to make maximum, sustainable use of current water resource. Work with land owners and farmers to identify areas where water run-off can be slowed and, through appropriate land management, infiltration rates increased, and where new water capture and storage facilities can be created. Work with the Levels' Internal Drainage Board where possible in the interests of the water tables in this NCA and in the adjoining Levels, and thus contribute to habitat management. Pursue and develop green infrastructure projects, and particularly sustainable drainage systems (SuDS), in new and existing developments and in the catchments affecting urban areas.	**Water availability** **Regulating water quality** **Sense of place/ inspiration**

[1] *The Parrett Catchment Abstraction Management Strategy*, Environment Agency (URL: http://publications.environment-agency.gov.uk/pdf/GESW0306BKMY-E-E.pdf)

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Genetic diversity	Arable plants Traditional orchards Ancient semi-natural woodland Calcareous and mesotrophic grassland	Many sites designated for their arable plants and ancient woodland. Established orchards as home to heritage fruit species, with cider varieties of note.	National	Many semi-natural areas may serve as reservoirs of older plant stock, notably species-rich woodlands and the rich verge flora along ancient tracks and droves. Orchards as characteristic of the local landscape on the wetland edge. It is important to maintain the genetic diversity in orchard species, to increase resilience to climate change and disease. Rare arable fields are found in the Mid Somerset Hills that have retained a diverse arable-weed flora, a number of which are nationally rare or scarce.	Investigate rare arable plants that may be useful wild relatives of crops, and their potential as a resource as climate changes. Explore opportunities to protect old orchards and bring them into positive management, not least to develop species variety in the interests of resilience to climate change and disease.	**Genetic diversity** **Food production** **Biodiversity** **Sense of place/ inspiration** **Sense of history**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Biomass energy	Broadleaved woodland Long history of coppiced woodland management that has declined since the Second World War Mixed farming culture, and local expertise Fertile soils and moderate climate	Statistically no significant current trace of energy crops, but the farming sector is open to innovation and diversification. The existing woodland cover (5 per cent) offers limited potential for biomass provision. Competing demands for grass for livestock production so little take up of biomass initiatives as yet.	Local	The characteristic highly conspicuous ridges and slopes with thinner soils of this NCA are not well suited to biomass plantings with regular blocks of monoculture out of scale and character with the open landscape. However, towards the east the low hills and valleys may accommodate some plantings. Small-scale short rotation coppice plantings are more suited to the secluded valley bottoms. Miscanthus crops may be accommodated in the mixed farming areas of the low hills, fitting into the existing pattern of arable crops. Bringing or returning unmanaged woodlands under coppice management could provide wood products for the local market. The woodlands of this area were, in the past, used to produce timber products for the agricultural community. Small diameter stems for a wide variety of purposes were extracted by periodic coppicing of many species, especially hazel. The decline in this practice since the Second World War has altered the age structure and character of the woodlands. The re-establishment of coppice as a management tool could provide products for a local wood fuel market.	Work with the farming community to identify suitable locations for the increase in net yield of miscanthus and short rotation coppice, avoiding locations that would be contrary to local landscape character, likely to impact on archaeological features or be in conflict with nature conservation opportunities. Encourage the development of market and supply chain for local wood fuel.	**Biomass energy** **Climate regulation** **Sense of place/ inspiration**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Climate regulation	Soils and vegetation of the following habitats: Permanent grassland Trees, woodland and scrub Flood plain grazing marsh Lowland raised bog	Soil carbon content within this NCA is typically 0–5 per cent with occasional areas of up to 10 per cent, reflecting the predominance of mineral soils that can be low in organic matter where under continuous arable cultivation. Areas of higher carbon content are likely to be predominantly associated with the loamy and clayey flood plain soils with naturally high groundwater (9 per cent), some of which are peaty at depth or include small areas of peaty soils, especially where overlain by areas of flood plain grazing marsh. Areas of fen peat soils (3 per cent) are likely to be associated with the boundary with the Somerset Levels and Moors NCA, and have large and important stores of carbon.	Local	Cultivation of soils is leading to ongoing loss (wastage) of peat through shrinkage and oxidation (with loss of carbon dioxide into the atmosphere), and where drained there may be losses of methane, a potent greenhouse gas. Further stores of carbon are potentially associated with the soils under other areas of long established permanent grassland, as well as in the vegetation of other semi-natural habitats such as scrub on the steep slopes and the ancient ash maple woodlands. While soil carbon content is relatively low in the predominately mineral soils of the NCA, soil carbon sequestration can be increased by organic matter inputs and/or by reducing the frequency/area of cultivation in appropriate areas.	Work with the farming community to promote best practice in soils management, using low pressure machinery and stock management where needed to prevent compaction, aid soil structure and quality and mitigate soil carbon losses from erosion. Encouraging the use of green manure crops such as nitrogen fixing legumes within arable systems to replace nutrients and bind soils in a sustainable way. Take steps to minimise cultivation of peat-rich soils as far as possible. Reduce net greenhouse gas emissions through increasing the area of native woodland and scrub and wetland restoration for carbon sequestration. Investigate opportunities for habitat-based payments for ecosystem services.	**Climate regulation** **Regulating soil quality** **Regulating soil erosion** **Regulating water quality** **Biodiversity**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating water quality	Rivers and many tributaries, some spring-fed	The NCA falls within the River Brue priority catchment. This suffers from soil erosion, related nutrient leaching and sedimentation and phosphate pollution in watercourses. The Brue and its tributaries drain into the nationally and internationally important wetlands of the Somerset Levels and Moors leading to the sedimentation and nutrient enrichment of these wetlands and their associated watercourses. Where information is available on water quality, the Brue, Parrett, Axe, Isle and Cary rivers are considered to have moderate ecological water quality within this NCA and poor quality further downstream, reflecting the issues noted above. Where they have been assessed, the rivers of this NCA have good chemical status and the NCA has good chemical groundwater status.[5] Thirty-six per cent of the NCA is a nitrate vulnerable zone.	National	Presence of significant amounts of duckweed and algae in the wetland SSSI of the Somerset Levels and Moors indicate nutrient enrichment due to soil erosion upstream, much of this from this NCA and the adjacent Yeovil Scarplands. This is having an adverse effect on the wetland SSSI of the Somerset Levels and Moors, many of which are also European designations. A large proportion of protected sites in the Somerset Levels and Moors have phosphate levels that exceed the targets in their conservation objectives. While this is based on limited monitoring across the ditch systems, modelling strongly indicates that the concentrations in water in feeder rivers are significantly in excess of the target. Evidence suggests that around 70 per cent of the phosphate in the Parrett and Brue come from sewage treatment works.[6] It is suspected that small domestic systems make a significant contribution to the phosphate pollution problem in locations where mains sewerage is not available. Further work is required to better understand this threat. Specific issues linked to agricultural sources of pollution include; sedimentation as a result of erosion and damage to the soils both in and outside of the area; diffuse water pollution from agriculture, particularly run-off of manure, fertiliser, poor stock management infrastructure and chemicals; soil erosion due to overgrazing and excessive stock access to watercourses resulting in severe bankside erosion.	Work with the water industry to increase understanding of the need to reduce phosphate discharged from key sewage treatment works, and the most effective ways of making the identified improvements. Work with farmers and landowners to establish and maintain best practice in water quality management including; grazing regimes and stocking rates; applications of organic matter and fertiliser; maintenance of farm infrastructure; and cultivation and cropping activity. Work with land managers to identify and develop crops and cropping regimes which lower applications of fertiliser and pesticides, to help protect the landscape from chemical run-off, and promote the use of buffer strips along watercourses, the creation of riparian semi-natural habitat and positive management of riparian vegetation for the same purpose. Work with the local community – including in the Levels – to identify and improve problematic sewage and trade discharges. Promote improvements in farm infrastructure and waste management.	**Regulating water quality** **Regulating soil quality** **Regulating soil erosion** **Biodiversity**

[5] *Water for life and livelihoods: River Basin Management Plan. South West River Basin District*, Environment Agency (2009; URL: http://wfdconsultation.environment-agency.gov.uk/wfdcms/en/southwest/Intro.aspx)

[6] *Somerset Levels 2006 – Nutrient Concentrations in the Parrett and Brue Catchments*, Environment Agency (2006)

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating water flow	Rivers, drains and ditches Flood plain grazing marsh Limited flood plains Semi-natural vegetation and soils	There is considerable flooding risk over the adjoining Levels and Moors NCA and the history of this area is linked to water management over an extensive flood plain, with limited gradients making drainage a challenge. Uncontrolled flooding causes damage to property and agricultural interests. There are no major flooding concerns in this NCA, but as much of the water in the Levels and Moors flow through this NCA, the issue must be addressed.	Regional	On the northern fringes of this NCA, on the boundary with the Mendips, the permeable geology of the limestones means that the percentage run-off from land is generally low, although steep slopes in some areas can increase run-off rates locally. In the southern portion of the NCA the less permeable geology (clays overlying limestone) can result in higher run-off rates, exacerbated by steep slopes, compacted soils, open grown crops and high rainfall levels in the hills. As a consequence, river water levels can rise quickly but as the catchments in this area are small, this results in relatively small peak flows within the Mid Somerset Hills. Nevertheless, where the tributaries and minor rivers converge further downstream within the Somerset Levels and Moors, they lead to very significant flooding, exacerbated by increased sedimentation of river courses. There is little flood risk management within the area, other than very small scale activities to protect individual properties from surface water flooding. Nevertheless, the identification of specific locations where watercourses and flood plains can be restored in this NCA could decrease flood impacts downstream.[7] Efforts to reduce soil erosion in the Mid Somerset Hills will also assist in reducing flooding downstream by reducing the rate of sediment and water run-off and encouraging water infiltration.	Work at a landscape scale with landowners, farmers, the Internal Drainage Board, any successor bodies, statutory agencies and conservation bodies to increase the ability of the wider catchment to intercept and store increased volumes of precipitation to regulate the peak flows reaching settlements and farmland. Reduce flood risk through woodland creation and carefully located tree planting. Improve infiltration of rain water and reduced surface flows, through retention and good management of permanent pasture and arable farmland. Work to expand the area of semi-natural habitats and permeable surfacing to reduce run-off and increase water filtration; slowing water entering the system. Extend the areas of wetlands and restore former wetland zones to create greater water storage capacity and slow the flow during flooding events as well as aiding the spread and dispersal of wetland species. Encourage – in particular in the more clayey soils – agricultural practices that build up organic matter and work to reduce the risk of soil compaction, to improve water infiltration rates.	**Regulating water flow** **Biodiversity** **Regulating soil quality** **Regulating soil erosion**

[7] *North and Mid Somerset Catchment Flood Management Plan*, Environment Agency (2009; URL: http://publications.environment-agency.gov.uk/pdf/GESW1109BOUM-e-e.pdf)

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating soil quality	Soils and geology Trees, woodland and scrub Calcareous and mesotrophic grassland Permanent pasture Arable farming practices	There are seven main soilscape types in this NCA: ■ Lime-rich loamy and clayey soils with impeded drainage, covering 32 per cent of the NCA. ■ Slightly acid loamy and clayey soils with impeded drainage (23 per cent). ■ Shallow lime-rich soils over limestone (16 per cent). ■ Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils (10 per cent). ■ Loamy and clayey flood plain soils with naturally high groundwater (9 per cent). ■ Freely draining slightly acid loamy soils (4 per cent). ■ Fen peat soils (3 per cent).	National	The lime-rich loamy and clayey soils with impeded drainage (32 per cent) are calcareous soils with some natural resilience and enhanced workability. These and the slightly acid loamy and clayey soils with impeded drainage (23 per cent) are at risk from topsoil compaction and poaching, while the slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils (10 per cent) may suffer compaction and/or capping as they are easily damaged when wet. Increasing organic matter inputs, careful management of weak topsoils such as minimum tillage (lime-rich loamy/clayey soils) and careful timing of activities (slightly acid loamy/clayey soils with impeded drainage) can help improve soil structure. The shallow lime-rich soils over limestone (16 per cent) are typically shallow and droughty but due to their calcareous nature have a degree of natural resilience. They are valuable for aquifer recharge, requiring the maintenance of good structural conditions to aid water infiltration and requiring the matching of nutrients to needs to prevent pollution of the underlying aquifer. There is also the potential to increase organic matter content by management interventions. Catchment sensitive farming promotes targeted management of nutrient applications following soilanalysis of individual fields and should be applied where possible.	Increase area of native broadleaved woodland/scrub. Manage nutrients on improved pasture. Expand and restore wetland habitats. Work with farmers and landowners to establish and maintain best practice in soils management including; grazing regimes and stocking rates; applications of organic matter and fertiliser; and cultivation and cropping activity. Work with landowners, the Internal Drainage Board and others to maintain high water levels in areas with soils with high peat content to avoid desiccation and oxidisation. Encourage restoration and an expansion in the area of permanent pasture. Seek and realise opportunities to improve farm infrastructure, particularly the location of feeders and drinkers, and the use of droves and farm tracks, to minimise localised compaction and/or poaching. Improve levels of organic matter in soils subject to prolonged flooding to improve resilience and recovery. Also, work flexibly and responsively with landowners and farmers to manage the recovery of soils following long periods of flooding.	**Regulating soil quality** **Regulating soil erosion** **Food provision** **Regulating water quality** **Water availability** **Biodiversity**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating soil erosion	Soils vulnerable to erosion Semi-natural habitats Decline in dairy in favour of arable	The majority of soils covering this NCA (78 per cent) are at risk of erosion. Reflecting the vulnerability of the soils, much of the area falls within Defra's Catchment Sensitive Farming Initiative Somerset Levels and Moors priority catchment.	National	Significant soil erosion and the resulting sedimentation of watercourses downstream are a key concern for this NCA. This is a result of soils on steep slopes in a high rainfall area, and further exacerbated by dairying with very high stocking levels leading to soil compaction, outdoor pigs and poultry production leading to bare soils, and the growth of open-grown crops – potatoes, maize and miscanthus, all highly susceptible to soil erosion. Many of the slightly acid loamy and clayey soils with impeded drainage (23 per cent) are prone to capping/slaking, leading to increased risk of erosion. The latter soils and the lime-rich loamy and clayey soils with impeded drainage (32 per cent) 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. Soils need to be managed carefully to reduce risks with careful timing of cultivations and maintenance of vegetation cover. The shallow lime-rich soils over limestone (16 per cent) are sometimes unstable and prone to loss through erosion, and are particularly at risk on sloping cultivated ground or where bare soil is exposed. This is often exacerbated where organic matter levels are low after continuous arable cultivation or where soils are compacted. The slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils (10 per cent) and the loamy and clayey flood plain soils with naturally high groundwater (9 per cent) have a low erosion risk.	Work with farmers and land managers to apply the principles of good soil management as advocated by initiatives such as catchment sensitive farming. Seek to expand networks of semi-natural habitats within the farmed landscape, and promote reversion of arable land to permanent grassland in areas of higher erosion risk, to reduce the risk of exposure and loss of soils. Promote the use of green manure crops such as nitrogen fixing legumes within arable systems to replace nutrients and bind soils, winter stubble options in agri-environment agreements, limiting livestock access to watercourses to avoid bankside erosion, and encouraging the use of winter cover crops.	**Regulating soil erosion** **Regulating soil quality** **Regulating water quality** **Food provision** **Biodiversity**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Pollination	Hedgerows and droves Remnant traditional orchards	Extensive network of ancient and/or botanically diverse hedgerows and droves. Many villages and farmsteads across the area retain remnant or restored traditional orchards providing islands of nectar source attractive to pollinating insects.	Local	Small areas of semi-natural grassland and rich dense hedgerows, combined with extensive areas of remaining traditional orchards, provide important nectar sources. Both numbers and variety of pollinating species are adversely affected by any decline in semi-natural habitat and the effects of climate change in this NCA, and in the immediately adjacent Levels. Farm orchards have played an important part in the culture and historical development of the area, however, many continue to deteriorate and decline in condition and extent. Some initiatives have been established to encourage the reinstatement and conservation of traditional orchards.	Support the expansion of local soft fruit and market gardening enterprises. Support the introduction of nectar and forage mixes in arable land and also the development of species-rich grasslands and leys. Ensure that permanent pasture is maintained and woodlands and hedgerows are restored and managed. Encourage sympathetic management of sites beneficial to pollinators, including appropriate management of ancient droves and hedgerows, and increase the area and range of habitat mosaics making connections between existing sites that are attractive to pollinators. Encourage the protection and diversification of farm orchards through re-introduction of management, which will provide further nectar sources and improve insect diversity.	**Pollination** **Pest regulation** **Biodiversity** **Sense of place/ inspiration** **Food provision**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Pest regulation	Extensive network of ancient hedgerows connecting semi-natural habitats Trees, woodland and scrub Calcareous and mesotrophic grassland Drains, ditches and grazing marsh on the edge of the NCA	Extensive semi-natural habitats interspersed amongst the predominately pastoral landscape and linked by a dense network of established and ancient hedgerows.	Local	Small areas of semi-natural grassland and rich dense hedgerows, both of which can be expanded, as suitable habitat for the required species. In particular, the connectivity of the hedgerows across the agricultural landscape potentially contributes to the regulation of crop pest species by bringing predators into closer proximity.	Work with farmers and land managers to enhance the mosaic of semi-natural habitats, connected by established, managed hedgerows, so they provide habitat and movement corridors for predator species.	**Pest regulation** **Biodiversity** **Pollination** **Sense of place/ inspiration** **Food provision**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Sense of place / inspiration	Glastonbury and the Tor Worthy Farm – Glastonbury Festival Pastoral landscape, with extensive semi-natural habitats and network of ancient hedgerows and droves Wide expansive views over the Somerset Moors and Levels contrasting with the more intimate rolling hills and hidden valleys to the east Local Blue Lias limestone in buildings	The predominantly agricultural landscape provides a sense of place in contrast to the surrounding urban areas. Longstanding cultural links to the adjacent Levels and Moors represented by the ancient trackways (droves) linking the summer grazing lands to the farmsteads of the hills. Views over Levels and a sense of their history also create a sense of place. The frequent references to Arthur are a reminder of the history here and its continuity with the folk memory. Feelings of inspiration and escapism are associated with the dramatic and prominent hills such as Glastonbury Tor and the traditional character of the landscape with traditional orchards, dense hedgerows and ancient woodland forming a contrasting intimate landscape.	National	A sense of place is provided by the series of low hills, ridges and islands that form this NCA and provide distinctive skylines extending into and dividing the Somerset Levels and Moors. The lower lying ground with the risk of seasonal flooding has influenced the settlement pattern with nucleated and linear settlements largely found on the hills, ridges and islands or at the wetland edge. The settlement formations on hills rising out of the wetlands are further delineated by landmark church towers. While very different in character, the Mid Somerset Hills and the Levels and Moors are indelibly linked through their shared history and the presence of the hills, visible on the skyline across the area. Semi-natural and managed habitats are key to the sense of place. Field pattern is characterised by pasture, commonly divided into small irregular fields by dense hedgerows. A dense network of lanes and pathways connect many villages and hamlets and add to the intimate nature of the area. Orchards are characteristic of the lower land close to settlements while ancient woodlands, a distinctive feature of the Somerset Hills, feature on the ridgetops and steeper side slopes and together with frequent hedgerow trees and the traditional orchards, create a well-wooded landscape character even though the total woodland cover is limited.	Identifying, protecting and reinforcing the distinctive elements and features of the landscape are essential to maintaining the inspirational and immediately recognisable character of the area. Preserve views to and from the Tor to make development sympathetic to the landscape. Work with the organisers and the local community to allow the enjoyment of the festival by the many visitors to the benefit of the local economy, while working to preserve the landscape from adverse consequences. All opportunities to ensure that development respects local settlement patterns and building materials should be taken, and to avoid the loss of historic evidence through insensitive development or management.	**Sense of place/ inspiration** **Sense of history** **Recreation** **Tranquillity** **Biodiversity**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Sense of history	Archaeological and historic features Pattern of historic settlement and enclosure Geological and palaeo-environmental records Medieval buildings often linked with ecclesiastical foundations Commercial operations still drawing on the past for themes and inspiration Semi –natural habitats throughout the farmed landscape	A strong sense of history and record of human occupation since early prehistoric times. This is evident in the presence of ancient trackways, Anglo Saxon and medieval buildings and cultural links to the Somerset Levels and Moors. Historical settlement pattern related to the history of land safe from flooding and access to productive pastoral ground. Strong Christian heritage, from the seventh century on – with folk memory of the arrival of Joseph of Arimathea in the first century and the burial near the Tor (inhabited from the sixth century) of the Holy Grail. This leads to connections with medieval literature with the tales of King Arthur sleeping near Glastonbury from the late 12th century.	Regional	In this traditional agricultural area, the history of farming can be traced in the trackways (droves) which extend between the low-lying pastures and the higher ground on the islands and Hills, some dating from 4,000 BC. Villages are commonly sited on the islands or wetland edge use predominantly Blue Lias, and also a mix of oolitic limestone, sandstone and conglomerate as their building materials, with pantiles used for roofing giving the settlements a strong sense of unity. Aspects of history particularly evident are the frequent tall medieval church towers forming prominent features in the landscape, one of the most visible being, St Michael's on Glastonbury Tor. Maintaining the historical pastoral character of the area which strongly influences the sense of history is dependent on sustainable livestock and farming regimes that are able to respond to the pressures from a changing economy and climate.	Pursue opportunities to preserve and manage the many historic assets by working with landowners, farmers, communities and local decision makers to safeguard into the future, and provide interpretation of the archaeological and historical sites to increase awareness and knowledge. Restoring and expanding woodlands and hedgerow boundaries will reinforce the historical landscape character while strengthening the connectivity between habitats of high biodiversity. Where opportunities for new development are identified and considered use local vernacular architectural styles and settlement patterns to inform design solutions that reinforce the existing sense of history. The restoration and conversion of vernacular buildings should be sympathetic, use local materials and preserve local distinctiveness.	**Sense of history** **Sense of place/ inspiration** **Biodiversity** **Tranquillity**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Tranquillity	Semi-natural habitats scattered through a pastoral landscape Expansive views over the Levels and Moors	This NCA has experienced a significant decline in tranquillity; with undisturbed areas decreasing from 95 per cent in the 1960s to 57 per cent in 2007 (according to the CPRE Intrusion Map 2007). Disturbance is confined to the routes of the A39, A37 and the towns, specifically Somerton, Street and Glastonbury.	Local	The area retains a deeply rural character with expansive views across the Somerset Levels and Moors, contrasting with the well wooded and intimate character of the landscape with traditional orchards, combined with small winding lanes. Transport corridors are largely at the edge of the NCA, with a train line running across it and few stations. This is largely a quiet rural area away from the tourist honeypots of Street and Glastonbury. Tranquillity is associated with widespread semi-natural habitats in this NCA, such as Thurlbear.	Manage expansion around main settlements and transport networks and infrastructure improvements to contain intrusion into 'undisturbed' areas. Protect landscape features which contribute to sense of tranquillity, such as ancient woodlands, hedgerows along droves and uninhabited flood plain grazing marsh.	**Tranquillity** **Recreation** **Biodiversity** **Sense of history** **Sense of place/ inspiration**
Recreation	Rights of way network Ancient droves and tracks Nature reserves and semi-natural habitats	The NCA offers a network of rights of way totalling 812 km at a density of just over 1.9 km per km^2 as well as a small amount of open access land covering 42 ha of the NCA. Many rights of way and permissive paths follow traditional droves – livestock tracks running to the Levels and Moors, highlighting the historic connection between these areas.	National	The dense network of lanes that connect villages and hamlets add to the rights of way network revealing the intimate nature of the area. Primarily known as a quiet rural area, this NCA is host to the Glastonbury Festival of international renown. Larger towns are close and this may provide opportunities to expand open air recreation in nature and to the benefit of the local economy and to the wellbeing of visitors.	Identify and realise opportunities to enhance and expand the rights of way network, improve access and interpretation of heritage assets, and create circular and cycle routes for the enjoyment of all.	**Recreation** **Biodiversity** **Tranquillity**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Biodiversity	Widespread semi-natural habitats Intricate network of hedgerows Rare arable-weed flora Designated sites (SSSI, SPA, local sites) Area rich in ancient woodlands, many designated and protected as SSSI	23 SSSI, in part or whole in NCA (3 per cent of the NCA). 2,153 locally designated sites (4 per cent of the NCA). Priority habitats cover 15 per cent of the NCA and include flood plain grazing marsh which covers over 4,000 ha of the NCA within the river valleys that cut through the hills, and woodlands (ancient ash maple) covering some 800 ha. Smaller areas of priority habitats in the NCA include lowland meadows (418 ha), lowland calcareous grassland (237 ha) and lowland raised bog (144 ha). There is one SPA/Ramsar site (the fringes of the Somerset Levels and Moors) in the area. Area rich for agricultural plants and those found in ancient woodlands.	Regional	Semi-natural habitats, particularly flood plain grazing marsh, woodlands and meadows, are widespread throughout the NCA with areas of high biodiversity connected by dense networks of established hedgerows. Generally, designated sites are in favourable or favourable recovering condition. A characteristic of the area is semi-natural habitats dispersed through a mainly agricultural landscape however, conversion of pastoral land to arable and dairy may place pressure on some habitats and result in localised fragmentation of habitat networks. As with much of lowland Britain this has already led to the decline of herb-rich pastures and meadows in this NCA. Due to the changing economies of farming the steeply sloping grasslands with high biodiversity value have not been maintained as grazing land resulting in an increase in scrub cover, often at the expense of herb-rich calcareous grassland.	Improve the quality and increase the area of all priority habitats, notably flood plain, ancient woodland, meadows and lowland raised bog looking to better connect, buffer, improve and create habitat patches, resulting in more coherent and resilient ecological networks to improve habitat resilience and enable necessarily responsive species movement. Continue to use evidence to build a landscape scale approach to habitat management and restoration and to prioritise action on the ground, benefiting the strong sense of a special place and strengthening landscape character. Protect and enhance designated sites aiming to achieve favourable condition on all sites and linking them, where appropriate and where there is no risk of increasing the range of non-native invasive species, to the wider habitat network to further enhance their influence, functionality and resilience to climate change and other threats.	**Biodiversity** **Food provision** **Sense of place/ inspiration** **Regulating soil quality** **Regulating water flow**

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Geodiversity	Geological SSSI Local Geological Sites	Four SSSI within the Mid Somerset Hills designated for their geological interest. There are 19 locally designated geological sites. Solid and underlying geology is of Late Triassic and Early Jurassic sediments, which contain many fossils, including some marine reptiles. Younger sediments from the recent Quaternary Period are less than 50,000 years old and were deposited in periods of glacial and interglacial conditions. The fossils and structural features of these sediments are of particular importance in determining environmental conditions of that time.	Local	Pleistocene gravels are informative as they allow dating and interpretation of the evolution of river catchments (specifically the rivers Cary and Yeo) in the region over the last ice age and there is also rare direct evidence of sea level rise and fall associated with warming periods. The celestine outcrop at Ben Knowle SSSI, west of Wells was once part of the strontium export business in the 19th century. The use of locally sourced stone in vernacular architecture is an expression of the deeper, solid geology in and adjacent to the area, notably the use of Blue Lias limestone and locally derived bricks.	Maintain and enhance existing geological exposures, and, where appropriate, improve access to promote and increase peoples understanding of geodiversity. Support the use of local stone as a building material to help maintain local distinctiveness.	**Geodiversity** **Sense of place/ inspiration**

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