National Character Area profile:

65. Shropshire Hills

Supporting documents

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Introduction

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

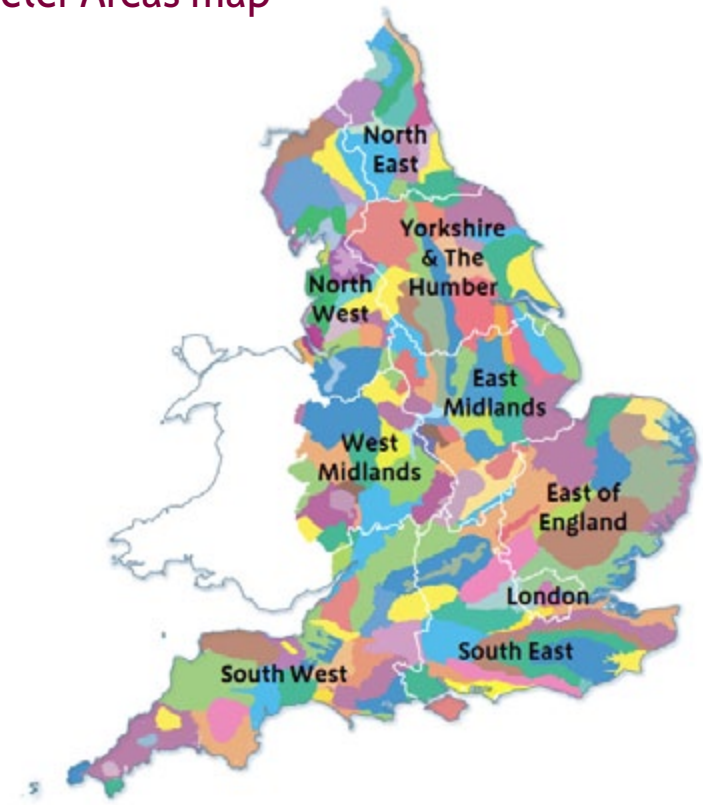
NCA profiles are guidance documents which can help communities to inform theirdecision-making about the places that they live in and care for. The informationthey contain will support the planning of conservation initiatives at a landscape scale, inform the delivery of Nature Improvement Areas and encourage 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 Shropshire Hills National Character Area (NCA) is a landscape of rugged and mostly bare-topped hills, contrasting with mixed agriculture in intervening valleys and dales. This tranquil landscape of national importance flows almost seamlessly into the neighbouring hills of Clun and North West Herefordshire Hills NCA to the south, but contrasts markedly with the flat and lowly undulating Shropshire, Cheshire and Staffordshire Plain NCA to the north. To the east, the Shropshire Hills stand above and overlook a complementary landscape of rolling landform, intricate field patterns, and the parklands and numerous woodlands of the Mid-Severn Sandstone Plateau. The Shropshire Hills are characterised most strongly by the series of relatively wild hills and ridges that lend the area its name. The historic town of Ludlow sits to the south, with the settlements of Craven Arms to the north-west and Church Stretton in the centre of the area.

Almost half of this area is designated as the Shropshire Hills Area of Outstanding Natural Beauty, with two Special Areas of Conservation – The Stiperstones and The Hollies, and Downton Gorge – and one Ramsar site (Midland Meres and Mosses). There are 63 Sites of Special Scientific interest in the NCA, covering 5 per cent of the total area. Important habitats include upland and lowland heathland, wet woodland and lowland mixed deciduous woodland. The area is very rich in upland fens, flushes and swamps. These habitats are home to upland birds including curlew, red grouse and merlin. The rivers Clun, Teme and Onny, along with many smaller rivers and streams, are relatively clean and natural in form, and of high quality. Many are lined with alder, and are home to important species such as dipper, white-clawed crayfish and otter.

The geology and history of this area are also very special: geology has been a key influence on industry and settlement patterns. This is a classic area associated with early geological and scientific work, which continues today. Many ancient features survive in the landscape: defences such as Offa's Dyke, iron-age hill forts such as at Caer Caradoc, medieval castles and fortified houses. Stone and timber-framed buildings in a variety of styles reflect the diversity of the materials available.

Maintaining sustainable levels of livestock farming is vital to maintaining the character of the NCA. The landscape supports an important sheep and beef cattle industry. There are great potential environmental benefits to significantly expanding key woodland, heathland and wetland habitats: this will help to ensure ecological connections across administrative boundaries and river catchments improve the regulation of water quality and soil quality, improve climate regulation, as well as enhancing biodiversity, tranquillity and sense of place. Current incentives to land managers, combined with other economic forces being applied to farming, mean that habitat expansion in the foreseeable future is only likely to be modest.

Future challenges for this NCA include ensuring that livestock farming maintains and enhances the character of the landscape. In addition, continuing to provide outdoor recreational opportunities to the local population, while ensuring that recreation, access and travel do not erode the tranquillity of this special area.

Click map to enlarge; click again to reduce.

Statements of Environmental Opportunity

- **SEO 1:** Protect and enhance the unique character of the Shropshire Hills NCA – with its distinctive landforms, outstanding geology and diverse historic environment – to provide and maintain a sense of place, enhance biodiversity, and promote an enhanced understanding and enjoyment of the area.

- **SEO 2:** Create (where appropriate) significant amounts of characteristic woodland, wetland and grassland habitats to enhance and extend the strong habitat network, and to improve soil quality and the regulation of water.

- **SEO 3:** Conserve, manage and enhance the area's diverse historic environment, including its features and their settings (archaeological sites, buildings in a wide range of vernacular styles, and landmark features such as castles and hill forts). Conserve, manage and enhance the integrity of the area's heritage, providing a sense of time depth across the whole landscape – in historic towns, field patterns, veteran trees, ancient paths and trackways, and industrial heritage – to provide and maintain a sense of history and place, to encourage recreation, and to promote an enhanced understanding and enjoyment of the area.

- **SEO 4:** Promote – and enhance understanding and enjoyment of – the area, increase learning and educational opportunities, and manage recreation at well used and high-value locations (such as the Long Mynd, the Stiperstones, Wenlock Edge, Clee Hills, The Wrekin and Stretton Hills) to retain their conservation value and tranquillity, and to support sustainable tourism.

The NCA offers an extensive network of rights of way and open access land. The Offa's Dyke National Trail also runs through the west of the area.

Description

Physical and functional links to other National Character Areas

From hill ridges within the area, there are extensive views to the west, into mid Wales and towards the Snowdonia National Park, which provide a wild and remote upland backdrop to the Shropshire Hills. This Welsh landscape to the west is a significant influence on the tranquil qualities of the Shropshire Hills. To the south, north and east there are extensive views over more low-lying landscapes: as far as the Malvern Hills NCA, to the Shropshire, Cheshire and Staffordshire Plain NCA, and to the Birmingham conurbation within the Arden NCA.

All of the watercourses flow directly into the River Severn – either to the north of the NCA, south of Telford, or through the River Teme, which passes through the south-western corner of the NCA. The River Severn drains into the Bristol Channel.

The Shropshire Hills Area of Outstanding Natural Beauty (AONB) extends from the Shropshire Hills NCA into the neighbouring Clun and North West Herefordshire Hills NCA, and to the north-west in a rolling pattern to the Welsh border.

To the north, a long, linear woodland corridor along Wenlock Edge, The Wrekin and The Ercall joins with extensive areas of woodland along the Severn Valley, in the Mid Severn Sandstone Plateau NCA. In the south, the Wenlock Edge woodland almost connects with large wooded areas in the Clun and North West Herefordshire Hills NCA.

There is a strong presence of hedgerow trees and small blocks of woodland looking across to The Wrekin which forms a prominent landmark in the north of this NCA.

Key characteristics

- The Shropshire Hills NCA is dominated by a series of ridges, scarps and intervening valleys running south-west to north-east. Distributed across the area are many smaller steep and rounded hills.
- A geologically significant, complex and diverse area, comprising Precambrian to Permian rocks, as well as a variety of sedimentary and igneous rocks. Combined with the geological structure, these have a major influence on the landscape and land use of the area, as well as contributing significantly to early studies of the science of geology.
- The red, silty loam soils over silty clays, particularly over the Clee Hills plateau, offer fertile and well drained agricultural land that supports an important sheep and beef cattle industry.
- Semi-natural woodlands are scattered across the area, although many are largely confined to the slopes, where ash, elm and oak stands occur. Upland oak woods predominate to the north and east of the Stiperstones ridge. There are numerous conifer and mixed plantations.
- Moorland, extensive areas of unimproved semi-natural grassland and small areas of calcareous grassland can be found across the area.
- Rivers and streams, with associated lines of alder trees, are prominent features of the landscape. The major watercourses are the rivers Onny, Corve and Rea Brook, which are home to important species such as dipper, white-clawed crayfish and otter.
- The area exhibits great diversity in its historic environment. The earliest evidence of human occupation comes from the burial monuments of the Bronze Age. Relic quarries and mining sites record important episodes in the area's industrial past.
- A wide variety of local building styles and materials exists, reflecting the different geological outcrops, for example Kenley Grit, Acton Scott Limestone and Chatwall Flags.
- There are scattered farmsteads in the dales and sheltering valleys, with larger settlements confined to the A49 corridor – Church Stretton, Craven Arms and Ludlow. Villages and hamlets are dispersed across the area. Farmsteads on roadsides and in common-edge settlements make an especially significant contribution to the character of the Shropshire Hills.
- The NCA offers an extensive network of rights of way and open access land, as well as the Offa's Dyke National Trail. There are many locally well known landmarks, and a few honeypot sites such as Carding Mill Valley and The Wrekin.

This area is very popular with local people and visitors alike for horse riding as it offers an extensive rights of way network.

Shropshire Hills today

The Shropshire Hills NCA is a landscape of modest hills – occasionally rugged – contrasting with mixed agriculture in the intervening valleys and dales. This landscape flows almost seamlessly into the neighbouring hills of Clun and North West Herefordshire Hills NCA to the south, but contrasts markedly with the low-lying, undulating Shropshire, Cheshire and Staffordshire Plain NCA to the north. To the east, the Shropshire Hills stand above and overlook a complementary landscape of rolling landform, intricate field patterns, and the parklands and numerous woodlands of the Mid Severn Sandstone Plateau. The Shropshire Hills are characterised most strongly by the series of hills and ridges that lend the area its name. The Shropshire Hills AONB runs across significant sections of both this and the neighbouring Clun and North West Herefordshire Hills NCA.

The great geological variety of the Shropshire Hills gives rise to a series of very distinctive landscape features of ridges, scarps, hills and valleys. The influence on the landscape of these different rock types and structures is clearly visible. Bedrock ranges from Precambrian to Early Permian in age, and generally becomes younger to the south-east. Individual rock units crop out along an approximately north-east–south-west linear trend, and are influenced by a number of major faults. The component rocks consist of mudstones, siltstones, sandstones and limestones, as well as a variety of igneous rocks that were either intruded at depth or erupted as lavas and ash falls. The north-western part of the NCA is covered by a widespread mantle of Quaternary sediments which, together with erosional and depositional landforms, reflect the complex history of the last ice age.

The nature of the bedrock and superficial deposits exercises a strong influence on soils and vegetation. For example, the uplands of the Stiperstones, the Long Mynd and the Stretton Hills are underlain by silica-rich rocks that generate thin, acid

There are scattered farmsteads in the dales and sheltering valleys, with larger settlements such as Church Stretton confined to the A49 corridor.

soils with moorland vegetation. These contrast with the broadleaved woodlands and calcareous grasslands of Wenlock Edge, underlain by limestones. The diverse geology of the NCA has led to the use of a large variety of local building stones: in the area to the west of the Stiperstones, Mytton Flags characterise the buildings, whereas where Ordovician rocks are present (in and to the south of the Stretton Hills), Chatwall Sandstone and flagstone from the Cheney Longville Formation characterise many of the buildings.

To the west of the Long Mynd, the heavily faulted Precambrian and Ordovician rocks hosted mineral veins that were exploited for lead, zinc, barites and, to a minor extent, copper. Substantial mining took place in the area between Shelve and the Stiperstones, and the remains of tips and mine buildings characterise the area. The igneous intrusions of the Clee Hills and the Wenlock Limestone of Wenlock Edge continue to be exploited for aggregates, while the Coal Measures of the Clee Hills were worked up until the mid-20th century. Some iron ore was also mined from the Coal Measures, and iron ore was smelted on Titterstone Clee using the locally mined coal. The area is of great importance in the history of geological science, with the earliest investigations taking place in the late 18th century. The area figures strongly in Roderick Murchison's The Silurian System and subsequent editions of Siluria. Many aspects of the geology have been almost constantly researched since that time, and fossils from the Shropshire Hills have found their way into museum collections around the world.

Several tributaries of the River Severn and River Teme have their headwaters in the Shropshire Hills, where they retain a relatively natural condition. The River Teme is a designated a Site of Special Scientific Interest (SSSI) for its important flora, fish and invertebrate fauna, which includes priority species such as twaite shad, sea lamprey, Atlantic salmon, otter and white-clawed freshwater crayfish. The

Ludlow Castle is a landmark feature of the area.The castle is seen here playing host to the 2012 Ludlow Food Festival. In the background is Titterstone Clee Hill.

headwaters flow from the hills through more intensively managed agricultural land in the intervening valleys. In the valleys, rivers such as the Onny, Corve and Ledwyche Brook, together with associated riparian habitat, provide valuable linear reservoirs of biodiversity and an important element of tranquillity. They also support a wide range of wildlife, including invertebrates such as golden-ringed dragonfly and keeled skimmer. In their lower sections, the rivers run relatively rapidly, and the associated riparian habitats – including flushes, alder woodland and wet meadows – support birds such as dipper and grey wagtail. Many of the watercourses are fringed by alder and other trees, lending the area a well wooded character.

On the hill slopes there are patchworks of small pasture fields, often with woodland on steeper slopes. The hill slopes grade into gentler slopes characterised by arable and pasture land. In these areas there is often a strong presence of trees in hedgerows and alongside watercourses: there are isolated veteran trees in parkland, and remnants of apple and damson orchards. The overall impression is of a landscape rich in boundary features and trees.

The area has a great diversity of historic environment interest: it boasts notable sites dating from the prehistoric period, including bronze-age burial monuments, boundary and settlement earthworks, and iron-age hill fort settlements on the undisturbed, unenclosed land on hill tops. Other pre-Roman and Romano-British settlements remain under arable cultivation. There are areas of particularly coherent medieval field patterns, with associated earthwork mottes, settlement sites and traditional farmsteads in the dales and sheltering valleys. Larger settlements are confined to the A49 corridor. Squatter settlements, associated with small fields and mineral extraction industries, are located around the Stiperstones and Clee Hills.

Farmsteads on roadsides and in common-edge settlements make an especially significant contribution to the character of the Shropshire Hills. The shelter of the valleys and the relative wildness of the hills mean that this area is one of the most tranquil in the country.

This area is very popular with locals and is growing in recognition with visitors for walking and riding, as it offers an extensive rights-of-way network, open access land and part of the Offa's Dyke National Trail. Particular opportunities for recreation are also associated with well-known landmarks and honeypots including Wenlock Edge, The Wrekin, the Long Mynd and the Stiperstones, as well as the historic towns of Ludlow, Much Wenlock and Church Stretton, which serve as gateways to the wider area.

Particular opportunities for recreation, such as paragliding are also associated with well-known landmarks and honeypots including the Long Mynd.

The landscape through time

The Long Mynd and the Stretton Hills, making up the heart of the Shropshire Hills, are Precambrian in age (formed between 570 and 550 million years ago) and composed of igneous rocks (ashes and lavas) erupted on the margin of a small continent, and sediments deposited in marine and terrestrial environments. The volcanics underlie the hog-backed Stretton Hills, and the sediments underlie the massif and plateau of the Long Mynd. The faults that bound the Long Mynd, the Stretton Hills and the Stiperstones are ancient and were probably established at the time of the Precambrian volcanism, through lateral tension and movement along the margin of what is now known as the Midlands Craton. These faults (Church Stretton Fault and Pontesford Lineament) have had a major influence on the subsequent geological evolution of the Shropshire Hills, are key elements in the modern landscape and have provided major routes along the Welsh Marches since Roman times. The faults remain active, as the occasional earth tremor indicates.

At the time when the volcanic rocks of the Stretton Hills and the sediments of the Long Mynd were being formed, England lay at a high southern latitude as part of the micro-continent of Avalonia. The subsequent geological record of the NCA charts the movement of this microcontinent northwards and across the equator, and provides evidence (through its rocks) of the closure of seas and oceans, the uplift and submergence of land, further volcanism, and the development of tropical reefs and arid desert environments.

The influence of the faults on the geology and subsequent landscape was particularly strong during the Cambrian and Ordovician, where Cambrian sediments rest unconformably on Precambrian rocks. They are largely restricted to a zone aligned with the Church Stretton faults, and were probably deposited in a narrow, fault-controlled basin. While restricted in outcrop, the Cambrian rocks have

The Stiperstones Quartzite forms one of the most distinctive landscapes in the Shropshire Hills with its craggy ridge with frost-shattered tors.

produced significant fossil assemblages – consisting of trilobites and a variety of primitive molluscs – as well as exceptional material in which soft organs may be preserved. The Ordovician successions on either side of the Long Mynd rest unconformably on older rocks, but differ greatly in thickness. To the south and east of the Mynd, only a small part of the Ordovician is represented, mostly as shallow-water sediments, whereas to the west, a thick succession representing much of the Ordovician is present. The latter contains volcanic rocks in the form of ash falls and ash flows, as well as several igneous intrusions. This is one of the main factors that influence the contrasting landscapes to the west and east of these major fault systems. To the east of the Church Stretton faults, Ordovician sediments consist of mudstones, conglomerates, sandstones and thin limestones, and give rise to narrow scarps such as Hoar Edge. Both sides of the Long Mynd are classic areas for the study of Ordovician rocks, and have yielded substantial and diverse fossil assemblages. Earth movements at the close of the Ordovician, combined with an ice age that lowered sea levels, mean that no Late Ordovician or Early Silurian rocks are present and Silurian sediments rest unconformably on older rocks.

During the Silurian and Early Devonian, sedimentation was more or less continuous, but changed from marine to terrestrial over this period. Thus the mudstones and limestones of the Llandovery, Wenlock and early Ludlow Series reflect deposition in warm, relatively shallow seas in which coral reefs thrived from time to time. The alternation of mudstones with limestones gives rise to the scarps and vales of Wenlock Edge, Apedale and View Edge, among others. Once again, these rocks have yielded abundant and diverse assemblages of fossil marine organisms. During the final phases of the Silurian, the adjoining Welsh Basin was largely in-filled with sediment, leading to a dominance of siltstones and sandstones, while the marine component of the fossil assemblage declined. It was replaced by jawless fish, eurypterids, other arthropods and early plants, and now provides internationally important evidence of the terrestrialisation process of the late Silurian.

The rolling countryside with red soils to the south-east of the Silurian scarpland is underlain by latest Silurian and Early Devonian red and green sandstones and mudstones, deposited on a sometimes arid alluvial plain. Again, fossil fish, arthropods and plants are present. Small scarp features are caused by the presence of 'cornstones', which represent calcareous soil horizons or caliches that developed on the plain from time to time. Uplift and folding related to the final closure of the Iapetus Ocean resulted in Late Devonian sediments resting unconformably on those of the Early Devonian. These, along with younger Carboniferous sediments, are present over a small part of the southern part of the NCA, where a thin development of Carboniferous Limestone and Coal Measures exists on Titterstone Clee. The Coal Measures on Brown Clee Hill and Titterstone Clee are intruded by dolerite sills, which may have contributed to the survival of these high prominences.

Many of the landforms of the Shropshire Hills were modified during the Quaternary ice ages, as the area was affected by glacial erosional and depositional processes from the Welsh and Irish Sea ice sheets. As well as deepening the Stretton Valley, the ice and meltwater streams also acted to modify drainage patterns in the area.

The border with Wales has always given rise to the need for defensive structures, and iron-age hill forts, such as that at Caer Caradoc, are among the earliest examples. Late bronze-age and iron-age settlement of the hills was probably characterised by hill-top grazing and cultivation in the valleys. There are numerous settlement sites, hill forts, barrows and field systems dating from the prehistoric period, when population density was at least as great as it is today. Woodland clearance accelerated during the Iron Age, which probably saw settlements spreading along the river valleys and, perhaps, cultivation of the hill slopes. The Romans had little impact on the area, although mining for metals like lead clearly took place in areas such as the Stiperstones. By the time of the Norman conquest, and intensifying over the 12th and 13th centuries, settlement developed: farmsteads

and hamlets were interspersed with villages, and surrounded by strip fields, enclosed fields and more distant fields in intermittent cultivation (the so-called infield–outfield system). The area lay predominantly within Marcher lordships. Defended administrative and market towns were planted in the west of the area and often protected by a motte, which was sometimes replaced in later years by a more substantial stone castle – such as at Ludlow. A period of contraction, land purchase and enclosure followed the Black Death and epidemics of the 14th century, and many of the uplands reverted to rough pasture and moorland grazing.

During the 16th and 17th centuries cultivation spread to the open uplands once again. Squatter settlements sprang up, especially on the commons of the southern Clee Hills and on the western flanks of the Stiperstones, created by migrants to the area attracted by the prospect of employment in the coal mines and quarries. Most lowland areas had already been enclosed by the 18th century, and enclosures extending into the 1870s were mostly confined to upland grazing areas. The area contains a number of parks, the oldest being relatively modest hunting parks close to manor houses. Later parks were larger, and the houses grander, as the wealth and stability of the area grew. The period from the 18th century to the present day has been one of fluctuating arable expansion, with conversion of the rough moorland to improved pasture. Since the 19th century there has been fluctuating arable expansion, with conversion of rough moorland to improved pasture. In response to the arrival of the railways, Craven Arms and Church Stretton developed significantly as inland 'resorts' during the 19th century. Today these towns – and also Ludlow, with its food festival – continue to grow in popularity. New buildings in and around small villages and hamlets, particularly residential developments and farm buildings, have sprung up, and there are continued development pressures on Ludlow. Mining continues today, with limestone quarries at Wenlock Edge and dolerite quarries at Clee Hills.

Looking west from the Stiperstones NNR the patchwork pattern of fields, hedgerows and woodland is evident.

Ecosystem services

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

Provisioning services (food, fibre and water supply)

- **Food provision:** Sheep and beef are the main enterprises in the Shropshire Hills NCA, with smaller amounts of arable, dairy, pigs and poultry. The dominant agricultural land uses are grass and uncropped land (accounting for nearly 65 per cent of the total farmed area), and cereals (which account for around a quarter of the farmed area).

- **Biomass energy:** The existing woodland cover of 10.3 per cent of the NCA offers potential for the provision of biomass, both by bringing unmanaged woodland under management and as a by-product of commercial woodland management. There is generally a medium potential yield for both short rotation coppice and miscanthus throughout the NCA. For information on the potential landscape impacts of biomass plantings within the NCA, refer to the tables on the Natural England website.

- **Water availability:** There are a number of minor aquifers in this area. The principal rivers are the Corve, Rea Brook and Onny, all of which drain into the Teme, which passes through the south-western corner of the NCA. The River Onny runs along the eastern boundary of the NCA, and has two principal tributaries within the NCA: the East and West Onny. The headwaters of the River Corve are within this NCA, and the river drains through the middle of the NCA. Other rivers include Ledwyche Brook. The River Severn crosses the north-eastern corner of the NCA, south of Telford.

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

- **Regulating soil erosion:** The slightly acid, loamy and clayey soils with impeded drainage (covering nearly a third of the NCA) are easily compacted when wet, and are prone to capping/slaking, increasing the risks of soil erosion by surface water run-off – especially on steeper slopes. By comparison, the freely draining, slightly acid, loamy soils (covering another third of the NCA) carry an enhanced risk of soil erosion on moderately or steeply sloping land where bare or cultivated soil is exposed, or where soils are compacted. The freely draining, acid, loamy soils over rock are often found on steep slopes and are subject to rapid run-off, with an inherent risk of erosion. The upland soils with a peaty surface (making up approximately 2 per cent of the NCA) may be at risk of gullying and loss of particulate organic matter where surface vegetation is damaged, modified or lost. Reflecting its potential for soil erosion, the majority of the NCA (including the rivers Onny, Corve and Rea) falls within a Defra priority catchment (the River Teme).

- **Regulating soil quality:** The slightly acid, loamy and clayey soils with impeded drainage (covering an estimated 28 per cent of the NCA) generally have a weak topsoil structure that is easily damaged. These soils are easily poached by livestock and compacted by machinery when wet, so activities must be carefully timed. Equally, the slowly permeable, seasonally wet, acid, loamy and clayey soils (covering 20 per cent of the NCA) have poor water infiltration, and are at risk of diffuse pollution and flooding. Soils are easily damaged when wet, and therefore it is important to minimise

the compaction and/or capping risk – especially as there may be limited potential for increasing organic matter levels in these soils through management interventions.

- **Regulating water quality:** Diffuse pollution of watercourses is problematic in places, for example in the River Corve and other tributaries that ultimately feed into the River Teme SSSI. This poses a threat to freshwater biodiversity. Large sections of the catchments are farmed (arable and pastoral) right up to the channel banks, and the riparian corridor is generally in a poor condition as a result (problems include ploughing close to the channel bank and poaching by livestock). Although riparian woodland is present along a large proportion of the river, this generally only consists of a narrow strip, confined to the banks of the river itself, and badly affected by alder disease in many places. Diffuse, fine sediment inputs through run-off can therefore easily enter the watercourse.

Cultural services (inspiration, education and wellbeing)

- **Sense of place/inspiration:** A sense of place is provided by the strong and varied landscape from rounded, steep-sided hills – often with open moorland on hill tops and deciduous woodland on steep escarpments – to pastoral hillside slopes and arable land in the valleys. Key landmarks include the dramatic Wenlock Edge, The Lawley, Caer Caradoc and the Long Mynd. A wealth of parklands and designed landscapes exist, as well as built remains of lead and coal mining/quarrying, especially on the Stiperstones and Clee Hills. There are 203 Scheduled Ancient Monuments, including many hill forts and barrows, stone circles, buried Roman features, extraction industry remains, ecclesiastical buildings, motte-and-bailey castles, deserted villages, ancient paths and trackways (such as the Port Way), and sections of the Offa's Dyke National Trail. Remains of the mining and quarrying industry, together with

A very clear boundary marked out on the Stretton Hills with an earthbank topped by a row of oak trees.

squatter settlements, are a distinctive reminder of the area's industrial past. Past extraction industries have left a legacy of historically important structures, as well as features that are important for biodiversity and geodiversity: priority habitat calaminarian grassland occurs on lead mine sites beneath the Stiperstones, old adits and mines are important for bats (including the lesser horseshoe hibernacula), and quarries and spoil heaps provide a significant geological resource (for example at Snailbeach lead mine SSSI and Scheduled Ancient Monument, Clee Hill Quarries SSSI and Wenlock Edge Quarries SSSI).

- **Sense of history:** Defensive and ritual sites lend a strong sense of place to this border and upland area. These include the iron-age hill forts that are a striking feature of much of the area (such as at Caynham Camp, Caer Caradoc) and the bronze-age camp and Norton, burial mounds (such as Duckley Napp on the Long Mynd), stone circles (for example Mitchell's Fold), motte-and-bailey sites and cairns. All of these features give the area a distinctive sense of history and place. The settled nature of the NCA is reflected in today's dispersed settlement pattern, with strong concentrations along valleys. Settlements feature a diverse range of building materials and styles. Key landmarks include the well preserved historic border town of Ludlow, with its medieval castle, the 19th-century spa and market town of Church Stretton, and parklands and designed landscapes such as at Burwarton House, Acton Burnell Castle, Millichope Park, Stokesay Court and Morville Hall. On a smaller scale, standing stones and medieval crosses are notable landscape features, as well as the well known route of Offa's Dyke.

- **Tranquillity:** The NCA has experienced a slight decline in tranquillity – the area of undisturbed land has decreased from 97 per cent in the 1960s to 87 per cent in 2007[4] – but it still remains one of the most tranquil parts of the country. The main area of low tranquillity is the A49 corridor. Landscape

The Shropshire Hills is a landscape of rugged and mostly bare-topped hills. There are many locally well known landmarks and a few honeypot sites like Cardingmill Valley.

characteristics that are particularly important in conveying a sense of tranquillity are the steep-sided, 'whaleback' hills, often open and exposed hill tops with moorland, and the mixture of pastoral and wooded hillside slopes and historical villages along valley springlines.

- **Recreation:** The NCA offers an extensive network of rights of way, totalling 2,407 km at a density of 2.23km per km2, open access land covering 6,220 ha (or nearly 6 per cent of the NCA), and over 5 km of the Offa's Dyke National Trail, which cuts through the area. Particular opportunities for recreation are associated with well known landmarks and honeypots, including Wenlock

[4] *Developing an intrusion map of England*, Campaign to Protect Rural England (2007) (www.cpre.org.uk/resources/countryside/tranquil-places/item/1790-developing-an-intrusion-map-of-england)

Edge, The Wrekin, the Long Mynd and the Stiperstones. Horse riding and angling are significant recreational activities: a number of rivers (including the River Severn) are used for angling. The rugged upland terrain makes the area popular for mountain biking and off-road cycling, but a number of Sustrans cycle routes cross the NCA as well. National Cycle Routes 44 and 45 and Regional Route 31 run through the area. Extreme sports are becoming increasingly popular and there are a number of activity centres. The unique geological interest of the area draws in visitors. There are a number of attractive market towns and the annual Ludlow Food Festival is a significant visitor attraction.

- **Biodiversity:** Some 8 per cent of the NCA is covered by priority habitats, including upland heathland (3,289 ha) and lowland mixed deciduous woodland (1,089 ha). The area is very rich in upland fens, flushes and swamps, but this habitat has been very poorly surveyed to date. Less than 1 per cent of the NCA (619 ha) is designated as being of international importance: there are two SAC (The Stiperstones and The Hollies, and Downton Gorge) and one Ramsar site (Midland Meres and Mosses). There are 63 SSSI in the NCA, covering 5 per cent of the total area. All of the main rivers in the NCA (Onny, Corve, Ledwyche Brook and Rea Brook) have a 'very high' or 'high' ecological sensitivity to water abstraction levels.[5] This NCA supports an interesting assemblage of plant and animal communities, showing transitions between southern lowland and northern upland, with several species being present at the edge of their natural range.[6]

- **Geodiversity:** An outstanding area, where much of the pioneering work that established the foundations of geology was undertaken. The importance of the area is reflected in the presence of 38 Geological Conservation Review sites (designated as SSSI), as well as a large number of local sites. The NCA has generated a vast quantity of scientific literature in relation to its geology, and research activities will continue into the future. The links between the underlying geology and the form of the landscape are very strong, and the influence on land use and the use of building materials contributes markedly to local character. There is a history of quarrying and mining that is directly related to the geology, and that has had its own impact on the landscape and history of the Shropshire Hills.

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[5] *The Teme Catchment Abstraction Management Strategy*, Environment Agency (September 2005)

[6] *Natural Area Profiles: 42 Shropshire Hills*, Natural England (March 1997) (www.naturalareas.naturalengland.org.uk/Science/natural/profiles%5CnaProfile42.pdf)

Statements of Environmental Opportunity

SEO 1: Protect and enhance the unique character of the Shropshire Hills NCA – with its distinctive landforms, outstanding geology and diverse historic environment – to provide and maintain a sense of place, enhance biodiversity, and promote an enhanced understanding and enjoyment of the area.

For example, by:

- Conserving and enhancing the parts of the NCA that have been designated as an Area of Outstanding Natural Beauty (AONB).
- Using an understanding of the NCA's historic landscape character – the result of how human and natural factors have interacted over millennia – as a framework for delivering sustainable development and promoting an integrated approach to land management.
- Working with local groups and other bodies to maintain and manage natural rock exposures, disused quarries, former mines and mine spoil, so that accessible geodiversity features and valuable biodiversity resources are retained.
- Working with local groups to conserve historic mine and quarrying structures as a record of the once-thriving extraction industries.
- Working with local groups and other bodies to continue to improve the condition of geological sites, and to raise awareness and understanding of geology and its influences on the landscape and on human activity.
- Encouraging the use of local building stones in maintaining older buildings, as well as in new developments.
- Working with farmers to develop supply chains, helping them to produce good quality products while maintaining and enhancing the landscape (supporting initiatives like Shropshire Hills AONB's 'buy local' scheme).
- Working with land managers and farmers to support wood and timber production – this can have multiple benefits for biodiversity, soil quality, carbon storage, water quality, water availability and the landscape.
- Working with land managers and farmers to support food production – this, too, can have multiple benefits for biodiversity, soil quality, carbon storage, water quality, water availability and the landscape.

SEO 2: Create (where appropriate) significant amounts of characteristic woodland, wetland and grassland habitats to enhance and extend the strong habitat network, and to improve soil quality and the regulation of water.

For example, by:

- Expanding broadleaved woodland and restoring plantations on ancient woodland sites (PAWS).
- Planting woodlands on steep slopes where this can act as a buffer to soil run-off, particularly in the River Teme priority catchment.
- Conserving ancient semi-natural woodland, including upland oakwoods and mixed deciduous woodland on hill slopes and valley sides, wet woodlands in valley bottoms and woodlands on calcareous soils along Wenlock Edge.
- Restoring woodlands along Wenlock Edge to broadleaved status and creating new woodlands to bridge any gaps. This will help to create a substantial network of woodland connecting Mortimer Forest, Wenlock Edge, Severn Valley and Wyre Forest. In other parts of the NCA, seeking to enlarge existing blocks of semi-natural woodland and/or restoring and creating areas of semi-natural habitat buffering woodlands – so as to create a large area of habitat mosaic networks.
- Expanding broadleaved and conifer woodland to support the local processing industry.
- Retaining veteran trees and deadwood in both woodlands and valley bottom woodlands, to conserve the important fauna associated with deadwood.
- Creating wide, field-edge buffer strips across steeper slopes and adjacent to rivers and other watercourses (particularly the Corve and other tributaries of the River Teme priority catchment). Also to either side of hedgerows, in areas of intensive arable, to help provide effective soil management, to further impede soil erosion and nutrient run-off, and to enhance the habitat network.
- Planting and encouraging a wide variety of hedgerow trees to enhance the well-wooded character of the landscape. Managing waterside trees through pollarding or coppicing, to increase their adaptation to climate change.
- Restoring and expanding the wetland habitats (including flood plain grazing marsh and fen) of the valley floors of the rivers Camlad and Rea Brook, to conserve populations of wading birds, which have declined significantly in recent decades.
- Managing grassland and wetland favourably, through extensive grazing, to increase adaptation to climate change.
- Restoring and creating calcareous grassland habitat on Wenlock Edge, aiming to create larger blocks of this habitat, including areas in disused quarries.
- Retaining and restoring unimproved grasslands in meadows around the Stiperstones and Clee Hills, so that they are in good condition.

SEO 3: Conserve, manage and enhance the area's diverse historic environment, including its features and their settings (archaeological sites, buildings in a wide range of vernacular styles, and landmark features such as castles and hill forts). Conserve, manage and enhance the integrity of the area's heritage, providing a sense of time depth across the whole landscape – in historic towns, field patterns, veteran trees, ancient paths and trackways, and industrial heritage – to provide and maintain a sense of history and place, to encourage recreation, and to promote an enhanced understanding and enjoyment of the area.

For example, by:

- Protecting the settlement pattern of dispersed buildings and settlement along springlines and valleys, conserving the range of vernacular building styles.
- Planning for the change of use of historic farm buildings – including new development that will respect the character and significance of the historic farmstead, its landscape setting and its capacity for accommodating change – while also supporting their ongoing maintenance.
- Planning for the opening and reopening of small, disused quarries for sourcing stone supplies as well as for avoiding the sterilisation of sources for future use. This will facilitate the conservation of important buildings across the area.
- Reinforcing the historic field boundary patterns, especially where they run across slopes to provide a buffer to soil erosion and nutrient run-off, and where they provide a link between habitat 'islands'.
- Maintaining the varied patterns of hedgerow and stone wall boundaries that reflect various stages of enclosure through the ages.
- Ensuring that any new development respects the setting and distinctive character of the NCA's settlements.
- Encouraging land management practices and other proposals that conserve and enhance archaeological features, especially those identified as being at risk.

SEO 4: Promote – and enhance understanding and enjoyment of – the area, increase learning and educational opportunities, and manage recreation at well used and high-value locations (such as the Long Mynd, the Stiperstones, Wenlock Edge, Clee Hills, The Wrekin and Stretton Hills) to retain conservation value and tranquillity, and to support sustainable tourism.

For example, by:

- Maintaining and enhancing opportunities for access throughout the area, but particularly at popular destinations such as the Long Mynd, the Stiperstones, Wenlock Edge, Clee Hills and Stretton Hills, including proposals identified in both the Shropshire Hills AONB Management Plan and the Shropshire Rights of Way Improvement Plan, as well as by the Local Access Forum.
- Supporting small, low-key tourism developments, sympathetically designed to blend into the landscape and to spread economic benefits more widely.
- Supporting tourism businesses to take a sustainable approach and encouraging visitors to do likewise.
- Promoting the use of sustainable transport throughout the area, and creating links to urban areas outside the NCA to reduce car-dependency and to maintain tranquillity. Supporting the role of settlements such as Ludlow, Much Wenlock and Church Stretton as gateways to the wider area.

Additional opportunity:

1. Maintain and enhance the springs and flushes, as well as the rivers Onny, Corve and Rea Brook, to support biodiversity, enhance tranquillity and regulate water flow and soil erosion.

For example, by:

- Re-wetting deep peat soils in the Rea Brook valley surrounding Marton Pool, and ensuring that existing wetland features across the NCA are not impacted by drainage schemes.
- Restoring the natural hydrology (such as springs and flushes) in headwaters.
- Increasing the sequestration of carbon dioxide through the restoration and creation of wetland, in particular by expanding existing areas of wetland.
- Supporting the work of the River Teme priority catchment, whose priorities are to reduce the impact of grazing and over-wintering livestock on water quality (focusing on the River Corve, which runs through the middle of the NCA), and to reduce pollution from dairy and poultry systems.
- Reducing sources of pollution by targeting the impacts of grazing. Putting in place measures focused on point sources such as farmyards, and encouraging the appropriate management of livestock outdoors.
- Carefully controlling water abstraction so that supplies downstream are not depleted by abstraction within this NCA.
- Restoring areas of wetland, particularly in the uplands, to slow the speed of rainfall run-off.
- Seeking to restore and extend grasslands, woodlands and hedgerows. Increasing woodland, scrub and orchard cover.
- Improving soil quality through good soil management to increase infiltration rates and to reduce run-off.

Supporting document 1: Key facts and data

Total area: 107,902 ha

1. Landscape and nature conservation designations

52,655 ha of the NCA falls within the Shropshire Hills Area of Outstanding Natural Beauty (AONB) (49 per cent of the NCA).

More information about the protected landscape can be found at:
http://www.shropshirehillsaonb.co.uk/

Source: Natural England (2011)

1.1 Designated nature conservation sites

The NCA includes the following statutory nature conservation designations:

Tier	Designation	Name	Area (ha)	Percentage of NCA
International	Ramsar	Midland Meres and Mosses - Phase 1	17	<1
European	Special Protection Area (SPA)	n/a	0	0
	Special Area of Conservation (SAC)	The Stiperstones & The Hollies SAC; Downton Gorge SAC	602	<1
National	National Nature Reserve (NNR)	The Stiperstones NNR	448	<1
National	Site of Special Scientific Interest (SSSI)	A total of 73 sites wholly or partly within the NCA	4,893	5

Source: Natural England (2011)

Please note: (i) Designated areas may overlap, designations that span coastal areas/views below this line will not be included.

The Stiperstones NNR sits within the SAC.

There are 240 Local sites in the Shropshire Hills NCA covering 4,848 ha which is 5 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 – select 'Designations/Land-Based Designations/ Statutory'

1.2 Condition of designated sites

A breakdown of SSSI condition as of March 2011 is as follows:

SSSI condition category	Area (ha)	Percentage of SSSI in category condition
Unfavourable declining	2	<1
Favourable	1,457	30
Unfavourable no change	58	1
Unfavourable recovering	3,374	69

Source: Natural England (March 2011)

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

2. Landform, geology and soils

2.1 Elevation

Elevation ranges from 37 m above sea level to a maximum of 534 m. The average elevation of the landscape is 84 m. The highest point in this NCA is Brown Clee Hill.

Source: Natural England (2010)

2.2 Landform and process

The Shropshire Hills form an area of great diversity of landform comprising the Clee Hills, Wenlock Edge, Stretton Hills, Long Mynd, Stiperstones and the Wrekin. Each has a distinctive and individual character but, with the exception of Wenlock Edge, they are unified by their steep-sided, rounded 'whale-back' landforms, their generally north-east to south-west orientation and the abundance of open grassland and moorland tops. Between them are valleys in arable and pasture use, which contain most of the settlements.

Source: Shropshire Hills Character Area Description

2.3 Bedrock geology

Very diverse geology with rocks from six geological periods. Different geological periods are characterised by different rock types, which in turn determine the shape, vegetation and economic use of the landscapes. Geology has been a key influence on industry and settlement patterns. Variety of building stones and clay products impacting on local character. Classic area associated with early scientific work which continues today.

Source: Geological Narrative West Midlands Geodiversity Partnership; Shropshire Hills Character Area Description

2.4 Superficial deposits

Extensive periglacial head deposits occur on the Long Mynd plateau, with valley bottoms full of sand, gravel and boulder clay. There are widespread screes, sometimes exhibiting stone stripes and polygons on The Stiperstones and Earl's Hill. Glaciation during the last (Devensian) phase of the ice age resulted in both erosional and depositional features shaping the hills and valleys. Glacial sands and gravels provide an economic aggregates resource.

Source: Geological Narrative West Midlands Geodiversity Partnership; Shropshire Hills Character Area Description

2.5 Designated geological sites

Tier	Designation	Number
National	Geological Site of Special Scientific Interest (SSSI)	35
National	Mixed interest SSSI	9
Local	Local Geological Sites	159

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 sandstone plateau around the hills gives rise to red, silty, loam soils over silty clays. For the most part these are fertile and well-drained, supporting arable land and pasture as well as woodland, but waterlogged areas support wet heathland and bog. The hill tops have thin, stony soils supporting only rough moorland.

Source: Shropshire Hills Countryside Character Area Description

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

Agricultural Land Classification	Area (ha)	Percentage of NCA
Grade 1	0	0
Grade 2	12,587	12
Grade 3	56,473	52
Grade 4	24,614	23
Grade 5	13,066	12
Non-agricultural	659	<1
Urban	283	<1

Source: Natural England (2010)

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

3. Key waterbodies and catchments

3.1 Major rivers/canals

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

Name	Length in NCA (km)
River Corve	30
River Onny	17
Ledwyche Brook	16
Rea Brook	12
River Severn	12
River Teme	9

Source: Natural England (2010)

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

The area is drained primarily to the south and south-east. The principal rivers are the Corve and Onny and the Ledwyche Brook - all draining into the River Teme. The Severn marks the northern and eastern boundaries. Several tributaries of the River Severn and River Teme have their headwaters in the Shropshire Hills where they retain a relatively natural condition. These flow from the hills through more intensively managed agricultural land in the intervening valleys, which provide valuable corridors together with associated riparian habitats. These include flushes, alder woods and wet meadows.

Source: Natural England (2010)

3.2 Water quality

The total area of Nitrate Vulnerable Zone is 3,983 ha, 4 per cent of NCA.

Source: Natural England (2010)

3.3 Water Framework Directive

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

4. Trees and woodlands

4.1 Total Woodland Cover

The NCA contains 11,090 ha of woodland (10.3 per cent of the total area), of which 3,338 ha is ancient woodland.

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

4.2 Distribution and size of woodland and trees in the landscape

Ancient and semi-natural woodland is a significant feature of this NCA. Upland oak woods are well represented in the Shropshire Hills where they are mainly restricted to steep hillside locations. Coniferous and mixed woods are a significant feature, comprising almost half the woodland area. Along Wenlock Edge and around, plus on the Wrekin, mixed deciduous woodland, characterised by ash-elm-oak stands, and significant areas of conifer are a prominent feature. There are small areas of wet woodland, which occur in flushed areas and at stream side locations along valley bottoms. Small woodlands and conifer plantations are dispersed across an area to the west of the Stiperstones. A number of parklands, supporting veteran trees lie within the Shropshire Hills.

Source: Shropshire Hills Character Area Description; Shropshire Hills Natural Area Profile

4.3 Woodland types

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

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

Woodland type	Area (ha)	Percentage of NCA
Broadleaved	6,446	6
Coniferous	3,044	3
Mixed	944	<1
Other	656	<1

Source: Forestry Commission (2011)

Area and proportion of ancient woodland and planted ancient woodland sites (PAWS) within the NCA.

Woodland type	Area (ha)	Percentage of NCA
Ancient semi-natural woodland	1,655	2
Ancient re-planted woodland (PAWS)	1,683	2

Source: Natural England (2004)

5. Boundary features and patterns

5.1 Boundary features

Mature hedgerows, often with mature trees and less frequently with veteran trees, bound fields on lower slopes and in dales. Occasionally there are dry-stone walls, for example near Norbury, to the east of the Stiperstones.

Source: Shropshire Hills Countryside Character Area description; Countryside Quality Counts (2003)

5.2 Field patterns

The predominant pattern is one of piecemeal enclosure with reorganised piecemeal enclosure, the result of generally pre-17th century enclosure of common fields intermixed with more ancient enclosure patterns, and later boundary removal and reorganisation. Hill slopes with patchworks of small pasture fields, giving way to arable lands with larger fields in the dales. Hill

tops are often crowned with open moorland. Some areas of late 18th-mid 19th century planned enclosure, concentrated on areas of higher ground. Rectilinear squatter enclosures in former industrial areas, including a marked concentration south-west of Titterstone Clee Hills.

Source: Shropshire 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

There has been an 87 per cent increase in horticulture holdings (15 to 28 holdings).Trends also show an increase in the number of LFA grazing livestock farms (up from 183 to 281 or 54 per cent) as well as a significant increase in the number of specialist poultry farms (up from 29 to 38 or 31 per cent) as well as an increase in cereals (up from 123 to 142 or 15 per cent) and 'other' types (most commonly associated with smallholdings) (up from 249 to 275 or 21 per cent). Dairy farms have seen the greatest proportional drop (down from 162 to 105 or a decrease of 35 per cent). There has also been a reduction in lowland grazing livestock farms (down from 397 to 276 or a decrease of 30 per cent), specialist pig farms (down from 8 to 6 or a decrease of 25 per cent), mixed farms (down from 165 to 140 or a decrease of 15 per cent) and general cropping farms (down from 46 to 39 or a decrease of 15 per cent).

Source: Agricultural Census, Defra (2010)

6.2 Farm size

Farms between 5 and 20 ha are the most common in the area (336 accounting for 25 per cent of holdings) followed by farms over 100 ha (327 or 25 per cent of holdings), farms under 5 ha (228 or 17 per cent of holdings) and farms between 50 and 100 ha (222 or 17 per cent of holdings). The least common farm size in the area is farms between 20 and 50 ha. The largest holdings (those over 100 ha) make up 70 per cent of the total farmed area, compared to those under 5 ha which cover less than 0.5 per cent of the farmed area. The trends in farm size show a 6 per cent increase in the number of holdings over 100 ha (309 to 327). However, in every other size category there was a decrease in the number of holdings; holdings between 50 and 100 ha reduced by 11 per cent (250 to 222), holdings between 20 and 50 ha decreased by 8 per cent (236 to 217), holdings between 5 and 20 ha reduced by 4 per cent (351 to 336) and farms of less than 5 ha reduced by 1 per cent (231 to 228).

Source: Agricultural Census, Defra (2010)

6.3 Farm ownership

2009: Total farm area = 92,217 ha; owned land = 59,656 ha
2000: Total farm area = 87,879 ha; owned land = 59,497 ha

Source: Agricultural Census, Defra (2010)

6.4 Land use

The dominant agricultural land uses are grass and uncropped land, accounting for 59,164 ha (64 per cent of the total farmed area), and cereals which account for 21,994 ha (24 per cent). These are followed by oilseeds which cover 2,979 ha (3 per cent), 'other' arable crops which cover 2,747 ha (3 per cent) and cash roots which cover 909 ha (1 per cent). The other agricultural land uses each represent less than 0.5 per cent of the total farmed area. Between 2000 and 2009 there was an increase in the area of grass and uncropped land (by 2,969 ha or 5 per cent) and a small decrease in the area of cereals (by 1,070 ha or 5 per cent). The area under oilseeds increased by 1,565 ha or 111 per cent. There have also been increases in the area of land used for growing stock feed (by 107 ha or 34 per cent) and an increase in the area used for 'other' arable crops (by 413 ha or 18 per cent). A decrease was seen in the area of land used for growing vegetables (by 13 ha or 69 per cent), fruit (by 12 ha or 18 per cent) and cash roots (by 1,024 ha or 11 per cent). Other land uses were relatively static or related to less than five holdings.

Source: Agricultural Census, Defra (2010)

6.5 Livestock numbers

Sheep are the most numerous livestock by far within this landscape, numbering 357,300 animals. Cattle are the next most numerous with 83,100 animals whilst pigs numbered 13,100. All livestock numbers have decreased during the period 2000-2009. Pig numbers decreased by 58 per cent (18,200 animals), sheep by 20 per cent (87,600 animals) and cattle by 2 per cent (1,800 animals).

Source: Agricultural Census, Defra (2010)

6.6 Farm labour

The overwhelming majority of holdings are run by principal farmers (including their spouses and business partners) rather than salaried managers (2,035 principal farmers, 40 salaried managers). Employed full time and part time workers (295 FT and 307 PT) are more numerous than casual/gang workers (187). Trends from 2000 to 2009 show a decrease in the number of principal farmers (down by 102) and an increase in salaried managers (up by 8). There has been a decrease in full-time workers (down by 107) and casual gang workers (down by 20) but an increase in part time workers (up by 101).

Source: Agricultural Census, Defra (2010)

Please note: (i) Some of the Census data are estimated by Defra so may not present a precise assessment of agriculture within this area (ii) Data refers to commercial holdings only (iii) Data includes land outside of the NCA where it belongs to holdings whose centre point is recorded as being within the NCA.

7. Key habitats and species

7.1 Habitat distribution/coverage

The geological and geographical distinctiveness is reflected in a varied landform and land cover, with a wide range of semi-natural habitats of importance for nature conservation, for example the extensive tracts of moorland and related upland habitats. The area supports an interesting mix of plant and animal communities showing transitions between southern lowland and northern upland types, with several species being found at the edge of their natural range. This NCA maintains important concentrations of unimproved grasslands, showing gradations from upland acid grassland to neutral grasslands on lower slopes. An abundance of ancient semi-natural woodlands and the presence of varied aquatic and riparian habitats associated with the numerous streams and rivers adds to the diversity and importance of semi-natural habitats in this area. In addition the NCA contains important arable habitats. These support nationally important assemblages of arable birds.

Source: Shropshire Hills Natural Area Profile

7.2 Priority habitats

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

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

Priority habitat	Area (ha)	Percentage of NCA
Broadleaved mixed and yew (Broad habitat extent)	4,491	4
Upland heathland	3,285	3
Fen	619	1
Coastal and floodplain grazing marsh	453	<1
Reedbeds	134	<1
Lowland meadows	126	<1
Lowland heathland	100	<1
Lowland dry acid grassland	99	<1
Lowland calcareous grassland	25	<1
Upland calcareous grassland	23	<1
Blanket bog	15	<1
Purple moor-grass and rush pasture	3	<1

Source: Natural England (2011)

Maps showing locations of priority habitats are available at:

- http://magic.defra.gov.uk – Select 'Habitats and Species/Habitats'

7.3 Key species and assemblages of species

- Maps showing locations of some key species are available at: http://magic.defra.gov.uk – Select 'Habitats and Species/Habitats'
- Maps showing locations of S41 species are available at http://data.nbn.org.uk/

8. Settlement and development patterns

8.1 Settlement pattern

Highly dispersed settlement pattern with centres of population in the A49 corridor where three market towns are located. Squatter settlements, particularly around the Clee Hills and Stiperstones. Farmsteads, hamlets and villages often sit at the base of slopes and along spring lines in valleys.

Source: Shropshire Hills Countryside Character Area description; Countryside Quality Counts (2003)

8.2 Main settlements

The main towns are Ludlow, Craven Arms and Church Stretton. Other centres of population are Much Wenlock and larger villages at Pontesbury, Minsterley and Cleehill. The total estimated population for this NCA (derived from ONS 2001 census data) is: 43,996.

Source: Shropshire Hills Countryside Character Area description; Countryside Quality Counts (2003)

8.3 Local vernacular and building materials

There is no single building style and a wide variety of materials has been employed. Materials used include sandstone in the Clee Hills and limestone on the Wenlock Edge. On the northern and western fringes of the area brick is common. Harder volcanic material has been used to build upland farms. Ludlow is considered to be one of England's finest and best preserved historic towns.

Source: Shropshire Hills Countryside Character Area description; Countryside Quality Counts (2003)

9. Key historic sites and features

9.1 Origin of historic features

There is extensive evidence for late bronze-age and iron-age settlement sites (earthworks and cropmarks), hillforts (for example, Caer Caradoc) and field systems. Late Mesolithic/Neolithic woodland clearance led to the development of moors – Long Mynd, Stiperstones and Clee Hills. Some moated sites of 12-14th century origin, for example Castle Pulverbatch and Caus Castle. Lead mining on the Stiperstones since the Roman period. Squatter settlements, associated with quarrying, lead and coal mining on commons of Clee Hills and flanks of Stiperstones. Notable concentration of parkland and designed landscapes, for example Morville, Linley.

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

9.2 Designated historic assets

This NCA has the following historic designations:

- 10 Registered Parks and Gardens covering 1,079 ha.
- 0 Registered Battlefield/s covering 0 ha.
- 203 Scheduled Monuments.
- 1,909 Listed Buildings.

Source: Natural England (2010)

More information is available at the following address:
http://www.english-heritage.org.uk/caring/heritage-at-risk/

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

10. Recreation and access

10.1 Public access

- 8 per cent of the NCA, 897 ha, is classified as being publically accessible.
- There are 2,407 km of public rights of way at a density of 2.2 km per km2.
- There is 1 National Trail (Offa's Dyke Path, 5 km)

Sources: Natural England (2010, 2011)

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

Access designation	Area (ha)	Percentage of NCA
National Trust (Accessible all year)	631	1
Common land	4,313	4
Country parks	0	0
CROW Access Land (Section 4 and 16)	88	<1
CROW Section 15	2,239	2
Village greens	5	<1
Doorstep greens	0	0
Forestry Commission Walkers Welcome grants	1,028	<1
Local Nature Reserves (LNR)	44	<1
Millennium greens	6	<1
Accessible National Nature Reserves (NNR)	448	<1
Agri-environment Scheme access	7	<1
Woods for People	2,233	2

Sources: Natural England (2011)

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

11. Experiential qualities

11.1 Tranquillity

Based on the CPRE map of Tranquillity (2006) the highest scores for tranquillity occur in extensive areas across the west of the NCA, across the Stiperstones/ Long Mynd/Stretton Hills ridges and around the Clee Hills. The lowest scores for tranquillity occur along the A49 road corridor. The majority of this NCA ranks as amongst the most tranquil in England.

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

Tranquillity	Tranquillity Score
Highest value within NCA	52
Lowest value within NCA	-53
Mean value within NCA	14

Sources: CPRE (2006)

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

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 there is a similar pattern to the Tranquillity Map with the most intruded areas confined to the A49 road corridor. A breakdown of intrusion values for this NCA is detailed in the table below.

Intrusion category	1960s (%)	1990s (%)	2007 (%)	Percentage change (1960s-2007)
Disturbed	2	7	12	10
Undisturbed	97	92	88	-10
Urban	<1	<1	<1	<1

Sources: CPRE (2007)

Notable trends from the 1960s to 2007 are an increase by 40 per cent in the area classed as disturbed, up to nearly 60 per cent in 2007, and a decrease of 40 per cent, down to 40 per cent, of the undisturbed area.

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

- New planting is mainly in the form of small blocks predominantly in the east of the area. The proportion of sites covered by the English Woodland Grant Scheme has slowly increased. Thus overall character has probably been maintained or is enhancing slowly.

- National policy and grants have encouraged management of larger commercial woodlands towards greater cover of broadleaved trees, with more open space and structural diversity. Restorations of plantations on ancient woodland sites (PAWS) are a high priority, and there are a significant number of these spread around the NCA. Conifers are likely to retain a long-term place in the landscape, though demand varies with fluctuating timber prices.

- Woodland habitats are generally more stable and less vulnerable than grasslands. While the best sites are generally in good condition, many smaller woodlands are neglected, and their condition is slowly declining. Limiting factors include difficult access and little tradition of active woodland management among some farmers.

Boundary features

- Previous amalgamation of small fields into larger units, with removal of boundaries has disrupted the historic field patterns.

- Dry stone walls are not always maintained although levels of maintenance of hedges are generally high.

Agriculture

- Sheep and beef production are the main agricultural enterprises in the Shropshire Hills, with a smaller numbers of holdings registered as producing arable, dairy, pigs and poultry. Many parts of the uplands have in recent decades been grazed at higher levels than the habitats can sustain. Agri-environment schemes are helping to reverse some of the damage associated with historic grazing mostly in the form of hill sheep.

- Dairy farms have seen the greatest proportional drop with a decrease of around 35 per cent during the period 2000-2009. There has also been a reduction in lowland grazing livestock farms, a decrease of 30 per cent, specialist pig farms have reduced by a quarter, mixed farms around 15 per cent and general cropping farms have decreased of 15 per cent.

- The dominant agricultural land uses are grass and uncropped land and cereals. These are followed by oilseeds and 'other' arable crops and cash roots.

- Sheep are the most numerous livestock by far within this landscape. Cattle are the next most numerous then pigs. All livestock numbers have decreased during the period 2000-2009 and subsequently with pigs seeing the biggest fall in numbers.

Settlement and development

- There has been some inappropriate conversion of redundant farm buildings to new uses, often as dwellings.
- Overall development pressure has been low. However, new buildings, particularly residential developments and farm buildings, in and around small villages and hamlets are often of an inappropriate scale, design and materials. They can disrupt the historic settlement pattern especially by infilling.
- There is ongoing use of radio masts and relay stations on hill tops.

Semi-natural habitat

- Semi-natural habitats have suffered significantly in the past and high quality habitats are fragmented. Direct loss of biodiversity has slowed but still continues.
- There have been some significant improvements in the condition and extent of heathlands and the management of commons and woodlands.
- Old orchards are being lost along with neutral grasslands.
- Key upland and farmland bird species such as lapwing, curlew and snipe have declined to critically low levels.

Historic features

- 203 Scheduled Ancient Monuments, including many hill forts and barrows and also stone circles, buried Roman features, extraction industry remains, ecclesiastical buildings, barrows, motte and bailey castles, deserted villages, ancient paths and trackways and sections of Offa's Dyke.

The large plateau of the Long Mynd is a beautiful sea of purple heathland in the late summer.

- 52 per cent of Scheduled Ancient Monuments (86) are classified as 'at high or medium risk' and 2 per cent of listed buildings (3) are classified as 'at risk' declining stable.

- Improved land management and increased awareness is conserving many historic features but funding is required to keep up the maintenance of traditional buildings.

Rivers

- Rivers and their catchments have issues around poor water quality and flow regimes, nutrient and sediment input.

- The resource assessment for the key rivers in this NCA, Corve, Rea Brook, and Onny is 'water available'; however, as these rivers drain into the Severn (via the Teme), which is classed as 'no water therefore the rivers in this NCA have been classed as 'no water available'.

- The ecological status of the majority of rivers in the NCA has been classed as 'moderate', although there are several river lengths classed as 'poor' and several as 'good'. Almost all of the rivers in the NCA have not been assessed for chemical quality. Groundwater quality is classed as 'good' across the majority of the NCA, but classed as 'poor' in the north east of the area.[7]

Minerals

- Permissions are still in existence for limestone working at Wenlock Edge but active quarrying has ceased. There has been pressure for continued industrial uses of former quarry sites here rather than completing the full restoration required in the original planning conditions. Dolerite quarrying for roadstone continues at Clee Hill.

- Remains of mining and quarrying industry, together with squatter settlements are a distinctive reminder of the area's industrial past. Past extraction industries have left a legacy of structures important historically, and also for biodiversity and geology, for example priority habitat calaminarian grassland occurs on lead mine sites beneath the Stiperstones, old adits and mines are important for bats, including lesser horsehoe hibernacula, and quarries plus spoil heaps provide a significant geodiversity resource, for example at Snailbeach Lead Mine (a SSSI and SAM), Clee Hill Quarries SSSI and SSSI quarries on Wenlock Edge. [5]

Drivers of change

Climate change

The Shropshire Hills NCA is likely to experience warmer, drier summers and warmer, wetter winters in future. There is also likely to be more frequent extreme weather events such as storms and periods of intense rainfall. There will be direct effects on the Shropshire Hills landscape from these changes including:

- Changes in the species and communities that make up habitats.

- Changes in the timing of seasonal events like flowering, breeding and migration.

[7] *Compliance Monitoring*, Environment Agency (January 2009)

- More frequent droughts, which could result in crop failures and very low river levels affecting river biodiversity particularly in the Teme and Clun.
- Increased erosion in winter, resulting in more nutrients being washed into rivers, such as Teme.
- An increase in fire risk particularly on areas of heathland such as the Stiperstones and the Long Mynd as outdoor recreation becomes more popular and visitor numbers grow.
- Intense storm events are likely to happen at a greater frequency which means that habitats will struggle to recover from any damage they cause. This potentially will have the greatest impact in wooded areas such as Wenlock Edge.
- A loss of mature trees in the landscape as these succumb to extended droughts and more severe storms.
- Differences in the ability of woodland species to adapt to a longer growing season.
- An increase in the popularity of shaded areas such as woodland for recreation as temperatures rise.
- A reduction in water resources available for agriculture, recreation, potable water supply and habitats.
- Changes in the viability of some crop varieties and livestock breeds that are less able to cope with drought conditions.
- Damage to historic buildings and structures such as earthworks, caused by an increase in soil erosion during peak rainfall events.

The variation in altitude and aspect within the Shropshire Hills is likely to help provide wildlife with some greater resilience to climate change than in some areas. However, because the Shropshire Hills is a transitional area, with more typical and less 'extreme' habitats (such as montane or coastal areas), the direct climate-related effects may be less than elsewhere.

Other key drivers

- Structural change in agriculture will continue to have a significant impact on the special qualities of this area. The future of the livestock sector especially beef cattle and sheep are especially important to this NCA to help maintain and enhance the key features of the NCA.
- Increased demand for car ownership and higher numbers of visitors particularly to key sites such as the Long Mynd, in this NCA is leading to erosion in tranquillity.
- For the rural communities of the Shropshire Hills NCA to survive there is demand for new housing, tourism and business development particularly around Church Stretton and Ludlow.
- Cross border partnership working such as the River Teme Restoration Plan, AONB Management Plan will drive forward conservation projects within this NCA.

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.

On the hill slopes there are patchworks of small pasture fields, often with woodland on steeper slopes.

Statement of Environmental Opportunity	Ecosystem service: Food provision	Timber provision	Water availability	Genetic diversity	Biomass provision	Climate regulation	Regulating water quality	Regulating water flow	Regulating soil quality	Regulating soil erosion	Pollination	Pest regulation	Regulating coastal erosion	Sense of place / Inspiration	Sense of history	Tranquillity	Recreation	Biodiversity	Geodiversity
SEO 1: Protect and enhance the unique character of the Shropshire Hills NCA with its distinctive landforms, outstanding geology and diverse historic environment to provide and maintain a sense of place, enhance biodiversity and promote an enhanced understanding and enjoyment of the area.	↗ **	↗ **	↗ **	↔ **	↗ **	↗ **	↗ **	↗ *	↗ **	↗ **	↗ **	↗ *	n/a	↑ **	↗ *	↗ *	↗ *	↗ **	↑ *
SEO 2: Significantly create, where appropriate, characteristic woodland, wetland and grassland habitats to enhance and extend a strong habitat network to improve regulation of water and soil quality.	↘ *	↑ **	↗ **	↔ *	↗ **	↗ **	↗ *	↗ *	↗ **	↗ **	↗ *	↗ *	n/a	↗ **	↔ *	↗ **	↗ **	↑ ***	↔ *
SEO 3: Conserve, manage and enhance the area's diverse historic environment including its features and their setting (archaeological sites, buildings in a wide range of vernacular styles, landmark features such as castles and hill forts) as well as the integrity of heritage providing a sense of time depth across the whole landscape, in historic towns, field patterns and veteran trees, ancient paths and trackways and industrial heritage to provide and maintain a sense of history and place, encourage recreation and promote enhanced understanding and enjoyment.	↔ *	↗ **	↗ *	↔ *	↗ **	↗ **	↗ **	↗ **	↗ **	↗ **	↗ *	↗ *	n/a	↑ ***	↑ ***	↗ **	↑ **	↗ **	↑ **
SEO 4: Promote and enhance understanding and enjoyment of the area and increase learning and educational opportunities, and manage recreation at well used and high value locations such as the Long Mynd, the Stiperstones, Wenlock Edge, Clee Hills, The Wrekin and Stretton Hills to retain their conservation value and tranquillity, and support sustainable tourism.	↘ *	↔ *	↔ *	↔ *	↔ *	↔ *	↔ *	↔ *	↔ *	↔ *	↔ *	↔ *	n/a	↗ **	↗ *	↗ **	↑ **	↗ **	↔ **

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

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

Landscape attributes

Landscape attribute	Justification for selection
Series of parallel hills and valleys running south-west, north-east with the strike of the rocks forming five distinctive upland areas each with their own landscape character.	■ An outstandingly diverse geology, including areas where much of the pioneering works that established the foundations of geological understanding were undertaken. The area includes such well known features as the steep-sided rift valley of Church Stretton, the great pre-Cambrian moorland ridge of the Long Mynd, the unmistakable volcanic outlier peak of the Wrekin, the Stiperstones (with its tors and stone stripes), the basalt capped, sandstone Clee Hills and the long, linear limestone outcrop of Wenlock Edge. ■ The area contains 38 sites that have been included in the Geological Conservation Review of nationally important geodiversity resources. There is a legacy of past mining and quarrying relating to the area's industrial past which provides an important resource for education and tourism. ■ The internationally important Stiperstones and the Hollies Special Area of Conservation, regarded as one of the best examples of dry heath in the UK. ■ The Shropshire Hills are an important recreational area for the towns of the Welsh border and for visitors from the West Midlands. The ridge footpaths, such as the Portway, are traditionally popular walking country. ■ Outstanding views from elevated points such as Brown Clee Hill, Titterstone Clee, the Long Mynd, Stiperstones and Stretton Hills. ■ An extensive and well maintained network of public rights of way, providing excellent access opportunities for walkers, cyclists and horseriders. ■ Almost half of the NCA is part of the nationally important Shropshire Hills Area of Outstanding Natural Beauty.

Landscape attribute	Justification for selection
The wooded limestone ridge of the Wenlock Edge running north east to south west across the NCA.	■ A distinctive long linear ridge, clothed by woodland. A feature that stands out of the NCA. ■ Areas of Silurian limestone ancient woodland containing priority species such as dormouse and yellow bird's-nest. Many of these woodlands have been replanted with coniferous trees or non native broadleaves. ■ Significant geological exposures in quarries along Wenlock Edge, containing a rich fossil fauna. ■ The Wenlock Edge is a site of international significance for its stratigraphy and its unrivalled reef exposures. ■ Priority habitat calcareous grassland, for example at Wenlock Edge SSSI, including priority species such as basil thyme. These areas are now very restricted, being confined to two or three areas above rock outcrops and areas disturbed by quarrying. ■ Popular visitor destination with several access points and good public access.
Semi-natural woodlands scattered across the area, mainly on slopes and steep valley bottoms.	■ Ancient woodlands on hill slopes and steeper valley sides are a significant feature of the NCA. ■ The area contains priority habitat, upland oakwood, upland mixed ashwood, and mixed deciduous woodland. These woodlands contain priority species such as dormouse and lesser horseshoe bat and unusual features such as the rare large leaved lime in the Habberley Valley. ■ Priority habitat wet woodland, dominated by alder and oak, occurs in dingles across the area, such as Betton Dingle and Gulley Green SSSI, where priority species occur associated with woody debris in streams, such as southern and northern yellow splinter craneflies. ■ Numerous woods are in decline caused by livestock and deer grazing within woodlands, preventing regeneration and damaging woodland flora. Over half of ancient woodland sites have been replanted with conifer and non-native broadleaves. In places, inappropriately sited and designed new coniferous woodlands have been planted. ■ A nearly continuous block of woodland stretches from one end of the NCA to the other, from the Wrekin and Ercall (SSSI), via Wenlock Edge to Craven Arms. In the north, this connects with ancient woodlands in the Severn Valley that link to the Wyre Forest.

Landscape attribute	Justification for selection
Upland heath, springs and flushes, rough grassland and pasture on hilltops and hill slopes text.	■ Substantial areas of priority habitat upland heath, particularly on the Long Mynd, Stiperstones and Clee Hills. Parts of the area are a designated Special Area for Conservation and National Nature Reserve. Priority species include red grouse, tree pipit, skylark and adder. The area's heathlands are of particular interest as they are often transitional in character between upland and lowland heath. ■ Pasture on higher and lower slopes often featuring priority habitats, including unimproved acid grassland, purple moor grass and rush pasture, and upland springs, flushes and swamps. These wet features are extremely diverse, reflecting the varied geology of the area. They support some of the rarest species in the county including the globally rare marsh flapwort (a liverwort), have good populations of the scarce small pearl bordered fritillary butterfly, and are now the only places in the county where snipe still breed. ■ On lower slopes of the Stiperstones and the Clee Hills, species-rich hay meadows and pasture occur. These are often small remnant plots and have declined in area dramatically since 1980. ■ The wide open, bare-topped hills and ridges are a signature feature of the AONB. ■ Much of the upland heathland and adjoining upland areas are open access land, popular with many visitors to the NCA.

Landscape attribute	Justification for selection
Tributaries of the rivers Severn and Teme rise in the hills before flowing through more intensively managed land in intervening valleys.	■ Originating in the springs and flushes in the hills, the headwaters of the rivers East Onny, West Onny, Corve and Rea Brook in the hills of the NCA, run fast and in a relatively unmodified state through the uplands. ■ In some places, substantial land drainage efforts in the past now hasten the flow of water from the land, reducing the area of wetland habitat and increasing both the flashiness of streams and the transport of sediment from land to rivers. ■ These streams and rivers provide an important element of tranquillity and support a wide range of wildlife including invertebrates such as golden ringed dragonfly and keeled skimmer. In their lower sections, rivers run relatively rapidly and the associated riparian habitats, including flushes, alder woodland and wet meadows, support birds such as dipper and grey wagtail. ■ In places diffuse pollution of watercourses is problematic, for example the River Corve and other tributaries that ultimately feed into the River Teme SSSI. This poses a threat to freshwater biodiversity. ■ Rivers in a relatively natural state are of geomorphogical interest for the range of physical processes they demonstrate. Outstandingly important geological exposures have also been exposed by river processes, such as the Onny River Section and Teme Bank SSSI. ■ Rows of trees, mainly alder, along watercourses are a feature in the landscape. ■ Wet grasslands are an infrequent feature of more intensively farmed valley bottoms. These grasslands, characteristic of priority floodplain grazing marsh, support an interesting range of wetland flora and habitat. ■ The River Teme is a designated SSSI for its important flora, fish and invertebrate fauna which includes priority species, including twaite shad, sea lamprey, Atlantic salmon, otter and white-clawed freshwater crayfish. ■ The internationally important Downton Gorge Special Area of Conservation (SAC) borders the NCA, with a very small part of the SAC running into the Shropshire Hills NCA.

Landscape attribute	Justification for selection
A rich historic landscape, including barrows, Iron Age hill forts, bronze and iron-age settlement sites, stone circles, historic farmsteads, mining and extraction remains, squatter settlements, historic towns and villages, castles and motte and bailey sites, parkland and designed landscape.	■ 203 Scheduled Ancient Monuments, including many hill forts and barrows and also stone circles, buried Roman features, extraction industry remains, ecclesiastical buildings, barrows, motte and bailey, deserted villages, ancient paths and trackways (such as the Port Way) and sections of Offa's Dyke. ■ Iron-age hill forts are numerous and many hilltops are crowned with ramparts that make a striking feature across much of the area, for example Caynam Camp, Caer Caradoc and Norton Camp. Together with some 37 burial mound sites (mainly on hills), scheduled as bowl barrows, for example at Duckley Napp on the Long Mynd; stone circles, for example Mitchell's Fold; motte and bailey sites and cairns. These features give the area a distinctive sense of history and place. ■ Mining and quarrying industry remains, together with squatter settlements are a distinctive reminder of the area's industrial past. Past extraction industries have left a legacy of structures, important historically and also for biodiversity and geodiversity, for example priority habitat calaminarian grassland occurs on lead mine sites beneath the Stiperstones, old adits and mines are important for bats, including lesser horsehoe hibernacula, and quarries plus spoil heaps provide a significant geodiversity resource, such as at Snailbeach Lead Mine (a SSSI and SAM), Clee Hill Quarries SSSI and SSSI quarries on Wenlock Edge. ■ Historic towns, exemplified by the 11-12th century defended administrative centre of Ludlow, widely regarded as one of the finest and best preserved historic towns in Britain. Also, Much Wenlock which developed around ecclesiastical foundations. ■ Dispersed settlement pattern, reflecting early medieval (11th century and earlier) settlement, with stronger patterns of nucleation along river valleys and spring lines, dating from a later medieval period (12 and 13th century). ■ A diverse range of building styles in scattered settlements and farmsteads across the area, including timber framing (particularly in the Stretton Valley), a wide variety of stone buildings (reflecting the area's diverse geology) and red brick on the northern and western fringes. ■ Designed landscape, for example Walcot Parkand and Milichope Park.

Landscape attribute	Justification for selection
On lower hill slopes there is a strong pattern of small pasture fields giving way to mixed farming with small to medium sized fields in intervening valleys. Trees are a frequent presence throughout.	■ A strong and varied pattern of hedgerow and stone wall boundaries, including small enclosed pastures on hill slopes, strong irregular and semi-regular patterns on the Clee Hills plateau, large rectilinear fields in dales and a regular to sub-regular pattern of medium sized fields in Ape Dale and the Severn Valley. ■ Extant historic field boundary patterns, including those enclosed directly from medieval woodland, for example on the steep eastern slopes of Linley Hill; ancient piecemeal enclosure of open fields, such as around Clee St Margaret; late 16th to early 19th century smallholdings ('squatter' enclosure) on former commons and in association with historic mining and quarrying, for example on the western side of the Stiperstones; a strong pattern of 18th and 19th century planned enclosure, as on Prolley Moor; and late 20th century enclosure of high land on Long Mountain. ■ Many trees, including frequent veteran trees (particularly oak) in hedegrows, along watercourses, in-field, orchards and parkland. Veteran trees are particularly important as a landscape feature and for deadwood and hole-nesting insect and bird communities. ■ Traditional orchards (a priority habitat) beneath the Clee Hills. ■ Historic parkland containing veteran trees. A salient landscape feature and an important resource of deadwood for a range of scarce invertebrates and fungi, for example at Burwarton Park.
Open water and wetland features in the north-west of the area.	■ Marton Pool SSSI in the north-west of the NCA is part of the internationally important Midlands Meres and Mosses Ramsar site. This is a southern outlier of this unique series of wetland sites which have developed in glacial hollows, most of which fall within the Shropshire, Cheshire and Staffordshire Plain NCA to the north. Marton Pool sits in a large block of drained peat which extends north-east along the Rea Brook, offering great potential for restoration of wetland habitats. ■ Shelve Pool, a man made pool, is a SSSI, partly designated for its rich wetland flora and associated grassland.

Landscape opportunities

- Manage the landscape and biodiversity associated with the uplands of the Shropshire Hills, maintaining management regimes that will conserve internationally important dry heathland and oak woodland habitat, priority habitat (upland heath, unimproved grasslands and mires).

- Conserve ancient semi-natural woodland including upland oakwoods and mixed deciduous woodland on hill slopes and valley sides, wet woodlands in valley bottoms and woodlands on calcareous soils on the Wenlock Edge. Restore ancient woodlands by removing non native planting and allowing natural regeneration of native species and/or by replanting with appropriate native species. Retain veteran trees and deadwood in woodlands and in valley bottom woodlands to conserve the important fauna associated with deadwood. Protect existing sites by appropriately controlling livestock access within ancient woodlands.

- Retain in good condition and restore the large areas of semi-natural vegetation communities on the Stiperstones, Stretton Hills, the Long Mynd and Clee Hills, in particular heathland, upland fens, flushes and swamps, and species-rich acid/neutral grasslands.

- Retain and restore unimproved grasslands in meadows around the Stiperstones and Clee Hills, so that they are in good condition. In appropriate places create upland hay and lowland meadow habitat, particularly where this will increase the size of existing blocks of unimproved grassland.

- Create a substantial connected network of semi-natural woodland between the Wyre Forest, Severn Valley, Shropshire Hills and Mortimer Forest within and outside the Shropshire Hills NCA, by restoring planted ancient woodlands to native broadleaf status and by planting or allowing woodland to regenerate in gaps in the potential network. Outside of this key network plan to enlarge and connect significant areas of semi-natural woodland through planting and natural regeneration.

- Maintain and increase the area of calcareous grassland along Wenlock Edge by restoring former areas and creating new areas in places such as former quarries on limestone. Aim to do this in a way that creates substantive blocks of calcareous grassland habitat.

- Manage the distinctive patterns of field enclosure, representing various historic enclosure processes, by maintaining hedgerows and stone walls through appropriate management and protection.

- Manage the area's rivers and open water features, plus associated wetland habitats and waterside trees, to conserve important freshwater and wetland biodiversity by eliminating sources of diffuse and point source pollution and also by expanding areas of waterside wetland habitat and woodlands. In headwater areas protect important flush, mire and rush pasture habitats, in particular by restoring formerly wet areas and by preventing drainage of surviving areas.

- Restore wetland habitat in the Camlad Valley and on deep peat soils along the Rea Brook valley near Marton Pool. Do this to conserve populations of wading birds which have seen significant declines in recent decades.

- Protect the open, upland landscape and intervening valleys devoid of development and intrusions and also ensure that river headwaters remain in natural condition, retaining the area's tranquillity, biodiversity and deep sense of history.

- Protect from damage and appropriately manage the area's outstanding cultural heritage, including prehistoric stone circles, hillforts, burial mounds, earthworks, medieval castle remains, deserted villages, historic townscapes, varied vernacular buildings, historic parklands, mining and quarrying industrial remains, traditional orchards, hedgerow and in-field veteran trees, cairns, ancient paths and trackways.

- Increase understanding of the outstanding geodiversity resource in the Shropshire Hills by increasing access to geological exposures and improving interpretation of the resource – there are 320 Local Geological Sites in the area.

- Use micro quarries to provide small amounts of local distinctive building stone for conservation and even facing new builds in order to keep the character of a particular village/settlement.

- Conserve the area's outstanding views from intrusion by development and inappropriate woodland planting.

- Retain the largely dispersed pattern of settlement with few nucleated villages and towns, together with the varied traditional building styles that reflect local geological variation. Do this by protecting the integrity of existing historic buildings and by ensuring that new development is in character with surrounding development.

On the hill slopes there are patchworks of small pasture fields, often with woodland on steeper slopes.

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 service offered by opportunities
Food provision	Fertile soils Livestock (beef cattle and sheep) Pasture	12 per cent is classed as Grade 2 land and 52 per cent is Grade 3 land. Slightly acid loamy and clayey soils with impeded drainage, covering one third of the NCA; Freely draining slightly acid loamy soils (one third of the NCA); Slowly permeable seasonally wet acid loamy and clayey soils (fifth of the NCA). The dominant agricultural land cover is grass and uncropped land, accounting for around 64 per cent of the total farmed area, and cereals which account for about a quarter of the farmed area. Sheep and beef are the main enterprises in the Shropshire Hills NCA, with smaller amounts of arable, dairy, pigs and poultry. Levels of land in agri-environment schemes remain high.	Regional	Maintaining sustainable levels of livestock farming is vital to maintaining the character of the NCA. The landscape supports an important sheep and beef cattle industry. Although it may have negative impacts on landscape character and biodiversity it can also provides multiple benefits in terms of maintaining the level of food production, preserving landscape character and supporting overall biodiversity. An increase in the number of livestock could potentially put pressure on the watercourses and soil quality and areas could be overgrazed as has been evident in the past. To achieve a balance and optimise food production, land managers and farmers could be encouraged into or remain in agri-environment schemes.	Work with farmers to develop supply chains and produce a good quality product that is linked with maintaining and enhancing this NCA's landscape. Work with land managers and farmers to support sustainable food production and the multiple benefits it affords for biodiversity, soil quality, carbon storage, water quality, water availability and landscape. Provide good quality advice and support to farmers and landowners to secure enhanced soil and water quality. Work with livestock farmers to minimise the levels of pollution which enter the NCA's watercourses from this sector of agriculture.	**Food provision** **Biodiversity** **Sense of place / inspiration** **Sense of history** **Regulating soil erosion** **Regulating soil quality** **Regulating water quality** **Regulating water flow** **Climate regulation**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal service offered by opportunities
Timber provision	Soils Woodlands (softwood and a small amount of good quality hardwood) Wooded limestone ridge of the Wenlock Edge	Woodland covers 10.3 per cent of this NCA with broadleaved covering around 6 per cent, conifers 3 per cent and mixed woodland 1 per cent. A nearly continuous block of woodland stretches from one end of the NCA to the other, from the Wrekin and Ercall (SSSI), via Wenlock Edge to Craven Arms. In the north, this connects with ancient woodlands in the Severn Valley that link to the Wyre Forest. Existing (primarily conifer and mixed woodlands) provide timber for construction and fencing, supporting local processors and providing jobs - these woods are managed in accordance with the UK Forestry Standard.	Regional	A third of the woodland provision is coniferous (timber source) and 6 per cent is broadleaved (low grade timber source (firewood). Much of this resource is currently well managed as there has been a rising demand for wood fuel. There is potential to acquire increased volumes of timber by utilising the resources contained within the NCA's more remote and less accessible woodlands. In addition to softwood timber production, there is a small amount of higher quality hardwood timber produced. The local firewood market is quite strong, but has significant scope for further expansion. Ransford's sawmill at Bishop's Castle is an important part of the supply chain, processing around 60,000 tonnes of timber per year, mainly Douglas fir and larch. Dead wood is also an important component to retain in semi- natural woodlands in terms of biodiversity (fungi, lichen, invertebrates) as well as nutrient cycling and soil formation (underpinning services regulating climate, soil quality, soil erosion and water quality).	Promoting sustainable woodland management practices, such as coppicing, pollarding, and rotational wood fuel production, to increase carbon storage and sequestration, and to improve the resilience of woodlands to climate change. Opportunities for sustainable soil management especially at replanting/harvesting. Expand broadleaved woodland and restore plantations on ancient woodland sites. Improve design and landscape sensitivity of plantations where woodland and forestry felling are taking place. Encourage multi-purpose forestry for conservation and recreation benefits as well as timber production, supporting greater biodiversity with more broadleaved trees and open space.	**Timber provision** **Recreation** **Climate regulation** **Regulating soil erosion** **Regulating soil quality** **Regulating water quality** **Regulating water flow** **Biomass energy** **Sense of place / inspiration** **Biodiversity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal service offered by opportunities
Water availability	Rivers Minor aquifers Spring fed private supplies Open water bodies	The NCA does not overlie a major aquifer, although there are a number of minor aquifers. The principal rivers are the Corve, Rea, and Onny, all of which drain into the Teme, which passes through the south-west corner of the NCA. The River Onny runs along the eastern boundary and has two principal tributaries within the NCA, the East and West Onny. The headwaters of the River Corve are within this NCA, and the river drains through the middle of the NCA. Other rivers include Ledwyche Brook and the Rea Brook/River. The River Severn crosses the north-east corner of the NCA, south of Telford.	Regional	There is not a high demand for public water supplies in this area. But there is a higher demand for agricultural use. There is currently a 'low risk' to groundwater from abstraction. The resource assessment for the key rivers in this NCA (described above) is 'water available'; however, as these rivers drain into the Severn (via the Teme), which is classed as 'no water available', the rivers in this NCA have also been classed as 'no water available'.	Carefully control water abstraction so that supplies downstream are not depleted by abstraction within the Shropshire Hills NCA. Support measures to maintain and improve soil structure to increase permeability and water retention by the soil.	**Water availability** **Climate regulation** **Regulating soil erosion** **Regulating soil quality** **Regulating water flow** **Regulating water quality** **Biodiversity**
Genetic diversity	Shropshire sheep Rare breed pigs/cattle	Since February 2013 Shropshire sheep are no longer considered rare in the UK and the breed has been officially removed from the Rare Breed Survival Trust's Watchlist. Traditional animal breeds are a feature of some farms.	Regional	Although now removed from the Rare Breed Survival Trust's Watchlist there is still a need to encourage this breed where it is still a stronghold. Maintaining rare breeds is important for food security and for maintaining genetic diversity. Hardy, adaptable rare breeds can also aid future land management through conservation grazing. This will help to maintain a sense of place and increase biodiversity.	Support existing and new rare and ancient breed farms, for local food production and conservation grazing.	**Genetic diversity** **Food production** **Biodiversity** **Sense of place / inspiration**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal service offered by opportunities
Biomass energy	Fertile soils Woodlands	The soils throughout the NCA support medium potential for miscanthus. The existing woodland cover is 10.3 per cent of the NCA.	Regional	The existing woodland cover offers potential for the provision of biomass, by bringing unmanaged woodland under management and as a by product of commercial woodland management. Dead wood is also an important component to retain in semi- natural woodlands in terms of biodiversity (fungi, lichen, inverts) as well as nutrient cycling and soil formation (underpinning services regulating climate, soil quality, soil erosion and water quality). There is generally a medium potential yield for both short rotation coppice and miscanthus throughout the NCA. For information on the potential landscape impacts of biomass plantings within the NCA, refer to the tables on the Natural England website. Sensitive management of existing unmanaged woodland offers potential for wood fuel. Dead wood is a critical component of broadleaved woodland for biodiversity. Establishment of energy crops should avoid harm to biodiversity, water quality and availability. Visual impact should also be taken into account.	Seek opportunities to plant energy crops close to existing areas of woodland to increase biomass production while maintaining the overall character of the landscape. Bring unmanaged areas of woodland back into management to increase biomass production from existing areas of woodland. Seek opportunities for sustainable soil management especially at replanting/ harvesting.	**Biomass energy** **Climate regulation** **Regulating soil erosion** **Regulating soil quality** **Biodiversity** **Timber provision**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal service offered by opportunities
Climate regulation	Soils Woodlands Wetlands Grasslands	Woodland, healthland, grassland and wetland soils and vegetation are important for storing and sequestering carbon. The NCA contains around 10.3 per cent of the total area of woodlands. 6 per cent of the woodland is broadleaved, 3 per cent coniferous and 1 per cent mixed. The mineral soils in this NCA generally have a low carbon content of between 0-5 per cent reflecting low levels of organic matter, especially where under cultivation, although carbon levels may be higher in areas under permanent pasture. Marton Pool SSSI in the north-west of the NCA is part of the internationally important Midlands Meres and Mosses Ramsar site. This is a southern outlier of this unique series of wetland sites which have developed in glacial hollows, most of which fall within the Shropshire, Cheshire and Staffordshire Plain NCA to the north. Marton Pool sits in a large block of drained peat which extends NE along the Rea Brook, Shelve Pool, a man-made pool, is a SSSI, partly designated for its rich wetland flora and associated grassland.	Regional	The higher carbon soils are likely to be associated with areas of permanent grassland, healthland, woodlands and wetlands. When these habitats are in good biological condition the vegetation can assist in the build-up of organic material and the sequestration of carbon from the atmosphere. The woodlands of the NCA also play an important role in the sequestration and storage of carbon, both in their organic-rich soils and in the woody material itself. There is an opportunity to maintain the carbon storage potential of the area and increase it through the extension of these habitats. Restoring wetland habitat in the Camlad Valley and on deep peat soils along the Rea Brook valley near Marton Pool would help to conserve populations of wading birds which have seen significant declines in recent decades. Habitat restoration and creation will be required to address multiple sources of pressure. In addition to responding to the direct impact of climate change, this will allow other issues such as habitat fragmentation due to agricultural intensification and recreation to be addressed. The greater the area of well connected, good quality habitat, the more resilient the landscape will be to the impacts of climate change and other pressures.	Retain and expand areas of scrub and woodland habitat and encourage land managers to refrain from cultivating areas of permanent pasture, heathland and wetland. Manage heathland vegetation and soils to ensure in good biological condition examining the opportunities for management, for example through sustainable grazing. Re-wet deep peat soils in the Rea Brook valley, surrounding Marton Pool and ensure that existing wetland features across the NCA are not impacted by drainage schemes. Restore the natural hydrology (such as springs, flushes) in headwaters. Increase sequestration of carbon dioxide through restoration and creation of wetland, in particular by expanding existing areas of wetland.	**Climate regulation** **Biodiversity** **Sense of place / inspiration** **Regulating soil erosion** **Regulating soil quality** **Regulating water quality** **Regulating water flow**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal service offered by opportunities
Regulating water quality	Wet heath Blanket bog Wetlands Grasslands Woodlands Hedgerows Rivers Soils	The ecological status of the majority of rivers in the NCA has been classed as 'moderate', although there are several river lengths classed as 'poor' and several as 'good'. Almost all of the rivers in the NCA have not been assessed for chemical quality. Groundwater quality is classed as 'good' across the majority of the NCA, but classed as 'poor' in the north-east of the area.	Regional	Rivers are the principal freshwater habitat, and the rivers Teme, Clun, Onny and Corve are very important. In places diffuse pollution of watercourses is problematic, for example, the River Corve and other tributaries that ultimately feed into the River Teme SSSI. Notable species include white-clawed crayfish and freshwater pearl mussel. The latter is found in the River Clun just outside the NCA, but is completely dependent on the quality of the river further upstream within this NCA, and is declining rapidly. Traditional coppicing of Alder for clog making and charcoal production stopped decades ago, and over-mature trees tend to shade outfield layer vegetation, which supports invertebrates and in turn fish. Alder is also suffering badly from water-borne Phytophthora disease, and loss of trees leads to bank instability. Unrestricted stock access compounds poor development of bankside vegetation and bankside erosion which can often lead to siltation of gravel beds used by spawning fish and the freshwater pearl mussel.	Support the aims of the Teme Priority Catchment Area, the priorities for which are to reduce the impact of grazing and over-wintering livestock on water quality; Priority areas include the River Corve, which runs through the middle of the NCA, and pollution from dairy and poultry systems. Reduce sources of pollution by reducing the impacts of grazing. Do this through targeted actions focussed on point sources such as farmyards and appropriate management of livestock outdoors. Increase woodland and hedgerow networks to aid in the capture of chemicals and nutrients before they enter the groundwater. They will also help to filter out sediments and organic matter, preventing them from being transported into the watercourses	**Regulating water quality** **Biodiversity** **Water availability** **Sense of place / inspiration** **Recreation** **Climate regulation** **Regulating soil erosion** **Regulating soil quality** **Regulating water flow** **Biomass energy**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal service offered by opportunities
Regulating water flow	Soils Wet heath Blanket bog Wetlands Grasslands Woodlands Hedgerows Rivers	There is a risk of localised flooding along the main river valleys, and there have been significant flood events in the past. In 2007 Ludlow experienced a major flood event, when the main road bridge into the town was washed away by the rapidly rising waters of the River Corve (which runs through the centre of the NCA). There are approximately 100-250 properties currently deemed to be at risk from flooding in Ludlow.	Local	The River Severn Flood Management Plan indicates that surface water flooding is a growing problem in this NCA potentially due to the condition of some of the key assets. The suggested approach to flood risk management includes investigating land use changes which will reduce run-off rates. This may also lessen soil erosion from cultivated land. Also identifying locations where flood attenuation ponds or wetland areas could be developed with associated habitat improvement and potential sites for habitat creation.	To minimise this NCA's risks of localised flooding, restore and get into good condition areas of wetland, particularly in the uplands, to slow the speed of rainfall run off. Seek to restore and extend grasslands, woodlands and hedgerows. Increase cover of woodland /scrub and orchards. Improve soil quality by good soil management to increase infiltration rates and reduce runoff. Work with the Environment Agency, water companies, local authorities, the Highways Authority and developers to create more sustainable urban drainage to tackle surface water flooding particularly around Ludlow.	**Regulating water flow** **Regulating soil quality** **Regulating soil erosion** **Regulating water quality** **Biodiversity** **Sense of place / inspiration** **Climate regulation**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal service offered by opportunities
Regulating soil quality	Soils Woodlands Hedgerows	There are 8 main soilscape types in this NCA: ■ Slightly acid loamy and clayey soils with impeded drainage, covering nearly a third of the NCA. ■ Freely draining slightly acid loamy soils (a quarter of the NCA). ■ Slowly permeable seasonally wet acid loamy and clayey soils (fifth of the NCA). ■ Freely draining acid loamy soils over rock. ■ Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils. ■ Freely draining floodplain soils. ■ Slowly permeable wet very acid upland soils with a peaty surface (around 2 per cent of the NCA). ■ Loamy and clayey floodplain soils with naturally high groundwater (2 per cent). The NCA contains 11,090 ha of woodland (10.3 per cent of the total area). Area of heathland cover around 4 per cent of the NCA.	Local	The slightly acid loamy and clayey soils with impeded drainage (28 per cent) may have a weak topsoil structure that is easily damaged. These soils are easily poached by livestock and compacted by machinery when the soil is wet so careful timing of activities is required to reduce the likelihood of soil compaction. Equally, the slowly permeable seasonally wet acid loamy and clayey soils (20 per cent) have poor water infiltration and are at risk of diffuse pollution and flooding. Soils are easily damaged when wet and therefore it is important to minimise compaction risk especially as these soils may have limited potential for increasing organic matter levels by management interventions. In contrast, the freely draining slightly acid loamy soils (24 per cent) have good water infiltration and may be valuable for aquifer recharge requiring the maintenance of good soil structure (helped by addition of organic matter) and the matching of nutrients to needs to prevent groundwater pollution. In the case of the freely draining acid loamy soils over rock (13 per cent), the characteristically steep slopes and stony ground make management difficult and where organic soils are present may poach when wet.	Increasing woodland cover and restoring heathland especially around; Stretton Hills, the Long Mynd and Clee Hills ensuring appropriate grazing levels to prevent erosion and compaction. Encouraging best farming practices – reducing stocking rate and machinery operations on more vulnerable soils during protracted wet periods, encouraging permanent leys to improve soil structure, minimising cultivation, and steadily increasing organic matter content. Increase cover of woodland/ scrub and orchards beneath the Clee Hills. Ensure appropriate grazing levels to prevent erosion and compaction.	**Regulating soil quality** **Regulating soil erosion** **Regulating water quality** **Biodiversity** **Water availability**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal service offered by opportunities
Regulating soil erosion	Soils Woodlands Heathlands Hedgerows Orchards	Two-thirds of the NCA is prone to soil erosion. Woodland covers around 10.3 per cent of the NCA.	Regional	The slightly acid loamy and clayey soils with impeded drainage (covering a third of the NCA) are easily compacted when wet and have increased risks of soil erosion by surface water run-off, especially on steeper slopes. By comparison, the freely draining slightly acid loamy soils (covering a quarter of the NCA) have enhanced risk of soil erosion on moderately or steeply sloping land where bare or cultivated soil is exposed or where soils are compacted, while the freely draining acid loamy soils over rock are often found on steep slopes subject to rapid run-off with an inherent risk of erosion. In the case of the upland soils with a peaty surface, these may be at risk of gullying and loss of particulate organic matter where surface vegetation is damaged or lost. In some places, substantial land drainage efforts in the past now hasten the flow of water from the land, reducing the area of wetland habitat and increasing both the flashiness of streams and the transport of sediment from land to rivers. **Continued over...**	Expand areas of semi-natural habitat across slopes and maintain a network of hedgerows and grassland buffer strips running across steeper arable slopes. Furthermore, on slopes throughout the NCA and particularly in the valley of the River Corve, reduce soil erosion by maintaining and creating areas of semi-natural habitat and low input grasslands to minimise soil compaction and allow dense vegetation to improve water retention and minimise soil runoff. Restore natural hydrology such as springs, flushes) in headwaters. Manage the area's rivers and open water features, plus associated wetland habitats and waterside trees, to conserve important freshwater and wetland biodiversity by eliminating sources of diffuse pollution and also by expanding areas of waterside wetland habitat and woodlands. **Continued over...**	**Regulating soil erosion** **Biodiversity** **Regulating water quality** **Water availability** **Regulating water flow** **Regulating soil quality** **Sense of place / inspiration**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal service offered by opportunities
				...continued from previous. The majority of the NCA falls within a Defra Priority Catchment (the Teme), including the rivers Rivers Onny, Corve, and Rea. The priorities in this catchment include reducing sediment transfer rates from intensive grassland and cultivated fields. Priority areas for the prevention of soil erosion include the River Corve, which runs through the middle of the NCA, and areas of arable production, especially that managed under root cropping and intensive grassland associated with dairy systems.	**...continued from previous.** In headwater areas protect important flush, mire and rush pasture habitats, in particular by restoring formerly wet areas and by preventing drainage of surviving areas. Encourage land managers and farmers not to grow high risk crops in high risk locations, change cultivation techniques, for example ploughing to contours and the timing of arable operations.	
Pollination	Unimproved grasslands Heathlands Wetlands Lowland meadows	The NCA contains approx 10.3 per cent of the total area of woodland. Area of heathlands cover around 4 per cent. Area of orchards covers less than 1 per cent.	Local	Although pollination is not that important for crops in this NCA, heathland will support a diverse range of pollinating invertebrates and where it is adjacent to certain food crops can assist with pollination. There is real scope to improve the availability of nectar sources in this NCA through the good management and extension of heathlands, grasslands and wetlands as well as good hedge and margin habitats. This would have positive benefits for biodiversity and enhance the landscape character.	Conserve pollinating insect populations by protecting existing areas of heathland, unimproved grasslands and scrub. In particular, restore and create areas of semi-natural habitat such as traditional grasslands, heathland and wetlands to create substantial blocks of semi-natural habitat that can better support pollinating insect populations and reverse recent severe declines in these insects and encourage good hedge and margin habitat.	**Pollination** **Biodiversity** **Sense of place / inspiration** **Regulating soil erosion** **Regulating soil quality** **Climate regulation**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal service offered by opportunities
Pest regulation	Unimproved grasslands Heathlands Wetlands Lowland meadows Hedgerows	The NCA contains 11,090 ha of woodland (10.3 per cent of the total area) Area of heathlands (upland heathland 3 per cent, lowland heathland less than 1 per cent. Area of orchards covers less than 1 per cent of the NCA.	Local	This NCA provides a wide range of habitats for species that contribute to the regulation of pests as there is a relatively good network of habitats amid the arable production. Fragmentation and breaks in the network of habitats may limit the movement and effectiveness of predatory species.	Enhance and expand the network of semi-natural habitats that aids the movement of predatory species and bring benefits for pest regulation as well as pollination and biodiversity.	**Pest regulation** **Pollination** **Biodiversity** **Regulating soil erosion** **Regulating soil quality** **Regulating water quality**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal service offered by opportunities
Sense of place/ inspiration	AONB Key landmarks including Wenlock Edge. The Wrekin, the Long Mynd, Stiperstones, Clee Peaks Variety of building stones used locally Hillforts, burial mounds and stone circles Rounded steep-sided hills often with open moorland on hill tops Deciduous woodland on steep escarpment Pastoral hillside slopes and arable land in the valleys Parklands and designed landscapes Remains of lead and coal mining/quarrying especially on Stiperstones and Clee Hills Rivers and wetlands	Half of the NCA is designated as Area of Outstanding Natural Beauty (AONB). Geology has been a key influence on industry and settlement patterns. Variety of building stones and clay products impacting on local character. Classic area associated with early scientific work which continues today. 10 Registered Parks and Gardens covering 1,079 ha. 203 Scheduled Monuments. 1,909 Listed Buildings. 69 per cent of SSSI are in favourable recovering condition with 30 per cent in favourable condition.	National	Management to maintain locally distinctive features and elements is also likely to increase the sense of history with many of them having deep-rooted cultural associations. Conserving and enhancing the distinct landscape character is also likely to benefit biodiversity, by enhancing or expanding the range of habitats such as heathlands and wetlands. Reinforcing the sense of place has the potential to further increase the attractiveness of the area to visitors. Pressure on the distinctiveness of the area and its sense of place comes from potentially intrusive development and infrastructure.	Maintain the contrast between the open, bare-topped uplands and the more intricate landscape of the intervening valleys with the variety of field boundary patterns and woodlands on slopes and in valleys. Maintain the dispersed settlement pattern with a range of buildings built in local stone and timber framing together with parklands, designed landscapes and remains of extraction industries. Maintain headwaters of rivers in a natural condition and protect waterside trees on lowers slopes and in valleys. Maintain the long-distance views from the hills and ridges by controlling the placement of potentially intrusive development and infrastructure. Also protect historical features including hillforts, burial mounds and stone circles.	**Sense of place / inspiration** **Sense of history** **Biodiversity** **Recreation** **Tranquillity** **Food production** **Pollination** **Regulating water quality** **Geodiversity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal service offered by opportunities
Sense of history	Late bronze and iron-age settlements and defences Hill camps and hillforts such as Caer Caradoc Mott and bailey castles, and early industry reflected in squatter enclosures Well preserved historic town of Ludlow with its medieval castle 19th century spa and market town of Church Stretton Parklands and designed landscapes such as Burwarton House, Action Burnell, Millichope Park, Stokesay Court and Morville. Standing stones and medieval crosses Offa's Dyke National Trail Traditional farmsteads	52 per cent of Scheduled Ancient Monuments (86) are classified as 'at high or medium risk' 2 per cent of Listed Buildings (3) are classified as 'at risk' declining stable. 10 Registered Parks and Gardens covering 1,079 ha. 203 Scheduled Monuments. 1,909 listed buildings. 39 per cent of listed farm buildings have been converted to residential or non-farming use in the NCA, while between 21 and 35 per cent were derelict. More than half are now out of agricultural or associated use, but are generally kept in very good condition Around 25 per cent of buildings require maintenance or some restoration to prevent decline.	National	With its place on the English/Welsh border there is a rich historic landscape, including barrows, iron-age hill forts, bronze and iron-age settlement sites, stone circles, historic farmsteads, mining and extraction remains, squatter settlements, historic towns and villages, castles and motte and bailey sites, parkland and designed landscape. Good land management and increasing awareness is conserving many historic features. Many ancient features survive in a landscape which has seen much less change than many parts of the country including defences such as Offa's Dyke, iron-age hillforts such as at Caer Caradoc and medieval castles and fortified houses. Much of the field and settlement pattern is very ancient, with tiny lanes, villages and scattered hamlets and farms. There are also estates, parkland, planted settlements and abandoned medieval villages, along with areas of later, more regular Parliamentary enclosure. Stone and timber-framed buildings in a variety of styles reflect the diversity of materials available. Parts of the area have seen periods of thriving industry, from charcoal burning to lead mining and stone quarrying, often accompanied by haphazard 'squatter' settlement.	Protect the wealth of historic features in the NCA, including hillforts, burial mounds, stone circles, motte and bailey castles, parklands, mining industry relics, squatter settlements, the variety of hedgerow and stone wall boundary patterns, historic farmsteads and other vernacular buildings. Maintain the integrity of the settings of key historic landmarks, such as Ludlow, Much Wenlock, villages, Stokesay Castle, parklands and designed landscapes. Encourage take up of Environmental Stewardship and other schemes to maintain and enhance traditional farm buildings and sustainable soil management to protect buried archaeology.	**Sense of history** **Sense of place / inspiration** **Recreation** **Geodiversity** **Biodiversity** **Regulating soil quality** **Regulating soil erosion**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal service offered by opportunities
Tranquillity	Steep sided, "whaleback" hills, often open and exposed hill tops with moorland Mix of pastoral and wooded hillside slopes Historical villages along valley springlines	The NCA has experienced a slight decline in tranquillity. Areas of undisturbed land have decreased from 97 per cent in the 1960s to 87 per cent in 2007 (CPRE Intrusion Map, 2007). The main area of low tranquillity is the road corridor along the A49.	Regional	Levels of transport are increasing. This is a major source of intrusive noise and is gradually eroding the tranquillity of this NCA Off the beaten track and remote in the context of the west Midlands, the Shropshire Hills are a haven of tranquillity – peace and quiet, dark skies and unspoilt views. Relatively low levels of noise and inappropriate development combine with modest visitor numbers to create an unspoilt quality that is greatly valued throughout the area.	Maintain the tranquillity of the NCA, by limiting intrusion into undeveloped parts and by maintaining the sparsely settled character of much of the area.	**Tranquillity** **Biodiversity** **Sense of place / inspiration** **Recreation** **Regulating water quality** **Regulating water flow** **Climate regulation**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal service offered by opportunities
Recreation	Rights of way network Offa's Dyke National Trail Honeypot sites Angling sites Rugged upland terrain Sustrans cycling routes Extreme sports	8 per cent of the NCA 897 ha is classified as being publically accessible. The NCA offers an extensive network of rights of way totalling 2,407 km at a density of 2.23 km per km2, open access land covering 6,220 ha or nearly 6 per cent of the NCA and over 5 km of the Offa's Dyke National Trail, which cuts through the NCA in the west. Particular opportunities for recreation are associated with well known landmarks and honeypots including Wenlock Edge, the Wrekin, the Long Mynd and the Stiperstones. Angling is a significant recreation activity in the Shropshire Hills. There are a number of rivers including the River Severn, which are used for angling. The rugged upland terrain makes the area popular for mountain biking and off-road cycling but there are also a number of Sustrans cycle routes crossing the area National Cycle Routes 44 and 45 and Regional Route 31 run through the Character Area. There are popular mountain biking facilities at Eastridge Wood. Extreme sports such as rock climbing are becoming increasingly popular and there are a number of activity centres.	Regional	The quality of access to the countryside has improved significantly in recent years including through the condition of rights of way, open access and promotion. However there is a need to balance recreation with the impact that has on biodiversity and also tranquillity which is slowly being eroded by more transport.	Maintain and enhance opportunities for access throughout the area and particularly at popular destinations such as the Long Mynd, the Stiperstones, Wenlock Edge, Clee Hills and Stretton Hills, including proposals identified in the Shropshire Rights of Way Improvement Plan and by the Local Access Forum. Ensure visitor pressure is distributed within the NCA to enhance the visitor experience and alleviate the pressures on well known sites. Encourage smaller, low-key tourism developments designed in sympathy with local character will blend better into the area and spread economic benefits more widely. Support the AONB in encouraging tourism businesses to take a sustainable approach and encouraging their visitors to do likewise.	**Recreation** **Sense of place / inspiration** **Biodiversity** **Regulating water quality** **Regulating soil erosion** **Climate regulation**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal service offered by opportunities
Biodiversity	Priority habitats; Heathland, wet woodland Semi-natural grassland Upland fens Rivers, flushes and swamps 2 SAC 1 RAMSAR site 63 SSSI	Some 8 per cent of the NCA area is covered by priority habitats including upland heathland (3,289 ha), wet woodland (1,733 ha), and lowland mixed deciduous woodland (1,089 ha). The area is very rich in upland fens, flushes and swamps, but this habitat has been very poorly surveyed to date. Less than 1 per cent of the NCA area (619 ha) is designated as sites of international importance comprising the two SAC (Stiperstones and the Hollies, and Downton Gorge) and one Ramsar site (Midland Meres and Mosses). There are 63 SSSI in the NCA, covering 5 per cent of the NCA area. 69 per cent of SSSI are in favourable recovering condition with 30 per cent in favourable condition. This NCA supports an interesting mix of plant and animal communities showing transitions between southern lowland and northern upland types, with several species being found at the edge of their natural range. All the main rivers in the NCA (Onny, Corve, Ledwyche Brook, and Rea) have a 'very high' or 'high' ecological sensitivity to abstraction levels.	National	By improving the biodiversity of the area, the sense of place is maintained and enhanced. This also leads to improvements in tranquillity and assists in the regulation of water quality, soil erosion and the climate. There may be some impacts on food production but as the area is mainly known for its sheep and beef production these impacts may be reduced. The Long Mynd – Stiperstones area has the strongest and largest habitat networks of any part of the area, and there is plenty of scope to continue recent work in seeking to strengthen these.	Remove pressures on, and improve condition of, existing semi-natural habitats. Restore habitats where appropriate, increasing size of blocks of semi-natural habitats and improving links between them. Significantly increase the size of habitat networks that include the following priority habitats; woodlands, upland heath, calcareous grasslands, purple moor grass and rush pasture, mire and flush upland fens, flushes and swamps, upland hay and lowland hay meadows and pasture (including some calcareous grassland). Retain and restore unimproved grasslands in meadows around the Stiperstones and Clee Hills, so that they are in good condition. In appropriate places, create upland hay and lowland meadow habitat, particularly where this will increase the size of existing blocks of unimproved grassland. Protect, conserve and expand areas of ancient semi-natural woodland including upland oak woods and mixed deciduous woodland on hill slopes and valley sides, wet woodlands in valley bottoms and woodlands on calcareous soils.	**Biodiversity** **Sense of place / inspiration** **Regulating water quality** **Regulating soil erosion** **Recreation** **Climate regulation**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal service offered by opportunities
Geodiversity	Very diverse geology Soils and geo-morphology SSSI Local Geological Sites Local building stones Local industrial mining/ quarrying heritage	35 geological SSSI. 9 mixed SSSI. 159 Local Geological Sites. Very diverse geology with rocks from six geological periods each characterised by different rock types, which in turn determine the shape, vegetation and economic use of the landscapes. Geology has been a key influence on industry and settlement patterns. The wide variety of building stones and clay products influence local character. This is a classic area associated with early scientific work which continues today.	National	Geological sites including SSSI and Regionally Important Geological and Geomorphological Sites (RIGS) will sometimes need active management to maintain their value, such as controlling vegetation and tree growth. Sites which are well used for education and study may need active monitoring and liaison to ensure that damage, either deliberate or accidental, does not occur. Ensuring a supply of local stone is available to reinforce sense of place and history could have a negative impact on the landscape character if not managed sensitively.	Seek to improve the condition of geological sites and raise public awareness of geology, soils and geomorphology and its influences on landscape and human activity. Encourage the continued use of local stone in buildings to build on the sense of place and history. Use micro quarries to provide small amounts of local distinctive building stone for conservation and even facing new builds in order to keep the character of a particular village/settlement. Encourage the public awareness of the past industrial heritage of the mining/quarrying.	**Geodiversity** **Sense of place / inspiration** **Sense of history** **Recreation** **Water availability**

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