National Character Area profile:

132. Salisbury Plain and West Wiltshire Downs

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Introduction

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

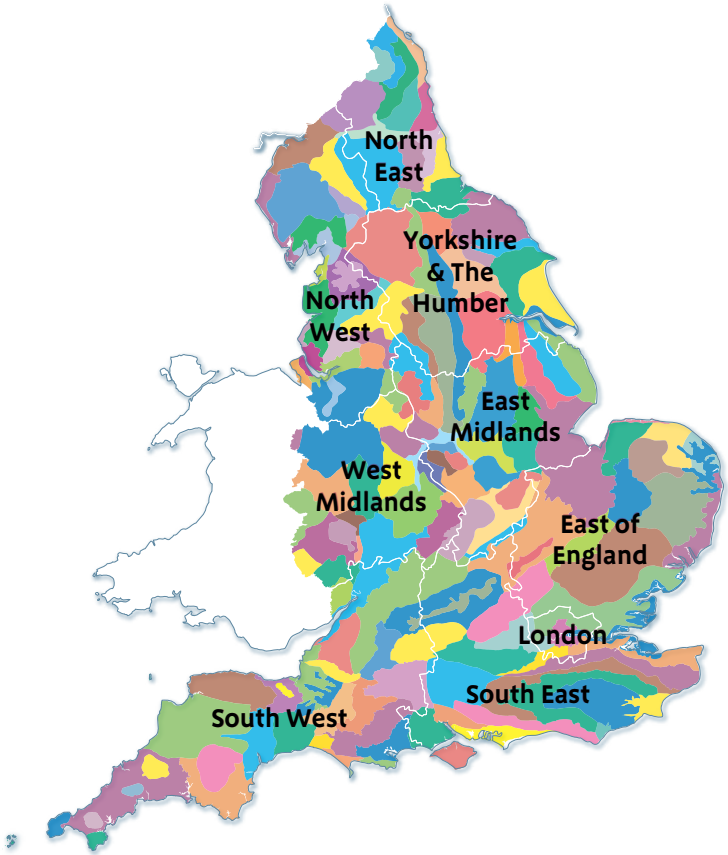
NCA profiles are guidance documents which can help communities to inform their decision-making about the places that they live in and care for. The information they contain will support the planning of conservation initiatives at a landscape scale, inform the delivery of Nature Improvement Areas and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

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

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

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

National Character Areas map



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

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

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

Summary

Salisbury Plain is a sparsely settled, predominantly agricultural area with a strong sense of remoteness and openness. The dominant element in the landscape – apart from the expansive sky – is the gently rolling chalk downland, forming part of the sweep of Cretaceous Chalk running from the Dorset coast and across the Chilterns to north of the Wash.

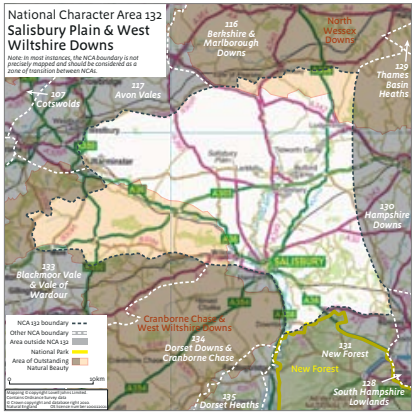
The Plain is designated as both a Special Protection Area and Special Area of Conservation (SAC) under European legislation, notably for the populations of stone curlew and hen harrier, and for the chalk grassland habitat, one of the largest remaining areas of calcareous grassland in north-western Europe. Much of the natural environment is also protected through its designation as a Site of Special Scientific Interest for its populations of rare bumblebee species, and many rare birds, plants and invertebrates. Around one third of this NCA is also designated as Area of Outstanding Natural Beauty. Cranborne Chase and West Wiltshire Downs AONB lies to the south and west, and the North Wessex Downs AONB to the north and east.

The fields here, many dating from the final era of enclosure in the period of the Napoleonic Wars, are seemingly endless. With hedgerows rare, they often lack clearly visible boundaries. Steep escarpments with unimproved calcareous grassland cover are found along the northern and western edges, providing a sharp transition to the Vale of Pewsey, underlain by the Upper Greensand. There is a more gradual transition to the Berkshire and Marlborough Downs and Hampshire Downs to the north and east, and the Dorset Downs and Cranborne Chase to the south and west. The sheltered chalk river valleys, such as the Bourne and Wylye, incise the Chalk and are often wooded with older, smaller fields, and form part of the (Hampshire) River Avon system, which is designated as an SAC for its aquatic biological diversity.

There is little settlement, with villages generally located along springlines, some small towns, and pockets of modern military-dominated development in the east. Only Salisbury, with its historic core, stands as an urban area of any size. Military activity and infrastructure, so rarely evident elsewhere in England, are very prominent here.

The National Character Area (NCA) contributes substantially to the national production of arable cereals, notably wheat and barley. The remaining open grassland, which adds so much to the sense of place around the many and internationally important prehistoric sites, is vulnerable to demands for further changes in arable use. There is a strong local vernacular architecture combined with a rare sense of space and emptiness. Large numbers of visitors to the area may challenge this sense of history and tranquillity.

Most of the NCA lies within the county of Wiltshire. The NCA contains significant historical and cultural assets, including a wealth of buried and above-ground archaeological remains of international importance, and many historic houses and estates, such as Wilton House. There is a strong sense of historical continuity underpinned by the prehistoric landscape features identified in the Stonehenge and Avebury World Heritage Site at Stonehenge in the southern part of the Plain, along with many other prehistoric monuments.



Click map to enlarge; click again to reduce.

Statements of Environmental Opportunity

- **SEO 1**: Protect, manage and enhance the landscape of large areas of calcareous chalk grassland, and develop network connectivity, supporting internationally important and designated semi-natural habitats and species assemblages – from birds to bumblebees – and thus support biodiversity.

- **SEO 2**: Protect, manage and enhance the (Hampshire) River Avon system, working in partnership notably with the regional farming community to improve the habitat for flora and fauna and improving biodiversity, developing the scope for climate regulation and for regulation of water flow and water quality.

- **SEO 3**: Protect, conserve and sustainably manage the NCA's rich historic and archaeological resource, notably the Stonehenge and Avebury World Heritage Site and its surrounding landscape, and its natural and cultural heritage, for its value in sense of place and history and tranquillity, for open air recreation, and for the benefits it brings to the local and regional economy.

- **SEO 4**: Protect and enhance the NCA's agriculture interest, working with the local farming community to prepare for the impact of and adapt to both evolving funding mechanisms and climate change, to secure future food provision, while working in harmony with the nationally recognised and distinctive character of the landscape, its natural beauty and scenic quality and, so far as possible, extending the scope for access to nature and other recreation, for public benefit, understanding and enjoyment.

Chalk grassland habitat, such as shown here at Haxton Down, is valued for its undisturbed character, outstanding natural beauty and rich flora and fauna.

Description

Physical and functional links to other National Character Areas

The Chalk of the National Character Area (NCA) is part of a wider sweep, extending from the Dorset coast up across to north of the Wash into Yorkshire.

The views from and to the escarpment over the Vale of Pewsey and the Avon Vales NCA form the principal connection to the areas to the north. Views from this NCA to the north are extensive and long distance.

The rivers of the Avon system rise locally, within the NCA itself or to the north in the Berkshire and Marlborough Downs, and flow south towards the New Forest. They may once have served as transport routes. To the south of Salisbury, after the rivers have joined, there are flood risks, which may affect settlements in the adjacent Dorset Downs and Cranborne Chase NCA.

The area is a catchment for rivers affecting the Hampshire Downs to the east. A substantial pipeline network to move freshwater between the NCA and the Dorset Downs and Cranborne Chase, to the south, was under development in the early part of the 21st century by Wessex Water. This is likely to prove vital for secure water supplies thereafter for this NCA, in addition to assisting with the water flow along the River Avon system, designated under European legislation as a Special Area of Conservation (SAC).

Transport links are by major roads running broadly east–west – thus to the South Hampshire Lowlands, the New Forest and Avon Vales, and onwards to London or Bristol. There are few rail links.

The Stonehenge and Avebury World Heritage Site shows that the link north to Avebury, on the Marlborough Downs, is very longstanding and the likely result of related cultures. This now generates infrastructure and recreational links through the tourist and heritage industry, with many related connections between the numerous sites of interest.

Medieval farming landscape near Mere.

Key characteristics

- Salisbury Plain, an extensive and open rolling chalk plateau and one of the largest remaining areas of calcareous grassland in north-west Europe.
- Many small, sheltered river valleys, such as the Wylye, with narrow flood plains and meandering river courses.
- Woodland generally confined to valley slopes, with scattered copses and shelterbelts (usually of beech or conifer) found on the high downs, and occasional ancient oak woods on the ridgetops.
- Large arable fields predominate, with generally very few hedgerows or obvious boundary features; there are often wide grass buffer strips.
- Rare flora and fauna of national significance, associated with a chalk landscape, from stone curlew, hobby and corn bunting to dropwort, early gentian and slender bedstraw.
- Outstanding prehistoric ritual landscape, with many Scheduled Ancient Monuments and earthworks prominent in the open landscape, notably Stonehenge.
- Distinctive chalk-cut figures – generally large horses – post-dating the medieval period.
- A sparsely settled landscape, with few settlements of any size, and notable for nucleated villages at the foot of the scarp along the springline. Large-scale farmsteads are a prominent feature.
- Abundant use made in older buildings of local stone such as flint, Chilmark stone and clunch, together with timber frame and chalk cob.
- Large parks and estates found in the valleys, with related groups of estate housing in common style.
- Salisbury, an ecclesiastical centre since the early medieval period and now a tourist and local administration centre, with a well-preserved historic core, and a cathedral whose spire has long been a feature in the surrounding landscape.
- Military tracks, airfields and structures reflecting a major land use. Visually prominent modern military housing and supporting development are found in the eastern side of the NCA.

Salisbury Plain and West Wiltshire Downs today

The overall character is of an extensive open chalk plateau, with a near-continuous dramatic scarp to the north, and a pattern of attractive valleys to the east and south. Two seperate areas, covering around one third of the NCA are designated as Area of Outstanding Natural Beauty (AONB): Cranborne Chase and West Wiltshire Downs AONB to the south and North Wessex Downs AONB to the north-east.

Open farm landscape near Winter's Penning.

The two areas of AONB are noteworthy. Cranborne Chase and West Wiltshire Downs to the south is designated as an AONB for its rich chalk down, whaleback ridges, wooded valleys and deeply rural, agricultural character and its rich archaeological resource. It is separated from its fellow AONB by Salisbury Plain and shares its sense of remoteness and generally dark skies.

The North Wessex Downs AONB lies to the north east, towards Marlborough, and is designated for its wide open downland and the scarp slopes, rich in flora and wildlife, its ancient woodlands, and its river valleys with rare spring-fed and fast-flowing chalk streams.

Salisbury Plain is the largest expanse of the rare habitat of unimproved chalk grassland in north-west Europe. It is designated as an SAC and is rich in chalk plants and invertebrates. It is also rich in bird species, notably the stone curlew, and is designated as a Special Protection Area (SPA), again under European legislation, as is the nearby area of Porton Down. The latter is generally known for its military and scientific role, but has distinctive and valuable heathland flora.

A major theme in this NCA is the continuity of use and division of the landscape, with features ranging from the Bronze Age through to the Roman and early Saxon periods all being used as boundaries for medieval estates and parishes, suggesting that many of the land units seen today reflect much earlier territorial divisions. Most of the area had been cleared of its woodland for farming and grazing by the end of the Neolithic period, resulting in the thin chalk-based soils which have helped to shape much of the area's agricultural development and heritage. Large farmsteads are a feature across the area, often with nearby workers' housing. Large arable fields with few hedgerows or settlements

predominate across the area, resulting from the piecemeal enclosure of open fields around villages and also open downland from the medieval period. These changes worked within an earlier framework of droveways and routeways. Fields on the plateau generally date from the late 18th century, are more regular in their form and have been most affected in the post-1950 period by declining hedgerow management and their removal. The downs to the south and west are broad hills with long views, separated by shallow dry valleys. The main land use is arable farming, with much of the eastern area down to pasture – not least for the benefit of locally rich archaeology and for the setting of the prehistoric monuments, from the early Robin Hood's Ball to Durrington Walls, the Cursus and Stonehenge itself. There is abundant evidence of settlements and surrounding fields across the open plateau and also across the area, which is thought to have been largely cleared of trees in the Neolithic period. The settlements moved down into the river valleys after Roman times.

There are scattered copses and shelterbelts – many planted in the 18th and 19th centuries – on the high downs, with earlier and more substantial areas of woodland confined mainly to valleys and steep slopes. There are some extensive ridge top ancient oak woodlands, some with newer planting, such as at Grovely Wood. Occasional new planting of small broadleaved woods around the chalk plain may take place where military training needs call for woods as cover, and where it is appropriate on a site-specific basis.

The plateau is drained by the River Avon and its tributaries, designated as an SAC for its biodiversity in fish (notably two lamprey species) and aquatic plants, such as the water crowfoot. These rivers drain along their natural course into the Avon just north of Salisbury, and expand across a flood plain just to the south of the city. The views over the flood plain to the historic core of the city and its cathedral were immortalised by the artist Constable and remain little changed, with functioning watermeadows between Salisbury and Harnham and beyond to Bodenham.

The low ridges of abandoned floated flood meadows which have developed from the 16th and 17th centuries are characteristic; although many meadows have been lost, some continue to be grazed, notably by cattle. The valleys and watercourses are often lined with areas of carr woodland with willow and alder. Locally abundant is an ancient plant, marsh marigold; also found is the rare brown galingale. The river valleys to the south and west are sheltered and include long- established settlements, revealed not least by the smaller field enclosures from up to the 16th century.

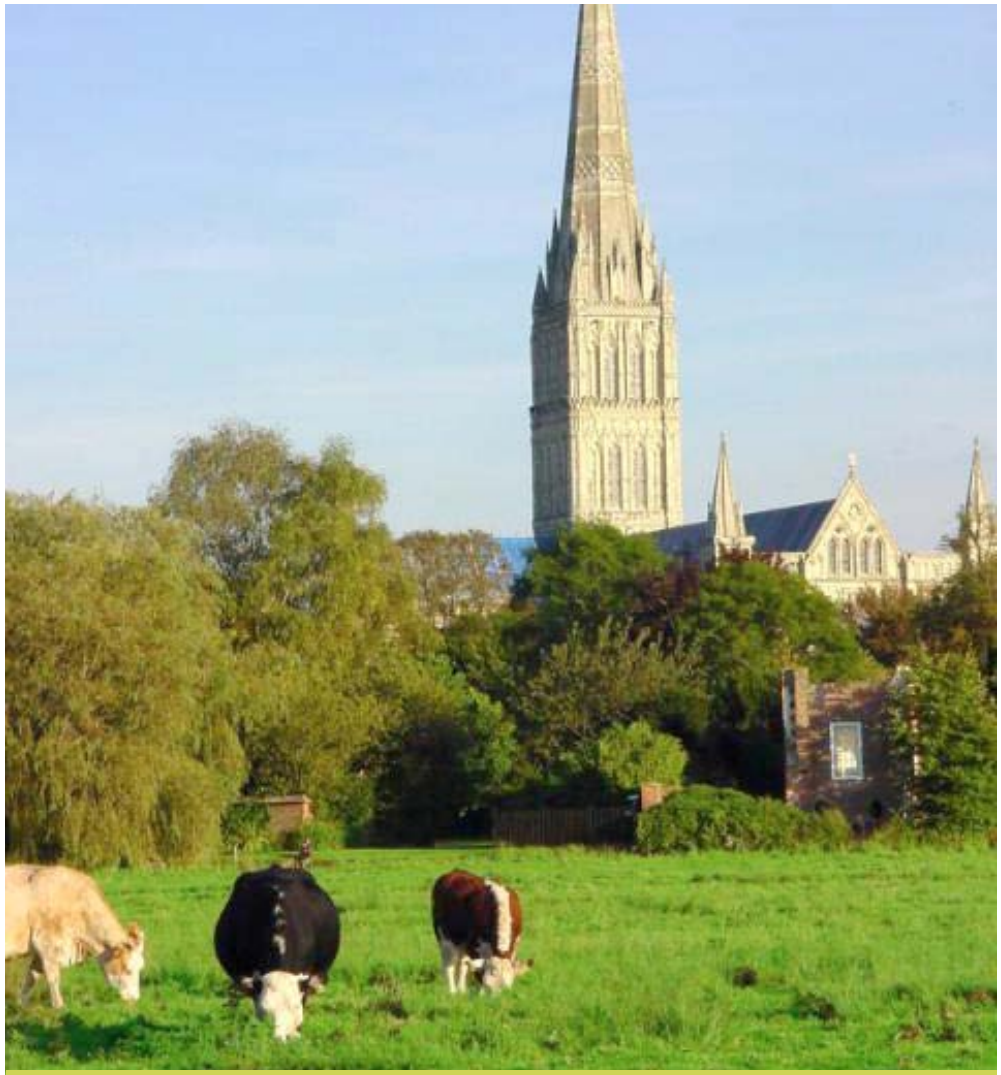
Clay and gravel deposits, and exposures of older Jurassic rocks, some notified as a Site of Special Scientific Interest, illustrate the action of water over time through the chalk landscape. Steep sided and with narrow flood plains, the valleys are visually contained and often appear remote.

Nucleated settlements prevail, often with groups of former estate cottages in uniform style. Older cottages are of cob and timber frame with thatch roofs, with brick and tile common from the early 19th century onwards. There is some use of local stone, for example the distinctive Chilmark stone or knapped flint with clunch. This adds to local distinctiveness.

There are few major communication routes across the NCA; where possible, people travelled along the valley floors but went across the Downs when necessary, heading north and south.

This is a rural area with over 70 per cent agricultural use. This is largely arable, with some livestock use (generally pigs or sheep), in particular around Stonehenge, where there has been a drive for reversion to pasture. The popularity of Wiltshire ham, and its suitability in rotation with arable farming, also encourages the continuation of pig farming. Land is also managed (at least in part) in the interests of game shooting, which brings benefit to the local economy and affects the management measures that are applied.
The main modern influence on the Plain's landscape is military activity, which in places bars civilian use, generally influences the agricultural patterns, and is widely apparent owing to buildings and other infrastructure.

This NCA includes Stonehenge, part of a World Heritage Site, whose ancient monuments "together with their settings and associated sites... form landscapes without parallel" and are testimony to "a wealthy and highly organised prehistoric society able to impose its concepts on the environment". Stonehenge[4] retains spiritual associations for some. Over one million visitors from all over the world come to Stonehenge each year. Tourism and agriculture remain the main economic drivers within the NCA and likely forces for change, as they have been for well over a century.



Cattle grazing on Harnham water meadows to the south of Salisbury.

[4] http://whc.unesco.org/en/list/373

The landscape through time

The western area of the NCA, the Downs, dates from the Upper Jurassic, around 150 million years ago, when Britain was covered by shallow shelf seas, and sees some exposures of that period. Later in the Jurassic Period there was, over time, a substantial fall in sea level. This resulted in a variety of depositional environments – marine and estuarine – leading to limestone, siltstones and clays. These deposits are seen in the areas along and to the south of the River Wylye. The notable resulting local stone is Chilmark Limestone, the building stone used for Salisbury Cathedral.

Salisbury Plain, as the core and northern and western part of the NCA, was formed during the Cretaceous Period, after 145 million years ago, when sea levels had risen again and shallow marine conditions prevailed. The Lewes, Seaford and Newhaven Chalks of this period form the majority of the Plain itself, and are very pure limestone of some 98 per cent calcium carbonate. There are few natural exposures of these chalks.

The plateau slopes slightly up to the north and west, with the northern scarp slopes particularly striking. Subsequent erosion by rivers has left the area with a pattern of river valleys with later alluvial deposits, all the rivers rising in the NCA other than the Avon itself. There are also many winterbournes, such as the Till, which flow over the Chalk only after prolonged rainfall. To the east, beyond the River Bourne, lie much more recent Tertiary deposits (including a number of sarsen trains) and superficial drift geology of alluvium, clay, silt, sand and gravel.

The area was largely cleared for agriculture and grazing at the outset of the Neolithic period (around 4200–3700 BC) followed by the development of a distinctive regional culture up until around 2500 BC and then continuing into the Bronze Age, Iron Age and Roman occupation. The result is an astonishing diversity of evidence for farmsteads and other settlements with their associated field systems, the development of large estates marked by linear boundaries which often formed the framework for present parishes, and causewayed enclosures, cursus monuments and hill forts (such as Scratchbury in the Wylye Valley), and finally Neolithic long barrows, bronze-age barrows and other ritual and funerary monuments. Pre-eminent among these is Stonehenge with its associated monuments, its significance recognised since 1986, with that of Avebury to the north, by inscription by Unesco as a World Heritage Site. This includes the Cursus monument dating from around 3600 BC and the circles of sarsens and trilithons erected within the circular earthwork enclosure of around 3000 BC, linked by its Avenue to the Avon. Archaeological work around 2000 revealed new information about its development, its association with the 12-hectare henge at Durrington Walls and its linked settlement, and its role in the development of Neolithic and bronze-age Britain.

Roman settlement consists of small towns such as the roadside town that developed outside the iron-age hill fort at Old Sarum, a few villa sites and villages. Of particular importance are a number of examples of deserted Roman villages on higher downland which survive, in part, as earthworks. These settlements appear to have been deserted by the 4th or early 5th centuries. It is probable that most rural settlement in the Roman period (of which there are few visible traces above ground) followed the existing pattern, with linear villages lying in the valleys alongside chalk streams. Within these valley-based settlements there is evidence for both medieval planning in the form of regular property plots and the desertion and shrinkage of settlements in the 14th and 15th centuries. The present pattern of discrete villages separated by farmland is often the result of the loss of some villages or shrinkage of existing villages at that time.

Salisbury, dominated by its cathedral spire, is the main urban area in this NCA. Salisbury is a medieval new town created by the Bishop of Salisbury, moving it from the hill-top location at Old Sarum, slightly to the north. Downton, a little to the south, is also a planned new town laid out opposite an earlier Saxon estate centre. In the Saxon period Wilton was the most important town, being the administrative capital of the area and having a royal residence. A rich legacy of churches with 12th–13th century fabric (such as Fisherton Delamere) testifies to the prosperity of this area in this period, and the wealth gained from its arable land and wool. Clarendon is a largely overlooked Saxon royal palace, to the south-west of Salisbury, rebuilt by Henry III in the 12th century and enjoyed until the 17th century.

Travellers wrote about Stonehenge – while addressing the Dissolution of the Monasteries on behalf of Henry VIII, and the 17th century sees it documented by antiquarian John Aubrey. This inspired interest, which was encouraged in the late 18th century by the romantic vision of its 'wilderness' and saw a growing exploration of the area. The NCA's several important country houses with their associated parklands, for example Wilton House, Boyton and Wilbury, developed after the Dissolution of the Monasteries. In parallel, large farms were developing from the 15th and 16th centuries, often based on leased estates of major ecclesiastical landowners and through the engrossing of the holdings of smaller farmers. This resulted in the creation of some of the largest farms in the country and the rise of the 'capitalist farmer' who had considerable resources. Wilton and other estates had a major impact on the rebuilding of farmsteads and the reshaping of the farmed landscape from the late 18th century.

Wiltshire's landscape has been intensively used for military training and infrastructure from the late 19th century. Salisbury Plain is the largest training area in the United Kingdom, at some 38,000 ha, and is now one of the best-preserved archaeological landscapes in western Europe. The military use of the Plain has helped to conserve chalk grassland habitats for a rich diversity of fauna and flora, as well as the visible archaeology of settlement and land use from the prehistoric period which has been destroyed elsewhere by intensive arable cultivation. The remains of practice trenches from both World Wars and other features developed by the Army across the Plain are also of significance. Around the Plain are military camps which have developed into small towns, including Tidworth, Larkhill and Bulford. Outstanding and probably unique in an international context are the pre-1914 military aviation sites and structures at Larkhill, Netheravon and Upavon. Old Sarum retains the most complete group of hangars and other buildings relating to a grass flying field of the First World War period.

Over the latter part of the 20th century, there was much intensification of agriculture – which remains the major industry in the NCA – but the early 21st century brought more reversion to pasture and less arable, particularly in the area of the World Heritage Site. This development results in large part from a care for the historic environment and a willingness to support this financially – which may not prove to be of long duration. A positive development has been the restoration of the landscape setting to Stonehenge following the closure of the A344.

The farmed landscape and semi-natural habitats were, in the early 21st century, developing in a manner consistent with the overall (rural) character for the NCA, with little urban development outside military areas. Housing and other development was well managed, not least with the growing interest in and use of green infrastructure to make landscape serve many purposes such as for recreation, drainage and biodiversity. The designation of the SAC for Salisbury Plain and the River Avon has helped to advance the conservation of the NCA's landscape.

Ecosystem services

The Salisbury Plain and West Wiltshire Downs 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 this NCA is contained in the 'Analysis' section of this document.

Provisioning services (food, fibre and water supply)

- **Food provision:** Substantial arable crops, of national importance – mostly wheat and (often for distillers and maltsters) barley, with additional oilseeds (rape and linseed) and (largely for animal feed) maize; pig meat, one of largest sources in England, largely outdoor reared; limited mixed farming; and livestock. The current mosaic of agricultural production is important in preserving the NCA's landscape character.

- **Water availability:** Local rivers and aquifers are currently broadly sufficient for the supply of water within the NCA and beyond[5] and the underlying rocks are such that water flow is good.

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

- **Regulating water quality:** There is a major problem here in that the greensand soils found in parts of the river valleys are in places degraded and have unsuitably high nutrient levels, and are occasionally higher than is desirable in nitrates. It is believed likely that work with the agricultural community through the catchment sensitive farming schemes will satisfactorily address these concerns and be a useful tool elsewhere. The NCA is largely a nitrate vulnerable zone and already has many applicable regulations affecting land managers.

Cultural services (inspiration, education and wellbeing)

- **Sense of place/inspiration:** The Chalk dominates the NCA's history and topography; Stonehenge and the surrounding open pasture land supply a strong sense of place to the NCA. The strength of the NCA's character here can be seen from the enduring power of the visitor attractions such as Stonehenge and its associated monuments; the range of chalk-cut figures, to demonstrate man's interaction with the chalk hills; and Salisbury itself, with the cathedral and its close.

- **Sense of history**: The area has captured the imagination of antiquarians and writers from the 16th century, and it has a strong sense of being one of the most anciently settled landscapes in the world. Much of this rich evidence has been conserved by military use of the Plain, its airfields and training areas also being highly evocative of militarisation before and during the First World War. To this can be added rich evidence of how pre-Roman land use has shaped present boundaries, and in its farmsteads, traditional buildings and farmed landscape together with the development of a distinctive rural economy based on corn and sheep. Old Sarum, north of Salisbury, is both a medieval site and a former rotten borough. Wilton House is a stately home (and now a visitor attraction and thus an economic force) which has been inhabited by the same family since its construction in the 17th century[6];

[5] For details, see the Environment Agency website and search for aquifers

[6] www.wiltonhouse.com

Salisbury is a medieval town, now city, that is still in operation and serving as a centre today, showing continuity in human presence in this NCA and that activity in the city has endured and evolved over time.

- **Tranquillity**: The NCA enjoys quiet countryside and a sense of isolation and escape, partly owing to the open spaces themselves, and there are many areas which seem to pre-date the modern world. This is appreciated by both residents and visitors. The area remains tranquil, with dark night skies away from the major transport links of the A36 and A303[7], and this is largely unaffected by the many military uses.

- **Recreation**: The NCA is richly endowed, with an extensive network of rights of way (including byways open to all traffic) and scope for game shooting, fishing, birdwatching (including of the great bustard, now restored to the NCA[8]), and many visitor attractions in relation to both heritage and nature. The NCA has resources for education on English history and culture, and on the natural world.

- **Biodiversity**: Around a fifth of the NCA is recognised as being important for its diversity of wild species. There are large areas of semi-natural habitat and a wealth of flora and fauna. A number of key sites are supported by international and national designations.

Shrill carder bee feeding on red clover.

[7] www.cpre.org.uk/resources/countryside/dark-skies
[8] www.greatbustard.org

Statements of Environmental Opportunity

SEO 1: Protect, manage and enhance the landscape of large areas of calcareous chalk grassland, and develop network connectivity, supporting internationally important and designated semi-natural habitats and species assemblages – from birds to bumblebees – and thus support biodiversity.

For example, by:

- Seeking to improve the sustainability of land management practices, for example by encouraging experimentation in working to increase seasonal pasture and reduce dependence on chemical inputs, in the interests of improving soil and water quality.
- Learning from the work done, including that carried out upstream from this National Character Area (NCA), for the benefit of the biodiversity of the River Avon system, and the effects on soil structure and soil and water quality, and spreading any relevant good practice through workshops for land managers.
- Pursuing and collaborating where possible with partners, for example the Bumblebee Conservation Trust, on any relevant research into bee health and welfare in the light of colony concerns in the early 21st century, and learning from lottery-funded work on the development of flower-rich grassland for the benefit of (primarily) the shrill carder bee, a feature of the Plain, to assist biodiversity and pollination.
- Surveying grassland flora diversity to identify specific areas of concern and scope for further work, and fostering grassland restoration projects where possible, for example in conjunction with the RSPB Futurescapes project and 'Stepping Stones', led by the two Areas of Outstanding Natural Beauty.
- Considering the historical significance of boundaries in the context of re-creating network connectivity and wildlife corridors in the interests of biodiversity, and seeking to have any new boundary features consistent with the current landscape.
- Supporting, developing and extending the farmland birds scheme, and thus encouraging the farming community to actively engage in fostering local biodiversity where possible.

SEO 2: Protect, manage and enhance the (Hampshire) River Avon system, working in partnership notably with the regional farming community to improve the habitat for flora and fauna and improving biodiversity, developing the scope for climate regulation and for regulation of water flow and water quality.

For example, by:

- Working with local groups, such as the Harnham Water Meadows Trust, south of Salisbury, protecting and enhancing traditional flood management systems, and their watermeadows and earthworks, looking for scope to extend them, and working to ensure that communities learn from such work.
- Monitoring chalk streams in the light of climate change and working with partners, for example the Wessex Chalk Streams Project, on the protection of water flow.
- Seeking to improve riparian tree cover where possible on a site-specific basis, exploring the benefits to landowners that may encourage them to foster shading of the river in order to assist in climate regulation and aid biodiversity.
- Encouraging the development of variation in ploughing practice, particularly in the Wylye Valley, to spread good practice and reduce contour-driven run-off and thus assist with reducing waste, soil erosion and pollution.
- Working with those delivering under the Water Framework Directive, specifically in the interests of improving and safeguarding the water and ecological quality of the chalk streams.
- Working to maintain the River Avon Special Area of Conservation and its biodiversity of flora and fauna, and contributing to the network of Natura 2000 sites.

SEO 3: Protect, conserve and sustainably manage the NCA's rich historic and archaeological resource, notably the Stonehenge and Avebury World Heritage Site and its surrounding landscape, and its natural and cultural heritage, for its value in sense of place and history and tranquillity, for open air recreation, and for the benefits it brings to the local and regional economy.

For example, by:

- Supporting and assisting the World Heritage Site Committee in giving effect to the operative Management Plan and delivering agreed-upon priorities in support of the site's outstanding universal value, as is required of the Government by treaty.
- Assisting, so far as is possible, in the development of appropriate funding schemes which foster the maintenance and restoration of permanent grassland, to help to conserve the archaeological resource and to aid in the interpretation of the prehistoric landscape.
- Working with partners, for example the RSPB at Normanton Down, to help the landscape surrounding the World Heritage Site to serve the interests of the landowner and archaeology and biodiversity in order to enhance the overall visitor experience of the site.
- Considering the removal and extension of woodland as appropriate on a case-by-case basis, mindful of the potential for undiscovered heritage assets, to shield the World Heritage Site from inappropriate development and assist in securing a tranquil landscape in harmony with the prehistoric interest.
- Protecting and managing historic parklands to retain their important contribution to landscape character and sense of history, and to conserve their important deadwood fauna, including the establishment of new generations of trees and appropriate management of mature and veteran trees, in the interests of sense of place and biodiversity, and both soil quality and climate regulation.
- Conserving and appropriately managing and, where possible, increasing public understanding of the NCA's archaeology of land use and settlement (dating back to the Neolithic and earlier) including its high archaeological potential and distinctive farmstead architecture, in the interests of sense of place and history, and for the benefits for the rural economy.
- Seeking to preserve where possible the agricultural heritage of the NCA and Wiltshire, notably field boundaries (some prehistoric) which have shaped the local landscape, and old practices from non-intensive farming times, for education purposes.

SEO 4: Protect and enhance the NCA's agriculture interest, working with the local farming community to prepare for the impact of and adapt to both evolving funding mechanisms and climate change, to secure future food provision, while working in harmony with the nationally recognised and distinctive character of the landscape, its natural beauty and scenic quality and, so far as possible, extending the scope for access to nature and other recreation, for public benefit, understanding and enjoyment.

For example, by:

- Working with the farming community to develop alternative land management practices and/or crops to adapt as appropriate to the changing climate in the light of the possible impact of climate change on the provisioning services provided.
- Fostering the involvement of community groups in making land available for public access, whether permissive or otherwise (learning, where possible, from the National Trust and other landowners who often facilitate access as a matter of principle) to increase public engagement with the natural environment and to develop public understanding of the responsibilities of visitors to the countryside.
- Exploring appropriate schemes on a site-specific basis for biodiversity offsetting and/or payment for ecosystem services, for example in the interests of local flood defences or for the benefit of local land managers, which may lead to greater provision and in any event assist the local economy.
- Working with relevant Local Nature Partnerships and Local Enterprise Partnerships to assist their work in respect of the role of land managers and others and to explore the potential for climate regulation services, or services aiding water and soil quality, to grow.

Supporting document 1: Key facts and data

Total area: 122,334 ha

1. Landscape and nature conservation designations

Salisbury Plain and the West Wiltshire Downs are made up of Salisbury Plain, West Wiltshire Downs; River Avon and tributaries. The NCA contains 27 ha of the New Forest National Park and 25,220 ha of the Cranborne Chase and West Wiltshire Downs Area of Outstanding Beauty (AONB). It also contains 6,756 ha of the North Wessex Downs AONB. In total the area of AONB within the NCA is 31,976 ha, 26 per cent of the NCA.

Management plans for the protected landscapes can be found at:

- www.newforestnpa.gov.uk/
- http://www.ccwwdaonb.org.uk/
- www.northwessexdowns.org.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	N/A	N/A	0	0
European	Special Protection Area (SPA)	Salisbury Plain SPA; Porton Down SPA	21,278	17
	Special Area of Conservation (SAC)	Salisbury Plain SAC; River Avon SAC; Mottisfont Bats SAC; Chilmark Quarrries SAC	21,843	18
National	National Nature Reserve (NNR)	Parsonage Down NNR; Wylye Down NNR;	310	<1
	Site of Special Scientific Interest (SSSI)	A total of 42 sites wholly or partly within the NCA	23,958	20

Source: Natural England (2011)

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

A total area of 24,001 ha, 20 per cent of the NCA is covered by European and National designations. The whole of the land that is designated as SPA is coterminous with SAC. The same land is also designated as SSSI. A small additional piece of the Parsonage Down NNR is not designated as SSSI.

There are 467 Local sites in the Salisbury Plain and West Wiltshire Downs NCA covering 7,136 ha which is 6 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 at: 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

SSSI condition category	Area (ha)	Percentage of SSSI in category condition
Unfavourable declining	4,778	20
Favourable	18,710	78
Unfavourable no change	445	2
Unfavourable recovering	25	<1

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

The NCA elevation ranges from 286 m above sea level down to 23 m with an average altitude of 125 m.

Source: Natural England (2010)

2.2 Landform and process

Salisbury Plain is a rolling plateau, sloping gently from about 150 m above sea level in the south to 200 m at its north and western edges. The Chalk margins to the Plain in the north and west are dominated by a near continuous scarp. The rivers forming the principal valleys of the Wylye, Till and Avon, flow south and south-eastwards to form the Hampshire Avon.

Source: South Wessex Downs Natural Area Profile, Salisbury Plain and West Wiltshire Downs Countryside Character area description

2.3 Bedrock geology

Upper Cretaceous Chalk, a very pure and soft form of limestone, makes up 93 per cent of the NCA area. There are small amounts of clay, silt and sand. Sarsen stones – weather worn blocks of grey sandstone derived from the former cover of Tertiary deposits - are scattered across Salisbury Plain and Downs. Greensand and Gault Clay are only found in small outcrops within the South Wessex Downs. The NCA also contains exposures which have been used to determine the boundary between the Upper Jurassic and Lower Cretaceous in Britain (Upwey Quarries and Bincombe Down).The rocks are rich sources of fossils due to the way in which they were formed (encapsulating organisms) and because of their chemical composition.

Source: South Wessex Downs Natural Area Profile, Salisbury Plain and West Wiltshire Downs Countryside Character area description

2.4 Superficial deposits

During the Quaternary, clay-with-flints deposits were laid down over at least part of the Chalk and these high level deposits survive today.

Source: Salisbury Plain and West Wiltshire Downs Countryside Character area description

2.5 Designated geological sites

Tier	Designation	Number
National	Geological Site of Special Scientific Interest (SSSI)	3
National	Mixed Interest SSSI	2
Local	Local Geological Sites	11

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

There are local influences from neutral soils especially on flatter ground on hill tops and valley bottoms. There are 5 main soilscape types in this NCA: Shallow lime-rich soils over chalk (covering 71 per cent of the area); Freely draining lime-rich loamy soils (11 per cent); Freely draining slightly acid loamy soils (10 per cent); Loamy and clayey floodplain soils with naturally high groundwater (4 per cent); and Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils (3 per cent).

Source: National Soils Research Institute

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	78	0
Grade 2	13,148	11
Grade 3	67,011	55
Grade 4	5,240	4
Grade 5	1,126	1
Non-agricultural	34,331	28
Urban	1,400	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 Avon	63
River Bourne	42
River Wylye	41
River Nadder	13
River Ebble	4
River Test	<1

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.

These rivers form the principal valleys of the Wyle, Till and Avon and flow south and south-eastwards to form the Hampshire Avon. The valley bottoms tend to be lined with gravel and alluvium.

3.2 Water quality

The total area of Nitrate Vulnerable Zone is 121,782 ha, which is 100 per cent of the 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 at:

http://maps.environment-agency.gov.uk/wiyby/wiybyController?ep=maptopics&lang=_e

4. Trees and woodlands

4.1 Total woodland cover

The NCA contains 12,859 ha of woodland (10.5 per cent of the total area), of which 4,287 ha 3.5 per cent is ancient woodland.

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

4.2 Distribution and size of woodland and trees in the landscape

Scattered copses and shelterbelts occur on the high downs with woodlands confined mainly to valleys and steep slopes. Extensive ridge top ancient oak woodlands are present at Grovely Wood and Great Ridge. There are small hilltop woodlands of beech and conifer. Juniper scrub is particularly important.

Source: Natural England 2010

4.3 Woodland types

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

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

Woodland type	Area (ha)	Percentage of NCA
Broadleaved	8,506	7
Coniferous	2,318	2
Mixed	1,069	<1
Other	966	<1

Source: Natural England (2010), 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	1,645	1
Planted ancient woodland sites (PAWS)	2,642	2

Source: Natural England (2004)

5. Boundary features and patterns

5.1 Boundary features

Large arable fields with very few hedges and low post and wire fences, which maintain the feeling of openness. In the extreme west, arable cultivation dominates, with copses around farms and barns. Ridgeways, field systems and hillforts emphasise the prehistoric significance of this part of the area. The estimated boundary length for the NCA is about 8,600 km. Total length of agreements between 1999-2003 is equivalent to about 3 per cent of this total. The resource has probably been neglected.

Source: Salisbury Plain and West Wiltshire Downs Countryside Character Area description; Countryside Quality Counts (2003)

5.2 Field patterns

Enclosure of the open fields in the 15th century resulted in large fields that reflected the earlier pattern of strips with gently curving field boundaries. Small fields similarly reflecting their origins as former strips tend to cluster around settlements. On the higher down regular enclosure is more typical with large fields and straight boundaries dating from the 18th and 19th centuries. Intensification of arable production has often resulted in the removal of hedges or them being in poor condition.

Source: Salisbury Plain and West Wiltshire Downs Countryside Character Area description; Countryside Quality Counts (2003)

6. Agriculture

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

6.1 Farm type

The predominant farm types in 2009 were cereals and grazing livestock: cereal 201 holdings (39 per cent); general cropping 9 (2 per cent); horticulture 11 (2 per cent); specialist pigs 11 (2 per cent); specialist poultry 11 (2 per cent); dairy 18 (3 per cent); grazing livestock (lowland) 120 (23 per cent); mixed 34 (7 per cent); other 102 (20 per cent). The figures on farm type for 2009 show there are 20 cereal cropping farms and 120 holdings with grazing of livestock on lowlands. Survey data from 2000 and 2009 shows a decrease of 46 per cent 63 to 34 in mixed farming and 42 per cent 31 to 18 in dairy holdings while the numbers of grazing livestock on lowlands have increased by 13 per cent (an increase of 14 more holdings). This is predominantly a cereal growing area which has shown an increase of 5 per cent 192 to 201 commercial holdings from 2000 to 2009.

Source: Agricultural Census, Defra (2010)

6.2 Farm size

There were 14 fewer holdings larger than 100 ha (202 rather than 216) in 2009. In the same period there was an increase of 3 holdings between 50 and 100 ha from 63 to 66.

Source: Agricultural Census, Defra (2010)

6.3 Farm ownership

2009: Total farm area = 98,903 ha; owned land = 46,736 ha.
2000: Total farm area = 90,355 ha; owned land = 47,077 ha.

Source: Agricultural Census, Defra (2010)

6.4 Land use

Survey data from 2000 and 2009 showed the following for commercial holdings: (i) There was a 46 per cent decrease in mixed farming from 63 to 34

holdings; (ii) The number of dairy farms decreased from 18 to 13 (a drop of 42 per cent); (iii) There was a 27 per cent decrease in horticulture holdings from 15 to 11; (iv) There was a 12 per cent increase in other types of holdings; (v) The numbers of grazing livestock (lowland) holdings increased by 13 per cent from 106 to 120; (vi) The area of grassland and uncropped land has increased from 40,982 ha to 48,153 ha or 17 per cent; (vii) Areas farmed for cereal crops increased by 5 per cent from 192 to 201; (viii) There was a large increase 254 per cent of land used for stock feed eg root crops, brassicas and fodder beet (ix) The land is predominantly used for grass and is uncropped land (45 per cent), cereal growing has decreased by 7 per cent between 2000 and 2009 although there here was a 70 per cent decrease from 131 ha to 39 ha in the area farmed for cash root crops.

Source: Agricultural Census, Defra (2010)

6.5 Livestock numbers

In 2009 there were 30,700 cattle (36,900 in 2000), 40,000 sheep (59,700 in 2000) and 34,300 pigs (66,800 in 2000).The numbers of grazing livestock (lowland) holdings increased by 13 per cent from 106 to 120. Pigs were the most numerous livestock but their numbers almost halved between 2000 and 2009.

Source: Agricultural Census, Defra (2010)

6.6 Farm labour

There were 695 principle farmers in 2009. This was a decrease of 5 per cent from 2000.There was a 25 per cent decrease from 448 to 338 full time workers. However, there is a rise of 25 per cent in part time workers from 139 to 184.There was a rise 16 per cent in salaried managers (from 81 up to 94) between 2000 and 2009.

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

Salisbury Plain contains one of the largest remaining areas of calcareous grassland in north-west Europe. In addition the NCA contains important arable habitats. These support nationally important assemblages of arable birds.

Source: South Wessex Downs 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:

http://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
Lowland calcareous grassland	16,667	14
Broadleaved mixed and yew woodlands (Broad habitat)	5,489	4
Coastal & floodplain grazing marsh	1,594	1
Lowland meadows	424	<1
Reedbeds	24	<1
Purple moor grass and rush pasture	13	<1
Lowland heathland	4	0

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

The settlement pattern is still dominated by villages and small towns. Today the only city in the Natural Area is Salisbury; its wealth deriving not only from its ecclesiastical history but agricultural industries such as cloth-working, tanning and malting. The main towns (Blandford Forum, Dorchester, Wimborne Minster, Warminster) are still relatively small and continue to reflect an agricultural heritage, military training requirements and management.

Source: Salisbury Plain and West Wiltshire Downs Countryside Character Area description; Countryside Quality Counts (2003)

8.2 Main settlements

Salisbury, Warminster, and Amesbury are the largest settlements in the Character Area. Military housing at Tidworth, Larkhill, Durrington and Amesbury has a considerable impact on the landscape. The military towns of Tidworth and Warminster experienced high level of development in the 20th century. Military camps are also at Tidworth, Larkhill and Bulford. The total estimated population for this NCA (derived from ONS 2001 census data) is: 132,623.

Source: Salisbury Plain and West Wiltshire Downs Countryside Character Area description; Countryside Quality Counts (2003), Natural England (2012)

8.3 Local vernacular and building materials

Groups of estate cottages in uniform style. Abundant older buildings of cob, thatch, brick, Chilmark Stone, flint and clunch. Brick and tile were common from 19th century onwards.

Source: Salisbury Plain and West Wiltshire Downs Countryside Character Area description; Countryside Quality Counts (2003)

9. Key historic sites and features

9.1 Origin of historic features

The Salisbury Plain and West Wilshire Downs NCA is an outstanding prehistoric ritual landscape with widespread earthworks and monuments prominent in the open landscape. This includes Stonehenge which is a World Heritage Site. Locally distinctive features include chalk-cut white horses and large parklands and estate landscapes particularly in the valleys. Roman settlement consists of small towns such as the roadside town that developed outside of the iron-age hill fort of Old Sarum, a few villa sites and villages. A lot of deserted roman villages on higher downland survive, in part, as earthworks.

Source: Draft Historic Profile, Salisbury Plain and West Wiltshire Downs Countryside Character Area description

9.2 Designated historic assets

This NCA contains the following numbers of designated heritage assets:

- 1 World Heritage Site covering 2,607 ha
- 13 Registered Parks and Gardens covering 1,123 ha
- 0 Registered Battlefields
- 821 Scheduled Monuments
- 3,238 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

- 3 per cent of the NCA 2,538 ha is classified as being publically accessible.
- There are 1,664 km of public rights of way at a density of 1.4 km per km^2.
- There are no National Trails within the NCA.

Sources: Natural England (2010)

Arable landscape representative of Salisbury Plain, near Dane's Bottom.

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

Access designation	Area (ha)	Percentage of NCA
National Trust (Accessible all year)	140	<1
Common Land	857	<1
Country Parks	0	0
CROW Access Land (Section 4 and 16)	2,511	2
CROW Section 15	806	2
Village Greens	3	<1
Doorstep Greens	0	0
Forestry Commission Walkers Welcome Grants	1,968	2
Local Nature Reserves (LNRs)	39	<1
Millennium Greens	4	<1
Accessible National Nature Reserves (NNRs)	310	<1
Agri-environment Scheme Access	18	<1
Woods for People	1,982	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) a large proportion of the Character Area is tranquil, away from built-up areas and main roads.

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

Tranquillity	Score
Highest value within NCA	149
Lowest value within NCA	-141
Mean value within NCA	11

Sources: CPRE (2006)

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

Stone curlew and chick; characteristic species of the chalk plain landscape.

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 again, a large proportion of the Character Area is undisturbed, away from built-up areas and main roads. However, much of this land is military and is used training.

A breakdown of intrusion values for this NCA is detailed in the following table.

Intrusion category	1960s (%)	1990s (%)	2007 (%)	Percentage change (1960s-2007)
Disturbed	6	25	37	31
Undisturbed	93	74	61	-32
Urban	1	1	2	1

Sources: CPRE (2007)

Notable trends from the 1960s to 2007 are a 31 per cent increase in disturbed areas with corresponding decrease in undisturbed areas. Urban has seen only a slight increase.

- 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 Forest Inventory, Forestry Commission (2011)
- 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)

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

- Salisbury Plain is an area of open chalk downland with few trees. Generally the character of the West Wiltshire Downs is one with wooded valley sides, and this is unchanged over the latter years of the 20th century. There has been limited new planting in this period, although development of wet woodlands in the eastern part of the NCA remains as an aspiration. There may be more woodland, prompted by the needs of the military over time, but woodland planting is not a general objective here. Coppicing is slowly increasing, which is of local financial benefit.

- The substantial increase (to 60 per cent) to 2005 in uptake of Woodland Grant Schemes covering established woodland suggests that the local character of the resource has been maintained and strengthened. Various Environmental Stewardship schemes are also operational to facilitate maintenance and restoration of woodland. About 40 per cent of the woodland cover is ancient woodland.

Boundary features

- Around 3 per cent of the area's 8,500 km total length of boundary features had restoration and/or maintenance work funded through agri-environment schemes in the late 20th century.

- Hedgerows are not a major feature of the Plain landscape, but there are some 8,600 km in the NCA overall and some are of historical significance. Many were neglected and generally poorly managed, which had an impact on the landscape, and restoration and maintenance were targeted in the late 20th century with the development of Environmental Stewardship schemes. From 2005 hedgerow management and maintenance saw some 120 agreements covering helpful options on over 620 km of hedgerow.

- Pasture for sheep was revitalised over the turn of the 21st century, with the result that fencing also saw development, with over 50 km supported by stewardship schemes, receiving over three times the funding as standard post-and-wire.

Agriculture

- Extensive areas of cereal cropping continue to dominate the agricultural landscape.

- The extent of permanent grassland increased at the very end of the 20th century, with some expansion also in livestock, namely lowland cattle and sheep. Given the extensive agri-environment scheme agreements for the management of pastures, and calcareous grassland management and restoration (above the national average), the open and expansive grassland character of the farmed landscape can be seen as strengthened.

- Habitats, and food sources, for farmland birds are developing: work may still be required on the restoration of water meadows, some having been converted to arable. Substantial sums have been used under Environmental Stewardship schemes for the restoration of over 16,000 ha of species-rich grassland since 2005, but there is still more that can be done.

Settlement and development

- There was limited development around the turn of the 21st century, save around Warminster on the NCA's western border, and Amesbury. This development has had local impact only. Military housing is highly localised in the east, and has little impact outside its immediate area. Much late 20th century development has come in rural locations from adapting redundant agricultural buildings to other uses.

- The plans for housing growth in the early 21st century largely exclude this NCA but where there is change, the increasing interest in multi-functional landscapes (with green infrastructure) will be reflected in the overall design of any development evolving from that seen in previous years – with less dominant hard landscaping. Local supplementary planning guidance (and, where geographically appropriate) from the AONB teams, has helped in the maintenance of the area's largely rural and tranquil character.

Semi-natural habitat

- The majority of the NCA's SSSI units are in favourable, or recovering, condition – other than the River Avon System SSSI where the majority of the units are unfavourable with no change. Work is already in hand to address this.

- From 2005 there was substantial uptake of Environmental Stewardship options for the maintenance and restoration of species rich grassland, whilst the overall contribution of schemes to meeting grassland targets is still unclear. Pressure from commercial farming, and in particular any general increase in arable prices, may put this landscape under pressure in the future if this agri-environment funding decreases, but sustainable land management practices may work towards pasture featuring more widely.

Historic features

- The area surrounding Stonehenge and Avebury was designated a World Heritage Site in 1986 covering 2,600 ha, and is covered by an agreed management plan, (under review at regular intervals) with the involvement of the government and major heritage protection bodies likely to secure its conservation. Grassland has been replacing arable crop in that area since 2003, in the interests of landscape and heritage protection by avoiding being ploughed.

- Much of the historic parkland (once around 2 per cent of the NCA) was lost before the Second World War but much of what now remains is covered by agri-environment or other schemes and as such is protected. It is also valued by the tourist industry which assists in making it supported by the local community. Salisbury's surroundings and their ecosystems value, notably its water meadows, are protected largely by growing public support.

Rivers

- The NCA is traversed by the (Hampshire) Avon and its tributaries. This river system (long an SSSI) was designated an SAC in 2005 for its biodiversity, and thus protected under European legislation.

- Many of the river's SSSI units are in unfavourable condition, although the growth of Catchment Sensitive Farming schemes and the dissemination of good farming practice may assist in their improvement, by reducing diffuse pollution and the generally adverse impact of phosphates and nitrates on biodiversity.

Minerals

- There is a handful of active chalk pits in the southern part of the NCA, servicing primarily the cement market, and a long established quarry of Jurassic limestone at Chilmark. This NCA is not regarded by the local authorities as one with much mineral extraction potential, which is consistent with the high percentage of land designated for landscape or scientific interest.

Drivers of change

Climate change

- The likely increase in temperature and declining rainfall may adversely affect the long-term agricultural landscape by making arable uneconomic – although there may be scope for crop diversification and development of wild relatives to current crops.
- High temperatures and droughts may adversely affect the rich species diversity of the chalk, with an impact on biodiversity, and likewise for chalk rivers as groundwater levels reduce. There will probably be some species that benefit from any change, but the overall composition of the communities on the grassland will change.
- If rainfall is reduced significantly, there will inevitably be a fall in the level of aquifer recharge, and thus an adverse effect on the water availability in the NCA, in addition to putting vegetation under stress.
- Predicted increased storminess, prolonged periods of drought and an increased prevalence of pests and diseases may all have an impact upon the area's characteristic valley oak woodlands and veteran trees and parklands, in addition to the arable production.
- Species migration as non-natives, or simply those currently found nearer to the south coast, may colonise the area with predicted rises in temperature, and current residents moving north. Some pest species may prosper, for example grey squirrels.
- Trees (especially beech) may suffer sun scorch, where exposed or isolated (as common here) in the face of rising temperatures; there may also be an adverse effect on lichen.
- There will be more pressure for the generation of renewable energy, for example by wind turbines, notwithstanding the landscape impact.
- Increasing concern about the impact of car travel may put pressure on tourism, which is a key economic driver for the NCA and is not yet equipped with ready substitutes.

Other key drivers

- Changes in agricultural support funding mechanisms are yet unknown but may adversely affect the development of pasture and (if only briefly) see a return to arable across the chalk plateau.
- Increased demand for new housing and development may place pressure on communities across this still sparsely populated area. Major development in Wiltshire is currently planned to be outside this NCA, mainly to the north. Opportunities for enhancement of natural assets and services may however result from local well-informed developments.

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.

Typical house front in the Wylye Valley.

Statement of Environmental Opportunity	Ecosystem service																		
	Food provision	Timber provision	Water availability	Genetic diversity	Biomass energy	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	Tranquility	Recreation	Biodiversity	Geodiversity
SEO 1: Protect, manage and enhance the landscape of large areas of calcareous chalk grassland, and develop network connectivity, supporting internationally important and designated semi-natural habitats and species assemblages – from birds to bumblebees – and thus support biodiversity.	↗ *	↔ **	↗ **	↗ ***	↗ ***	***	↗ ***	↗ ***	↗ ***	↗ ***	↔ ***	↔ ***	N/A	↑ ***	↗ ***	***	↑ ***	↑ ***	↔ ***
SEO 2: Protect, manage and enhance the (Hampshire) River Avon system, working in partnership notably with the regional farming community to improve the habitat for flora and fauna and improving biodiversity, developing the scope for climate regulation and for regulation of water flow and water quality.	↔ **	↔ ***	↗ *	↔ ***	↔ ***	↔ **	↑ ***	↗ **	↗ ***	↗ **	↔ ***	↔ ***	N/A	↗ **	↔ ***	↗ ***	↔ ***	↑ ***	↔ ***

Note: Arrows shown in the table above indicate anticipated effect 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 effect is available.

Dark plum = national importance; mid plum = regional importance; light plum = local importance

Statement of Environmental Opportunity	Ecosystem service																		
	Food provision	Timber provision	Water availability	Genetic diversity	Biomass energy	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	Tranquility	Recreation	Biodiversity	Geodiversity
SEO 3: Protect, conserve and sustainably manage the NCA's rich historic and archaeological resource, notably the Stonehenge and Avebury World Heritage Site and its surrounding landscape, and its natural and cultural heritage, for its value in sense of place and history and tranquillity, for open air recreation, and for the benefits it brings to the local and regional economy.	↔ ***	↔ ***	↔ ***	↔ ***	↔ ***	↔ ***	↔ ***	↔ ***	↔ ***	↔ ***	↔ ***	↔ ***	N/A	↑ ***	↑ ***	↑ ***	↑ ***	↗ ***	↔ ***
SEO 4: Protect and enhance the NCA's agriculture interest, working with the local farming community to prepare for the impact of and adapt to both evolving funding mechanisms and climate change, to secure future food provision, while working in harmony with the nationally recognised and distinctive character of the landscape, its natural beauty and scenic quality and, so far as possible, extending the scope for access to nature and other recreation, for public benefit, understanding and enjoyment.	↑ ***	↗ **	↔ ***	↗ ***	↔ **	↗ **	↗ ***	↗ ***	↗ ***	↗ ***	↗ ***	↔ ***	N/A	↗ **	↔ ***	↔ ***	↗ ***	↗ ***	↔ ***

Note: Arrows shown in the table above indicate anticipated effect 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 effect is available.

Dark plum = national importance; mid plum = regional importance; light plum = local importance

Landscape attributes

Landscape attribute	Justification for selection
Extensive open chalk plateau with large arable fields and some remaining or reinstated areas of chalk grassland.	■ The emptiness of the chalk plain is a strong characteristic of the NCA. ■ The Plain has a clear sense of identity and distinctiveness contributing much to the sense of place. ■ Big skies accompany the wide open spaces with uninterrupted panoramas over a broad horizon and distant views from elevated areas. ■ Few hedgerows and generally inconspicuous boundary features accentuate the chalk landform. ■ Rectilinear field patterns, many reflecting 19th enclosure, and current land use result in a rich tapestry of colours. ■ Locally bright colours are found as a result of the profusion of flowering plants associated with chalk grassland.
Sheltered river valleys with narrow flood plains and some settlement.	■ Contrast between valleys and chalk plateau heightens the sense of isolation and remoteness found on the plateau. ■ Intimate, secluded, fertile, wooded valley sides with wet woodland along watercourses, floated water meadows, more marked boundary features and a greater sense of enclosure. ■ Settlements and transport routes are associated with the more settled river valleys.
Extensive prehistoric ritual landscape.	■ Stonehenge is often seen as synonymous with Salisbury Plain, providing a foundation for the internationally important sense of history created by the wider prehistoric landscape. ■ Multiple, and often associated, earthworks occupy skyline and focal point locations within the landscape; a constant reminder of the long history of human occupation. ■ For many, the cultural connections with past ritual landscapes have a lasting resonance and act as a foil to modern society. This is embodied in the character of the area. ■ The World Heritage Site plays a major role in NCA economy.
Sparsely settled away from the scarp foot and valley villages.	■ The pattern and extent of settlement across the plateau and plain is largely unaffected by the 21st century and contributes much to a sense of isolation. ■ Where settlement occurs it often has clear historical connections, for example the military settlements and few farmsteads. ■ Settlement often relates to the availability of resources; water, more fertile farmland and transport routes.

Landscape attribute	Justification for selection
Abundant use of local stone, for example Chilmark limestone, adding to a distinctive local vernacular architecture.	■ The local vernacular architecture reinforces the sense of place creating unity between the underlying geology and human occupation. ■ In contrast more recent military development and utilitarian structures reflect the remote, unpopulated landscape.
Long history of human occupation and agriculture.	■ Visible signs of habitation and cultivation since the Neolithic era cover the landscape, from barrows to strip lynchets, villages to stately homes, and military housing. ■ The area remains fundamentally agricultural in character.
Military presence.	■ The close association with the military and defence uses of the Plain are a distinguishing feature of NCA for many. ■ Military use has a major impact on landscape even outside the restricted area. ■ Military and defence uses within the landscape are both prominent and historical.
Evocative species associated with chalk and chalk river habitats.	■ Stone curlew and lapwing are characteristic and charismatic species of chalk plain landscape. ■ Floristically diverse chalk grasslands bring seasonal colour and scientific interest to parts of the landscape. ■ The quality and flow of chalk rivers support important and diverse species, providing interest for a range of communities including the scientific and game fishing communities.
Semi-natural habitats and natural beauty.	■ Over a third of the NCA is covered by landscape designations, within one of two Areas of Outstanding Natural Beauty, reflecting the outstanding scenic and natural beauty. ■ Over 2,000 ha have been designated as SPA, SAC and SSSI for the diversity of wild species present; the range of bird and plant species and the chalk grassland of international significance. ■ River Avon and its system is designated as an SAC as one of Britain's most diverse rivers, supporting internationally important chalk rivers and wetland habitats and species. ■ The range and presence of rare, scarce and common plants and animals adds interest and distinctiveness to the area.

Landscape opportunities

- Preserve connections to the cultural heritage of all ages, from the Neolithic to the First World War, and build on the foundation of the World Heritage Site.
- Foster partnership working to explore and exploit any scope for developing areas of species-rich chalk grassland.
- Enhance and develop traditional flood management systems.
- Collaborate with Environment Agency and others on a variety of projects on the River Avon system to enhance water quality and the other ecosystems services that the river provides.
- Work to maintain levels of tranquillity to enhance the valued sense of remoteness in the NCA.
- Maintain the woodlands on the valley sides and support traditional management practices such as coppicing in the interests of the landscape while encouraging economic development.

Nature reserve at Langford Lakes in the Wylye Valley.

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 the analysis and opportunities may change upon publication of further evidence and better understanding of the inter-relationship between services at a local level.

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Food provision	Arable, predominantly cereal farming Grazing livestock Pig farming	Substantial cereal farming across the chalk plateau, often in units larger than the national average. A third of the area is used for arable farming. This is mostly wheat or barley, with some oil seed crops, mainly rape, and maize for livestock feed, and cover crop for game. While cereal production appears to dominate the landscape, nearly half the farmed area is grassland or uncropped land. In 2009 over 30,000 cattle and nearly 40,000 sheep grazed within the area. Outdoor pig rearing has been long established in the area.	National	Production of cereals may see continuing steady increases particularly as wheat and barley usage increases are sought. Climate change may in due course impact on the viability here of cereal production as the resilience of various species will vary. Dairy farming has declined in recent years with more than a 40 per cent reduction in the number of dairy farms in the area. However, the number of grazing livestock farms has increased. The number of mixed farms has also declined notably. Wiltshire Ham is a recognised marquee, making a major contribution to the national deficit in pig meat production after the difficulties at the start of the 21st century with foot and mouth disease; there is likely to be some scope for future development (though the name can apply to meat from elsewhere).	Consider any appropriate change in management practice (for example crop/pasture rotation) in the interests of assisting soil quality and general diversification. Work with farmers and land managers to investigate crop variants to address climate change, taking into account landscape character so far as is possible when evaluating change. Explore opportunities for food provision that may have flexible in response to climate change and is consistent with the need to protect the rich archaeological resource of the area, but there would need to be careful monitoring of depletion in water resource.	**Food provision** **Regulating soil quality** **Regulating soil erosion** **Sense of place / inspiration** **Sense of history**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Timber provision	Plantation woodland	Woodland cover is 10.5 per cent of the NCA. Provision of timber is currently low, much of the woodland being broadleaf and approximately one third being ancient. Plantation on ancient woodland sites (PAWS) may offer the opportunity for a single crop of timber followed by restocking, or natural regeneration of broadleaved woodland. Woodland on steep valley sides is hard to exploit economically.	Local	There is limited potential to expand timber provision from existing woodlands, due to difficulty in accessing areas on which timber currently grows. There is a risk to landscape character and integrity, heritage assets and valued habitats if new woodland were to be developed on high downs, as well as potential conflict with food production. Woodland is able to assist with the management of erosion risk and has value as such – but limited site -specific potential.	Explore opportunities for hazel coppicing to economic benefit, and ensure that no potential sites are overlooked, so far as possible with needs of the landscape and not just considered in the context of biomass provision with short rotation coppicing (SRC). Some opportunity to source occasional crops of timber from PAWS sites. Opportunities to explore for very local timber provision resulting from conservation management of existing broadleaved woodlands.	**Timber provision** **Regulating soil erosion** **Sense of place / inspiration** **Biodiversity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Water availability	Aquifer broadly under the Chalk Rivers of the Avon system	Substantial resource of highly productive aquifer with no abstraction issues that are not already being addressed; used via boreholes, and (with reservoirs elsewhere) serves as part of Wessex Water's supply to the NCA and beyond for example to Bournemouth and Bath.	Regional	New supply grid developed in the early 21st century to move water in a 'spine main' between the downstream side of NCA, to the north, that is believed satisfactory to address current concerns as to levels of abstraction from the Chalk for public water supply, and as to the impact of such abstraction on the SAC. Currently the Avon is over licensed for abstraction in the west of NCA and over abstracted in centre – and limits reached in the east, and generally some problems in dryer summer months. Abstraction restrictions are being implemented to encourage a reduction in demand, and work is under way with significant abstractors, (notably in agriculture) not least to prepare for the impact of climate change. The current resource may not meet unregulated demand for agricultural and private use if rainfall declines and/or the population grows.	Catchment Sensitive Farming schemes (CSF) promotion of rainwater, winter water flow harvesting and clean grey water management, with advice and grants, are helpful, and should be continued and developed. The River Avon is viewed as one of England's most biodiverse chalk rivers with many species (especially of plants / invertebrates) of international interest. Any effect on abstraction is of interest for this reason, in addition to supply issues and should be carefully monitored. There is a need to identify opportunities for water resource planning and use efficient sustainable drainage systems in any developments.	**Water availability** **Regulating water quality** **Food provision** **Regulating water flow** **Biodiversity** **Sense of place / inspiration**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Genetic diversity	Area of land long subject to Ministry of Defence management / controls and down to arable use.	Much of the area has never been intensively farmed and is believed to be richer in plant species than adjacent areas. This is particularly the case with land owned by the Ministry of Defence. Large areas of species-rich chalk grassland with potential seed store of crop wild relatives.	National	Richer in flowers than is usual for arable country, and now subject to many conservation schemes for example, for the benefit of bees. Plants such as cornflower are abundant here but rare in the wild elsewhere, indicating that the NCA can be seen as a seed repository.	Merit in raising awareness of local breeds and varieties, especially of crop wild relatives and traditional orchards where they remain. Explore potential for conservation projects (for example work for bee conservation) to work together for mutual advantage, using SSSI condition as start for helpful surveys; could collect seeds as appropriate and need to research wild relatives to current crops.	**Genetic diversity** **Food provision** **Biodiversity**
Biomass energy	Undeveloped valley sides / floors Current widespread arable cropping	Approximately 10.5 per cent of the NCA is wooded and there may be scope to complement this with some short rotation coppice, but this may be limited by the difficulties of the terrain. The more versatile and fertile soils may present scope to add to the range of biomass energy crops, with limited impact on landscape.	Local	The area to which access for agriculture is economically practical is limited by terrain, and short rotation coppice may be an appropriate use of such land. Scope for miscanthus expansion may be limited - on chalk plateau this would be by landscape impact, and over eastern part of NCA by risks posed by root systems to archaeological resource.	Be alert to any potential for SRC on site-specific basis, as interest in and the need for biomass will increase with climate change. As above; look to scope for miscanthus, but almost certainly only on lower slopes of chalk plateau, and where water supply allows.	**Biomass energy** **Climate regulation**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Climate regulation	Soils Semi-natural grassland / permanent pasture Ancient woodland Large areas of parkland (over 1,000 ha generally good for carbon storage)	Chalk and mineral soils with little CO_2 storage (up to 10 per cent in the north of the area, but 0 to 5 per cent in south of area where there is a lesser extent of semi-natural grassland) although areas with undisturbed pasture will have increased levels of organic matter and thus store more carbon. Almost 13,000 ha of woodland, of which more than 4,000 ha is ancient or plantation on ancient woodland sites. Wet woodland associated with rivers and valley floors is not as widespread and could be a greater carbon store per unit area. Parkland, generally located in valleys across the southern dip slope. It is often on richer soils and is generally good for carbon storage.	Local	Chalk soils are low in carbon and are not a major contributor to carbon storage, with little capacity for any increase, particularly where under continuous arable cultivation. However, with more than 16,500 ha of lowland calcareous grassland, much of which is undisturbed, there is some local contribution to climate regulation. Expansion of the total area of grassland would further contribute to carbon storage. Increasing the area of woodland and particularly restoring ancient woodland sites and increasing the area of riparian woodland cover would create habitat with higher carbon sequestration and storage capacity. Some of the loamy and clayey flood plain soils may have peaty pockets and certainly higher levels of groundwater; these will be associated with flood plain grazing marshes – with perhaps 2,000 ha in the area in total - which are valuable both to regulate water flow and to store carbon, so are a conservation priority. **Continued on next page...**	Work with land managers to develop potential to increase organic matter levels, and thus storage of carbon. Reduction in inputs onto arable land may also play a role in improving soil quality for this and other purposes. Work with such groups to adopt best practice soil management as supported by initiatives such as the Defra Catchment Sensitive Farming schemes. Look to increase woodland cover where appropriate, and promote management of existing tree stock, consistent with the need to protect landscape character, historic water meadows and the underlying archaeology; work in partnership with those involved in woodland and river management notably the Forestry Commission and the Environment Agency.	**Climate regulation** **Regulating water flow** **Regulating soil quality** **Regulating water quality** **Biodiversity** **Sense of place / inspiration** **Sense of history**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Climate regulation cont.				**... continued from previous page** Parkland, often located in valley floors and across the lower-lying flood plains to the south of the area, support areas of permanent pasture, woodland and ancient and veteran trees, often on soils with higher carbon content contributing to carbon sequestration and storage.	Work with land owners to maintain and enhance areas of undisturbed semi-natural grassland, particularly calcareous grassland sites and within historic parklands, not least to protect and increase carbon storage.	

Service	Assets/attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating water quality	Permeable (chalk) geology and soils, fostering efficient aquifer recharge Rivers in the Avon system Semi-natural habitats - including woodland on valley sides, wet woodlands and grasslands	River Avon has elevated levels of nitrates and phosphates, the latter in particular causing concerns for drinking water, as also do high levels of pesticides. The entire NCA is classed as a nitrate vulnerable zone. The bulk of the NCA is in arable or livestock farming and this is unlikely to change; this means there is risk of continuing pollution. High particulate loads contribute to siltation of rivers threatening important habitats and the associated flora and fauna, especially egg and larval survival in salmon, trout and lamprey, and many aquatic plants. Woodlands act as buffers or nutrient soaks, especially if located on lower slopes or valley floors in locations where cross-land flows are intercepted before reaching main watercourses.	Regional	Poor groundwater quality in east of NCA, with River Bourne of poor ecological quality, although surface water is in general of good quality. Current and historical agricultural practices have resulted in high levels of phosphates and nitrates, often from point discharges. Unrelated to agriculture, there are pollutants resulting from road runoff. Defra Priority Catchment Sensitive Farming initiative (CSF) schemes covering the Avon system and similar schemes are reducing the levels of inputs, and failing farm infrastructure. They are slowly reducing the level of pollutants in watercourses and most rivers and streams are of moderate ecological quality. Improvements in sewage treatment have also led to significant improvements in phosphate levels but there remain generally high levels in the rivers. Sources of sediment include inputs from agriculture (runoff and poaching) while 'fingerprinting' shows also real contribution from grass verges, which may assist in pointing the way to address this.	Work with farmers and land owners to make use of best agriculture practice to minimise diffuse pollution using Catchment Sensitive Farming principles to promote good management of nutrient and manure, yard infrastructure and cultivation timing / techniques, and general soil management. Buffering the watercourses to slow pollution runoff will improve water quality and may also have a significant impact on soil quality, and sedimentation. Work with Environment Agency on nutrient management plans (and similar) to aid water quality and also assist agriculture in reducing inputs.	**Regulating water quality** **Regulating water flow** **Biodiversity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating water flow	Partially wooded valleys Traditional water meadows	Main watercourses have wide flood plains and flow through open grassland, farmland and woodland. The flood risks are largely from Wilton downstream, although this is influenced higher groundwater levels upstream, not least by development separating rivers from their flood plains with their natural storage (and valuable wetland habitats). Valleys have alluvial deposits and sandstones, which are relatively permeable, such that flood peaks are reached slowly - in particular in broader valleys in the east of the NCA. Flooding by river is rare above Salisbury; downstream, it is more common but usually handled (for land within the NCA) by traditionally managed water meadows for example at Harnham.	Regional	Any increase in woodlands may assist in slowing the flow into the river system. Careful management and securing their future will be vital and innovative funding needs development. Need to identify areas where greater wetland storage can be accommodated for example by restoring degraded riverine habitats to enhance populations of key species, and their adjacent wetlands (fed by controlled inundation) to reduce the isolation of rivers from their associated flood plains.	Seek to expand semi-natural woodland on slopes where it is appropriate to the specific site; ensure (via Catchment Sensitive Farming) land management practices avoid compaction of soils, to limit scope for flash flooding. Work with Environment Agency, local communities and land managers to ensure flood management systems are connected to rivers as necessary; pursue any scope for extending water meadows elsewhere on Avon system, possibly on the Wylye.	**Regulating water flow** **Regulating soil erosion** **Regulating soil quality** **Sense of place / inspiration** **Biodiversity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating soil quality	Fertile soils	Soils have made the NCA productive for arable produce for many years and likely to respond to good management by remaining or becoming more fertile. There are five main soilscape types in this NCA; (a) shallow lime rich soil over chalk over some 71 per cent of area (b) 11 per cent is freely draining lime rich loamy soil, (c) 10 per cent is freely draining slightly acid loamy soil, and (d) the balance is loamy and clayey flood plain soils, often with naturally high groundwater, or slowly permeable base-rich loamy and clayey soil.	Regional	It will be necessary to work closely with the farming community to ensure crop variation is sufficient to keep soils resilient and productive, in the interests of food production. Type (a) is typically shallow and (b) of moderate depth; and being calcareous have some degree of natural resilience. Together with type (c) they are valuable for aquifer recharge by infiltration, and need to be maintained in good structural condition.	Continue with Catchment Sensitive Farming schemes to develop and extend use of best land management practice including use of break crops. It is vital to prevent pollution of the chalk aquifer, so while an increase in organic matter may be appropriate, the matching of added nutrient to actual need is a priority; this is an issue to be worked on through Catchment Sensitive Farming schemes to ensure that land managers fully embrace the approach, as it is as much an issue for water supply as for soil quality.	**Regulating soil quality** **Food provision** **Regulating water quality** **Water availability**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Regulating soil erosion	Pastureland	The vast majority of soils covering the NCA (92 per cent) are at potential risk of erosion. The shallow lime-rich soils over chalk (71 per cent) are sometimes unstable, and can be prone to loss through erosion where not well managed. The freely draining slightly acid loamy soils (10 per cent) and some of the freely draining lime-rich loamy soils (11 per cent) also have acid loamy soils.	Local	The (Hampshire) Avon (including its tributaries of the Wylye, Nadder, Ebble and Bourne) catchment is a Defra Priority Catchment. The rivers are designated as an SAC and suffer from sedimentation due to soil erosion and agricultural run-off[9]. There is little evidence on the ground of major soil erosion, save in the Wylye Valley, where some hillside ploughing patterns seem unhelpful, and where there has been an adverse impact on the river quality. There is an enhanced risk of soil erosion on moderately or steeply sloping land (for example in the river valleys) where cultivated or bare soil is exposed, often exacerbated where organic matter levels are low after continuous arable cultivation or where soils are compacted. Pig rearing outdoors also poses problems. There is also the potential for wind erosion on some coarse textured cultivated variants of the freely draining slightly acid loamy soil (type c), while the remaining soil types have a low erosion risk. Overall, land managers need to continue to be aware of the risk of soil erosion.	Catchment Sensitive Farming schemes should be pursued here in the interests of soil and water quality and reducing soil erosion. Continuous arable cultivation is a common state and its adverse consequences may merit local exploration and discussion to develop alternative strategies appropriate to each site. Any and all good practice to be widely disseminated and pursued, in the interests of securing sound management in an area where this is crucial to limit erosion - through Catchment Sensitive Farming schemes and similar.	**Regulating soil erosion** **Regulating water quality** **Regulating soil quality**

[9] DEFRA catchment priorities identified under the England Catchment Sensitive Farming Delivery initiative (URL: https://www.gov.uk/catchment-sensitive-farming)

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Pollination	Meadows and species-rich grassland	Almost 15 per cent of the NCA is semi-natural chalk grassland and this provides a large nectar source for pollinating insects. However, many arable crops neither require nor provide the best habitat for pollinators. There is therefore little major need for pollinators for agriculture in the NCA – beyond SSSI and national concern at falling bee numbers – and this is being addressed nationally.	Local	The current main food products in NCA (arable) do not require insect pollination (save oil seed crops). The NCA would gain from the flexibility that full pollination services would bring for future agriculture options in the light of climate change. This would also aid biodiversity and (possibly) pest control.	Work with inter alia Bumblebee Conservation on projects to develop bee-friendly habitat on the grassland areas of the NCA, to assist with national biodiversity concerns.	**Pollination** **Biodiversity** **Pest regulation**
Pest regulation	Semi-natural habitat as home for a range of predators Land managed for game shooting, at least in part	Field margins are not extensive on the Plain but are found elsewhere in the area. Other than aphids in arable crops, there is no substantial pest problem. Gamekeeper presence will manage many predators to the benefit of arable birds.	Local	There may be opportunities in the eastern part of the NCA to develop small areas of habitat, for example beetle banks and field margins, to support populations of pest-regulating species. This combined with work in the bee interest will assist pest regulation and pollination. Pests controlled for game reasons and conservation unlikely to be a priority; may not be carried out to benefit conservation.	Explore and develop land management opportunities (which may be few in an NCA with few hedges) to work on network of habitats for predator species, including bees. Work with gamekeepers and explore any potential to influence their work in the interests of conservation.	**Pest regulation** **Pollination**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
A sense of place/ inspiration	Expansive sparsely populated plateau Prominent scarp to north and west Salisbury and the distinctive and dominant cathedral spire A long history of human occupation evident in extensive ritual landscape, including Stonehenge	Open space and big skies are the immediately dominant features of the NCA, and have been for some time. The low ground cover, with few trees or hedgerows, serves to accentuate the chalk landform. The area contains and there is widespread interest in, a wealth of natural and historical resources and environments across the Plain. There is less awareness of the agricultural heritage and its legacy than the ritual components of the landscape. A quarter of the area has been designated for its outstanding natural beauty. The wildlife, heritage and cultural significance of the area are recognised nationally and provide inspiration and spiritual motivation for many. There are close and long-standing associations with military and defence uses. **Continued on next page...**	National	It is important to foster activities which respect the strong sense of place and allow it to continue; redevelopments of the Stonehenge visitor facilities in the early 21st century are likely to assist in safeguarding the inspiring element of the location. The number of visitors to a limited number of locations within the landscape may challenge their inspirational qualities, but reflect the significance of the resource. Military use confirmed as likely to continue for the foreseeable future. There is capacity to fulfil and develop projects that engage people with the wider environmental and heritage assets found in the landscape. With the aid of local volunteer groups and partnership working, for example the work to	Work to ensure the strong sense of place is reflected in and used to inform any developments within the NCA, including initiatives to improve rights of way and visitor facilities. Assist the Ministry of Defence when seeking to allow recreational use of their land where possible, to develop and explore better connections across the landscape. Develop local networks of supporters and meet their needs where possible in the interests of securing future work, and to raise awareness of the history of agriculture in the area.	**Sense of place / inspiration** **Sense of history** **Recreation** **Tranquillity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
A sense of place/ inspiration cont		**... continued from previous page** The monumental stones of Stonehenge have been recorded by and stimulated investigation and contemplation by many antiquarians and artists over the generations; William Stukeley's record and depiction of 1722 being one of the best known. Salisbury, with the prominent cathedral viewed across flood meadows provided inspiration for one of Constable's best known paintings.		reintroduce the great bustard, there is potential to make local projects, including fundraising, more successful in fulfilling the reinforcing the sense of place and inspirational qualities of the area.		

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Sense of history	Stonehenge and Avebury (and associated sites) World Heritage Site centred at Stonehenge; including Durrington Walls, the largest henge in Europe, and the Cursus, and many skyline barrow cemeteries Many Scheduled Ancient Monuments (SAM) Salisbury Cathedral and its Close in medieval surroundings Historic parks and gardens and estate landscapes	Internationally important complex of prehistoric monuments including dense concentration of burial mounds, all in an impressive setting and with some religious significance; site well known to public. Stately homes occur on the lower, less exposed slopes and valleys, particularly along the southern dip slope. There are several hundred Scheduled Ancient Monuments, the majority located across the open plateau and along the edge of the northern scarp, often within the cultivated arable landscape. Many SAMs within the area are identified as being at risk, principally from arable ploughing and clipping. Listed buildings, from grand gentry houses to local vernacular dwellings, are scattered throughout the landscape. **Continued on next page...**	International	It is estimated that heritage assets attract over 1 million visitors to the area annually, generating income and external funding. There is a need to monitor the impact of and adapt for such numbers and effect of climate change; continued problem of busy traffic corridor (A303) to site which may adversely impact on its protection and on the whole NCA. Tourism related to heritage has long been important to the local economy but transport issues remain a concern. Traffic is a major contributor to climate change and alternative means of access need to be explored. There is a need to consider all local infrastructure in terms of catering for visitors; for example ensuring water capacity is sufficient. Many SAM sites and lesser known heritage assets, particularly below ground and earthwork archaeological remains, remain threatened by inappropriate and unsympathetic cultivation.	Contribute to World Heritage Site (WHS) management plans and seek engagement of site's local community for example from Amesbury, to have their interests and needs reflected where possible. Seek in general to maintain the character of the WHS, by reflecting and responding to the outstanding universal value in any development in the area and managing the associated landscape and habitats to complement the WHS.	**Sense of history** **Sense of place / inspiration** **Recreation** **Tranquillity** **Biodiversity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Sense of history cont		**... continued from previous page** Collectively the wealth of heritage assets illustrates human presence in area over time. Many now are established as visitor attractions and are important to the local economy (Wiltshire has over 13,000 SAM sites). Examples include Wilton House – inhabited by Herbert family, Earls of Pembroke who built the current house in the 17th century. A royal presence was well established at Clarendon near Salisbury.		European Union funding has facilitated the local expansion of pasture, which aids the visitor experience and minimises the disruption commonly caused to archaeology by agriculture. Work on continuing such appropriate funding mechanisms needs to be pursued.		
Tranquillity	Sparsely populated NCA Large areas of open space, some inaccessible by car	Tranquil and largely undisturbed as a rural area, and valued as a location for quiet recreation as a result. Unsettled areas of chalk plateau add to tranquillity. Road infrastructure and large numbers of visitors to the area can locally challenge the sense of tranquillity. A quarter of the area is designated for its outstanding natural beauty often reflecting the most open, undisturbed parts of the landscape.	National	Valued as tranquil (identified as such by CPRE), and free from intrusion, outside the immediate area of Salisbury and the transport corridors of A303 and A36, which cross the NCA. This pattern of highly localised tranquillity is more pronounced than it was in the 1960s.	Tranquillity is a major attractor for the tourist industry so all developments need to be monitored and managed for adverse impact on area – for environmental and economic damage.	**Tranquillity** **Sense of place / inspiration** **Sense of history** **Biodiversity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Recreation	A rights of way network extending over 1,650 km including 'byways open to all traffic' Minimal open access land but some open space exists, for example in parklands Numerous visitor attractions many with historical focus Recreational activities including fishing, bird watching, horse riding and cycling	Much National Trust land is generally accessible and some Ministry of Defence land is open on specific dates. Well established and acknowledged access to heritage assets results in the principal recreational activity in the area, notably visiting the World Heritage Site and other prehistoric and historic sites for example Old Sarum and Salisbury.	Regional	Extensive military estate prevents access in much of the area and can limit linear and circular walking routes; however many paths are assets for many other user purposes, for example, accessing heritage sites and birdwatching. Ministry of Defence requirement for closed sites is unlikely to change but exploration of alternative arrangements and connectivity with other open spaces could be considered. WHS attracts some 350,000 coach trips along with many individual car journeys, resulting in 'honey pot' pressures on a small part of the overall resource.	Explore the scope to develop the rights of way network for new user groups, for example increasing disabled accessibility. Work with local communities to identify preferences for enhanced and improved access and seek to achieve this where possible. Climate change will mean all travel needs to be considered with care and work to develop the most sustainable means of access. Use access to the WHS to develop examples of best practice.	**Recreation** **Sense of place / inspiration** **Sense of history** **Tranquillity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Biodiversity	Chalk grassland and rivers with many associated species Scrub habitats, notably juniper scrub on the scarp Ancient and wet woodland Riparian vegetation acting as a water temperature regulator	The area contains some 24,000 ha key priority habitats, over around 20 per cent of the NCA. This includes over 16,500 ha of semi-natural lowland calcareous grassland, the largest concentration of such habitat in the UK; this is mainly designated SSSI and SAC/SPA, and is important for invertebrates, such as the (butterfly species in decline) marsh fritillary, and is rich in bee species (for example shrill carder bee) and many important bird species notably the stone curlew, hobby and hen harrier for which the area is also designated SPA. It also includes some 5,000 ha of mixed broadleaved and yew woodland. The River Avon system is designated SAC, for its biodiversity in plants and invertebrates; it is national stronghold for the river lamprey.	International	Extensive Chalk area is the base for much conservation work, and this attracts substantial funding, for example on work for restoration of meadows in the interests of bumblebees (a notified feature for Salisbury Plain SSSI) where work on one area will benefit many others. Designated sites still reveal and attract new features for example Montagu's harrier and marsh fritillary. The principal threats here are economic, as high arable prices tend to discourage restoration of chalk grassland, despite its advantages for the archaeological interest and the tourist industry, and may even threaten existing sites. The River Avon (Hampshire) and the species it supports are vulnerable to increasing water temperatures as a result of climate change. Increasing the area of riparian woodland could limit these effects, improving both water quality and biodiversity.	Need to continue to develop partnership working (seen in past for example the LIFE+ project which accomplished much valuable work on the Plain's habitat) to maximise gain for a variety of species from such funding as there is, and look towards any opportunities to expand suitable habitats. Work with riparian owners for example on Environment Agency projects to increase tree cover to lower water temperatures in important rivers.	**Biodiversity** **Sense of place / inspiration** **Sense of history** **Regulating water quality** **Regulating soil quality** **Tranquillity**

Service	Assets/ attributes: main contributors to service	State	Main beneficiary	Analysis	Opportunities	Principal services offered by opportunities
Geodiversity	Jurassic exposures in established quarries Chalk exposures Geomorphological processes; sarsens, swallow holes, river geomorphology Chilmark and local vernacular building stones	Five SSSI designated for geodiversity or with geodiversity interests and eleven local geological sites.	Local	SSSI resources serve as useful educational resources complimented by a number of local sites. Local historic built environment shows use of local stone, as seen at Chilmark. Although a chalk landscape there are limited numbers of exposures.	There is potential to explore, but limited scope for development of access to geology, especially in quarries with bats and other ecological interests.	**Geodiversity** **Sense of place / inspiration** **Sense of history** **Biodiversity**

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