



## Introduction

As part of Natural England's responsibilities as set out in the Natural Environment White Paper<sup>1</sup>, Biodiversity 2020<sup>2</sup> and the European Landscape Convention<sup>3</sup>, 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.

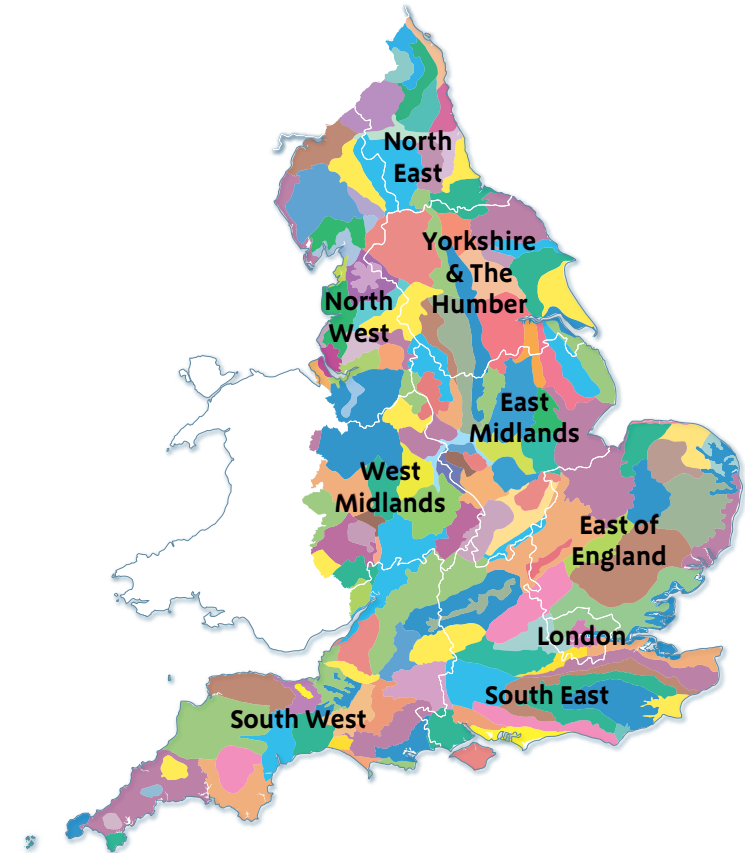
NCA profiles are guidance documents which can help communities to inform their decision-making about the places that they live in and care for. The information they contain will support the planning of conservation initiatives at a landscape scale, inform the delivery of Nature Improvement Areas and 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](mailto:ncaprofiles@naturalengland.org.uk)

## National Character Areas map



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

<sup>2</sup> 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](http://www.defra.gov.uk/publications/files/pb13583-biodiversity-strategy-2020-111111.pdf))

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

## Summary

South Purbeck National Character Area (NCA) is a compact but highly diverse landscape whose principal geological strata are expressed in distinct landscapes: the steep Purbeck chalk ridge, gently undulating Corfe and Swan Vales, coastal slope at Kimmeridge, seaward-dipping limestone plateau and gently rolling chalk downland around Chaldon Herring. The entire NCA falls within the Dorset Area of Outstanding Natural Beauty.

The dramatic 42 km of coast reveals exposures of all these strata creating cliffs, bays, stacks, arches and coves. The beauty of the coast is recognised through Heritage Coast status, while the outstanding geology, geomorphology and palaeontology have been awarded inscription as the East Devon and Dorset World Heritage Site, popularly referred to as the Jurassic Coast.

Coastal habitats, principally grasslands, have received Site of Special Scientific Interest (SSSI) (South Dorset Coast) and Special Areas of Conservation (SAC) (Isle of Portland to Studland Cliffs and St Aldhelm's Head to Durlston Head) status, while Corfe Common is an SSSI, an SAC and an outlier of the Dorset Heaths Ramsar site. Durlston Head and its surrounds have been given National Nature Reserve and Country Park status. Coastal cliffs are breeding areas for peregrine, puffin, guillemot, razorbill and kittiwake. The vegetated coastal cliffs are of exceptional botanical quality.

Land use is overwhelmingly agricultural, comprising a mosaic of pastoral, arable and semi-natural habitats whose unifying effect upon the underlying geology and landforms underpins the character of this area. The combination of stunning landscape, world-class geodiversity and high botanical interest gives the area high recreational value. The South West Coast Path runs along the NCA providing linear and, via a well-developed public rights of way network, inland access.

[Click map to enlarge; click again to reduce.](#)

## Statements of Environmental Opportunity

- **SEO 1:** Conserving and promoting South Purbeck's unique geodiversity including the Jurassic Coast coastline, the suite of national and local geological sites and the highly legible relationship between geology, soils, landform and land use. Maintaining and enhancing access, including via the South West Coast Path National Trail, and providing interpretation to enhance educational and recreational opportunities. In both cases, placing the local community at the heart of this opportunity, through engagement and participation.
- **SEO 2:** Helping the communities of South Purbeck to protect, manage and enhance the diverse but coherent landscape character and tranquillity of this rural NCA, conserving the mixed farming land use which contributes to food provision, and a distinct landscape pattern, reducing the risk of soil erosion and strengthening resilience to climate change.
- **SEO 3:** Maintaining and enhancing the calcareous, acid and neutral grassland, ancient woodland, parkland, coastal cliffs, quarries, fen meadows and flushes, arable farmland and offshore reefs that are the key semi-natural habitats of this area. Additionally, conserving and strengthening the populations of the distinctive suite of species that are characteristic of the NCA.
- **SEO 4:** Protecting and managing the rich time depth and landscape texture created by the wealth of heritage assets located within the NCA, engaging both visitors and local communities in understanding the relationship between historic environment, geodiversity and biodiversity in the evolution of South Purbeck to the present day.



Dramatic geodiversity of the Jurassic Coast near Lulworth.

## Description

### Physical and functional links to other National Character Areas

A part of the Purbeck Monocline, the steeply dipping chalk buttress of the Purbeck Ridge dominates, shelters and delineates much of the National Character Area (NCA), while also continuing, across the English Channel via the Old Harry sea stacks, to The Needles and the Isle of Wight. The gently seaward-dipping limestone plateau can be seen, continuing on the Isle of Portland



Lulworth Cove attracts over 500,000 visitors a year.

The gap in the ridge at Corfe Castle provides the principal transport link into the NCA, allowing passage for the railway and the A351 which both run between Wareham and Swanage. The Corfe River also flows northwards through this gap into Poole Harbour.

From the ridge northwards, long views are afforded over heathland, plantation and the wetlands of Poole Harbour and the valleys of the Frome and Piddle in Dorset Heaths NCA. Beyond this rise the chalk downs of Dorset Downs and Cranborne Chase NCA.

The coastal strip with its maritime cliff habitats provides a strong ecological link to the adjacent NCAs including Weymouth Lowlands to the west and Dorset Heathlands to the east. The Dorset and East Devon Coast World Heritage Site (Jurassic Coast) and the South West Coast Path are strong cultural, recreational and processional links between coastal NCAs, principally to the west.

Long views along the coast and out to sea (including views of the Isles of Portland and Wight) provide a strong visual tie across and between NCAs.

Relatively unimpeded coastal processes also link this and adjacent NCAs via long shore drift and sediment cells. Offshore, the submarine geodiversity and seabed morphology are as varied as on the land. Terrestrial biodiversity is mirrored by an equally diverse suite of reef communities.

### Distinct areas

- Chaldon Down

## Key characteristics

- Exceptionally diverse chalk, limestone, mudstone, siltstone, sandstone and clay geology, leading to widely varied landscape morphology and soils creating a diverse mosaic of land uses, habitats and species.
- The Purbeck Ridge is a prominent feature with steeply rising northern slopes featuring extensive ancient woodland. The ridge top and southern slopes feature large areas of calcareous and acid grassland, in places dominated by scrub.
- Strong maritime influence, with long and wide views along the coast and out to sea bracketed by the Isles of Portland and Wight. Impressive and diverse coast featuring several internationally recognised geological features (for example, Old Harry Rocks, Durdle Door and Lulworth Cove) and a suite of maritime habitats, some internationally designated.
- A wealth of heritage assets and history of occupation, including barrows, early settlements, pre-Roman through medieval to Victorian industrial sites, field systems, quarries and the commandingly situated Corfe Castle, the presence of which is felt throughout the east of the NCA – often, but not always, as a skyline feature.
- Small, scattered villages, hamlets and farms, linked by dense network of tracks and lanes.



Wind blasted scrub characterises the Purbeck Ridge, thick hedgerows and copses emphasise the shelter within the Corfe Valley below.

## Key characteristics continued...

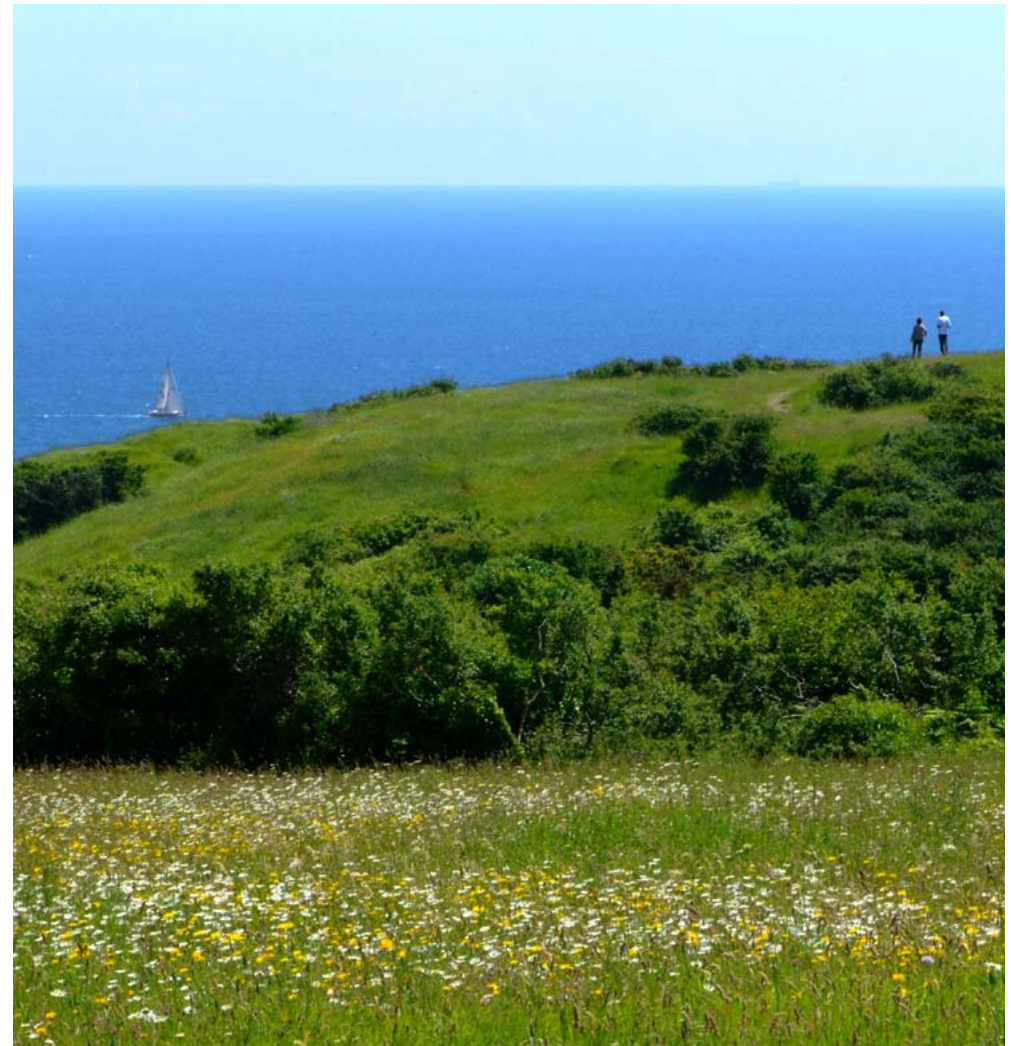
- Predominantly rural and agricultural in character. A mosaic of pastoral, arable and semi-natural land covers, enclosed by drystone walls, hedges and small copses.
- Swanage and its hinterland is a popular visitor destination, with a strong identity based upon past stone quarrying and development as a resort.
- The juxtaposition of impressive coastal and inland topography and land use and vegetation patterns which can combine to stimulate feelings such as tranquillity, solitude, 'naturalness', 'wildness' and a sense of spirituality as part of the individual's experience of moving through the landscape.
- Chaldon Down, where the exposure of chalk widens to rolling downland. The area has a distinct sense of place, marking the transition to the character of Dorset Downs and Cranborne Chase NCA.
- The exposed elevated areas of the NCA are characterised by a distinct lack of woodland. Here, small trees and sparse hedgerows struggle against the strong winds and general exposure to the elements. In the lower-lying, more sheltered areas hedgerow trees, shelter belts and small clumps and copses are a frequent and distinctive feature. There are only a handful of larger woodlands, the most important of which are the ancient 'hanger' woodlands on the sheltered northern slopes of the Purbeck Ridge.
- Well-drained chalk and limestone take precipitation quickly away from the surface, to emerge at spring and seepage lines where impervious strata are met. These feed the Corfe River, rising at North Egliston and running eastwards to exit the NCA at Corfe Castle, and the Swan Brook which drains the east end of the Purbeck vale, is joined by the Ulwell Stream and flows out to sea at Swanage. On the coast various springs and seepages merge to form streams in small seaward-facing valleys.

## South Purbeck today

South Purbeck is a landscape of contrasts. A vertiginous, exposed chalk ridge and wind-swept limestone plateau, a sheltered, gently undulating and often intimate central valley, rolling downland and a rugged, dynamic coast bear witness to and often reveal the underlying strata. This geological and geomorphological diversity is bound by a strong unifying cultural identity, drawing heavily on this area's past.

The whole NCA is predominantly rural and agricultural in nature. Livestock grazing, principally cattle and sheep, predominates. The pattern of hedges and fields in the Corfe Valley becomes smaller and more irregular to the north and west where small farmsteads are hidden in an intricate network of lanes. To the south and east, the fields are larger, extending up the slopes of the limestone plateau. The area around Chaldon Down presents further contrast. Here, large rectilinear arable fields mark well-drained, fertile soils lying over chalk.

The NCA is not well wooded, but trees and small woodlands are important. Clinging to the sheltered northern edge of the Purbeck Ridge, ancient semi-natural beech and oak woodland is found, a key habitat for Bechstein's bat. These, along with three principally conifer plantations, are the only woodlands of significance. The limestone plateau and top of the Purbeck Ridge are mainly treeless, a combination of exposure and thin soils stunting growth. Small ash and sycamore woodlands thrive in the most sheltered sections of the coastal valleys.



Durlston National Nature Reserve, 113 ha of coastal grasslands and scrub a haven for biodiversity and area for informal recreation.



Patches of scrub and scrappy hedgerows do provide important 'wooded' features and important refuges for birds and other animals. In the central valley and other sheltered areas thick hedges, shelter belts and small copses enclose fields and hamlets alike and create a sheltered, intimate landscape. The top and southern slopes of the Purbeck Ridge used to be almost exclusively open grassland but in recent decades scrub, mainly gorse, has gained an increasing hold on the slopes.



Swanage has a long history as a seaside resort, it is still a popular visitor destination.

Limestone and chalk high ground quickly absorbs precipitation into the well-drained strata. There are no surface waters here and even ponds are few. However, as the water meets impermeable strata, springs and flushed areas abound. In the central valley these feed networks of small streams that empty into the sea at Swanage, via the Swan Brook and, as the Corfe River, out of the NCA through the impressive gap in the Purbeck Ridge at Corfe Castle. The small streams and flushes support stands of alder trees and in places fen and wet meadow habitats. On Corfe Common the flushes and runnels are home to the rare southern damselfly. On the coast, the spring line is well below the tops of now dry valleys incising the plateau.

The well-drained and fertile limestone plateau comprises rectilinear fields of arable and semi-improved grazing, protected from the wind by a network of stone walls. A concentration of arable fields around St Aldhelm's Head hosts a relict population of corn bunting, a rare farmland bird. Other farmland bird species including linnet and skylark are more widespread. Arable plants such as corn gromwell, corn parsley and shepherd's needle are also found in nationally significant numbers. The exposed coast features large areas of unimproved grassland which is mainly calcareous in nature; similarly, the Purbeck Ridge features calcareous grassland and areas of unimproved and semi-improved acid grassland. Much of this was, until the middle of the 20th century, an intrinsic part of the area's agricultural system but it is now marginalised and suffers, in places, from a lack of necessary management – principally a lack of suitable grazing.

The area around Kimmeridge is exposed but fertile and features extensive improved and semi-improved grazing and some arable. The central valley is the most fertile and sheltered area, and clay and loam soils derived from underlying shales and alluvium from streams and the river support rich

pasture. In places such as Corfe Common, fertility is low and soils are thin and waterlogged, giving rise to important semi-natural habitats such as fen and fen meadow.

The principal settlements of the NCA, Corfe Castle, Harman's Cross and Swanage, are located along the main A351, running eastwards from the Corfe Gap. Swanage is a bustling seaside resort with many Victorian buildings and a typical collection of 20th-century resort vernacular styles. At its fringes caravan and camp sites (often in sites of old quarries) have developed. Corfe Castle is the 'gateway' to the NCA, featuring the imposing castle and picturesque stone-built village.

Off of the main road, winding lanes link small villages such as Langton Matravers and Worth Matravers and a series of hamlets and isolated farmsteads. Many of the buildings are of Purbeck Stone and Portland Stone. On the plateau, the small stone villages centred on the quarries are uniform in character. These settlements are busy in summer but, owing to the numbers of second homes and holiday lets, can be very quiet in winter. As one travels further west the villages and hamlets become smaller, within a much more enclosed landscape. Corfe Castle aside, there are few manor houses or major historic buildings, with the notable exception of Lulworth Castle.

South Purbeck's character is strongly influenced by features from the past. The Purbeck Ridge is dotted with bronze-age barrows and at its far western end there is a hill fort. Traces of field systems, abandoned villages (often with a single farm remaining), tracks and quarries are frequent. Small quarries in particular pepper the limestone plateau, some now grassy depressions, others still nominally in production, surrounded by piles of stone.

Apart from agriculture and some limited operational quarrying, tourism visits are the major economic driver and force for change in South Purbeck. The coast provides the greatest draw. From the Chalk cliffs high above Swanage Bay, a complex and dramatic coastline sweeps round to Worbarrow Bay. Sheer white chalk and limestone cliffs contrast with sheltered coves at Chapman's Pool and Lulworth Cove, and extend seaward as the Chalk stacks of Old Harry Rocks. To the west are the unstable cliffs at Kimmeridge. A near continuous strip of unimproved coastal grasslands features botanical highlights such as the early spider orchid and early gentian.

High wave energy and varied coastal geology have resulted in various erosional landforms. Many are typified by a breakdown of the resistant Portland strata, often by ancient (10,000 BP) fluvial processes, followed by rapid erosion of weaker Purbeck and Wealden Beds as sea levels rose and finally slower erosion of the chalk to form impressive cliffs, up to 170 m tall. The series of headlands and bays intercept littoral sediment drift, leading to between 8 and 11 discrete coastal sediment cells being identified. Only a small part of the coastline is defended outside of Swanage. Offshore sediment transport is constrained by a series of reefs and shelves and it probably cycles back landward into beaches.

The coast and Purbeck Ridge host much of the important habitat in this NCA. Calcareous grassland, acid grassland and coastal cliffs form much of the 1,415 ha (12 per cent of the NCA) of principally coastal habitats, designated as a Special Area of Conservation (SAC). Elsewhere, quarries, fen meadows, flushes, arable farmland, neutral grassland, ancient woodland and parkland all contribute to a diversity of habitats made possible by the underlying geodiversity. In fact South Purbeck falls within the 10 km square with the greatest plant diversity in the UK.

The largely unspoilt natural beauty of this NCA has been recognised by its designation as part of the Dorset Area of Outstanding Natural Beauty (AONB) (1959) and selection as a Heritage Coast (1970). The biological importance of the coast is recognised, at a European scale, through selection of most of the coastal part of the NCA as a SAC. In 2001 the 153 km of coast from Exmouth to Studland Bay were inscribed by UNESCO as a World Heritage Site, popularly known as the Jurassic Coast, in recognition of this coastline's 185-million-year geological record, outstanding fossil record and geomorphological processes. All 42 km of the NCA coast are inside the World Heritage Site and all are part of the South West Coast Path National Trail.

## The landscape through time

The rock record in South Purbeck extends from the Kimmeridge Clay of late Jurassic age through to the earliest deposits from the Eocene. Fluctuating sea levels and several phases of tectonic activity are evident.

The Kimmeridge Clay was laid down during a time of higher sea level and contains high levels of organic carbon. It is an important source of hydrocarbons in the North Sea and is studied on the Dorset coast.

Falling but fluctuating sea levels created shallow seas suitable for a highly fossiliferous limestone, Portland Stone, to form. The fluctuating environments, cycling between marine and freshwater (a conifer forest grew in marshy conditions at one time) at this point, gave rise to the different qualities and types of stone, the highly varied Purbeck Beds, which were to become desirable as building materials.

Following uplift in distant areas to the west and north, large rivers carried sand, grit and clay into the area, creating the Wealden Beds. A slow return to marine conditions began with the Lower Greensand but was interrupted by significant uplift and erosion across the region.



Corfe Castle and Corfe Village, spanning five hundred years of building, unified through exclusive use of local Purbeck Stone.

After sea levels rose and flooded this surface the Gault Clay and Upper Greensand were laid down. Sea levels continued to rise and the erosion that had previously supplied sediment to this area ceased, allowing the formation of the pure limestone called the Chalk. Following the end of the Cretaceous (65 million years ago) the chalk sea bed was uplifted and exposed to erosion here by the ongoing opening of the Atlantic Ocean. Deposition did not resume until the Eocene with a return to marine conditions. These deposits only appear north of the Chalk ridge and only the oldest of these rocks are included in the South Purbeck area.



Visible here at Stair Hole, collision of the African and Eurasian continental plates caused intense folding in the strata of South Purbeck.

At about 20 to 25 million years ago tectonic compression related to the closing of the Tethys Ocean as the African and European plates collided (creating the modern Mediterranean Sea and the uplifting of the European Alps) formed a structure known as the Purbeck Monocline. The key characteristic of this structure is the steep northern dip that it imprinted across the geological sequence here. As subsequent erosion cut into the monocline the variety of rocks responded differently, creating the area's distinct geomorphology. There is evidence of human activity in South Purbeck from at least the Mesolithic era, when the clay vale appears to have been intensively farmed and settled. The surrounding high ground most probably held considerable ceremonial value and has many neolithic, bronze-age and iron-age sites and barrows culturally linked with the South Dorset Ridgeway to the east.

Kimmeridge Shale was being used for ornaments in the Iron Age, when occupation of the valley was quite dense. By the time of Roman occupation this was a largely cleared and settled landscape with several villa complexes and continued shale working, an industry that continued into the Romano-British period (in relation to which over 50 sites are known).

Portland Stone and Purbeck Marble were quarried by the Romans and were also used in 11th- and 12th-century buildings. However, more rapid development of the industry began in the 13th and 14th centuries, the quarrying and carving developing as a major medieval industry providing monumental masonry for churches, cathedrals and public buildings. The Purbeck Stone quarries around Swanage were the most intensively worked, operating between 1700 and 1905, and leaving extensive abandoned workings. Today, the surface of the limestone plateau is pock-marked by hundreds of abandoned small quarries with more recent ones near the coast or actually into the cliff faces.

Shale, clay, alum and, most recently, oil have been extracted from the Kimmeridge Shale and, in the 19th century, there was a short-lived oil-shale industry manufacturing a wide range of products from the jet-like bituminous shale.

While the extractive industries developed and declined, the settlement pattern became one of a quite densely populated valley, a largely uninhabited Chalk ridge and quarrying settlements on the limestone. The ridge provided extensive common grazing.

Corfe Castle, started in the 11th century, has been a landmark ever since. It was one of the first stone castles in England. Various modifications and extensions over the centuries meant that the Roundheads could not assail it in the English Civil War. It was finally defeated through treachery and subsequently demolished with explosives, creating today's impressive ruins.

During the Second World War, the village of Tyneham and surrounding land were evacuated to allow military training. The area was never repopulated and remains an area of intensive military use.

Despite the quarrying industry, the area has remained substantially rural even after the arrival of the railway and the development of Swanage as a resort. Visitors have always come to experience Corfe Castle and its village (approximately 190,000 in 2010), Swanage's attractions and the spectacular 42 km of coastal scenery. The west of the NCA around Chaldon and the plateau, aside from Worth Matravers, are still much less frequently visited, although in high season they can become very busy.

## Ecosystem services

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

### Provisioning services (food, fibre and water supply)

- **Food provision:** Directly, of only local importance – a mixed farming area with dairying, beef cattle, pigs and sheep alongside a range of arable cropping. The area around Chaldon Down is more intensively managed than the rest of the NCA. However, the mosaic of agricultural production and traditionally managed semi-natural habitat is key to maintaining the NCA's regionally to nationally significant biodiversity and landscape.

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

- **Regulating water flow:** The NCA, particularly in its western extent, feeds water into the large chalk aquifer lying predominantly under the Dorset Downs and Cranborne Chase. The generally permeable nature of the strata underlying the NCA reduces run-off.
- **Regulating coastal flooding and erosion:** The coastal processes along the 42 km of coast are almost entirely naturally functioning. This may provide material not only for the formation of beaches along the NCA coast, but also for others further along the coast.

## Cultural services (inspiration, education and wellbeing)

- **Sense of place/inspiration:** South Purbeck has a strong sense of place. The coastal location and diversity of landscape character leave a strong impression. Landmark features, both manmade and natural, such as Corfe Castle, Durdle Door, Clavell Tower and Lulworth Cove, are emblems of a landscape where limestone and chalk dominate the topography, architecture and history of human endeavour. This particular sense of place can be spiritually, intellectually, philosophically and artistically inspiring.
- **Sense of history:** The relatively undeveloped, rural nature of this NCA has left many historic features intact and visible. Corfe Castle dominates a landscape of strip lynchets, barrows, ancient lanes and tracks, quarry workings dating back to the Roman period and more recent features from the Second World War.
- **Tranquillity:** High levels of tranquillity away from Swanage are an essential feature of this NCA, with views which are, despite being far reaching, almost entirely free of 20th-century 'clutter'.
- **Recreation:** Plentiful recreational opportunities are afforded by the very dense (2.1 km per km<sup>2</sup>) network of footpaths, tracks and quiet lanes. The entire 42 km of the coast is traversed by the South West Coast Path National Trail, the 'spine' of the NCA's access infrastructure. Additionally 11 per cent (1,313 ha) of the NCA is classed as having open access. With the Dorset AONB covering the whole NCA and the Purbeck Heritage Coast the entire coastline, this is a valuable area for recreation. Along the coast, rock climbing, diving and kayaking are popular forms of recreation.

- **Biodiversity:** This is an NCA rich in biodiversity. The grasslands of the coastal cliff-tops and the chalk ridge inland are host to a wide variety of highly valued communities, while the ancient woodland that clothes parts of the Purbeck Ridge is host to characteristic flora and fauna, including Bechstein's bat. The area has a high density of semi-natural habitats and is of great interest to naturalists both professional and amateur).
- **Geodiversity:** This is an internationally recognised cultural service, forming part of the Jurassic Coast World Heritage Site, inscribed for exhibiting outstanding geology, palaeontology and geomorphology. Within the NCA, geodiversity offers many opportunities for engagement, education and recreation.



The SW Coast Path provides uninterrupted access to the outstanding geology and biodiversity of the South Purbeck coast.

## Statements of Environmental Opportunity

**SEO 1: Conserving and promoting South Purbeck's unique geodiversity including the Jurassic Coast coastline, the suite of national and local geological sites and the highly legible relationship between geology, soils, landform and land use. Maintaining and enhancing access, including via the South West Coast Path National Trail, and providing interpretation to enhance educational and recreational opportunities. In both cases, placing the local community at the heart of this opportunity, through engagement and participation.**

**For example, by:**

- Ensuring that natural function of coastal geomorphological processes is unimpeded and that only in extreme cases is intervention adopted.
- Continuing to provide high-quality interpretation and engagement activities to local people and visitors to the Jurassic Coast to highlight its importance on an international and local scale.
- Providing ongoing, high-quality access to the 42 km of the coast, via the South West Coast Path, and ensuring that inland linkages to the public rights of way network are maintained and, where appropriate, enhanced.
- Using the expertise and intelligence provided by Local Access Forums to manage access in partnership with communities and landowners.
- Managing the coastal strip and hinterland to ensure that new or existing developments neither impact upon the setting or visual coherence of the coast nor pose a future threat to continued unimpeded natural processes.
- Developing and providing interpretation for sites which illustrates the link between underlying geology and soils, thus providing a link with land use and management, and aiding interpretation of the wider landscape. Access to many potential exposures of soils that could be recognised under Local Geological Site designations is provided by the coastal path.
- Ensuring that measures are taken to maintain or bring about favourable condition of the geological Sites of Special Scientific Interest (SSSI) running the length of the coast and that the sites of local geological importance are appropriately managed and, where possible, accessible for study.
- Protecting important features, for geological/geomorphological interpretation, from inappropriate changes in land use, for example planting woodland on the southern slopes of the Purbeck Ridge.
- Conserving the visually outstanding and unspoilt coastline.
- Ensuring that the policies outlined in the Jurassic Coast and Dorset Area of Outstanding Natural Beauty (AONB) Management Plans are implemented.
- Utilising the Dorset AONB Landscape Character Assessment & Management Guidance (*Conserving Character*) to inform agricultural management and development choices.
- Planning for Swanage's continued protection from rising, stormier seas while managing coastal processes in as natural a state as possible.

**SEO 2: Helping the communities of South Purbeck to protect, manage and enhance the diverse but coherent landscape character and tranquillity of this rural NCA, conserving the mixed farming land use which contributes to food provision, and a distinct landscape pattern, reducing the risk of soil erosion and strengthening resilience to climate change.**

**For example, by:**

- Understanding the systemic changes which may be occurring in the agricultural system of the area. Working with farmers, land managers and communities to positively shape the way in which land is managed into the future, innovating and diversifying to maintain the agricultural economy while simultaneously preserving and positively enhancing the physical, ecological and cultural landscape that is so highly valued by local people and visitors alike.
- Helping land managers to develop profitable agricultural systems which will provide sufficient stock to effectively graze this and the adjacent NCA's large areas of semi-natural grassland and heathland and result in a valuable livestock product.
- Understanding and promoting the services provided through specific management of ecosystems by land managers and seeking financial mechanisms which reasonably reward and incentivise those practices.
- Maintaining and restoring the network of small woodlands and copses and interlinking hedgerows typical of the Corfe Valley and Chaldon Downs, utilising their potential for wood fuel and as a community resource as a catalyst to bring them into positive management.
- Maintaining the network of stone walls found on the limestone plateau, both for their landscape value and their function in reducing surface water flows and erosion.
- Encouraging land use which maintains long views along the coast and ridges, headlands and touts (local name for lookout hills).
- Promoting cropping patterns on Chaldon Down which create ground cover in the autumn and winter months, arresting water flows, reducing erosion and providing cover and food for farmland biodiversity, including the farmland bird community.
- Avoiding development that detracts from the character, natural beauty and tranquillity of the NCA and, in as many cases as possible, identifying alternative approaches which enhance and reinforce them.
- Ensuring that the relevant policies outlined in the Dorset AONB Management Plan are implemented.
- Managing access in a way which balances the desire of people to enjoy and experience the geological, biological and cultural assets of the NCA with the prevention of damage to them.



**SEO 3: Maintaining and enhancing the calcareous, acid and neutral grassland, ancient woodland, parkland, coastal cliffs, quarries, fen meadows and flushes, arable farmland and offshore reefs that are the key semi-natural habitats of this area. Additionally, conserving and strengthening the populations of the distinctive suite of species that are characteristic of the NCA.**

**For example, by:**

- Ensuring that the suite of biological SSSI is maintained in or brought into favourable condition and that the Sites of Nature Conservation Importance in the NCA are in positive management.
- Ensuring that the 1,415 ha (12 per cent of the NCA) of principally coastal habitats which are designated Special Area of Conservation attain and retain favourable conservation status as an element of the Natura 2000 Network.
- Returning traditional management regimes to those habitats that require them, particularly grazing to the range of grasslands and active management interventions in woodlands.
- Returning plantations on ancient woodland sites (PAWs) to broadleaved species and exploring and, where feasible, promoting local woodfuel produce schemes across the woodland resource in the NCA.
- Allowing natural erosional and depositional processes on the coast to continue without undue constraint, creating and maintaining ecological niches essential for early successional species and habitats.
- Engaging with the farming community and their local communities to promote understanding of the linkages and dependencies between people, their surroundings and the way in which they are managed.
- Maintaining and expanding low-intensity arable farming around St Aldhelm's Head to expand the suitable habitat for the nationally valuable relict community of rare arable plants which survive there.
- Restoring and strengthening the matrix of connecting landscape and habitat features such as hedgerows, copses, stone walls, thickets, ponds and ditches to increase landscape permeability.
- Supporting the aims and objectives of the Wild Purbeck Nature Improvement Area.
- Assisting land managers in realising biodiversity gains through adjusting methods of production, thereby creating farmland of higher nature value, particularly low-intensity arable farmland around St Aldhelm's Head to enhance the nationally significant population of rare arable plants.
- Creating new wetlands in the corridors of the Corfe River, Swan Brook, Ulwell Stream and the network of smaller Purbeck streams to enhance biodiversity and water flow and quality.
- Promoting the benefits of agri-environment schemes and other environmental land management schemes to the land management community of South Purbeck and helping them with applications to these schemes.
- Securing opportunities to extend and buffer existing habitats, particularly the pinch points in semi-natural coastal grasslands.
- Managing deer populations in the NCA and beyond to realise a reduction in grazing damage, particularly to the woodland resource.
- Affording suitable levels of protection to the internationally significant reef communities found off the South Purbeck coast.
- Utilising a range of media and locations to provide local communities and visitors with an integrated, high-quality interpretive experience explaining the evolution, development and conservation of the biodiversity of South Purbeck.

**SEO 4: Protecting and managing the rich time depth and landscape texture created by the wealth of heritage assets located within the NCA, engaging both visitors and local communities in understanding the relationship between historic environment, geodiversity and biodiversity in the evolution of South Purbeck to the present day.**

**For example, by:**

- Promoting, through engagement, people's understanding of the combined effect that multiple historic features have on the landscape character and the importance of their conservation and presentation.
- Bringing all heritage assets within the NCA into sympathetic management, seeking communities' engagement in the process of restoring and maintaining their heritage, and explaining English Heritage's 'at risk' register.
- Promoting the understanding and use of traditional materials and techniques both for maintaining historic structures and for new builds.
- Engaging local communities and visitors in preserving and celebrating the history and legacy of the quarrying and masonry industries, where possible combining the interpretation of the quarrying industry, geodiversity and natural history of the NCA.
- Ensuring that sufficient stone of the right strata is available to both maintain existing and construct new buildings to preserve the unifying nature that these materials have on South Purbeck settlements.
- Linking the low-volume/high-quality and value output of some quarries to the opportunities provided to maintain valuable biodiversity features, particularly hibernation sites for bats and microclimates favoured by many species of invertebrates and reptiles.
- Planning for restoration and creation of valuable habitats following mineral extraction.
- Maintaining and, where possible, creating access to historic assets or, if access is not possible, creating viewpoints from which they can be studied.
- Protecting historic barrows and areas of known archaeological interest at risk from ploughing by reverting to pasture. Managing the levels of grazing on historic features to prevent poaching and erosion damage on the one hand, and ensuring that scrub is removed on the other.
- Maintaining the setting of Corfe Castle.
- Maintaining the principally rural setting in which these assets are found and within which most of them have their best context.
- In an NCA where geodiversity, biodiversity and human endeavour are so closely linked it would be useful to ensure a partnership approach to new interpretation which places all of these in context through time in a way which would explain to residents and visitors alike how the area has arrived at its present state.

## Supporting document 1: Key facts and data

Total area: 11,850 ha

### 1. Landscape and nature conservation designations

The South Purbeck NCA includes parts of the Dorset and East Devon Coast World Heritage Site covering 284 ha (2 per cent of NCA), the Dorset Area of Outstanding Natural Beauty (AONB) covering 11,837 ha, (100 per cent of NCA) and the Purbeck Heritage Coast covering 6,708 ha, 57 per cent of NCA.

Management Plans for the protected landscape can be found at:

[www.dorsetaonb.org.uk/](http://www.dorsetaonb.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 | Ramsar                             | Dorset Heathlands   | 138       | 1                 |
| European      | Special Protection Area (SPA)      | Dorset Heathlands SPA   | 3         | <1                |
|               | Special Area of Conservation (SAC) | Isle of Portland to Studland Cliffs SAC;<br>St Albans Head to Durlston Head SAC;<br>Dorset Heaths SAC | 1,415     | 12                |

| Tier     | Designation                                | Name  | Area (ha) | Percentage of NCA |
|----------|--|---|-----------|-------------------|
| National | National Nature Reserve (NNR)              | Durlston NNR  | 109       | 1                 |
|          | Site of Special Scientific Interest (SSSI) | A total of 10 sites wholly or partly within the NCA | 1,884     | 16                |

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.

The Dorset Heathlands Ramsar Site and the Dorset Heaths SAC have common boundaries at Corfe Common.

There are 69 Local sites in South Purbeck NCA covering 613 ha which is 5 per cent of the NCA.

Source: Natural England (2011)

- Details of individual Sites of Special Scientific Interest can be searched at: <http://www.sssi.naturalengland.org.uk/Special/sssi/search.cfm>
- Details of Local Nature Reserves (LNR) can be searched at: [http://www.lnr.naturalengland.org.uk/Special/lnr/lnr\\_search.asp](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  | 9         | <1                                       |
| Favourable              | 1,039     | 55                                       |
| Unfavourable no change  | 82        | 4  |
| Unfavourable recovering | 748       | 40                                       |

Source: Natural England (March 2011)

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

## 2. Landform, geology and soils

### 2.1 Elevation

Elevation in South Purbeck ranges from sea level to a maximum of 200 m. Mean elevation is 86 m.

Source: Natural England 2010

### 2.2 Landform and process

Steeply dipping Chalk forms the spine of the Purbeck Ridge; south of this, the soft Weald Clay has been eroded to form the broad, sweeping Corfe Valley. Continuing southwards, the land rises to the limestone plateau gently dipping seawards. Along the coast resilient Portland and Purbeck stone form spectacular cliffs, again often the location of quarrying resulting in large man made caverns cutting inland along particular beds of building stone.

To the west, the exposure of softer less resilient strata of sands and clays has resulted in undermining of the harder layers leading to slopes of slump, scree and huge blocks of collapsed Portland/Purbeck stone.

Source: South Purbeck Countryside Character Area description, Isles of Portland and Purbeck Natural Area Profile

### 2.3 Bedrock geology

The rocks of South Purbeck are of outstanding geological interest. The coastal cliffs, part of the Jurassic Coast World Heritage Site, expose strata ranging from the Jurassic through to the Cretaceous. They include rocks rich in fossil invertebrates and some vertebrates, including plesiosaurs, ichthyosaurs, other dinosaurs and early mammals. They also contain many internationally recognised reference sites ('stratotypes'). Palaeogene rocks are exposed inland. The area has many mineral resources, including shale, oil, chalk, and is quarried for Portland and Purbeck limestone, and Purbeck 'Marble.'

The Purbeck Hills were formed as the result of a monocline – a step-like fold in the bedrock – which was created by the Alpine Orogeny (mountain-building episode). The Chalk and limestone were more resistant to erosion than the Wealden clays whose erosion created the valley between the two ridges.

Source: South Purbeck Countryside Character Area description, Isles of Portland and Purbeck Natural Area Profile, British Geological Survey maps

### 2.4 Superficial deposits

Alluvium along river courses, clay-with-flints on the top of the Purbeck chalk ridge.

Source: South Purbeck Countryside Character Area description, Isles of Portland and Purbeck Natural Area Profile, British Geological Survey maps

## 2.5 Designated geological sites

| Tier     | Designation   | Number |
|----------|---|--------|
| National | Geological Site of Special Scientific Interest (SSSI) | 1      |
| National | Mixed Interest SSSIs                                  | 4      |
| 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

The soils are strongly influenced by the underlying geology, with lime-rich soils over the Purbeck limestones and the Chalk, and clay valley soils between the chalk ridge and the limestone plateau to the south.

Source: Isles of Portland and Purbeck Natural Area Profile

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

| Agricultural Land Classification | Area (ha) | Percentage of NCA |
|----------------------------------|-----------|-------------------|
| Grade 1                          | 0         | 0                 |
| Grade 2                          | 0         | 0                 |
| Grade 3                          | 7,114     | 60                |
| Grade 4                          | 1,555     | 13                |
| Grade 5                          | 1,141     | 10                |
| Non-agricultural                 | 1,580     | 13                |
| Urban                            | 284       | 2                 |

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 Corfe | 5                  |

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.

Within the Corfe Valley, streams collect on the Wealden Clay and form the River Corfe which cuts through the chalk ridge at Corfe, draining into Poole Harbour. On the south coast, there are short, steep, southward-draining dry valleys on the limestones.

### 3.2 Water quality

The total area of Nitrate Vulnerable Zone is 6,999 ha, 59 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](http://maps.environment-agency.gov.uk/wiyby/wiybyController?ep=maptopics&lang=_e)

## 4. Trees and woodlands

### 4.1 Total woodland cover

The NCA contains 891 ha of woodland (8 per cent of the total area), of which 389 ha, (3 per cent) is ancient woodland.

**Source: Forestry Commission (2011) and Natural England (2004)**

### 4.2 Distribution and size of woodland and trees in the landscape

Woodland cover varies across the area, from the strong belts of ancient woodland along the northern edge of the chalk ridge, large copses and small woodlands in the central Corfe Valley, to the largely treeless limestone plateau to the south. The Corfe Valley is enclosed by hedgerows with dense belts of hedgerow trees.

**Source: South Purbeck Countryside Character Area description**

### 4.3 Woodland types

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

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

| Woodland type | Area (ha) | Percentage of NCA |
|---------------|-----------|-------------------|
| Broadleaved   | 711       | 6                 |
| Coniferous    | 138       | 1                 |
| Mixed         | 10        | <1                |
| Other         | 32        | <1                |

**Source: Forestry Commission (2011)**

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

| Woodland type                         | Area (ha) | Percentage of NCA |
|---------------------------------------|-----------|-------------------|
| Ancient semi-natural woodland         | 243       | 2                 |
| Planted ancient woodland sites (PAWS) | 146       | 1                 |

**Source: Natural England (2004)**

## 5. Boundary features and patterns

### 5.1 Boundary features

The Corfe Valley is enclosed by hedgerows with dense belts of hedgerow trees. As the land rises up to the limestone plateau hedgerows are gradually replaced by dry stone walls.

**Source:** South Purbeck Countryside Character Area description;  
Countryside Quality Counts (2003)

### 5.2 Field patterns

In the undulating Corfe Valley, the principal villages are surrounded by irregular hedges and fields. The fields become smaller and more irregular to the north and west where small farmsteads are hidden in an intricate network of lanes. To the south and east, the fields are larger, extending up the slopes of the limestone plateau to the south. Piecemeal enclosure to the south and east has resulted in larger fields including a remarkable series of long narrow strips marked by continuous boundary walls extending up the slopes of the limestone plateau. These land units are divided by cross boundaries creating a 'ladder' effect.

**Source:** South Purbeck Countryside Character Area description;  
Countryside Quality Counts (2003)

## 6. Agriculture

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

### 6.1 Farm type

There were two more farms in South Purbeck in 2009 than in 2000 – 82 as opposed to 80. The area's farming is dominated by farms grazing livestock. There are dairy farms, mixed farms and cereal or general cropping farms in the NCA. There were no horticultural holdings in 2000, but several (<6) were in business in 2009.

**Source:** Agricultural Census, DEFRA (2010)

### 6.2 Farm size

Units of more than 100 hectares account for 24 of all holdings, units of 5 hectares or less account for 11 of all holdings.

**Source:** Agricultural Census, DEFRA (2010)

### 6.3 Farm ownership

2009: Total farm area = 8,463 ha; owned land = 1,716 ha  
2000: Total farm area = 9,448 ha; owned land = 1,702 ha

**Source:** Agricultural Census, DEFRA (2010)

### 6.4 Land use

The numbers of sheep and pigs more than halved between 2000 and 2009 while the number of cattle dropped by only 5 per cent.

**Source:** Agricultural Census, DEFRA (2010)

### 6.5 Livestock numbers

In 2010 there were 8,500 cattle in the NCA, which represents a dip in numbers from the 9,000 in 2000. The number of sheep has more than halved from 24,000 to 11,100 and the number of pigs has decreased from 1,300 to 400 over the same period.

**Source:** Agricultural Census, DEFRA (2010)

### 6.6 Farm labour

The number of full-time farm workers nearly halved while there was a slight increase in the numbers of casual/gang labourers and the number of part-time farm workers remained constant.

**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

Coastal strip with extensive areas of maritime cliff and slope habitat – grasslands, scrub, reedbeds along seepage lines – more mobile areas with early successional communities. Plateau with areas of limestone grassland and in quarried areas early successional habitats, calcareous grassland on the ridge with local areas of acid grassland where drift suites. Remnant meadows in the clay vale in more neutral, damper soil conditions. Hanger woodland along the north facing slopes of the ridge and copses linked by overgrown hedges in the clay vale. Small wet woodlands along the streams flowing down steep valleys punctuating the cliffs.

Source: Isles of Portland and Purbeck 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 |
|--|-----------|-------------------|
| Maritime cliff and slope                         | 1,435     | 12                |
| Lowland calcareous grassland                     | 861       | 7                 |
| Broadleaved mixed & yew woodland (Broad habitat) | 684       | 6                 |
| Lowland dry acid grassland                       | 79        | 1                 |
| Lowland meadows                                  | 69        | 1                 |
| Reedbeds   | 51        | <1                |
| Lowland heathland                                | 30        | <1                |
| Purple moor grass and rush pastures              | 27        | <1                |
| Fens   | 15        | <1                |

Source: Natural England (2011)

- Maps showing locations of priority habitats are available at: <http://magic.defra.gov.uk> – Select 'Habitats and Species/Habitats'

### 7.3 Key species and assemblages of species

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



## 8. Settlement and development patterns

### 8.1 Settlement pattern

Historically the Chalk ridge has been largely uninhabited. At the eastern end of the Corfe Valley, Swanage is a substantial resort town with a predominantly Victorian core surrounded by mainly 20th century suburban development spreading out to caravan sites and holiday cottages. Inland, there are many villages, hamlets and farms in the Corfe Valley, with a dense network of lanes. On the plateau, the small stone villages centred on quarries are uniform in character, while to the west there are very small villages and hamlets within a much more enclosed landscape.

Source: South Purbeck Countryside Character Area description;  
Countryside Quality Counts (2003)

### 8.2 Main settlements

The main town within the NCA is Swanage; there are smaller settlements at Corfe Castle, Worth Matravers, Kimmeridge, West Lulworth and Chaldon Herring. The total estimated population for this NCA (derived from ONS 2001 census data) is: 14,839.

Source: South Purbeck Countryside Character Area description;  
Countryside Quality Counts (2003)

### 8.3 Local vernacular and building materials

Many of the buildings are of Purbeck Stone and Portland Stone.

Source: South Purbeck Countryside Character Area description;  
Countryside Quality Counts (2003)

## 9. Key historic sites and features

### 9.1 Origin of historic features

There are many Neolithic, Bronze Age and Iron Age sites, field systems and barrows on the plateau and chalk downs. Kimmeridge Shale ornaments were manufactured and exported in the Iron Age, when occupation of the valley was quite dense, and in the Romano-British period when pottery was manufactured in the area. There was a high density of Roman settlements in South Purbeck, including villa sites such as Bucknowle. The main town of the area was Corfe, dominated by the castle which probably developed on the site of a Saxon royal residence. The town developed outside the gates of the castle and around its market place. Remains of quarrying on the plateau are highly distinctive. There are hundreds of abandoned small quarries with more recent ones near the coast. Deeply worn hollow ways run across the area, linking settlements, quarries and extraction routes.

Source: Draft Historic Profile; Countryside Quality Counts;  
South Purbeck Countryside Character Area description

### 9.2 Designated historic assets

This NCA contains the following numbers of designated heritage assets:

- 4 Registered Parks and Gardens covering 737 ha.
- 0 Registered Battlefield/s covering 0 ha.
- 95 Scheduled Monuments.
- 57 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

- 11 per cent of the NCA, 1,313 ha, is classified as being publically accessible.
- There are 250 km of public rights of way at a density of 2.1 km per km<sup>2</sup>.
- There is 1 National Trail within the NCA. The South West Coast Path National Trail runs for 42 km through South Purbeck.

Sources: Natural England (2010)

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)       | 488       | 4                 |
| Common Land                                | 168       | 1                 |
| Country Parks                              | 114       | 1                 |
| CROW Access Land (Section 4 and 16)        | 1,111     | 9                 |
| CROW Section 15                            | 161       | 1                 |
| Village Greens                             | <1        | <1                |
| Doorstep Greens                            | 0         | 0                 |
| Forestry Commission Walkers Welcome Grants | 10        | <1                |
| Local Nature Reserves (LNRs)               | 0         | 0                 |
| Millennium Greens                          | 0         | 0                 |
| Accessible National Nature Reserves (NNRs) | 109       | 1                 |
| Agri-environment Scheme Access             | 15        | <1                |
| Woods for People                           | 64        | 1                 |

Sources: Natural England (2011)

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

## 11. Experiential qualities

### 11.1 Tranquillity

Based on the CPRE map of Tranquillity (2006) the majority of South Purbeck is very tranquil. The only area of low tranquillity is around Swanage.

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

| Tranquillity             | Score |
|--------------------------|-------|
| Highest value within NCA | 97    |
| Lowest value within NCA  | -65   |
| Mean value within NCA    | 12    |

Sources: CPRE (2006)

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

### 11.2 Intrusion

The 2007 Intrusion Map (CPRE) shows the extent to which rural landscapes are 'intruded on' from urban development, noise (primarily traffic noise), and other sources of visual and auditory intrusion. This shows that the majority of South Purbeck is still undisturbed except around Swanage and the Swanage-Wareham road.

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

| intrusion category | 1960s (%) | 1990s (%) | 2007 (%) | Percentage change (1960s-2007) |
|--------------------|-----------|-----------|----------|--------------------------------|
| Disturbed          | 3         | 10        | 27       | 23                             |
| Undisturbed        | 89        | 81        | 70       | 19                             |
| Urban              | n/a       | n/a       | 3        | n/a                            |

Sources: CPRE (2007)

Notable trends from the 1960s to 2007 are that the area classified as disturbed has increased dramatically whilst the percentage of the NCA described as undisturbed has decreased accordingly.

- 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)
- BAP 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

- In the recent past it is likely that the total resource has remained stable. It currently covers 8 per cent of the NCA. No new stands of ancient woodland within the NCA have been converted to conifer for some time and the current trend is towards restoration.
- Pure conifer makes up 3 woodlands. These are well established and no new 100 per cent conifer planting has taken place in recent years. Within the Corfe Valley the density of small copses and woodlands appears to have been maintained and may have increased due to some small-scale planting and natural regeneration. Semi-natural woodlands in the seaward facing valleys on the limestone plateau also appear stable.
- Whilst woodland extent is stable, woodland management may be a cause for concern. The Woodland SSSI (Purbeck Ridge West) is currently in favourable and unfavourable recovering condition. The main cause for unfavourable condition has been damage from excessive deer numbers and subsequent browsing damage to both trees and ground flora. Deer management is ongoing in the area and should see a reduction in grazing damage.
- Within the NCA, since 2005, around 5.6 km of deer fencing has been erected and 4 km of woodland fencing managed via environmental stewardship.

- Management outside of the designated site is probably patchy and ad hoc (as in many woodlands in England). This may be having a negative impact upon elements of ground flora and invertebrate interest.

#### Boundary features

- The Countryside Quality Counts assessment of 2003 stated that Countryside Stewardship had brought hedge management (6 km), hedge planting and restoration (7 km), restored boundary protection (1 km) to the NCA's approx 793 km of boundary features – some 5 per cent of the resource.
- Since 2005, the Entry Level Scheme has put some 110 km of hedgerow into 'landscape' management and a further 30 km into landscape and wildlife management. The Higher Level Scheme is managing a further 6.6 km, including 1 km of newly planted hedgerow.
- Stone walling of 2.2 km in length has been protected or restored under both schemes.
- This total (150 km) equates to almost 19 per cent of the estimated boundary resource in the NCA. This appears to indicate that boundary features are now more likely to be in sympathetic management than at any time since the middle of the last century. It is clear however that the stone wall resource is receiving much lower attention than hedgerows, probably because of the greater cost and less widespread skill set required for their maintenance.

## Agriculture

- It is difficult to come to firm conclusions with the data we have, however, there appears to be a general slow decline in farming with an absolute decrease in total agricultural area.
- A reduction in full time farm workers of nearly 50 per cent in the 10 years between 2000 and 2009 is quite dramatic as is a 985 ha decrease (10 per cent) in total farm area. It is, however, difficult to attribute this change to any specific causes and thus draw any meaningful conclusions about the drivers.
- The NCA has exhibited high levels of agri-environment scheme uptake. Since the introduction of the Countryside Stewardship Scheme this NCA was always ahead of the national average. Since 2005, uptake of Environmental Stewardship has also been quite high with Entry Level Scheme and Higher Level Scheme agreements valued at approx £4.8 million being established within the NCA.
- The period 2000 to 2009 saw an overall reduction in livestock numbers; this fall was mainly in sheep and pig numbers (both decreasing by over 50 per cent) whilst cattle dropped by 5 per cent. Again, it is difficult to ascertain what this means and how these reductions were distributed over the NCA.
- In conclusion, although the farmed landscape of South Purbeck appears to be in good condition, some statistics may indicate underlying structural changes in the farming system that may subsequently drive changes in the landscape.

## Settlement and development

- South Purbeck is not an area that has experienced much in the way of settlement growth in the last ten years. Small additions to villages have been made, often to a high standard, in the vernacular and in some cases represent an evolution of the vernacular.
- Whilst, in many parts of the NCA resident population has declined over the last two hundred years (many farms used to be hamlets with populations of fifty or so people), the seasonal population has increased as holiday lets and caravan parks have appeared and expanded. Economic constraints may increase demand for 'staycationing' in this area.
- Swanage has continued to grow slowly and has the least sympathetic new developments within the NCA, though it could be said that Swanage has, along with most resort towns, its own distinct vernacular.
- Some development appears to have been accommodated within settlements through re-use of existing structures.
- South Purbeck has seen its quarrying and masonry industry decline over the last two hundred years or so. While still a profitable employer in the area, it probably stands alongside agriculture and behind tourism as the main forms of enterprise.

## Semi-natural habitat

- It is likely that the overall condition of designated sites has improved quite considerably over the last 10 years. The focussed targeting of agri-environment money on SSSI habitats has brought many of them into favourable or recovering condition.
- Habitats identified as SNCIs have potentially benefitted from more than 15 years of Countryside Stewardship Scheme followed by Environmental Stewardship.
- In the 'wider countryside' the functioning of semi-natural habitats as a matrix, creating a 'permeable' landscape may still not have reached the levels likely to have existed before the beginning of the 20th Century.
- Within the farmed landscape, particularly the arable areas, collapses of farmland bird numbers in the 1970s onwards have not been halted or reversed, despite an apparently suitable mosaic of farmed and semi-natural habitat.

## Historic features

- Historic features in this NCA have probably been less impacted than in many areas by the pressures of modern agriculture. The military ranges have protected several important archaeological remains.
- In 1995 about 60 per cent of historic farm buildings remain unconverted. About 92 per cent were intact structurally.
- Many of the typical stone walls of the limestone plateau have fallen into disrepair, replaced by wire fences or boundaries abandoned altogether. In some areas however, extensive restoration has occurred.

- English Heritage's Heritage at Risk Register lists several locations within the NCA as 'at risk'. These are principally Neolithic barrows which are located in the Chaldon area and under threat from ploughing. Other structures at risk include the hill fort at Rings Hill falling into the sea (entirely natural erosion and impractical to prevent), barrows with scrub invasion and Kimmeridge Bay industrial sites at risk from vandalism.

## Coast and rivers

- The River Corfe has changed little in recent years, though it is likely that any domestic or agricultural discharges into it are now considerably more tightly regulated than in the past. The flooding problems Swanage experienced from the Swan Brook have been addressed through provision of flood storage and a relief channel. There is still however a risk of tidal flooding to Swanage town centre and some surface water flooding issues.
- Coast relatively 'slow' to change, natural processes may intermittently be subject to a major event - cliff collapse, slump event in clays, storm damage to beaches.
- Coastal defences appear not to have increased; rather they have merely been maintained. Clavell Tower was moved inland several metres to prevent it being undermined by a receding cliff, rather than trying to protect the cliff base.
- Increase in popularity of the South West Coast Path may be increasing levels of erosion of protective layers of vegetation (principally grassland), leading to greater rain water runoff and erosion. It is also possible that increased disturbance of ground and cliff-nesting birds will occur.

## Minerals

- The quarrying of stone from this NCA has, in the past, been the major driver of landscape change and settlement formation. Currently, the importance of the industry in this area has waned, though two or three quarries remain operational.
- A chalk quarry located in the Purbeck Ridge was, bought out in 2003 and has subsequently been left to naturally colonise.

## Drivers of change

### Climate change

- Increasing sea levels will impact Swanage and may prompt the need for further sea defences. The current Shoreline Management Plan adopts a 'hold the line' approach for the urban coastal units.
- Increases in extreme weather events (for example prolonged rainfall and storms) will increase the rate at which the coast erodes. This will be more marked in certain places depending upon the geomorphological processes that control erosion (slumping may increase with increased rainfall and groundwater percolation for example).
- More rapid coastal erosion will increase 'squeeze' on the coastal strip of semi-natural grasslands against inland farmland and in some places result in significant loss of extent. The ongoing retreat of semi-natural habitats needs to be managed to allow inland spread onto currently agriculturally improved land as the coast erodes.

- Extremes in weather will also potentially impact upon established agricultural systems and further impacts upon ecosystems may arise due to farmers' responses to these changes.
- Semi-natural habitats will remain so, however, community composition may begin to shift in response to climate drivers. Particularly vulnerable will be wetlands on Corfe Common and Meadows associated with wetter ground in the Corfe Valley.
- Increases in average temperature will continue to provide conditions in which species introduced or migrating from outside the United Kingdom may flourish and breed. This will have as yet unanticipated impacts upon our native flora and fauna. These impacts may also be seen in the marine environment where increased average sea temperatures will facilitate establishment of non-native, potentially invasive species.

### Other key drivers

- Conserving the uncluttered, undeveloped character of this NCA in the face of growing demand for wind energy both on land and out to sea may become increasingly challenging.
- If climate change brings increased average temperatures, this may encourage farmers to diversify their crops and patterns of cropping. This could have impact both in terms of the nature of the actual land use (new or novel crops) and the patterns of use throughout the year. Changes could have a visual impact and implications for semi-natural habitats and the species that rely upon them.



- As a coastal NCA, South Purbeck will be the landfall for returning species and those expanding their natural range in response to climate change. Whilst many of these will be incorporated into the native flora and fauna without issue, some species will represent new pests and diseases. These may threaten and pose a threat to agricultural and silvicultural crops, native flora and fauna.
- Continued reductions in farmed land, full time farmers and numbers of stock maintained in the NCA could have negative knock on effects upon traditional management of semi-natural habitat and the maintenance of the landscape in general.
- Conversely, an increase in non-professional 'hobby farmers' and small holders may actually see an increase in the numbers of traditional breeds available within the NCA.
- Increased 'staycationing' in the face of increasing fuel prices and lowering incomes may place pressure on areas like this (adjacent Poole-Bournemouth is largest non-industrial conurbation in UK) to increase and 'enhance' visitor facilities. This will need careful management to prevent over exploitation and damage, but will create opportunities for enhanced visitor experience, engaging people with the natural environment and development of sustainable income sources for the area.
- Continued increases in world food prices and concerns over 'food security' may prompt a re-invigoration of the local agricultural economy, prompting pressure for intensification and bringing of land (back) into agricultural production.
- Uncertainties around the future of agri-environment schemes and payments may impact greater on land managers in this NCA, where there has been above average take up of agri-environment schemes.
- Given the relative popularity of this area for its range of cultural ecosystem services, the potential to seek payment for them, by society, is quite high. What is unclear at this early stage in the development of such an approach is how payments for the maintenance of setting or landscape should be levied, how much they should be and whether the public are willing to pay for them.



Species-rich chalk grassland, Dorset.

## 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.



Almost unimpeded patterns of erosion and deposition create the complex geomorphology characteristic of the South Purbeck coast.

| 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 |     |
| <b>SEO 1:</b> Conserving and promoting South Purbeck's unique geodiversity including the Jurassic Coast coastline, the suite of national and local geological sites and the highly legible relationship between geology, soils, landform and land use. Maintaining and enhancing access, including via the South West Coast Path National Trail, and providing interpretation to enhance educational and recreational opportunities. In both cases, placing the local community at the heart of this opportunity, through engagement and participation. | ↔                 | ↔                | ↔                  | ↔                 | ↔              | ↔                  | ↗                        | ↔                     | ↗                       | ↔                       | ↗           | ↗               | ↑                          | ↑                          | ↗                | ↔           | ↗          | ↑            | ↑            |     |
|   | ***               | ***              | **                 | ***               | ***            | ***                | **                       | **                    | **                      | **                      | **          | **              | ***                        | ***                        | ***              | **          | ***        | ***          | ***          |     |
| <b>SEO 2:</b> Helping the communities of South Purbeck to protect, manage and enhance the diverse but coherent landscape character and tranquillity of this rural NCA, conserving the mixed farming land use which contributes to food provision, and a distinct landscape pattern, reducing the risk of soil erosion and strengthening resilience to climate change.   | ↔                 | ↗                | ↔                  | ↔                 | ↔              | ↔                  | ↗                        | ↗                     | ↗                       | ↗                       | ↔           | ↗               | ↔                          | ↑                          | ↑                | ↑           | ↔          | ↗            | ↗            |     |
|   | ***               | ***              | ***                | ***               | **             | ***                | **                       | ***                   | **                      | ***                     | **          | **              | ***                        | ***                        | ***              | ***         | ***        | ***          | **           | *** |

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 |
| <b>SEO 3:</b> Maintaining and enhancing the calcareous, acid and neutral grassland, ancient woodland, parkland, coastal cliffs, quarries, fen meadows and flushes, arable farmland and offshore reefs that are the key semi-natural habitats of this area. Additionally, conserving and strengthening the populations of the distinctive suite of species that are characteristic of the NCA. | ↘<br>**           | ↗<br>***         | ↗<br>**            | ↗<br>***          | ↔<br>**        | ↗<br>***           | ↗<br>**                  | ↗<br>***              | ↗<br>**                 | ↗<br>**                 | ↗<br>***    | ↗<br>**         | ↔<br>***                   | ↑<br>***                   | ↗<br>**          | ↑<br>**     | ↔<br>***   | ↑<br>***     | ↗<br>***     |
| <b>SEO 4:</b> Protecting and managing the rich time depth and landscape texture created by the wealth of heritage assets located within the NCA, engaging both visitors and local communities in understanding the relationship between historic environment, geodiversity and biodiversity in the evolution of South Purbeck to the present day.   | ↘<br>**           | ↘<br>***         | ↔<br>***           | ↔<br>***          | ↘<br>***       | ↔<br>***           | ↔<br>**                  | ↔<br>***              | ↔<br>***                | ↗<br>**                 | ↔<br>***    | ↔<br>***        | ↘<br>**                    | ↑<br>***                   | ↑<br>***         | ↗<br>***    | ↘<br>**    | ↗<br>**      | ↔<br>**      |

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  |
|---|--|
| <p>Exceptionally diverse chalk, limestone, shale and clay geology, leading to widely varied landscape morphology.</p>   | <ul style="list-style-type: none"> <li>■ Clearly defined ridge, vale, plateau and downland character within a small NCA. Exceptionally clear and 'readable' relationship between geological structures/processes, soils, landforms and land use.</li> <li>■ Long history of extractive and processing industries associated with the various geological strata present within the NCA.</li> <li>■ Designated as United Kingdom's only natural World Heritage Site, the Dorset and East Devon Coast World Heritage Site – known as the Jurassic Coast.</li> </ul>   |
| <p>Large areas of windswept treeless landscape, elevated, exposed ridgeline with wooded northern slopes and moderately wooded Corfe Valley.</p>                                       | <ul style="list-style-type: none"> <li>■ Contrast between treeless chalk ridge and limestone plateau and moderately wooded clay vale, coastal valleys and chalk downland is a strong characteristic of the NCA.</li> <li>■ Long, unencumbered views along and from the ridge across 'blasted' heath, treeless plateau and changeable seascape all conspire to imbue the landscape with a very strong sense of place.</li> </ul>  |
| <p>A valuable range of semi-natural BAP habitats within a small area (reflection of geology). A significant concentration of arable farmland biodiversity, both plants and birds.</p> | <ul style="list-style-type: none"> <li>■ The biological diversity and richness of the South Purbeck NCA is reflected in the range of designations found here.</li> <li>■ 1,415 ha (12 per cent of the NCA) of principally coastal habitats are designated Special Area of Conservation.</li> <li>■ 109 ha of National Nature Reserve at Durlston Head including coastal habitats and unimproved grassland.</li> <li>■ 10 Sites of Special Scientific Interest totalling 1,884 ha (16 per cent of NCA), featuring grasslands, cliffs and slope, woodlands.</li> <li>■ A suite of internationally important offshore reef communities that reflect the submarine geodiversity.</li> <li>■ The entire NCA falls within the Wild Purbeck Nature Improvement Area (NIA) announced in 2012.</li> <li>■ Important areas of traditionally managed semi-natural farmland, particularly arable farmland on limestone plateau have created a refuge for a diverse relict community of arable plants and a small and declining farmland bird population.</li> <li>■ This NCA is also part of the 10 km square with the greatest diversity of plant species in the country.</li> <li>■ Important habitats in this NCA are: calcareous grassland, acid grassland, neutral grassland, ancient woodland, parkland, coastal cliffs, quarries, fen meadows and flushes and arable farmland.</li> </ul> |

| Landscape attribute  | Justification for selection  |
|--|--|
| <p>A very diverse range of species.</p>  | <ul style="list-style-type: none"> <li>■ The Lulworth skipper with obvious association with this part of the Dorset coast.</li> <li>■ The early spider orchid, chosen by the Dorset Wildlife Trust as their logo, and early gentian are both charismatic species of the coastal grasslands and are two of the botanical 'must sees' of Dorset.</li> <li>■ The summer song of skylarks, climbing far into the sky and the cacophony of bumble bees, crickets and grasshoppers along the coastal grasslands and chalk ridge are the most evocative sounds to be heard in the NCA.</li> <li>■ Bats which hibernate in the extensive abandoned quarries/mines are a good representation of the long associations between humans and the natural world in this NCA.</li> </ul>  |
| <p>Dramatic coastal landscape of tall sea cliffs of Jurassic Portland &amp; Purbeck Limestones, land slips and erosional features.</p> | <ul style="list-style-type: none"> <li>■ Internationally recognised geological record and geomorphological processes as inscribed in the World Heritage Site status.</li> <li>■ Several type localities (the locality where a particular rock type, stratigraphic unit, fossil or mineral species is first identified) for Kimmeridgian and Purbeck Beds.</li> <li>■ Exceptionally well utilised educational resource for all levels of study/</li> <li>■ Internationally recognised coastal erosional structures at Durdle Door, Lulworth Cove and Old Harry Rocks.</li> <li>■ Extensive and almost unbroken maritime cliff and slope habitats along coastal strip – designated as a Special Area of Conservation.</li> <li>■ Aesthetically outstanding and unspoilt coastline recognised in Heritage Coast designation.</li> </ul> |

| Landscape attribute   | Justification for selection   |
|---|---|
| <p>Clearly visible history of human occupation throughout the NCA.</p>  | <ul style="list-style-type: none"> <li>■ Corfe Castle dominates the skyline and the built heritage.</li> <li>■ Visible signs of human habitation, agriculture and industry from Neolithic to present day. Barrows on ridge and Corfe Common, strip lynchets on hillsides, Roman/Romano-British industrial sites, medieval to 20th century quarry workings pockmark the limestone plateau and coastal cliffs and ledges.</li> <li>■ A range of field/landuse patterns from early, irregular fields in Corfe Valley, small rectilinear system around Durlston to larger more recent patterns on the limestone plateau and arable on the chalk of Chaldon Down.</li> <li>■ Four sites entered on the Register of Historic Parks and Gardens, covering 737 ha.</li> <li>■ The gradually 'blurring' land use pattern around the lost village of Tyneham, where enforced evacuation of the village and surrounding land for military training since the Second World War has allowed natural processes to reclaim farmland.</li> <li>■ The pattern of settlement throughout most of NCA significantly unaffected by 20th century development and expansion. Small, often sensitive additions to villages, and a small number (57) of listings which belies the large number of unassuming but notable local vernacular buildings in the NCA.</li> </ul> |
| <p>Sense of place maintained by vernacular architecture and predominantly pre 20th century infrastructure patterns.</p> | <ul style="list-style-type: none"> <li>■ Use of Portland and Purbeck stones for most buildings in settlements gives a somewhat austere but strong unity to the area. Foremost amongst these is Corfe Castle and its village.</li> <li>■ Grand churches with fine Purbeck 'Marble' features are a readily visible trademark of the small settlements.</li> <li>■ On the chalk around Chaldon Herring, stone is joined by brick-with-flints as traditional materials.</li> <li>■ The strong contrast presented by Swanage strengthens both its 'differentness' through the more typically 20th century range of building 'genres' and materials and the tradition of the rest of the NCA.</li> <li>■ A narrow wending network of lanes connecting villages and hamlets/farmsteads in the valley contrasting with a sparser network of tracks on the higher ground. A single main road connecting Wareham to Swanage and guarded by Corfe Castle. A network of quarry tracks and paths now manifested as a particularly dense public rights of way network and topped by the South West Coast path, running the 42 km length of the NCA.</li> </ul>  |

| Landscape attribute   | Justification for selection  |
|---|--|
| <p>Strong sense of isolation/remoteness from the rest of Dorset, variably rugged and windswept or sheltered and enclosed.</p> | <ul style="list-style-type: none"> <li>■ Many ruined or abandoned features of the landscape (Corfe Castle, quarries, Tyneham) can inspire awe. A landscape that has seen much human endeavour come and go.</li> <li>■ Contrasts between treeless windswept plateau, ridgelines and coast and the sheltered, relatively luxuriant, valleys heighten the sense of either remoteness or shelter as one proceeds through the landscape.</li> <li>■ Predominance of natural landmarks, the various ridgelines, headlands, bays, caps and coves all combine to 'disconnect' one from modernity – those man-made features that do stand out, Corfe Castle, Clavell's Tower and Nine Barrow Down have almost become part of the natural land form with age.</li> </ul> |

## Landscape opportunities

- Protect the exceptionally diverse geology, geological processes and varied landscape morphology and the legibility of the relationship between them.
- Continue to protect the contrasts between uncluttered, prominent chalk ridgeline, enclosed clay vale and bleak exposed limestone plateau that give the unique sense of place to this NCA.
- Continue, or introduce, active interventions on habitats that depend upon 'traditional' management, principally grasslands and woodland. Plan for the extension and/or linking of existing habitats in order to increase climate change resilience and strengthen landscape permeability
- Conserve the undeveloped coastal strip, including rich biodiversity assets, significant geological and geomorphological structures and unimpeded coastal processes.
- Protect from damage and manage the rich archaeological heritage of South Purbeck. Ensure its preservation whilst enhancing accessibility for study.
- Manage the distinctive boundary features (hedges, hedgerow trees and dry stone walls) and dense network of public rights of way which not only delineate patterns of occupation and provide excellent access but also provide an essential network of ecological connections across the wider countryside.
- Manage South Purbeck's settlements, particularly Swanage to ensure that sense of place is maintained by the local vernacular and any growth is sustainable and maintains or, preferably, enhances the character of this NCA. Plan for Swanage's continued protection from rising, stormier seas whilst managing coastal processes in as natural a state as possible.
- Plan for changes in farming types, cropping patterns and crops in the face of climate change and the need to enhance biodiversity.



## 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   |
|-----------------------|---|---|------------------|---|---|---|
| <b>Food provision</b> | Livestock production<br><br>Arable production<br><br>Horticulture | Agricultural Land Classification: the NCA has no grade 1 or 2 land. 7,114 ha of grade 3 (60 per cent of NCA), 1,555 ha grade 4 (13 per cent) and 1,141 ha grade 5 (1 per cent).<br><br>Locally significant producer of lamb and milk. Small beef herd.<br><br>Very much a general farming area with no known specialisms, stock types or products associated with the area. | Local            | Livestock rearing appears to be in decline in this area with sheep numbers halved between 2000 and 2010 and pig numbers down 60 per cent. Whilst the dairy herd has declined by 5 per cent it is not clear from the figures what this means for actual milk production.<br><br>It is not clear if this reduction in numbers equates to farmers moving out of livestock all together, or moving towards mixed farms with an element of arable. | Provide livestock farmers with encouragement and advice on how to diversify into extensive beef production, utilising both the semi-natural grasslands within the NCA, and the extensive tracts of heathland and acid grassland in the adjoining Dorset Heaths NCA.<br><br>Assist land managers with the taking up of agri-environment schemes to support extensive systems of grazing suited to much of this NCA's grassland types.<br><br>Develop links between local food producers and local demand such as tourism, hotels, pubs and schools. Highlight links between the way in which food is produced and the landscape it produces.<br><br><b>Continued on next page...</b> | <b>Food provision</b><br><br><b>Regulating soil erosion</b><br><br><b>Regulating soil quality</b><br><br><b>Biodiversity</b><br><br><b>Sense of place</b> |

| Service                   | Assets/<br>attributes: main<br>contributors<br>to service | State  | Main beneficiary | Analysis   | Opportunities   | Principal<br>services offered<br>by opportunities |
|---------------------------|---|--|------------------|--|---|---|
| <b>Food<br/>provision</b> |   | Drier plateau and chalk<br>downland around the Chaldon<br>Downs appear to provide<br>productive arable cropping. |                  | A halving of full-time farm<br>workers may indicate either a<br>loss of total workers or a shift<br>to income diversification; the<br>same number, but working part-<br>time at farming. | <p><b>... continued from previous page</b></p> <p>Investigation of how food output can be<br/>increased and/or diversified without damaging<br/>the ecosystems or landscape – ideally identify<br/>how to enhance farmland biodiversity and<br/>output.</p> |   |

| Service                 | Assets/ attributes: main contributors to service      | State  | Main beneficiary | Analysis   | Opportunities   | Principal services offered by opportunities   |
|-------------------------|---|--|------------------|--|---|---|
| <b>Timber provision</b> | Existing conifer plantation and broadleaved woodlands | Some 8 per cent (891 ha) of the NCA is wooded. Only 1 per cent is of conifer, while 6 per cent is of broadleaved and less than 1 per cent mixed. | Local            | <p>Generally woodland cover is quite dispersed with much of the broadleaved on steep slopes which would make harvesting difficult. Conifer is concentrated into four distinct woodlands which may provide useful timber or pulpwood.</p> <p>There are 146 ha of plantation on ancient woodland sites (PAWs) within the NCA, equating to over half of the conifer/mixed woodland in the NCA.</p> <p>Most likely timber to come out of NCA may be specimen trees for specific projects. Given the nature of this NCA, it is not likely that it has any great potential for timber production apart from small, possibly artisanal cropping for local projects/usage.</p> | <p>Managed coppice can produce material suitable for traditional products (for example hurdles, tent pegs, charcoal).</p> <p>Restoration of PAW sites to broadleaf could secure continued supply of standard and coppice trees for local use and enhance the connectivity of the existing woodland network. The extracted material would provide a fixed-term supply of timber.</p> | <p><b>Timber provision</b></p> <p><b>Regulating water quality</b></p> <p><b>Regulating water flow</b></p> <p><b>Climate regulation</b></p> <p><b>Regulating soil erosion</b></p> <p><b>Biodiversity</b></p> |

| Service                   | Assets/ attributes: main contributors to service | State   | Main beneficiary | Analysis   | Opportunities   | Principal services offered by opportunities  |
|---------------------------|--|---|------------------|--|---|--|
| <b>Water availability</b> | <p>Aquifer recharge</p> <p>River/streams</p>     | <p>This NCA contains the River Corfe and tributaries of the Frome. The Ulwell Stream and Swan Brook flow to the sea through Swanage. The area is underlain by chalk, limestone, shale and clay rocks, with a chalk aquifer in the west of the NCA, forming part of the aquifer that underlies the Dorset Downs.</p> <p>The groundwater resources in this NCA have 'no water available' for additional abstraction.</p> <p>The Corfe river has 'water available' for further abstraction as do the tributaries of the Frome.</p> | Local            | <p>Most of the licensed abstractions are from the ground waters of the chalk aquifer, surface waters are taken from the River Corfe and Swan Brook and at least one spring-fed source (for bottled spring water).</p> <p>Main usage is for general domestic and agriculture, spray irrigation and, on the chalk of the Chaldon downs and Purbeck Ridge several potable water supplies are found.</p> <p>Since the key abstraction on the river (Wessex Water Public Water Supply at Corfe) has been revoked, the status of the river has moved to 'water available'.</p> <p>There will be a presumption against issuing new unconstrained licences in the Corfe catchment during low flow periods. This river supports water voles, a large trout population and otters that are all affected by irregular flows of water.</p> <p>There are likely to be issues around supply versus demand if any increased requirement for spray irrigation (under a scenario of drier summer conditions) arises in this area.</p> <p>Future water supplies for Swanage are set out in the water resources management plan of Wessex Water. Climate change effects have been taken into account.</p> | <p>Maintenance and restoration of semi-natural habitats, particularly grasslands and woodland present a 'rougher' surface and are better at slowing and capturing surface water down into the ground water reservoir.</p> <p>Creation of wetland areas along the Corfe river may help to store water into drier periods.</p> <p>Water efficiency and water harvesting technology in new builds will reduce demand for increased supplies into the area or from boreholes.</p> | <p><b>Water availability</b></p> <p><b>Biodiversity</b></p> <p><b>Regulating water quality</b></p> |

| Service                  | Assets/attributes:<br>main contributors<br>to service | State   | Main beneficiary | Analysis   | Opportunities  | Principal services<br>offered by<br>opportunities                                |
|--------------------------|---|---|------------------|--|--|--|
| <b>Genetic diversity</b> | Suite of rare arable 'weeds'                          | The area around St. Aldhelm's Head is host to an important concentration of plants associated with low intensity arable production. | National         | This area is still a national stronghold for a suite of species associated with low intensity arable production including pheasant's eye, shepherd's needle, corn marigold and corn parsley. | Area of low intensity arable could be increased to promote expansion of the area utilised by arable plants, increasing both resilience of the community to perturbation and providing opportunities for local food production. Expansion should be via extensification of existing arable or conversion of low diversity leys. | <b>Genetic diversity</b><br><br><b>Biodiversity</b><br><br><b>Food provision</b> |

| Service               | Assets/attributes: main contributors to service | State  | Main beneficiary | Analysis  | Opportunities   | Principal services offered by opportunities   |
|-----------------------|---|--|------------------|---|---|---|
| <b>Biomass energy</b> | Existing woodland and hedgerows                 | <p>891 ha of woodland are found within the NCA. There are also many kilometres of hedgerow. Most of this appears to be under-managed and probably under-utilised as a source of local wood fuel. There is likely to be a ready market for logs within the NCA itself.</p> <p>Potential miscanthus yield is generally low or medium throughout the area, with an area of high potential in the east around Swanage (additionally, no facilities for the processing or use of this material are known to exist in the area). Potential yield of short rotation coppice is predominantly low. For information on the potential landscape impacts of biomass plantings within the NCA, refer to the tables on the Natural England website. <a href="http://www.naturalengland.org.uk/ourwork/farming/funding/ecs/sitings/areas/default.aspx">http://www.naturalengland.org.uk/ourwork/farming/funding/ecs/sitings/areas/default.aspx</a></p> | Local            | <p>The existing woodland cover is 8 per cent offering the potential production of biomass by bringing existing woodland under management and as a by product of commercial timber production. There are limited suitable locations for new biomass plantings.</p> | <p>Existing ancient woodland can be brought back into traditional management regimes to provide biomass (wood fuel).</p> <p>Possibility that ‘under managed’ hedges and hedgerow trees could be managed for the local supply of firewood.</p> <p>These should have significant benefits to woodland/hedgerow biodiversity.</p> <p>Planting of suitable native broadleaved species for biomass could be accommodated in the Corfe Valley and around Chaldon Down, extending and linking existing woodlands and repairing gaps (especially strategic) in the hedgerow network. The chalk ridge and plateau are unsuitable both in terms of landscape character and hostility of the environment for tree growth.</p> <p>Some short rotation coppice could be introduced on the edge of Swanage, though such a scheme would only really benefit a very local end user (schools, public buildings, small district heating schemes for example.)</p> | <p><b>Biomass energy</b></p> <p><b>Biodiversity</b></p> <p><b>Climate regulation</b></p> <p><b>Sense of place</b></p> |

| Service                   | Assets/attributes: main contributors to service   | State   | Main beneficiary | Analysis   | Opportunities  | Principal services offered by opportunities  |
|---------------------------|---|---|------------------|--|--|--|
| <b>Climate regulation</b> | Woodland<br><br>Small area of fen on Corfe Common | Carbon content of the soil is 0 to 5 per cent apart from one small area to the west of the centre of the NCA that contains 20 to 50 per cent possibly associated with the thick soils of areas of fen. The woodland cover of the NCA (8 per cent of the area) will also make a contribution to the sequestration and storage of atmospheric carbon dioxide. | Local            | <p>The NCA does not appear to offer a great deal of contribution to carbon capture.</p> <p>Woodland, trees and hedges will all play a small part but even these are sparse.</p> <p>The management that promotes the continued formation of peaty fen derived soils on Corfe Common needs to be maintained, thereby continuing the sequestration of carbon into the soil.</p> <p>The NCA's extensive areas of semi-natural grassland and smaller areas of wetland will hold locally significant carbon in their soils, improved leys and arable will hold significantly less.</p> | <p>Small scale woodland planting and management will have a small added impact upon carbon capture.</p> <p>Protecting old grassland and semi-natural habitats will store soil carbon. Introducing reduced till, no till or cover crops will increase soil carbon at Chaldon Down, re-creating wetlands will increase soil carbon but may increase methane. Ploughing up grassland at St Aldhelm's will result in emission of CO<sub>2</sub> from soil. Agriculturally intensive practices are likely to result in N<sub>2</sub>O emissions; careful soil and nutrient management may help reduce this.</p> | <p><b>Climate regulation</b></p> <p><b>Biodiversity</b></p> <p><b>Sense of place</b></p> <p><b>Regulating soil quality</b></p> |

| Service                         | Assets/ attributes: main contributors to service | State   | Main beneficiary | Analysis  | Opportunities  | Principal services offered by opportunities   |
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| <b>Regulating water quality</b> | River Corfe<br>Tributaries of the Frome          | Groundwater quality is classed as poor throughout the area.<br><br>Ecological quality of the Corfe River is moderate while that of the tributaries of the Frome is good, although the Frome (including some of its tributaries) is a Priority Catchment identified by Defra, where there are high levels of sediment and phosphates in surface waters as a result of diffuse pollution from agriculture in the catchment. | Local            | <p>Apart from the south-east part of the NCA, where the Swan Brook and a couple of coastal streams flow towards the sea, the entire NCA is within a nitrate vulnerable zone (NVZ). Almost all of this is classified for both ground and surface waters.</p> <p>The most addressable water quality issue may be that of the eutrophic Corfe River which discharges into Poole Harbour. Certain actions to reduce nutrient input into this river could have landscape and biodiversity benefits as well.</p> <p>The Chaldon area of the NCA feeds into the River Frome and is already part of a priority catchment for the Water Framework Directive. The area of this catchment within the NCA is however minor.</p> | Buffering the Corfe River with semi-natural habitats including grasslands, wetlands and woodland will protect the watercourse from high nutrient flows, help slow flood flows and increase biodiversity. Wet woodland could also be managed for wood fuel. | <p><b>Regulating water quality</b></p> <p><b>Biodiversity</b></p> <p><b>Sense of place</b></p> <p><b>Water availability</b></p> |



| Service                          | Assets/<br>attributes:<br>main<br>contributors<br>to service | State   | Main beneficiary | Analysis   | Opportunities  | Principal services<br>offered by<br>opportunities   |
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| <b>Regulating<br/>water flow</b> | Series of small<br>rivers/streams                            | <p>There is little or no risk of flooding across the area, with Swanage's historical tendency to flood rectified for the time being by the construction of the Swan Brook relief channel in 1996.</p> <p>The upper reaches of the River Frome in this NCA are over chalk which can readily absorb water upstream, decreasing flooding downstream within the adjacent Dorset Heaths NCA.</p> <p>The rural character of the rest of the area means there is currently no or very little flood defence or maintenance necessary.</p> | Local            | <p>Climate change poses a scenario in which hotter, drier summers may well be interspersed with frequent extreme weather events when water flows will rapidly increase across a catchment. Therefore any measures aimed at ameliorating these effects must be able to absorb water flows in extreme conditions and release this in drier conditions.</p> <p>The chalk and limestone strata are able to absorb and later release via springs and groundwater sources large volumes of water, however, in extreme events even these are saturated and surface water becomes an issue (events in June and July 2012 has shown this in other parts of Dorset, though not in this NCA).</p> | <p>Requirements for flood management works on smaller 'flash prone' streams and winterbournes could present opportunities for wetland creation and 'soft engineering' that would benefit the functional structure and biodiversity of these waterbodies.</p> <p>Soft engineering could also be used to create areas where scour is desirable (spawning grounds) and specifically designed sediment dropping zones where lower energy flows will release sediment load.</p> | <p><b>Regulating water flow</b></p> <p><b>Biodiversity</b></p> <p><b>Regulating water quality</b></p> |

| Service                        | Assets/attributes: main contributors to service  | State  | Main beneficiary | Analysis   | Opportunities  | Principal services offered by opportunities   |
|--------------------------------|--|--|------------------|--|--|---|
| <b>Regulating soil quality</b> | <p>Shallow clay over limestone or silt over chalk</p> <p>Seasonally wet loam to clayey over shale</p> <p>Loam over sandstone and deep loam to clay over chalk</p> <p>Free-draining base-rich soils with wetter clays and alluvium in floodplain of the River Corfe and smaller streams.</p> <p>Poorly drained acidic peaty, fen derived, soils on Corfe Common.</p> <p>Arable fields, permanent pasture and semi-natural habitats.</p> | <p>The limestone plateau is typified by well-drained clayey soils and chalk areas are typified by free-draining silty to locally clayey soils.</p> <p>On Corfe Common the acidic peaty soils with impeded drainage have led to build ups of peat under fen vegetation.</p> <p>Much of the NCA (more than 60 per cent) is of grade 3 Agricultural Land Classification, areas of grades 4 and 5 (13 per cent and 10 per cent respectively) are a function of slope in most cases with thinner soils developed. The waterlogged soils of Corfe Common are also grade 5.</p> | Local            | <p>Low soil fertility is an important factor in the distribution of the best semi-natural habitats in this NCA. Low-nutrient levels and extended periods of drought due to very free drainage create conditions suited to a range of native plant communities. Excessive nutrient input and inclusion of high levels of organic matter would be detrimental to all semi-natural habitats.</p> <p>Within the arable and agriculturally improved land, soil quality could be adversely affected by inappropriate cropping patterns; leaving soils unvegetated for extended periods can diminish soil structure and quality.</p> <p>It is also possible that use of large machinery could lead to localised compaction of loams and clays and subsequent impediment to drainage.</p> <p>Poaching due to inappropriate stocking rates, particularly on clayey and peaty soils.</p> | <p>Maintaining the low-nutrient status of those soils supporting semi-natural habitats protects them from degradation and community shift towards less biodiverse stands.</p> <p>Increasing area of low-nutrient input arable land will both introduce a more sustainable nutrient cycle for this productive land and enhance the suitability for the rare arable plant population.</p> <p>In the west of the NCA, measures to introduce cropping which leaves permanent cover and relies less on heavy machinery will reduce compaction and increase naturally occurring organic content, lessening the need for artificial inputs.</p> <p>Stocking rates that maintain nutrient and organic matter without poaching particularly adjacent to watercourses.</p> | <p><b>Regulating soil quality</b></p> <p><b>Biodiversity</b></p> <p><b>Regulating water quality</b></p> <p><b>Regulating water flow</b></p> <p><b>Regulating soil erosion</b></p> |

| Service                        | Assets/ attributes: main contributors to service  | State  | Main beneficiary | Analysis  | Opportunities  | Principal services offered by opportunities   |
|--------------------------------|---|--|------------------|---|--|---|
| <b>Regulating soil erosion</b> | <p>Highly permeable clay and silty soils over chalk and limestone</p> <p>Less permeable and more fertile clay, loam and alluvium over limestone and clays</p> <p>Permanent pasture and a range of semi-natural habitats</p> | <p>The fringes of the Frome catchment in the north-west of the NCA form part of a Defra priority catchment with high levels of sediment in the river as a result of soil erosion caused by inappropriate agricultural practices. (for example, maize production on moderate to high risk soils on steeper slopes in an area of high rainfall<sup>4</sup> and with cross land flows following preferential pathways including roads and tracks that provide ideal routes for run-off to enter the watercourses.)</p> <p>Within the eastern part of the NCA erosion is less likely to be an issue with arable confined to the 'flat' and steeper areas under permanent pasture or semi-natural habitats and appropriately (though occasionally under) grazed.</p> <p>Along the coast path and some of the inland paths, visitor use has created extensive areas of 'linear' erosion.</p> | Local            | <p>Various soils display differing levels of vulnerability.</p> <p>The clay cap is easily compacted and sheds water. Calcareous soils absorb even extreme rainfall. These soils have excellent structure, do not cap and are difficult to compact. The shallow soils are prone to tillage creep, leaving the chalk bedrock exposed. Wet soils in the alluvial areas are prone to compaction and degradation. The non-calcareous silty soils easily cap and are prone to soil erosion.</p> <p>The presence of permanent pasture and large tracts of semi-natural grasslands, woodlands, hedgerows and stone walls do help check some of the potential issues above.</p> <p>Given the topography of this NCA, grazing at too high a density and/or at times of water logging can lead to poaching, compaction and overgrazing, all of which can trigger excessive surface water movement and erosion.</p> <p>In some areas the erosion of footpaths (especially the South West Coast Path) has led to a need for remedial works, but the highly absorbent nature of the chalk geology generally prevents serious secondary erosion.</p> | <p>Enhancing the quality and vegetation structure of both improved and semi-natural grasslands through optimised grazing regimes will both prevent poaching and soil compaction and enhance ability of the surface to 'capture' and slow overland water flow.</p> <p>Maintenance of areas of active soil erosion leading to exposed mineral and skeletal soils is necessary to provide niches for plants and invertebrate species reliant on such early successional habitats.</p> <p>Hedges and stone walls should be maintained and new ones created for, amongst other services, their ability to intercept and prevent water/soil movement.</p> <p>Footpaths, particularly the South West Coast Path, can be managed to provide areas of bare substrate which are utilised by various species to colonise.</p> | <p><b>Regulating soil erosion</b></p> <p><b>Regulating water flow</b></p> <p><b>Regulating water quality</b></p> <p><b>Regulating soil quality</b></p> <p><b>Biodiversity</b></p> |

<sup>4</sup> Defra catchment priorities identified under the England Catchment Sensitive Farming Delivery initiative <http://archive.defra.gov.uk/foodfarm/landmanage/water/csf/documents/catchment-priorities.pdf>

| Service            | Assets/attributes: main contributors to service                   | State   | Main beneficiary | Analysis   | Opportunities   | Principal services offered by opportunities   |
|--------------------|---|---|------------------|--|---|---|
| <b>Pollination</b> | Flower-rich maritime cliffs and species-rich calcareous grassland | <p>In the region of 2,000 ha of flower-rich maritime cliffs and species-rich calcareous grassland.</p> <p>Quite permeable landscape in terms of pollinator movement due to density and distribution of semi-natural habitats.</p> <p>The current extent of pollinator friendly habitats in the NCA is high. However, the condition of these habitats is such that they may be supporting fewer pollinators than they could.</p> | Local            | <p>There is no doubt that this NCA provides a significant and well distributed source of nectar for pollinating insects.</p> <p>However, some of the coastal grassland, whilst floristically quite diverse and still displaying many flowering plants, appears under-grazed and may be somewhat sub-optimal.</p> <p>The same can be said for much of the inland grassland which, whilst under extensive grazing management, appears sub-optimal in terms of scrub (mainly gorse) encroachment.</p> <p>Management regimes that should be in place to achieve a favourable habitat condition would, in turn, promote greater densities of pollinating species.</p> <p>The value of the pollinating service is greater here for biodiversity (pollination of semi-natural habitats) than for food production.</p> | <p>Bring areas of semi-natural grassland into suitable grazing management, including areas of coastal grassland which appear to fall outside grazing units.</p> <p>Manage scrub to prevent / reduce invasion of open grassland habitats.</p> <p>Manage woodland to open up floor and encourage floristic diversity.</p> <p>Ensure management of soft rock exposures does not destroy mining bee/invertebrate opportunities.</p> | <p><b>Pollination</b></p> <p><b>Biodiversity</b></p> <p><b>Sense of place/ inspiration</b></p> <p><b>Food provision</b></p> |

| Service                | Assets/attributes:<br>main contributors<br>to service  | State  | Main beneficiary | Analysis  | Opportunities   | Principal services<br>offered by<br>opportunities  |
|------------------------|--|--|------------------|---|---|--|
| <b>Pest regulation</b> | Well distributed semi-natural habitats<br><br>Intimate field pattern and mixed farming systems | The robust semi-natural habitat network within the NCA will support quite high levels of natural predators.<br><br>However, understanding of the contribution made by native predator species in controlling such pest species is low. | Local            | While the impact and interactions of the majority of pest-reducing predator species is not well understood, the status of farmland birds in this NCA is still apparently either stable at very low levels or still declining.<br><br>Reasons are not clearly understood, though it is likely to be due to perturbations in the predator/prey populations lower down the food chain. | Opportunities to enhance existing and create new semi-natural habitats should increase numbers of natural predators.<br><br>Attempt to realise the full potential of the NCA's farmed landscape for the suite of farmland birds that should be flourishing there. | <b>Pest regulation</b><br><br><b>Pollination</b><br><br><b>Biodiversity</b><br><br><b>Food provision</b> |

| Service  | Assets/ attributes: main contributors to service                                      | State  | Main beneficiary | Analysis  | Opportunities   | Principal services offered by opportunities  |
|--|---|--|------------------|---|---|--|
| <b>Regulating coastal flooding and erosion</b> | <p>Sequence of hard and soft cliffs</p> <p>Series of bays with protective beaches</p> | <p>The coast is dominated by sea cliffs of chalk, limestone, shale and clay of varying resistance that has resulted in differential erosion between the resistant chalk and limestone and the softer clay.</p> <p>This has been the dominant control for the formation and evolution of the present shoreline, with its many headlands separated by bays, occupied by small beaches whose sole source of sediment is the erosion of the backing cliffs.</p> <p>Erosion occurs with irregular cliff falls characteristic of the chalk and slumping of the clays. At Lulworth a combination of marine and fluvial erosion and the differing hardness of layers of rock have created the famous cove.</p> | Local/Regional   | <p>The coast of the NCA is of international importance forming the eastern end of the Dorset and East Devon Coast World Heritage Site (the Jurassic Coast). Active geomorphological processes are one of the elements of the World Heritage Site's Outstanding Universal Value (OUV).</p> <p>There has been very little in the way of coastal defence or management intervention activity on this section of largely sea cliff-dominated coast.</p> <p>The exceptions are at Lulworth Cove and Kimmeridge Bay, where small-scale localised defence works have been constructed.</p> <p>There are also more significant flood defences along the coast at Swanage (groynes plus sea wall backing beach), however these can be overtopped by extreme water levels which is likely to be exacerbated with sea level rise.</p> <p>Within the Shoreline Management Plan, a 'hold the line' defence has been suggested for Swanage; while for the rest of the coast, a 'no active intervention' policy approach has been put forward.</p> | <p>Intervene as little as possible in the natural coastal processes which dominate the coast of this NCA.</p> <p>Avoid construction of new structures/infrastructure that would, in time, require coastal defences.</p> <p>Investigate novel approaches to securing coastal assets such as with the Clavell Tower which was moved inland, rather than attempt to defend the receding cliff.</p> <p>The range of coastal habitats, both on and offshore depend upon naturalistic patterns of erosion and deposition as fundamental factors in determining community composition, succession and climax. The maintenance of the limited interventions along this coast, in turn, allows a representative suite of marine and maritime communities to develop.</p> | <p><b>Biodiversity</b></p> <p><b>Sense of place/ inspiration</b></p> <p><b>Sense of history</b></p> <p><b>Recreation</b></p> |

| Service                            | Assets/attributes: main contributors to service   | State   | Main beneficiary | Analysis   | Opportunities   | Principal services offered by opportunities  |
|------------------------------------|---|---|------------------|--|---|--|
| <b>Sense of place/ inspiration</b> | <p>Long views over dramatic coastline of cliffs, headlands and bays</p> <p>Strong link between vernacular and local materials</p> <p>Great time depth visible in a range of heritage assets</p> <p>Contrasts between exposed ridges and plateau and sheltered valley and downland</p> | <p>The rugged exposed coast, sheltered Corfe Valley and Purbeck Ridge contrasting in juxtaposition but unified by the encompassing ridge to the north and sea to the south. Chaldon Down whilst distinct is held in the NCA by the coast and the chalk topography.</p> <p>Small villages and hamlets of local stone linked by lanes and bordered by hedges or stone walls strengthen cohesion of the NCA as a single entity.</p> <p>This area has been and continues to be an inspiration to visitors. The drama of the coast and ridge, the grand approach through Hardy's 'blasted heaths' entrance between the ramparts of the chalk ridge, guarded by the brooding mass of the now shattered Corfe Castle.</p> <p>Thomas Hardy and Enid Blyton both found inspiration in South Purbeck.</p> | National         | <p>This NCA's strong identity is recognised in its inclusion within the Dorset AONB and Purbeck Heritage Coast.</p> <p>It is relatively unspoilt and presents an area considerably untouched by post-war development and still rural in character.</p> <p>The large tracts of unimproved grassland along the coast and Purbeck Ridge with their invertebrate 'hum', skylark song and other bird calls are key components of the sense of place, especially during the summer months.</p> <p>The strength of place appears uncompromised, except possibly around Swanage where typical peri-urban land use has given the area an 'unkempt' feel, though the sphere of influence is quite small.</p> | <p>The elements which make this landscape distinctive need to be protected and, where degraded, enhanced.</p> <p>The sense of openness and rugged wildness needs to be protected as this is a cornerstone element of the NCA's sense of place.</p> <p>Much development in the villages and hamlets is of high quality and actively re-enforces the distinctive vernaculars found in the NCA – this approach needs to be maintained.</p> <p>Land management practices should be sympathetic and enhancing of the biodiversity and rich cultural heritage found here.</p> | <p><b>Sense of place/ inspiration</b></p> <p><b>Sense of history</b></p> <p><b>Recreation</b></p> <p><b>Tranquillity</b></p> <p><b>Geodiversity</b></p> <p><b>Biodiversity</b></p> |

| Service                 | Assets/attributes: main contributors to service  | State   | Main beneficiary | Analysis  | Opportunities  | Principal services offered by opportunities  |
|-------------------------|--|---|------------------|---|--|--|
| <b>Sense of history</b> | <p>A suite of earthworks, field patterns and historic buildings</p> <p>95 Scheduled Monuments</p> <p>57 Listed Buildings</p> <p>4 registered Parks &amp; Gardens (737ha)</p> | <p>A rich and varied range of heritage assets mark a landscape with a long history of human occupation spanning pre-history to Second World War and beyond.</p> <p>The long history of extractive industries from shale jewellery to shale oil, not to mention the great traditions of stone extraction and masonry.</p> <p>The area is not as touched by Second World War structures as many coastal areas of Southern England, though the abandoned village of Tyneham is a poignant memorial to that period.</p> | National         | <p>The wide range of heritage assets present in this NCA have survived due, in some regards, to a lack of intensification in the post-war period. They remain susceptible to damage from direct, inappropriate management and care must be taken that they continue to receive a high level of protection.</p> <p>New threats possibly posed by climate change induced severe weather events may have an impact, for example, accelerated cliff erosion speeding loss of the hill fort at Rings Hill.</p> | <p>Protection of both heritage assets and their setting must be maintained, and where possible, enhanced in the face of any intensification of management or changes in land use.</p> <p>Seek to enhance interpretation and understanding of the area's rich heritage.</p> | <p><b>Sense of history</b></p> <p><b>Sense of place/ inspiration</b></p> <p><b>Recreation</b></p> <p><b>Tranquillity</b></p> |



| Service             | Assets/<br>attributes: main<br>contributors<br>to service   | State   | Main beneficiary | Analysis  | Opportunities  | Principal services<br>offered by<br>opportunities  |
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| <b>Tranquillity</b> | <p>Over 70 per cent of the NCA still classified as 'undisturbed'</p> <p>Remoter stretches of coastline away from Swanage</p> <p>Quiet rural lanes, hamlets, and footpaths</p> | <p>Away from Swanage, and the at times busy A351, in the east, the NCA remains almost entirely 'undisturbed'.</p> <p>Despite periods of high summer activity at Lulworth Cove and intermittent military training around Tyneham, a sense of tranquillity is associated with much of the area.</p> | Local            | <p>Tranquillity is a key feature of the area and whilst 70 per cent is still a high figure this is down from 89 per cent in the 1960s.</p> <p>The 'large scale' landscape, coupled with well distributed small settlements and narrow winding lanes provide the visitor with at times a sense of enclosure and protection and at others with wildness and exposure both creating forms of tranquillity.</p> | <p>The small scale, uncluttered nature of the NCA should be maintained, large buildings or structures should be avoided or carefully designed to minimise impact.</p> <p>The sense of wildness and uncluttered open vistas should be maintained. Where possible, existing obtrusive features (such as power lines, masts, disused structures) should be removed or more sensitively incorporated into the landscape.</p> | <p><b>Tranquillity</b></p> <p><b>Sense of place / inspiration</b></p> <p><b>Sense of history</b></p> |

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| <b>Recreation</b> | <p>South West Coast Path National Trail following the coastline (42 km)</p> <p>Public rights of way network as a whole totals 250 km at a density of 2.10 km per km<sup>2</sup></p> <p>1,313 ha of publically accessible land (covering just under 10 per cent of the NCA)</p> <p>1 NNR (109 ha)</p> <p>Rock climbing, diving and sea kayaking</p> | <p>South Purbeck is an important location for recreation of all kinds.</p> <p>The coast path is very popular, both with day trippers and those undertaking longer distance walks.</p> <p>The network of small lanes and paths that cross the NCA also provide a myriad of walks for all ability of walker.</p> <p>Corfe Castle and the small villages (and particularly their churches) are popular heritage attractions.</p> <p>Swanage provides for a more traditional, beach oriented visitor experience and provides services for those not necessarily staying there.</p> <p>The coast itself provides the setting for a variety of activity-oriented recreation, diving, rock climbing and sea kayaking being amongst the most popular.</p> <p>Both the Dorset AONB and Jurassic Coast management plans highlight the great recreational potential of this NCA, particularly the coast, with its excellent access infrastructure.</p> | National         | <p>The NCA is, on the whole, a popular destination fulfilling a broad spectrum of visitor requirements from the visceral pleasures of Swanage to the more contemplative experience of coastal walking.</p> <p>Some areas are heavily used for recreation, particularly in the summer. However, the dense network of paths, tracks and lanes allows visitor pressure to disperse somewhat across the landscape.</p> <p>The seaside resort of Swanage, the heritage destination of Corfe Castle and the village of West Lulworth in the west, dominated by its coastal caravan park and very large car park close to Lulworth Cove, are the most popular destinations.</p> <p>The A351, Swanage Road is often congested, particularly around Corfe Castle. Plans to re-connect the Swanage Railway with the main line network at Wareham will help reduce pressure on the road.</p> | <p>South Purbeck's existing network of public rights of way and permissive paths should be maintained and, where possible and appropriate, enhanced.</p> <p>Extend awareness of both the South West Coast Path and its linkages with the inland footpath network.</p> <p>Opportunities should be sought to enhance the interpretation of the landscape, geology, soils, biodiversity and heritage 'assets' of the NCA, ideally bringing a 'holistic' view.</p> <p>Development of new or expansion of existing recreational facilities should be sympathetic with and enhance their setting.</p> <p>Provision of sustainable transport options into and within the NCA will help to manage visitor pressure and avoid potentially damaging changes to tranquillity and sense of place.</p> | <p><b>Recreation</b></p> <p><b>Sense of place/ inspiration</b></p> <p><b>Sense of history</b></p> <p><b>Tranquillity</b></p> |

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|---------------------|---|---|----------------------------|---|--|---|
| <b>Biodiversity</b> | <p>Approximately 3,251 ha of priority BAP habitat (27.5 per cent of NCA)</p> <p>1,884 ha of SSSI (16 per cent of NCA) of which approx 1,415 ha (12 per cent of NCA) are SAC</p> <p>613 ha of SNCI (5 per cent of NCA)</p> <p>Most of the coast has been selected as an Important Plant Area by Plantlife</p> <p>Diverse range of habitats and species due to geology, topography and coast.</p> | <p>This NCA forms part of the most botanically diverse 10 km square in England. The high geodiversity and proximity of the coast have combined to create an area of high biodiversity.</p> <p>Most designated sites are in favourable or unfavourable recovering condition though scrub encroachment and under grazing are still issues to be fully resolved.</p> <p>Below low tide the diversity continues with extensive areas of high quality and diverse reef. The quality is such that these are being proposed as a marine SAC.</p> | International/<br>National | <p>Despite unfavourable recovering status, many of the grasslands may still be sub-optimally managed in terms of their grazing regimes.</p> <p>Scrub is still an issue on the inland ridge and some sections of coastal grassland are outside of grazing units due to difficulty of the terrain.</p> <p>Many of these areas are in agri-environment schemes and so revisiting prescriptions may prove useful.</p> <p>Farmland birds do not appear to do as well as expected in this landscape and this has been partly linked to a reduction in the invertebrate food supply, and a sub-optimal 'matrix' of supporting habitats. However, far more detail is required to clearly define the causes.</p> <p><b>Continued on next page...</b></p> | <p>Designated sites need to be brought into favourable condition via sustainable grazing extensive regimes.</p> <p>Enhanced buffering, extension and linking of the core of designated sites should be undertaken, in line Biodiversity 2020 principles.</p> <p>Landscape permeability, whilst quite good here, needs to be strengthened and extended in the face of anticipated climate change stresses on habitats and species.</p> <p>Sub-tidal habitats, though under less direct pressure than terrestrial, require better protection and study/interpretation.</p> | <p><b>Biodiversity</b></p> <p><b>Sense of place/ inspiration</b></p> <p><b>Tranquillity</b></p> |

| Service             | Assets/attributes: main contributors to service   | State   | Main beneficiary | Analysis  | Opportunities   | Principal services offered by opportunities |
|---------------------|---|---|------------------|---|---|---|
| <b>Biodiversity</b> | Offshore, areas of multiple reef features. Rich and varied habitats consisting of bedrock reef as well as boulder and cobble reef. A diverse assemblage of epifaunal species. | <p>Amongst terrestrial habitats, maritime and calcareous grasslands and ancient woodland stand out as very important.</p> <p>Significant assemblage of arable plants and farmland birds around St Aldhelm's Head.</p> |                  | <p><b>... continued from previous page</b></p> <p>Topography and extensive blocks of habitat mitigate against climate change impacts, though connectivity/permeability may need to be strengthened to facilitate migration/adaptation.</p> <p>Offshore habitats appear to be in good condition and are not threatened by excessive discharges from this NCA's coast. Threats such as acidification and temperature rise are too global in nature to address here.</p> | <p>Whilst a habitat led conservation approach suites many species, special attention may need to be paid to species with unusual requirements.</p> <p>The influence upon biodiversity, geodiversity, human history and climate should be highly profiled in any interpretation.</p> |   |

| Service             | Assets/attributes: main contributors to service  | State  | Main beneficiary         | Analysis  | Opportunities   | Principal services offered by opportunities   |
|---------------------|--|--|--------------------------|---|---|---|
| <b>Geodiversity</b> | <p>Entire coastline is part of Dorset and East Devon Coast World Heritage Site (the Jurassic Coast) – Outstanding Universal Value</p> <p>Type localities for Kimmeridge Clay, Portland and Purbeck Beds</p> <p>Important locality for the study of hydrocarbon geology and structures</p> <p>Durdle Door, Lulworth Cove and Old Harry Rocks are classic geological structures</p> <p>Local Portland and Purbeck Stones</p> <p>Long history of extractive industry embedded in the landscape</p> <p>Offshore, the geology plays a vital role in the formation of reefs. St Albans Ledge extends 10km from coast</p> | <p>The varied geodiversity of South Purbeck has produced a coastline world famous as a place to study coastal processes and landforms.</p> <p>The coastline is typically functioning in a natural state with most stretches exposed to normal, unconstrained geomorphological processes.</p> <p>Small scale local defences are found at Lulworth Cove, Kimmeridge and, on a slightly larger scale, at Swanage. None of these have any significant impact upon the processes for which this coast is so highly regarded.</p> <p>The geological SSSIs running the length of this coast are all in favourable condition.</p> <p>Offshore geodiversity is a key factor in the development of a significant array of reef communities the importance of which are due to recognised at a European level with their designation as Marine SACs.</p> <p><b>Continued on next page ...</b></p> | National / International | <p>This NCA's 42 km of coast forms part of the Dorset and East Devon Coast World Heritage Site.</p> <p>Selected for a near continuous exposure of 195 million years of geological history, for important Mesozoic fossil localities and a series of classic geomorphological structures and processes.</p> <p>School visits from primary through to A-level as well as university and adult learning groups.</p> <p>Centres offering formal education such as Lulworth Cove Heritage Centre, Durlston Country Park and Leeson House Field Studies Centre operate throughout the year.</p> | <p>Ensure the importance of this coast's geology and geomorphology are presented to both visitors and local people using interpretation of the highest quality.</p> <p>Maintain and, where appropriate, enhance levels of access to the geodiversity assets of the coast.</p> <p>Take the opportunity to provide a soils trail of Local Geological Sites, looking at how geology interacts with soils, land use, management, biodiversity and landscape.</p> <p>Strive to maintain the current levels of unmodified geomorphological processes.</p> <p>Maintain the current policy of requiring new developments in the area to reflect the vernacular in high quality builds using local stone (and other materials where appropriate) and styles.</p> | <p><b>Geodiversity</b></p> <p><b>Biodiversity</b></p> <p><b>Sense of place/ inspiration</b></p> <p><b>Regulating coastal flooding and erosion</b></p> |

| Service      | Assets/attributes: main contributors to service   | State  | Main beneficiary | Analysis  | Opportunities  | Principal services offered by opportunities |
|--------------|---|--|------------------|---|--|---|
| Geodiversity | <p>1 geological SSSI and 4 with mixed interest. 11 Local Geological Sites</p> <p>Several GCR Single Interest Localities</p> | <p><b>... continued from previous page</b></p> <p>Inland, the existence of a couple of working quarries ensures new exposures, though some exposures at worked out or abandoned sites may be lost.</p> <p>The reflection of the local building materials in the local vernaculars is well presented and continues to result in high quality, sensitive building in the small villages.</p> |                  | <p>The type section of the Kimmeridge Clay and other features relating to oil in South Purbeck are also important study sites for university students studying petroleum geology.</p> <p>Several geological type sections and single interest locations (SILs) exist in this area and continue to be actively researched.</p> <p>The World Heritage Site is managed by a small team, hosted within Dorset County Council. They have, over the last ten years, ensured that the educational, scientific and cultural aspects of the coastal geology and geomorphology have been given a high profile and quality interpretation.</p> <p>The cultural significance of the coast is high, having evidenced and influenced theories which had profound impacts on the study of geology, palaeontology and evolution itself.</p> | <p>Investigate the ways in which marine geodiversity could be illustrated and interpreted, particularly in relation to the abundant marine biodiversity.</p> |   |

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