

## Appendix D: Thematic Studies

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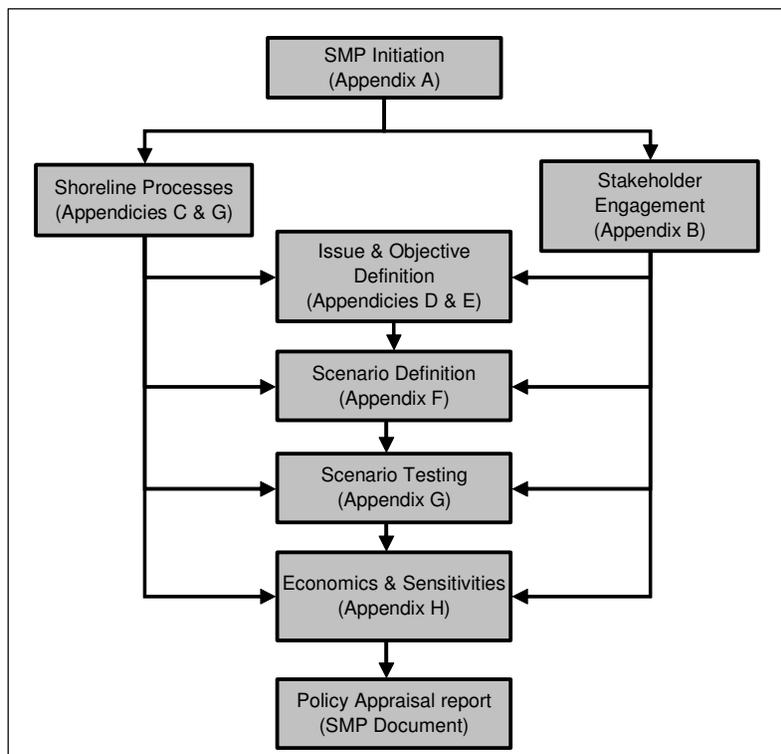


### The Supporting Appendices

This appendix and the accompanying documents provide all of the information required to support the Shoreline Management Plan. This approach ensures that there is clarity in the decision-making process and that the rationale behind the policies being promoted is both transparent and auditable. The appendices are:

A: SMP Development	This reports the history of development of the SMP, describing more fully the plan and policy decision-making process.
B: Stakeholder Engagement	All communications from the stakeholder process are provided here, together with information arising from the consultation process.
C: Baseline Process Understanding	Includes baseline process report, defence assessment, NAI and WPM assessments and summarises data used in assessments.
D: Thematic Review	This report identifies and evaluates the environmental features (human, natural, historical and landscape).
E: Issues & Objective Evaluation	Provides information on the issues and objectives identified as part of the Plan development, including appraisal of their importance.
F: Initial Policy Appraisal & Scenario Development	Presents the consideration of generic policy options for each frontage, identifying possible acceptable policies, and their combination into 'scenarios' for testing.
G: Scenario Testing	Presents the policy assessment and appraisal of objective achievement towards definition of the Preferred Plan (as presented in the Shoreline Management Plan document).
H: Economic Appraisal and Sensitivity Testing	Presents the economic analysis undertaken in support of the Preferred Plan.
I: Metadatabase and Bibliographic database	All supporting information used to develop the SMP is referenced for future examination and retrieval.

Within each appendix cross-referencing highlights the documents where related appraisals are presented. The broad relationships between the appendices are as below.





## **D1 Introduction**

This Appendix contains the theme review and identifies key features along the coast and why these features are important to stakeholders, i.e. the benefits that the feature provides in terms of nature conservation, landscape and character, human environment, including current and future land-use, and heritage. Information from this review has been used as a basis for developing policy options and assessing the implications and thus suitability of these options.

Maps illustrating the themes are included in Annex D2.



## D2 Natural Environment

### D2.1 GENERAL

As part of developing shoreline management policies it is important to understand the relationship between the areas of value to nature and geological conservation and coastal processes, and to understand how coastal defence can alter the coastal processes and therefore have an impact on nature conservation.

This section reviews the status of the 'natural' features present on the South Foreland to Beachy Head coast. This includes significant areas designated for their international and national nature conservation importance.

### D2.2 NATURE CONSERVATION

#### D2.2.1 Overview

The natural environment of the study area is characterised by a number of features:

- Chalk cliffs at its eastern and western limits, where the North and South Downs reach the sea;
- Low-lying freshwater wetlands at Romney Marsh, Pett Levels and Pevensy Levels, which are vulnerable to saline inundation;
- The massive shingle foreland of Dungeness;
- Soft eroding cliffs of Tertiary sediments, several of which are of both ecological and palaeontological interest.

The special quality of the natural habitats on this coast is recognised in a number of national and international designations. These are as follows:

#### (a) *International Designations*

- Pevensy Levels Ramsar Site
- Hastings Cliffs candidate Special Area of Conservation (SAC)
- Dungeness candidate Special Area of Conservation (SAC)
- Dungeness to Pett Level Special Protection Area (SPA)
- Dungeness to Pett Level proposed Ramsar Site

#### (b) *National Designations*

- Seaford to Beachy Head Special Site of Scientific Interest (SSSI)
- Pevensy Levels National Nature Reserve (NNR)
- Pevensy Levels Special Site of Scientific Interest (SSSI)
- Combe Haven Special Site of Scientific Interest (SSSI)
- Hastings Cliff to Pett Beach Special Site of Scientific Interest (SSSI)
- Houghton Green Cliff Special Site of Scientific Interest (SSSI)

- Winchelsea Cutting Special Site of Scientific Interest (SSSI)
- Pett Level Special Site of Scientific Interest (SSSI)
- Rye Harbour Special Site of Scientific Interest (SSSI)
- Camber Sands and Rye Saltings Special Site of Scientific Interest (SSSI)
- Walland Marsh Special Site of Scientific Interest (SSSI)
- Dungeness Special Site of Scientific Interest (SSSI)
- Dungeness National Nature Reserve (NNR)
- North Lade Special Site of Scientific Interest (SSSI)
- Romney Warren Special Site of Scientific Interest (SSSI)
- Brede Pit and Cutting Special Site of Scientific Interest (SSSI)
- Folkestone Warren Special Site of Scientific Interest (SSSI)

In addition, there is a range of sites and features covered by non-statutory designations, but which are recognised within the statutory and non-statutory planning framework. These include:

**(c) Sites of Nature Conservation Interest (SNCIs)**

- Beachy Head mSNCI
- Sub-tidal wave-cut chalk platform (Hope Point to Beachy Head) mSNCI
- Prince William Parade, Eastbourne SNCI
- Playing Fields, Sovereign Centre SNCI
- Langney Levels and Langney Sewer East SNCI
- Pevensey Bay SNCI
- Shingle Beach at Norman's Bay SNCI
- Cooden Cliffs SNCI
- Royal Sovereign Shoals marine SNCI
- Eastbourne Downland SNCI
- The Helen Garden SNCI
- Bulverhythe Shingle Beach and Cliffs SNCI
- Rock-a-Nore Shingle Beach SNCI
- Greatstone Beach SNCI
- Midley Chapel Pasture, Hawthorn Corner SNCI
- Hythe Ranges SNCI
- Royal Military Canal SNCI
- Seabrook Stream and Shorncliffe Hythe SNCI
- Western Heights SNCI

**(d) Local Nature Reserves**

- Rye Harbour LNR
- Filsham Reedbeds LNR
- Folkestone Warren LNR
- Western Heights LNR

**(e) Other Nature Reserves**

- Seven Sisters Voluntary Marine Conservation Area
- Gillham Wood Wildlife Trust Reserve
- Dungeness RSPB Reserve
- Palmarsh Gravel Pits

**(f) Biodiversity Action Plans**

The National and Kent and Sussex Biodiversity Action Plans cover this frontage. They include both Habitat and Species Action Plans, many of which are relevant to the coast. Details of the habitats and species identified are given in Annex D1.

**D2.2.2 Features****(a) South Foreland to Dover**

Dover to Kingsdown Cliffs SSSI comprises cliff top chalk grassland and cliff face habitats together with important chalk foreshore platforms. These are of national importance and their loss within the study area would be of high significance. Cliff-top chalk grassland could be re-created on other downland sites and its loss within the study area would be of high significance. Cliff face habitats should be regarded as essentially non-recreatable and their loss within the study area would be of high significance. Foreshore habitats should be regarded as essentially non-recreatable and their loss within the study area would be of moderate significance.

**(b) Dover to Folkestone**

Folkestone Warren SSSI and LNR comprise cliff top chalk grassland and an intertidal reef on Lower Greensand. These are of national importance and currently in favourable condition. Cliff-top chalk grassland could be re-created on other downland sites and its loss within the study area would be of high significance. Intertidal reefs, however, should be regarded as essentially non-recreatable and their loss within the study area would be of moderate significance. Posford Haskoning (2003) suggests that removal of redundant sea defences along the Folkestone Warren section, in combination with decommissioning the railway, would provide ecological enhancements by allowing natural processes and suggests an SMP policy of Limited Intervention. Western Heights LNR and SSSI are chalk grassland within urban Dover, which is also a Scheduled Ancient Monument. The chalk grassland and chalk heath habitats are essentially terrestrial and could be re-created on downland that is currently in other forms of land use such as agriculture.

**(c) Dungeness**

The Dungeness peninsula, from Camber to Hythe, includes several features of great biological interest. These are:

- The vegetated shingle, freshwater/brackish pools and bird habitats of Dungeness itself, which are of international importance and, by virtue of their scale and location, could not be re-created elsewhere. English nature regards these as currently not in favourable condition. The loss of these features within the study area would be of high significance.

- Sand dunes and dune grassland at Romney Warren and Camber Sands. These are of national importance and, whilst re-creation elsewhere in a suitable location is possible in principle, the need for specific conditions characteristic of such a dynamic environment would make this difficult in practice. The loss of these features within the study area would be of moderate significance.
- Walland Marsh, which mainly comprises coastal and floodplain grazing marsh used by birds, reedbeds and are botanically rich dykes. These are of national importance but potentially could be re-created elsewhere in a suitable location through a process of habitat migration between saline, brackish and freshwater conditions. The loss of such characteristic coastal features within the study area would be of high significance.

There is also a number of SNCIs, which are of local or regional importance:

- Seabrook Stream and Shorncliffe Hythe SNCI, a river valley including alder/willow carr and some ancient semi-natural woodland (not re-creatable);
- Royal Military Canal SNCI - aquatic flora and amphibians (re-creatable);
- Hythe Ranges SNCI – grassland, scrub and shingle (re-creatable in principle, provided the necessary dynamic conditions exist on a site that does not presently support vegetation);
- Midley Chapel Pasture Hawthorn Corner SNCI – unimproved grassland (re-creatable); and
- Greatstone Beach SNCI – shingle beach supporting wintering waders (re-creatable in principle, provided the necessary dynamic conditions exist on a site that does not presently support vegetation).

The loss of these features within the SMP area would be of moderate significance.

Posford Haskoning (2003) suggests that a policy of managed realignment be considered for sections of this frontage including parts of Dungeness peninsula and Littlestone Golf Course in order to reinstate natural processes and create low dunes. The Coastal Habitat Management Plan (CHaMP) (Posford Haskoning 2003) considers a number of options for the management of the frontage, though it does not recommend one in particular as the purpose of the CHaMP is to inform the policy selection process of the SMP. To facilitate achieving this, the CHaMP examines the possible long term implications of sea level change, coastal defence activity and the effect on habitats within the Natura 2000 network of internationally protected sites. The CHaMP endorsed the following options:

- Do Nothing
- Hold the line / maintain (existing practice)
- Hold the line (alternative – cessation of beach profiling and sourcing of shingle from offshore)
- Managed retreat – removal of the terminal groyne (apparently this refers only to the Rye Harbour frontage)
- Managed retreat to 1800 coastline (apparently this refers only to the Rye Harbour frontage).

**(d) Rye Harbour to Cliff End**

Pett Levels is a freshwater wetland of particular importance for breeding and over-wintering birds. It is regarded as internationally important and its loss in the study area would be of high importance, but in

principle it is a re-creatable habitat. English Nature considers the condition of habitats in this section to be partly unfavourable.

The shingle beach from Winchelsea to Rye Harbour Arm forms part of Dungeness candidate SAC and is of international importance for its annual and perennial vegetation. These habitats are in principle re-creatable but the size of the vegetated shingle complex means that re-creation of the whole feature could not be achieved in practice, so it should be treated as not re-creatable. Its loss within the study area would be of high importance.

Posford Haskoning (2003) suggests that a policy of managed realignment be considered for sections of this frontage to create intertidal habitats. The Coastal Habitat Management Plan (Posford Haskoning, 2003) considers a number of options for the management of the frontage, though it does not recommend one in particular:

- Do Nothing
- Hold the line / maintain (existing practice)
- Hold the line (alternative – cessation of beach profiling and sourcing of shingle from offshore)
- Managed retreat – removal of the terminal groyne
- Managed retreat to 1800 coastline.

**(e) Cliff End to Hastings Cliffs**

The stretch of eroding cliffs extending from Cliff End to Hastings Cliffs, incorporating Fairlight Cove, forms part of the Hastings to Pett Beach SSSI, designated for its geological and biological importance. The SSSI is internationally important for the palaeo-botanical and vertebrate palaeontological fossils found in the cliffs. The coastal site also includes examples of complex cliff faults and supports nationally important ancient woodland, scrub, maritime grassland and vegetated shingle beach habitats. The current SSSI habitat is considered by English Nature to be favourable.

**(f) Hastings Cliffs**

Hastings Cliffs support vegetated sea cliff of the Atlantic and Baltic coasts and are designated as a candidate SAC, indicating their international significance. As an essentially unmodified natural habitat, they should be regarded as essentially non-re-creatable and their loss within the study area would be of high significance. English Nature considers the current SSSI habitat condition to be favourable.

The cliffs also support ancient woodland, scrub, maritime grassland and a vegetated shingle beach, considered to be of national significance. Ancient woodland is not re-creatable, whilst the other habitat types probably are within a 50 to 100 year time scale. In the case of vegetated shingle, this is provided the necessary dynamic conditions exist on a site that does not presently support vegetation.

Cooden Cliffs SNCI is an area of low, steep cliffs with patches of fine grassland and maritime species that is of local importance and may therefore be considered as re-creatable.

Combe Haven SSSI is approximately 2 km inland, but within the coastal flood zone. It comprises meadow and reedbed of national importance, which may be considered re-creatable.

There are two shingle beach SNCI sites – Bulverhythe Shingle Beach and Cliffs and Rock-a-Nore Shingle Beach, both of which have been disturbed by sea defence works and recreation. Both are of local/regional significance and may be considered re-creatable, provided the necessary dynamic conditions exist on a site that does not presently support vegetation.

**(g) Pevensy Bay**

Pevensy Levels is a low-lying grazing marsh intersected by brackish and freshwater ditches, which supports rare and unusual species of plants and invertebrates, together with significant populations of wintering birds. There is also vegetated shingle interest on the foreshore, which is currently not in favourable condition. The site as a whole is of international significance to nature conservation and its loss within the study area would be of high significance. Although the habitats themselves are re-creatable, at least in principle, much of the value of this wetland derives from its size and location and in practice it would be difficult to find a site where re-creation could be achieved.

There are also two SNCIs within Pevensy Bay, both of which are vegetated shingle sites. These may be considered to be of local/regional significance and potentially re-creatable on other suitable coastal sites, provided the necessary dynamic conditions exist and that other conservation interests, if present, can be accommodated as advised by English Nature.

Posford Haskoning (2003) suggests that a policy of managed realignment be considered for Pevensy Levels to create intertidal habitats.

**(h) Eastbourne**

There is a number of SNCIs in Eastbourne:

- The Helen Garden, which comprises lawn and cliff edge flora;
- Friston Forest, which is beech and pine plantation with species-rich rides and grassland areas.
- Prince William Parade, comprising vegetated shingle;
- Playing fields at Sovereign Centre, which support scrub and rare species; and
- Langney Levels and Langney Sewer East, which is a grassland and wetland site, also supporting vegetated shingle, which has been reduced in value by the construction of the Sovereign Harbour development.

These are of local/regional importance; their loss would be of moderate significance and may be considered re-creatable within a time scale of 50 to 100 years. In the case of cliff edge and vegetated shingle habitats, any such recreation would have to be on other suitable coastal sites where the necessary dynamic conditions exist.

Posford Haskoning (2003) suggests that a policy of managed realignment be considered for sections of The Crumbles frontage to restore vegetated shingle and create saline lagoons, though these aspirations appear to be in conflict with recent development of the area.

**(i) Beachy Head**

Beachy Head (SSSI) comprises a diverse range of habitats including herb-rich chalk grasslands, chalk heath, maritime grassland, foreshore and chalk cliffs. English Nature currently considers the SSSI to be in favourable condition. The habitats are of national importance and their loss within the study area would be of high significance. The chalk cliff habitats could only be re-created in an area of coastal chalk, which only occurs in limited locations, and should therefore be regarded as essentially non-recreatable. The chalk grassland and chalk heath habitats are essentially terrestrial and could be re-created on downland that is currently in other forms of land use such as agriculture.

## **D2.3 EARTH HERITAGE**

### **D2.3.3 Overview**

The earth science interest of the coastline includes geomorphological, stratigraphic and palaeontological features. The cusped shingle foreland of Dungeness is one of the best examples internationally and exhibits a series of shingle ridges and back barrier deposits illustrating formation over thousands of years. The chalk exposures of the South Downs exhibit both chalk stratigraphy and periglacial geomorphology, including a section through a dry valley at Birling Gap. The Wealden cliff and foreshore strata at Bexhill and Hastings contain some of Britain's most important dinosaur and Cretaceous plant fossils.

A number of national designations in the study area include features of importance to earth science:

- Seaford to Beachy Head SSSI
- Hastings Cliff to Pett Beach SSSI
- Dungeness SSSI
- Folkestone Warren SSSI

### **D2.3.4 Features**

**(a) South Foreland to Dover**

Dover to Kingsdown Cliffs SSSI contains stratigraphically important chalk exposures, together with fossils and geomorphologically significant examples of cliff erosion and its relationship to the shore platform. This is a site of national importance that should be regarded as non-recreatable.

**(b) Dover to Folkestone**

Folkestone Warren includes two internationally important reference sites for stratigraphic studies of coastal terrain of the Cretaceous period, together with a succession of coastal landslips creating complex and interesting terrain. This is a site of national importance that should be regarded as non-recreatable.

**(c) Dungeness**

Dungeness is the largest cusate shingle foreland in Europe and its shingle ridges exhibit a record of geomorphological evolution over thousands of years. This is a nationally important site of great interest from the point of view of coastal evolution, which is not re-creatable.

Posford Haskoning (2003) suggests that a policy of managed realignment be considered for sections of the Dungeness frontage to restore more dynamic coastal processes.

**(d) Rye Harbour to Cliff End**

The shingle ridges at Rye Harbour are smaller in scale and younger in age than those of Dungeness but represent part of the same system and are similarly of national importance and not re-creatable.

**(e) Hastings Cliffs**

The site contains 6 km of eroding sea cliffs with Wealden exposures. The cliffs between Covehurst Wood and Lee Ness Ledge are Britain's most important site for Cretaceous fossil plants. Below Fairlight Cliffs are tree stumps probably belonging to an extinct family of tree ferns. This is a site of national importance that should be regarded as non-recreatable.

There are also Regionally Important Geological Sites at Fairlight Cove and Cliff End.

**(f) Hastings and Bexhill**

There are Regionally Important Geological Sites (RIGs) at Galley Hill and Little Galley Hill in Bexhill and Foul Ness in Hastings. There are dinosaur footprints on the foreshore at Cooden. These are of regional significance and essentially non-recreatable.

**(g) Eastbourne**

There is one Regionally Important Geological Site (RIGs) at The Crumbles. This comprises marine deposited shingle ridges, but much of the interest has been lost to development, which makes their remaining geomorphological value questionable. Consequently they are regarded as of only local significance, though their remaining value as a record of geological evolution is not re-creatable.

Posford Haskoning (2003) suggests that a policy of managed realignment be considered for sections of The Crumbles frontage to restore more dynamic coastal processes, though this appears to conflict with recent development.

**(h) Beachy Head**

Beachy Head is of national importance for its chalk stratigraphy. Cow Gap is of particular value for its chalk and periglacial geomorphology. These features are essentially non-recreatable.

## D3 Landscape and Character

### D3.1 GENERAL

Coastal defence provision (and therefore SMP policy) may also have an impact on the landscape of an area, depending on the type of defence used, and the significance of this will depend upon the importance placed upon a particular landscape.

This section reviews the status of the landscape and character on the South Foreland to Beachy Head coast. This includes areas designated for their high landscape value.

### D3.2 LANDSCAPE AND VISUAL FACTORS

#### D3.2.1 Overview

The South Foreland to Beachy Head coastal landscape includes a range of landscape types, from coastal plains and marshes to high chalk cliffs and from highly developed urban centres to undeveloped agricultural land. The coastal landscape includes parts of the recognised South Downs and High Weald areas. Several areas of the coastline are considered to be of high value, as reflected in the Area of Outstanding Natural Beauty (AONB), Heritage Coast, Special Landscape Area (SLA) and Local Landscape Area (LLA) designations.

#### D3.2.2 Features

##### (a) *Dover to Folkestone*

The Dover to Folkestone coast is dominated by high chalk cliffs. Development is centred on the towns of Folkestone and Dover and the villages of Capel-le-Ferme and Aycliff. The coast at Folkestone Warren provides a vantage point with views of Shakespeare Cliff and the white Martello Towers. The Towers form a distinctive landscape feature<sup>1</sup>. The cliffs provide a vantage point with seaward views across the Channel to France and landward views of the downs<sup>2</sup>. Outside the towns, sections of the Folkestone to Dover cliffs remain in a relatively unmodified state, but much of the coast has been altered by the construction of the railway and Samphire Hoe Country Park. Despite this, the white cliffs of Dover, which surround the town, are an internationally recognised landmark.

Approximately 80% of this section of coast falls within the **Kent Downs AONB**, the **Folkestone Warren Heritage Coast** (Copt Point) and the **Dover-Folkestone Heritage Coast**<sup>3 4</sup>. The coastline is less impressive than that to the north of Dover. However, the cliffs are visually important as the coastal termination and exposure of the chalk ridge that forms the **Kent Downs AONB**. In terms of

<sup>1</sup> *Cliff End to Folkestone Strategy Review, Appendix E Strategic Environmental Appraisal, Halcrow, 2002*

<sup>2</sup> *Landscape Features in [www.kentdowns.org.uk](http://www.kentdowns.org.uk), 2003.*

<sup>3</sup> *Areas of Outstanding Natural Beauty, Kent Downs in [www.countryside.gov.uk](http://www.countryside.gov.uk), 2003.*

<sup>4</sup> *Cliff End to Folkestone Strategy Review, Appendix E Strategic Environmental Appraisal, Halcrow, 2002*

importance, scarcity and the difficulty of replacing them, they are comparable to the cliffs at Beachy Head, in the Sussex Downs AONB.

**(b) Folkestone to Lydd on Sea**

This stretch of coast leading northwards from the Dungeness foreland comprises a wide sandy foreshore with larger expanses of mudflats exposed at their toe. Landscape features include the hard defences of Dymchurch, built-up areas (holiday bungalows and residential properties) and the coastal road that runs almost continuously along the coastline and the low-lying banks adjacent to Hythe Ranges. The coast between St Mary's Bay and Hythe is dominated by seawalls, particularly the Dymchurch Wall, and groynes, which are visible at low tide. Wide sandy beaches are characteristic of the coastal stretch to the south whilst the shoreline adjacent to Hythe Ranges is predominantly low-lying shingle banks with sparse and scrubby vegetation<sup>5</sup>.

The coast is backed by Romney Marsh, identified as a **Character Area** by the Countryside Agency<sup>6</sup>. The **Old Romney Shoreline SLA** rises steeply along the northern and western edges of Romney Marsh and is visible from quite a distance. This represents the Neolithic coastline, prior to the formation of Dungeness during the Holocene, and is an interesting and important landscape feature<sup>7</sup>. There is a number of local landscape designations conferred by Shepway District Council, including.

- **Seabrook Valley LLA.**
- **Romney Marsh LLA.**
- **Sandgate Escarpment LLA.**
- **Cooling Lane LLA.**
- Undeveloped Coast, including stretches between Hythe and Dymchurch Redoubt; Willop Basin (St Mary's Bay) and Littlestone-on-Sea, and Greatstone-on-Sea and Dungeness.

Despite these designations, the coastal landscape appears to be of lesser significance than that in the adjoining coastal areas, without particular scarcity and importance, especially given the level of recent coastal development.

**(c) Dungeness/Lydd on Sea to Cliff End/Pett Levels**

As noted in the Cliff End to Folkestone SEA<sup>8</sup>, the landscape is characterised by the large flat expanses of the Pett Levels, Walland Marsh and Dungeness that are bounded to the south and east by the sea and to the north and west by the Neolithic cliff shoreline (which reaches the coast at Folkestone). The landscape features vary from the Rother estuary and the rolling sand dunes of Camber Sands to the internationally important cusped shingle foreland of Dungeness. These different features impact on the landscape and are briefly described below from Cliff End to Dungeness.

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<sup>5</sup> *Cliff End to Folkestone Strategy Review, Appendix E Strategic Environmental Appraisal, Halcrow, 2002*

<sup>6</sup> *Cooden to Cliff End PAR, Appendix E Strategic Environmental Appraisal, Halcrow, 2002*

<sup>7</sup> *Cliff End to Folkestone Strategy Review, Appendix E Strategic Environmental Appraisal, Halcrow, 2002*

<sup>8</sup> *Cliff End to Folkestone Strategy Review, Appendix E Strategic Environmental Appraisal, Halcrow, 2002*

The river levels around Pett, Winchelsea and Rye are remarkable expanses of open farmland, with almost no roads or houses. The river levels and marshes are criss-crossed by ditches or 'sewers'. Although many of the smaller sewers have been filled in, the network is a fundamental part of this open landscape, making fences and hedges unnecessary. The great, open expanse of the Brede and Tillingham valleys is interrupted by occasional stately rows of Lombardy poplars. An ancient cliff rears up along what was once the edge of the coast, around Rye, Winchelsea and Pett. In Roman times, much of the area now known as the Brede and Pett Levels was tidal estuary and mudflats. The gradual silting up of these estuaries, and the drainage that followed, has resulted in the formation of the present flat agricultural landscape with its ditches.

**(d) Cliff End to Hastings**

The sandstone cliffs between Cliff End and Hastings are part of the **High Weald AONB**. The cliffs are fissured by steep, scrubby gulleys, which are gradually crumbling into the sea<sup>9</sup>. Although less dramatic than Beachy Head, this area also provides an elevated vantage point. The undeveloped cliff top area immediately adjacent to Hastings is an important visual feature, due to its connotations with Hastings Castle and Wall. Significant sections of the cliff top and cliff face present a 'wild' appearance due to the scrubby vegetation that has colonised them and their eroding, undefended nature. This forms a visual contrast with the farmed land and the residential cliff top areas at Fairlight. Fairlight church overlooks the sea, 160m above sea level. The short section of coastal defence at Fairlight Cove is not in keeping with the natural character of the cliffs and cliff toe. The landscape is regionally significant and scarce, with no other high sandstone or scrub-vegetated cliffs on the south-east coast. The south-western section of this coastline is particularly important, as the cliff top has not been developed. Substitution of this area, in landscape and character terms, is not practicable within the south-east region, given that this is the only area of sandstone cliffs.

The estuary of the River Rother is a dominant feature with the town and harbour of Rye overlooking Walland Marsh, providing an impressive viewpoint over the surrounding vast expanses of the Marsh. The coastline to the east of the Rother is predominantly sandy with groyne dominating visually. Sand dunes rise to the south of Camber village with the sandy foreshore eventually giving way to shingle beaches fronting the military ranges of Lydd and upon which lie the nuclear power stations of Dungeness.

**(e) Hastings to Eastbourne**

The Pevensey Levels are recognised as a distinct **Character Area** by the Countryside Agency<sup>10</sup>. The shingle ridge and beachscape are backed by low-lying, flat levels, which are criss-crossed with drainage ditches. The most significant viewpoints are those from the houses, of which there are approximately 400 along the beach crest orientated to benefit from a sea view. The coast also provides a significant visual amenity to pedestrians walking on the shingle ridge and the beach. Existing visual amenity of residents and visitors is temporarily reduced by the presence of bulldozers working on the shingle ridge under the existing beach management regime<sup>11</sup>. The landscape of the

<sup>9</sup> Cooden to Cliff End PAR, Appendix E Strategic Environmental Appraisal, Halcrow, 2002

<sup>10</sup> Redoubt to Cooden PAR, Appendix E Strategic Environmental Appraisal, Halcrow, 2002

<sup>11</sup> Redoubt to Cooden PAR, Appendix E Strategic Environmental Appraisal, Halcrow, 2002

levels is of local importance; however the coast, with the extensive linear development is of little landscape importance. There is potential to significantly improve the landscape value of this area if the coast were allowed to realign and areas of nature shingle ridge and intertidal saltmarsh created.

The low-lying shingle area of Dungeness is a striking landscape feature. The whole area is flat and very open with ridges of rolling shingle across Dungeness, marking the deposition via storm ridges (Halcrow, 1995). There are a number of disused gravel extraction pits, the machinery for which can be seen across the flat and low-lying areas. Besides the machinery of the disused gravel pits, there is another, more dominant, man-made landscape features at Dungeness: the nuclear power station site. Two nuclear power reactors are sited at Dungeness Point. The size of the reactors and intense lighting at night make them key features of the landscape. Two lighthouses are also of visual significance and these are also included within the Dungeness Built Conservation Area<sup>12</sup>.

Much of the reclaimed tidal marshes of the Pett Levels and Walland Marsh are located in the **High Weald AONB**<sup>13</sup>. The Walland Marsh and Wealden Greensands have also been identified by the Countryside Agency as **Character Areas**<sup>14,15</sup>. The **Dungeness SLA** encompasses the Dungeness shingle landscape<sup>16</sup>. The reclaimed marshes and Rye Harbour are an old landscape that visually represents centuries of human intervention in reclaiming and maintaining the area<sup>17</sup> and deposition of a series of shingle ridges. Such undeveloped areas of historic coastal marsh landscape are uncommon in south-east England. It would not be possible to provide alternative areas of similar landscape value, because much of the landscape value is drawn from its links to historic reclamation activities.

**(f) Eastbourne to Beachy Head**

The South Downs comprise a long prominent spine of chalk, which stretches from Hampshire, eastwards, across West Sussex to the coastal cliffs of East Sussex. The eastern end of the **Sussex Downs AONB** extends to the coast. The chalk cliffs of Beachy Head and the Seven Sisters form the most easterly point of the rolling downland, ending abruptly with a sheer drop to the sea. The red and white striped Beachy Head lighthouse is situated at sea level just offshore from the base of the cliff. The **Sussex Heritage Coast** designation includes the coast between Cuckmere Bay and Beachy Head. The South Downs are designated as an **Environmentally Sensitive Area** (designated for landscape, wildlife and historic interest). It is a nationally important landscape of rolling chalk downland, identified as a distinct **Character Area** by the Countryside Agency. Much of the coastline is owned by the National Trust, and it is Trust policy to maintain and enhance the landscape character of the area.<sup>18</sup>

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<sup>12</sup> *Cliff End to Folkestone Strategy Review, Appendix E Strategic Environmental Appraisal, Halcrow, 2002*

<sup>13</sup> *Rye Bay Countryside Management Plan (summary in [www.ryeharbour.org](http://www.ryeharbour.org), 2003)*

<sup>14</sup> *Cooden to Cliff End PAR, Appendix E Strategic Environmental Appraisal, Halcrow, 2002*

<sup>15</sup> *Cliff End to Folkestone Strategy Review, Appendix E Strategic Environmental Appraisal, Halcrow, 2002*

<sup>16</sup> *Cliff End to Folkestone Strategy Review, Appendix E Strategic Environmental Appraisal, Halcrow, 2002*

<sup>17</sup> *Draft High Weald AONB Management Plan 2004: A 20 Year Strategy (in [www.highweald.org.uk](http://www.highweald.org.uk) 2003).*

<sup>18</sup> *Cuckmere to Redoubt PAR, Appendix E Strategic Environmental Appraisal, Halcrow, 2002*

Beachy Head and the lighthouse are iconic visual symbols of the south-east coast. There are no other areas with the same combination of undeveloped chalk downlands, chalk cliffs and a distinctive, solitary man-made structure. As such, the landscape is not replaceable and the Beachy Head assemblage, in particular, is considered to be of national importance. The remainder of the South Downs coast, on either side of Beachy Head, provides an important visual backdrop and forms a coherent undeveloped headland, edged by the chalk cliffs. It provides an important vantage point for landward views across the South Downs and seaward views towards the Channel. The isolated, undeveloped, elevated character of the headland is considered to be of national importance and is rare within the developed southeast region.



## D4 Historic Environment

### D4.1 GENERAL

This section reviews the heritage features found on the South Foreland to Beachy Head coast, including both archaeological and historic elements in the terrestrial and marine environments.

The Government's policy on archaeological remains is set out in PPG16 (para.6) it states that: 'Archaeological remains should be seen as a finite and non-renewable resource, in many cases highly fragile and vulnerable to damage and destruction. Appropriate management is therefore essential to ensure they survive in good condition'.

From a local point of view the historic environment is important as features such as Dover Castle contribute to the local economy.

### D4.2 TERRESTRIAL

#### D4.2.1 Overview

The South Foreland to Beachy Head coast has been settled since prehistoric times and has a rich cultural heritage. There is an abundance of archaeological sites and historic sites, dating from the more recent past, are also plentiful. The sites are protected as Scheduled Monuments, Conservation Areas or designated Archeologically Sensitive Areas. The importance and scarcity of the heritage features is discussed in this section. Substitution of resources lost to coastal erosion and/or flooding is not relevant in this context.

#### D4.2.2 Features

##### *(a) Dover to Folkestone*

The quality of the District's historic environment is extremely high. The District includes the South Foreland Heritage Coast and the Dover-Folkestone Heritage Coast. These are the only stretches of Heritage Coast in Kent. The Dover-Folkestone Heritage Coast includes a large area reclaimed from the sea at the foot of Shakespeare Cliff. This area, named Samphire Hoe, was created by depositing spoil from the Channel Tunnel. Archaeological sites and remains of international importance date from the prehistoric period onwards.

Dover is of exceptional archaeological and historical importance, termed the "gateway to England" it has a network of prehistoric, Roman, medieval and later defences. The town's importance is also reflected in the discovery of a Bronze Age boat, major Roman remains and Dover Castle (which was probably an Anglo-Saxon fortress and, on the arrival of William the Conqueror, the existing fortifications were improved with the building of an earthwork castle. This Norman 'motte' (mound) which supported the castle is today known as 'Castle Hill'). The centre of Dover is therefore deemed a Town of Archaeological Importance.

Historic Parks and Gardens are also a valuable part of the regions heritage, and may be important for wildlife, tourism, recreation and education, as they frequently contain listed buildings and structures, such as fountains and gazebos.

Scheduled Ancient Monuments:

Title	Description	NGR
Western Heights LNR	A chalk grassland within urban Dover	
Archcliffe Fort, Dover	Stands on a headland over looking the harbour	TR 31504027
Martello Tower, East Cliff	-	
Langdon Battery CASL and Langdon stairs	Smugglers Stairs cut into cliff face	634550 142500
Spigot Mortar Emplacement (pedestal)	-	634800, 142600
Land defence, Cornhill, Dover	Land defence position (No 2?) Cornhill	634650, 142520
Coast artillery engine	Engine, generator and caretakers house for searchlight battery	634500, 142560
Light AA gun positions	Light AA gun positions, Cliff Road, Dover	634050, 142300
Light AA gun positions	Light AA gun positions, Langdon Hole	634350, 142480
Defence works	Defence works north of Langdon Hole	634400, 142500
Abbots Cliff sound mirror	Situated between Folkestone and Dover	TR27083867
Martello Tower	Copt Point, Folkestone	-

**(b) Folkestone to Cliff End/Pett Levels**

This description of heritage features has been extracted from the Cliff End to Folkestone Strategic Environmental Assessment.<sup>19</sup>

The Rother District is an area of great importance for archaeology and cultural heritage due, in part, to the presence of 37 Scheduled Monuments<sup>20</sup>. These are notified by the Secretary of State for the

<sup>19</sup> *Cliff End to Folkestone Strategy Review, Appendix E Strategic Environmental Assessment, Halcrow, 2002*

<sup>20</sup> *County List of Scheduled Monuments, East Sussex, 1996*

Environment as Ancient Monuments of national importance by virtue of their historic, architectural, traditional or archaeological interest. There are also approximately 100 other sites of archaeological interest in the District, together with nine designated Conservation Areas. Many of the important historical features in the area, such as Camber Castle and the Royal Military Canal, are military structures relating to defence of the coast and dating from the early sixteenth century to World War II. Details of **Scheduled Monuments** are given in Table D4.1.

Table D4.1: Scheduled Monuments (Folkestone to Cliff End)

Parish	SM No	Title	NGR
Icklesham	3	Camber Castle	TQ 921 184
Winchelsea	7	Winchelsea Friary (known as Greyfriars)	TQ 906 171
Rye	8	Ypres Tower	TQ922 203
Rye	17	Rye Land Gate	TQ922 206
Winchelsea	18	Strand Gate	TQ 907 174
Winchelsea	19	Ferry Gate	TQ 903 177
Winchelsea	20	New Gate	TQ 901 164
Winchelsea	23	The Court Hall	TQ 905 175
Rye	30	Rye Town Wall	TQ 920 205 TQ 921 206 TQ 919 204 TQ 918 203
Rye	66	Peacocks School, High Street	TQ 920 204
Rye	147	Austin Friars Chapel	TQ 921 204
Rye	163	Water Tower	TQ 921 203
Winchelsea	166	Barn and cellar in Rectory Lane	TQ 903 173
Rye	171	Martello tower No. 30 near level-crossing on Winchelsea Road	TQ 918 199
Icklesham	172	Martello Tower, No 28 at Rye Harbour	TQ 941 188
Icklesham	355	Medieval town of Winchelsea	TQ 907 172 TQ 902 174 TQ 903 170 TQ 902 170 TQ 904 168 TQ 901 167

Parish	SM No	Title	NGR
			TQ 903 167
Icklesham	451	Moat at Old Place	TQ 882 168
	468	Field System, Bullock Down	TV 582 962
Pett	488(A)	Royal Military Canal – Cliff End to Coastguard Cottages	TQ889 133 – TQ 894 139
Pett	488 (B)	Royal Military Canal, Coastguard Cottages to Wickham Cliff	TQ 894 139- TQ 895 156
Pett, Icklesham	488 (C)	Royal Military Canal, Wickham Cliff End to Strand Bridge, Winchelsea	TQ 895 156- TQ 909 175
Iden	488 (D)	Royal Military Canal – Iden Lock	TQ 936 244
Iden	488 (E)	Royal Military Canal – Iden Lock to Kent Ditch	TQ 936 244 – TQ 940 252

Further **Scheduled Monuments** located between Rye and Folkestone include:

- Aldington Knoll Roman Barrow and later beacon
- Chapel at Court-at-Street
- Domestic Chapel at Horne's Place
- Dymchurch Redoubt
- Eastbridge Church
- Lade Fort
- Martello Tower No 5, 23, 24
- Moat and Associated closes at Marshall's Bridge
- Ring ditch and rectangular enclosure SE of Mockbeggar
- Roman Villa
- Saltwood Castle
- Sandgate Castle
- Stutfall Castle
- World War II underground operational base.

A remnant of the famous Second World War Mulberry harbours, a caisson, lies off Littlestone. This has been identified by English Heritage as an important site, which could potentially be threatened by coastal defence works.

Conservation Areas include:

- The towns of Winchelsea and Rye, although the towns are not included within the potential coastal flooding area due to their elevation above sea level.
- The old port of Hythe, around the High Street.

- Much of Littlestone including low density residential areas dating back to the 16<sup>th</sup> century, the Parish Church, which dates back to the 12<sup>th</sup> century, the Stade part of the town centre and the Bayle.

There are numerous listed buildings on this section of the coast, including commercial, residential, farming and military buildings. They are listed in detail in the Cliff End to Folkestone Strategic Environmental Assessment<sup>21</sup>. The historic parks and gardens are detailed in Table D4.2.

Table D4.2: Historic Parks and Gardens (Cliff End to Folkestone)

Name	Description	Grid Ref
Horton Priory	Horton Priory was founded in 1144 by Robert de Vere. No records of ancient gardens survive and until 1911, grazing pastures and farmland came right up to the house. In 1911 the owner engaged Waterer to lay out the grounds, including an extensive perimeter ha-ha	TR 109393
Kingsnorth Gardens, Folkestone	Former worked clay pit given to the town of Folkestone in 1926 for development as a garden. Features include: terraces, pergola, clipped yews and an Italian garden.	TR 221362
The Leas, Folkestone	A mile long cliff top promenade at Folkestone with views across the Channel to France. Features include an ornate Victorian bandstand and many flower beds against a backdrop of Edwardian buildings, many of them hotels.	TR 219353
Port Lympne	Early 20 <sup>th</sup> century formal gardens designed by Sir Philip Sassoon, laid out by Philip Tilden, 6ha, with adjacent zoo and woodland of 104ha.	TR 105348
Radnor Park, Folkestone	This was formerly a recreation ground and was donated to Folkestone by the Earl of Radnor in 1886. Features include: a mock-Tudor lodge, extensive flower beds, tree avenues and fishing and boating ponds.	TR 222365
Saltwood Castle	Mid 20 <sup>th</sup> century formal and informal gardens and parkland around castle	TR 163359
South road recreation ground, Hythe	This area was laid out as a public recreation area in 1920, but was in public use long before this date. There are two main promenades that quarter the recreation fields and these are planted with trees and rose shrubs to create garden walks.	TR 165345

Sites of archaeological interest include dispersed finds located on agricultural land on Pett Levels. Romney Marsh has numerous and important ancient churches, dating mainly from the Norman and Early English periods. Notable **Archaeologically Sensitive Areas** within the study area are:

- Occupied caves – flint implements, Upper Palaeolithic or Mesolithic, Upper Palaeolithic flints
- Mesolithic flints
- 16<sup>th</sup> Century forge, site of pond bay
- Post Medieval Harbour
- Antiaircraft listening station

<sup>21</sup> Cliff End to Folkestone Strategy Review, Appendix E Strategic Environmental Assessment, Halcrow, 2002

- Camber Castle
- Lade Fort (1798)
- Martello Tower
- Martello Tower-Dymchurch
- Martello Tower No 10 1805
- Martello Tower No 25
- Martello Tower No 28
- Roman Villa
- RMA
- Rye New Harbour (18<sup>th</sup> century)
- St Mary's in the Marsh Martello Tower.

With the widespread distribution and large number of Scheduled Monuments and Archaeologically Sensitive Areas through the Cliff End to Folkestone area, the full coastline is considered to be of national heritage importance.

**(c) Cliff End to Bexhill**

This description of heritage features has been extracted from the Cooden to Cliff End Strategic Environmental Assessment<sup>22</sup>.

Table D4.3 lists the **Scheduled Monuments** that are located along this section of the coast. In addition, early 16<sup>th</sup> century remains of quayside facilities have been found at Smeaton's Harbour during construction work, with the stone arms of the harbour entrance still visible along the shingle beach at low tide.

Table D4.3: Scheduled Monuments (Cliff End to Bexhill)

Parish	SM No	Title	NGR
Hastings	121	Hastings Town Wall	TQ826 095
Hastings	148	St Mary's Chapel, Bulverhythe	TQ 768 083
Hastings	12869	Hastings Castle, the Collegiate Church of St Mary & the Ladies Parlour	TQ 8214 0951
Hastings	12870 (144)	Iron Age Cliff Castle & Site of St George's Churchyard , East Hill	TQ 8328 0989

Conservation **Areas** on the Bexhill to Cliff End coast are:

- The Old Town (Hastings)
- Burtons' St Leonards
- St Leonards West
- St Leonards East

<sup>22</sup> Cooden to Cliff End PAR, Appendix E Strategic Environmental Appraisal, Halcrow, 2002

- St Leonards North
- Warrior Square
- White Rock
- Grosvenor Crescent
- Eversfield Place
- Hastings Town Centre
- Bexhill Town Centre Conservation Area
- Bexhill Old Town.

The settlements of Hastings, St Leonards and Bexhill are of considerable historic interest, which is reflected in the number of **Conservation Areas** designated within the towns. Of particular importance are those of Old Town and Burton St Leonards which are recognised by the Secretary of State as being of outstanding architectural and historic interest (Hastings Local Plan, Oct 1999). The majority of these conservation area designations extend down to cover the intertidal zone. The Alexandra Park and St Leonards Gardens are of historic interest and included on the register of Parks and Gardens of Special Historic Interest.

In the Bexhill to Cliff End coastal area, prehistoric tools, such as flints and bronze axeheads, have been found with dinosaur bones and fossil footprints found in the rock on the beach. Radio carbon dating of wood samples shows them to be over 5,000 years old. There is also a petrified forest on the beach at Cliff End, which is of palaeo-environmental interest. The remains of a deserted medieval village at Glyne Gap have been designated an area of archaeological interest by Hastings Borough Council. The potential for further finds of archaeological importance is reflected in the designation of Hastings Old Town, the town centre and the entire coastline, as far as Fairlight, as archaeological sites. This is to ensure that any future development within these areas follows a code of practice produced for such sites. Other areas recognised by East Sussex County Council as **Archaeologically Sensitive Areas** include caves at Cliff End.

Based on the Scheduled Monument designations and specially-recognised Conservation Areas, the coastal towns of Hastings-St Leonards and Bexhill are considered to be of national heritage importance.

**(d) Bexhill to Eastbourne**

This description of heritage features has been extracted from the Redoubt to Cooden Strategic Environmental Assessment<sup>23</sup>.

The **Scheduled Monuments** are listed in Table D4.4. Six Martello Towers and the Redoubt fortress line this frontage. Three of the towers and the fortress have been designated Scheduled Monuments under Section 1 of the Ancient Monuments and Archaeological Areas Act, 1979. The Towers were built to defend against Napoleonic invasion at the beginning of the nineteenth century.

Table D4.4: Scheduled Monuments (Eastbourne to Bexhill)

<sup>23</sup> Redoubt to Cooden PAR, Appendix E Strategic Environmental Appraisal, Halcrow, 2002

Parish	SM No	Title	NGR
Eastbourne	379	Martello Tower No 66	TQ 642 010
Eastbourne	417	Martello Tower No 64	TQ 646 022
Pevensey	173a	Martello Tower No 60	TQ 652 035
Pevensey	173b	Martello Tower No 61	TQ 653 037
Pevensey	27013	Pevensey Castle (inc Saxon Shore Fort, Norman defences, medieval enclosure castle)	TQ6444 0478
Pevensey	12743	Medieval moated site and associated earthworks, Manxey	TQ6514 0705

Much of Pevensey village has been included within the **Pevensey and Westham Conservation Area** due to its considerable architectural and historic interest. The Pevensey Levels are potentially an important site for archaeological deposits due to the wet, marshy environment that is ideal for the preservation of organic materials. Several archaeological sites have been identified, including the deserted village of Northeye and areas of ancient saltworks. In general, to prevent damage to archaeological sites, it is preferable to maintain high water levels to avoid the desiccation and decay of organic artefacts. A Roman corridor villa and bath house has been designated as an **Archaeologically Sensitive Area**, and although not scheduled, this Area is afforded some protection through the development control process.

The landing places of both the Roman (43 AD) and Norman (1066 AD) invasions of Britain are believed to be located in the Pevensey/Norman's Bay frontage.

The Pevensey village/Pevensey Levels area is considered to be of national heritage importance due to the presence of Scheduled Monuments and the Archaeologically Sensitive Areas. The surrounding coastal area does not appear to be of regional or national importance in terms of heritage.

**(e) Eastbourne to Beachy Head**

This description of heritage features has been extracted from the Cuckmere to Redoubt Strategic Environmental Assessment<sup>24</sup>.

The **Scheduled Monuments** are listed in Table D4.5.

Table D4.5: Scheduled Monuments (Eastbourne to Beachy Head)

SM No	Title	NGR
198	Wish Tower, Eastbourne (Martello Tower No 73)	TV 614 982
200	Circular brick structure surrounded by dry moat, Eastbourne.	-

<sup>24</sup> Cuckmere to Redoubt PAR, Appendix E Strategic Environmental Appraisal, Halcrow, 199??

SM No	Title	NGR
468	Field System, Bullock Down	TV 582 962
20127 (343a)	Bowl Barrow 500m NE of Cornish Farm	TV 5697 9655
20129 (236)	Three bowl barrows on Heathy Brow	TV 5915 9627

There are four **Conservation Areas** within Eastbourne that lie in close proximity to the seafront, namely:

- Old Town
- College
- Meads
- Town Centre and Seafront

In addition to these Conservation Areas, there are areas of **High Townscape Value**, which comprise urban townscape of local interest, which do not merit conservation area status. The only area of High Townscape Value of relevance is the area abutting the Town Centre Conservation Area. Compton Park in Eastbourne is listed on the Historic Parks and Gardens register provided by the Historic Buildings and Monuments Commission for England.

Much of the coastal high ground at Beachy Head has been designated as an **Archaeologically Sensitive Area**, due to the presence of enclosures and field systems of the Early Iron Age (6-5th centuries BC). Groups of bronze implements and ornaments have also been retrieved from the cliffs, intertidal and seabed locations around Beachy Head, which may indicate entire sites of archaeological interest that were lost or are disappearing. Further **Archaeologically Sensitive Areas** have been designated behind Eastbourne pier and the environs of the Wish Tower.

As Scheduled Monuments are nationally important heritage sites, the presence of such sites in conjunction with the Eastbourne Conservation Areas and the Beachy Head Archaeologically Sensitive Area, with confirmed prehistoric sites, indicates an area of significant national importance.

## D4.3 MARINE

### D4.3.3 Overview

The marine heritage of the South Foreland to Beachy Head coast is predominantly linked to wrecks and any sub-tidal/drowned archaeology. As with the terrestrial heritage, there is an abundance of archaeological and historic sites. It is difficult to assess the importance of the coastal marine heritage sites identified in this section, other than those identified by English Heritage at Pevensy Levels, which appear to be of at least regional significance. Substitution of resources lost to coastal erosion and/or flooding is not relevant in this context.

### D4.3.4 Features

#### (a) Dover to Folkestone

The remains of wrecks have been found within the limits of Folkestone to Dover, located in navigation channels, along the foreshore and further offshore

- Folkestone: POMERANIA (3382 tonne Hamburg-Amerika Line steamer) Built in 1873, sunk 25<sup>th</sup> November, 1878 by collision with iron-hulled barque Moel Eilian off Folkestone.
- Dover: Orangeman
- Langdon Bay Wreck sunk in the Middle Bronze Age (51 07 36N / 01 20 48E) and was designated (designated in 1978) with a 150m exclusion zone.

#### (b) Folkestone to Cliff End/Pett Levels

The remains of wrecks have been found in the Cliff End to Folkestone, located in navigation channels, along the foreshore and further offshore. The remains of the 19<sup>th</sup> century Rother barge 'Primrose' were removed to the Shipwreck Heritage Centre in Hastings due to problems of vandalism and theft.

- The Amsterdam (a protected wreck): located off Hastings (50 50 42N / 00 31 39E) with a 100m exclusion zone, the ship sunk in 1749. The wreck of The Amsterdam is the only known well preserved example of a Dutch East Indiaman, lost in 1749 can also be found offshore<sup>25</sup>.

#### (c) Cliff End to Bexhill

Along this frontage there is considerable local heritage interest, including an ancient wrecked boat located off the beach near Cooden (Bexhill). A submerged Bronze Age oak and hazel forest, which becomes visible at low tides, can also be found off Little Galley Hill. The protected wreck site of 'The Anne' (50 53 22N/00 41 46E), an English 70 gun warship, with a 75m exclusion zone, is located underneath the Fairlight cliffs where she ran a ground in 1690<sup>25</sup>. A full list of wrecks is given in Table D4.6<sup>26</sup>.

Table D4.6: Shipwreck Sites (Bexhill to Cliff End)

Name	Type	Location	Classification	Period	MAR Ref No	NGR
Les Trois Drus	Sailing Ship	Galley Hill, Bexhill	Brigantine	1779	MSMR 113	-
Unidentified	Possible Wreck	Bexhill beach	-	-	MSMR 114	-
Unidentified	Possible Craft	Jenny's Stool (Bexhill reef)	-	-	MSMR 117	505000N – 003000E
-	Aircraft	Pevensey / Bexhill	WWII Spitfire	1941	MSMR 126	504936N-002830E

<sup>25</sup> Of considerable archaeological and historical importance hence their designation under the Protection of Wrecks Act.

<sup>26</sup> Cooden to Cliff End PAR, Appendix E Strategic Environmental Appraisal, Halcrow, 2001

Name	Type	Location	Classification	Period	MAR Ref No	NGR
-	Aircraft	Hastings	WWII Spitfire	-	MSMR 127	-
Amsterdam	Protected Wreck Sailing Craft	3 Miles West of Hastings	Sail	1749	MSMR 166	505042N-003139E
-	-	Close to MSMR 166	Prehistoric Forest	-	MSMR 167	-
Thistle	Steam Craft	Hastings	Fishing Trawler	1948	MSMR 175	505052N-003448E
Eagle	Cargo Ship	Hastings	Cargo Barge	1945	MSMR 177	504910N-003626E
The Anne	Protected Wreck	Fairlight Cliffs	70 Gun Warship	1690		5053 22N - 004146E
-	Sailing Craft	Fairlight Cove	Cargo Barge	C19th	MSMR 262	-
-	Sailing Craft	Hastings	Wilton Steam	1918	MSMR 1028	505000N-003500E
-	Weapon	Fairlight	Dirk	Bronze Age	MSMR 1063	-
-	Hoard	Cooden Bay	-	Bronze Age	MSMR 1067	-
-	Weapon	Between Pett Level and Fairley	Dirk	Bronze Age	MSMR 1068	-

**(d) Bexhill to Eastbourne**

English Heritage has identified the south coast, particularly at Pevensey Levels, as being of very high archaeological potential with several known wreck sites offshore and in the intertidal zone. Known wrecks include the *Barn Hill*, together with the remains of two World War II aircraft close to the low water line of Pevensey Bay (Table D4.7)<sup>27</sup>.

Table D4.7: Shipwreck Sites (Eastbourne to Bexhill)

Name	Type	Location	Classification	Period	MAR Ref No	NGR
Barn Hill	Cargo Ship	Nr Langney Point, Eastbourne	Steam	1940	MSMR 115	504723N – 002020E
Oneida	Cargo Ship	Langney Point, Eastbourne	Brigantine	1869	MSMR 116	-
Pioneer	Cargo Ship	Eastbourne – Head Ledge	Sail	1864	MSMR 118	-
Marian	Sailing Craft	Eastbourne	Yacht	1925	MSMR 120	504510N – 001835E

<sup>27</sup> Redoubt to Cooden PAR, Appendix E Strategic Environmental Appraisal, Halcrow, 2002

Name	Type	Location	Classification	Period	MAR Ref No	NGR
Endeavour	Sailing Craft	Eastbourne	Salvage Boat	1955	MSMR 121	504536N – 001824E
-	Aircraft	Pevensey	WWII Spitfire	1944	MSMR 125	504800N-002300E
Easy-Dog	Aircraft	Norman's Bay, Pevensey	WWII Bomber	-	MSMR 128	504900N-002324E
-	Aircraft	Pevensey	WWII Spitfire	WWII	MSMR1023	504922N-002354E

**(e) Eastbourne to Beachy Head**

The shipwrecks shown in Table D4.8 below are of archaeological importance<sup>28</sup>.

Table D4.8: Shipwreck Sites (Beachy Head to Eastbourne)

Name	Type	Location	Classification	Period	MAR Ref No	NGR
Coonatto	Cargo Ship	Crowlink 2 miles west of Beachy Head	Barque	1876	SMR69	TV5342596499
Polynesia	Cargo Ship	300 yards East of Birling Gap	Steam/sail	1890	SMR68	TV5146996998
Unknown	Feature	1km south of Cuckmere Haven	Feature	Unknown	SMR994	TV5122596620
Unknown	Fishermens fastener	2km south of Cuckmere Haven	Unknown	Unknown	1006364	TV5148795700
Sitakund	Cargo Ship	1.16miles from Beachy Head Lighthouse	Super Tanker	1968	MSMR 119	504441N – 001712E
Davenport	Sailing Craft	Eastbourne	Fishing Boat	1955	MSMR 122	504557N – 001820E
-	Aircraft	Eastbourne	WWII Bomber	1940	MSMR 123	504548N – 002042E
Alan Dean	Sailing Craft	1 mile SW Langney Point	Cargo Barge	1932	MSMR 124	504630N – 002051E
-	Weapons + Bracelet	Beachy Head Beach	Sword, Axe	Bronze Age	MSMR 1064	-

<sup>28</sup> Cuckmere to Redoubt PAR, Appendix E Strategic Environmental Appraisal, Halcrow, 2002

## D5 Current and Future Land Use

### D5.1 GENERAL

This section reviews the status of the built environment present on the South Foreland to Beachy Head coast and comprises commercial/industrial areas, residential developments, recreational interests and current and future land uses.

### D5.2 OVERVIEW

The majority of the built assets within the study area are residential (Section 5.3) and one of the principal economic activities is tourism (Section 5.4). Other economic activities include:

- Port and harbour operations
- Power stations
- Roads and rail lines
- Water, sewerage, gas and power lines
- Fisheries
- Aggregate extraction
- Light industry
- Agriculture

#### D5.2.1 Residential developments

Residential developments are those that encompass a number of facilities: housing, infrastructure, commerce (shops), education, community facilities (libraries, village halls, and a post office), amenities (parks, leisure centre) and exist at a number of scales (village to city). This SMP area contains a number of significant coastal towns, principally:

- Eastbourne
- Bexhill
- Hastings
- Hythe
- Folkestone
- Dover

And a number of small towns and villages:

- Pevensey
- Fairlight and Cliff End
- Winchelsea
- Winchelsea Beach
- Rye
- Rye Harbour
- Camber

- Dungeness
- Lydd on Sea
- Greatstone on Sea
- Littlestone
- Villages in Romney Marsh
- St Mary's Bay
- Dymchurch

Sustainable coastal and flood defence to these settlements is one of the main objectives of the SMP, in order to meet self-evident social and economic needs.

### **D5.2.2 Recreation, tourism and amenity interests**

The South Foreland to Beachy Head coastline provides a valued resource for water and land based recreation, tourism and amenity interests. Tourism plays an important role in the study area and is increasingly valuable to the local economy, both in terms of visitor spending and by providing employment opportunities.

Visits to the area focus predominantly on the numerous beaches and important tourist towns and attractions although the area also attracts a diverse range of recreational pursuits including informal recreation such as watersports, fishing, horse-riding, cycling, walking and bird-watching.

The following amenities are present within the area:

- Tourist Attractions
- Public Rights of Way
- Recreational Amenities (including designated bathing beaches, informal recreational pursuits and formal recreational activities)
- Holiday Accommodation (including hotels, holiday camps, chalet parks and caravan parks).

## **D5.3 FEATURES**

### **(a) South Foreland to Dover**

There are no significant industrial developments east of Dover to the limits of the study area, South Foreland. What are in abundance along this frontage are the environmental based interests, which provide a small amount to the tourist economy.

### **(b) Dover to Folkestone**

Folkestone and Dover support significant industrial facilities. The port of Dover is of national importance. Folkestone Harbour supports a fishing fleet.

There are numerous sports centres, golf courses, tennis courts, cricket and football pitches and other facilities in the town. All these may be considered of local importance, to be re-creatable and their loss would be of moderate significance to the study area.

**(c) Hythe**

Significant commercial activities at Hythe are light industry and the Ministry of Defence Hythe Ranges. A small number of fishing boats operate from the beach, targeting herring, sprat and mackerel.

There are numerous sports centres, golf courses, tennis courts, cricket and football pitches and other facilities in the town. All these may be considered of local importance, to be re-creatable and their loss would be of moderate significance to the study area.

**(d) Dungeness**

There are a number of commercial operations on the Dungeness peninsula that are of regional or national importance:

- Dungeness Nuclear Power Stations and associated power lines and road/rail communication links
- Ministry of Defence Lydd Ranges
- Onshore aggregate extraction from a number of licensed locations
- Operational lighthouse
- RNLI lifeboat
- Lydd and New Romney support light industry.

Most of Romney Marsh is classified by Defra as Grade 1 and 2 agricultural land. Historically used for sheep rearing, the last 200 years have seen conversion to arable cropping, though livestock rearing is still significant. It is now an important arable area for cereals, linseed, oilseed rape, soft fruit, potatoes and other vegetables.

There is a beach-launched fishing fleet from the eastern shore of Dungeness.

The Dungeness peninsula, from Camber to Hythe, includes numerous features of recreational interest including the wide sandy beaches of Camber Sands, St Mary's Bay to Dymchurch Redoubt, Hythe and Sandgate. These beaches are of high importance and their loss within the study area would be of high significance, particularly given the relative scarcity of sandy beaches in south-east England, adversely affecting the tourism industry.

Informal recreation within the study area centres on Camber Sands, sports facilities in Lydd, Dymchurch and Hythe, the Cheriton Road Municipal Sport's ground and Radnor Park in Folkestone and freshwater angling on the Royal Military Canal.

The following tourist attractions lie within this area:

<b>Tourist Attraction</b>	<b>Scale</b>	<b>Substitutable?</b>	<b>Importance</b>	<b>Is there enough?</b>
Camber Sands	Regional	No	Medium	No
Littlestone Golf course	Local	Yes	Medium	Yes

Greatstone Golf course	Local	Yes	Medium	Yes
Romney, Hythe and Dymchurch Railway	Regional	Yes	Medium	Yes
Old Lighthouse, Dungeness	Regional	No	Medium	No
Power Station Visitor Centre	Regional	No	Medium	No
Dunrobin Stud Farm, Greatstone	Regional, local	Yes	Medium	Yes
Dungeness Bird Observatory	Regional	No	Medium	No
RSPB Reserve, Dungeness	Regional	No	Medium	No
High Knocke, St Mary's Bay (Amenity Beach)	Local	No	Medium	No
Greatstone Amenity Beach	Local	No	Medium	No
JGS Amusement Park	Regional	Yes	Medium	Yes
Martello Towers No. 3 and 24	Regional	No	Medium	No
Hotel Imperial Golf Club	Local/Regional	Yes	Medium	Yes
Hythe Swimming Pool	Local	Yes	Medium	Yes
Sandgate Castle	Regional	No	Medium	No
Leas Cliff Hall	Regional	Yes	Medium	Yes
The Leas Lift	Regional	Yes	Medium	Yes
The Rotunda, Amusement Arcade	Local/Regional	Yes	Medium	Yes
Folkestone Sands	Local/Regional	No	Medium	No
Marine Gardens	Regional	Yes	Medium	Yes
Lower Sandgate Road	Regional	Yes	Medium	Yes

These tourist attractions are of local/regional importance, their loss would be of moderate significance and some, but not all, are considered to be re-creatable.

**(e) Rye Harbour to Cliff End**

The main land uses are grazing, the small settlements of Cliff End, Winchelsea Beach, Rye Harbour and the larger inland settlements of Rye and Winchelsea.

Navigation to the port of Rye Harbour and Rye town are important for commercial, recreational (Rye Harbour LNR) and RNLI lifeboat use. A fleet of 24 small fishing boats operate from Rye Harbour.

The following tourist attractions lie within this area:

<b>Tourist Attraction</b>	<b>Scale</b>	<b>Substitutable?</b>	<b>Importance</b>	<b>Is there enough?</b>
Camber Castle	National/regional/local	No	High	No
Rye Castle Museum	Regional/local	Yes	Medium	Yes
Rye Parish Church	Local	Yes	Medium	No
Rye Harbour LNR	Regional/Local	No	Medium	No

**(f) Hastings Cliffs**

Land uses are mainly low to average quality agricultural land and semi-natural woodland.

**(g) Hastings and Bexhill**

Hastings is an historic seaside town supporting a significant tourism industry. Bexhill supports small-scale industrial development and tourism, whilst St Leonards on the east side of Hastings is predominantly a retail centre. Between Bexhill and St Leonards is a landfill site with a proposed after-use as an equestrian centre and country park. The A259 trunk road and the Brighton to Hastings railway line both run close to the seafront.

Hastings' medieval harbour area supports a commercial fishing fleet of 40 boats (the largest beach-launched fleet in Europe), winch huts and a fish market. There are smaller beach fleets at Bulverhythe and Bexhill. Pelagic, demersal and shellfish species are targeted along the frontage. Recreational boats are chartered from Bulverhythe. Sea angling is popular from Hastings pier and harbour arm and the beaches of Bulverhythe, Bexhill, St Leonards and Hastings.

Marine aggregates are dredged at Hastings Bank.

Bexhill beach has been awarded the 'Tidy Britain Seaside Award' and is therefore of high importance to the study area.

Numerous coastal footpaths exist along this frontage including two Maritime Heritage Trails, which form part of the Saxon Shore Way.

The following tourist attractions lie within this area:

Tourist Attraction	Scale	Substitutable?	Importance	Is there enough?
Hastings Country Park	Regional/local	No	Medium	No
Shipwreck Heritage Centre	Local/Regional	Yes	Medium	
Sea Life Centre	Local/Regional	Yes	Medium	Yes
Hastings Victorian Pier	National/regional/local	No	Medium	No

**(h) Pevensey Bay**

A ribbon of residential development runs along the coast of Pevensey Bay. Much of this comprises holiday homes and there are several large caravan parks. The main road communications are provided by the A259, approximately 2 km inland, and a minor road follows the coast. Much of Pevensey Levels is used for sheep grazing. Arable agriculture is limited because of poorly drained soils and high water table. There is a closed landfill site in the vicinity of Norman's Bay. A beach-launched fishing fleet operates from Pevensey and fishing takes place along the frontage for demersal, pelagic and shellfish species.

Pevensey Bay and Norman's Bay are designated bathing beaches under the European Community Directive have also been awarded the Tidy Britain Seaside Award. These beaches and associated bathing waters are of high importance and their loss within the study area would be of high significance, adversely affecting the tourism industry.

The Saxon Shoreline Public Footpath traverses this area and is considered to be of moderate importance.

A dinghy sailing club is located within this section and is considered to be of local importance only.

The following tourist attractions lie within this area:

Tourist Attraction	Scale	Substitutable?	Importance	Is there enough?
RNLI Lifeboat Museum	Regional	Yes	Medium	Yes
Redoubt Fortress	Regional	No	High	No
Sovereign Centre/Harbour	Regional/local	Yes	Medium	
Treasure Island	Regional/local	Yes	Medium	Yes
Pevensey Castle (SAM)	National/regional/local	No	High	No
St Nicholas Church	Regional/local	No	Medium	No
Martello Towers Nos 66, 64, 61, 60 and 55	National/regional/local	No	High	No

**(i) Eastbourne**

Most economic assets relate to tourism and recreation (the town supports over 2 million visits per annum). Eastbourne has a designated bathing beach under the European Community Directive and is a regional and local tourist asset of high importance. Three specific tourist assets in Eastbourne are as follows:

Tourist Attraction	Scale	Substitutable?	Importance	Is there enough?
Eastbourne Pier	National/regional/local	No	Medium	No
Wish Tower (Martello Tower No 73)	National/regional/local	No	High	No
Redoubt Museum and Aquarium	National/regional/local	Yes	Medium	No

The town also supports a main fishing fleet of 20 full time boats, targeting pelagic species such as herring, sprat, bass and mullet; demersal species such as sole, plaice, ray, brill, turbot and other flatfish; and potting for crabs and lobsters. Sovereign Harbour is a new commercial and residential development centred around a marina providing 2000 yacht berths, partly built on two closed landfill sites. The RNLI operates a rescue vessel from the Harbour. Aggregate extraction takes place from storm beach deposits along the coastline and there is considerable potential for further extraction around Sovereign Harbour.

**(j) Beachy Head**

Most assets relate to recreation and tourism. There is also a lighthouse. Beach fishing is popular. There is a B road from the Head to Eastbourne. Livestock farming is a major land use.

The South Downs Way National Trail traverses this area and is considered to be of moderate importance.

The following tourist attractions lie within this area:

Tourist Attraction	Scale	Substitutable?	Importance	Is there enough?
Beachy Head Countryside Centre	Regional/local	Yes	Medium	Yes
Beachy Head	National/regional/local	No	High	No

## D5.4 FUTURE LAND USE/PLANNING TARGETS AS SET BY LOCAL PLANS ETC.

### D5.4.3 Overview

The purpose of this Section is to identify proposals for development in the coastal zone that are contained in Local Plans.

### D5.4.4 Features

#### (a) Dover District

Dover Western Docks are allocated for mixed use redevelopment, including employment uses, non-food retail, residential and tourism/leisure.

Old Park Barracks are allocated for employment, port related, residential, leisure and institutional uses.<sup>29</sup>

St. James's Area is allocated for a mixed use scheme including employment, retail, residential, leisure and tourism uses.

#### (b) Shepway District

The Council has policies to redevelop and improve Folkestone town centre. Land to the west of the Rotunda is identified for a new seafront residential area.

#### (c) Hastings District

The Borough Council has a number of policies for the regeneration of the seafront, maintaining and enhancing its historic character and improving integration with the town.

#### (d) Rother District

The draft Local Plan proposes 141 new houses in Rye and Rye Harbour.

<sup>29</sup> Old Port Barracks is not located in the coastal zone and therefore the only foreseeable impact (on this development) would be if anything happened to the Port of Dover.

**(e) Wealden District**

Pevensey Bay is the only existing settlement within the study area frontage and no specific policies for development have been identified.

**(f) Eastbourne District**

The Local Plan identifies 15 sites for new housing development within the existing built up area.



## D6 References

- Dover District Council (2002): Dover Local Plan
- English Nature (2003) Identifying biodiversity opportunities to inform SMP review.
- Posford Haskoning (2002) Dungeness and Pett Levels Coastal Habitat Management Plan (CHAMP).
- Posford Haskoning (2003): Biodiversity Opportunities within the Folkestone to Selsey Bill Natural Area – 108. (Final Report, English Nature)



## Annex D1: Biodiversity Action Plans

English Nature has divided the country into Natural Areas, based on their physical and biological characteristics. The SMP study area includes parts of five terrestrial and two maritime natural areas:

**(a) Terrestrial Natural Areas**

- Low Weald and Pevensey
- High Weald
- Romney Marshes
- Wealden Greensand
- North Downs

**(b) Maritime Natural Areas**

- Folkestone to Selsey Bill
- East Kent Coast

The National Biodiversity Action Plan includes both Habitats and Species Action Plans, of which those relating to the seven natural areas crossed by the SMP are as follows (**those particularly relevant to coastal management are shown in bold**):

**(c) Habitat Action Plans**

- **Coastal and floodplain grazing marsh**
- **Saline lagoons**
- **Maritime cliff and slope**
- **Coastal vegetated shingle**
- **Littoral and sublittoral chalk**
- Coastal saltmarsh
- **Mudflats**
- **Coastal sand dunes**
- Ancient and species rich hedgerows
- Reedbeds
- Lowland heathland
- Fens
- Mesotrophic lakes
- Cereal field margins
- Chalk rivers
- Sea grass beds

**(d) Species Action Plans**

- Brown hare
- Otter

- Dormouse
- Pipistrelle bat
- **Harbour porpoise**
- Skylark
- **Bittern**
- Grey partridge
- Stone curlew
- Song thrush
- **Aquatic warbler**
- Corncrake
- Great crested newt
- **Natterjack toad**
- Sand lizard
- Mole cricket (*Gryllotalpa gryllotalpa*)
- High brown fritillary
- Pearl bordered fritillary
- Marsh fritillary
- Silver-spotted skipper
- Leaf beetle (*Cryptocephalus coryli*)
- Shrill carder bee
- Hornet robberfly
- Hoverfly (*Chrysotoxum octomaculatum*)
- Ground beetle (*Bembidium argentoleum*)
- Stag beetle (*Lucanus cervus*)
- Medicinal leech
- **Ivell's sea anenome (*Edwardsia ivelli*)**
- **Starlet sea anenome (*Nematosella vectensis*)**
- Snail (*Anisus vorticulus*)
- Shining ram's horn snail (*Segmentina nitida*)
- Desmoulin's whorl snail (*Vertigo moulinsiana*)
- Freshwater white-clawed crayfish
- Three lobed crowfoot
- Early gentian (*Gentianella anglica*)
- Killarney fern
- Slender green feather moss (*Hamatocaulis vernicosus*)
- Glaucous beard-moss (*Didymodon glauca*)
- Starfruit (*Damasonium alisma*)
- Sandy silt puffball (*Battarraea phalloides*)
- Devil's bolete (*Boletus satanus*)
- Nail fungus (*Poronia punctata*)
- Orange-fruited elm lichen (*Caloplaca luteoalba*)
- **Toadflax brocade moth (*Calophasia lunula*)**
- **Red Hemp Nettle (*Galeopsis angustifolia*)**

The Kent and Sussex Biodiversity Action Plans include specific Habitat Action Plans for several features along the study area coast:

- Reedbeds: Target to maintain and rehabilitate wet reedbed at Combe Haven;
- Vegetated shingle: Targets for protection of the existing resource, especially from agriculture, development and gravel extraction, and re-creation where possible;
- Floodplain grassland: Targets for improved conservation management, particularly in relation to control of freshwater levels;
- Saline lagoons: Target to maintain and enhance the current saline lagoons on the Lydd Ranges and at Rye Harbour; and
- Timber groynes and other structures on the landward side of shingle banks are identified as supporting a rich lichen flora that should be conserved where possible.

There are also Species Action Plans for the Fen Raft Spider *Dolomedes plantarius*, a protected species found at Pevensey Levels (one of only two UK sites) and the Glow Worm *Lampyrus noctiluca*, found at Norman's Bay.



## **Annex D2: Theme Maps**