

EASTBOURNE DOWNLAND MANAGEMENT PLAN 2015-2022



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for



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Summary

Eastbourne Downland is a stunning area of coastline and countryside that includes the towering chalk cliffs of Beachy Head and is the eastern-most part of the 4.5km coastal area between Eastbourne and Seaford that includes the well-known undulating chalk cliffs of the Seven Sisters.

Beachy Head is the southern-most headland of the East Sussex coast and the countryside formed of this headland is a complex mosaic of grassland, scrub, woodland and farmland. Much of the site is part of the Seaford Head to Beachy Head Site of Special Scientific Interest (SSSI) and is nationally important for its ecology and geology. Most of the SSSI is in one large block but three other smaller SSSI areas are also designated inland of the main headland.

Management of this site is required to maintain the favourable status of the SSSI and to ensure land adjacent to the SSSI contributes to the biodiversity of the area. Most of the open downland, and some of the tenanted farmland, is under Higher Level Stewardship (HLS) agreements with Natural England. The process of management has to be balanced with the site's popularity with many hundreds of thousands of visitors each year and its benefit to the local economy from tourism and agricultural activity.

The purpose of this document is to define the management proposals for land mostly within the open downland HLS agreement. Grassland management within the area has had to be revised as the recent National Vegetation Classification survey, carried out in 2013, has shown that some are being overgrazed and/or historically damaged by excessive cutting and other areas under-grazed or under-managed. The plan's focus is to restore much of the coastal cliff-top to an outstanding example of rich and varied chalk grassland habitats welcoming visitors with a stunning display of chalk grassland flowers including endangered and vulnerable species. The headland is also an important area for bird and insect migration and the scrub management proposed aims to ensure a mosaic of grassland and scrub that will provide cover and food for breeding and migrant birds.

1. Site Description

1.1 Introduction

Eastbourne Downland is a 1700 ha area of maritime chalk cliff & slope, chalk heath, calcareous grassland, neutral grassland, acid grassland, scrub, woodland, and farmland. The site has been wholly owned and managed by Eastbourne Borough Council since it was purchased in the 1920's and now sits within the South Downs National Park.

The site roughly divides into 490ha of coastal chalk cliff, chalk heath, calcareous grassland, scrub and woodland extending from the English Channel at its south end to the village of Willingdon at the north end with the scarp overlooking the urban area of Eastbourne to the east. A large proportion of the land sits within the Seaford Head to Beachy Head SSSI and is of high ecological, geological, educational and amenity value. The rest of the site is 1199ha, predominantly farmland, with a significant area used as a golf course. Within the farmland are three further SSSIs at Bulling Dean, Long Down and Combe Hill above Willingdon.

This management plan concentrates on the management of the 490ha coastal area which sits within the Seaford Head to Beachy Head SSSI and the high crest and scarp to the north. Almost all this area is now managed under a Higher Level Stewardship (HLS) agreement. The HLS management prescriptions are integrated into the management action sections of this plan. With the exception of the public rights of way the tenanted farms are overseen by a land management agent, Strutt and Parker. Farming activity is governed by the economic viability of certain commodities, agricultural regulation and various other agreements and covenants.

The management of the site is also influenced by the Eastbourne Downland Forum which includes representatives from Natural England, South Downs National Park Authority, Ramblers Association, Royal Society for the Protection of Birds, The Eastbourne Society, elected councillors, council officers and others. The current overarching council policy document is the Corporate Plan 2010 – 2015 to which more detail is given later.

1.2 Site Details

Site Name: Eastbourne Downland

Site Ownership: Eastbourne Borough Council

Site Management: Eastbourne Borough Council/Strutt & Parker

Area: 1700ha (4200 acres)

Grid Reference: TV 589 957 (Beachy Head Hotel Entrance)

Conservation & Landscape Designations:

- South Downs National Park
- Site of Special Scientific Interest (SSSI) - Seaford to Beachy Head SSSI
- Site of Special Scientific Interest (SSSI) - Willingdon Down SSSI
- Site of Special Scientific Interest (SSSI) – Bulling Dean SSSI
- Site of Special Scientific Interest (SSSI) – Long Down SSSI
- Sussex Heritage Coast
- RIGS (Regionally Important Geomorphological Site)

1.3 Importance for Amenity, Tourism and Education

Beachy Head and the chalk cliffs between Eastbourne and Seaford are a widely recognised and very important visitor attraction. The area is internationally famous and has appeared in numerous films and television programmes. The stunning natural beauty of this part of the Sussex coastline draws in hundreds of thousands of visitors each year and the site is one of the most popular countryside visitor attractions in East Sussex.

The countryside here is also important for local amenity and education due to its urban fringe location. The site provides an important educational resource for local schools and universities in the south-east England area. The residents of Eastbourne and from other towns in the region such as Hastings, Bexhill and Seaford form a large proportion of the visitors. It is popular for dog walking, hiking, bird watching, photography and paragliding. Most of the coastal area within the SSSI is open access, whereas on the farmland, access is mainly

confined to public footpaths and bridleways except where there are some smaller open access areas. The South Downs Way (SDW) crosses the Eastbourne Downland via two different routes. The SDW with a public footpath designation enters the Borough on the cliff tops just west of Belle Tout lighthouse and follows the coast to the start of Eastbourne's urban seafront at King Edward's Parade. A second route designated as public bridleway enters the Borough further north having come up a track from the village of Jevington and then follows the crest of the Downs southward to join the other route at the seafront. Until a few years ago the two alternative SDW routes finished at different locations but this seemed unsatisfactory and thus the bridleway was extended to the seafront.

The many tourism, amenity and educational visitors the site draws in from the region contribute to the local economy and the site is a key asset for Eastbourne Borough Council and the residents of the town.

The popularity of the Downs and the heavy visitor pressure means a balance between amenity management, estate management and conservation management has to be made. This is especially important due to the SSSI designations and therefore carries a responsibility to ensure management maintains favourable status of the SSSI units within Eastbourne Borough Council ownership.

1.4 Corporate Plan 2010 - 2015

The Corporate Plan sets out priority themes and aims for defined periods of time. The current plan ends in 2015 but its content will be revised and new themes and aims created for the future, many of which will build upon previous ones. The plan includes four main themes of; Prosperous Economy; Quality Environment; Thriving Communities and Sustainable Performance. There is also a longer term vision for Eastbourne in 2026, namely that "Eastbourne will be a premier seaside destination within an enhanced green setting." Each Corporate Plan theme is described in a downland context below.

Prosperous Economy

- *An outstanding seaside resort and gateway to the South Downs National Park.*
- *An inspiring cultural provision combining opportunities for employment, learning, participation and shared experiences for residents and tourists*

In 2010 Eastbourne became the gateway to the eastern end of the South Downs National Park adding considerable prestige to Eastbourne's south coast location. The Downs provide an inspiring and unique shared experience for residents and tourists combining opportunities for employment, learning and participation. Volunteers regularly help with downland maintenance.

Quality Environment

- *Increased quantity and improved quality of public space*
- *Enhance and promote the unique natural and built environment for the maximum benefit of the town*
- *Moving towards becoming a low carbon town*

A new stewardship agreement with Natural England is leading to an enhanced maintenance regime on the open downland. This includes a reduction in mowing in order to allow the chalk grassland meadows to thrive in wider areas particularly on the cliff tops. New and replacement signage coupled with the repair of gates, stiles and steps enhances the visitors ability to access and navigate the downland. Changes to maintenance methods on the open downland will save on machinery and fuel costs as well as reducing the carbon footprint of the maintenance operations.

Thriving Communities

- *Lowest levels of crime in comparison to other towns in the South East*
- *A wider range of activities and facilities for young people, enabling them to be the best they can be*
- *A high level of community volunteering and involvement in our neighbourhoods*
- *Increased opportunities to take part in recreational and sporting activities*

Although difficult to quantify, there is a positive correlation between quality and availability of green open space and crime levels. Eastbourne is endowed with many urban green spaces but the Downs form a great opportunity for people to maintain contact with nature. The downland area can be used for walking, cycling, beach combing, nature study and many other activities enjoyed by families and individuals of all ages. The Paradise bike trail was created to satisfy demand for a specific activity and is largely managed and kept clean by the regular users. The Southern Paragliding Club is licensed to fly from land near the pub. The South Downs National Park Volunteer Ranger Service provides a workforce that is open to all age groups. During the year cycling and walking events take place, often organized by charities, and there is the annual Beachy Head Marathon.

Sustainable Performance

- *Service excellence and innovation*
- *Customer and outcome focused*
- *A valued partner across the public, private and voluntary sectors*

The land will be sensitively managed and new working methods and investment will enhance the visitor's experience of the downland environment. Car parks will be enhanced with improved litter bins and signage. Visitors will be informed with improved on-site information and directional guidance. The council will continue to work closely with other organisations such as the Coast Guard, Police, Health Service, Beachy Head Chaplaincy, National Park Authority, Natural England and English Heritage as well as the tenants of various downland properties.

1.5 Ecological Importance

1.5.1 Habitats and National Vegetation Classification Communities

The site is a complex mosaic of chalk heath, calcareous grassland, neutral grassland, acid grassland, scrub, woodland and coastal habitats. Beachy Head is a towering headland up to 164 metres (530ft) high consisting of Late Cretaceous Chalk which sits above a wave cut platform, which is exposed at low tide, and in parts exposes Gault Clay and Upper Greensand. The maritime chalk cliffs have been created by the collapse of the chalk above areas weakened by marine undercutting at the base. At Cow Gap the chalk sits above exposed Gault Clay and Upper Greensand. The geological structure and the presence of the Gault at Cow Gap have resulted in the rotational slipping of the overlying chalk creating an area of undercliff composed of land slip debris, erosion debris and detached blocks. A narrow expanse of fringing shingle beach has also developed in this area. A vegetated shingle community has developed on this shingle as well as in small pockets on the cliff-edge.

Along the cliff-edge is a nationally scarce chalk grassland community, which is the habitat for the nationally vulnerable small hare's-ear *Bupleurum baldense*. The majority of the cliff-top and inland grassland is calcareous grassland, although there are also some large areas of neutral grassland and small pockets of acid grassland on the more acidic soils to the east.

Scrub is common throughout the site. On the chalk, species rich chalk scrub occurs and off the chalk a more species poor scrub is present and gorse scrub is present on acidic soils particularly on some of the higher summits. Areas of woodland also occur, including Horseshoe Plantation, Paradise Woods, Further Plantation, Ratton woods and other significant areas of self-sown ash and sycamore secondary woodland.

Standing freshwater is represented by a series of dew ponds throughout the site, some of which have been restored and maintained. The permeable nature of the chalk prevents the development of surface streams although low on the eastern scarp there is a spring line beyond the margin of the management area. The base of the sea cliffs often exhibits chalybeate (fresh or brackish water) springs in the section between Holywell and Falling Sands.

The National Vegetation Classification (NVC) survey conducted by Graeme Lyons during 2013 proved the site to be a very complex mosaic of diverse NVC

communities. Detailed analysis of the NVC communities present at the site can be found in the supplementary document 'Eastbourne Downland NVC Survey 2013'. Below is a summary of the NVC communities identified during the 2013 NVC survey. The most important communities for conservation are marked with *. These are the communities that are the key focus for restoration and maintenance by the Higher Level Stewardship options and grassland and scrub management outlined in this plan. The area of each community is noted in hectares.

1.5.1.1 Grassland Communities

CG1e – sheep's fescue *Festuca ovina* – **carline thistle** *Carlina vulgaris*
grassland

crested hair-grass *Koeleria macrantha* sub-community (1.05 ha) *

This is a nationally scarce community and occurs as a thin strip along the cliff edge.

CG2a – sheep's fescue *Festuca ovina* – **meadow oat-grass** *Helictotrichon pubescens*

dwarf thistle *Cirsium acaule* – **squinancywort** *Asperula cynanchia* sub-community (13.7 ha) *

This is nationally uncommon species rich chalk grassland, it occurs mainly within Shooters Bottom and Belle Tout.

CG3 – upright brome *Bromus erectus* grassland (27.1 ha)

A less species rich chalk grassland that occurs along the cliff-tops.

CG3b – black knapweed *Centaurea nigra* sub-community (9.38 ha)

CG3d – red fescue *Festuca rubra* – **tall fescue** *Festuca arundinacea* sub-community (16.3 ha)

CG4b – tor-grass *Brachypodium pinnatum* grassland – **black knapweed** *Centaurea nigra*

rough hawkbit *Leontodon hispidus* sub-community (4.59 ha).

This species poor community develops where there is little or no management or grazing undertaken.

CG5a – upright brome *Bromus erectus* – **tor-grass** *Brachypodium pinnatum* grassland – typical sub-community (13.0 ha).

A nationally uncommon but still quite species poor grassland community.

CG7e – sheep's fescue *Festuca ovina* – **mouse-ear hawkweed** *Hieracium pilosella* - **wild thyme** *Thymus praecox*.

black medick *Medicago lupulina* – **common sorrel** *Rumex acetosa* sub-community (0.10 ha) *

This community occurs where there is heavy rabbit grazing and amongst the chalk heath area of Belle Tout.

MG1 – false oat-grass *Arrhenatherum elatius* grassland (37.1 ha)

A very common species poor neutral grassland community.

MG1a – red fescue *Festuca rubra* sub-community - **greater knapweed** *Centaurea scabiosa* variant (30.6 ha)

A species poor community that occurs on heavily mown areas where cuttings are not removed.

MG1e – black knapweed *Centaurea nigra* sub-community (6.52 ha)

A more species rich community that occurs in pockets within the site.

MG5b – black knapweed *Centaurea nigra* – **crested dog's-tail** *Cynosurus cristatus* grassland.

lady's bedstraw *Galium verum* sub-community (44.1 ha) *

This community is typical of low nutrient input hay meadows, it is floristically rich and provides an excellent pollen and nectar resource. The road embankment within compartment 2 is a one of the best examples within the site.

MG6 – perennial rye-grass *Lolium perenne* – **crested dog's-tail** *Cynosurus cristatus* (78.2 ha)

This is semi-improved neutral grassland and has developed in part on the recently re-seeded pasture.

MG6b – sweet vernal grass *Anthoxanthum odoratum* sub-community (7.50 ha)

MG6c – yellow oat-grass *Trisetum flavescens* sub community (70.7 ha)
This community has also developed in part on the recently re-seeded grassland north of Beachy Head Road.

MG7e – perennial rye-grass *Lolium perenne* grasslands

MG7e – perennial rye-grass *Lolium perenne* – **ribwort plantain** *Plantago lanceolata* sub-community (3.36 ha)

This community occurs where there is intense disturbance and is of very low ecological value.

U1 – sheep's fescue *Festuca ovina* - **common bent** *Agrostis capillaris* - **sheep's sorrel** *Rumex acetosella* grassland

U1b – sweet vernal grass *Anthoxanthum odoratum* – **bird's-foot trefoil** *Lotus corniculatus* (7.91ha)

This is the acid grassland community that occurs in small areas to the east of the site.

1.5.1.2 Woodland & Scrub Communities

W8 – ash *Fraxinus excelsior* – **field maple** *Acer campestre* – **dog's mercury** *Mercurialis perennis* woodland (12.8 ha)

This is the self-sown secondary woodland community, composed mainly of ash and sycamore that has developed on unmanaged areas within the site.

W12 – beech *Fagus sylvatica* – **dog's mercury** *Mercurialis perennis*

W12a – dog's mercury *Mercurialis perennis* sub-community

W12c – yew *Taxus baccata* sub-community

These two sub-communities of W12 occur to the north of the site and pre-date the W8 secondary woodland.

W21 – hawthorn *Crataegus monogyna* – **ivy** *Hedera helix*

W21a - ivy *Hedera helix* – **common nettle** *Urtica dioica* sub-community (10.6 ha)

A more species poor scrub community that occurs off the chalk within the site.

W21c - wayfaring-tree *Viburnum lantana* chalk-scrub sub-community (22.4 ha) *

This is the species rich chalk scrub community that occurs throughout the site.

W23 – European gorse *Ulex europaeus* – **bramble** *agg. Rubus fruticosus agg.* (2.88 ha)

This is the gorse scrub community that occurs on the more acidic parts of the site.

W24 – bramble *agg. Rubus fruticosus agg.* – **yorkshire fog** *Holcus lanatus* (0.85 ha)

This bramble scrub community occurs in small pockets throughout the site.

1.5.1.3 Coastal & Open Communities

SD1a – curled dock *Rumex crispus* – **yellow-horned poppy** *Glaucium flavum* typical sub-community (0.06 ha)*

This nationally uncommon coastal community occurs in small pockets on the cliff-top and on the shingle at Cow Gap.

MC8b – red fescue *Festuca rubra* – **thrift** *Armeria maritima* - **rock samphire** *Crithmum maritimum* sub-community

This community occurs on the slumped undercliff in the Cow Gap area and other small pockets of slumped cliff along the cliff-face.

OV23 – perennial rye-grass *Lolium perenne* - **cock's-foot** *Dactylis glomeratus* grassland. (<0.01 ha)

A small pocket of this community occurs around the edge of one car park.

OV27 – rosebay willowherb *Epilobium angustifolium* community (1.23 ha)

This community can occur on fire sites and disturbed areas that have a sudden high nutrient input. It occurs in small pockets mainly within Whitbread Hollow.

OV24 – common nettle *Urtica dioica* – **goosegrass** *Galium aparine* community (0.43 ha)

Nettle patches occur throughout the site where there is high nutrient input.

1.5.2 Species of Conservation Concern

With such a diversity of habitats present within the site, including nationally uncommon communities, it is of no surprise that the area supports populations of many species of conservation concern. The presence of these scarce assemblages of species is a key factor for the management prescriptions outlined in the plan. The sections below summarise the presence of UK Biodiversity Action Plan (UK BAP) species and species with conservation designations recorded from the site. More details on each species can be found in Appendix 1. The information for this section is summarised from the 2013 Sussex Biodiversity Record Centre - Desktop Biodiversity Report for Land at Eastbourne Downland (Sussex Biodiversity Record Centre, 2013).

For explanations of the conservation designation terms see glossary p.75.

1.5.2.1 Lichens

One IUCN (2001) - Vulnerable species has been recorded from the Belle Tout area of site, *Cladonia convoluta*. This species is associated with warm, sunny limestone and chalk coastal slopes. See Appendix 1.1 for details.

1.5.2.2 Vascular Plants

A number of rare and scarce chalk grassland species have been recorded from the site including five IUCN (2001) - Endangered, three IUCN (2001) - Vulnerable, two IUCN (2001) - Lower risk - near threatened, and nine UK BAP species. See Appendix 1.2 for detailed information on these species.

The site is especially important for the chalk grassland flowering plant assemblages that are present within the site represented by the number of nationally endangered, vulnerable and rare species recorded.

IUCN (2001) - Endangered species:

- *Adonis annua* pheasant's-eye
- *Ajuga chamaepitys* ground-pine
- *Dianthus armeria* Deptford pink
- *Orchis ustulata* burnt orchid
- *Tephrosieris integrifolia* field fleawort

IUCN (2001) - Vulnerable species:

- *Bupleurum baldense* small hare's-ear
- *Clinopodium acinos* basil thyme
- *Dactylorhiza viridis* frog orchid

IUCN (2001) - Lower risk - near threatened species:

- *Himantoglossum hircinum* lizard orchid
- *Seseli libanotis* moon carrot

UK BAP/Natural Environment and Rural Communities Act 2006 -

Species of Principal Importance in England species:

- *Adonis annua* pheasant's-eye
- *Ajuga chamaepitys* ground-pine
- *Centaurea cyanus* cornflower
- *Clinopodium acinos* basil thyme
- *Dactylorhiza viridis* frog orchid
- *Dianthus armeria* Deptford pink
- *Gentianella anglica* early gentian
- *Orchis ustulata* burnt orchid
- *Tephroseris integrifolia* field fleawort

1.5.2.3 Amphibians & Reptiles

Three UK BAP species of amphibian and reptile have been recorded within the site, **common toad** *Bufo bufo*, **great crested newt** *Triturus cristatus* and **adder** *Vipera berus*. See Appendix 1.3 for detailed information on these species.

1.5.2.4 Birds

The site is well known as a regionally important site for the study of bird migration, and the site provides cover and food for both spring and autumn migrants and is an outstanding location for watching visible migration, mainly in autumn. The site also supports an assemblage of breeding species associated with downland, coastal scrub and maritime cliff.

The site supports three red list breeding species and three amber list species, although breeding records of a number of these species are very rare. See Appendix 1.4 for detailed information on these species.

Red list species:

- *Emberiza calandra* corn bunting
- *Passer montanus* Eurasian tree sparrow
- *Phylloscopus sibilatrix* wood warbler

Amber list species:

- *Circus pygargus* Montagu's harrier
- *Milvus milvus* red kite
- *Phoenicurus ochruros* black redstart

1.5.2.5 Mammals

One UK BAP species of mammal has been recorded from the site, **brown hare** *Lepus europaeus*. See Appendix 1.5 for detailed information on this species.

1.5.2.6 Insects

A number of rare and scarce insects have been recorded from the site, including one IUCN (2001) - Endangered, two IUCN (2001) - Vulnerable, three IUCN (2001) - Lower risk - near threatened, and 38 UK BAP species (mainly butterflies & moths). See Appendix 1.6 for detailed information on these species.

It is clear the site is especially important for the Lepidoptera (butterflies & moths) assemblages present within the grassland, scrub and maritime cliff habitats.

IUCN (2001) - Endangered species:

- *Satyrium w-album* white-letter hairstreak

IUCN (2001) - Vulnerable species:

- *Erynnis tages* dingy skipper
- *Hipparchia semele* grayling

IUCN (2001) - Lower risk - near threatened species:

- *Coenonympha pamphilus* small heath
- *Cupido minimus* small blue
- *Lasiommata megera* wall

UK BAP/Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England species:

- *Acronicta rumicis* knot grass
- *Adscita statices* forester
- *Agrochola lychnidia* beaded chestnut

- *Allophytes oxyacanthae* green-brindled crescent
- *Amphipyra tragopoginis* mouse moth
- *Aporophyla lutulenta* deep-brown dart
- *Atethmia centrigo* centre-barred sallow
- *Bombus humilis* brown-banded carder-bee
- *Bombus ruderarius* red-shanked carder-bee
- *Brachinus (Brachynidius) sclopeta*
- *Caradrina morpheus* mottled rustic
- *Chiasmia clathrata* latticed heath
- *Coenonympha pamphilus* small heath
- *Cupido minimus* small blue
- *Diarsia rubi* small square-spot
- *Doros profuges* phantom hoverfly
- *Ecliptopera silaceata* small phoenix
- *Epirrhoe galiata* galium carpet
- *Erynnis tages* dingy skipper
- *Haplodrina blanda* rustic
- *Hipparchia semele* grayling
- *Hydraecia micacea* rosy rustic
- *Lasiommata megera* wall
- *Limenitis camilla* white admiral
- *Malacosoma neustria* lackey
- *Melanchra persicariae* dot moth
- *Melanthia procellata* pretty chalk carpet
- *Mesoligia literosa* rosy minor
- *Perizoma albulata* grass rivulet
- *Satyrium w-album* white-letter hairstreak
- *Scopula marginepunctata* mullein wave
- *Scotopteryx chenopodiata* shaded broad-bar
- *Spilosoma lubricipeda* white ermine
- *Spilosoma luteum* buff ermine
- *Tholera decimalis* feathered gothic
- *Timandra comae* blood-vein
- *Tyria jacobaeae* cinnabar
- *Xanthorhoe ferrugata* dark-barred twin-spot carpet

1.6 Geological importance

The geology of Beachy Head is of national importance, and the site is popular with fossil enthusiasts and for educational geology visits. The rocks and clays of the site span from the Mid-Cretaceous Gault Clay and Upper Greensand, which is exposed in places at low tide, to the Late Cretaceous Chalk that includes the Glauconitic Marl at its base at the eastern cliffs up to the Coniacian stage Chalk at the highest elevation of Beachy Head. This records

deposition from approximately 103 million years ago to 86 million years ago including the transition from shallow, near shore conditions, when the sea level was low and sands and clays were formed, to the potentially deeper water conditions required for Chalk deposition. This spans a time when the Beachy Head area was at a latitude more equivalent to the Mediterranean today.

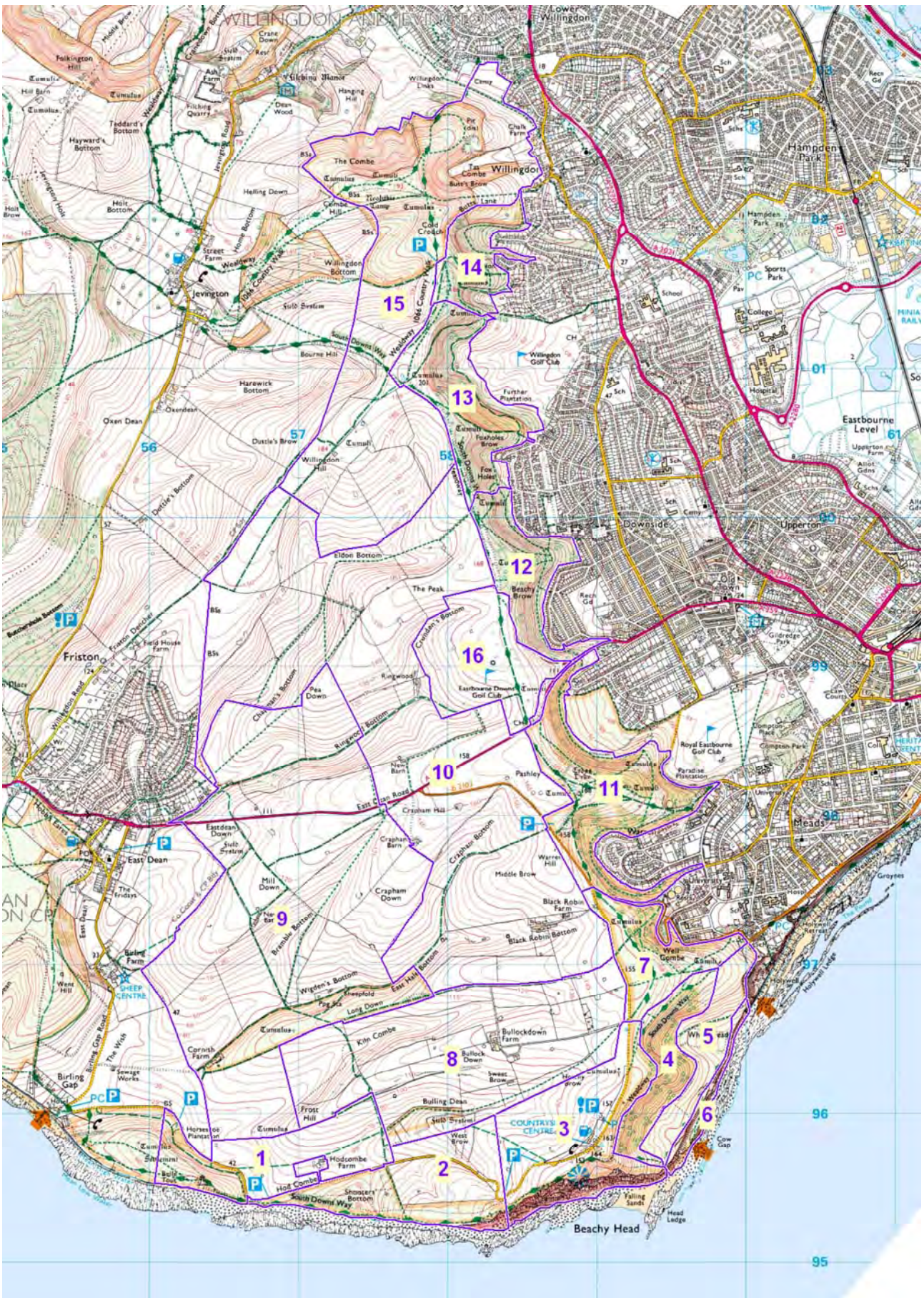
The sediments of the Gault Clay and Upper Greensand were formed during near shore conditions that were calm enough to allow the deposition of silt and sands. The Chalk mainly consists of the skeletal remains of planktonic algae (coccoliths) which gradually accumulated as a white ooze on the sea bed. The further away from sources of terrestrial sediment input this deposition took place the higher the purity of the Chalk created. Later compaction and lithification has resulted in the calcium carbonate rich sediment forming a relatively soft white limestone.

In its upper part layers of flint formed through chemical reaction concentrating silica into irregular nodules and sheet-like layers. One flint band, the Seven Sisters Flint Band, follows the gently tilted chalk strata and extends from the cliff base to the west of the site to near the cliff-top at Beachy Head. After dehydration the silica hardens to form microscopic quartz crystals creating the hard flints that are seen within the Chalk.

Fossils are very commonly found within the rocks and clays at Beachy Head and ammonites, bivalves and sponges are the most common fossil groups found. The greatest density and diversity of fossils is found within the Chalk and Flints, where fossil groups including gastropods, echinoids, bryozoans, nautili, fish skeletons, shark teeth and crustaceans can also be found.

Due to the sites SSSI designation and the finite resource of fossils present within the clays, sands, chalk and flints, any removal of *in situ* specimens should be discouraged. The study, removal and preservation of fossils from foreshore pebbles and boulders is preferable as these will inevitably be lost to erosion and wave action. Fossil collectors and educational events should be encouraged to document and record any specimens removed from the site.

2. Management Compartment Descriptions



2.1 Compartment 1 - Belle Tout



This 88.67ha compartment contains some of the best quality species rich calcareous grassland and the only area of chalk heath within the site. The compartment also contains Horseshoe Plantation, an area of secondary woodland, and an area of recently re-seeded grassland, Hodcombe, across the road from Belle Tout.

The grassland south of Beachy Head Road is predominately species rich CG2a, with the small patch of CG2a/H2 on the western most edge of the compartment boundary. Patches of CG3, CG4 and MG5 are also present amongst the grassland/scrub mosaic. Within Hodcombe, north of the road, the grassland is mainly MG6 with some MG5. The scrub present is mainly W21 and W23 and Horseshoe Plantation is W8 secondary woodland.

Numerous groups of well-defined ant hills exist throughout the compartment and their presence may be important for the relationship they have with various 'blue' butterflies. On the advice of the British Butterfly Conservation Society (Sussex Branch), where privet occurs this has been left when other works have been done in order to promote the habitat of the rare Barred Tooth-striped moth.

A Scheduled Ancient Monument consisting of a possible bronze age round barrow is present within the compartment and there are extensive ancient earthworks surrounding Belle Tout lighthouse. The earthworks form the boundary to what is considered the largest prehistoric enclosure in the UK. Its use is unknown for certain and further research is necessary by English Heritage who plan a full ground-radar survey during 2015/16.

The area south of the road is currently managed mainly by winter pony grazing and rabbit grazing with the cliff-top grassland formerly heavily mown. The south-east corner of this area is under threat from severe scrub encroachment. The field north of the road is managed by a combination of late summer cutting and sheep grazing in spring and autumn/winter. The majority of this compartment is currently under an HLS agreement including the grassland and grazing options HK6 (maintenance of species-rich semi-natural grassland), HK7 (restoration of species-rich semi-natural grassland), and HR1 (grazing supplement for cattle). The scrub area is under scrub management option HC15 (maintenance of successional areas and scrub) and Horseshoe Plantation under the woodland management option HC7 (maintenance of woodland).

Species of note recorded within this compartment include a possible breeding population of the moth, flame brocade *Trigonophora flammea* and silver spotted skipper *Hesperia comma*. Early spider orchid *Ophrys sphegodes* occurs here in areas of shorter grass.

2.2 Compartment 2 - Shooters Bottom



This 63.65 ha area of grassland and scrub is of particular importance for attracting migrant wildlife and is a complex mix of habitats including sheltered rides and grassland/scrub mosaics. There are also two areas of recently re-seeded grassland at Far West (spring 1992) and West Brow (autumn 1996).

The cliff-top grassland and along the rides within the scrub is predominately CG2a, as well as some MG5 to the east of the large scrub block. The cliff-top grassland to the extreme west and east of the compartment is CG3. The scrub present throughout the compartment is a mixture of mainly W21 and W23. Numerous well-defined ant hills exist, particularly near the scrub edges, and may be important for the local 'blue' butterfly populations.

The recently re-seeded grassland to the east of the large scrub block is predominately MG5 with MG1 edging the path and road. The road side embankment is a fine example of MG5, distinctly different from the rest of the field. Over the road the grassland is MG6.

The compartment was historically managed mainly by winter cattle grazing with the cliff-top grassland formerly heavily mown. Pony grazing is to be introduced in the Shooters Bottom scrub area and the cliff top mowing has recently been reduced in frequency. The recently re-seeded grassland to the east of the compartment is managed by a combination of late summer cutting

and sheep grazing in spring and autumn/winter. The majority of this compartment is currently under a HLS agreement including the grassland and grazing options HK7, and HR1. The scrub area is under scrub management option HC15.

Species of note recorded from this compartment include **lizard orchid** *Himantoglossum hircinum*, **lady orchid** *Orchis purpurea*, **small blue** *Cupido minimus*, **white horehound** *Marrubium vulgare* and **silver-spotted skipper** *Hesperia comma*.

2.3 Compartment 3 - Beachy Head & Heathy Brow



This is a 80.3 ha area of maritime chalk cliff, chalk grassland and coastal scrub. This compartment has the most intense visitor pressure of the site due to the combination of a coach park, car park and bus stop, and includes the Beachy Head view point overlooking the lighthouse.

There are also refreshment and toilet facilities, a coastguard office, permanent interpretation panels and a disabled access path, the 'Peace Path'. One end of the pub buildings houses the Beachy Head Countryside Centre opened in September 1995 and managed and staffed by volunteers.

The grassland opposite the Beachy Head pub has been heavily mown for many years creating a very species poor MG1/MG7 grassland. North of the road includes the eastern area of the recently re-seeded MG6 grassland and is under HLS agreement option HK7. The grassland to the south-west of the compartment is a mixture of MG5, CG3 and CG4 with blocks of W21 scrub. To the north-east of the compartment the grassland is the acid grassland community U1.

The field north of Beachy Head Road is managed by sheep and cattle grazing and late summer hay cuts. The grassland opposite the Beachy Head Hotel has been managed as heavily mown amenity grassland throughout the early to mid-2000s. Bee orchids were formerly recorded towards the west side of the main summit on the opposite side of the road from the pub car park area. The summit is also licensed for use as a take-off and landing area for the Southern Hang Gliding Club. To protect possible peregrine falcon nesting sites the club are only allowed to overfly the area west of a line running south from the Beachy Head pub between 1st August and 31st January.

2.4 Compartment 4 - Escarpment below South Downs Way.



This is a 25 ha southeast facing escarpment above Whitbread Hollow and Frances Bottom. This compartment contains a very large scrub block which is used by the Beachy Head Ringing Group to study bird migration. They have a small permanent shed on the edge of the sports field area in Whitbread Hollow below the lower scrub edge.

The southeast-facing escarpment in the south of the compartment is a mixture of CG5 and CG2 and is under severe threat of scrub encroachment and the small W21 scrub patches, if allowed, will eventually coalesce to form a larger scrub block. The steepest meadow slope has been mown in the past but pony grazing is to be introduced. Ash and sycamore are starting to invade the W21 scrub within Whitbread Hollow and eventually this area will develop into W8 woodland. The bird ringers do some minor scrub removal works.

The grassland within this compartment is under HLS agreement options HK7 and HR1 and the large scrub blocks under scrub management option HC15.

The South Downs Way long distance footpath runs through the scrub high up on the steep slope above Frances Bottom and Whitbread Hollow giving panoramic views down on to the lower meadows and cliff top areas.

2.5 Compartment 5 - Lower Slopes



This is a 32 ha area of mainly grassland and scattered scrub, and includes a playing field which is leased to Bedes School. Maintenance of the sports field is carried out by the school's grounds man. Foyle Way track runs along the eastern boundary joining the playing field to the western terminus of Eastbourne seafront. Access to Cow Gap beach starts in this compartment.

The grassland to the south of the compartment is a mixture of CG3, MG5 and MG1. It is one of the best pollen and nectar resources within the site and should be a priority for survey during any invertebrate assemblage survey. The grassland north of the playing field is a mixture of CG2, CG5 and MG5, which contains substantial scattered W21 scrub. Patches of ragwort have developed in certain areas of this compartment and will require some control measures if the vegetation is grazed or cut and used as feed.

The grassland within this compartment is currently under HLS agreement options HK7 and HR1.

Species of note include records of **Deptford pink** along Foyle Way track.

2.6 Compartment 6 - Cow Gap



This is a 24 ha area of slumped cliff and cliff face with a small cliff-top area of grassland and scrub. A stepped footpath and wooden staircase, to the base of the cliff and beach at Cow Gap which includes a small area of vegetated shingle. The wooden staircase is maintained by the County Council.

The structural failure of the cliffs through rotational slipping appears to have occurred in several phases creating a series of small valley features parallel to the main cliff line. Evidence for the timing of cliff movement has not been investigated but the area appears to have been stable for many decades. Continuing erosion of the toe of the landslips will likely lead to further instability at some time in the future.

This beach is rich in Late Cretaceous fossils and is a popular site for visiting fossil collectors and academic geologists.

Currently little management is required here and the free functioning of coastal erosion and deposition should be allowed to continue to maintain the ecological and geological value of this area. This area should be a priority for inclusion within an invertebrate assemblage survey, to study the invertebrates of chalk cliff and undercliff

2.7 Compartment 7 - Well Combe



This is a 25 ha area of scrub, woodland and grassland. The grassland within this compartment is a mixture of MG1 and MG5, and in the south-west corner is a large area of U1 acid grassland which has become invaded with bramble scrub. Scattered W21 scrub is present and the northern area of the compartment is composed of W8 woodland.

The area is currently cattle grazed between autumn and spring, although the acid grassland appears under grazed and the grassland adjacent to Beachy Head Road was formerly heavily mown. An area known as The Dencher, adjacent to the roadside opposite Bullock Down Farm, is kept mown for licenced use by buggy kite flyers and as a car park area when Eastbourne's summer airshow takes place in August. Pony grazing may be introduced in those sections worst affected by bramble regeneration.

A number of fire break rides have been cut and maintained through the scrub.

The grassland within the compartment is currently under HLS agreement options HK7 and HR1, except for the central heavily mown area adjacent to Beachy Head Road. The woodland within the compartment, off Upper Duke's

Drive, is under HLS agreement option HC7 and the northern block of scrub is under option HC15.

This compartment is the main entry point for visitors walking along the seafront to the site via the South Downs Way footpath. The South Downs Way bridleway also runs northwest across the compartment from its terminus at seafront road.

2.8 Compartment 8 - Bullock Down Farm



This is a 168 ha area of chalk grassland, with a small amount of scrub, which is leased to a tenant farmer. The farmland contains four dew ponds and an historically important flint walled enclosure known as Drovers Field and a linear Napoleonic flint wall. A large area of Roman-British field enclosures and other features are widely spread across the compartment.

This compartment is not managed under the HLS agreement, and management is administered through Strutt & Parker (Eastbourne Borough Council Downland Estate Report, 2012.).

Kiln Combe and Bullingdean are both designated as SSSI due to the species rich chalk grassland and the occurrence of the rare umbellifer, Moon Carrot.

2.9 Compartment 9 - Cornish Farm



This is a 434 ha area of grass ley, pasture and scrub which is managed under tenancy agreements with two farmers and administered through Strutt & Parker (Eastbourne Borough Council Downland Estate Report, 2012.).

There are four dew ponds, including the only one of traditional clay/flint construction on the Eastbourne downland, next to the A259. Towards the centre of the compartment is a traditional shepherd's bothy with brick walls and tiled roof. This is grade two listed and was restored in the early 2000s. There are also archaeologically important tumuli and earth works. Numerous bridleways and public footpaths run through this compartment.

2.10 Compartment 10 - Black Robin Farm



This is a 404.8 ha area of grass ley, pasture, arable and scrub, which is managed under a tenancy agreement and administered through Strutt & Parker (Eastbourne Borough Council Downland Estate Report, 2012).

The area contains six dew ponds including the best preserved local example of a pond collection/water storage coupled with piped delivery to a barn complex and waste retrieval of water to a pond in the valley bottom. Various bridleways and public footpaths run through the compartment.

2.11 Compartment 11 - Warren Hill & Pashley



This is a 80.40 ha area of grassland, scrub and woodland. Three woodland blocks occur within this compartment. The northern block of woodland off Pashley Road is currently under HLS agreement option HC7. The central block of woodland, Paradise Plantation, is also under HLS agreement option HC7. The southern block of woodland, Warren Hill, is not included within the HLS agreement options. The woodland within compartment 11 contains beech and yew and some of the oldest trees within the site. This area of woodland was badly damaged during the hurricane of October 1987.

Within part of Paradise Plantation a series of mountain bike trails have been established. The trail area is now recognized and protected as a Queen Elizabeth II Diamond Jubilee Playing Field.

There are archaeological important sites within the compartment including tumuli, earthworks and a former windmill site.

A part of the area to the east side is leased to the Royal Eastbourne Golf Club.

Species of note recorded within this compartment include **frog orchid** growing near the edge of the golf course.

2.12 Compartment 12 - YHA to Beachy Brow



This is a 36 ha area of mainly scrub and woodland with some grassland. Fire break rides have been cut and maintained through the central block of gorse scrub. This scrub is under HLS agreement option HC15. The woodland off Cherry Garden and Beachy Brow is relatively recent secondary woodland, and contains mainly ash and sycamore. The woodland within this compartment is not included within the HLS agreement options.

Beachy Brow meadow on the spur jutting out between the housing estates is mown to maintain it as open ground and contains some chalk grassland habitat.

This compartment is an important entry point to the site from the dense urban development adjacent to the compartment.

2.13 Compartment 13 - Priory Heights to Linkway



This is a 49.3 ha area of grassland, woodland and scrub. The compartment is adjacent to the Willingdon Golf Course and a small area at Priory Heights is let for horse grazing. The woodland, Further Plantation and Foxhole Brow, is recent secondary woodland composed of ash and sycamore. It is included within HLS agreement option HC7.

The remnant grassland in this area is quite species rich but has not been grazed for many years. This compartment is also important for amenity due to its location adjacent to urban development.

A small field adjacent to priory heights is leased for horse grazing.

The Linkway track, running up to the summit of Willingdon Hill from the Ratton housing, has south-facing embankments important for their butterfly colonies including Chalk Hill Blues associated with horseshoe vetch.

Near the triangulation pillar on Willingdon Hill summit is the site of former windmill and the prominent low mound of a tumulus gives panoramic views.

2.14 Compartment 14 - Ratton Woods, Butts Brow and Butts Lane



This is a 33.79 ha area of woodland and grassland. The area has a lot of visitor pressure via the Butts Brow car park and as such is one of the key entry points into the northern part of the site.

Ratton Plantation is W12 woodland composed of beech, yew and ash, which is surrounded by a large area of recently self sown ash and sycamore secondary woodland. The southern area of woodland is included within HLS option HC7. The remnant grassland patches are quite species rich and maintained by rabbit grazing.

A small area in the north of this compartment sits within the Willingdon Down SSSI. The area in the SSSI was formerly grazed pasture but is now grazed by rabbits. There is some scrub encroachment around the perimeter will require control. The remaining area of open field is rich with chalk grassland species that include a visually stunning display of devil's-bit scabious during mid to late summer. The silver-spotted skipper has been recorded here.

An ancient circular earthwork surrounds part of the car park area.

2.15 Compartment 15 - Chalk Farm



This is a 236.51 ha area of grass ley, arable, pasture and woodland, which is managed as an organic farm under a tenancy agreement and administered through Strutt & Parker (Eastbourne Borough Council Downland Estate Report, 2012).

This compartment comprises the majority of the Willingdon Down SSSI and is ecologically rich containing chalk grassland and a dew pond. The site is also of archaeological importance featuring a Neolithic Causewayed Camp at Combe Hill, which is probably the most important archaeological feature within the site, and a number of tumuli.

The site has high visitor pressure, possibly the most visited part of the site after the Beachy Head area. Most of the northern section of Chalk Farm is designated as public open access land and there is a dense network of public rights of way including part of the inland branch of the South Downs Way.

Chalk Farm Hotel operates at the foot of the escarpment and is leased from the council.

2.16 Compartment 16 - Eastbourne Downs Golf Club



This is a 58.4 ha area of mown fairways and greens, rough grassland and scrub, which is managed under lease to the Eastbourne Downs Golf Club. Public access is restricted to three bridleways, including the South Downs Way, that run through this compartment and the easterly area of scrub.

3. Habitat Management

3.1 Scrub Management

Scrub is an important habitat component of the Borough downland and chalk scrub communities especially can be very species rich and provide a diverse woody vegetation resource for scrub breeding invertebrates, and an important structural element for scrub invertebrates most notably spider assemblages. Spring flowering scrub species, for example blackthorn and hawthorn, also provide an important nectar and pollen resource especially for early emerging insects, most importantly early spring nesting aculeate hymenoptera (ants, wasps and bees), including bumblebees. Scrub is an important habitat for breeding birds and due to the coastal headland location of the site is especially important as a source of food and cover for migrants.

Scrub poses a significant threat to the grassland communities. If left without management the majority of the grassland within the site will by natural succession become dominated by scrub and eventually woodland. The ecological value of the nationally scarce chalk grassland and chalk heath communities will be lost if this is allowed to happen so scrub control is one of the key priorities for the management of the Downs.

The scrub communities present within the site include W21 *Crataegus monogyna* – *Hedera helix* scrub, W23 – *Ulex europaeus* – *Rubus fruticosus* agg. scrub and W24 – *Rubus fruticosus* agg. – *Holcus lanatus* community.

W21 is the dominant scrub community present and is present in two sub-communities. W21a *Hedera helix* – *Urtica dioica* occurs mainly off the chalk and the more species rich W21c *Viburnum lantana* chalk-scrub sub-community on the chalk.

There are four categories of scrub management within the site:

i. Lowland calcareous grassland, neutral and acid grassland within early stages of succession to scrub.

A number of areas of grassland within the site have been under-grazed or undergone a period of minimal management. These areas are threatened by serious scrub invasion, especially bramble, and are currently (2014) within an early successional development to scrub. In terms of scrub control these are the highest priority areas as the greatest gain for grassland restoration can be

made within these areas by appropriate management to eradicate bramble and scattered scrub from the sward via grazing/cutting/weed wiping with herbicide. Prescriptions for the control of scrub within grassland swards are outlined in the grassland management section.

ii. Lowland calcareous grassland/scrub mosaic.

A number of areas within the site, especially around the cliff-top, a grassland/scrub mosaic has developed. Small patches of scrub, mainly gorse and privet, have developed within the sward and are growing in size, although only slowly in the salty and windy environment. If left unmanaged these will eventually form dense blocks of scrub. The sheltered pockets of grassland and diverse ecotone that exists amongst the grassland/scrub mosaic is valuable and complete eradication of scrub within these areas is not an appropriate goal. Reducing the area of scrub around these grassland patches by cutting scrub back will both ensure the scrub patches do not form dense blocks and also protect the grassland/scrub ecotone mosaic that is present. This management is also a priority as a gain in high quality grassland can be effectively and easily maintained by small scale removal of scrub surrounding patches of species rich grassland.

iii. Dense continuous blocks of scrub.

Areas of dense scrub might appear to be the most obvious threat to the loss of species rich grassland but are in fact not a current priority for scrub control, except for a couple of areas. Clearing dense continuous scrub cover would have little short term impact on restoring grassland communities as the damage has already been done and the build up of scrub litter will have enriched and changed the underlying soil.

Once areas currently at high risk of scrub encroachment are dealt with work can turn to reducing the size of continuous blocks of scrub by cutting, stump treatment, scrub litter scraping back to mineral soil and eventual development and maintenance of restored grassland. This is a long process but must only be undertaken once the loss of grassland by scrub encroachment has been halted.

The only exception to this are key blocks of scrub close to the cliff-top. These require removal to ensure grassland is maintained on the cliff-edge as the cliff-

edge recedes due to coastal erosion. The scarce maritime grassland communities that develop on the extreme cliff-edge due to exposure and erosion cannot develop if dense scrub is present rather than open grassland or a grassland/scrub mosaic. These blocks should be cut and treated, with ongoing management consisting of grazing and further cutting if regrowth is observed.

Other blocks of scrub present within the site can be improved by creating a varied age structure through rotational cutting.

Where paths run through dense blocks of scrub path edge improvements should be adopted to create ecotone by scallop creation and ride cutting. Rides and paths running through scrub and parallel to the cliff-edge are particularly valuable as the scrub on the seaward side of the path provides shelter and the south-facing side of the path provides warmth creating a warm micro-climate for thermophilous invertebrates. These pathways are identified as priorities for ride management.

iv. Woodland edge and understorey scrub.

Woodland edge and understorey scrub is an important component of the woodland areas on the Downs. Maintenance of woodland and improvement of woodland edge by scrub coppicing and scallop creation are outlined in the woodland management section but are not a priority for management.

Scrub Management Objectives

1. Restore grassland under threat of scrub invasion via grazing/mechanical control/herbicide treatment.
2. Ensure blocks of continuous scrub do not expand into areas of species-rich grassland.
3. Within a grassland/scrub mosaic ensure small scale removal around grassland patches so scrub does not coalesce into continuous blocks thus decreasing the amount of species-rich grassland.
4. Improve grassland/scrub ecotone by creating scallops into scrub edging paths and by coppicing the edge of woodland.

5. Ensure species rich grassland and features of archaeological interest are not damaged by scrub management.
6. Ensure that there is a programme of rotational coppicing.

Scrub Management Targets

1. Scrub cover within grassland/scrub areas should be between 20-50% by 2020.
2. Dense scrub blocks should contain no more than 50% mature scrub by 2020.
3. At least a 1m strip between scrub and grassland should be maintained at a sward height of 30cms and between 2-10cms within small grassland patches surrounded by scrub.
4. Scrub species should be rare or at most occasional (especially bramble) within the grassland swards identified as under threat from scrub invasion by 2020.

Scrub Management Actions

The scrub management compartment maps show the areas that are the highest priority for scrub management within the site. Management marked as priority 1 will be undertaken first and elements 2 and 3 will only be undertaken once higher priority work has been completed. The timing for lower priority tasks will be reviewed and pushed back if resources do not allow completion within the time frame allocated.

Areas shown in red, yellow and black in the scrub management maps will be dealt with by scrub control techniques included within the management actions outlined in this section, areas shown in orange and green will be dealt with by grassland management techniques and are dealt with in the grassland/grazing section.

Compartment 1 (Map Scrub 1.)

1. Remove 1-3m strip of scrub surrounding pockets of grassland in areas C1-S1, C1-S2, C1-S3. Stumps should be cut to ground level and regrowth controlled by cattle grazing.
2. Create scallops into scrub blocks alongside path marked C1-R1. This should be done on a five year rotation allowing scallops to re-grow and then cut back regrowth.
 - a. Cut scrub should be removed off site and disposed of. If this is not possible the cut scrub can be burnt on site at a designated fire site that should be used during scrub clearance. A fire site should be at least ten metres from any tree canopy and species rich grassland and preferably cut material should be burnt on a metal sheet for easy disposal of ash.
3. Scrub clearance work should only take place, outside of the bird breeding season, between 1st October - 28th February. Care should be taken to ensure stumps are cut to ground level and are not to be removed or uprooted and ensure species-rich grassland or features of archaeological importance are not damaged.
4. Scrub work within C1-S1, C1-S2, C1-S3 and C1-R1 should be undertaken by volunteers due to the small scale work and care and attention needed not to damage surrounding grassland. Scrub removal within C1-S4 can be undertaken by either volunteers or contractors. C1-S4 requires larger scale scrub removal, disposal and herbicide treatment but the entire area marked need not be cut at the same time. Preferably the seaward side of the scrub block should be cut and treated first.
5. Follow up treatment within C1-S4 should include flailing and the cut area should be included within the area cattle grazed C1-G1 after scrub work is undertaken. Follow up treatment within C1-S1, C1-S2 and C1-S3 should just include cattle grazing. These areas are to be included within the C1-G1 grassland area grazed.

Table Scrub 1. Scrub management actions within Compartment 1.

Compartment 1 Scrub Management						
Name	Management	HLS Options	Priority	Year	Time of year	Undertaken by:
C1-S1	Cut 1-3 metre strip of scrub surrounding pockets of grassland. Control regrowth with grazing.	HC15, HK6, HR1	1	2014/2015	1 st October - 28 th February	Volunteers
C1-S2	Cut 1-3 metre strip of scrub surrounding pockets of grassland. Control regrowth with grazing.	HC15, HK6, HR1	1	2014/2015	1 st October - 28 th February	Volunteers
C1-S3	Cut 1-3 metre strip of scrub surrounding pockets of grassland. Control regrowth with grazing.	HC15, HK6, HR1	1	2014/2015	1 st October - 28 th February	Volunteers
C1-S4	Cut scrub and remove on seaward side of scrub block. Larger stumps to be treated with herbicide, flail and graze in following years if regrowth observed. Remove cut scrub and dispose of off-site or burn on site at agreed fire site.	HC15, HK6, HR1	3	2017/2018	1 st October - 28 th February	Volunteers/ Contractor
C1-S5	Cut 1-3 metre strip of scrub surrounding pockets of grassland. Control regrowth with grazing.	HC15, HK6, HR1	1	2014/2015	1 st October - 28 th February	Volunteers/ Contractors
CS-R1	Cut 5-10m deep scallops into scrub bordering path. Allow regrowth to develop.	HC15	2	2015/2016	1 st October - 28 th February	Volunteers
CS-R1	Cut regrowth within scallops cut into scrub bordering path.	HC15	2	2020/2021	1 st October - 28 th February	Volunteers

Map Scrub 1. Compartment 1 Scrub Management



Compartment 2 (Map Scrub 2.)

1. Remove a 1-3 metre strip of scrub surrounding pockets of grassland in areas C2-S1, C2-S2, C2-S3. Stumps should be cut to ground level and regrowth controlled by cattle grazing.
2. Create scallops into scrub blocks alongside path marked C2-R1 and C2-R2. This should be done on a five year rotation allowing scallops to re-grow and then cut back regrowth.
3. Cut scrub should be removed off site and disposed of. If this is not possible the cut scrub can be burnt on site at a designated fire site that should be used during scrub clearance. A fire site should be at least ten metres from any tree canopy and species rich grassland and preferably material should be burnt on a metal sheet for easy disposal of ash.
4. Scrub clearance work should only take place, outside of the bird breeding season, between 1st October - 28th February. Care should be taken to ensure stumps are cut to ground level and are not be removed or uprooted and ensure species-rich grassland or features of archaeological importance are not damaged.
5. Scrub work within C2-S1, C2-S2, C2-S3, C2-R1 and C2-R2 should be undertaken by volunteers due to the small scale work and care and attention needed not to damage surrounding grassland. Scrub removal within C2-S4, C2-S5, C2-S6 and C2-S7 require larger scale scrub removal, disposal and herbicide treatment and can be undertaken by either volunteers or contractors.
6. At least 30% of C2-S4 should be cut every five years and regrowth allowed to develop to create a varied age structure within the scrub block. Management within this scrub block is not intended to eradicate scrub but to improve structure.
7. Scrub within C2-S5, C2-S6 and C2-S7 should be cut and large stumps treated with herbicide to prevent regrowth. If regrowth is observed in following years the regrowth should be flailed. The area cut should be included within the area grazed. The seaward side of this scrub blocks should be cut first. The entire block does not need to be cut at the same time.

Table Scrub 2. Scrub management actions within Compartment 2.

Compartment 2 Scrub Management						
Area	Management	HLS Options	Priority	Year	Time of year	Undertaken by:
C2-S1	Cut 1-3 metre strip of scrub surrounding pockets of grassland.	HC15	1	2014/2015	1 st October - 28 th February	Volunteers/ Contractors
C2-S2	Cut 1-3 metre strip of scrub surrounding pockets of grassland.	HC15	1	2015/2016	1 st October - 28 th February	Volunteers
C2-S3	Cut 1-3 metre strip of scrub surrounding pockets of grassland. Control regrowth with grazing.	HC15, HK7, HR1	1	2015/2016	1 st October - 28 th February	Volunteers
C2-S4	Cut at least 30% of scrub block. Remove and dispose of off-site or burn on site at agreed fire site.	HC15	3	2015/2016	1 st October - 28 th February	Volunteers/ Contractor
C2-S4	Cut at least 30% of scrub block. Remove and dispose of off-site or burn on site at agreed fire site.	HC15	3	2020/2021	1 st October - 28 th February	Volunteers/ Contractor
C2-S4	Cut at least 30% of scrub block. Remove and dispose of off-site or burn on site at agreed fire site.	HC15	3	2025/2026	1 st October - 28 th February	Volunteers/ Contractor
C2-S5	Cut scrub and remove on seaward side of scrub block. Larger stumps to be treated with herbicide, flail and graze in following years if regrowth observed. Remove cut scrub and dispose of off-site or burn on site at agreed fire site.	HC15, HK7, HR1	2	2017/2018	1 st October - 28 th February	Volunteers/ Contractor
C2-S6	Cut scrub and remove on seaward side of scrub block. Larger stumps to be treated with herbicide, flail and graze in following years if regrowth observed. Remove cut scrub and dispose of off-site or burn on site at agreed fire site.	HC15, HK7, HR1	2	2017/2018	1 st October - 28 th February	Volunteers/ Contractor
C2-S7	Cut scrub and remove on seaward side of scrub block. Larger stumps to be treated with herbicide, flail and graze in following years if regrowth observed. Remove cut scrub and dispose of off-site or burn on site at agreed fire site.	HC15, HK7, HR1	2	2017/2018	1 st October - 28 th February	Volunteers/ Contractor
C2-R1	Cut 5-10m deep scallops into scrub bordering path.	HC15	2	2015/2016	1 st October - 28 th February	Volunteers
C2-R1	Cut regrowth within scallops cut into scrub bordering path.	HC15	2	2020/2021	1 st October - 28 th February	Volunteers
C2-R2	Cut 5-10m deep scallops into scrub bordering path.	HC15	2	2015/2016	1 st October - 28 th February	Volunteers
C2-R2	Cut regrowth within scallops cut into scrub bordering path.	HC15	2	2020/2021	1 st October - 28 th February	Volunteers

Map Scrub 2. Compartment 2 Scrub Management



Compartment 3 (Map Scrub 3.)

1. At least 30% of C3-S1 should be cut every five years and regrowth allowed to continue to create a varied age structure within the scrub block.
Management within this scrub block is not intended to eradicate scrub but to improve structure.
2. Cut scrub should be removed off site and disposed of. If this is not possible the cut scrub can be burnt on site at a designated fire site that should be used during scrub clearance. A fire site should be at least ten metres from any tree canopy and species rich grassland and preferably material should be burnt on a metal sheet for easy disposal of ash.
3. Scrub clearance work should only take place, outside of the bird breeding season, between 1st October - 28th February. Care should be taken to ensure stumps are cut to ground level and are not be removed or uprooted and ensure species-rich grassland or features of archaeological importance are not damaged.
4. Scrub management within C3-S1 can be undertaken by either volunteers or contractors.

Table Scrub 3. Scrub management actions within Compartment 3.

Compartment 3 Scrub Management						
Area	Management	HLS Options	Priority	Year	Time of year	Undertaken by:
C3-S1	Cut at least 30% of scrub block. Remove cut scrub and dispose of off-site or burn on site at agreed fire site.	HC15	3	2015/2016	1 st October - 28 th February	Volunteers/ Contractor
C3-S1	Cut at least 30% of scrub block. Remove cut scrub and dispose of off-site or burn on site at agreed fire site.	HC15	3	2020/2021	1 st October - 28 th February	Volunteers/ Contractor
C3-S1	Cut at least 30% of scrub block. Remove cut scrub and dispose of off-site or burn on site at agreed fire site.	HC15	3	2025/2026	1 st October - 28 th February	Volunteers/ Contractor

Map Scrub 3. Compartment 3 Scrub Management



Compartment 4 (Map Scrub 4.)

1. At least 30% of C4-S1 and at most 25% of C4-S2 should be cut every five years and regrowth allowed to continue to create a varied age structure within the scrub block. Management within these scrub blocks is not intended to eradicate scrub but to improve structure.
2. Cut scrub should be removed off site and disposed of. If this is not possible the cut scrub can be burnt on site at a designated fire site that should be used during scrub clearance. A fire site should be at least ten metres from any tree canopy and species rich grassland and preferably material should be burnt on a metal sheet for easy disposal of ash.
3. Scrub clearance work should only take place, outside of the bird breeding season, between 1st October - 28th February. Care should be taken to ensure stumps are cut to ground level and are not be removed or uprooted and ensure species-rich grassland or features of archaeological importance are not damaged.
4. Scrub management within C4-S1 and C4-S2 can be undertaken by either volunteers or contractors.
5. Any management within C4-S2 should only be undertaken after consultation with the bird ringing group due to the use of the area for bird ringing and any management should enhance the area for bird ringing as this monitoring produces valuable information on the value of scrub within the site for migrants and breeding species.

Table Scrub 4. Scrub management actions within Compartment 4.

Compartment 4 Scrub Management						
Area	Management	HLS Options	Priority	Year	Time of year	Undertaken by:
C4-S1	Cut at least 30% of scrub block. Remove cut scrub and dispose of off-site or burn on site at agreed fire site.	HC15	3	2016/2017	1 st October - 28 th February	Volunteers/ Contractor
C4-S1	Cut at least 30% of scrub block. Remove cut scrub and dispose of off-site or burn on site at agreed fire site.	HC15	3	2021/2022	1 st October - 28 th February	Volunteers/ Contractor

Compartment 4 Scrub Management

Area	Management	HLS Options	Priority	Year	Time of year	Undertaken by:
C4-S1	Cut at least 30% of scrub block. Remove cut scrub and dispose of off-site or burn on site at agreed fire site.	HC15	3	2027/2028	1 st October - 28 th February	Volunteers/ Contractor
C4-S2	Cut at most 25% of scrub block. Remove cut scrub and dispose of off-site or burn on site at agreed fire site. Consult with bird ringing group before any management is undertaken.	HC15	3	2016/2017	1 st October - 28 th February	Volunteers/ Contractor
C4-S2	Cut at most 25% of scrub block. Remove cut scrub and dispose of off-site or burn on site at agreed fire site. Consult with bird ringing group before any management is undertaken.	HC15	3	2021/2022	1 st October - 28 th February	Volunteers/ Contractor
C4-S2	Cut at most 25% of scrub block. Remove cut scrub and dispose of off-site or burn on site at agreed fire site. Consult with bird ringing group before any management is undertaken.	HC15	3	2026/2027	1 st October - 28 th February	Volunteers/ Contractor

Map Scrub 4. Compartment 4 Scrub Management



Compartment 7 (Map Scrub 5.)

1. At least 30% of C7-S1 should be cut every four years and regrowth allowed to continue to create a varied age structure within the scrub block.
Management within this scrub block is not intended to eradicate scrub but to improve structure.
2. Cut scrub should be removed off site and disposed of. If this is not possible the cut scrub can be burnt on site at a designated fire site that should be used during scrub clearance. A fire site should be at least ten metres from any tree canopy and species rich grassland and preferably material should be burnt on a metal sheet for easy disposal of ash.
3. Scrub clearance work should only take place, outside of the bird breeding season, between 1st October - 28th February. Care should be taken to ensure stumps are cut to ground level and are not be removed or uprooted and ensure species-rich grassland or features of archaeological importance are not damaged.
4. Scrub management within C7-S1 can be undertaken by either volunteers or contractors.

Table Scrub 5. Scrub management actions within Compartment 7.

Compartment 7 Scrub Management						
Area	Management	HLS Options	Priority	Year	Time of year	Undertaken by:
C7-S1	Cut at least 30% of scrub block. Remove cut scrub and dispose of off-site or burn on site at agreed fire site.	HC15	3	2015/2016	1 st October - 28 th February	Volunteers/C ontractor
C7-S1	Cut at least 30% of scrub block. Remove cut scrub and dispose of off-site or burn on site at agreed fire site.	HC15	3	2020/2021	1 st October - 28 th February	Volunteers/C ontractor
C7-S1	Cut at least 30% of scrub block. Remove cut scrub and dispose of off-site or burn on site at agreed fire site.	HC15	3	2025/2026	1 st October - 28 th February	Volunteers/C ontractor

Map Scrub 5. Compartment 7 Scrub Management



Compartment 12 (Map Scrub 6.)

1. At least 30% of C12-S1 should be cut every five years and regrowth allowed to continue to create a varied age structure within the scrub block.
Management within this scrub block is not intended to eradicate scrub but to improve structure.
2. Cut scrub should be removed off site and disposed of. If this is not possible the cut scrub can be burnt on site at a designated fire site that should be used during scrub clearance. A fire site should be at least ten metres from any tree canopy and species rich grassland and preferably material should be burnt on a metal sheet for easy disposal of ash.
3. Scrub clearance work should only take place, outside of the bird breeding season, between 1st October - 28th February. Care should be taken to ensure stumps are cut to ground level and are not be removed or uprooted and ensure species-rich grassland or features of archaeological importance are not damaged.
4. Scrub management within C12-S1 can be undertaken by either volunteers or contractors.

Table Scrub 6. Scrub management actions within Compartment 12.

Compartment 12 Scrub Management						
Area	Management	HLS Options	Priority	Year	Time of year	Undertaken by:
C12-S1	Cut at least 30% of scrub block. Remove cut scrub and dispose of off-site or burn on site at agreed fire site.	HC15	3	2014/2015	1 st October - 28 th February	Volunteers/ Contractor
C12-S1	Cut at least 30% of scrub block. Remove cut scrub and dispose of off-site or burn on site at agreed fire site.	HC15	3	2019/2020	1 st October - 28 th February	Volunteers/ Contractor
C12-S1	Cut at least 30% of scrub block. Remove cut scrub and dispose of off-site or burn on site at agreed fire site.	HC15	3	2024/2025	1 st October - 28 th February	Volunteers/ Contractor

Map Scrub 6. Compartment 12 Scrub Management



Compartments 13 & 14

1. Woodland edge scrub that is encroaching into the pasture within these two compartments should be cut back. An irregular edge to the woodland should be maintained by cutting scallops into the woodland edge scrub and these areas should then be included within the area grazed and/or cut.
2. The buddleja thicket at the eastern end of the pasture in compartment 14 should be removed and this area included within the area grazed and/or cut. A detailed timescale for further scrub removal from the SSSI pasture area should be agreed with Natural England. The site has potential for grazing although water supply is problematic.
3. Cut scrub should be removed off site and disposed of. If this is not possible the cut scrub can be burnt on site at a designated fire site that should be used during scrub clearance. A fire site should be at least ten metres from any tree canopy and species rich grassland and preferably material should be burnt on a metal sheet for easy disposal of ash.

4. Scrub clearance work should only take place, outside of the bird breeding season, between 1st October - 28th February. Care should be taken to ensure stumps are cut to ground level and are not be removed or uprooted and ensure species-rich grassland or features of archaeological importance are not damaged.
5. Scrub management within compartments 13 & 14 can be undertaken by either volunteers or contractors.

Table Scrub 7. Scrub management actions within Compartment 13 & 14.

Compartment 13 & 14 Scrub Management						
Area	Management	HLS Options	Priority	Year	Time of year	Undertaken by:
13 & 14	Cut scallops into encroaching woodland edge scrub. Remove cut scrub and dispose of off-site or burn on site at agreed fire site.		2	2016/2017	1 st October - 28 th February	Volunteers/ Contractor
13 & 14	Remove buddleja thicket within compartment 14. Remove cut scrub and dispose of off-site or burn on site at agreed fire site.		3	2017/2018	1 st October - 28 th February	Volunteers/ Contractor

(There is no coloured map for these scrub areas since the vegetation mosaic is too fine to show at a small scale. The pasture within the SSSI meadow, in compartment 14, just south of Butts Lane will be subject to a more detailed plan of action agreed with Natural England.)

3.2 Grassland Management

The majority of the site is comprised of grassland including the UK BAP habitat lowland calcareous grassland which is the key feature for the land's SSSI designation at Beachy Head and above Willingdon. The species rich calcareous grassland provides a diverse resource of herbaceous vegetation which supports a rich invertebrate assemblage. The calcareous sward can also be an important pollen and nectar resource and the bare ground present within the nutrient poor soils provides nesting habitat for ground nesting aculeate hymenoptera (bees, wasps and ants).

There is also neutral grassland and acid grassland with some restricted areas having developed a very scarce chalk heath habitat. The grassland resource throughout the site is not only important for the vascular plants and invertebrates present but provides habitat for ground nesting breeding bird species such as **skylark** *Alauda arvensis* and is an important resource for insectivorous migrant birds.

The chalk grassland communities present include CG1e – *Festuca ovina* – *Carlina vulgaris* grassland *Koeleria macrantha* sub-community which exists as a thin strip along the extreme cliff-edge. This community supports the nationally vulnerable **small hare's-ear** *Bupleurum baldense*.

Much of the species rich chalk grassland at the site is comprised of the CG2a – *Festuca ovina* – *Helictotrichon pubescens* grassland *Cirsium acaule* – *Asperula cynanchia* sub-community. This community occurs mainly within the rabbit grazed grassland to the west of the site.

The grassland present along the cliff-tops is comprised of CG3 – *Bromus erectus* grassland including the sub-communities CG3b – *Centaurea nigra* sub-community and CG3d – *Festuca rubra* – *Festuca arundinacea* sub-community.

Where grassland has had little or no management CG4b – *Brachypodium pinnatum* grassland – *Centaurea nigra* - *Leontodon hispidus* sub-community and CG5a – *Bromus erectus* – *Brachypodium pinnatum* grassland – typical sub-community are present.

In the most heavily rabbit grazed areas and amongst chalk heath the CG7e – *Festuca ovina* – *Hieracium pilosella* - *Thymus praecox*, *Medicago lupulina* – *Rumex acetosa* sub-community is present.

Neutral grassland is represented by small areas of MG5b – *Centaurea nigra* – *Cynosurus cristatus* grassland, *Galium verum* sub-community which is typical of hay meadows. There are also larger areas of the more species poor MG6 – *Lolium perenne* – *Cynosurus cristatus*, including the MG6b – *Anthoxanthum odoratum* sub-community and MG6c – *Trisetum flavescens* sub community.

Much of the grassland managed as amenity grassland is MG1 – *Arrhenatherum elatius* grassland. Most of which is the species poor MG1a – *Festuca rubra* sub-community - *Centaurea scabiosa* variant but pockets of the more species rich MG1e – *Centaurea nigra* sub-community occur.

MG7e – *Lolium perenne* – *Plantago lanceolata* sub-community is also present where there is heavy and sustained human disturbance.

The acid grassland on the more acidic soils to the east of the site is represented by the U1b – *Anthoxanthum odoratum* – *Lotus corniculatus* community.

There are three key priorities for grassland management within the site:

i. Maintenance and restoration of the cliff-top areas of chalk grassland and chalk heath.

These grassland areas contain some of the more species rich chalk grassland and it is essential that these areas are properly managed to maintain favourable status of the SSSI. It is also essential that as the cliff-edge recedes species rich grassland is present for the cliff-edge habitat of **small hare's-ear** *Bupleurum baldense* to develop. If scrub or species poor grassland is present as the cliff recedes the potential for development of this habitat is reduced.

These grasslands are also within the most heavily visited part of the site and provide an important amenity and educational resource. These grasslands should be a shining example of the biodiversity value of coastal chalk grassland. Historically many areas are heavily mown or suffering severe scrub encroachment. Ideally the mowing needs to be replaced by grazing mainly by cattle but with due regard to the hazard created by the cliff edge. Desire lines will naturally be created by visitor pressure through the taller grassland created by the cessation of regular mowing, and this should not be discouraged as the varied mosaic of taller grassland with shorter patches and

tracks created by trampling will produce an ideal structure and edge to the grassland sward. The only exceptions to this are at most a six metre road-side strip which needs to be cut for traffic visibility and at most a six metre wide mown strip along public footpaths and around benches, picnic tables etc. The number of cuts though should be reduced and arisings removed.

Some of the best chalk grassland is grazed by rabbits that have created some very floristically rich swards. Rabbit grazing though is unpredictable, difficult to control and can't be relied on to manage such an important site. Rabbit grazing can also create a fine dense grass litter build up which is then colonised by mosses. This can cool and humidify the soil and can be detrimental to thermophilous invertebrates. Cattle grazing on heavily rabbit grazed areas needs to be carefully monitored to ensure it is not detrimental by causing overgrazing and poaching.

Cattle grazing produces a good quality sward introducing structure within the grassland. Exmoor ponies are also effective and their browsing behaviour can be useful at reducing bramble and scattered scrub within grassland. They are also useful for grazing steep and uneven areas of grassland where cattle would not be possible or effective. The grassland they create though is usually without structure and they must not be used during summer as they will favour eating flower-heads, although if the objective is to control serious scrub invasion then summer grazing using ponies can be effective for a short period. Sheep breeds such as Herdwicks and Hebridean could also be beneficial but due to the open nature of the coastal grassland and the proximity of large numbers of visitors, using cattle and ponies is the most practical and beneficial solution.

Grazing should be concentrated during spring and autumn/winter outside of the main flowering season of the majority of chalk grassland species. Spring grazing and/or spring cutting needs to be carefully controlled. If the previous winter has been cold and dry spring grazing/cutting may not be necessary, if the winter has been mild and wet spring grazing/cutting may be beneficial. If the sward is cut before late summer/autumn grazing then the arisings must be removed to prevent enrichment of the soil.

Some areas that have had little to no management over the last few years have become heavily colonised by bramble and scattered scrub. This needs to be dealt with as a priority. The bramble should grow up and then be weed

wiped to allow the herbicide to be consumed into the root stock. Cutting bramble low to the ground can cause a carpet of prostrate growth which is very difficult to remove and spraying with herbicide will have a very damaging effect on other plant species within the sward. The following year after applying herbicide (or topping if application of herbicide is not possible) then follow up treatment should include a late summer cut followed immediately by aftermath grazing by cattle or ponies. This may need to be repeated for a number of years and further possible weed wipe application of herbicide. Once bramble or other scrub species are only rare to occasional within the sward a grazing regime similar to other chalk grassland areas can be used.

Control of injurious weeds such as **common ragwort** and **creeping thistle** needs to be undertaken as required. This needs to be balanced due to the important invertebrate assemblages associated with coastal populations of these species, so ragwort and thistle control should be prioritised on the best quality chalk grassland.

ii. Maintenance of neutral grassland and hay meadow.

The neutral grassland and hay meadow within the site is extremely important as a nectar and pollen resource and needs to be managed appropriately.

These fields would be best managed by a hay cut in summer followed by aftermath grazing with cattle or ponies. Arisings need to be removed to ensure nutrients are not redistributed into the grassland soils. Only at most two-thirds of a field should be cut each year to ensure an area of tussocks and seed-heads can be maintained over winter to allow invertebrates species which require these habitat components to complete their life-cycles. The area left uncut should be rotated each year to prevent scrub encroachment over time.

Fields and grassland areas that are suffering heavy scrub encroachment, especially bramble will need scrub control measures before a regular grazing regime can be implemented. A similar programme can be used as on the chalk grassland. The bramble should grow up and then be weed wiped to allow the herbicide to be consumed into the root stock. The following year after applying herbicide (or topping if application of herbicide is not possible) should include a late summer cut followed immediately by aftermath grazing by cattle or

ponies. This may need to be repeated for a number of years and further possible weed wipe application of herbicide.

Control of injurious weeds such as **common ragwort** and **creeping thistle** also needs to be undertaken as required.

iii. Restoration of acid grassland.

Much of the acid grassland resource within the site is affected by scrub invasion that needs to be controlled. A similar programme of bramble/scrub control can be undertaken as in the chalk and neutral grassland affected by scrub invasion. The use of Exmoor ponies on these areas would be especially useful and allow the possible development of more species rich lowland dry acid grassland.

Grassland Management Objectives

1. Maintain the species rich chalk grassland and chalk scrub mosaic via grazing and cutting.
2. Restore areas of heavily mown chalk and neutral grassland to grazed species rich grassland.
3. Restore areas of grassland that are currently under heavy scrub invasion by a combination of herbicide treatment, cutting and grazing.
4. Maintain species rich neutral grassland via hay cutting, aftermath grazing and occasional spring grazing or cutting.

Grassland Management Targets

1. Introduce Exmoor pony grazing on at least two grassland areas by 2015.
2. Reduce heavy mowing of grassland by at least 75% by 2018.
3. Scrub species should be rare or at most occasional (especially bramble) within the grassland swards identified as under threat from scrub invasion by 2020.
4. Expand late summer/early autumn cut and collect management into at least two new grassland areas by 2016.

Grassland Management Actions

The grassland management compartment maps show the areas that are the highest priority for management within the site. Management marked as

priority 1 should be undertaken first, management marked as priority 2 should be undertaken if resources allow and management marked as priority 3 should only be undertaken once higher priority work has been completed. The timing for lower priority tasks can be reviewed and pushed back if resources do not allow completion within the time frame allocated.

Areas shown in orange and green are dealt with by grassland management techniques outlined in this section.

Compartment 1 (Map Grassland 1.)

1. Grassland area C1-G1 should be cattle or pony grazed only in winter and care should be taken to monitor the grazing to ensure the combination of rabbit grazing and livestock grazing is not having a detrimental effect on the sward. A sward height of 2-10cm should be maintained throughout November/December. As this is one of the best grassland areas at the site mowing should be stopped, or used to maintain at most a six metre wide path along the public footpaths throughout the compartment. But due to the heavy rabbit grazing, cattle grazing and heavy footfall from visitors this is one area that mowing could be stopped or severely reduced.
2. Grassland area C1-G2 should be allowed to grow tall during one growing season and then bramble and other scrub species weed wiped with herbicide in late summer/autumn. The following three years a combination of a hard late summer cut followed immediately with aftermath grazing. If the bramble has been reduced to at most rare to occasional frequency within the sward the area can be included within the winter only grazing.
3. The recently re-seeded downland C1-G3 can be cattle or sheep grazed in early spring and again in late summer/autumn after a hay cut. At most 60% of the field should be cut in one year to allow a portion of the field to maintain seed heads through winter. The area cut can be rotated each year. Arisings must be removed before aftermath grazing commences. Grazing during late spring/summer should be reduced or removed during the main flowering season, especially if using sheep, as sheep will favour flower-heads.
4. The chalk heath west of Belle Tout lighthouse should be closely monitored to prevent over grazing by rabbits or livestock.

Table Grassland 1. Grassland management actions within Compartment 1.

Compartment 1 Grassland Management						
Area	Management	HLS Options	Priority	Year	Time of year	Undertaken by:
C1-G1	Graze with cattle/ponies over winter.	HK6, HR1	1	2015-2024	November-January	Grazier/contractor
C1-G1	Cut once in early spring if needed. Regular mowing should only occur along at most a six metre strip along public footpaths.		1	2015-2022	March-April	Contractor/Staff
C1-G2	Weed wipe scrub with herbicide.		2	2015	August/September	Contractor
C1-G2	Cut to a sward height of 2-5cm, remove arisings and aftermath graze with cattle/ponies.		2	2016	Cut - July/August Graze - August-October	Contractor/Grazier
C1-G2	Cut to a sward height of 2-5cm, remove arisings and aftermath graze with cattle/ponies.		2	2017	Cut - July/August Graze - August-October	Contractor/Grazier
C1-G2	Cut to a sward height of 2-5cm, remove arisings and aftermath graze with cattle/ponies.		2	2018	Cut - July/August Graze - August-October	Contractor/Grazier
C1-G2	Graze with cattle/ponies over winter.		2	2018-2022	November-January	Contractor/Grazier
1-G3	Cut 60% of field, remove arisings and graze with sheep.	HK7, HR1	1	2015-2022	August-October	Grazier
C1-G3	Graze for a short period with sheep during early spring.	HK7, HR1	1	2015-2022	March-April	Grazier

Map Grassland 1. Compartment 1 Grassland Management



Compartment 2 (Map Grassland 2.)

1. Grassland area C2-G1 should only be cut in spring. Regular mowing should be stopped, or at most used to maintain at most a six metre wide path along the southerly scrub-edge footpath throughout the compartment. In proximity to the cliff edge a wide strip should be mown so that longer vegetation doesn't force walkers into a confined marginal space.
2. The recently re-seeded downland C2-G2 and C2-G3 can be cattle or sheep grazed in early spring and again in late summer/autumn after a hay cut. At most 60% of each field should be cut in one year to allow a portion of the field to maintain seed heads through winter. The area cut can be rotated each year. Arisings must be removed before aftermath grazing commences. Grazing during late spring/summer should be reduced or removed during the main flowering season, especially if using sheep, as sheep will favour the sweet flower-heads.

**Table Grassland 2. Grassland management actions within
Compartment 2.**

Compartment 2 Grassland Management						
Area	Management	HLS Options	Priority	Year	Time of year	Undertaken by:
C2-G1	Cut once in early spring if needed. Regular mowing should only occur along at most a six metre strip along public footpaths and in proximity to the cliff edge.	HK7	1	2015-2022	March-April and mid/late summer dependent upon growth.	Contractor
C2-G2 C2-G3	Cut 60% of field, remove arisings and graze with sheep/cattle.	HK7, HR1	1	2015-2022	August-October	Grazier
C2-G2 C2-G3	Graze for a short period with sheep/cattle during early spring.	HK7, HR1	1	2015-2022	March-April	Grazier

Map Grassland 2. Compartment 2 Grassland Management



Compartment 3 (Map Grassland 3.)

1. The recently re-seeded downland C3-G1 can be cattle or sheep grazed in early spring and again in late summer/autumn after a hay cut. At most 60% of each field should be cut in one year to allow a portion of the field to maintain seed heads through winter. The area cut can be rotated each year. Arisings must be removed before aftermath grazing commences. Grazing during late spring/summer should be reduced or removed during the main flowering season, especially if using sheep, as sheep will favour flower-heads.
2. Regular mowing should stop in C3-G2 and C3-G3. Mowing should be restricted to a maximum six metre strip along public footpaths and road margins. Mowing can also be used around picnic tables, benches etc. to create a well maintained look to the area. Cattle grazing can be used in winter, but no grazing during spring and summer. These areas should be managed just with winter grazing, if possible, and the effects of trampling from visitor footfall. Desire lines will be created through the grassland and this should not be discouraged as it will create edge habitat within the sward. The intention in these areas is to create a floristically rich grassland in place of the featureless lawn that currently exists. If grazing is not possible then the grassland can be cut in spring and again in late summer, but arisings must be removed to prevent nutrient input and a rank grassland to develop.

Table Grassland 3. Grassland management actions within Compartment 3.

Compartment 3 Grassland Management						
Area	Management	HLS Options	Priority	Year	Time of year	Undertaken by:
C3-G1	Cut 60% of field, remove arisings and graze with cattle or sheep.	HK7, HR1	1	2015-2022	August-October	Grazier
C3-G1	Graze for a short period with cattle or sheep during early spring.	HK7, HR1	1	2015-2022	March-April	Grazier
C3-G2	Graze with cattle over winter.		2	2015-2022	November-January	Grazier
C3-G2	Cut once in early spring if needed. Regular mowing should only occur along at most a six metre strip along public footpaths.		1	2015-2022	March-April	Contractor/S taff
C3-G3	Graze with cattle over winter.	HK7, HR1	2	2015-2022	November-	Grazier

Compartment 3 Grassland Management						
Area	Management	HLS Options	Priority	Year	Time of year	Undertaken by:
					January	
C3-G3	Cut once in early spring if needed. Regular mowing should only occur along at most a six metre strip along public footpaths.		1	2015-2022	March-April	Contractor/S taff

Map Grassland 3. Compartment 3 Grassland Management



Compartment 4 (Map Grassland 4.)

- 1.C4-G1 needs to be grazed to prevent the severe scrub encroachment and scattered scrub to coalesce into a large block of scrub. A longer period of grazing can be undertaken on this area than other areas of grassland within the site to encourage browsing. For a period of four or five years a small number of cattle or Exmoor ponies should be used to graze this area either late summer to spring or throughout the year. This will need to be closely monitored to ensure severe overgrazing does not occur. A small amount of overgrazing can be tolerated as this will encourage browsing behaviour. After a period of four or five years this area should then only be grazed during winter.
- 2.Grassland area C4-G2 should be cattle or pony grazed only in winter and care should be taken to monitor the grazing to ensure the combination of rabbit grazing and cattle grazing is not having a detrimental effect on the sward. A sward height of 2-10cm should be maintained throughout November/December.

Table Grassland 4. Grassland management actions within Compartment 4.

Compartment 4 Grassland Management						
Area	Management	HLS Options	Priority	Year	Time of year	Undertaken by:
C4-G1	Graze with Exmoor ponies from late summer to spring.	HK7, HR1	1	2015-2019	August-April	Grazier
C4-G1	Graze with cattle or ponies over winter.	HK7, HR1	1	2020-2022	November-January	Grazier
C4-G2	Graze with cattle or ponies over winter.	HK7, HR1	1	2015-2022	November-January	Grazier

Map Grassland 4. Compartment 4 Grassland Management



Compartment 5 (Map Grassland 5.)

Compartment 5 (south)

1. C5-G1 can be cattle or pony grazed in early spring and again in late summer/autumn after a hay cut. If grazing is not possible due to accessibility then just a late summer cut and collect can be used to manage this area. At most 60% of the field should be cut in one year to allow a portion of the field to maintain seed heads through winter. The area cut can be rotated each year.
2. Grassland area C5-G2 should be cattle or pony grazed only in winter and care should be taken to monitor the grazing to ensure the combination of rabbit grazing and cattle grazing is not having a detrimental effect on the sward. A sward height of 2-10cm should be maintained throughout November/December.

Table Grassland 5. Grassland management actions within Compartment 5.

Compartment 5 Grassland Management						
Area	Management	HLS Options	Priority	Year	Time of year	Undertaken by:
C5-G1	Cut 60% of field, remove arisings and graze with cattle or ponies (if possible).	HK7, HR1	1	2015-2022	August-October	Grazier
C5-G2	Graze with cattle over winter.	HK7, HR1	2	2015-2022	November-January	Grazier

Map Grassland 5. Compartment 5 (north) Grassland Management



Map Grassland 5. Compartment 5 (south) Grassland Management



Compartment 7 (Map Grassland 7.)

- 1.Regular mowing should stop in C7-G1. Mowing should be restricted to a maximum six metre strip along public footpaths and road margins. Mowing can also be used around picnic tables, benches etc. to create a well maintained look to the area. Cattle or pony grazing can be used in winter, but no grazing during spring and summer. These areas should be managed just with winter grazing, if possible, and the effects of trampling from visitor footfall. Desire lines will be created through the grassland and this should not be discouraged as it will create edge habitat within the sward. The intention in these areas is to create a floristically rich grassland in place of the featureless lawn that currently exists. If grazing is not possible then the grassland can be cut in spring and again in late summer, but arisings should be removed to prevent nutrient input and development of rank grassland.
- 2.The acid grassland area within C7-G2 should be grazed with cattle or ponies after a late summer cut. Arisings will need to be removed to prevent enrichment. The grazing can remain over winter to encourage browsing.
- 3.The grassland in C7-G3 should be cattle or pony grazed only in winter after a late summer cut. Arisings will need to be removed to prevent enrichment.

Table Grassland 7. Grassland management actions within Compartment 7.

Compartment 7 Grassland Management						
Area	Management	HLS Options	Priority	Year	Time of year	Undertaken by:
C7-G1	Graze with cattle/ponies over winter.	HK7, HR1	2	2015-2022	November-January	Grazier
C7-G1	Regular mowing should only occur in a six metre strip along public footpaths, road margins and around benches, picnic tables etc.	HK7, HR1	2	2015-2022		Contractor
C7-G2	Cut to a sward height of 2-5cm, remove arisings and aftermath graze with cattle or ponies.	HK7, HR1	2	2016	Cut - July/August Graze - August-January	Contractor/ Grazier

Compartment 7 Grassland Management						
Area	Management	HLS Options	Priority	Year	Time of year	Undertaken by:
C7-G2	Cut to a sward height of 2-5cm, remove arisings and aftermath graze with cattle or ponies.	HK7, HR1	2	2017	Cut - July/August Graze - August-January	Contractor/ Grazier
C7-G2	Cut to a sward height of 2-5cm, remove arisings and aftermath graze with cattle or ponies.	HK7, HR1	2	2018	Cut - July/August Graze - August-January	Contractor/ Grazier
C7-G2	Graze with cattle or ponies over winter.	HK7, HR1	2	2018-2022	November-January	Grazier
C7-G3	Graze with cattle or ponies over winter.	HK7, HR1	2	2015-2022	November to January	Grazier

Map Grassland 7. Compartment 7 (north) Grassland Management



Compartments 12, 13, 14

1. The pasture within compartments 12 and 13 are becoming severely affected by bramble growth and scrub encroachment. It would be preferable to aftermath graze these areas after a late summer cut, but due to the lack of water provision and public accessibility these areas will need to be controlled by weed wiping bramble using herbicide and topping to suppress the bramble growth.
2. The pasture within compartment 14 is herb-rich and is a priority for management as it lies within the Willingdon SSSI. This area also lacks water provision and poor accessibility for grazing stock. Rabbit grazing in this area is currently maintaining the sward so as long as scrub control management outlined in the scrub section for compartments 13 & 14 is undertaken this grassland area should be maintained and enlarged. The effect of rabbit grazing should be monitored here and if under-grazing is evident the possibility of winter grazing with cattle, sheep or ponies should be investigated.

Table Grassland 8. Grassland management actions within Compartment 12, 13 & 14.

Compartment 12, 13 & 14 Grassland Management						
Area	Management	HLS Options	Priority	Year	Time of year	Undertaken by:
12, 13	Weed wipe encroaching scrub with herbicide.		2	2015	August/September	Contractor
12, 13	Cut to a sward height of 5-10cm, remove arisings.		2	2016	Cut - July/August	Contractor
12, 13	Cut to a sward height of 5-10cm, remove arisings.		2	2017	Cut - July/August	Contractor
12, 13	Cut to a sward height of 5-10cm, remove arisings.		2	2018	Cut - July/August	Contractor

Compartment 12, 13 & 14 Grassland Management

Area	Management	HLS Options	Priority	Year	Time of year	Undertaken by:
14	Undertake woodland edge scrub control. (See scrub management section.)		1	2015	November-January	Volunteers
14	Monitor effect of rabbit grazing only.		1	2015-2022		Volunteers/s taff.
14	Investigate possibility of installing water provision and grazing within compartment 14		2	2015-2022		Staff

3.3 Woodland Management

There are 8 main blocks of woodland within the management area. Woodland management within the site is not as much a priority as grassland and scrub management, but the pockets of secondary woodland throughout the site contribute to the overall biodiversity of the site and provide cover and food for migrant passerines.

If resources allow the only management required within these woodland areas is improvement of the woodland edge habitat through creation of coppiced scallops and selected thinning to improve the structure of the woodland.

Woodland blocks within the site:

- Ratton Plantation
- Further Plantation and Foxhole Brow
- Cherry Garden and Beachy Brow
- Woodland off Pashley Road
- Paradise Plantation
- Warren Hill
- Upper Dykes Drive
- Horseshoe Plantation

Path networks that run through these wooded areas will also need maintenance to ensure the safety of visitors by making safe any dead, dying or overhanging trees. When this work is carried out as much standing dead wood should be left *in situ* and any cut timber should be left on site, preferably in an open area of the wood where sunlight reaches the woodland floor. Dead wood exposed to the sun is of greater benefit for saproxylic invertebrates than damp shaded dead wood which is usually colonised mainly by detritivores and of less value. But care should be taken not to damage any woodland floor flora.

Woodland Management Objectives

1. Improve woodland edge habitat by creating coppiced scallops.
2. Improve structure of woodland through selective thinning.
3. Ensure standing dead wood and other dead wood habitat is left *in situ* and not removed from woodland.
4. Leave ivy uncut on trees where it is desirable for habitat enhancement.
5. Maintain safe access of public footpaths and bridleways through woodland by making safe any dead, dying or overhanging trees.

3.4 Maritime Cliff & Coastal Habitat Management

The maritime chalk cliff, undercliff, fringing beach and intertidal rock needs little management. This habitat should be left as a non-intervention zone to allow the free functioning of coastal erosion and deposition and no engineering or coastal defence works should be undertaken to prevent erosion. The exception to this is if such work is required to prevent the loss of life, injury, property or damage to property. Options to undertake managed retreat of properties, public footpaths and habitat creation should be considered first before any engineering or coastal defence work is undertaken.

Maritime Cliff & Coastal Habitat Management Objectives

1. Endeavor to ensure the free functioning of coastal erosion and deposition is maintained without interference from engineering or coastal defence works.
2. Ensure the finite fossil resource is not removed from the Chalk cliff and Gault Clay and Upper Greensand intertidal rocks by discouraging the removal of *in situ* fossils from the cliff-face and intertidal rocks.

4. Survey Methodology & Common Standards Monitoring

Surveys and monitoring are an integral part of management and essential to monitor the favourable status of the SSSI. This monitoring should be carried out in line with JNCC Common Standards Monitoring to ensure Natural England can use the data for condition assessments of the SSSI units. All monitoring will be the subject of resource availability and where relevant data is available from other sources these will be used.

4.1 Botanical Monitoring

A new NVC survey of the entire nature reserve was carried out during 2013 (Lyons, G. 2013). A NVC survey is best undertaken every 7-10 years so a repeat of the NVC should be carried out during 2020-2024.

The methodology for carrying out an NVC survey is outlined in the National Vegetation Classification Users Handbook published by JNCC. This publication can be downloaded from the JNCC website via this link:

http://jncc.defra.gov.uk/pdf/pub06_NVCusershandbook2006.pdf

Regular targeted botanical monitoring within the site should follow the NVC survey methodology for recording the constancy of plant species within grassland habitats, using randomly placed quadrats in a defined survey area. This targeted monitoring should be used to regularly monitor the effects in changes in grassland management on positive indicator species present within the grassland sward. Priority for this monitoring should be within areas where management has been changed recently or grazing changed or introduced.

Analysis on any changes in the extent of key NVC communities should be recorded regularly. The presence/absence and frequency of positive indicator species should be recorded regularly using the NVC quadrat methodology already established. This information can then be communicated with Natural England regularly so that it can be used in condition assessments for the site. This botanical monitoring should also include a rough habitat monitoring assessment to record structure and condition of the grassland. This could be carried out by a contractor in the first year to include training of volunteers, so that the monitoring can continue through volunteer support in future years.

4.2 Bryophyte and Lichens

Bryophyte and lichen surveys should follow Common Standards Monitoring Guidance for Bryophytes & Lichens (JNCC, 2005).

Habitats present within the site that require special guidance for monitoring both bryophytes, lichens and bryophyte & lichen habitat include:

- Bryophyte species of scrubby woodland,
- Bryophyte species of coastal habitats including hard or soft cliffs, landslip, talus and maritime caves,
- Woodland lichens.
- Lichen communities on lowland rocks (limestone, sandrock & other acid rock outcrops, including sarsen stones in lowland situations),
- Lichens on maritime cliffs and slopes.

4.3. Birds

Breeding bird surveys should follow BTO survey guidance to at least the level of Breeding Bird Survey (BBS) methodology but preferably to Common Bird Census (CBC) level so as to analyse population data using territory mapping.

Guidance on carrying out a BBS can be found via these link to the BTO website: <http://www.bto.org/birdtrends2010/bbs.htm>

Guidance on carrying out and analysing a CBC can be found via these publications:

Bibby, C.J., Burgess, N.D., Hill, D.A. & Mustoe, S.H. 2000. *Bird Census Techniques*. Academic Press, London.

Marchant, JH. 1983. *BTO Common Birds Census Instructions*. BTO, Thetford.

4.4 Invertebrates

Invertebrate assemblage surveys at the site should follow the guidance published in the Natural England report on Surveying Terrestrial and Aquatic Invertebrates for Conservation Evaluation (Drake, C.M., Lott, D.A., Alexander, K.N.A. & Webb, J. 2007).

4.5 Surveys and Monitoring Plan

An invertebrate assemblage survey should be undertaken to assess the habitat resources present at the site in association with invertebrate assemblages. The survey should concentrate on chalk grassland, neutral grassland, scrub and undercliff habitats. Between six to eight equal sized survey areas should be identified and timed transects walked through these survey areas. Due to the recent detailed NVC survey this survey could assess associations with invertebrate assemblages and NVC communities at the site by defining survey areas to distinct NVC communities or NVC community mosaics and ensuring detailed information is collected on plant/species associations during the survey.

The following outlines a series of surveys and monitoring projects that need to be carried out during the life span of this management plan. Methodologies used to follow the guidance as listed or referenced in sections 4.2-4.4.

Table Survey 1. Survey & monitoring plan.

Survey & monitoring plan 2014-2024.					
Area	Survey	Priority	Year	Time of year	Undertaken by:
SSSI	Invertebrate assemblage survey	1	2016	April - October	Contractor (preferably a team of specialists.)
SSSI	Common Bird Census or Breeding Bird Survey	2	Every year	March-June	Contractor/Volunteers
SSSI grassland	Targeted botanical and habitat assessment surveys.	1	Every year	June-August	Contractor/Volunteers
SSSI	Repeat NVC survey.	2	2020	June-October	Contractor
SSSI	Bryophyte & lichen survey	3	2016		Contractor

5. Interpretation and Education

Interpretation plays a key role in informing visitors of the need and benefit of management. It also plays an important role in community involvement by developing support for the management measures that are being undertaken.

As the site is within the South Downs National Park and part of a series of sites within the region any new interpretation package should be carried out in liaison with the South Downs National Park Authority and Natural England with particular reference to the Heritage Coast designation along the cliff top areas.

There are three key priorities for interpretation within the site.

- i. Interpretation and provision of information for new visitors and tourists. There are two key entrances that new visitors and tourists are directed to above all others; the Beachy Head Hotel area and via the seafront through Holywell to Cow Gap. In these areas interpretation needs to provide information helpful to allow visitors to navigate the site and to inform them of the special aspects of the site such as the importance of chalk grassland and the geology of chalk cliffs. Permanent interpretation panels, map boards and leaflet dispensers are ideal in these areas.
- ii. For regular local visitors more seasonal updatable interpretation is best to keep them informed with new information such as changes in management and grazing regimes. A3 gate mountable lockable panels and notice boards are best in areas such as the entrances into compartments 12, 14 and 15, which are adjacent to residential development and receive a lot of local visitors. The local press may be interested to publish occasional items.
- iii. For local birdwatchers and wildlife enthusiasts online information is ideal and a community website run in partnership with Seven Sisters Country Park and Seaford Head Local Nature Reserve would be an excellent way to disseminate information about the wildlife of the site and management projects in the area. (A similar project has been running in the Hastings, Rye Harbour & Dungeness area for a number of years and has been a very popular and an invaluable interpretation tool.)

There may be opportunities to create closer links to educational establishments in Eastbourne, including the foreign language schools. The latter, in particular, visit the headland in large numbers. Currently the resources available restrict

the likelihood of this happening except on a very limited scale. The improvement of the on-site interpretation and availability of new guide leaflets would enhance this situation. Coordination of presentation and content with the National Park Authority would assist with creating a recognizable brand linking to the wider region.

6. Public Access including Disabled Access

People travel to the Eastbourne downland by a number of means. This includes, car, taxi, bus, tour coach, motorbike, bicycle and on foot. A small number may also be on horseback and electric mobility buggies. There are nine pay and display car parks including several lay-bys and one coach park. Most of the car parks are located on the coastal section of Beachy Head. One car park is sited at Butts Brow in the north of the area above Willingdon. There is another car park for patrons of the Beachy Head pub. There are numerous bus stops giving close access to many points across the coastal section of Beachy Head.

Car park furniture such as bollards, signs and bins will be kept in a good condition and be replaced as necessary.

Across the whole of the Borough's downland estate there are 24 miles of public footpath and 26 miles of public bridleway. This includes a coastal footpath section of the South Downs Way and an inland bridleway section of the same long distance footpath, both of which meet at the west end of Eastbourne seafront. A lesser footpath (bridleway in parts) called the Jubilee Way runs along the scarp slope overlooking Eastbourne between the seafront and Butts Lane at Willingdon, a distance of 6 miles. This was created for Queen Elizabeth II's Silver Jubilee in 1977 and is, at the time of writing, being re-waymarked and many flights of steps along its course being rebuilt.

Open Access Land includes that considered open access by the Borough Council and that designated under the Countryside and Rights of Way Act 2000 (CROW). Within the council's downland estate most of the open access land is either coastal or follows the escarpment north from the coast to Willingdon. In the north, part of Chalk Farm is open access (CROW) as is a small area of woodland on the margin of Willingdon Golf Course. Two more small areas occur just inland of the coast at Long Down and Bulling Dean. Both of these are designated under CROW and lie within tenanted farms.

An 'easy access trail' runs from Butts Lane car park in the north to Beachy Head. This path is accessible to experienced users of heavy duty outdoor mobility vehicles such as Trampers. The route has no obstacles such as gates or stiles and only three road crossings. The aforementioned trail is linear and requires return to the starting point. Consideration will be given to the design

of a circular 'easy access route' although where it is necessary to confine livestock this presents a challenge with regard to the kind of accessible barrier that might be available.

Near the summit of Beachy Head, opposite the main car park, is the Peace Path. This is an accessible surfaced path that takes a short circular route to a coastal viewpoint and Bomber Command Memorial. From the viewpoint it is possible to see the town and seafront to the east and Beachy Head cliffs and lighthouse to the west. The surface of this path will be maintained to allow wheelchair and mobility vehicle access.

Gates, stiles and way marker posts will be regularly inspected and kept in a safe and good condition. Gates and stiles on public rights of way will be repaired or replaced from time to time as deemed necessary. Replacements will be constructed according to the British Standard for Gaps, Gates and Stiles 2006. As resources permit stiles will be replaced with gates that allow easier access. Way markers are often a simple post with an arrow but where text is engraved, as on the timber of a finger post, the lettering will be a minimum of 25mm high and will be painted in a contrasting colour to improve legibility.

From day to day observation it is self-evident that the vast majority of visitors begin their visit at or near the main Beachy Head car parks. The iconic views, and facilities such as the public toilets, visitor centre and pub no doubt drive this focus of activity along with the only parking area specifically designated for large tour coaches. Weight of numbers creates erosion problems along some of the most popular desire lines and this is difficult to remedy given the open access status. Along the cliff top, wide areas will be mown to encourage people to spread out but concern to protect and enhance the flowering species in the chalk grassland limit the desirability of this. It would need careful consideration before encouraging greater visitor numbers to the seaward section of the downland estate whereas most inland open access sections of the estate might withstand more intensive use, although at the cost of the isolation and solitude that many people seek.

7. Public Safety

Day to day safety of visitors to the downland generates an ongoing programme of works.

The cliff top areas from Holywell in the east to the borough boundary just beyond Belle Tout lighthouse in the west undergo a specific annual inspection. Further inspections will be carried out after prolonged bad weather or if specific issues arise. Areas of suspected cliff top weakness or movement will be noted and if in proximity to commonly used routes may have 'cliff top' reminder signs installed. These signs may also be used where the cliff edge is disguised by the topography at the cliff top. On aesthetic and practical grounds the use of signs is strictly limited and is discouraged by Natural England who govern many of the council's actions within the SSSI. At all car parks in the vicinity of Beachy Head there are cliff edge signs at each exit from the car park onto the downland. In very limited areas a low kick rail is used above steep slopes but not where it would intrude on the natural sky line. In the past a low two-strand wire fence has been used to indicate to visitors particularly hazardous parts of the cliff top. However, some people still cross these fences and in terms of public safety, they may serve little purpose along much of the remaining sections. Where the cliff edge is self-evident no signs or barriers are used.

Regular monitoring of the open access areas and the public rights of way will take place and remedial works be carried out to repair damaged structures or erosion. Steps are frequent on steeper ground along the scarp slope and where beach access exists at Holywell and Cow Gap. The steps directly connecting to the beach at Cow Gap form a particularly important access route and are maintained by the County Council although regularly inspected by the Borough Council. Most flights of steps are of simple construction using wooden boards to reinforce steps cut directly into the ground surface. These are inspected during regular site visits and remedial works carried out as required.

Whilst the majority of people carry mobile telephones the signal is variable although there is one public call box situated near the Beachy Head pub.

8. Ancient Monuments

The South Downs are extremely rich in archaeological features created during several millennia of human occupation and the Eastbourne downland is no exception to this. A large proportion of the Eastbourne downland is classified as an 'Archaeologically Sensitive Area'. The Borough Council has a management agreement with English Heritage that applies to twenty eight scheduled monuments. These range from relatively large expanses of ancient field systems to individual tumuli (burial mounds).

Human occupation probably extends back to not long after the end of the last ice age around 9,000 years before present (ybp). By around 8,000ybp there is some evidence of limited cultivation and stock farming. Between about 4,500 and 2,600ybp small ploughs appear to have been used in cultivation but large arable and stock farms weren't established until after the end of this period. During the Roman period between about 40 and 400AD perhaps 80% of the downland was under arable use. In the period either side of the Norman invasion it appears that farming split about 50/50 into arable and stock rearing. From around 1400 larger farms began to be formed and, as well as livestock, oats and wheat were cultivated. By the 19th Century around 40% of the downland was grazed by sheep. Oats and wheat were also still grown and several windmills, including ones formerly located on Willingdon Hill and at Pashley Down, were built to process these cereals. In the 20th Century more dairy and beef cattle have been introduced although around 50% of the tenanted farming area is under the plough. Around a quarter of the area, that outside the tenanted farms, is now designated for recreation and conservation with farming activity largely restricted to conservation grazing.

Under the management agreement referred to earlier, specific monuments will be inspected annually by the council and the County Archaeologist or another authorized official. A condition assessment will be made and any required remedial works be planned. From time to time livestock can cause erosion or wild animals burrow into the features. Visitor pressure can also cause an issue where perhaps a particular feature is popular as a view point or picnic site for example. Scrub encroachment is to be controlled and wide meadow areas are to be mown around some monuments to discourage burrowing animals such as rabbits and badgers that prefer better concealment. Remedial action is agreed with the county officer and, if necessary, English Heritage.

Appendices

9. Appendix A1 - Species of Conservation Concern

A1.1 - Lichens

Cladonia convoluta

A large, foliose, southern lichen, in the British Isles associated with warm, sunny limestone or base-rich coastal slopes. Recorded quite widely from both East and West Sussex. Recorded from Belle Tout in 1994.

Designations & Status:

- IUCN (2001) - Vulnerable;
- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- UK Biodiversity Action Plan priority species;
- Wildlife and Countryside Act 1981 (Schedule 8)
- Sussex Protected Species Register Species;
- Sussex Rare Species Inventory Species.

A1.2 - Vascular Plants

Himantoglossum hircinum Lizard Orchid

An orchid of open downs and dunes. Recorded from various sites on the Downs in East and West Sussex between 1850 and 2000, often as single plants. Has been recorded on a number of occasions mainly within the Beachy Head and Belle Tout area of the site.

Designations & Status:

- EC CITES Annex B;
- IUCN (2001) - Lower risk - near threatened;
- Sussex Protected Species Register Species;
- Sussex Rare Species Inventory Species;
- Wildlife and Countryside Act 1981 (Schedule 8).

Ophrys sphegodes Early Spider-orchid

A short-lived orchid of ancient, species-rich, heavily grazed grassland on chalk and limestone. The species has been recorded on a number of occasions mainly in the Beachy Head and Belle Tout area within the site.

Designations & Status:

- EC CITES Annex B;

- Sussex Protected Species Register Species;
- Sussex Rare Species Inventory Species;
- Wildlife and Countryside Act 1981 (Schedule 8).

***Dianthus armeria* Deptford Pink**

Recorded near Horseshoe Plantation in 2009 and near Holywell in 2006.

Designations & Status:

- IUCN (2001) - Endangered;
- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- Sussex Protected Species Register Species;
- Sussex Rare Species Inventory Species;
- UK Biodiversity Action Plan priority species;
- Wildlife and Countryside Act 1981 (Schedule 8).

***Gentianella anglica* Early Gentian**

An annual or biennial of shallow calcareous soils, especially on the chalk, in closely grazed calcareous grassland, quarries, on cliff-tops and sand dunes. Still known from two sites in East Sussex, but not recorded from West Sussex since 1992. Recorded rarely within Whitbread Hollow.

Designations & Status:

- Bern Convention Appendix 1;
- European Protected Species;
- Habitats Directive Annex 2 - non-priority species;
- Habitats Directive Annex 4;
- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- Sussex Protected Species Register Species;
- Sussex Rare Species Inventory Species;
- UK Biodiversity Action Plan priority species;
- Wildlife and Countryside Act 1981 (Schedule 8).

***Ajuga chamaepitys* Ground-pine**

Only ever known with certainty from chalky fields behind Beachy Head and near Highton, east of Newhaven, both in East Sussex. This species must now be presumed extinct as it has not been seen in either locality for well over 30 years. Recorded from Bullock Down in 1951.

Designations & Status:

- Farm Environment Plan Guidance 007- Table 3;
- IUCN (2001) - Endangered;
- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- Sussex Protected Species Register Species;
- Sussex Rare Species Inventory Species;
- UK Biodiversity Action Plan priority species;
- Wildlife and Countryside Act 1981 (Schedule 8).

***Bupleurum baldense* Small Hare's-ear**

This tiny annual is at the extreme northern edge of its range in Britain and is known from only two locations on the mainland. One is in Devon and the other is at Beachy Head, East Sussex. Recorded on a number of occasions from the Beachy Head and Belle Tout areas of the site.

Designations & Status:

- IUCN (2001) - Vulnerable;
- Sussex Protected Species Register Species;
- Sussex Rare Species Inventory Species;
- Wildlife and Countryside Act 1981 (Schedule 8).

***Dactylorhiza viridis* Frog Orchid**

A small, greenish brown flowered orchid, mainly of chalk grassland. Widespread in suitable places. A small number of records from the site from Bullock Down and the Royal Eastbourne Golf Course.

Designations & Status:

- EC CITES Annex B;
- IUCN (2001) - Vulnerable;
- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species

***Orchis ustulata* Burnt Orchid**

An orchid that requires warm, dry conditions Usually found in closely grazed chalk and limestone grassland on south-facing slopes. It is sporadic in its appearance. It has a number of sites on the East Sussex Downs, but only one site in West Sussex. A small number of records from Bullock Down.

Designations & Status:

- EC CITES Annex B;

- IUCN (2001) - Endangered;
- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- Sussex Rare Species Inventory Species;
- UK Biodiversity Action Plan priority species

***Adonis annua* Pheasant's-eye**

An annual plant of cultivated ground, possibly an ancient introduction, was formerly widespread on chalk in southern England but has steadily declined since the 1880s. Present at half a dozen sites in East Sussex, long extinct in West Sussex. One record from Beachy Head in 1998.

Designations & Status:

- Farm Environment Plan Guidance 007- Table 3;
- IUCN (2001) - Endangered;
- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- Sussex Rare Species Inventory Species;
- UK Biodiversity Action Plan priority species

***Clinopodium acinos* Basil Thyme**

An attractive labiate of banks, hedgerows, scrub and rough grassland usually on calcareous soils. Widespread on the Downs and recorded from Rye Harbour. One record from Belle Tout in 2013.

Designations & Status:

- IUCN (2001) - Vulnerable;
- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species

***Centaurea cyanus* Cornflower**

Once common, cornflowers suffered a massive decline in the last century but still continue to appear in scattered localities. While some of these are clearly introductions, records from arable fields and appearances on disturbed road banks before any seeding has occurred may be native. One record from Shooters Bottom 1991.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;

- Sussex Biodiversity Action Plan Species;
- Sussex Rare Species Inventory Species;
- UK Biodiversity Action Plan priority species.

***Tephrosieris integrifolia* subsp. *integrifolia* Field Fleawort**

A local plant of dry calcareous grassland usually on slopes and often in association with ancient earthworks. Widespread in suitable locations in Sussex. One record from Belle Tout in 2011.

Designations & Status:

- IUCN (2001) - Endangered;
- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- Sussex Rare Species Inventory Species;
- UK Biodiversity Action Plan priority species.

***Marrubium vulgare* White Horehound**

A perennial probably native only near the sea on open, exposed cliff-top grasslands and slopes overlying limestone and chalk. This species has never been common in Sussex, but several good populations have recently been found or re-discovered in both East and West Sussex. It seems possible that it needs disturbance, and can re-appear after a long absence when ground is broken. A small number of records from the Beachy Head area.

Designations & Status:

- Sussex Rare Species Inventory Species

***Phyteuma orbiculare* Round-headed Rampion**

A perennial of species-rich chalk grassland, open scrub, earthworks and verges in southern England. The vernacular name 'Pride of Sussex' signals the county as the headquarters of this gem of the chalk turf. Widespread in suitable downland habitats in East and West Sussex. Frequently recorded throughout the site.

Designations & Status:

- Sussex Rare Species Inventory Species

***Seseli libanotis* Moon Carrot**

A very rare plant mainly a plant of chalk grassland. In our area known only from the coast between Hope Gap and Eastbourne in East Sussex. Elsewhere in England it has only been recorded from Bedfordshire and Cambridgeshire in recent years. Recorded from Bullock Down.

Designations & Status:

- IUCN (2001) - Lower risk - near threatened; Sussex Rare Species Inventory Species

A1.3 - Amphibians & Reptiles

***Bufo bufo* Common Toad**

Still a widespread species in Sussex but declining due to loss of habitat and other factors. Toads tend to have large populations centred on particular breeding sites and they may become locally extinct if these are damaged or destroyed. Common toads are legally protected against sale.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species;
- Wildlife and Countryside Act 1981 Schedule 5 Sections (9.5a; 9.5b).

***Triturus cristatus* Great Crested Newt**

The largest British newt. It is black or dark brown and the males have a crest along the back and an orange underside spotted with black. Frequently confused with male smooth newts, which also have a crest. The great crested newt prefers larger, open ponds that are free of fish and waterfowl and has declined substantially in Britain and across Europe, mainly due to habitat loss. The species is fully legally protected and Britain has special responsibility for its conservation as some of the best European populations occur here. Scattered across East and Central Sussex but scarce in the west. Recorded rarely within the site, there is a record from Eastbourne Dew Pond (TQ583021) in 1986.

Designations & Status:

- Bern Convention Appendix 2;
- European Protected Species;
- Habitats Directive Annex 2 - non-priority species;
- Habitats Directive Annex 4;
- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- Sussex Protected Species Register Species;
- UK Biodiversity Action Plan priority species;
- Wildlife and Countryside Act 1981 Schedule 5 Sections (9.4b; 9.5a; 9.5b; Schedule

***Vipera berus* Adder**

Britain's only venomous snake, though incidences of snakebite involving man or domestic animals are relatively uncommon. Adders have a distinctive zig zag pattern of black or brown and white. They occur in open areas on downs, heaths and in heathy woods. Grass snakes and slow-worms are often misidentified as adders. Though widespread in Britain and found in

suitable areas across Sussex, the adder, like all our native reptiles has declined substantially through habitat loss and other factors. The adder is a protected species and it is illegal intentionally to kill or injure them. Recorded on a number of occasions from the Belle Tout and Beachy Head areas within the site.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- Sussex Protected Species Register Species;
- UK Biodiversity Action Plan priority species;
- Wildlife and Countryside Act 1981 Schedule 5 Sections (9.1 killing/injuring; 9.5a; 9.5b)

A1.4 - Birds

***Circus pygargus* Montagu's Harrier**

Very scarce spring and autumn visitor; last bred successfully in 1962. Most records are from open downland between the Arun Valley and Beachy Head with rather fewer along the coast. It's diet consists mainly of small birds and mammals, lizards and insects. Last possible breeding record from 1999 reported from Beachy Head area.

Designations & Status:

- Bird Population Status - amber;
- Birds Directive Annex 1;
- Convention on Migratory Species; Appendix 2;
- EC CITES Annex A; Wildlife and Countryside Act 1981 (Schedule 1 Part 1).

***Milvus milvus* Red Kite**

This unmistakable large bird of prey is a very scarce breeding resident and scarce visitor. Red kites were almost extinct in the UK by the early 1900s but in the last two decades, they have been re-introduced to England and Scotland, with magnificent results. It is easily recognised by its red colour and forked tail. It feeds on carrion, worms and small mammals. Recorded on a number of occasions, mainly migrants, with one possible breeding record in the Beachy Head area in 2002.

Designations & Status:

- Bird Population Status - amber;
- Birds Directive Annex 1;
- Convention on Migratory Species; Appendix 2;
- EC CITES Annex A;
- Wildlife and Countryside Act 1981 (Schedule 1 Part 1).

***Falco peregrinus* Peregrine Falcon**

Scarce breeding resident, passage migrant and winter visitor usually nesting on cliffs. This large and powerful falcon is well-known for its propensity to roost on tall buildings and has been widely recorded in Sussex. Takes medium-sized birds, such as wading birds, pigeons and small ducks. A large number of breeding records from the Belle Tout to Beachy Head area.

Designations & Status:

- Bern Convention Appendix 2;
- Birds Directive Annex 1;
- Convention on Migratory Species; Appendix 2;
- EC CITES Annex A;
- Wildlife and Countryside Act 1981 (Schedule 1 Part 1)

***Falco subbuteo* Eurasian Hobby**

Regular passage migrant. An agile species which feeds on insects and small birds, associated with heathlands that is now also found on farmland with pine clumps and woodland. Widely recorded in Sussex. A number of breeding records from the Belle Tout, Beachy Head, Hodcombe and Shooters Bottom area.

Designations & Status:

- Bern Convention Appendix 2;
- Convention on Migratory Species;
- Appendix 2; EC CITES Annex A;
- Wildlife and Countryside Act 1981 (Schedule 1 Part 1).

***Corvus corax* Common Raven**

This massive black bird with a large bill and diamond shape tail is a scarce resident. It is usually recorded from the coast, especially where there are cliffs, but is sometimes seen inland too. It feeds on carrion. A good number of breeding records from the Beachy Head, Shooters Bottom and Whitbread Hollow areas.

***Emberiza calandra* Corn Bunting**

A non-descript brown bunting that is a fairly common but decreasing resident with most records from the Downs and the east of East Sussex. One of the few UK bird species largely dependent on cropped land and it seems particularly to like barley. It feeds on seeds and insects. It can also be found on heathland and open countryside. Its has had a dramatic population decline in the UK including Beachy Head. Many records from the site mainly from the Belle Tout and Beachy Head area.

Designations & Status:

- Bird Population Status - red;
- UK Biodiversity Action Plan priority species.

***Passer montanus* Eurasian Tree Sparrow**

A bird that has had large fluctuations in population in the past but which has been in decline in the British Isles for some time. In Sussex it is a scarce resident, passage migrant and winter visitor more abundant in East Sussex than in the West. It is mainly a bird of open farmland with hedgerows and free-standing trees where it feeds on insects and seeds. Many records for the site, mainly wintering and migrant records.

Designations & Status:

- Bird Population Status - red;
- Environmental Stewardship Target Species (South Downs);
- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- UK Biodiversity Action Plan priority species.

***Phoenicurus ochruros* Black Redstart**

Rare resident; fairly common passage migrant and scarce winter visitor. A recent colonist of the British Isles and first recorded as breeding on the cliffs near Hastings (1923). This robin-sized bird can be found in coastal area where it feeds on insects, spiders, berries and seeds. A number of records for the site mainly during the breeding season of the species but only one record of breeding in 2000.

Designations & Status:

- Bern Convention Appendix 2;
- Bird Population Status - amber;
- Wildlife and Countryside Act 1981 (Schedule 1 Part 1).

***Phylloscopus sibilatrix* Wood Warbler**

A very scarce summer resident and passage migrant. This large white and yellow leaf warbler is associated with damp oak woodland where it feeds mainly on insects and spiders. Its best locations are in the north of our area, although it has never been common in Sussex and seems to be declining. One breeding record from Horseshoe Plantain in 1993, many other migrant records.

Designations & Status:

- Bird Population Status - red;
- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- UK Biodiversity Action Plan priority species.

A1.5 - Mammals

***Lepus europaeus* Brown Hare**

Widely distributed throughout England and Wales and probably an ancient introduction. Hares occur on a wide range of mainly open farmland and nationally the species is thought to be undergoing a steady decline. Much less common in Sussex than it used to be, but widely recorded. A small number of records from Belle Tout, Hodcombe and Beachy Head area.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

A1.6 - Insects

Coleoptera - Beetles

Brachinus (Brachynidius) sclopeta

An endangered bombardier beetle of waste ground. Recorded from Hastings before 1839 and Beachy Head in 1928, then thought to be extinct in this country until rediscovered at the Thames Barrier in 2005.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- Sussex Rare Species Inventory Species;
- UK Biodiversity Action Plan priority species.

Diptera - Two-winged Flies

***Doros profuges* Phantom Hoverfly**

A distinctive but elusive species that appears to be much less common than it was. The larvae are thought to be associated with ants. Quite widely recorded from downland areas of East and West Sussex with one report from Pevensy Levels. Recorded from Beachy Head.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- Sussex Rare Species Inventory Species;
- UK Biodiversity Action Plan priority species.

Hymenoptera - Bees, Ants & Wasps

***Bombus humilis* Brown-banded Carder-bee**

A declining bumble bee of flower-rich grasslands becoming increasingly rare in South East England. Recorded from Beachy Head in 2008.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- Sussex Rare Species Inventory Species;
- UK Biodiversity Action Plan priority species.

***Bombus ruderarius* Red-shanked Carder-bee**

A bumble bee that nests in moss or litter on the ground. Widespread in Britain, but commonest in the south east. Recorded from a handful of sites along the coast of East and West Sussex.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Spilosoma lubricipeda* White Ermine**

A white moth with black speckles. Flies in the summer months and 'woolly bear' larvae feed on low-growing plants. Widespread across Sussex. One record from Whitbread Hollow.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Spilosoma luteum* Buff Ermine**

A yellowish-buff summer-flying moth normally with black speckles. Larvae feed on low-growing plants as well as trees and shrubs. Widespread and often common in Sussex.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Tyria jacobaeae* Cinnabar**

A red and black day-flying moth whose orange and black ringed larvae feed on ragwort and related plants. Common across Sussex. Records from Shooters Bottom.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
 - Sussex Biodiversity Action Plan Species;
 - UK Biodiversity Action Plan priority species.
- 3.

***Chiasmia clathrata* Latticed Heath**

A moth that flies both by day and by night on downland, commons, open woodland and similar habitats. Widespread but local in Sussex. Some records of this species are under the nominate subspecies *Semiothisa clathrata clathrata*. Recorded from Cow Gap.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Ecliptopera silaceata* Small Phoenix**

A common moth in England and Wales and, though widespread in Scotland, it is less common there. It lives in a variety of habitats including open woodland, downland, commons, gardens and waste ground. Generally common in Sussex. Recorded from Cow Gap.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Epirrhoe galiata* Galium Carpet**

A geometrid moth found on a range of coastal habitats including sandhills, shingle beaches and cliffs, inland being found on chalk downland, limestone hills and sometimes open moorland, the larva feeding on various species of *Galium*. Found over much of GB. Mainly along the coast and on the Downs in our area. A small number of records from the Cow Gap/Beachy Head area.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Melanthia procellata* Pretty Chalk Carpet**

Hedgerows, edges of woods and bushy places on calcareous soils. Larva on Clematis. Southern England ranging northwards to Lincolnshire and Caernarvonshire. In our area mainly recorded from the West Sussex Downs. Recorded from the Holywell area of the site.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Perizoma albulata* Grass Rivulet**

A nationally local species of chalk grassland, sand dunes and shingle over much of lowland UK. In Sussex it is found on much of the downs, but is very scarce except between Brighton and Eastbourne in East Sussex and the downs above Storrington in West Sussex. A small number of records from the Cow Gap/Beachy Head area.

Designations & Status:

- Sussex Biodiversity Action Plan Species;
- Sussex Rare Species Inventory Species;
- UK Biodiversity Action Plan priority species.

***Scopula marginepunctata* Mullein Wave**

A mostly coastal moth, the larva feeding on low plants. Southern England and Wales, also noted from Cumbria, Yorkshire and a few localities in Scotland. Most Sussex records are from the Rye Harbour area in East Sussex, or Pagham Harbour in West Sussex. Recorded from Cow Gap.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species

***Scotopteryx chenopodiata* Shaded Broad-bar**

Adults in a wide range of habitats including sand dunes, downland, waste ground and grassy embankments where they can be found visiting flowers from dusk onwards. Larvae on vetches and clovers. Widespread and moderately common throughout Britain. Widespread and often frequent in Sussex. A small number of records from the Cow Gap/Beachy Head area.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;

- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Timandra comae* Blood-vein**

A widespread and moderately common moth in southern Britain with records from across Sussex. It is regarded as being in rapid decline.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Xanthorhoe ferrugata* Dark-barred Twin-spot Carpet**

A widespread species in Sussex commoner in some years than in others. Found in gardens, scrubland and often on the coast. The larvae feed on a variety of low growing plants. This species is declining generally across the country as a whole.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Erynnis tages* Dingy Skipper**

The butterfly occurs in discrete colonies, frequenting downland, dunes, heaths, embankments, woodland rides and occasionally damper areas. The larva feeds on birdsfoot trefoils, *Lotus corniculatus* and *L. uliginosus*. Southern Britain and Wales, being more local further north. Widespread but declining in Sussex Weald. More stable on the South Downs. Recorded under both *Erynnis tages* and as the nominate subspecies *Erynnis tages tages*. Frequently recorded throughout the site.

Designations & Status:

- IUCN (2001) - Vulnerable;
- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Malacosoma neustria* Lackey**

The larvae of this moth feed on a variety of trees and shrubs, living in a communal tent. Distributed throughout the southern half of England becoming very local further north. The species is vulnerable to flail cutting of hedges in winter and may be declining.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Cupido minimus* Small Blue**

Britain's smallest butterfly. Found in discrete colonies in a number of places along the Downs from East to West Sussex. Small number of records throughout the site.

Designations & Status:

- IUCN (2001) - Lower risk - near threatened;
- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species;
- Wildlife and Countryside Act 1981 Schedule 5 Sections (9.5a; 9.5b).

***Satyrrium w-album* White-letter Hairstreak**

A butterfly with elm-feeding larvae that declined dramatically after Dutch elm disease. Recorded from 17 1km squares since 2000, mostly near the Downs in East and West Sussex. A number of records from Horseshoe Plantation.

Designations & Status:

- IUCN (2001) - Endangered;
- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species;
- Wildlife and Countryside Act 1981 Schedule 5 Sections (9.5a; 9.5b).

***Acronicta rumicis* Knot Grass**

A widely distributed moth in the southern half of the British Isles, but one that is marked decline. Widely recorded in Sussex. Rarely recorded from the site.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;

- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Agrochola lychnidia* Beaded Chestnut**

A brown noctuid moth flying in September and October. Larvae feed on low plants and later on the leaves of trees and shrubs. Widespread in Sussex. Records mainly from the Holywell area.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Allophyes oxyacanthae* Green-brindled Crescent**

An autumn-flying noctuid moth with a metallic sheen. Frequents woodlands, hedgerows and gardens. Larvae on a variety of trees and bushes. Widespread in Sussex. A small number of records throughout the site.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Amphipyra tragopoginis* Mouse Moth**

A widespread moth in the British Isles, but one that is in marked decline. Very widely recorded in Sussex. A small number of records throughout the site.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Aporophyla lutulenta* Deep-brown Dart**

A brown, autumn-flying noctuid moth. Larvae feed on grasses and various shrubs including heather. Widespread but uncommon in Sussex. One record from Beachy Head.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Atethmia centrigo* Centre-barred Sallow**

An orange and brown noctuid moth of woodlands and hedgerows on the wing in late summer and early autumn. Larvae feed on ash. Widespread in Sussex. Recorded from the Holywell area.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Caradrina morpheus* Mottled Rustic**

A common noctuid moth whose larvae feed on nettle, dandelion and other low-growing plants. It is in marked decline in the UK, but has been very widely recorded in Sussex. Recorded from Whitbread Hollow and Shooters Bottom.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Diarsia rubi* Small Square-spot**

A brown noctuid moth which flies in early and again in late summer. Larvae eat a wide variety of low-growing plants. Widespread and often abundant in Sussex. Recorded from Whitbread Hollow.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Haplodrina blanda* Rustic**

A noctuid moth of gardens, grasslands and heath with larvae that feed on a variety of low-growing plants. Very widely recorded in Sussex, but in marked decline in the UK generally. A small number of records throughout the site.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Hydraecia micacea* Rosy Rustic**

A widespread noctuid moth, but one that is in marked decline in the British Isles. Larvae feed in the larger roots of a variety of plants such as docks. Very widely recorded in Sussex. One record from Beachy Head.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Melanchnra persicariae* Dot Moth**

A dark noctuid moth with a distinctive white wing spot. Larvae feed on a wide variety of low-growing plants and trees. Widely recorded in Sussex. A small number of records throughout the site.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Mesoligia literosa* Rosy Minor**

A noctuid moth with its strongholds on or near the coast, but also widely distributed inland in Sussex, though now in marked decline in the UK. The caterpillars feed on grasses. One record from Cow Gap.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Tholera decimalis* Feathered Gothic**

A brown noctuid moth or rough grasslands in late summer and autumn with white feathering on the forewings. Larvae on grass. Widespread in Sussex. One record from Beachy Head.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;

- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Coenonympha pamphilus* Small Heath**

A small grassland butterfly that is fairly widespread in Sussex, especially on the Downs. The species has become much less common than it used to be in many areas in recent decades. Commonly recorded throughout the site.

Designations & Status:

- IUCN (2001) - Lower risk - near threatened;
- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Hipparchia semele* Grayling**

Once widespread over the downs, now restricted to one valley near Wilmington. This species can occasionally be found in the far north-west of Sussex however this represents over-flow from Hampshire populations as opposed to an established Sussex colony. Not recorded within the site since 1995.

Designations & Status:

- IUCN (2001) - Vulnerable;
- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- Sussex Rare Species Inventory Species;
- UK Biodiversity Action Plan priority species.

***Lasiommata megera* Wall**

A grassland butterfly that has undergone a severe decline and now is normally only found near the coast and on the eastern part of the South Downs. Commonly recorded throughout the site.

Designations & Status:

- IUCN (2001) - Lower risk - near threatened;
- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Limenitis camilla* White Admiral**

A fairly widespread woodland butterfly that has increased a little in numbers and range in Sussex in recent decades. The larvae are found on honeysuckle. One record from Willingdon.

Designations & Status:

- IUCN (2001) - Vulnerable;
- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- UK Biodiversity Action Plan priority species.

***Adscita statices* Forester**

A nationally local species found in grassland and woodland rides over much of England and Wales. In Sussex it is found on the downs between Brighton and Eastbourne. In West Sussex it is very scarce with recent records only from Downs near Upper Beeding, Kingley Vale, Ebernoe Common and Duncton. caterpillars feed on Common Sorrel and Sheep's Sorrel. One record from Willingdon.

Designations & Status:

- Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England;
- Sussex Biodiversity Action Plan Species;
- Sussex Rare Species Inventory Species;
- UK Biodiversity Action Plan priority species.

10. Glossary

IUCN (pre 1994)/IUCN (2001) - Extinct

This conservation designation used to be referred to as RDBx (Red Data Book), which is now a deprecated term, and was given to species that are considered extinct in Great Britain.

IUCN (pre 1994)/IUCN (2001) - Endangered

This conservation designation used to be referred to as RDB1 (Red Data Book), which is now a deprecated term, and was given to species that are considered under threat of extinction in Great Britain.

IUCN (pre 1994)/IUCN (2001) - Vulnerable

This conservation designation used to be referred to as RDB2 (Red Data Book), which is now a deprecated term, and was given to species that are considered under threat of becoming endangered in Great Britain.

IUCN (pre 1994)/IUCN (2001) - Lower risk - near threatened

This conservation designation used to be referred to as RDB3 (Red Data Book), which is now a deprecated term, and was given to species that occur in less than 16 ten kilometre squares in Great Britain.

IUCN (pre 1994)/IUCN (2001) - Insufficiently Known

This conservation designation used to be referred to as RDBk (Red Data Book), which is now a deprecated term, and was given to species that occur in less than 16 ten kilometre squares in Great Britain but data was insufficient to assign a designation of RDB1, RDB2 or RDB3.

Nationally Scarce/Nationally Notable A

Species that occur in 16-30 ten kilometre squares in Great Britain.

Nationally Scarce/Nationally Notable B

Species that occur in 31-100 ten kilometre squares in Great Britain.

Southern Restricted

Species that are mainly restricted in distribution to below a line drawn from the Bristol Channel to the Wash.

Southern Widespread

Species that occur throughout Southern England, Wales but no further north than Northern England with the occasional record in Southern Scotland.

Universal

Species that occur through England, Wales and Scotland.

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