KINGSDOWN AND WALMER BEACH,

NEAR DEAL, KENT

Draft Management Plan 2010-2014

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1.0 Summary Plan

KINGSDOWN AND WALMER BEACH
Management Plan

A Local Wildlife Site...

- The site covers an area of almost 47 hectares of coastal vegetated shingle which is a rare habitat in Kent.
- It lies adjacent to the Dover to Kingsdown Cliffs SSSI at its southern boundary.
- A breeding population of the Sussex Emerald moth (*Thalera fimbrialis*), that has full protection under Schedule 5 of the Wildlife and Countryside Act 1981, has been confirmed here in 2010.
- The rare Bright Wave moth (*Idaea ochrata*) is found along this stretch of beach, with the main concentration in the south of the site.
- There is much historical interest with Walmer Castle at its centre. It is believed that when Julius Caesar arrived in 55/54 BC, he came ashore between Walmer and Deal.
- Fishing was once an important industry here and this interest continues today with angling as a popular pastime.
- Good access plus free parking encourage visitors to use this site.

Wildlife on the beach...

- The rare Bright Wave moth (*Idaea ochrata*) has its stronghold in the UK in this area.
- The Viviparous Lizard (*Zootoca vivipara*) may be found basking on dead wood in quiet sunny sheltered areas.
- A colony of Small Blue butterfly (*Cupido minimus*) with its only food plant Kidney Vetch (*Anthyllis vulneraria*) is found in the south of the site.
- The nationally scarce plant Sea Pea (*Lathyrus japonicus*) is located on the lower beach opposite Walmer Castle and stretching north. This area has the best population in South-East England.
- The only site in Kent where the moth *Pima boisduvaliella* is found.
- A variety of shingle plant specialists such as Yellow Horned-poppy (*Glaucium flavum*), Sea-Kale (*Crambe maritima*), and Babington's Orache (*Atriplex glabriuscula*) are found here.
- Wild Carrot (*Daucus carota*) growing on site is the main food source for the larvae of the Sussex Emerald moth (*Thalera fimbrialis*).

Sussex Emerald moth (*Thalera fimbrialis*) Nigel Jarman

Small Blue butterfly (*Cupido minimus*) Jim Asher

Bright Wave moth (*Idaea ochrata*) Keith Tailby

A sensitive site under threat...

There is a negative impact on this site where pressure comes from both human and natural actions:

- As sea levels rise there is the increasing risk in scouring of the beach especially at Kingsdown, leading to beach loss.
- Destruction of the plant community, especially Sea Pea (*Lathyrus japonicus*), through trampling by visitors.
- The spread of invasive garden plants which have the ability to thrive and in some cases out-compete the native vegetation.
- Dumping of garden waste onto the beach has caused an increase in nutrients on the shingle creating inhospitable conditions for native flora.
- A reduction in the native plant community leads to a reduction in the animal community which depend on the plants.
- Rubbish on the beach is an on-going issue that comes from various sources including the public and angling in particular.

A collection of non-native species on Kingsdown and Walmer Beach.
Red Valerian (*Centranthus ruber*) in the foreground, Red Hot Poker (*Kniphofia* sp) centre, with Holm Oak (*Quercus ilex*) and Silver Ragwort (*Senecio cineraria*) in the background.

How we would like to manage the site in the future...

- Removal of selected garden plants, especially Red Valerian (*Centranthus ruber*), Holm Oak (*Quercus ilex*) and Silver Ragwort (*Senecio cineraria*).
- Introduce a mowing regime in areas of rough grassland to increase native flowering species and invertebrates that are associated with them.
- To encourage the monitoring of flora and fauna.
- Maintain the high level of upkeep to the site, along cycle paths, car parks and footpaths.

People and wildlife...

We would like to encourage involvement from the local community through each stage of the management process. Residents will be informed before the proposed works begin with a newsletter to explain what is going to happen, where and why.

The idea is to educate the public who visit the site about the shingle community and its value to wildlife through interpretation in the form of panels and walks.

The aim will be to encourage local involvement with site management such as holding litter picks throughout the year along the beach and in unwanted plant removal.

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1.1 Site name

Kingsdown and Walmer Beach

1.2 Status

An area described as coastal vegetated shingle. A Local Wildlife Site (LWS), site reference number DO 01. This management plan does not include the permanent pasture north of Walmer Castle or the grassland known as Hawks Hill which is also part of the same LWS.

1.3 Ownership

The majority of this site is owned by Dover District Council (DDC) and English Heritage (EH) who also own the beach front. Some of this land is owned privately.

Privately owned land is positioned along the beach, in front of the housing along Wellington Parade. This includes land owned by the Old Lifeboat House at Kingsdown. A narrow strip extends south from here edging the rough grassland that is used as parking.

The strip of shingle that extends from Boundary Road is privately owned and has a beach hut with it. This continues to the lower beach where ownership is by English Heritage.

A gap of land between the housing along Wellington Parade has had planning permission granted since the 1980's.

There is a block of walled gardens at the Walmer end of the site that are in private ownership. To the south of these and positioned opposite short amenity grassland a section of beach is privately owned.

English Heritage owns the shoreline extending the length of the site and a large area directly in front of Walmer Castle.

1.4 Area

46.88 hectares (115.84 acres)

1.5 Local planning authority

Dover District Council, White Cliffs Business Park, Dover, CT16 3PJ
Tel: 01304 821199

1.6 Location

The area is positioned along the coastline with Deal to its north, running for approx 3 km south and ends at the Zetland Arms public house at Kingsdown.

The LWS of Walmer and Kingsdown Golf Course (DO 31) is to the south west of this site. The Dover to Kingsdown Cliffs SSSI is adjacent to its south. The South Foreland Heritage Coast is also positioned to the south of this site from the Zetland Arms public house.

1.7 Access

This area can be reached from the south by following the A258 to Kingsdown or by following the signs for Walmer Castle. There are two car parks on the beach side that can be accessed from Kingsdown Road. The Saxon Shore Way and White Cliffs Country Trail extend the full length of the site by following the public footpath along Wellington Parade from the Zetland Arms public house to the Walmer Lifeboat House. This public footpath is numbered as ED26. The path leading from the beach to the north of Walmer Castle is ED63, and to its south is ED5A.

1.8 Geology

Cretaceous chalks with Pleistocene drift deposits and shingle.

1.9 Landscape

Bare to consolidated shingle that moves from grassland to scrub and trees.

1.10 Habitat

This community comes under the Habitats Directive Annex I as 1220 Perennial vegetation of stony banks, National Vegetation Classification SD1 *Rumex crispus – Glaucium flavum* shingle community. This is a Biodiversity Action Plan (BAP) Priority Habitat and listed under the Natural Environment and Rural Communities (NERC) Act 2006. Coastal vegetated shingle is an internationally rare habitat covering 30% of the UK coast. At least 40% of this is found along the Kent coastline.

1.11 Important species

Mammals

Bat

A search over a 5km radius around TR 379500 gave 6 species that have been recorded in the area. All British species of bat and their roosts are protected by law under the Wildlife and Countryside Act 1981, Schedule 5 and the Conservation (Natural Habitats, etc) Regulations 1994. As a result they are described as a European Protected Species. The following have been identified as present: Common Pipistrelle (*Pipistrellus pipistrellus*), Soprano Pipistrelle (*Pipistrellus pygmaeus*), Serotine (*Eptesticus serotinus*), Noctule (*Nyctalus noctula*), and Natterer's Bat (*Myotis nattereri*). There is a Brown Long-eared (*Plecotus auritus*) roost on the Walmer Castle site.

The Soprano Pipistrelle (*Pipistrellus pygmaeus*), Noctule (*Nyctalus noctula*) and Brown Long-eared (*Plecotus auritus*) are listed under the NERC Act 2006.

Hedgehog (*Erinaceus europaeus*)

A dead adult specimen was identified on site. This is a Kent Biodiversity Action Plan (BAP) species and is found under the NERC Act 2006.

Reptiles

Viviparous Lizard (*Zootoca vivipara*) previously *Lacerta vivipara*

The presence of male, female and juvenile Viviparous Lizard (*Zootoca vivipara*) indicates a breeding population on site. It is a widespread species but nationally declining in recent decades. As a result it has been made a UK Biodiversity Action Plan (BAP) Priority Species.

Slow Worm (*Anguis fragilis*)

There is a breeding population of this species on site. This is a UK BAP Priority Species.

The above species of reptile are protected under the Wildlife and Countryside Act 1981 from sale, and intentionally killing or injuring, as are all reptiles. They are also listed under the NERC Act 2006.

Invertebrates

Sussex Emerald Moth (*Thalera fimbrialis*)

Adults had been identified at Kingsdown in 2009, followed by several larvae in May 2010. This species is highly endangered in the UK. It has full protection under Schedule 5 of the Wildlife and Countryside Act 1981. It is a Red Data Book (RDB1) / NERC Act 2006 and UK BAP Priority species. The only other breeding population of this moth is at Dungeness in Kent.

Bright Wave Moth (*Idaea ochrata*)

This is a threatened species with a restricted breeding range in the UK. This species has been reported from vegetated shingle on the upper beach at Kingsdown. This is a Red Data Book (RDB2): vulnerable, Kent Red Data Book (KRDB1): endangered, NERC Act 2006 and a UK BAP Priority species.

Toadflax Brocade Moth (*Calophasia lunula*)

This is classified as a RDB3: rare and favours shingle beach. The larva feed on various species of Toadflax (*Linaria* spp). Adults are present from May to August.

Small Blue Butterfly (*Cupido minimus*)

This butterfly mainly favours chalk grassland where its only food plant, Kidney Vetch (*Anthyllis vulneraria*) thrives. It is a BAP Priority and NERC Act 2006 species. The Wildlife and Countryside Act (1981) specifies that a licence is needed for trading in this species.

Ethmia bipunctella

The larvae of this moth feed on Viper's Bugloss (*Echium vulgare*). It is restricted to coastal shingle in the south-east. The main flight period is May – June. The status of this moth is currently pRDB2: vulnerable.

Pima boisduvaliella

This species may be found on sand-dune and shingle beaches in south-east England. Larva feed on seed pods of Sea Pea (*Lathyrus japonicus*) and Common Bird's-foot-trefoil (*Lotus corniculatus*). Adults are present from June to August. The status of this moth is currently pRDB3: rare.

The letter p indicates 'proposed' and that these species have not yet been placed in the Red Data Book.

Six-belted Clearwing (*Bembecia ichneumoniformis*)

Adults can be observed during the day from June to August. Larvae feed on the roots of plants that include Kidney Vetch (*Anthyllis vulneraria*) and Common Bird's-foot-trefoil (*Lotus corniculatus*). It is described as: Nationally scarce b.

The following species have been identified in this area in resident gardens through the use of moth trapping and are designated UK BAP Priority species and found under the NERC Act 2006 in England.

Ghost Moth (*Hepialus humuli*)

Adults may be seen from June to August and larval food plants include grass roots. This is a common moth.

Oak Hook-tip (*Watsonalla binaria*)

This species has two flight periods, May to June and July to September. It is found in woodland and parkland where the food plant Oak (*Quercus* spp) is located.

Small Emerald (*Hemistola chrysoprasaria*)

The larva of this species is found in hedgerow and woodland where it feeds on Traveller's-joy (*Clematis vitalba*) and usually on chalky soils. The adult moths are present between July and August. It is a local species.

Dark-Barred Twin-Spot Carpet (*Xanthorhoe ferrugata*)

Adults are present in May to June and July to August. The larvae are known to feed on a variety of herbaceous plants. This is a common species.

Shaded Broad-Bar (*Scotopteryx chenopodiata*)

This species may be found in a variety of open habitats where the larvae feed on Vetch (*Vicia* sp) and Clover (*Trifolium* sp). Adults are on the wing from July to August.

Small Phoenix (*Ecliptopera silaceata*)

The larvae of this species feed on Willowherb (*Epilobium* spp) in woodland and open habitats. Adults fly from April - June and July - August. This species is common.

Latticed Heath (*Chiasmia clathrata*)

Adult moths may be noted flying during the day and at night from May to June and from July to September. This is a common species that may be seen in a variety of habitats.

Dot Moth (*Melanchra persicariae*)

This moth may be found in suburban habitats where larval food plants include a wide range of species. Adults fly between July and August.

Broom Moth (*Ceramica pisi*)

The larvae of this moth feed on a variety of plants and prefer open habitats. Adults fly from May to July.

Feathered Gothic (*Tholera decimalis*)

This moth has a wide distribution, but is considered local. The larval food plant includes a variety of grasses. Adults fly in August and September.

Powdered Quaker (*Orthosia gracilis*)

This is a common species that flies in April and May. Larvae feed on a variety of woody and herbaceous plants.

Deep-Brown Dart (*Aporophyla lutulenta*)

Adults of this species fly in September and October. Favoured habitats include meadows, heathland and downland. There are a variety of larval food plants that include Hawthorn (*Crataegus monogyna*), Dock and Sorrel (*Rumex*)

Sallow (*Xanthia icteritia*)

This moth prefers damp habitats that may include damp woods, gardens and hedges where larval food plants include Sallow (*Salix* spp) and herbaceous plants. This is a common species that can be seen in September and October.

Knot Grass (*Acronicta rumicis*)

This is a common moth that may be found in a range of habitats. A variety of herbaceous and woody plants are eaten by the larva. Adults fly in May to July and then August to September in the south.

Mouse Moth (*Amphipyra tragopoginis*)

Adult moths are distinguished by three dark dots on each forewing. They can be seen from July to September. This is a common species that is found in many different habitats. Larvae feed on herbaceous plants.

Ear Moth (*Amphipoea oculea*)

Adults fly from July to September, with the larvae feeding on stems and roots of numerous grasses in damp habitats.

Rosy Rustic (*Hydraecia micacea*)

This is a common species that occurs in gardens, hedges, fields and woodland. Low growing plants are eaten by the larva and may include Woundwort (*Stachys*), Dock (*Rumex*) and Plantain (*Plantago*). Adults fly from August to October.

Rustic (*Hoplodrina blanda*)

This moth can be seen from June to August in various lowland habitats. Low plants such as Plantain (*Plantago*) and Dock (*Rumex*) provide food for larvae.

Mottled Rustic (*Caradrina morpheus*)

This common species is widespread in Britain and may be located in gardens and scrub. The food plant includes Nettle (*Urtica*), Dock (*Rumex*) and Dandelion (*Taraxacum* agg). Adults fly from June to August.

Mullein Wave (*Scopula marginepunctata*)

This local species is usually found along the coastline from June – July and then August – September. The larva feeds on Yarrow (*Achillea millefolium*), Mugwort (*Artemisia vulgaris*), and Wild Marjoram (*Origanum vulgare*) among others.

Buff Ermine (*Spilosoma luteum*)

This common species is widespread and flies from May to July. Larvae feed on herbaceous plants.

Cinnabar (*Tyria jacobaeae*)

The larvae of this species have very distinct yellow and black stripes. They feed on the leaves and flowers of mainly Common Ragwort (*Senecio jacobaea*). This is a common species that can be observed on open and well drained habitats. Adults fly from May to August.

Rosy Minor (*Mesoligia literosa*)

This common moth flies in July and August. Larvae feed on a variety of grasses such as Sheep's Fescue (*Festuca ovina*) and False Oat-grass (*Arrhenatherum elatius*).

Plants

Sea Pea (*Lathyrus japonicus*)

This plant is found in 16-100 different 10x10 km grid-squares since 1987 in Great Britain and Isle of Man, making this species nationally scarce. It affords some protection under the Wildlife and Countryside Act 1981, where it is a criminal offence to intentionally uproot any wild plant without the landowner's permission.

Wild Carrot (*Daucus carota*)

This is the main food plant of the Sussex Emerald moth (*Thalera fimbrialis*). It is a common species that is scattered throughout the site. It is found in areas that have some soil enrichment.

Kidney Vetch (*Anthyllis vulneraria*)

This is the sole food plant of the Small Blue butterfly (*Cupido minimus*). A common species on chalk grassland, it benefits from some ground disturbance.

Autumn Lady's-tresses (*Spiranthes spiralis*)

This has been noted on short amenity grassland at the back of the beach. This plant is easily overlooked. Preferred habitat includes dry calcareous, sandy grassland and dunes. It was last recorded here in 1988, and has again been confirmed in August 2010. It is described as near threatened.

Sea-Kale (*Crambe maritima*)

This species is described as occasional to very locally abundant in the British Isles, but uncommon along this particular stretch of coastline, possibly down to the beach erosion/feeding that is going on. This species is usually positioned along the edge and above the high tide line on shingle.

Along with Sea Pea (*Lathyrus japonicus*) and Sea-Kale (*Crambe maritima*), other classic pioneer species present are Babington's Orache (*Atriplex glabriuscula*), and Sea Beet (*Beta vulgaris*).

Birds

Migrating birds travelling in the direction of the Continent use Kingsdown and Walmer beach as a corridor to move down the coastline in order to find the ideal position in which to cross the Channel. The scrub at the back of the beach may provide ideal nesting opportunities for some species of bird. Ringed Plover (*Charadrius hiaticula*) may attempt to nest in this habitat.

This habitat assessment was made over autumn 2009 and spring/summer 2010. Nocturnal wildlife was not recorded.

2.0 Introduction

This is the first five year management plan for Kingsdown and Walmer Beach Local Wildlife Site. It has been written by the White Cliffs Countryside Partnership (WCCP) in conjunction with Dover District Council with the help of funding from the Kent BAP Partnership.

This is a significant area of coastal vegetated shingle in the UK. This area provides green space, paths, cycle ways, and recreational opportunities to the public. The beach is popular with tourists so important to the local economy.

The aim of this management plan is to suggest ways to maintain and enhance this sensitive ecosystem for all to enjoy at the same time. Monitoring moths in this area for many years has shown it as an important site for both common and rarer species. The most distinct is the recent discovery of a breeding population of Sussex Emerald moth (*Thalera fimbrialis*) which is fully protected. The Bright Wave moth (*Idaea ochrata*) is also found on site which has a restricted range in the UK. Figures have indicated on the latter that there may be a link to decreasing numbers and inappropriate management of the site. Whether there is or not, it has become apparent that invasive garden escapes have increased substantially in recent years both in area and diversity. These aliens are out-competing native flora and provide little benefit to native species that rely on the vegetated shingle habitat.

This plan will give an outline as to how the current management may be altered to achieve a balance between alien and native shingle species. There may be some local disapproval to proposed plans, as this will be a sensitive issue. The local residents must be informed on every stage of this work and given the opportunity to voice their opinion.

An assessment of vegetation on site was carried out in 2009/10 by [redacted], working for the WCCP. Recommendations for future management are to include a reduction in non-native species, to protect the native vegetation from further disturbance, to educate local people and visitors about the importance of the shingle community and introduce a cutting regime on grassland that will encourage flowering plants. There is an emphasis on encouraging local input in both practical conservation work and ecological monitoring.

There are other various threats throughout the site and include the trampling of sensitive vegetation, fires held on the beach, dog fouling, litter, and fishing debris. Future threats from climate change mean that sea level will continue to rise, and beach stability will be threatened through a predicted increase in storms and wave height. The constant recession of the beach at Kingsdown means that sediment is supplied in an ongoing basis. At the end of November beginning of December 2009, storms caused further scouring of the beach front at Kingsdown. There is a risk of vegetation damage by heavy machinery carrying out the restructuring programme on the beach.

The land from South Road and the slipway at the Zetland Arms stretching south along the coast is the Dover to Kingsdown Cliffs Site of Special Scientific Interest (SSSI). Any recommendations within this management plan need to be made with the adjacent SSSI in mind to avoid upsetting the sensitive balance and maintaining habitat connectivity.

The WCCP has considerable experience of vegetated shingle management, through the Romney Marsh Countryside Partnership, which manages part of the Dungeness National Nature Reserve.

3.0 Site description

The habitat for this 3km stretch of coastline is described as coastal vegetated shingle. It is a Biodiversity Action Plan Priority habitat (BAP) because most of the shingle that extends along our coastline tends to be in narrow strips and as this is mostly to unstable to provide a community of perennial vegetation, any areas that are stable are of significant importance. A variety of specialised flora and fauna occurs above the normal tidal limit, some of which may be BAP species themselves. Some invertebrates may be found in the bare shingle. This community takes a long time to form and recover once damaged. The site has been divided into 4 areas.

1. Vegetated shingle set between housing at back of beach (Zone 1)

This is situated behind Wellington Parade, between housing where the gradient drops down to road level. There is access by foot from both the Parade in the east and the main road through Kingsdown in the west. This is not a public footpath, but a path is in obvious use that runs along the southern edge of the housing.

Part of the LWS that lies between the housing is privately owned. There are posts positioned here to mark the ownership boundary. The owner is a [redacted] of Kingsdown. In the 1980's permission was granted for a building application that continues to stand today. The Small Blue (*Cupido minimus*) colony is located here and the main concentration of Bright Wave moth (*Idaea ochrata*) is in this area also. Sussex Emerald (*Thalera fimbrialis*) larvae were found here in May 2010.

The area is of sparse vegetated shingle on chalk. Much of the shingle is exposed and covered in lichens or moss with scattered grasses and native perennials such as Mouse-ear-hawkweed (*Pilosella officinarum*). Kidney Vetch (*Anthyllis vulneraria*) and Wild Carrot (*Daucus carota*) is located here. Shale has been placed on site during works for the 1995-1996 storms. This area has been affected by flooding in the past through wave action.

Scrub edges the fence line along the southern boundary of the LWS and along Kingsdown Road. (See maps in the appendices on vegetation and species of interest). Russian-vine (*Fallopia baldschuanica*) is escaping from a resident's garden in one area. Other non-natives include Holm Oak (*Quercus ilex*), Laburnum (*Laburnum anagyroides*) and Red Valerian (*Centranthus ruber*). There is a compost heap positioned on DDC land (not on the LWS) and in current use.

DDC owned land extends south from this site, but is not included within the LWS. Viviparous Lizard (*Zootoca vivipara*) and Slow Worm (*Anguis fragilis*) have been seen here following a reptile survey. If development is not planned, then a form of management would be advised in order to reduce the risk of non-natives spreading further into the LWS. There has been much dumping of garden waste in this area that has lead to enrichment of the soil. The installation of a sewage pipe has also been undertaken in the past. A path has been worn through here by local residents.

2. The Zetland Arms north to Newlands Residential Home (Zone 2)

The southern part of the site has a row of housing facing the sea, with the Wellington Parade (a path for pedestrians) separating these from the beach. The Parade is a popular route for dog walkers and in part cyclists, that stretch from the Zetland Arms at Kingsdown in the south to Walmer in the north. Parts of the beach are used for angling purposes. There are approx 24 beach huts on the shingle at Kingsdown with an area of rough grassland positioned behind. In between there is a storage area for boating/surfing equipment. The Old Lifeboat Station which is now a house is positioned adjacent to these on the shingle to the north of the huts with an extensive range of flora within the garden. The Bright Wave moth (*Idaea ochrata*) is also found in this area. There is a private beach hut further to the north of this that is owned by the house behind.

There is a slipway for boats on the SSSI boundary that is set within the concrete sea wall. This along with groynes has been positioned as sea defences, due to the rate of annual erosion along this part of the coast. The groynes begin just south of here and end in line with the gap in the housing at a length of approximately 585 metres. There is public seating here provided by the DDC and the Zetland Arms.

The footpath leading along the Parade brings various issues with it. These include dog walkers not picking up after their animals, despite penalty notices up and bins being provided. Wooden bollards edge the beach side at regular intervals to reduce vehicle use and to encourage people to stick to the tarmac path.

Where the public are using pathways from the bollards through the vegetation and onto the beach, it is obvious in that regular use has discouraged growth completely. The vegetation helps to keep the beach stable. Some of these bollards have been knocked over or have rotted in places and need replacing. The beach is used regularly by anglers, and as a result much discarded fishing tackle litters the lower beach. There is obvious dumping of garden waste in places in this area. Litter is a constant problem along the length of the beach.

There is much scrubby vegetation along the Parade in front of the housing. Natives such as Blackthorn (*Prunus spinosa*) and Traveller's-joy (*Clematis vitalba*) are found here with many non-natives such as Sumach (*Rhus* sp) and Holm Oak (*Quercus ilex*). On the beach side of the taller scrub, lower growing species such as Red Valerian (*Centranthus ruber*), Silver Ragwort (*Senecio cineraria*), Red Hot Poker (*Kniphofia* sp), Elephant Ears (*Bergenia* sp), and Pampas grass (*Cortaderia* sp) are just a few garden escapes thriving within the open native vegetated shingle. Further towards the shoreline the vegetation becomes sparser with natives such as Yellow Horned-poppy (*Glaucium flavum*), Bittersweet (*Solanum dulcamara*), Sea-Kale (*Crambe maritima*), Babington's Orache (*Atriplex glabriuscula*), Curled Dock (*Rumex crispus*) and Sea Beet (*Beta vulgaris*) found surrounded by large patches of bare shingle. These species are typical of this environment and vulnerable when shingle is scoured by wave action.

Rough grassland is positioned behind the beach huts. This is currently unmanaged, and Fennel (*Foeniculum vulgare*) has taken over as the dominant species, with some Tree-mallow (*Lavatera arborea*), Wild Carrot (*Daucus carota*), Kidney Vetch (*Anthyllis vulneraria*), Common Vetch (*Vicia sativa*), and Hairy Tare (*Vicia hirsuta*) also present.

3. Newlands Residential Home north towards Dows Boat Club - beach side (Zone 3)

Once the housing stops, the non-natives become fewer in number and diversity when moving north. The edge of the path is a mixture of rough grassland and flowering plants. Vegetation is denser along the Parade path, holding species such as Common Mallow (*Malva sylvestris*), Hedge Mustard (*Sisymbrium officinale*), Ribwort Plantain (*Plantago lanceolata*), Knotgrass (*Polygonum aviculare*) and Smooth Sow-thistle (*Sonchus oleraceus*). Numerous Holm Oaks (*Quercus ilex*) are found in the southern part, but soon peter out. Species scattered along the shingle in less enriched areas include Viper's-bugloss (*Echium vulgare*) and Common Toadflax (*Linaria vulgaris*). Closer to shore the rare Sea Pea (*Lathyrus japonicus*) is found from Walmer Castle north up to the Dows Boat Club. Sea Sandwort (*Honckenya peploides*) is located here also. The beach is wider and more stable here with large areas of bare shingle breaking up patches of vegetation. Red Valerian (*Centranthus ruber*) is also present. Wild Carrot (*Daucus carota*) is found dotted along the beach side of the path.

4. Newlands Residential Home north towards Walmer Lifeboat House - road side (Zone 4)

The Kingsdown Road runs along its western edge. Walmer Castle sits immediately behind it. The area set in front of Walmer Castle is owned by English Heritage. This area includes two main car parks and a public toilet.

In the south a tree line edges the Kingsdown Road in part, with scrubby areas in front of this. Larger trees include White Poplar (*Populus alba*), Ash (*Fraxinus excelsior*), Scots Pine (*Pinus sylvestris*) and Sycamore (*Acer pseudoplantanus*). Ivy (*Hedera helix*) forms a dense covering on scrub in the southern part and is spreading over the grassland in places. Species within the scrub include Bramble (*Rubus fruticosus*), Blackthorn (*Prunus spinosa*), Traveller's-joy (*Clematis vitalba*) and Hawthorn (*Crataegus monogyna*). Common Knapweed (*Centaurea nigra*) and Salad Burnet (*Sanguisorba minor*) are scattered throughout the rough grassland in front of the castle. There is a mixture of bare to lightly vegetated shingle here also. There are a variety of aliens present. Public footpaths run through the grassland. Grass is kept very short around Borrow Pit car park and on the amenity areas in the north leading to Walmer. There is some hedgerow around this.

There is scrub around the public toilets that needs to be kept back to a point as this provides cover to rats and anti-social behaviour.

English Heritage owns the rough grassland directly in front of the castle. This is currently not managed, although this might be in the future.

Site description summary (See maps 5 and 6 for vegetation cover and species of interest)

ZONE	WHERE	HABITAT	SPECIES OF INTEREST	THREAT
1	Between housing along Wellington Parade	Scrub Sparsely vegetated shingle	Bright Wave moth Small Blue butterfly Kidney Vetch Viviparous Lizard Sussex Emerald moth Wild Carrot Slow Worm Toadflax Brocade moth	Trampling of vegetation Proposed development Invasive garden plants
2	Beach from the Zetland Arms north up to the end of the housing on the Parade	Scrub Bare to vegetated shingle Rough grassland	Bright Wave moth Kidney Vetch Sea-Kale Yellow Horned-poppy Wild Carrot Slow Worm	Invasive garden plants Beach scouring Trampling Fires Enrichment Heavy machinery using beach
3	Residential home to boat club (beach side)	Bare to vegetated shingle	Sea Pea Strandline vegetation Wild Carrot	Trampling Invasive garden plants
4	Residential home to Walmer Lifeboat House (road side)	Short amenity grassland Rough grassland Scrub Tree line	Autumn Lady's-tresses Wild Carrot Viviparous Lizard Slow Worm	Trampling Unfavourable management Invasive garden plants Dog fouling

4.0 Site history

Archaeological findings in the Kingsdown area indicate Mesolithic (Middle Stone Age) and Neolithic (Late Stone Age) activity. Although this is difficult to confirm, it is believed that Julius Caesar arrived on these shores in 55/54 B.C, with an ideal landing area provided between Deal and Walmer. At Walmer, the Romans are thought to have set up their first camp on arrival, with Roman graves found near the beach indicating such presence. A Saxon community is known to have existed close to the old St. Mary's Church.

The most noticeable structure on Walmer beach today is the castle, built by Henry 8th for defence in the 16th century. This together with Deal and Sandown Castle made up the Cinque Ports on this stretch of coastline. Monasteries nearby provided much of the stone used in the building process. The sea caused some damage to Walmer Castle with renovation taking place in 1616 in order to exclude this. As Sandown Castle succumbed to the sea and its sale in 1863, this in turn provided Walmer Castle with much needed building material for more restoration. It has been home to the Lord Warden of the Cinque Ports since 1708, and among well known people that have taken office here includes William Pitt and the Duke of Wellington who also died here.

In Deal the fishing industry began to grow in medieval times, to eventually become a prosperous trading port. This would have influenced local employment in the neighbouring communities of Walmer and Kingsdown.

The notorious Goodwin Sands that were given the name of "dreaded shippe swallower" have been both friend and foe to the people of Kingsdown and Walmer. The shelter created between the Sands and land known as "the Downs" gave ships a place to anchor. Local people took advantage of this by sailing out to these vessels with various items such as mail and food supplies.

The nature of the Goodwin Sands meant local boatmen rescued survivors of ship wrecks on many occasions. Following the creation of the Royal National Lifeboat Institution in 1824, Walmer had to wait until 1856 for its station, while Kingsdown waited until 1866. Over time Walmer closed temporarily, but reopened later to take the lifeboat "Barbara Fleming" from Kingsdown which closed on January 8th 1927. Its closure was believed to be down to the inability to find an able bodied crew. The house at the end of the beach huts is where the old lifeboat house was positioned.

The fishing industry created much employment at Kingsdown, with a known tannery positioned on the beach front in the 1840's. Fish curing went on nearby. (There are sheds to the right of the public house that maybe these, see photographs in appendices). The fishermen would use ash from nearby woods in boat repair. Lobster, cod, mackerel, sprats, and prawns were all fished for at Kingsdown in the past.

For centuries smuggling went on becoming particularly rife over the 18th and early part of the 19th century. This was due to the highly taxed commodities such as tea, tobacco, brandy and gin. As a result of such activity, the Coastguard Service was set up. A watch house was constructed at Oldstairs Bay, which can be seen today.

Storm damage to ships often led to their contents washed up on the beach. (See appendices)

A photograph of a pill box on the beach which has since been removed indicates how the beach was used in defence in World War 2.

The combination of population growth and a lack of work in the late 1800's in Deal and Walmer meant that the local community had to consider alternative means to increase their income. By promoting the fresh air and sea this meant the beginnings of tourism to the area. During this period the building of a railway station in Walmer providing cheep travel encouraged people of different classes to visit the area. Beach huts and chalets are known to have been at Kingsdown from at least 1907, with 24 present along the beach at present day. In 1874 it was noted that you could travel by carriage from Kingsdown down to St. Margaret's along under the cliff, an example of how the coastline continues to change, as this is now impassable.

Tourism continues as an important source of income along this stretch of coastline, with the beach being an important draw for its amenity value. The Saxon Shore Way is part of a much longer walking route that takes in the coastline from the Zetland Arms in the south up through Walmer to Deal by following the public footpath. The route includes historic coastal fortifications that provided defence for Kent at around the time when Roman domination came to an end. Angling from Walmer and Kingsdown beach is a popular pastime.

This area has not been knowingly grazed in the recent past, but rabbits have played some role in managing the grass to an extent and will continue to do so in the future. There is some written evidence of grazing cattle in the area, “in front of the cliffs on Wellington Parade and alongside the Zetland” (1)

Current management of this site is down to the horticultural department of DDC. The amenity grassland in the north of the site towards the town and around Borrow Pit car park has a regular cut to maintain a short sward. The rough grassland next to the beach huts is left to appear natural. The grassland in front of the castle does not have a regular cutting regime. There has been little management of native and non-native scrub at the back of the beach.

Shoreline Management Plan

The beach at Kingsdown is notoriously unstable with wave action removing large quantities of shingle on an annual basis. The towns of Deal, Walmer and Kingsdown are covered under the following policy unit 4b23: Sandown Castle (remains of) to Oldstairs Bay on the Isle of Grain to South Foreland Shoreline Management Plan.

The idea of this plan is to assess the coastline and look at any problems that may arise in the future, so that its defence can be managed appropriately. The natural environment, people, historic structures and development are all considered in decision making. This management plan was reviewed in May 2007 when it was decided that the present day, medium-term and long-term policy is to ‘hold the line’.

The maintenance of existing defences will continue to protect these towns, together with an increase in beach recharge. Housing positioned along the sea front, particularly along Wellington Parade will need protection through more advanced defence structures that are currently in place. However, in the long term this activity will be likely to encourage scouring of the beach. There may be a negative impact on the outlook of this stretch if this upgrading occurs. Over the time scale considered (up to 2105) the conservation of the shingle habitat will continue.

It is currently estimated that the beach at Kingsdown loses approx 18,000m3 of shingle annually (This information was taken from the Deal to Kingsdown Coast Defences Coastal Strategy 2000-2005, Strategy Report, submitted by WS Atkins Consultants Ltd). The beach to the north is mainly stable.

Between Boundary Road and the residential home to the north at the end of the housing, the shingle has been removed and hidden sea defences put in place. The top 30cm of shingle was removed and then carefully replaced to ensure that the seed bank was restored as much as possible. This action was taken following the 1995-1996 storms. Beach feeding does not occur every year.

5.0 Public access

A public footpath extends the length of the Parade from the Zetland Arms public house up to Walmer Life-boat House and beyond. It is shared by the Saxon Shore Way and White Cliffs Country Trail walking routes. The National Cycle Network route 1 enters the site at Boundary Road. This route begins in Dover and heads north via London leading to John o'Groats, the Orkneys and Shetlands.

There are numerous informal pathways that pass through the grassland across the beach to the sea. There are two public footpaths which carry the pedestrian across the main road to the north and south of Walmer Castle.

There are two major public car parks on the beach side and just north of Walmer Castle. The larger one to the north known as Borrow Pit car park, has a grid reference of TR 378 505, and has a public convenience to its south. There is a small car park with this. A car park is also positioned in front of the castle at grid reference TR 378 502. Public footpaths lead from these to the Parade/beach. There is access to these car parks from Kingsdown Road. There is also some car parking space in front of the Zetland Arms. There are a total of 6 bus stops positioned along the Kingsdown Road for ease of access to the site.

6.0 Important features

SITE FEATURE	IMPORTANCE			
Habitat type	International	National	County	Local
Coastal vegetated shingle	√			
Species				
Bat species (recorded within 5km radius)	√			
Hedgehog (*Erinaceus europaeus*)			√	
Viviparous Lizard (*Zootoca vivipara*)		√		
Slow Worm (*Anguis fragilis*)		√		
Sussex Emerald moth (*Thalera fimbrialis*)		√		
Bright Wave moth (*Idaea ochrata*)		√		
Toadflax Brocade moth (*Calophasia lunula*)		√		
Small Blue butterfly (*Cupido minimus*)		√		
Moths – see pages 9 - 12		√		
Sea Pea (*Lathyrus japonicus*)		√		
Wild Carrot (*Daucus carota*)				√
Kidney Vetch (*Anthyllis vulneraria*)				√
Autumn Lady's-tresses (*Spiranthes spiralis*)				√
Sea-Kale (*Crambe maritima*)				√

7.0 Management objectives

- Protect, maintain and enhance the vegetated shingle habitat
- Encourage local involvement
- Interpretation
- Maintain and enhance public access to the site
- Maintain a high standard of repair
- Maintain and where possible, enhance numbers of important species listed in Section 1.11

8.0 Management prescription

8.1 Protect, maintain and enhance the vegetated shingle habitat

The usual management of vegetated shingle is to do little, by leaving it alone. The main issues damaging this shingle habitat are disturbance of the sensitive vegetation through trampling and the spread of non-native plants. Grazing as a form of management is not an option on this site, down to the expense of fencing for the size of the site, the size of the area would not support many livestock, aesthetics and dog activity. The SSSI to the south must be taken into account when considering management of any kind.

The idea is to prevent further damage to the native flora and fauna through human activities. In order to maintain this habitat the public need to be encouraged to enter onto the beach at certain points to avoid further trampling of vegetation. A reduction in flora is evident where paths are in constant use. Signage may be an option at both main car parks asking the public to keep to pathways currently used. There are already finger posts directing people along public footpaths. The tarmac path is well maintained which will play an important role in encouraging people to keep to this. The horticultural department of DDC regularly cuts the grass verges which give the area a well maintained appearance and this should continue.

Vegetated shingle set between housing at back of beach (Zone 1)

Part of this area is privately owned so that permission would have to be sort from the owner before any work is to be carried out. The Sussex Emerald moth (*Thalera fimbrialis*), Bright Wave moth (*Idaea ochrata*) and the Small Blue butterfly (*Cupido minimus*) colony are concentrated here. 50% of Red Valerian (*Centranthus ruber*) could be removed through spraying. The scrub growing along the southern boundary, along the edge of the garage could be cut back to prevent it spreading to far over the open shingle. The rough grassland/scrub that runs along the western boundary with Kingsdown Road could be left as this acts as a barrier. The Holm Oak (*Quercus ilex*) may offer some shelter to birds and invertebrates. If removal is considered, then a survey of where the Wild Carrot (*Daucus carota*), Kidney Vetch (*Anthyllis vulneraria*), and confirmed Bright Wave (*Idaea ochrata*) food plant is positioned, would have to be carried out first. Removal may allow more germination opportunities for these plants to flourish. Scattering Kidney Vetch (*Anthyllis vulneraria*) seed away from the area that has planning permission could encourage the Small Blue (*Cupido minimus*) population to spread further afield. Monitoring of target species annually will help to determine future management decisions.

Scrub is beginning to take over in the area behind the garage. It is not LWS but is owned by DDC. Removal of the Stags Horn Sumach (*Rhus typhina*) and other exotics at the southern boundary of the LWS that borders the entrance to this area will open it up to create germination possibilities for food plant such as Wild Carrot (*Daucus carota*). It is recommended that this area is cleared up to 20m in at first. Scattering seed of this food plant in enriched and disturbed areas may be considered. Stags Horn Sumach (*Rhus typhina*) will need to be cut then treated to prevent its spread. Vegetation that has been cut can be raked off and removed from site. In the future this whole area could be cleared of its exotics because they are beginning to encroach into the LWS. Selected removal of larger non-natives trees should be considered.

Hibernating reptiles will need to be considered if using heavy machinery when removing scrub.

Wild Carrot (*Daucus carota*) seed can be collected from site in the autumn.

The Zetland Arms north to Newlands Residential Home (Zone 2)

Invasive non–native species of flora need to be removed. Red Valerian (*Centranthus ruber*) is a highly invasive species that is found throughout the site. There is the possibility that it and other non-natives are out competing native flora. It is here through being dumped on the beach or as a garden escape. Numerous alien species are present throughout, especially in front of the housing on Wellington Parade. These are listed below. The recommendation is to remove the majority of the more invasive of these species. Removal will take the form of cutting, digging out, pulling up by hand and treating with a herbicide such as Glyphosate (Roundup). This removal will create some, but limited disturbance and benefit natives by reducing competition.

The removal of Red Valerian (*Centranthus ruber*) will be one of the biggest challenges down to its appealing colour and appreciation by local people. Approximately 50% of this species should be removed. This can take place from approximately 8-10 metres in towards the beach from the Parade.

The strip of enriched vegetation along the Parade can be left, but the more invasive species removed. A high percentage of removal is essential due to its ability to rapidly spread through windblown seed. The ideal time of year to carry out spraying would be in April to May before it has a chance of flowering and setting seed. This treatment should begin on plants growing on the main beach and opposite the gap in the housing along the Parade and work south.

Silver Ragwort (*Senecio cineraria*) can be pulled or dug up over winter. 50% of this can be removed from Cecil Road heading north. This is currently used as a reference point for men working on the beach during feeding operations. Further removal may be considered to the south if carried out with consideration to this boundary marker. Beach side specimens could be left. Vegetation that cannot be left on site can be removed by DDC.

Pampas Grass (*Cortaderia* sp) and Red Hot Poker (*Kniphofia* sp) can be cut low with a strimmer to its base and then painted with Glyphosate (Roundup). Curry Plant (*Helichrysum italicum*) should be removed by digging up. Elephant Ears (*Bergenia* sp) can be pulled or dug up. Snow-in-Summer (*Cerastium* sp) and Yucca (*Yucca* sp) should be removed also.

Holm Oak (*Quercus ilex*) is currently impairing the view for many houses and its wide spreading growth is reducing growing space for native, shade intolerant species. This species does offer some shelter to the housing behind. Local residents should be consulted on whether they would like to retain these trees if in front of their house. Selected/smaller specimens (unless opinion is to remove larger specimens) will be cut at ground level and then treated with Glyphosate. The wood could be left on the beach for local people to use or as an added interest to invertebrates and basking reptiles. Sumach (*Rhus* sp) has a habit of suckering when cut and this will need treating in the same way. The cut material will need to be removed from site.

Removal can take place over the autumn/winter months to limit disturbance to native flora and fauna over the flowering and breeding period. When digging or disturbing the soil in any way this must be done with caution down to reptiles hibernating. Avoid disturbing the ground from the beginning of November to mid March.

The SSSI adjacent to the site has some aliens present such as Red Valerian (*Centranthus ruber*) already. By reducing the non-natives on Kingsdown and Walmer beach this will reduce the risk of further invasion to this site.

Removal of non-natives will take several visits and this could be carried out in blocks. The risk of pesticide spray drift must be considered.

The vegetation on the public footpath and gates will need to be continually cut back to maintain access. Cutting should continue with the current regime.

Some of the bollards running along the Parade need replacing, especially at the northern end. The planting of Hawthorn (*Crataegus monogyna*) not Blackthorn (*Prunus spinosa*) as it has a habit of suckering, could be seen as an attractive option to act as a boundary where the two car parking bays are positioned. This will aim to discourage entrance to the beach through here.

The rough grassland behind the beach huts is currently left to appear natural. As a result the grass has become so dense that low flowering plants are limited and Fennel (*Foeniculum vulgare*) has become dominant. A cutting regime could be introduced to encourage flowering vetches and Wild Carrot (*Daucus carota*) and therefore possibly benefitting the Bright Wave (*Idaea ochrata*) and Sussex Emerald (*Thalera fimbrialis*) population. Kidney Vetch (*Anthyllis vulneraria*) is located here that may be utilised by the nearby Small Blue (*Cupido minimus*) colony. Reptile activity also needs to be taken into account as they may fall victim to mowers. Mowing strips in May is recommended at first. Wild Carrot (*Daucus carota*) can be scattered following a cut. This can be carried out each year. This action will be determined by monitoring results of the target species. Pockets of dense grass can be left for overwintering invertebrates and reptiles. All cuttings will need to be removed and placed under specific areas of scrub at the back of the beach in Zone 4 or removed from site. 50% of the Fennel (*Foeniculum vulgare*) can be sprayed, as can 30% of the Tree-mallow (*Lavatera arborea*).

The Old Lifeboat House adjacent to this has an extensive garden containing various drought resistant plants. As a result the vegetated shingle will need to be closely monitored either side, and aliens removed accordingly. It is possible that some windblown seeds from this garden have made their way onto the beach

and will continue to do so in the future.

Beach feeding will be continuing at Kingsdown due to erosion through wave action. This will bring with it further disturbance to the ecological community. This is unavoidable if the housing behind the beach is to be protected. It would be advisable to avoid driving heavy machinery on areas of vegetated flora where possible. Adding any more beach huts to the existing ones would not be recommended as this would increase the risk of trampling and remove valuable habitat.

Summary of invasive species that need reducing or total removal (Zones 1, 2 and 3)

SPECIES	LOCATION	% REMOVAL	TREATMENT	PRIORITY
Red Valerian	Gap between housing. Opposite gap in housing on the Parade and work south	50% removal	Spray with Glyphosate	Urgent
Silver Ragwort	In front of housing along Wellington Parade (from Cecil Road north)	50% removal	Pull / dig up	Urgent
Holm Oak	Along the beach side of Wellington Parade. Gap between housing	Removal of small specimens. Down to local opinion.	Cut and paint with Glyphosate	Medium/ low priority
Stags Horn Sumach	In front of housing along Wellington Parade and gap between housing	100% removal	Cut and paint with Glyphosate	Urgent
Pampas Grass	In front of housing along Wellington Parade	100% removal	Cut low and paint with Glyphosate	Urgent
Red Hot Poker	In front of housing along Wellington Parade	100% removal	Cut low and paint with Glyphosate	Medium/ low priority
Fennel	Rough grassland behind beach huts	50% removal	Spray with Glyphosate	Urgent
Elephant Ears	In front of housing along Wellington Parade	100% removal	Pull or dig up	Medium/ low priority
Yucca	In front of housing along Wellington Parade	100% removal	Cut and paint with Glyphosate	Low priority
Snow-in-Summer	In front of housing along Wellington Parade	100% removal	Spray with Glyphosate	Urgent
Curry Plant	In front of housing along Wellington Parade	100% removal	Dig up	Urgent
Tree-mallow	Rough grassland behind beach huts	30% removal	Spray with Glyphosate	Medium/ low priority
Rose-of-Sharon	In front of housing along Wellington Parade	100% removal	Spray with Glyphosate	Medium priority
Russian Vine	In front of housing along Wellington Parade	100% removal	Spray with Glyphosate	Medium priority

Newlands Residential Home north towards Dows Boat Club - beach side (Zone 3)

The Red Valerian (*Centranthus ruber*) can be left in this area.

Currently the grass is cut from the residential home at the end of Wellington Parade, north towards Walmer on either side of the cycle path at 2 – 3 times a year. It is cut at approximately 2 metres in. The suggestion is to carry on with this on the beach side, and leave the grass beyond the 2m alone.

Holm Oak (*Quercus ilex*) is numerous in the southern part of this section. A recommendation would be to remove the smaller selected specimens and retain the larger ones that will provide shelter to local wildlife, as well as maintaining open areas of bare shingle for potential colonisation of native flora and fauna.

Newlands Residential Home north towards Walmer Lifeboat House - road side (Zone 4)

The trees lining the Kingsdown Road should remain. Scrub will provide food and nesting for birds and small mammals, as well as shelter from road noise. Reptiles such as Viviparous Lizard (*Zootoca vivipara*) will use this to forage in. Invertebrates such as butterflies and bees will obtain a nectar source from Bramble (*Rubus fruticosus*) especially. For these reasons the scrub should remain as it is at present.

The grassland owned by DDC that lies south of the English Heritage boundary can be cut back as far as the path used by the public, and leads down to the concrete path used by the beach re-charging works. This could be cut annually. The first cut could be in October/November and then altered if needed.

Rabbits will use the scrub as cover, and will continue to be a useful tool to keep the grass down in places.

There should be a continuation in the current mowing regime of a 2m wide strip along the edge of the Parade. This will continue at 2 – 3 times a year. DDC manages the vegetation down to the cycle route entrance at Boundary Road.

The scrubby vegetation located around the public toilets can be cut back when needed. This has been carried out in spring 2010.

Following the cycle path north to Borrow Pit car park, the grass here has a rough cut at 9 times a year from March to October inclusive. This will continue.

The rough grassland north and adjacent to the car park is currently left with a natural look at present, and cut once a year. This is set to continue. There is much Wild Carrot (*Daucus carota*) and Common Ragwort (*Senecio jacobaea*) here with some shelter and drainage that may provide ideal colonising opportunities for Sussex Emerald (*Thalera fimbrialis*). Confirmation will now have to wait until spring 2011.

The short triangle of grassland adjacent to this has had Autumn Lady's-tresses (*Spiranthes spiralis*) recorded here in 1988 and again in August 2010. It is cut on a 10 – 15 working day regime at present and will continue. It would be advised that mowing is avoided over the school summer holidays to allow flowering and seed to set. So cutting should be avoided from the beginning of August to the end of September. This will need surveying over this period.

The block of amenity grassland in front of this is maintained as a short sward. It would be logical to continue with the current regime of a cut every 10 – 15 working days. There are the remains of a hedge standing here.

The beach in front of this has little vegetation on it possibly down to increased human activity. This area is important as an amenity site as it may encourage recreation here, rather than on more vegetated areas thus reducing the risk of damage elsewhere.

From the private gardens north to Walmer Lifeboat House the grass is cut on a 10 working day regime and this will continue.

All grass cuttings could be used to create a compost heap at the back of the beach under a hedge or bush.

Wood could be left to decay on the beach for animal interest.

The car park in front of the castle is owned by EH but leased to DDC, who are responsible for maintaining it. This includes cutting the grass around the bollards and this will continue.

Land in front of Walmer Castle and English Heritage owned

The rough grassland could be cut in strips on a three/five year rotation and cut in January/February. Cutting on a more regular basis will keep coarser vegetation in check, vary grassland structure and encourage flowering plants. Ivy (*Hedera helix*) should be managed as it is beginning to encroach onto the grassland. Wider rides could be cut where the public have created paths.

A reptile survey indicated a breeding population of Viviparous Lizard (*Zootoca vivipara*), as well as adult male and female Slow Worm (*Anguis fragilis*) in this Zone.

Summary management recommendations to protect maintain and enhance the vegetated shingle habitat.

- To control human activity on the vegetated shingle by maintaining clear signage to encourage the use of public footpaths.
- Maintain designated amenity grassland/beach areas.
- Maintain the tarmac cycle path to encourage use.
- Continue with the regular cutting of the verge either side of the footpath at 2 -3 times a year, at approximately 2 metres in.
- Management objectives must consider the adjacent SSSI at all times.
- The mowing regime will be determined by reptile presence and will be subject to alterations.

Vegetated shingle set between housing at back of beach (Zone 1)

- Remove 50% of Red Valerian (*Centranthus ruber*) from the site.
- Avoid work on privately owned land, unless permission is asked beforehand.
- All Stags Horn Sumach (*Rhus typhina*) to be cut and treated with Glyphosate, then removed from site.
- Only remove Holm Oak (*Quercus ilex*) after survey of target species food plant.
- Cut back scrub along side of garage to reduce encroachment.
- Scrub clearance to carry out from 1st September to 1st March to avoid disturbing nesting birds.
- Leave rough grassland/scrub along Kingsdown Road.
- Clear vegetation from DDC land south of the LWS at approximately 20m in to open area up.
- Remove all cuttings from site to avoid enrichment.
- Scattering of Wild Carrot (*Daucus carota*) seed in enriched and disturbed areas.
- Scattering of Kidney Vetch (*Anthyllis vulneraria*) seed to enlarge population area.
- Monitor target species.

The Zetland Arms north to Newlands Residential Home (Zone 2)

- Ask local opinion before removing selected invasive garden escapes. See list of target species on page 25.
- Carry out vegetation clearance/treatment in blocks.
- Selected Holm Oak (*Quercus ilex*) cleared can be left for local use or for wildlife interest. Stumps to treat with Glyphosate.
- Avoid disturbing the ground from mid November to mid March.
- Avoid pesticide spray drift.
- Cut grassland behind the beach huts in May and in strips at first. This may change depending on Bright Wave (*Idaea ochrata*) and Sussex Emerald (*Thalera fimbrialis*) monitoring results. Cutting regime will depend on reptile presence.
- Remove 50% of Fennel (*Foeniculum vulgare*) behind the beach huts.
- Consider scattering of Wild Carrot (*Daucus carota*) seed following grass cut.
- All grass cuttings could be placed under scrub in specific areas at the back of the beach in Zone 4.
- Plant Hawthorn (*Crataegus monogyna*) at northern end at car parking bays to discourage entrance onto beach.
- Clear scrub around gates along the Parade for easy access.
- DDC to collect vegetation that cannot be left on site.

Newlands Residential Home north towards Dows Boat Club – beach side (Zone 3)

- Leave Red Valerian (*Centranthus ruber*) in this area to retain aesthetic value.
- Remove selected/small Holm Oaks (*Quercus ilex*) and treat with Glyphosate.

Newlands Residential Home north towards Walmer Lifeboat House – road side (Zone 4)

- Retain scrub at present for bird, reptile and invertebrate interest.
- Cut DDC owned grassland that lies south of EH land in October/November each year to encourage flowering species. This regime can be altered if needed.
- Retain rabbit population as they create some disturbance and maintain a mosaic in the sward.
- Continue with grass cut around Borrow Pit car park at 9 times a year.
- Cut rough grassland adjacent to this once a year. Monitor for Sussex Emerald (*Thalera fimbrialis*) larvae in spring.
- Retain short sward on triangle of grassland, but do not cut over the school summer holidays. This will allow Autumn Lady's-tresses (*Spiranthes spiralis*), if present, to flower and set seed.
- The rectangle of amenity grassland next to this will continue to be cut on a 10 – 15 working day regime.
- Grassland north of the private gardens is to continue with a 10 working day cut.
- The grass around the bollards at Walmer Castle owned car park managed by DDC will be cut when needed.
- Scrub around public toilets to clear when needed.

Land in front of Walmer Castle and English Heritage Owned (Zone 4)

- Cut grassland on a 3 to 5 year rotation. Cut in January/February. This will encourage floral diversity and keep scrub in check. Cutting in winter will reduce injury/death to reptiles.
- Cut rides where public have created paths.

8.2 Encourage local involvement

Before any management begins, it would be recommended that the local community is informed of what has been proposed. This project is about keeping the locals happy and comfortable about what is going on. A double sided A4 newsletter could be produced and then delivered to local households. The information on this could include the type of work proposed, where the work will be, when it will start, how long it will take, who is doing it, and why it is being done. This letter could be produced annually and include some points of interest on what has been seen in the area throughout the year in each season. A newsletter that includes species of interest that we would like to see increase on site may mean more to local people. A contact telephone number can be phoned for any queries that may arise.

Encouraging local involvement with management activities can be a way of educating and teaching all age groups of the importance of such a rare and sensitive habitat. Events may include guided walks about the sites history and wildlife, with an emphasis on the problems facing this particular habitat. A moth trapping event along the beach in the summer could be a way of promoting its wildlife, as well as a bat walk. Local experts could be asked to lead these events. A talk about the proposed work and an insight as to how it will benefit the flora and fauna may make DDC and WCCP more approachable.

DDC has been working towards a reduction in littering and fly tipping under the Clean Kent Campaign. Regular inspections are made by council staff and there is an emphasis on encouraging local voluntary organisations to carry out litter picks. All equipment is provided for the task and rubbish collection is by DDC. Deal, Walmer and Kingsdown beaches have been covered in the past. The Marine Conservation Society runs Adopt-a-beach and Beachwatch events throughout the year, but the litter collection ends at Boundary Road. Local residents could be encouraged to take the litter clearance further down the beach and adopt their own area. The MCS website address is www.mcsuk.org. WCCP could hold task days here to collect rubbish.

Rubbish on the beach is a longstanding issue. SeaFrance are a major sponsor of the Beachwatch campaign. Each year there is a Big Beach Watch Weekend, which was held on the 19th and 20th of September in 2009. This was supported on the 19th at Kingsdown beach.

[redacted] of SeaFrance organises these events starting from St Margaret's Bay end and work up to the Zetland Arms. Turnout is generally low. A 100 metre stretch is surveyed and that goes to the strand line. After that litter is collected as far up the beach as possible but the focus is really on the beach rather than the grass and scrub at the rear. There is no guarantee that SeaFrance will be involved for the next 5 years, as this is reconsidered on an annual basis.

A volunteer contact, [redacted] collects litter from the Zetland Arms to Boundary Road, along the tide line as part of the Beachwatch event in September.

To date there had been 6 beach cleans on Kingsdown beach with a total of 159 bags of rubbish collected. Another rubbish collection and survey occurred on 7th March 2010 with 28 people turning up and 37 bags of rubbish were collected.

The Beachwatch weekend in 2010 will cover the 18th-19th September.

Deal Angling Club (1919) hold beach cleans 4 times a year but this is mainly focussed on the Deal end. This is very rarely on Kingsdown beach.

Kingsdown and Ringwould CEP School have taken part in marine litter collection in the past. Maybe more local schools can be encouraged to take part in litter picks in the future.

A guided circular walk from Walmer Castle would be an ideal opportunity to promote Walmer and Kingsdown beach.

The charity Butterfly Conservation has volunteered to help in removal of non-natives.

Summary recommendations to encourage local involvement.

- Inform locals about the management proposal with a newsletter.
- Hold a residents meeting.
- Ask locals if they would like to get involved with the proposed work.
- Encourage local experts to share their knowledge of the site through events such as walks.
- WCCP could arrange task days to collect rubbish.
- Encourage local schools to take part in litter picks.

8.3 Interpretation

Three interpretation panels could be positioned along Wellington Parade to explain the important habitat here and its species of interest. This information can also be used to stress the dangers to this habitat such as dog fouling, litter, dumping of non-native species, erosion from wave action and the destruction of vegetation through constant trampling. Beach safety could be covered also.

A temporary laminated notice could go up before work begins for people visiting the area. This could explain who we are, what we are doing and why we are doing it.

Summary recommendations for interpretation.

- To create interpretation boards for Kingsdown and Walmer on the shingle habitat, its flora and fauna.
- The erection of a notice when doing the work as to who we are and why we are doing it.

8.4 Maintain and enhance public access to the site

The two main car parks are free of charge at present, and this will continue to encourage visitors to use this area for amenity purposes.

The two car parks south of Borrow Pit are in need of some ground work repair. This may need to be considered in the future.

The tarmac on the public footpath/cycle route is currently in good repair. This will need to be monitored.

Where the cycling and pedestrian paths run alongside, this can sometimes lead to near accidents. Signage for cyclists to consider pedestrians may reduce this risk.

Summary recommendations to maintain and enhance public access to the site.

- Maintain free parking.
- Repair work on EH owned car parks to consider.
- Monitor path condition.
- A sign for cyclists to consider pedestrians.

8.5 Maintain a high standard of repair

Wooden bollards line the path along Wellington Parade. These have been erected to prevent cars parking on the beach and to encourage people to keep to the public footpath. Some of these bollards have been knocked over or have rotted. They will need replacing to prevent damage to existing vegetation and improve the aesthetic value to the immediate area.

There are currently two history related interpretation boards positioned at Kingsdown (outside the Zetland Arms) and another at the car park opposite Walmer Castle. Paint is now peeling and they look un-kept, so there would be a suggestion to update these panels to upgrade the look of the area.

Dog bins and fixed penalty notices are located along the Parade. These bins are checked daily and emptied if needed. Dog mess is a constant issue especially in the rough grassland and scrub in front of the Castle. It is possible that because it has been left wild, some members of the public think that they do not need to clean up after their dogs or that it will not be noticed. A mowing regime may give the site a more up kept look that discourages owners to allow this to happen to a certain extent. Some dog owners may be unaware that dog waste can be put into litter bins. Stickers may be added to these to increase this awareness. There is a dog warden on site at times that has the power to award fixed penalties. Stiffer penalties may be the answer.

Between April and September Sita have been commissioned by DDC to carry out regular beach checks, especially over the busy summer period. During this time bins are emptied when needed. Over winter this is dealt with on demand.

There was a litter bin in front of the Angling Club hut (in front of the Zetland Arms) that has been removed. There is a need of a replacement and reports of rubbish collection to be more frequent over the summer months by members of the public.

Summary recommendations to maintain a high standard of repair.

- Replace broken/missing wooden bollards along Wellington Parade.
- The historic interpretation boards at Kingsdown and Walmer need renewing/painting.
- Maintain regular rubbish and dog waste bin collection.
- The placement of stickers on litter bins to indicate that dog waste may be disposed of here.
- Maintain the presence of a dog warden on site awarding fixed penalties.
- Create a mowing regime in the longer grassland.

8.6 Maintain and where possible, enhance numbers of the notable species listed in Section 1.11

Bats

A total of six species of bat have been recorded in the area. See page 9 for this list.

Managing the whole site for plant diversity will encourage insect diversity as well as number and provide more food for bats. Scrub and trees along Kingsdown Road should be retained as they act as a food source as well as shelter from the wind and from predators. Bats may use this as a corridor to travel down when moving from roosting to feeding sites and back. It is important to maintain this link to feeding areas. Older trees may provide roosting sites.

Hedgehog (*Erinaceus europaeus*)

A dead specimen was found behind the beach in 2009 and a possible road casualty. Gardens adjacent to the site will in some cases provide much invertebrate prey together with the scrub and grassland on the LWS. Ideal hibernation sites may be provided locally in the form of compost heaps, piles of leaves, thick grass or shrubs. When clearing vegetation in winter this should be considered.

Viviparous Lizard (*Zootoca vivipara*)

This species has been seen during the 2009/10 season in Zones 1 and 4. It favours little disturbance with open habitat providing sunny patches in which to bask. Wood lying on the ground should be left in or near scrubby areas as it too acts as an ideal basking point because it retains heat. Introducing a management regime on the grassland situated in Zone 4 on the back of the beach will create an area of varying heights providing food, shelter and basking opportunities. A mosaic of scrub will offer the same, so this should be maintained also. There should be limited ground disturbance in and around scrub and grassland over winter when reptiles will be hibernating and prone to injury or death. Deep litter may be used for this reason also.

Slow Worm (*Anguis fragilis*)

This species has been noted in Zones 1, 2 and 4. Compost heaps provide an ideal habitat and so removal from unwanted areas should be done with caution. Flat objects that absorb heat will act as shelter as well as basking sites. Basking does not take place in the open, but under dense vegetation. Small slugs are a favourite prey. Long grass will provide cover when looking for food. Hibernation takes place underground, but dense grassy tussocks may also be used, so cutting in winter must take this into consideration.

Sussex Emerald Moth (*Thalera fimbrialis*)

A breeding population has been identified on site in Zone 1 where approximately 17 larvae were found on their main food plant of Wild Carrot (*Daucus carota*). Retaining the secondary food plant of Common Ragwort (*Senecio jacobaea*) is also of importance. The removal of much Red Valerian (*Centranthus ruber*) will create more space and opportunities for their germination. Spraying must be done with caution to avoid destroying the target species food plant. Wild Carrot (*Daucus carota*) found on site should be allowed to flower and set seed giving this moth more egg laying opportunities. Clearing scrub along the southern edge of the fence line in Zone 1 will create additional habitat for the food plant and may be followed up with the scattering of seed in enriched areas.

By cutting the grass behind the beach huts in Zone 2 on an annual basis and reducing the Fennel (*Foeniculum vulgare*), this will create more open space and germination potential for the food plant. Monitoring for larvae is set to continue in 2011.

Bright Wave Moth (*Idaea ochrata*)

This species is found along the coastline from Ramsgate down to Kingsdown. Adults may be seen from mid June to early August. Larval food plants that may be used include Hare's-foot Clover (*Trifolium arvense*), vetches (*Vicia* sp) and daisies (*Asteraceae*). The food plant or plants have yet to be confirmed but there is the possibility that it feeds on a variety of vetches (*Vicia* sp) in this country. This species has been reported from sparsely vegetated shingle on the upper beach at Kingsdown, where it benefits from the long grass that it uses for cover during the adult stage. Its main range in this area is from TR 379482 to TR 380489.

Butterfly Conservation has brought out management recommendations for this species. These and the report were produced by [redacted]. For a more extensive explanation of Bright Wave (*Idaea ochrata*) ecology and its results please see this report. Monitoring has been undertaken in this area since 2002, although it has been recorded at Kingsdown since 2000. This is a resident species. Surveying tends to be carried out by walking through the sward and disturbing adults. Further surveying has lead to additional records from [redacted] in 2009 at Zone 1, with her work to continue in 2010 here. The area around the Old Lifeboat House and boats is another location where numbers were high. Despite much field research on this species little is known about its ecology as yet.

In order to maintain and enhance this species various issues need to be addressed and these lie mainly in Zone 2 in front of the housing:

- Reduce 50% of the Red Valerian (*Centranthus ruber*) from opposite the gap in the housing and travelling south. This plant has no ecological value to this moth.
- Selectively remove invasive escapes to maintain and enhance native food plants. This will benefit all species of moth found on site.
- Educate local residents to the harm that dumping garden plants can do to the shingle community.
- The plant community will need to be closely monitored as the proposed work is carried out and in the years following this.
- Introduce a form of management to the grassland behind the beach huts to encourage flowering natives. Avoid cutting from mid June and throughout July. This must be monitored closely and altered following survey results.
- Grass cuttings must be removed from the immediate area.
- Camp fires are a regular occurrence on the beach and have a negative impact on flora and fauna. Bollards need replacing/erecting in these areas.
- Kidney Vetch (*Anthyllis vulneraria*) may be an important food plant, but has yet to be established.
- Monitor the population.

Toadflax Brocade Moth (*Calophasia lunula*)

The larvae of this species may pupate over winter on the remaining food plant of Toadflax (*Linaria* sp) so that any vegetation clearance during this time will need to be done with consideration. Adult moths have been recorded on Red Valerian (*Centranthus ruber*) flowers so this plant may be an important nectar source. A large area of bare ground surrounding the food plant may be favoured when females are laying eggs. Monitor the population.

Small Blue Butterfly (*Cupido minimus*)

This butterfly mainly favours chalk grassland where its only food plant, Kidney Vetch (*Anthyllis vulneraria*) thrives. Populations of this species fluctuate annually, and this may be down to the availability of the food plant. Lack of the correct habitat management and the increased isolation of populations are a constant threat. This is a small butterfly that is easily overlooked. The grassland needs minimum management here. Possible removal of a few non-natives such as Red Valerian (*Centranthus ruber*) and Holm Oak (*Quercus ilex*) may allow the Kidney Vetch (*Anthyllis vulneraria*) to expand where there is some ground disturbance. Scattering of seed away from the area where building may occur in the future may encourage the colony to spread further afield. Monitor the population.

All moths found on site

By retaining the diversity of plant species on site, this will provide a variety of moths with their food plant. When treating unwanted species, this work will need to consider spray drift.

Sea Pea (*Lathyrus japonicus*)

This plant tends to grow on shingle closer to the high tide mark than the main path, and is found mainly from Walmer Castle north up to Dows Boat Club. It flowers between June and August and is described as occasional to very locally abundant in England, but very rare in the rest of the British Isles. Beach stability here will help protect this species. Enrichment though dog fouling will not create ideal conditions for it, but this species tends to be concentrated away from the main dog walking areas so the risk will be negligible. Trampling by people using this part of the beach for activities such as angling may have some impact on this plant.

Wild Carrot (*Daucus carota*)

This species benefits from some enrichment, which allows it to grow throughout the site. Seed collection and scattering in suitable areas may increase this plant.

Kidney Vetch (*Anthyllis vulneraria*)

A common species that benefits from some ground disturbance. The lack of nutrients in the shingle habitat slows down the growth of competitive grasses. This species is currently doing well. Removal of some invasive garden escapes will reduce competition. Scattering seed where the ground is not enriched may increase the area of this plant.

Autumn Lady's-tresses (*Spiranthes spiralis*)

A short sward will need to be maintained. Mowing should be avoided over August to the end of September when this plant flowers and sets seed.

Sea-Kale (*Crambe maritima*)

This species is usually positioned along the edge and above the high tide line on shingle. Any beach feeding with large vehicles will need to take into consideration the vulnerability of the vegetation.

Birds

Due to its close proximity to mainland Europe this stretch of coastline is important to migrating birds. Management to increase invertebrates would feed these migrants as they travel in either direction. Scrub and trees provide food, shelter and nesting possibilities.

Summary recommendations to maintain and where possible, enhance numbers of the notable species listed in Section 1.11.

Bats

- Retain tree and scrub line for food, shelter and connectivity from roosting to feeding sites.
- Retain older trees that may provide roosting opportunities.
- Manage site for plant diversity that will increase invertebrate prey.

Hedgehog (*Erinaceus europaeus*)

- Avoid disturbing compost heaps from late October to late March.

Reptiles

- Manage the grassland as a mixed sward.
- Retain scrubby areas.
- Retain cut wood and leave on site.
- Avoid ground disturbance from mid November to mid March when reptiles are hibernating.
- Avoid cutting grassy tussocks over winter.

Sussex Emerald (*Thalera fimbrialis*) and Wild Carrot (*Daucus carota*)

- Reduce Red Valerian (*Centranthus ruber*) by 50% in Zone 1.
- The clearance and removal of plants in selected areas to open up for germination opportunities.
- Scatter Wild Carrot (*Daucus carota*) seed in enriched areas that have had some disturbance.
- Allow food plants to flower and set seed.
- Monitor.

Bright Wave Moth (*Idaea ochrata*)

- Reduce selected non-native garden escapes.
- Discourage locals from enriching the shingle by dumping garden waste.
- Create a mowing regime in places to encourage the food plants. Advice from Butterfly Conservation will need to be sought as this may need some adjustment depending upon annual findings.
- Remove cuttings from the grassland.
- Monitor.

Toadflax Brocade Moth (*Calophasia lunula*)

- To consider that the remaining food plant may hold pupae over winter if clearing scrub.
- Monitor.

Small Blue Butterfly (*Cupido minimus*) and Kidney Vetch (*Anthyllis vulneraria*)

- 50% removal of Red Valerian (*Centranthus ruber*) in Zone 1 will reduce further seed dispersal and risk of future competition with Kidney Vetch (*Anthyllis vulneraria*).
- Kidney Vetch (*Anthyllis vulneraria*) seed to spread throughout Zone 1.
- Establish mowing regime behind beach huts in Zone 2 to encourage food plant.

All moths found on site

- Maintaining native plant diversity will provide larvae with food.
- Avoid spray drift when treating Red Valerian (*Centranthus ruber*) and other unwanted invasives.

Sea Pea (*Lathyrus japonicus*)

- This species needs limited disturbance from human activity.
- Monitor the population.

(cont)

Wild Carrot (*Daucus carota*)

- Seed scattering in suitable areas.

Autumn Lady's-tresses (*Spiranthes spiralis*)

- Maintain short sward. Allow to flower and set seed over August and September.

Sea-Kale (*Crambe maritima*)

- A more sensitive response when beach feeding could be addressed if possible.

Birds

- Retain scrub and trees that may provide food, shelter and nesting possibilities.

9.0 Monitoring

Species	Where to monitor	When	How	Who will carry this out?
Bats	Over grassland in front of Walmer Castle. (Zone 3)	May to September Annually	Detector	Kent Bat Group / WCCP / Local expert
Sussex Emerald moth	Wherever food plant is present. (All Zones). Especially Zone 1 & behind beach huts in Zone 2. Also rough grassland in Zone 4.	Adult – July to August Larvae - May	Moth trap at night / Looking for larvae on food plant	Contractor / Butterfly Conservation
Bright Wave moth	From rough grassland behind beach huts up to the land between housing on the Parade. (Zone 1 & 2)	Mid June to end of July Annually Larvae - May	Transect walk	Contractor / Butterfly Conservation
Other species of moth	Along beach (Zone 1 and 2)	April to November Annually	Moth trap at night	Local expert / Butterfly Conservation / Contractor
Sea Pea	From open shingle in front of Walmer Castle north to the boat club. (Zone 3)	Flowers June to August Annually	Fixed point photographs	WCCP / Volunteer
Sea- Kale	Along the beach near shore line. (Zone 2 & 3)	Flowers May to June Annually	Fixed point photographs	WCCP / Volunteer
Autumn Lady's-tresses	Short amenity grassland. (Zone 4)	Flowers August to September	Fixed point photographs	WCCP / Volunteer
Wild Carrot	In all Zones.	June to August	Visual	WCCP / Butterfly Conservation
Kidney Vetch	Gap between housing. (Zone 1)	Flowers June to September Annually	Fixed point photographs	WCCP / Butterfly Conservation
Garden escapes	Whole area	May to September Annually	Fixed point photographs	WCCP
Small Blue butterfly	Gap between housing. (Zone 1)	Mid May to end of June & August Annually	Timed count or part of transect	WCCP / Butterfly Conservation / Local volunteer
Reptiles	To include Zones 1, 2 & 4, especially areas of rough grassland.	February to October	Roofing felt or carpet	WCCP / Local volunteer

Summary management recommendations for monitoring

- Bats could be monitored on an annual basis.
- Establish fixed point monitoring each year.
- Bright Wave (*Idaea ochrata*) and Sussex Emerald (*Thalera fimbrialis*) monitoring should continue throughout plan and beyond of the adults and their food plant.
- Small Blue (*Cupido minimus*) and Kidney Vetch (*Anthyllis vulneraria)* to be monitored annually.
- Encourage local moth trapping to continue.
- Encourage local experts to visit the site to encourage recording.
- Sea Pea (*Lathyrus japonicus*) population to monitor annually.

10.0 Suggested outline of five year work plan from 2010 – 2014

***** This means that DDC have agreed to do this work.

Activity/Project	Year 1	Year 2	Year 3	Year 4	Year 5	Time of year for action	Who will carry out the work
Removal of Red Valerian. Zone 2. To treat 50% of all plants. Work from opposite the entrance to Zone 1 and work south. Hand pulling of Red Valerian also.	√	√	√	√	√	April / May	WCCP/ Butterfly Conservation task Volunteers to hand pull DDC to remove material WCCP to spray
Removal of Red Valerian. Zone 1. To treat 50% of all plants.	√	√	√	√	√	April / May	WCCP/ Butterfly Conservation WCCP to spray
Removal of Silver Ragwort. Zone 2. From Cecil Road north. Remove 50%. South of Cecil Road also. To leave outer specimens as boundary markers.	√	√	√	√	√	Any time of year	WCCP on tasks / Volunteers DDC to remove Material
Removal of Sumach. Zone 1 & 2. Remove 100%.	√	√				To cut and treat in autumn and again in spring if needed	WCCP DDC to remove material
Removal of Pampas Grass. Zone 2. Remove 100%.	√	√				Spring	WCCP
Removal of Fennel. Zone 2. Rough grass-land behind beach huts. Remove 50%.	√	√				Spring	WCCP
Removal of Curry Plant. Zone 2. 100% removal.	√	√				Spring	WCCP
Removal of Snow- in-Summer. Zone 2. Remove 100%.	√	√				Spring	WCCP
Rose-of-Sharon. Zone 2. Remove 100%.	√	√				Spring	WCCP
Removal of Holm Oak. Zone 1, 2 & 3. Remove smaller selected specimens. This will depend on local opinion.	√	√	√	√	√	October to February	WCCP on tasks / Contractor DDC to re-move material

Suggested outline of five year work plan from 2010 – 2014 (cont)

*** This means that DDC have agreed to do this work.**

Activity/Project	Year 1	Year 2	Year 3	Year 4	Year 5	Time of year for action	Who will carry out the work
Removal of Tree-mallow. Zone 2. Rough grassland behind beach huts. Remove 30%.		√				Spring	WCCP
Removal of Elephant Ears. Zone 2. 100% removal.		√	√			Spring	WCCP
Removal of Yucca. Zone 2. Remove 100%.			√			Spring	WCCP
Scrub reduction. Zone 1. Along the southern edge of the site. Reduce encroaching scrub.	√	√				November to February	WCCP or DDC
Scrub removal. Zone 1. Area that is not LWS & set behind the garage. Clear vegetation up to 20m in.	√	√				November to February	DDC or WCCP
Planting of Hawthorn. Zone 2. At northern end around car parking bays.			√			December/January/ February	DDC *
Collection of seed. Wild Carrot	√	√	√	√	√	Autumn	WCCP / Volunteers
Collection of seed. Kidney Vetch	√	√	√	√	√	Autumn	WCCP/ Volunteers
Scattering seed. Zone 1 and 2. Wild Carrot	√	√	√	√	√	Autumn and/or spring	WCCP/ Volunteers
Scattering seed. Zone 1 and 2. Kidney Vetch	√	√	√	√	√	Autumn	WCCP/ Volunteers
Scrub removal around the public toilets. Zone 4. To maintain clear view and access. To carry out when needed.	√		√		√	Start of September to end of February	DDC*
Grass cutting behind beach huts. Zone 2. Cutting regime will be determined by Bright Wave monitoring figures. To cut once a year and in strips at first.	√	√	√	√	√	Cut in May. No cutting over June and July	WCCP on tasks

Suggested outline of five year work plan from 2010 – 2014 (cont)

*** This means that DDC have agreed to do this work.**

Activity/Project	Year 1	Year 2	Year 3	Year 4	Year 5	Time of year for action	Who will carry out the work
Grass cutting along the cycle path. Zone 3 & 4. Cut approx 2m either side of path.	√	√	√	√	√	2 - 3 times a year (when needed)	DDC*
Grass cutting of DDC land. Zone 4. From southern EH boundary south to works path. To cut once a year.	√	√	√	√	√	October / November at 1st and alter if needed	DDC or WCCP
Grass cutting in front of Walmer Castle. Zone 4. Introduce a 3/5 year mowing rotation.	√	√	√	√	√	Each area to cut once a year between October to February at first. This can be altered at a later date. Remove grass cuttings.	DDC or WCCP
Ride cutting in front of Walmer Castle. Zone 4. Mowing of rides along paths used by the public. To cut at 1m each side.	√	√	√	√	√	To cut in February and then April/May and in September.	DDC or WCCP
Grass cutting around Borrow Pit car park. Zone 4. A rough cut 9 times a year.	√	√	√	√	√	March to October inclusive.	DDC*
Grass cutting in the rough meadow adjacent to Borrow Pit car park. Zone 4. To cut once a year.	√	√	√	√	√	April/May	DDC*
Grass cutting on triangle. Zone 4. Maintain short sward. Manage for Autumn Lady's-tresses.	√	√	√	√	√	Cut on a 10-15 working day regime. **Do not cut over the school summer holidays (August –September)**	DDC*
Rectangle of amenity grassland south of private gardens. Zone 4. Maintain short sward.	√	√	√	√	√	To cut on a 10-15 working day regime.	DDC*

Suggested outline of five year work plan from 2010 – 2014 (cont)

*** This means that DDC have agreed to do this work.**

Activity/Project	Year 1	Year 2	Year 3	Year 4	Year 5	Time of year for action	Who will carry out the work
Grass cutting of amenity land north of private gardens to Walmer. Zone 4. Maintain short sward.	√	√	√	√	√	To cut every 10 working days.	DDC*
Newsletter Zone 1 & 2. For local residents informing of proposed works.	√	√	√	√	√	Before any work begins	WCCP
Interpretation Develop an interpretation board for education purposes.		√	√			At any time	WCCP
Events Promote the site with walks on the natural history of the area.	√	√	√	√	√	Spring/summer	WCCP
Litter picks To promote & carry out. Zones 2, 3 & 4 To carry out from Walmer Castle and work south.	√	√	√	√	√	Twice a year	WCCP / Volunteers
Bollard maintenance Zone 2. Erection & replacement along northern end of Wellington Parade in front of housing.		√				April – October	DDC*
Volunteers To carry out various work on site such as monitoring, litter picks, scrub clearance or invasive plant removal.	√	√	√	√	√	Throughout year	Volunteers
Butterfly Conservation This organisation has offered some time to help with non-native plant removal.		√					Butterfly Conservation/ Volunteers

Suggested outline of five year work plan from 2010 – 2014 (cont)

Activity/Project	Year 1	Year 2	Year 3	Year 4	Year 5	Time of action	Who will carry out the work
Survey Autumn Lady's - tresses	√	√	√	√	√	Over school summer holidays	WCCP / Volunteers
Monitoring Fixed point monitoring of flora through use of photography. Whole site.	√	√	√	√	√	June – August When the Red Valerian is flowering	WCCP / Volunteers

All cuttings removed from site, placed at the back of the beach under scrub, or may be mulched and used on resident gardens. Holm Oak can be stacked up for local people to collect and use for fire wood.

11.0 References

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Appendix 1

Species List from Kingsdown and Walmer Beach

Common Name	**Latin Name**
Invertebrates	
Bright Wave	*Idaea ochrata*
Pima boisduvaliella	*Pima boisduvaliella*
Sussex Emerald	*Thalera fimbrialis*
Ethmia bipunctella	*Ethmia bipunctella*
Toadflax Brocade	*Calophasia lunula*
Six- belted Clearwing	*Bembecia ichneumoniformis*
Ghost Moth	*Hepialus humuli*
Oak Hook-tip	*Drepana binaria*
Small Emerald	*Hemistola chrysoprasaria*
Dark-Barred Twin-Spot Carpet	*Xanthorhoe ferrugata*
Shaded Broad-Bar	*Scotopteryx chenopodiata*
Small Phoenix	*Ecliptopera silaceata*
Latticed Heath	*Semiothisa clathrata*
Dot Moth	*Melanchra persicariae*
Broom Moth	*Ceramica pisi*
Feathered Gothic	*Tholera decimalis*
Powdered Quaker	*Orthosia gracilis*
Deep-Brown Dart	*Aporophyla lutulenta*
Sallow	*Xanthia icteritia*
Knotgrass	*Acronicta rumicis*
Mouse Moth	*Amphipyra tragopoginis*
Ear Moth	*Amphipoea oculea*
Rosy Rustic	*Hydraecia micacea*
Rustic	*Hoplodrina blanda*
Mottled Rustic	*Caradrina morpheus*
Pammene trauniana	*Pammene trauniana*
Mullein Wave	*Scopula marginepunctata*
Buff Ermine	*Spilosoma luteum*
Cinnabar	*Tyria jacobaeae*
Rosy Minor	*Mesoligia literosa*
Grey Bush Cricket	*Platycleis albopunctata*
Small Blue butterfly	*Cupido minimus*
Brown Lipped Snail	*Cepaea nemoralis*
Garden Spider	*Araneus diadematus*
Plants	
Sea Pea	*Lathyrus japonicus*
Yellow Horned-poppy	*Glaucium flavum*
Sea-Kale	*Crambe maritima*
Babington's Orache	*Atriplex glabriuscula*
Curled Dock	*Rumex crispus*
Kidney Vetch	*Anthyllis vulneraria*
Autumn Lady's-tresses	*Spiranthes spiralis*
Sea Beet	*Beta vulgaris*
Red Valerian	*Centranthus ruber*
Red Hot Poker	*Kniphofia sp*
Holm Oak	*Quercus ilex*
Silver Ragwort	*Senecio cineraria*
Viper's-bugloss	*Echium vulgare*
Common Bird's-foot-trefoil	*Lotus corniculatus*

Species List from Kingsdown and Walmer Beach (cont)

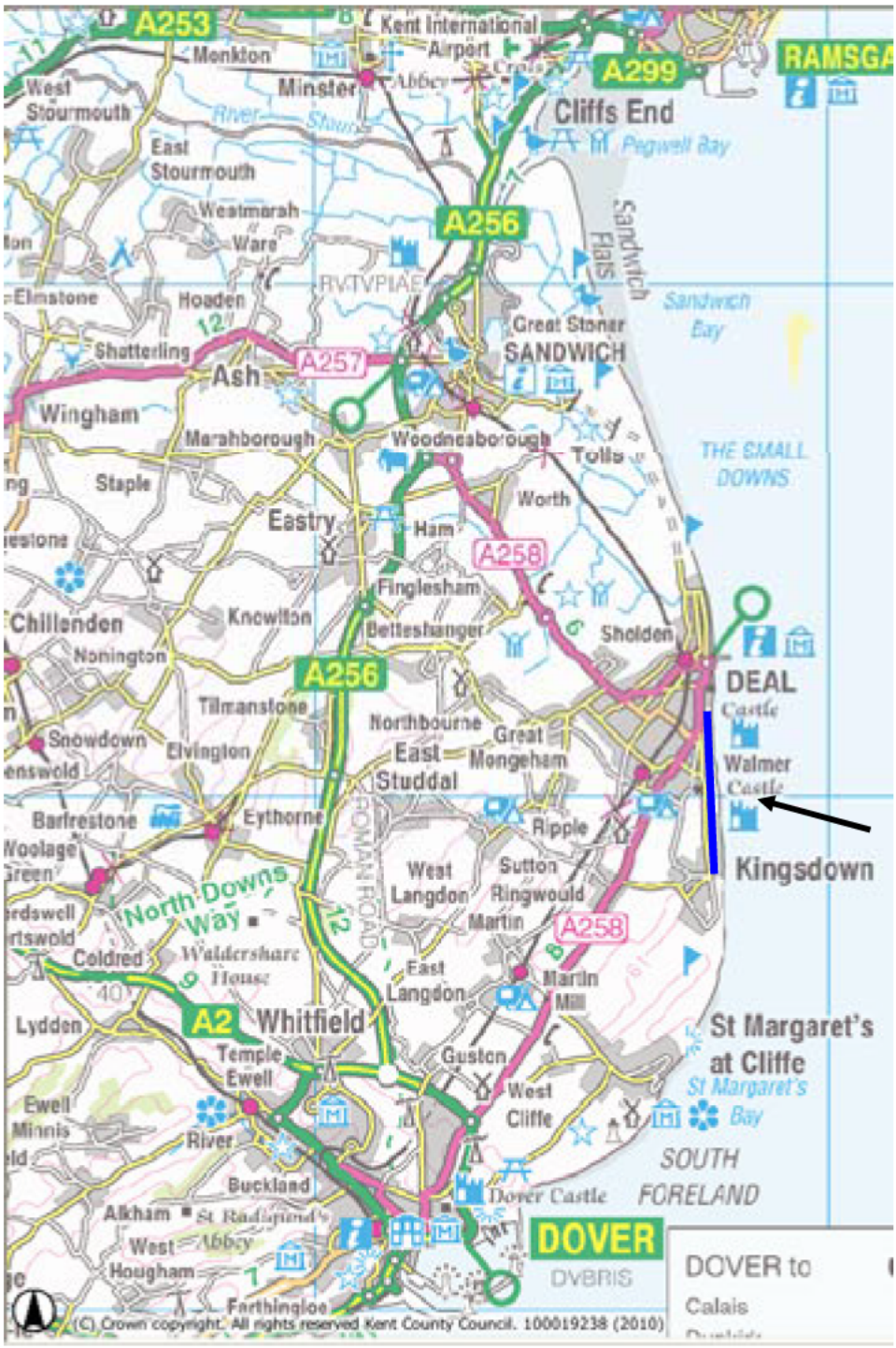
Common Name	**Latin Name**
Plants (cont)	
Common Toadflax	*Linaria vulgaris*
Purple Toadflax	*Linaria purpurea*
Mouse-ear-hawkweed	*Pilosella officinarum*
Russian-vine	*Fallopia baldschuanica*
Laburnum	*Larburnum anagyroides*
Blackthorn	*Prunus spinosa*
Traveller's-joy	*Clematis vitalba*
Sumach	*Rhus sp*
Elephant Ears	*Bergenia sp*
Pampas grass	*Cortaderia sp*
Bittersweet	*Solanum dulcamara*
Fennel	*Foeniculum vulgare*
Wild Carrot	*Daucus carota*
Tree-mallow	*Lavatera arborea*
Common Mallow	*Malva sylvestris*
Hedge Mustard	*Sisymbrium officinale*
Ribwort Plantain	*Plantago lanceolata*
Knotgrass	*Polygonum aviculare*
Smooth Sow-thistle	*Sonchus oleraceus*
Sea Sandwort	*Honckenya peploides*
White Poplar	*Populus alba*
Ash	*Fraxinus excelsior*
Scots Pine	*Pinus sylvestris*
Sycamore	*Acer pseudoplantanus*
Ivy	*Hedera helix*
Bramble	*Rubus fruticosus*
Hawthorn	*Crataegus monogyna*
Common Knapweed	*Centaurea nigra*
Salad Burnet	*Sanguisorba minor*
Curry Plant	*Helichrysum italicum*
Snow in Summer	*Cerastium sp*
Yucca	*Yucca sp*
Fig	*Ficus sp*
Rose-of-Sharon	*Hypericum calycinum*
Japanese Rose	*Rosa rugosa*
Common Ragwort	*Senecio jacobaea*
Yarrow	*Achillea millifolium*
Mugwort	*Artemisia vulgaris*
Mammals	
Common Pipistrelle	*Pipistrellus pipistrellus*
Soprano Pipistrelle	*Pipistrellus pygmaeus*
Serotine	*Eptesticus serotinus*
Noctule	*Nyctalus noctula*
Natterer's	*Myotis nattereri*
Brown Long-eared	*Plecotus auritus*
Hedgehog	*Erinaceus europaeus*
Reptiles	
Viviparous Lizard	*Zootoca vivipara*
Slow Worm	*Anguis fragilis*

Appendix 2

KINGSDOWN AND WALMER BEACH - LOCAL WILDLIFE SITE (LWS)

MAP 1

Surrounding Area



Kingsdown and Walmer Beach (LWS)

KINGSDOWN AND WALMER BEACH - LOCAL WILDLIFE SITE (LWS)
Map ref: TR 379500 - TR 374497

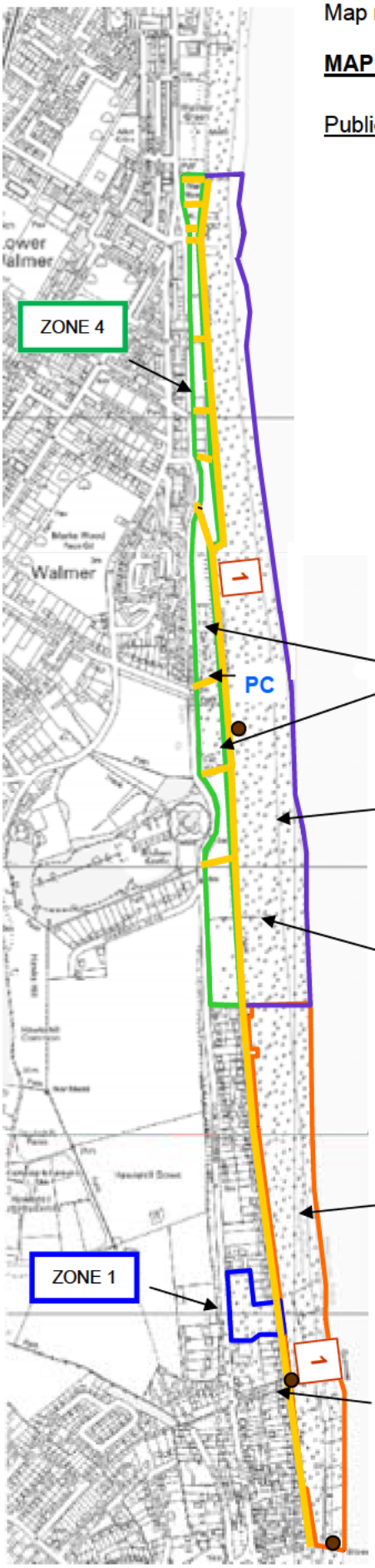
MAP 2

Boundary Map

KINGSDOWN AND WALMER BEACH - LOCAL WILDLIFE SITE (LWS)
Map ref: TR 379500 - TR 374497

MAP 3

Public Rights of Way



Key

Public Footpath

1 — National Cycle Network Route Number - This enters the Parade at Boundary Road / Traffic Free Zone

P — Car Park

PC — Public Convenience

Proposed sites for interpretation boards

Access to site for heavy machinery (beach re-charging)

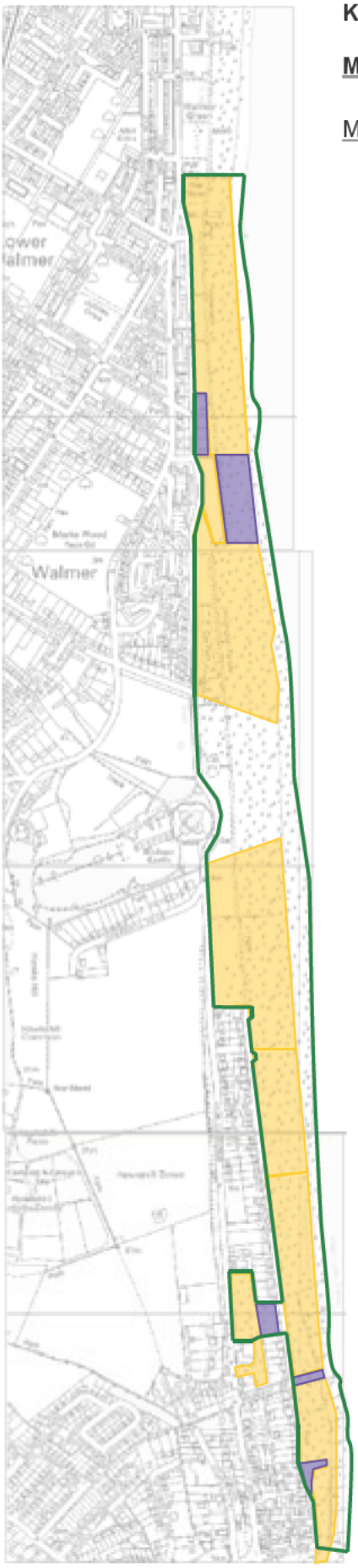
Boundary Road

N

KINGSDOWN AND WALMER BEACH - LOCAL WILDLIFE SITE (LWS)

MAP 4

Map of Land Ownership



Key

- Local Wildlife Site
- Dover District Council
- English Heritage
- Privately Owned Land

N

KINGSDOWN AND WALMER BEACH - LOCAL WILDLIFE SITE (LWS)

MAP 5

KINGSDOWN AND WALMER BEACH - LOCAL WILDLIFE SITE (LWS)

MAP 6a

Vegetation and Species of Interest in Zones 3 and 4 - Southern part

KINGSDOWN AND WALMER BEACH - LOCAL WILDLIFE SITE (LWS)

MAP 6b

Vegetation and Species of Interest in Zones 3 and 4 – Northern part

Appendix 3

Old photographs of the area

Kingsdown Beach. This is now the Zetland Arms public house, with fisherman's huts.
Turn of the 19th - 20th century.

South Road - Kingsdown in the early 1920's.

Walmer Beach. A pill box placed on the shingle, with Deal pier in the background.
1930 - 1940's

Walmer Beach. Turn of the 19th/20th century.

The Parade at Walmer. Early 20th century.

Walmer promenade and Strand. Turn of the 19th/20th century.

Walmer Beach.
Gleaners picking coal off the beach at Walmer where this has been washed ashore from the wreck of a collier - 2/9/1891. J. L. Roget.

Appendix 4

KINGSDOWN AND WALMER BEACH — LOCAL WILDLIFE SITE (LWS)

Photographs of landscape, flora and fauna found on site

Vegetated shingle set between housing along Wellington Parade — Zone 1.
The Small Blue butterfly (*Cupido minimus*) colony is located here, along with significant numbers of Bright Wave moth (*Idaea ochrata*). Sussex Emerald larvae (*Thalera fimbrialis*) were noted in May 2010. Viviparous Lizard (*Zootoca vivipara*) and Slow Worm (*Anguis fragilis*) have been recorded here also.

Coastal vegetated shingle along Wellington Parade — Zone 2

KINGSDOWN AND WALMER BEACH — LOCAL WILDLIFE SITE (LWS)

Photographs of landscape, flora and fauna found on site

Sea Pea (*Lathyrus japonicus*) is scattered along the open shingle from Walmer Castle north.
Zone 3

Viper's - bugloss (*Echium vulgare*) provides nectar and pollen to bumble bees.
Zone 3

KINGSDOWN AND WALMER BEACH — LOCAL WILDLIFE SITE (LWS)

Photographs of landscape, flora and fauna found on site

Grey Bush Cricket (*Platycleis albopunctata*) - Zone 2

Viviparous Lizard (*Zootoca vivipara*) basking on dead wood - Zone 1

Appendix 5

Citations

Local Wildlife Site (LWS)

and

Site of Special Scientific Interest (SSSI)

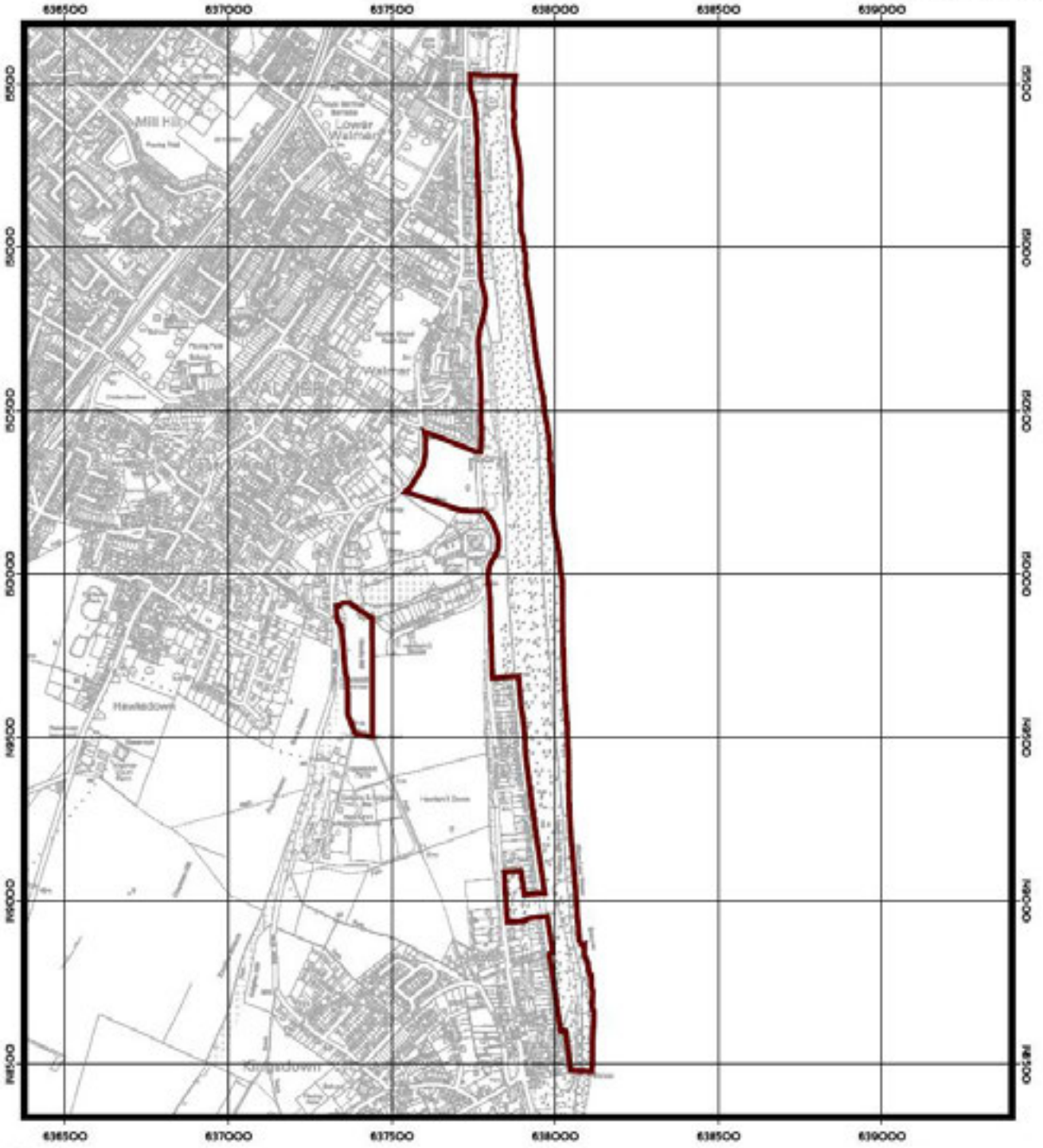
Kent Wildlife Trust

KENT WILDLIFE SITES

Site Ref No: **DO01**

Site: KINGSDOWN AND WALMER BEACH

Map ref: TR 379500
TR 374497



Kent wildlife Trust

KENT WILDLIFE TRUST

KWT File No: 379496

Sites of Nature Conservation Interest

Site Ref. No: DO 01

Site: Kingsdown and Walmer Beach

Map Ref. TR 379500
TR 374497

LPA: Dover

Natural Area: North Downs

Parish: Deal / Ringwould

AONB: No

Owner: Local authority/English Heritage/ Private

SLA: No

Category: Shingle beach, grassland

TPO: No

Area: 53.18 ha

Protected species: No

Date first notified: 1985

Public rights of way: Yes

Date amended: September 1997

DESCRIPTION

The site comprises a long shingle beach backed by rough grassland, which is relatively undisturbed, a small area of unimproved damp permanent pasture close to Walmer Castle, and a further small area of grassland at Hawks Hill.

Beach and Grassland

An interesting range of plants colonise the shingle, and succession from bare shingle on the foreshore to consolidated shingle and grassland can be seen at this site. Unusual plants include sea pea [1,2] *Lathyrus japonicus*, sea kale [3] *Crambe maritima*, two rare ragwort hybrids between native and alien species, and one alien species, silver ragwort *Senecio bicolor*, which is common at Calais but very rare in the British Isles. The consolidated shingle contains many small clovers, including rough clover [3] *Trifolium scabrum* and soft clover *T. striatum*, together with sand catchfly [1,2] *Silene conica*. In addition to crow garlic *Allium vineale*, the rare rose garlic [2] *A. roseum* also occurs, together with common restharrow *Ononis repens* and several uncommon annual grasses characteristic of dry, acid habitats, such as fern-grass *Catapodium rigidum* and squirreltail fescue *Vulpia bromoides*.

A rich community of ground lichens and acid-loving bryophytes occurs as a stage in the colonisation of the shingle. The area is noted as an important invertebrate site with good lepidoptera fauna.

Pasture

A small area of damp permanent cattle-grazed pasture adjoins Walmer Castle at the northern end of the site at TR 377503. This part of the site supports a wide range of grasses, including co-dominant crested dog's-tail *Cynosurus cristatus* and common bent *Agrostis capillaris* in the drier parts, and Yorkshire fog *Holcus lanatus* and meadow fescue *Festuca pratensis* on damper soils. Greater bird's-foot-trefoil *Lotus uliginosus*, water mint *Mentha aquatica* and brooklime *Veronica beccabunga* occur in the very marshy areas.

Hawkshill Common

This addition to the site at TR 374497 comprises rough, unmanaged grassland with dense scrubby margins along the western boundary. The area includes both plateau grassland with fairly deep, slightly calcareous soil and, on west-facing slopes, thinner and strongly calcareous soils. The main plateau area is dominated by rank grasses such as meadow fescue, cock's-foot *Dactylis glomerata*, tor-grass *Brachypodium pinnatum* and false oat-grass *Arrhenatherum elatius*, together with red fescue *Festuca rubra* and yellow oat-grass *Trisetum flavescens*. Lady's bedstraw *Galium verum*, field scabious *Knautia arvensis* and greater knapweed *Centaurea scabiosa* are frequent, together with meadow buttercup *Ranunculus acris* and bulbous buttercup *R. bulbosus*. Where the ground has been disturbed, hogweed *Heracleum sphondylium* and nettle *Urtica dioica* are present.

A steeply sloping chalk bank at the north-western end is rabbit-grazed and supports a rich and diverse flora. Erect brome *Bromopsis erecta* and tor-grass are present, but finer grasses are also common, including sheep's fescue *Festuca ovina* and quaking-grass *Briza media*. Kidney vetch *Anthyllis vulneraria*, squinancywort *Asperula cynanchica*, common milkwort *Polygala vulgaris*, dwarf thistle *Cirsium acaule* and restharrow *Ononis repens* are frequent in the turf, while bird's-foot-trefoil *Lotus corniculatus* and lady's bedstraw are very common. Fragrant orchid *Gymnadenia conopsea* was also recorded.

Common butterflies include marbled white, green-veined white, meadow brown, ringlet, large skipper and Essex skipper. Other species such as common blue are likely to be present.

This area is used by local dog walkers.

[1] Nationally Scarce. Scarce Plants in Britain. JNCC. 1994.
[2] County Rare. Atlas of Kent Flora. Philp. 1982.
[3] County Scarce. Atlas of Kent Flora. Philp. 1982.

File Reference: TR/34-3

COUNTY: KENT SITE NAME: **DOVER TO KINGSDOWN CLIFFS**

DISTRICT: DOVER

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981.

Local Planning Authority: Dover District Council

National Grid Reference: TR 332419-380485 Area: 299.9 (ha) 741.1 (ac.)

Ordnance Survey Sheet 1:50,000: 178 1:10,000: TR 34 NW, SW, SE

Date Notified (Under 1949 Act): 1951 Date of last Revision: 1981

Date Notified (Under 1981 Act): 1987 Date of last Revision: -

Other Information: Part of the site is owned by the National Trust; part is public open space. The site is included in the Geological Conservation Review.

Reasons for Notification:

The coastline from Dover harbour to Kingsdown is of extreme importance geologically and physiographically, and for its varied floral and faunal communities which include many rare species.

Biology

The vegetation of the cliff tops consists mainly of chalk grassland interspersed with areas of scrub. Much of the grassland is dominated by tor-grass *Brachypodium pinnatum* or upright-brome *Bromus erectus*, though there are numerous areas of species-rich open grassland with a range of typical chalk-turf grass and herb species. These include sheep's fescue *Festuca ovina*, salad burnet *Sanguisorba minor*, wild thyme *Thymus praecox*, and horseshoe vetch *Hippocrepis comosa*. A number of nationally-rare plants occur. These include early spider orchid *Ophrys sphegodes* and ox-tongue broomrape *Orobanche loricata* which are both at the northern extreme of a continental distribution.

Dense areas of scrub occur locally, eg at Fan Hole. The main constituent species are gorse *Ulex europaeus*, wild privet *Ligustrum vulgare*, hawthorn *Crataegus monogyna* and bramble *Rubus fruticosus*. There are a few scattered individuals of juniper *Juniperus communis*, this species now has only a few remaining native sites in Kent.

On the sheerest chalk-cliff faces, vegetation is largely confined to crevices and narrow ledges. In places where gullies have formed (particularly around Langdon Bay), the vegetation is more extensive and consists of mixed communities of plants typical of both maritime and chalk grassland habitats. National rarities include wild cabbage *Brassica oleracea*, hoary stock *Matthiola incana* and Nottingham catchfly *Silene nutans*, while more locally-rare species include wild madder *Rubia peregrina*.

At the northern end of the site, at Kingsdown beach is a broad shingle plateau with a succession of plant communities influenced in their extent and composition by increasing shingle-stability. Typical species include sea sandwort *Honkenya peploides* and the rare sea pea *Lathyrus japonicus*, while more secure shingle inland supports a sward of sheep's fescue and other grasses together with further colonies of the early spider orchid. Of particular note is a prostrate oak tree *Quercus robur* which instead of a trunk has branches radiating from its root-base.

The invertebrate fauna of the site is rich, including important communities of Lepidoptera (moths and butterflies) and Coleoptera (beetles). Locally-restricted species found here include the adonis blue butterfly *Lysandra_bellargus*, the scarlet tiger moth *Callimorpha dominula*, a ground-beetle *Bradycellus distinctus*, and some rare weevils of the family Apionidae.

There are numerous breeding sea birds along the cliffs including fulmars, rock pipits and lesser-black backed gulls; kittiwakes have been established since 1967, their expanding population now exceeds 1100 pairs, but are still found nowhere else in Kent. The South Foreland valley at St Margarets is a significant landfall for migrant birds in the spring and a gathering point for dispersal in the autumn. More importantly many migrants breed here including whitethroat, blackcap, grasshopper and other rarer warblers. Old wartime fortification-systems, of which there are several within the site, attract black redstarts. Near Kingsdown is one of the two cliff-nesting colonies of house martins in Kent.

In addition the site includes important chalk foreshore habitats, particularly those at St Margarets Bay. These support the most species-rich littoral chalk algal flora in south-east England. The wide wave-abrasion platform at the foot of the cliffs provides a diverse range of rock formations and habitats colonised by rich and complex seaweed communities, the lower shore red algae being particularly luxuriant. Examples of algae characteristic of lower salinities are present where freshwater springs emerge on the shore, and the cliff face supports well developed examples of the unusual algal communities characteristic of this habitat, exhibiting clear vertical zonation patterns.

Geology

Dover to Kingsdown is an internationally important stratigraphic reference site which provides extensive and near continuous cliff and shore exposures of the Cenomanian, Turonian and Coniacian Stages (the Lower, Middle and Upper Chalk). The site is historically very important as many geological principles, such as biostratigraphic zonation were tested here during the early development of geology. Many parts of the succession are fossiliferous and, in particular the upper parts of the Turonian and lower parts of the Coniacian are rich in Micraster, which have contributed, and still are contributing to our knowledge of evolution.

This is also a key site for coastal geomorphology, providing an excellent example of structural controls on coastal cliff morphology. It also provides significant evidence for understanding contemporary form/ process relationships in a cliff-shore platform-beach system. Historically, retreat of the cliffs has averaged 0.5m per year but, in contrast to Foreness on the Isle of Thanet, erosion takes place mainly as large slides affecting much of the cliff face. The present beach closely relates to contemporary erosion of the cliffs and a well-developed shore platform extending to below low water mark. Geomorphologically, Dover to Kingsdown is an essential member of the network of chalk coastal sites in Britain

DOVER TO KINGSDOWN CLIFFS, KENT

OPERATIONS LIKELY TO DAMAGE THE SPECIAL INTEREST OF THE SITE

Standard Ref. No	Type of Operation
1	Cultivation, including ploughing, rotovating, harrowing, and re|seeding.
2	Grazing and changes in the grazing regime (including type of stock or intensity or seasonal pattern of grazing and cessation of grazing).
3	Stock feeding.
4	Mowing or other methods of cutting vegetation and changes in the mowing or cutting regime (including hay making to silage and cessation).
5	Application of manure, fertilisers and lime.
6	Application of pesticides, including herbicides (weedkillers).
7	Dumping, spreading or discharge of any materials.
8	Burning.
9	The release into the site of any wild, feral or domestic animal*, plant or seed.
10	The killing or removal of any wild animal*, including pest control.
11	The destruction, displacement, removal or cutting of any plant or plant remains (including tree, shrub, herb, hedge, dead or decaying wood, moss, lichen, fungus, leaf mould, turf, algae, seaweed).
12	Tree and/or woodland management+.
13b	Modification of the structure of water courses (eg springs, ditches, drains), including their banks and beds, as by re-alignment, regrading and dredging.
14	The changing of water levels and tables and water utilisation (including irrigation, storage and abstraction from existing water bodies and through boreholes).
15	Infilling of ditches, drains, rock-pools, or pits.
16b	Coastal fishing or fisheries management and seafood or marine life collection++.
17	Reclamation of land from sea.
18	Bait digging in intertidal areas
19	Erection of sea defences or coast protection works, including cliff or landslip drainage or stablisation measures.

20 Extraction of minerals, including peat, shingle, sand and gravel, topsoil, sub-soil, chalk, shells, and spoil.

21 Construction, removal or destruction of roads, tracks, walls, fences, hard-stands, banks, ditches or other earthworks (including disused blockhouses), or the laying, maintenance or removal of pipe-lines and cables, above or below ground.

22 Storage of materials.

23 Erection of permanent or temporary structures, or the undertaking of engineering works, including drilling.

24 Modification of natural or man-made features (including cave entrances), clearance of boulders, large stones, loose rock or scree and battering, buttressing, seeding or grading rock-faces, outcrops and cuttings, infilling of pits and quarries.

26 Use of vehicles or craft likely to damage or disturb features of interest.

27 Recreational or other activities likely to damage or disturb features of interest.

28 Game and waterfowl management and hunting practices.

\+ (including afforestation, planting, clear and selective felling, thinning, coppicing, modification of the stand or underwood, changes in species composition, cessation of management).

* "animal" includes any mammal, reptile, amphibian, bird, fish or invertebrate.

++ including the use of traps or fish cages.

RISK ASSESSMENT FOR KINGSDOWN AND WALMER BEACH - LOCAL WILDLIFE SITE Appendix 6

Prepared by Leonie Seymour 30th March 2010

ACTIVITY, SITE EQUIPMENT	HAZARD	HARM	RISK GROUP	ANALYSIS OF FORSEEABLE RISK			CONTROL MEASURES	RISK LEVEL ACHIEVED	FURTHER CONTROL MEASURES REQUIRED	WHO IS RESPONSIBLE
				SEVERITY	LIKELIHOOD	RATING				
Wellington Parade	Path	Trips, falls	All users	4	4	16	Regular inspection with written records	Low (c)		DDC
	Vehicles using path (SITA collecting rubbish)	Injury to people on foot and cyclists	All users esp children	6	4	24	Vehicles to travel slowly and bins to be checked off peak. Vehicles marked boldly.	Low (c)		DDC
	Dogs not on leads	Risk of attack	All users	6	4	24	Sign up for dog walk-ers to take responsibility for their dogs.	Low (c)		DDC
	Dog fouling	Disease	All users esp children	2	4	8	As above Continue with fixed penalties with signs up displaying this Dog bins available	Low (c)	Impose stiffer penalties	DDC
	Cyclists using the Parade	Collision between pedestrians & cyclists	All users	4	4	16	Paths clearly marked in their use	Low (c)		DDC

RISK GROUPS: E = Employee WE = Work experience P = Public P (C) = Public (children) P (O) = Older public V = Volunteers C= Contractors

SEVERITY: 10 = Multiple death 8 = Single death 6 = Major injury/disabling illness 4 = Lost time injury or illness/repairable damage 2 = Minor illness/damage 1 = Delay only

LIKELIHOOD: 10 = Certain or imminent 8 = Very likely 6 = Likely 4 = May occur 2 = Unlikely 1 = Very unlikely

RESULTS: T = Trivial risk C = Risks controlled to "Best practice" standards S = Significant risk remain U = Unacceptable risk remains

ACTIVITY, SITE EQUIPMENT	HAZARD	HARM	RISK GROUP	ANALYSIS OF FORSEEABLE RISK			CONTROL MEASURES	RISK LEVEL ACHIEVED	FURTHER CONTROL MEASURES REQUIRED	WHO IS RESPONSIBLE
				SEVERITY	LIKELIHOOD	RATING				
Wellington Parade	Seats	Collapse breakage causing injury	All users	6	4	24	Regular inspection with written records	Low (c)		DDC
The beach	Walking on the shingle / groynes	Trips, falls	All users	2	4	8	Advise wearing stout footwear	Low (c)		DDC
	Wave action	Drowning Exposure	All users Esp anglers	8	4	32	Warn of risks in bad weather Life buoys available	Low (c)		DDC
	Steep banks caused by scouring action of sea	Falls, sprains breaks	All users	6	4	24	Warning sign of risk	Low (c)		DDC
	Sharp objects on the beach	Cuts Disease	All users	6	4	24	Advise wearing stout footwear	Low (c)	Increase in beach cleans	DDC
	Anglers casting off	Injury to nearby walkers	All users	4	4	16	Warn beach users of risk	Low (c)		DDC

RISK GROUPS: E = Employee WE = Work experience P = Public P (C) = Public (children) P (O) = Older public V = Volunteers C= Contractors
SEVERITY: 10 = Multiple death 8 = Single death 6 = Major injury/disabling illness 4 = Lost time injury or illness/repairable damage 2 = Minor illness/damage 1 = Delay only
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ACTIVITY, SITE EQUIPMENT	HAZARD	HARM	RISK GROUP	ANALYSIS OF FORSEEABLE RISK			CONTROL MEASURES	RISK LEVEL ACHIEVED	FURTHER CONTROL MEASURES REQUIRED	WHO IS RESPONSIBLE
				SEVERITY	LIKELIHOOD	RATING				
The beach	Sea wall	Falling and breaking bones Drowning	All users	8	4	32	Barriers installed to prevent this from happening Life buoy nearby	Low (c)		DDC
Kingsdown Road Entrance to site to both car parks	Crossing road No pavement on beach side of road	Accident, injury	All users	8	4	32	Maintain clear view to pedestrians and car users Speed limit signs on main road to maintain	Low (c)	Sign on road to indicate site entrance	DDC
Borrow Pit car park	Cars arriving and leaving the car park	Accident	All users esp children	8	4	32	Speed limit in the car park made clear to users	Low (c)		DDC
	Steep bank along eastern edge	Falling, leading to breaks/ sprains	All users	4	4	16	Encourage visitors to use the paths by putting signs up	Low (c)		DDC
Grass maintenance	Machinery used by horticultural department	Accident	All users	6	4	24	Work off peak when site is less busy	Low (c)		DDC English Heritage WCCP

RISK GROUPS: E = Employee WE = Work experience P = Public P (C) = Public (children) P (O) = OIder public V = Volunteers C= Contractors

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ACTIVITY, SITE EQUIPMENT	HAZARD	HARM	RISK GROUP	ANALYSIS OF FORSEEABLE RISK			CONTROL MEASURES	RISK LEVEL ACHIEVED	FURTHER CONTROL MEASURES REQUIRED	WHO IS RESPONSIBLE
				SEVERITY	LIKELIHOOD	RATING				
English Heritage owned car park	Uneven surface	Sprains, breaks	All users	4	4	16	Sign up to warn of uneven surface	Low (c)	Fill in holes	DDC
	Large stones surrounding car park	Sprains, breaks	All users	4	4	16	Painted white so that they can be easily seen	Low (c)		DDC
	Large trees	Falling on person Broken limbs Head injury	All users	8	4	32	Regular checks and these noted Rotten limbs removed	Low (c)		DDC
	Cars arriving & leaving the car park	Accident	All users	8	4	32	Speed limit in the car park made clear to users	Low (c)		DDC
Weather conditions on tasks	Very wet, windy hot or cold	Exposure, heat stroke, being blown over, bruising, broken limb	All users esp volunteers	4	4	16	Cancel task on bad weather days Hot and cold drinks available 1st aid kit available Check forecast beforehand.	Low (c)		WCCP

RISK GROUPS: E = Employee WE = Work experience P = Public P (C) = Public (children) P (O) = Older public V = Volunteers C= Contractors

SEVERITY: 10 = Multiple death 8 = Single death 6 = Major injury/disabling illness 4 = Lost time injury or illness/repairable damage 2 = Minor illness/damage 1 = Delay only

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RESULTS: T = Trivial risk C = Risks controlled to "Best practice" standards S = Significant risk remain U = Unacceptable risk remains

ACTIVITY, SITE EQUIPMENT	HAZARD	HARM	RISK GROUP	ANALYSIS OF FORSEEABLE RISK SEVERITY	LIKELIHOOD	RATING	CONTROL MEASURES	RISK LEVEL ACHIEVED	FURTHER CONTROL MEASURES REQUIRED	WHO IS RESPONSIBLE
Volunteer work groups	Verbal abuse	Emotional stress	WCCP staff/ volunteers	1	4	4	Newsletter for local residents before work begins	Low (c)		WCCP / DDC
Litter picks	Sharps	Cuts, disease	All involved	8	4	32	Safety talk beforehand Litter pickers and gloves to wear. Sharps box for fishing hooks. 1st aid kit.	Low (c)		WCCP
Use of hand tools (hammer, saw, loppers, pliers, spanners and screwdrivers)	Sharp edge, weight	Cuts, bruises	Volunteers Contractors	4	4	16	Shown how to use tools beforehand. Warn of risks. Gloves to wear. 1st aid kit.	Low (c)		WCCP DDC Contractors
Heating kettle	Hot water Lighting gas	Scalding, burning	Staff Volunteers	4	4	16	Shown how to use beforehand No under 18's to use	Low (c)		WCCP

RISK GROUPS: E = Employee WE = Work experience P = Public P (C) = Public (children) P (O) = Older public V = Volunteers C= Contractors

SEVERITY: 10 = Multiple death 8 = Single death 6 = Major injury/disabling illness 4 = Lost time injury or illness/repairable damage 2 = Minor illness/damage 1 = Delay only

LIKELIHOOD: 10 = Certain or imminent 8 = Very likely 6 = Likely 4 = May occur 2 = Unlikely 1 = Very unlikely

RESULTS: T = Trivial risk C = Risks controlled to "Best practice" standards S = Significant risk remain U = Unacceptable risk remains

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ACTIVITY, SITE EQUIPMENT	HAZARD	HARM	RISK GROUP	ANALYSIS OF FORSEEABLE RISK			CONTROL MEASURES	RISK LEVEL ACHIEVED	FURTHER CONTROL MEASURES REQUIRED	WHO IS RESPONSIBLE
				SEVERITY	LIKELIHOOD	RATING				
Brush-cutting	Sharp edges Projectile hitting the user or visitors. Noise level Vibrations	Cuts, slash injury	All people nearby to user	4	4	16	Only fully trained people do brush cutting i.e they must have attended a one day NPTC registered course. PPE such as hard hat with visor and ear defenders are worn. Warning signs are placed 10m away from the work area. Work undertaken when few visitors are on site.	Low (c)		DDC WCCP Contractors
Cutting down trees	Falling trunks and branches	Head injury Bruises Broken limb Cuts	People in the immediate area	8	4	32	Volunteers trained on how to use tools Undertake work when few public are present	Low (c)		WCCP Contractors DDC
Bonfire	Heat flame and smoke	Burns, smoke inhalation	All users	6	4	24	Only a few experienced volunteers manage the fire. Only lit in calm conditions. Fire beater and extra water carried.	Low (c)		WCCP

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ACTIVITY, SITE EQUIPMENT	HAZARD	HARM	RISK GROUP	ANALYSIS OF FORSEEABLE RISK			CONTROL MEASURES	RISK LEVEL ACHIEVED	FURTHER CONTROL MEASURES REQUIRED	WHO IS RESPONSIBLE
				SEVERITY	LIKELIHOOD	RATING				
Herbicide spraying	Toxic fluid on skin, eyes and mouth	Irritation of the skin, eyes, nose and throat	All users	4	4	16	Only fully trained staff undertake spraying, having passed PA 1 and PA 6. Appropriate PPE is worn. A 1st aid kit is carried. COSHH regulations for the use and storage of substances are followed.	Low (c)		WCCP Contractors DDC
Work in general	Insect sting	Illness, anaphylactic shock, death	All users	8	4	32	For insect bites minor allergic reactions should be treated via GP's.	Low (c)		WCCP Contractors DDC

RISK GROUPS: E = Employee WE = Work experience P = Public P (C) = Public (children) P (O) = Older public V = Volunteers C= Contractors

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Budget / Appendix 7

Activity/ Project	Area/Time	Estimated cost per day	Year 1 2010	Year 2 2011	Year 3 2012	Year 4 2013	Year 5 2014	Cost over 5 years
Spraying of Red Valerian	Approx 500 plants per day, per person	£150 per person plus extras £150 x 2 = £300	£300 x 3 = £900	£900	£900	£900	£900	£4,500
Treatment of other invasive species	WCCP	£150 per person plus extras £150 x 2 = £300	£150 x 2 = £300	£300	£300	£300	£300	£1,500
Silver Ragwort removal	WCCP 1 day task	£150 per task	£150 x 2 = £300	£300	£300	£300	£300	£1,500
Holm Oak and Sumach removal	WCCP 1 day task	£150 per task Contractor at £500 per day	£150 x 2 = £300 £500 x 3 = £1,500	£300 £1,500	£300 £1,500	£300 £1,500	£300 £1,500	£1,500 £7,500
Grass cut behind beach huts	WCCP 1 day task	£150 per task	£150	£150	£150	£150	£150	£750
Grass cut in front of Walmer Castle	WCCP 1 day task or DDC	£150 per task	£150	£150	£150	£150	£150	£750
Beach clean	WCCP 1 day task	£150 per task	£150 x 2 = £300	£300	£300	£300	£300	£1,500
Bollard replacement	DDC Approx 20 to replace/insert	£500 per day £500 x 4 = £2,000	£2,000	-	-	-	-	£2,000
Hawthorn planting along Wellington Parade	DDC Approx 200 plants	200 x £3.00 = £600 + £150 per person for 2 days	-	-	£600 + £600 = £1,200	-	-	£1,200

Budget (cont)

Activity/ Project	Area/Time	Estimated cost per day	Year 1 2010	Year 2 2011	Year 3 2012	Year 4 2013	Year 5 2014	Cost over 5 years
Scrub removal in Zone 1	WCCP A 3 day task or Contractor	WCCP staff at £150 per day	£150 x 3 = £450	£300	£150	-	-	£900
Scrub removal on DDC owned land next to Zone 1	WCCP A 2 day task	WCCP staff at £150 per day	£150 x 2 = £300	-	£150	-	£150	£600
Interpretation for 3 panels	WCCP & Contractor	WCCP staff at £150 per day Contractor to work on design, print and frame	£150 x 10 = £1,500	£1,700	-	-	-	£3,200
Guided walk	WCCP 1 day	£150	£150	£150	£150	£150	£150	£750
Newsletter for residents along the parade	WCCP 2 days 200 newsletters	£150 per day	£300 + £200 = £500	£500	£500	£500	£500	£2,500
Plant monitoring	WCCP 1 day	£150	£150	£150	£150	£150	£150	£750
Monitoring of Sussex Emerald & Bright Wave	Contractors/ Butterfly Conservation							
Total			£8,950	£6,700	£6,200	£4,700	£4,850	**£31,400**

Budget (cont)

Possible income		2010	2011	2012	2013	2014	Total
Possible income through HLS	Annual payments	£1,480	£1,480	£1,480	£1,480	£1,480	£7,400
Special projects (50% funded)	Interpretation		£1,500				£1,500
Possible income from DDC (to be confirmed)	Bollard replacement	£2,000					£2,000
Butterfly Conservation currently pays for this	Sussex Emerald & Bright Wave monitoring						
DDC	Hawthorn buying and planting			£1,200			£1,200
	Total income	£3,480	£2,980	£2,680	£1,480	£1,480	**£12,100**

N.B. The above figures are estimates; if agreed, the work would be tendered to obtain accurate figures.