Isle of Wight Biodiversity Action Plan
Maritime Cliffs Habitat Action Plan

Definition

Maritime cliffs are some of the most dramatic and widely appreciated landscape features of the Isle of Wight. They are home to a rich and highly adapted diversity of wildlife, and provide unique opportunities to view extensive and spectacular geological exposures and are a rich scientific and educational resource of national and international importance.

Maritime cliffs occur on both hard and soft rocks. Most form at the junction of land and sea, where land slippage and/or erosion by the sea has created a break in slope. Soft rock cliffs are characterised by slumped cliff faces that gradually become vegetated. Hard rock cliffs are often sheer, with ledges where plants can establish themselves and birds can find nest sites.

The south coast of the Isle of Wight also contains extensive areas of undercliff. 'Undercliff' is a term used to describe the more sheltered environment that develops between the outer sea-washed cliffs and an inner cliff line. This combination of habitats is best developed in the famous Undercliff that stretches between Blackgang and Bonchurch. Here, the undercliff habitat is extensive, partially urbanised and has a distinctive sheltered, almost Mediterranean, climate. Maritime influence on the inner cliffs is often reduced, particularly where the undercliff is wide. However, in most places, a maritime influence is still apparent.
All the maritime influenced and actively slumping habitats of the Island's remarkable undercliffs are considered in this Action Plan, together with the other maritime soft and hard rock cliffs of the Island. This plan does not include inland cliffs, such as those at Gatcliff, or artificial cliff habitats created by quarries. Sheltered undercliff habitats away from maritime influence, such as woodland and stable grasslands, will be covered by other habitat action plans.

Maritime cliffs provide a constantly changing habitat depending on the degree of maritime exposure, substrate type, degree of slope and the time since the last cliff fall or slippage. Associated with this changing habitat is a huge diversity of plant and animal communities: pioneer plant communities colonising bare rock, communities of rock crevices and ledges, an amazing variety of grassland types, ponds, reed beds and other wetlands, scrub and woodland and, in places, even cliff face heathland and sand dunes.

Why an Action Plan?

Because this habitat exists as a relatively narrow strip of land and because very many people use it for recreation, it is subjected to a high concentration of use, which can damage biodiversity.

Maritime cliffs are vulnerable to a range of potential threats: erosion from walkers and

climbers, encroachment by adjacent farmland and the invasion of non-native plants such as holm oak. Changing farming practices can also have consequences, particularly for cliff top habitats, as the cessation of grazing leads to invasion of coarse grasses and even scrub. Natural erosion and coastal processes are important for maintaining maritime cliff habitats. Coastal protection works designed to protect the developed coast from marine erosion can affect these processes and damage cliff habitats.

There is a need to ensure effective management of the Island's maritime cliffs in order to maintain and enhance their biodiversity value, and balance this with the requirements of recreation and tourism, coastal protection and agriculture.

Characteristic Wildlife

Maritime cliffs are a challenging environment for plants and animals; exposure to gale-force winds and salt spray, steep slopes with thin soils, frequent erosion and landslides, all shape unique and characteristic wildlife habitats.

The Isle of Wight has a particularly rich and varied sea-cliff resource. It is of national geological and ecological significance for its chalk cliffs and landslips. Many of the Island's maritime cliffs have been selected as candidates for inclusion in a European network of important wildlife sites known as Natura 2000. Following agreement with the European Commission, these will be designated as Special Areas of Conservation (SAC) in accordance with the EU Habitats Directive. The South Wight Maritime candidate SAC is one of 15 examples of vegetated sea cliff selected for inclusion in the Natura 2000 network in the UK, and one of only six lengths of coastline identified as being of European importance for their representation of soft rock cliffs.

The coastline is subject to a wide variety of coastal processes, which result in erosion, leading to sediment transport and eventual deposition. The maritime cliffs of the Island provide an important source of sediment that feeds these coastal processes.

The habitats, which develop on the cliffs and slopes, are particularly varied and dependent upon soil type, ground stability and water sources. A survey of the soft cliff vegetation of the Island undertaken in 1996 and 1997 identified a total of 44 different vegetation communities. This total includes seven pioneer communities, several of which have yet to be described by the National Vegetation Classification (NVC), together with eight maritime vegetation communities, including maritime grassland and sand dune communities. Heathland and mire communities were also recorded locally. A wide diversity of more terrestrial grassland types was also identified, ranging from acid through neutral to calcareous communities. The survey also revealed the presence of a range of swamp and fen vegetation types and at least two open water aquatic communities in ponds. Woodland and scrub vegetation was also found to be very varied and include examples ranging from early successional scrub communities to ancient semi-natural woodland.

This wide range of vegetation types present on the Island's cliffs is quite remarkable. It can be partially explained by the very varied geology and hydrology of the Isle of Wight coast. Exposures range from acidic sands, through neutral clays and silt, to calcareous

marls, limestones and chalk. In places, water arises from cliff face springs and flushes but in most instances, it is the poorly draining impermeable clay and marl substrate and uneven surface of the slumping cliffs which traps surface water to form seasonally waterlogged conditions. At the other extreme, there are examples of strongly parched conditions on both sand and chalk substrates. Further diversity is created by the differences in maritime exposure. In general, the south coast of the Island is subject to far greater degrees of maritime exposure, producing a range of typical maritime cliff grassland communities. By contrast, the more sheltered and much wider cliff zones found on the north of the Island often show very little maritime influence and extensive areas of woodland and scrub have developed on the most mature and stabilised coastal slopes.

The seacliffs and slopes frequently support rich and specialised plant and animal communities, many at the northern limit of their range. The combination of friable soils, hot substrates and open conditions maintained by cliff slippages offer a continuity of otherwise very restricted micro-habitats and these support many rare invertebrates which are confined to such sites. Water seeping out of the cliff face as springs and pools provide the wet muds required by many species of solitary bees and wasps for nest building, and also provide suitable conditions for a rich assemblage of other invertebrates and rare plants. Ponds, which can be transient in nature, are important for breeding amphibians such as the great crested newt. Chalk cliffs at the eastern and western extremities of the Island hold significant populations of breeding seabirds including guillemot, fulmar, cormorant, shelduck, occasional razorbill, as well as the peregrine falcon.

Special Species

The exacting environment of the Isle of Wight maritime cliffs supports a number of species that have been identified as being of national or local importance to biodiversity. Species of national importance have been identified as priority species by the UK Biodiversity Steering Group whilst those of more local importance have been identified in the Isle of Wight Audit and Assessment of Biodiversity. Appendix 1 gives details of these species. Action proposed in this Plan will be the principal means of conserving most of these species. In some cases additional action plans and programmes will also contribute to conserving priority species: for example, UK Species Action Plans (UK SAP). This list of species will be subject to regular review and updates as part of the biodiversity audit.

Important **cliff nesting birds** include: peregrine falcon, herring gull, cormorant, shelduck, razorbill, guillemot, raven and shag.

The **butterfly and moth fauna** is also very rich and includes the Island's own Glanville fritillary, a species found not naturally elsewhere in Britain. In addition the Island's cliffs are home to several important moths including the Isle of Wight wave, six-belted clearwing, dew moth, square-spot dart, crescent dart and beautiful gothic.

The **beetle fauna** of the cliffs is also important and includes such species as the golden tiger beetle, the rove beetle *Bledius crassicollis* and the click beetle *Anostirus castaneus*.

One of the most important groups of insects on the Island's coast are the **bees and**

wasps. Included in this group are nationally rare species such as the solitary bee *Osmia xanthomelana*, a mining bee known as *Lasioglossum angusticeps*, a potter flower bee *Anthophora retusa*, a digger wasp *Psen atratinus* and a parasitic bee *Nomada conjugens*.

The **flowering plants** of the Island's cliffs also abound in rare species including the early gentian, oxtongue broomrape, field cow-wheat, hoary stock, Nottingham catchfly and curved hard-grass.

Although often less conspicuous, the **mosses, liverworts and lichens** of the cliffs also include many rare and uncommon species of high biodiversity importance including the triangular pygmy moss *Acaulon triquetum*, the hemisphaeric liverwort *Reboulia hemisphaerica* and the scrambled egg lichen *Fulgensia fulgens*.

Special Physical Features

Wealden and Lower Greensand Series rocks, their fossils and environments

Cliffs on the southwest and southeast coast of the Island display internationally important exposures of these rocks. They are rich in dinosaur and other fossils. The Isle of Wight is the most important location in Europe for dinosaur fossils. These rocks and their fossils provide an unrivalled opportunity to study the environment of the Isle of Wight as it was 120 million years ago.

Chalk rocks

The chalk cliffs at Culver and between Compton Bay and the Needles are of national importance for the study of the geological period in which the calcium- rich remains of microscopic marine plants were laid down on the floor of a deepening sea between 100 and 65 million years ago.

Tertiary rocks and their environments

The younger rocks to the north of the Island's central chalk ridge are of international importance. They are best exposed in quarries and soft eroding cliffs, such as those at Hamstead and Bouldnor. These rock exposures provide an opportunity to understand the environment of the Island some 60-30 million years ago. The fossils found in these rocks are also of great interest and include those of mammals, reptiles, plants and insects.

Coastal processes

The ways in which the sea shapes the coastline (its geomorphology) can be studied more comprehensively in the Isle of Wight than in virtually any other part of England. Nowhere else is there such a range of coastal processes acting in such a comparatively small area. On the north of the Island are slumping cliffs, platforms cut in the beaches by fossil seas and more recent features such as estuaries, spits, shingle bars and reefs. On the south of the Island are landscape features such as the Isle of Wight monocline (the huge fold that buckled the Isle of Wight). On the south coast is the Undercliff (the largest urban landslide complex in northwest Europe) and smaller scale features such as the south coast 'chines', sea cliffs, caves and stacks.

Current Extent

The Isle of Wight cliffs are a significant biological resource. There are some 53km of maritime cliff around the Island's coastline, representing 35% of the resource of this habitat in south east England. More survey is needed to measure the extent of individual maritime vegetation types associated with the Island's cliffs but estimates suggest they support some 34ha of maritime grassland and a total of 172 ha of coastal scrub.

Nationally, vegetated cliffs are much more extensive with some 4000 km in the UK as a whole. However, most of the cliffs in the UK are in the north and west where rock types and climatic conditions are very different from those found on the Isle of Wight.

Issues Facing the Conservation of Maritime Cliff Biodiversity

The biodiversity of the Island's cliffs is under increasing threat from a number of natural and human induced factors.

Since Victorian times, much of the Island's development has been concentrated on the coast. This has lead to coast protection schemes being constructed to protect property. Coast protection schemes interrupt natural coastal processes of erosion, sediment transport and deposition. Many of the unique maritime habitats and species of the coast are dependent upon such processes, and soon decline once the cliff face becomes stabilised, as do the important geological exposures. Although some coastal habitats may persist behind coast defence schemes, the coastal processes that naturally sustain them have been removed. In some cases, coastal protection works can also result in increased rates of erosion on adjacent unprotected coastlines. This can further damage the delicate balance between rate of erosion and colonisation on which the ecology of the cliffs depends. The impact of coast protection schemes on the natural structure and function of the coast must therefore be considered, as this can have a significant effect on the nature conservation value of maritime cliffs. The challenge is to develop coast protection schemes that are economically justifiable, technically sound and environmentally sustainable.

Many of the most rare and threatened plants and animals of maritime cliffs have a precarious existence, as the cycle of cliff fall followed by cliff stabilisation creates the mix of vegetation and bare rock they require. For these specialist cliff dwellers to survive they must have sufficiently large areas of cliff in suitable condition at any one time and in close enough proximity to each other for them to recolonise cliffs following a cliff fall. This larger population of plants and animals made up of many small colonies has been described as a metapopulation. Isolation of colonies either through coastal stabilisation or increased rates of erosion may lead to range contraction loss of species.

Tourism is vital to the Island's economy. However, visitor pressure and recreation can also affect cliff vegetation through trampling and cause disturbance to nesting birds. Trampling can cause loss of plant species diversity, and new access paths can increase erosion or lead to demands for additional stabilisation works. It is important that these impacts are

managed to maintain coastal habitats in good condition.

Encroachment by invasive plants such as holm oak or sycamore may reduce the naturalness of coastal woodland and scrub, and in many cases, smothers less competitive native plant species.

Cultivation of cliff-top vegetation has truncated the natural zonation between maritime and terrestrial vegetation and resulted in a loss of diversity.

Fertilising, reseeding and silage production on fields bordering cliffs, and the planting of arable crops as close as possible to the cliff edge narrows the band of semi-natural cliff vegetation and reduces plant species diversity. Water abstraction for irrigation may also have effects on the biodiversity of chines.

Lack of stock grazing allows scrub to encroach, leading to the loss of maritime grassland communities.

There is a lack of information on the extent of the various habitat components of the Island sea cliffs, the wildlife they support (especially invertebrates) and the management needed to sustain them. This is particularly the case with the inaccessible chalk cliffs at the east and west of the Island.

Current Site Protection

Most of the Island's undefended coastline has been notified as Sites of Special Scientific Interest (SSSI), with a large proportion of these also selected for inclusion in the South Wight Maritime candidate Special Area of Conservation (cSAC), to be designated in accordance with the EU Habitats Directive. There are also important stretches of maritime cliff that have no statutory protection but have been identified as Sites of Importance for Nature Conservation (SINC) by the Isle of Wight Council. The cliffs between Ventnor and St Catherine's Point and Luccombe and Shanklin Chine have recently been identified by English Nature as further candidate SSSI.

Key sites for maritime cliff habitats on the Isle of Wight include:
Hanover Point to St. Catherine's Point (cSAC, SSSI)
Headon Warren and West High Down (cSAC, SSSI)
Culver cliffs and Redcliff (cSAC, SSSI)
Bouldnor and Hamstead Cliffs (SSSI)
Bonchurch Landslip (cSAC, SSSI)
Luccombe Chine and Ledges (SINC)
The Undercliff (SINC)

Current Initiatives for Maritime Cliffs on the Isle of Wight

- Shoreline Management Plan (SMP)
- Coastal Defence Strategy Studies

- Coastal Habitat Management Plans (ChAMPs)
- IW Rights of Way Strategy
- Participation in European initiatives such as EcoEnhance
- English Nature SSSI survey and notification programme
- IW AONB Management Plan including Heritage Coast Plans
- National Trust management initiatives
- Countryside Stewardship Scheme targets and incentives
- IW Coastal Visitors Centre
- SCOPAC studies and initiatives
- IW Centre for the Coastal Environment (EU and government funded studies)
- English Nature research report no. 398 'Restoring biodiversity of soft cliffs'.

Biodiversity Planning Context

UK BAP Context

Maritime cliffs and slopes have been identified as a priority habitat in the UK Biodiversity Action Plan. This HAP has been written in a way that relates to the objectives and targets of the national HAP for Maritime Cliffs and Slopes

Regional Plan Context

The South East England Biodiversity Forum has identified Maritime Cliffs and Slopes as extending over 150km of the region representing 4% of the UK resource. Regional targets for this habitat include the restoration of at least 30% of the habitat by 2010 and 100% by 2015, plus the recreation of 45ha of cliff top and slope habitat by 2020 (although English Nature has been recognised that these targets are not achievable). Restoration is taken to involve management of cliff habitats, for example removal of invasive scrub and restoration of appropriate stock grazing. Re-creation involves the removal of sea walls and other coast protection to allow natural coastal process to be reinstated.

Associated Plans within the Isle of Wight BAP

Associated Habitat Action Plans to be developed through the Isle of Wight BAP will include:

- Rocky sea bed and shallow sub-littoral rock (particularly chalk)
- Seagrass beds and intertidal flats
- Unimproved neutral grassland
- Acid grassland
- Calcareous grassland
- Lowland heath
- Wetlands (fens, swamps and marshes)

References

Biodiversity: The UK Steering Group Report vol2 HMSO 1995

Biodiversity of South East England 1998 ed Debbie Wicks and Patrick Cloughley

published by the Hampshire and Isle of Wight Wildlife Trust on behalf of the Wildlife Trusts of South East England and the RSPB South East and Central Regions

Isle of Wight Natural Area Profile 76 1998 English Nature

Isle of Wight Sea Cliff Study 1997 unpublished report to the Isle of Wight Council

Restoring biodiversity to soft cliffs 2001 English Nature research report no 398 E M Lee, D Brunsden, H Roberts, S Jewell, R McInnes

UK Biodiversity Steering Group Tranche 2 Action Plans vol 5 1999 English Nature

Wildlife of the Isle of Wight 2000 published by the Isle of Wight Council on behalf of the IW Biodiversity Action Plan Steering Group

Biodiversity Objectives and Targets for Maritime Cliffs on the Isle of Wight

	Objective	Proposed Actions
A	**Ensure existing sites of high quality sea cliff habitat are maintained for their wildlife and earth science interest** *Targets* · Maintain sites currently in favourable condition (favourable conservation status). · For other sites not in favourable condition, implement management regimes to restore favourable condition by 2008. · Identify sites at risk from over-use/misuse and progress improved management regimes, by 2006. **Ensure the natural processes of erosion, sediment movement and deposition continue to operate on all areas of conservation interest, with appropriate regard to essential coastal protection of settlements** *Target* · Coastal strategies, shoreline management plans and development plans should aid this objective and promote other objectives of this Habitat Action Plan.	1 - 4, 6 - 9, 10,13,15, 18,19, 23 - 24
B	**Re-create sea cliff and slope habitats that have been lost to other land uses** *Targets* · Identify candidate sites for re-creation by 2003. · Three priority sites to be re-created by 2008 from those identified.	4, 6 - 9
C	**Ensure restoration of degraded or neglected sites into habitat and/or exposures of high wildlife and earth science value** *Targets* · Establish criteria for the identification of priority sites for restoration and identify such sites by 2003. · Establish management regimes which would lead to restoration on 50% of priority sites by 2006, and of 100% of sites by 2011 **Establish buffer zone habitats between intensively-managed agricultural land and cliff and slope habitats.** *Targets* · Identify the extent of cliff top habitat threatened by intensive agricultural management by 2003. · Establish buffer strips of un-intensively managed semi-natural grassland along 50% of threatened cliff top habitat identified above by 2008.	1, 4, 6 - 9, 11, 14, 15, 17
D	**Ensure the requirements of priority species are met**	
E	**Improve the knowledge of the maritime cliff resource by survey, research and monitoring**	16 - 22
F	**Communication, Awareness and Publicity** **Foster continuing and increased understanding and awareness amongst**	

	landowners and managers of management practices that encourage wildlife and maintain earth science features on sea cliffs and slopes. *Targets* · Produce and distribute a guide for landowners and managers by 2007. · Visit 50% cSAC/SSSI cliff owners to promote the guide by 2008. **Foster increased understanding and awareness by the general public and decision-makers of the importance and need to conserve sea cliff and slope, the pressures it faces, and ways in which it can be conserved and enhanced.** *Targets* · Incorporate elements highlighted in the Isle of Wight Biodiversity Action Plan into existing information publications at their next review. · Implement the Isle of Wight Geological Interpretation Strategy, by 2006. · Seek to designate the Isle of Wight coast as a World Heritage Site for its geological, geomorphological and biodiversity value in accordance with The Convention Concerning the Protection of the World Cultural and Natural Heritage (the World Heritage Convention).	5, 12 - 13, 23 - 26

Proposed Action

Key to symbols in the Action Table	
◆	To be completed by the indicated year Work can commence at any time before the due date, at the discretion of the key partner
◆ ⇨	Design of a plan/strategy to be completed by this year and then followed by its implementation
➔	To start by the indicated year and usually followed by ongoing work. A start arrow in 2002 can indicate a new action or impetus to existing work
⇨	Work that is already begun and is ongoing

The following table lists the actions required to achieve the objectives set out in this Plan. Each action has been assigned to one or more Key Partners, who expected to take responsibility for the delivery of these actions, according to the targets set in this Plan. Other organisations may also be involved in the delivery of the action and they have been indicated in the Others column.

KEY TO ORGANISATIONS

AONB	Isle of Wight Area of Outstanding Natural Beauty Unit	IWC GM	Isle of Wight Council Geology Museum
DEFRA	Department for Food, the Environment and Rural Affairs	IWC RoW	Isle of Wight Council Rights of Way Section
EA	Environment Agency	IWNHAS	Isle of Wight Natural History and Archaeological Society
EN	English Nature	NT	National Trust
GSIW	Geology Society of the Isle of Wight	RSPB	Royal Society for the Protection of Birds
IWC CMC	Isle of Wight Council Coastal Management Centre	WW	Wight Wildlife
IWC CS	Isle of Wight Council Countryside Section		

	Action	Delivered by		Year						Contributes to objectives
		Lead	Partners	2002	2003	2004	2005	2006	2011	
	Habitat protection									
1	Complete the notification of coastal sites meeting criteria for either biological or geological/ geomorphological SSSI	EN	WW, IWC			◆				A, C
2	Ensure all suitable maritime cliff sites are identified as SINC in the relevant development plan	IWC CS	WW, EN	◆						A
3	Identify all potential Regionally Important Geological/Geomorphological Sites (RIGGS) and incorporate within the planning system within 5 years.	IWC GM		➔						A
4	Where necessary, encourage the purchase of important and vulnerable maritime cliff sites by conservation organisations	NT	WW, RSPB	⇨						A, B, C
5	Seek to establish the Island's coast as a World Heritage Site	IWC CMC	NT, WW, EN					➔		F
	Habitat management, Incentive Schemes and Other Resources									
6	Update Shoreline Management Plan for the Island's coast	IWC CMC	DEFRA, EN, EA		➔	◆				A, B, C
7	Complete the Coastal Strategy for the North East coast of the Island including the identification of cliff re-creation schemes	IWC CMC	DEFRA, EN, EA	◆						A, B, C
8	Prepare Coastal Strategies for South East and West coast of the Island and identify opportunities for cliff re-creation schemes	IWC CMC	DEFRA, EN, EA		◆					A, B, C
9	Identify environmental mitigation opportunities for maritime cliffs	IWC CMC	DEFRA, EN, EA		◆					A, B, C

	Action	Delivered by		Year						Contributes to Objectives
		Lead	Partners	2002	2003	2004	2005	2006	2011	

	Habitat management, Incentive Schemes and Other Resources									
10	Promote the development of a system of financial compensation for property owners affected by cliff erosion to encourage them to accept higher levels of risk from erosion in high risk areas of the coast	IWC CMC	DEFRA	⇨						A
11	Seek funding from agri-environment schemes and other sources to support extensive low intensity farming practices to cliff top grasslands	WW	DEFRA, EN, IWC RSPB,	⇨						C
12	Establish good practice guidance for construction of access facilities to unstable cliffs and chines	IWC RoW	EN, WW, AONB, EA					➔		C, F
13	Continue to play an active role in European and national initiatives to with respect to Integrated Coastal Zone Management (ICZM)	IWC CMC	EN	⇨						A, F
14	Work with the Isle of Wight rights of way department to obtain funding for management of cliff top habitats to enhance	IWC	EN, WW	⇨						C
15	Work with the Island Conservation Grazing project to promote extensive grazing and restoration of cliff top and undercliff grasslands	EN	WW, NT, IWC					➔		A, C
	Species Action									
16	Monitor populations of key maritime cliff species including the Glanville fritillary and other species of plant and animal indicative of differing cliff environments	WW	IWNHAS, EN, IWC CS	⇨						D

	Action	Delivered by		Year						Contributes to objectives
		Lead	Partners	2002	2003	2004	2005	2006	2011	
	Survey, Research and Monitoring									
17	Audit the conservation status of all Island	EN	WW,	⇨						B, C

	maritime cliffs to identify sites in need of restoration and re-creation (re-creation sites to feed into the Coastal Strategies)		IWC CS							
18	Complete phase 2 vegetation survey of the Island's maritime cliffs	EN	IWC CS		◆					A, E
19	Liaise with JNCC and EN over the classification of coastal vegetation types not described by the NVC	EN	IWC CS	⇨						A, E
20	Continue to monitor the effects of coast protection on biodiversity and nature conservation value at Castle Cove and other appropriate sites	IWC CMC		⇨						D, E
21	Monitor rates of cliff erosion around the Island's coast and gain better understanding of processes of sediment transport and re-distribution									E
	Communication. Awareness and Publicity									
22	Establish and implement a programme to monitor the impacts of climate change on coastal biodiversity	IWC CMC	EN, EA, WW, IWNHAS			➔				E
23	Liaise with user groups (e.g. ramblers, hang-glider/para glider groups, rock climbers, geologists/fossil hunters) to agree codes of conduct to ensure sustainable use of the maritime cliff environment	NT	WW,EN, IWNHAS, RSPB, EA, IWC GSIW	⇨						A, F
24	Promote and distribute appropriate codes of conduct for geological field work	IWC GM	EN, GSIW IWNHAS	◆						A, F

	Action	Delivered by		Year						Contributes to objectives
		Lead	Partners	2002	2003	2004	2005	2006	2001	
25	Continue to promote the 'living coast' message and importance of maritime cliffs, the threats it faces and methods for its	IWC CMC	EN, NT, WW	⇨						F

	conservation through guided walks, talks, displays, publications etc.									
26	Produce and distribute guide for landowners and managers of maritime cliffs and make visits to cliff owners to promote the guide	WW	IWC, EN, NT					➔		F

Species associated with Maritime Cliffs and Slopes

Latin	English	Group	BAP status	Rarity	Other habitat
Alca torda	Razorbill	Bird	3		
Anthus petrosus	Rock pipit	Bird	2		Littoral rock ◆
Corvus corax	Raven	Bird	3		
Falco peregrinus	Peregrine	Bird	2		
Larus fuscus	Lesser black-backed gull	Bird	2		Littoral rock
Larus argentatus	Herring gull	Bird	2		Littoral rock
Oenanthe oenanthe	Wheatear	Bird	2		LOWLAND CALCAREOUS GRASSLAND ◆
Phalacrocorax carbo	Cormorant	Bird	2		Coastal waters
Phalacrocorax aristotelis	Shag	Bird	2		
Saxicola torquata	Stonechat	Bird	2		LOWLAND HEATHLAND ◆
Tadorna tadorna	Shelduck	Bird	2		MUDFLATS ◆
Uria aalge	Guillemot	Bird	3		Coastal waters
Anthophora retusa	Potter Flower Bee	Ants, Bees and Wasps	p3	RDB 1	
Nomada conjugens	A nomad bee	Ants, Bees and Wasps	3	VU	
Nysson interruptus	A cuckoo wasp	Ants Bees and Wasps	p3	RDB 2	
Osmia xanthomelana	A mason bee	Ants, Bees and Wasps	1	RDB1	
Psen atratinus	A solitary wasp	Ants, Bees and Wasps	p3	RDB 2	REEDBEDS
Tachysphex unicolor s.s.	A solitary wasp	Ants, Bees and Wasps	p3		
Anostirus castaneus	A click beetle	Beetles	1	EN	
Baris analis	A weevil	Beetles	3	EN	
Bembidion andreae	A ground beetle	Beetles	3		
Bledius crassicollis	A rove beetle	Beetles	3	RDB1	
Cathormiocerus socius	A weevil	Beetles	3	RDB 2	
Cicindela germanica	A tiger beetle	Beetles	1	RDB3	
Dromius vectensis	A ground beetle	Beetles	3	pRDB	COASTAL VEGETATED SHINGLE ◆
Elaphrus uliginosus	A ground beetle	Beetles	3		
Halobrecta princeps	A rove beetle	Beetles	3	RDB1	COASTAL VEGETATED SHINGLE ◆
Harpalus parallelus	A ground beetle	Beetles	1	pRDB	LOWLAND CALCAREOUS GRASSLAND ◆

Latin	English	Group	BAP status	Rarity	Other habitat
Heterocerus fusculus	A mud-dwelling beetle	Beetles	3		
Medon pocoferus	A rove beetle	Beetles	3	RDB1	COASTAL VEGETATED SHINGLE
Otiorhynchus ligustici	A weevil	Beetles	3	RDB2	
Thinobius brevipennis	A rove beetle	Beetles	3	pRDB	
Forficula lesnei	Lesnes Earwig	Crickets and Grasshoppers	p3		
Ectobius pallidus	Tawny Cockroach	Crickets and Grasshoppers	3		LOWLAND CALCAREOUS GRASSLAND ◆
Orthetrum coerulescens	Keeled Skimmer	Damselflies and Dragonflies	3		EUTROPHIC STANDING WATERS
Limonia goritensis	A cranefly	Flies	2	RDB3	
Myopa extricata	A conopid fly	Flies	p3	RDB 3	LOWLAND CALCAREOUS GRASSLAND ◆
Thereva strigata	A stilletto fly	Flies	p3	RDB 3	
Volucella inanis	A hover-fly	Flies	3		Broad-leaved mixed woodland
Volucella zonaria	A hover-fly	Flies	3		
Trachysphaera lobata	A Millipede	Millipedes	2		COASTAL SAND DUNES
Truncatellina callicratis	A Snail	Molluscs	3	RDB 3	
Agrotis trux	Crescent Dart	Moths	3		
Bembecia scopigera	Six-belted Clearwing	Moths	3		LOWLAND CALCAREOUS GRASSLAND
Catarhoe rubidata	Ruddy Carpet	Moths	3		ANCIENT AND/OR SPP RICH HEDGEROWS
Cucullia absinthii	Wormwood	Moths	3		
Eudonia lineola	Striped Grey	Moths	3		Boundary and linear features ◆
Euxoa obelisca grisea	Square-spot Dart	Moths	3		
Leucochlaena oditis	Beautiful Gothic	Moths	2	RDB3	
Mecyna asinalis	Madder Pearl Pyralid	Moths	3		
Metzneria littorella	A micro-moth	Moths	3		
Mythimna l-album	L-album Wainscot	Moths	3		
Setina irrorella	Dew Moth	Moths	3		
Saldula arenicola	A shorebug	True bugs	3		
Anaptychia runciata	A Lichen	Lichens	3		
Fulgensia fulgens	"Scrambled-egg lichen"	Lichens	2		LOWLAND CALCAREOUS GRASSLAND ◆
Blasia pusilla	'Common Kettlewort'	Liverworts	3		

Latin	English	Group	BAP status	Rarity	Other habitat
Cololejeunea rossettiana	'Roussetti's Pouncewort'	Liverworts	3		
Marchesina mackaii	'MacKay's Pouncewort'	Liverworts	3		Broad-leaved mixed woodland
Phaeoceros laevis	'Smooth Hornwort'	Liverworts	3		
Porella obtusata	'Broad Scalewort'	Liverworts	3		LOWLAND CALCAREOUS GRASSLAND ◆
Reboulia hemisphaerica	'Hemisphaeric Liverwort'	Liverworts	3		
Scapania aspera	Rough Earwort	Liverworts	3		LOWLAND CALCAREOUS GRASSLAND ◆
Southbya nigrella	Green Blackwort	Liverworts	2	EN	Rivers & streams
Cephaloziella baumgartneri	'Chalk Threadwort'	Liverworts	3	VU	
Acaulon triquetrum	Triangular pygmy moss	Mosses	1	EN	LOWLAND CALCAREOUS GRASSLAND
Bryum canariense	'Canary Thread-moss'	Mosses	3		
Bryum intermedia	'Many-seasoned Thread-	Mosses	3		Built-up areas and gardens
Hylocomium splendens	'Glittering Wood-moss'	Mosses	3		LOWLAND HEATHLAND ◆
Mnium stellare	'Starry Thyme-moss'	Mosses	3		
Philonotis marchica	'Bog Apple-moss'	Mosses	2	CR	
Tortula viridifolia	'Bristly Pottia'	Mosses	3		
Asplenium marinum	Sea Spleenwort	Fern	3		MARITIME CLIFFS & SLOPES
Osmunda regalis	Royal Fern	Fern	3		LOWLAND HEATHLAND ◆
Artemisia absinthium	Wormwood	Flowering plant	3		
Astragalus glycyphyllos	Wild Liquorice	Flowering plant	3		LOWLAND CALCAREOUS GRASSLAND ◆
Berula erecta	Lesser Water-parsnip	Flowering plant	3		FENS *
Brassica oleracea	Wild Cabbage	Flowering plant	3		LOWLAND CALCAREOUS GRASSLAND ◆
Centaurium tenuiflorum	Slender Centaury	Flowering plant	2	VU	
Cochearia officinalis	Common Scurvy-grass	Flowering plant	3		
Epipactis palustris	Marsh Helleborine	Flowering plant	3		LOWLAND HEATHLAND ◆
Euphorbia portlandica	Portland Spurge	Flowering plant	3		LOWLAND CALCAREOUS GRASSLAND
Gastridium ventricosum	Nit-grass	Flowering plant	3		LOWLAND CALCAREOUS GRASSLAND ◆
Gymnadenia conopsea ssp densiflora	Marsh Fragrant Orchid	Flowering plant	3		Fen marsh and swamp
*Impatiens capensis**	Orange Balsam	Flowering plant	3		MARITIME CLIFFS & SLOPES
Isolepis cernua	Slender Club-rush	Flowering plant	3		Fen marsh and swamp
Jasione montana	Sheepsbit Scabious	Flowering plant	3		LOWLAND DRY ACID GRASSLAND

Latin	English	Group	BAP status	Rarity	Other habitat
Juncus subnodulosus	Blunt-flowered Rush	Flowering plant	3		FENS ◆
*Lobularia maritima**	Sweet Alison	Flowering plant	3		
Marrubium vulgare	White Horehound	Flowering plant	3		
Matthiola incana	Hoary Stock	Flowering plant	3		LOWLAND CALCAREOUS
Melampyrum arvense	Field Cow-wheat	Flowering plant	2	EN	LOWLAND CALCAREOUS GRASSLAND ◆
Orobanche hederae	Ivy Broomrape	Flowering plant	3		Broad-leaved mixed woodland ◆
Orobanche artemisiae-campestris	Oxtongue Broomrape	Flowering plant	2	EN	
Parapholis incurva	Curved Hard-grass	Flowering plant	3		SALTMARSH ◆
Parentucellia viscosa	Yellow Bartsia	Flowering plant	3		LOWLAND MEADOWS ◆
Pilosella peleteriana	A Hawkweed	Flowering plant	3	VU	
Poa infirma	Early Meadow-grass	Flowering plant	3		Built-up areas and gardens
Poa bulbosa	Bulbous Meadow-grass	Flowering plant	3		COASTAL SAND DUNES ◆
Populus nigra ssp betulifolia	Black Poplar (native)	Flowering plant	3		
Pyrola rotundifolia	Round-leaved Wintergreen	Flowering plant	3		
Salix repens	Creeping Willow	Flowering plant	3		Fen marsh and swamp ◆
Silene uniflora	Sea Campion	Flowering plant	3		COASTAL SAND DUNES
Silene nutans	Nottingham Catchfly	Flowering plant	3		
Trifolium glomeratum	Clustered Clover	Flowering plant	3		COASTAL SAND DUNES ◆
Valerianella eriocarpa	Hairy-fruited Cornsalad	Flowering plant	3	VU	

Habitats in CAPITALS are Priority Habitats in the UK Biodiversity Action Plan ◆ indicates the primary habitat of a species

1 = National BAP Priority Species 2 = Species of National Conservation Concern 3 = Species of Local Conservation Concern * introduced species