

Scottish Borders
MARITIME CLIFF AND SLOPE
HABITAT ACTION PLAN



Our Scottish Borders
Your environment



MARITIME CLIFF AND SLOPE

Status and Ecology

This habitat comprises sloping to vertical faces on the coastline where a break in slope is formed by slippage and/or coastal erosion. It includes cliff tops influenced by salt spray deposition and shore areas above the intertidal zone. Around 4,000km of the UK coastline has been classified as cliff of which approximately one half occurs in Scotland. 1% of the UK total (c.40km) lies in Scottish Borders.

The geology of the coast is very important for revealing the geological history of Scottish Borders and Scotland. Cliff profiles vary with the nature of the rocks forming them and with the geomorphology of the adjoining land. In Scottish Borders, the habitat is mainly made up of hard cliffs. These are formed in rocks that are resistant to weathering and tend to support few higher plants except on ledges. Soft cliffs, which are formed in less resistant rocks, have less steep slopes that are more easily colonised by vegetation. Good examples of soft cliffs occur around Burnmouth.

Lichens are the predominant vegetation on exposed hard cliffs with plant species such as thrift and sea campion on



© NTS Kevin Rideout

ledges. Variations occur where there is water seepage or enrichment from seabird guano. Scrub and bracken occur on soft cliffs and there is a small remnant of semi-natural woodland.

Maritime grasslands have red fescue, thrift, sea and buck's-horn plantain together with species of more inland grassland such as bird's-foot trefoil, common restharrow and various grasses. Calcareous grassland communities, with common rock-rose and crested hair-grass occur on thin soils with underlying mineral-rich rock while areas on acidic rocks support maritime heath characterised by ling. Associated with these grassland habitats are invertebrates of nationally restricted distribution such as the northern brown argus butterfly.

There are colonies of breeding seabirds with nationally important numbers of guillemot and kittiwake. Other breeding species are cormorant, shag, razorbill, fulmar and puffin. There are also breeding peregrine and raven, cliff nesting house martins and an abundance of rock pipits and linnets.

The following Scottish Borders Local Biodiversity Action Plan species can be found in this habitat.

© NTS Kevin Rideout



Habitat Indicators

Plant indicator species:

Scots lovage (*Ligustum scoticum*),
Roseroot (*Sedum rosea*),
Carline thistle (*Carlina vulgaris*),
Bloody cranes-bill (*Geranium sanguineum*),
Spring squill (*Scilla verna*),
Sea campion (*Silene maritima*),
Purple milk-vetch (*Astragalus danicus*),
Kidney vetch (*Anthyllis vulneraria*),
Buck's-horn plantain (*Plantago coronopus*),
Crested hair-grass (*Calluna vulgaris*).

Invertebrate indicators:

Northern brown argus (*Aricia artaxerxes*)

Bird indicator species:

Peregrine falcon
Raven
Rock pipit (*Anthus petrosus*)

Flagship species:

Common rock-rose (*Helianthemum chamaecistus*),
Thrift
Common blue butterfly (*Polyommatus icarus*),
House martin, Puffin.

UKBAP species associated with this habitat and found in the Borders include northern brown argus butterfly (*Aricia artaxerxes*).

Further information on the UKBAP Habitat Action Plans for native woodland priority habitats and their associated species can be found at:

www.ukbap.org.uk/habitats.aspx

A full list of the species associated with maritime cliff and slope habitat can be found at:

<http://www.scotborders.gov.uk/>



© Butterfly Conservation Scotland

Factors Causing Loss or Decline

Impacts (past & present)

The biological communities on the inaccessible sea cliffs are dependent on natural processes and remain virtually unaltered by human activities. Elsewhere, communities have been modified to a certain extent by cultivation and stock grazing but even in these areas, biodiversity remains high.

Agricultural impacts include inappropriate grazing, cultivation and abandonment; however, appropriate levels of grazing are beneficial. Overgrazing by sheep, cattle or rabbits may also affect species composition and habitat structure. Where grazing has been abandoned, encroachment by scrub and coarse grasses may occur on maritime grassland leading to loss of species diversity. The negative and positive effects of over-grazing, under-grazing and scrub encroachment need to be evaluated before an active management programme can be devised. Agriculture may extend close to the cliff edge and maritime grassland has been ploughed out, reducing the natural zonation between maritime and non-maritime vegetation. Other potential impacts from agriculture include local eutrophication by fertiliser run-off, drift from herbicide and pesticide spray and the dumping of farm rubbish and rubble.



© NTS Kevin Rideout

Recreational impacts occur at some easily accessible places but these generally do not cause significant widespread damage and much of the Borders coastline receives little visitor pressure.

Built Development

Urban, industrial and holiday development may be built too close to the cliff top. Where cliffs are subsequently found to be eroding, protection measures may threaten the habitat. Cliff-top ecological communities may be squeezed in and prevented from moving, in response to cliff erosion.

Threats (future)

Natural coastal erosion is occurring locally e.g. Lower Burnmouth, Cove and Hillton Bay, but rates are generally very low in Scottish Borders.

Stabilisation and coastal protection threaten the existence of pristine cliffs near to buildings and 'beauty spots' but such threats are rare in Scottish Borders.

Further residential and recreational development (e.g. caravan parks, golf courses) may threaten maritime cliff and slope habitats.

Local erosion through trampling and disturbance to nesting birds may occur on cliff-top paths. Footpaths should be carefully planned so that sensitive habitats can sustain these pressures. Recreational activities such as climbing and abseiling can directly degrade the

habitat and disturb breeding birds though these are thought to be infrequent activities at present.

Introduced species, such as cats and rats, can have a significant impact on cliff or burrow nesting seabirds. The spread of certain alien, invasive plants can have a devastating impact on indigenous maritime plant communities.

Despite its importance for wildlife and as a recreational resource, the coastal zone is very much undervalued. Raising awareness will help to ensure its continued well-being.

Climate change is likely to influence the biological communities of the Borders. The Berwickshire Coast is currently at the northern end of the range of the comma butterfly (*Polygonia c-album*) and there are indications that this species is now spreading northwards. Similarly the large skipper butterfly (*Ochlodes venata*) has reached North Northumberland and may colonise Berwickshire in the near future. Movements in the distribution of species such as these are likely to be early indicators of the effects of global warming in the region.

Current Action

Around one-half of the coastline is designated as SSSI (St Abb's Head to Fast Castle SSSI, also an SPA and SAC, Pease Bay SSSI, Siccar Point SSSI and Burnmouth Coast SSSI). St Abb's Head is a National Nature Reserve owned by the National Trust for Scotland.

© NTS Kevin Rideout



Designated sites on coast:

Berwickshire & Northumberland Coast cSAC	Grey seal; large shallow inlets and bays; mudflats & sandflats not covered by seawater at low tide; reefs; submerged or partially submerged sea caves.
Pease Bay Coast SSSI	Lower Carboniferous (<i>Dinantian - Namurian (part)</i>) and fossils of the Silurian-Devonian period.
Siccar Point SSSI	Non-marine rocks of the Devonian and Caledonian Structures of the Southern Uplands.
Burnmouth Coast SSSI (Geological)	Lower Carboniferous (<i>Dinantian - Namurian (part)</i>) Caledonian Structures of the Southern Uplands.
Burnmouth Coast SSSI (Biological)	Maritime cliff - an outstanding diversity of maritime grassland plants.
	Invertebrate assemblage several invertebrate species of restricted distribution nationally woodlouse (<i>Armadillidium pulchellum</i>) fly (<i>Limonia goritiensis</i>).
St Abbs Head to Fast Castle SPA	Breeding seabird assemblage and internationally important populations of guillemot; kittiwake; razorbill; shag.
St Abbs Head to Fast Castle cSAC	Vegetated sea cliffs of Atlantic & Baltic Coasts.
St Abbs Head to Fast Castle SSSI (Geological)	Late Devonian lavas autobrecciated basic andesites. Chemical link with Cheviots. Probably post-lapetus sea closure and rock coast geomorphology with structural control by rock types.
St Abbs Head to Fast Castle SSSI (Biological)	Guillemot and kittiwake kittiwakes. Most recent counts for the whole SSSI were in 2000 when there were 43,137 individual guillemots, approx 29,000 pairs, and 15,430 pairs of kittiwakes Also shag, razorbill, herring gull and the breeding bird assemblage.
	Maritime cliff vegetation types.

Burnmouth Coast and St Abbs Head to Fast Castle SSSIs are designated not only for their rich geological history which sheds light on the composition of the Southern Uplands but also how the rocks were formed. The two SSSIs support a diverse range of vegetation types on the cliff face and slopes. The two sites extend over some 426ha and c. 20km of coastline. The varied shape of the cliffs and its exposure, geology and microclimate, gives rise to a range of habitats including grasslands of various types; flushes, rock face seepages, open-water, scrub and splash zone communities cliff ledges. Maritime grasslands are especially important for invertebrates including butterflies (northern brown argus, dark green fritillary (*Argynnis aglaja*), grayling (*Hipparchia semele*), several moths,

ants and grasshoppers. A survey in Scottish Borders in 2004 the Borders suggests that the small blue butterfly (*Cupido minimus*) may have become locally extinct.

Ongoing nature conservation

management is carried out at St Abb's Head and elsewhere e.g. Dowlaw. Borders FWAG is focussing key advisory work on coastal farming units.

Grazing management at NTS reserve maintains important grasslands in the NNR. Invasive species such as ragwort, gorse and creeping thistle are controlled. Similarly, grazing management is carried out in the SSSIs along the coast.

SNH and the National Trust for Scotland carry out monitoring of seabird colonies. NTS conduct biological monitoring on the NNR, including northern brown argus and vegetation monitoring. Site Condition Monitoring is being carried out on the designated sites.

Data gathering occurs through the Scottish Borders Biological Recorders Group and collation by Scottish Borders Biological Records Centre.

Countryside Ranger Service led walks along the Berwickshire Coastal Path promoting the importance of the Maritime cliff and slope habitats and species.

SEPA is maintaining good water quality in rivers & burns through the regulation of discharges.

Scottish Borders Council with partners including SNH and the Scottish Executive, are leading a pilot project on the Berwickshire Coast under the Scottish Executive Scottish Sustainable Marine Environment Initiative (SSMEI). This is a three year pilot study beginning in 2006 investigating the potential for community led sustainable development of the marine environment in the Berwickshire

Coast area. This will develop initiatives to demonstrate sustainable fisheries, sustainable harbour management and sustainable visitor management. Opportunities to benefit the maritime cliff and slope habitats may develop from this initiative.

Objectives and Targets

Objectives

1. Maintain and enhance the biodiversity of the maritime cliff and slope habitats by appropriate management.
2. Raise awareness of the importance of the habitats, the threats they are exposed to and the action required to safeguard them.

Action plan targets

- T1** Seek to maintain and enhance the existing maritime cliff resource of cliff-top and slope habitats, of about 40km.
- T2** Maintain and where possible increase the amount of maritime cliff and slope habitats unaffected by coastal defence and other engineering works, allowing the free functioning of coastal physical processes where possible.
- T3** Increase the area of cliff-top semi-natural habitats by at least 5ha over the next 20 years.
- T4** Improve by appropriate management the biodiversity of at least 10% of the maritime cliff and slope habitats, including cliff-top vegetation, by 2010.
- T5** Increase education and awareness of maritime cliff and slope habitats and species through targeted new initiatives.

ACTIONS

1. Policy & Legislation:	Partners	2006	2007	2008	2009	2010	2015	Meets Objective
1.1 Input into review of RSS and Land Management Contracts prescriptions	C&M HWG, EF&LG HWG	*	*	*	*	*		T1, T3, T4
1.2 Input into the development of future agri-environment schemes and Land Management Contracts	C&M HWG, EF&LG HWG	*	*	*	*	*	*	T1, T3, T4
1.3 Input into the development of adopt policies (N4, N5 and N12 of Structure Plan) to ensure developments are sensitively placed with regard to cliff-top habitats	SBC (P&ED), SNH		*	*	*	*	*	T1
1.4 Promote sea defence and coastal protection policies, which encourage the free functioning of the coastal physical processes wherever possible. Make necessary linkage to EMS management scheme	SBC (P&I, TS), Crown Estates SNH Network Rail	*	*	*	*	*	*	T2
1.5 Ensure implementation of Shoreline Management Plan (SMP) if adopted	SBC			*	*	*	*	T1, –

	2006	2007	2008	2009	2010	2015	Meets Objective
3. Advisory							
3.1 Encourage the appropriate management of maritime cliff and slope habitats by preparing and disseminating guidance material	*	*	*	*	*	*	T1, T3, T4
3.2 Ensure appropriate advice is targeted for applications to RSS and Land Management Contracts	*	*	*	*	*	*	T1, T3, T4
4. Research & Monitoring							
4.1 Identify list of key species and ensure appropriate monitoring is implemented, create an appropriate database and consider creating an image catalogue	*	*	*	*	*	*	T1, T3, T4
4.2 Conduct survey to assess conservation importance of undesignated areas and identify sites for improvement (see also 2.2, 2.4)	*	*	*	*	*	*	T1, T3, T4
4.3 Conduct site condition monitoring of designated sites	*						T1

4.4 Review current grazing practices	NTS, SNH	*	*	*	*	*	*	*	T1, T4
5. Communications & Publicity	Partners	2006	2007	2008	2009	2010	2015	Meets Objective	
5.1 Promote an understanding of the biodiversity value and importance of the coastal strip through newsletters e.g. Cross Border Currents, events, and websites. Produce four articles by 2008	NTS, VMR, EMS, SBC	*	*	*	*	*	*	T5	
5.2 Review & update existing leaflets	C&M HWG		*					T5	
5.3 Conduct Ranger-led walks and presentations to promote LBAP maritime cliff and slope habitats including the East Berwickshire Natural History Festival	SBC (P&ED), NTS, VMR	*	*	*	*	*	*	T5	
6. Plan Monitoring	Partners	2006	2007	2008	2009	2010	2015	Meets Objective	
6.1 Monitor and review this plan on an annual basis and revise every 5 years	C&M HWG	*	*	*	*	*	*	T1, T2, T3, T4, T5	

Abbreviations

C&M HWG	LBAP Coastal & Marine Habitat Working Group
EF&LG HWG	LBAP Enclosed Farmland & Lowland Grassland Habitat Working Group
EMS	Berwickshire & North Northumberland European Marine Site
FWAG	Farming and Wildlife Advisory Group
NTS	National Trust For Scotland
SAC	Scottish Agricultural College
SBC	Scottish Borders Council
(P&ED)	Planning & Economic Development
(TS)	Transport & Environmental Standards
SBBRC	Scottish Borders Biological Records Centre
SEB	Scottish Enterprise Borders
SSMEI	Scottish Sustainable Marine Environment Initiative
SNH	Scottish Natural Heritage
VMR	Voluntary Marine Reserve

Key Contacts:

Ecology Officer
Planning and Economic Development
Scottish Borders Council
Newtown St Boswells
Melrose
Scottish Borders TD6 0SA
Tel: 01835-825060
Fax: 01835-825158
email: ped@scotborders.gov.uk

Scottish Natural Heritage
Anderson's Chambers
Market St
Galashiels
Scottish Borders
Tel: 01896-756652

National Trust for Scotland
St Abbs Head NNR
Rangers Cottage
Northfield
St Abbs
Eyemouth
TD14 5QF
Tel: 018907-71443



© NTS Kevin Rideout

This document and other Habitat Action Plans can be viewed at
<http://www.scottishborders.gov.uk/life/environment/naturalheritage/2715.html>



Designed by Scottish Borders Council Graphic Design Section.
Printed in Scottish Borders by Kelso Graphics.