

wildwaterforestmountains
ennerdale

Combined SSSI Management Plan 2015-2025

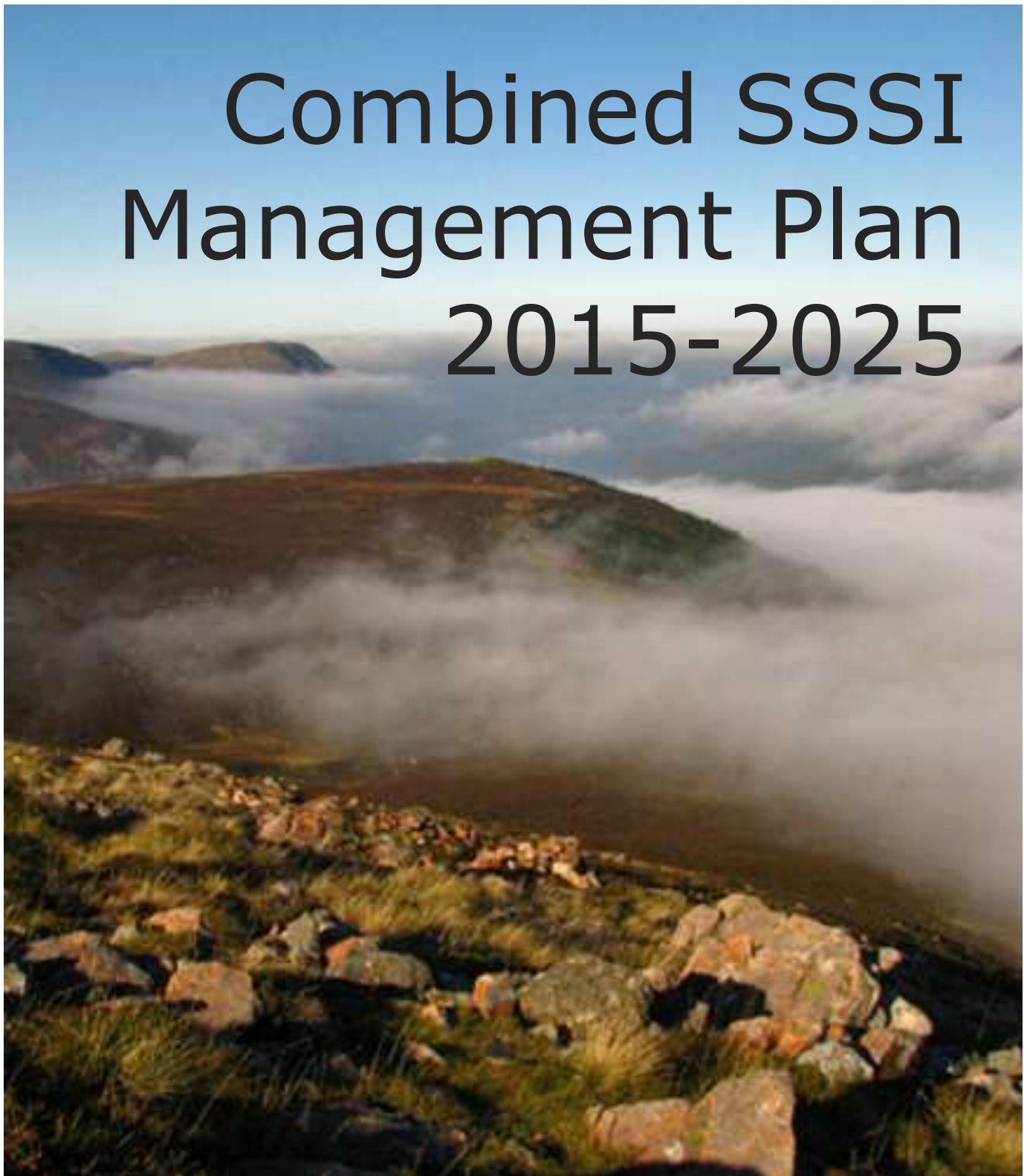


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Bowness Knott

Site details

Name of Site:	Bowness Knott
OS Grid Ref:	NY 111155
Period of Plan:	2013 to 2023
Area:	40.63ha

Location

The site is located at the west end of the Ennerdale valley on the lower slopes of Bowness Knott some 14km east of Whitehaven.

Description

The crags and rock outcrops around Bowness Knott provide excellent exposures of an igneous rock-type known as the Ennerdale Granophyre. This was injected into the crust in a molten state (as magma) during the early Ordovician Period of geological history about 475 million years ago. These outcrops are of particular interest as they illustrate the contact of the granophyre with the surrounding Skiddaw Slate "country rocks". The injection of the granophyre at high temperature baked the country rocks and the effects of this process can also be studied at Bowness Knott. This is an important site for study of the Ennerdale Granophyre, demonstrating many features of geological interest.

The designated area includes 11ha of Japanese larch planted in 1951 which has been thinned every 3 to 7 years in the past.

The area is important for recreation and access with the site including Bowness Knott car park, picnic site and footpaths and the sewage tank for the now removed toilets.

The site contains Ennerdale Parish Quarry which is owned by Ennerdale and Kinniside Parish. Quarrying activity has not been known to be carried out for some decades.

Finally in addition to the geological interest the site is important for nesting Peregrine Falcons.

Condition status

May 2012 – All units were identified as in `Favourable` condition status.

SSSI name: Bowness Knott

% Area meeting PSA target	% Area favourable	% Area unfavourable recovering	% Area unfavourable no change	% Area unfavourable declining	% Area destroyed / part destroyed
100.00%	100.00%	0.00%	0.00%	0.00%	0.00%

Issues to be addressed

- Natural Regeneration and loose scree obscuring the contact (transition) zone between the two geologies Skiddaw Slater and Ennerdale Granophyre.
- Avoiding unusual forest operations disturbing nesting Peregrine falcons (timber haulage along the valley access road is considered normal and does not cause a disturbance).
- *Phytophthora ramorum* disease of larch could see the removal of larch trees from the site.

Opportunities

- The Wild Ennerdale Partnership provides the opportunity to manage this site holistically at the landscape scale, pooling resources and effort to protect the special qualities of the site and sharing these with the wider community and visitors.
- Some targeted quarrying is beneficial to maintain the visibility of the transition zone.

Objectives of management

- Maintain the transition zone between the Ennerdale Granophyre and Skiddaw Slates free of natural regeneration and loose scree.
- Protect the Peregrine falcons from disturbance.
- Share the special qualities of the site with the wider community and visitors.

Management Actions

- Ensure that clear felling of larch trees and subsequent restocking do not impact the favourable status of the site, whilst ensuring protection of the nesting Peregrine Falcons.
- Existing way markers, path and road surfaces, the car park surface, fence boundaries and seating will be maintained as and when necessary.

- All educational use of the site will be controlled by permit issued by the Forestry Commission. Permission will not be given for any removal of fixed material or any work on the rock face. Permission to remove loose scree will be given subject to Natural England approval.
- Clear scrub from key section as identified in current condition assessment.

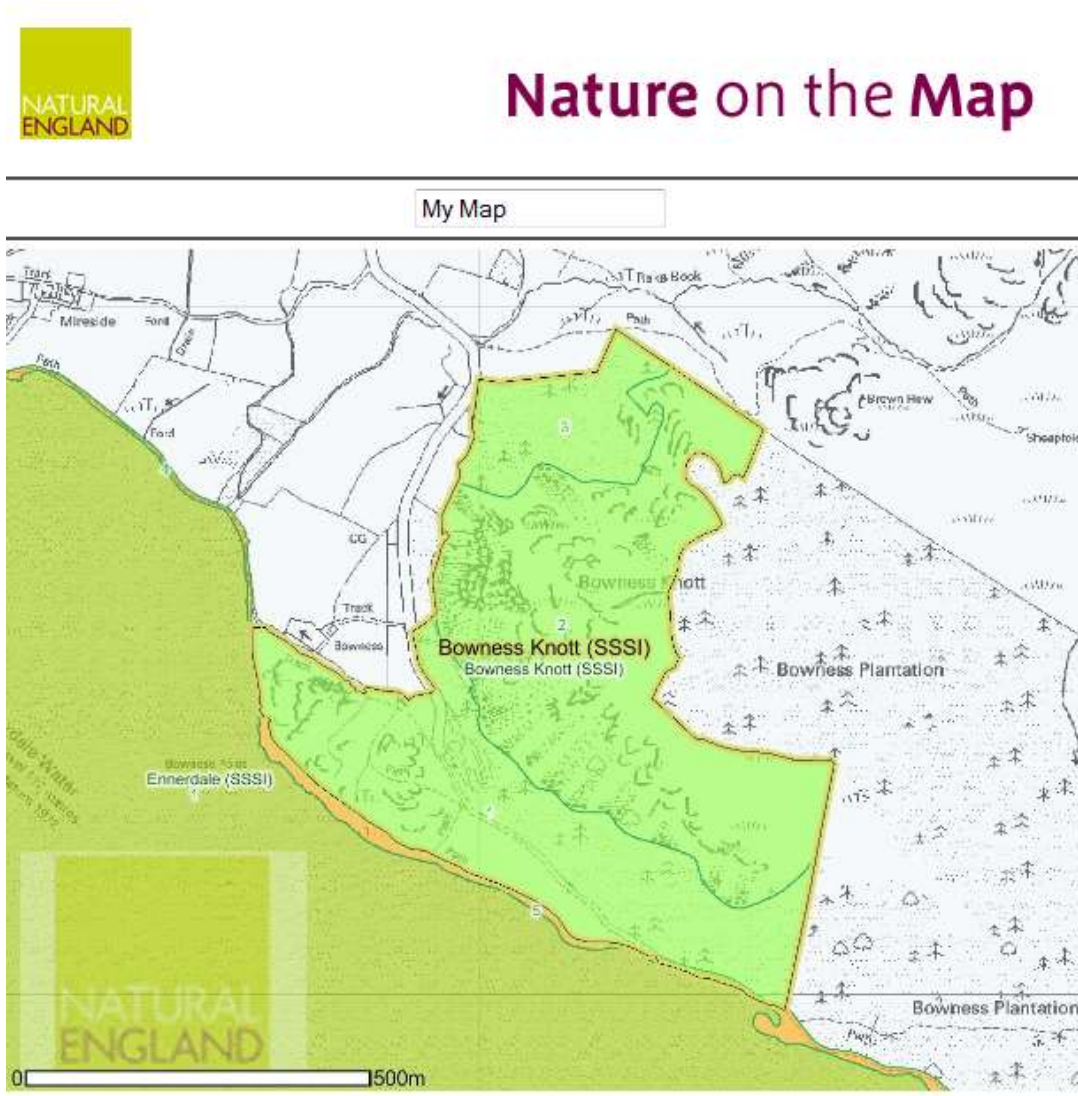
Monitoring

- Jointly with Natural England carry out a 5 to 6 yearly inspection and update actions if necessary.

References

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Appendix 1 Site Map



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- Selected Sites of Special Scientific Interest
- SSSI Live Management Agreements
SSSI Unit condition - last updated 22 May 2012
- Favourable Condition
- Unfavourable Recovering
- Unfavourable no change
- Unfavourable Declining
- Part Destroyed
- Destroyed
- Not Assessed
- Sites of Special Scientific Interest
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- Natural England Area Teams
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- Ordnance Survey background mapping
- England



Ennerdale Water

Site details

Name of Site:	Ennerdale Water
OS Grid Ref:	NY 110148
Period of Plan:	2012 to 2022
Area:	425.25ha

Location

The site is located at the west end of the Ennerdale valley some 10km east of Whitehaven.

Description

Ennerdale Water is an important example of a nutrient-poor lake and in Cumbria is second only to Wastwater for its low productivity. It is relatively undisturbed and supports a characteristic freshwater flora and fauna which include examples of nationally rare and local species

The site contains a variety of habitats apart from the open water of the lake itself, including the shoreline, a small area of semi-natural deciduous woodland with important lichen and bryophyte communities, and a small area of wetland at the head of the lake.

Latterbarrow Wood is an area of birch-oak woodland: on the steep south-facing slopes above the lake head and is included within the site. Side wood previously within Ennerdale SSSI is now part of Ennerdale and Pillar Fells SSSI.

At the head of the lake, behind an interrupted shingle spit with an associated system of inlets and lagoons, there is an interesting area of wet heath dominated by purple moor-grass and small, floating *Sphagnum* carpets

Fish populations include the nationally rare Arctic Charr which spawn in the lower reaches of the River Liza at the head of the lake, brown trout, salmon, eel, three-spined stickleback and minnow. The lake is also home to two rare crustaceans which are characteristic of relic glacial lakes

The southern shore is devoid of aquatic vegetation, being steep and rocky, while the richest areas are the western basin and part of the northern shore. The aquatic flora found here is typical of unproductive lakes and includes water lobelia *and* quillwort which are frequent in Cumbria but uncommon elsewhere in England.

Condition status

May 2012 see Appendix 1 map for status of individual units.

% Area meeting PSA target	% Area favourable	% Area unfavourable recovering	% Area unfavourable no change	% Area unfavourable declining	% Area destroyed / part destroyed
98.37%	6.69%	91.68%	1.63%	0.00%	0.00%

Issues to be addressed

- Increasing productivity and turbidity recorded in successive 5 yearly Lakes Tours currently cause unknown.
- Impact of a discontinuous concrete lake shore revetment wall along the western and northern lakeshore which prevents natural lakeshore habitats developing, contributes to the flooding of the lakeshore right of way and prevents aquatic vegetation developing.
- Ongoing concern for future of Arctic Charr which although recovering in numbers are still vulnerable to predictions of warmer winter temperatures
- Understanding what future level and type of fishing is sustainable for the Charr population.
- Balance between maintaining sufficient lake levels whilst maintaining enough water flow down the River Ehen for the freshwater pearl mussel population.
- Potential for increased sediment inputs into lake caused by large scale felling of larch in response to confirmed infection by *Phytophthora ramorum* disease.
- Species mix of natural regeneration within Latterbarrow ancient semi natural woodland.
- Balance between compensation flow for River Ehen and abstraction of drinking water and an objective for a near natural hydrological regime.

Opportunities

- The Wild Ennerdale Partnership offers opportunities to pool resources and effort in ensuring the protection of the lakes special qualities.
- The Lakes Tour data provides evidence to support action to reduce nutrient and or sediment inputs.

Objectives of management

- Aim to see whole site in favourable or unfavourable recovering condition by end of plan period.
- Increase the area of natural lakeshore habitat.
- Ensure Arctic Charr populations are recovering to ecologically sustainable levels. This will require additional actions out with this SSSI plan.
- Prevent further increase in lake turbidity/productivity and see turbidity/productivity levels falling.
- Share the special qualities of the site with the wider community and visitors.
- Ensure natural regen of birch-oak woodland within Latterbarrow

Management Actions

- Deliver pilot revetment removal sites, monitor and review results. If successful develop and implement a plan to remove as much of the revetment as is practical whilst maintaining a public access route around the lakeshore.
- Investigate reasons behind the increasing lake turbidity.
- Work with neighbours and partners to reduce the source(s) of inputs changing lake turbidity.
- Support Environment Agency efforts to restore Arctic Charr Populations.
- Agree new terms of fishing agreement with Angling club to include no fishing from boats, catch and return and bag limits.
- Monitor group canoeing through permit system. Family and individual canoeing do not require permits.
- Encourage users to apply appropriate bio-security for any lake based activities.
- Deliver the requirements of the new abstraction regime for Ennerdale Water.
- Manage harvesting and restocking operations in a manner to reduce risk of increased sediment inputs.
- Fell sufficient beech trees within Latterbarrow wood to favour natural regeneration of birch oak woodland. Hand pull beech seedlings across site at least once every 5 years.
- Deliver the grazing management for Castle Hows as agreed within the HLS scheme.

Monitoring

- Annual Review of Management Actions progress by Wild Ennerdale partnership.
- Environment Agency annual monitoring of Arctic charr spawning.
- Water chemistry is monitored continuously by the Environment Agency monitoring buoy in the middle of the lake. Also Manual water samples taken monthly.
- Natural England monitoring.
- Lakes Tour water quality survey every 5 years.
- Permissions system for large/commercial group water based activities
- Annual reports back from Wathbrow Anglers.

References

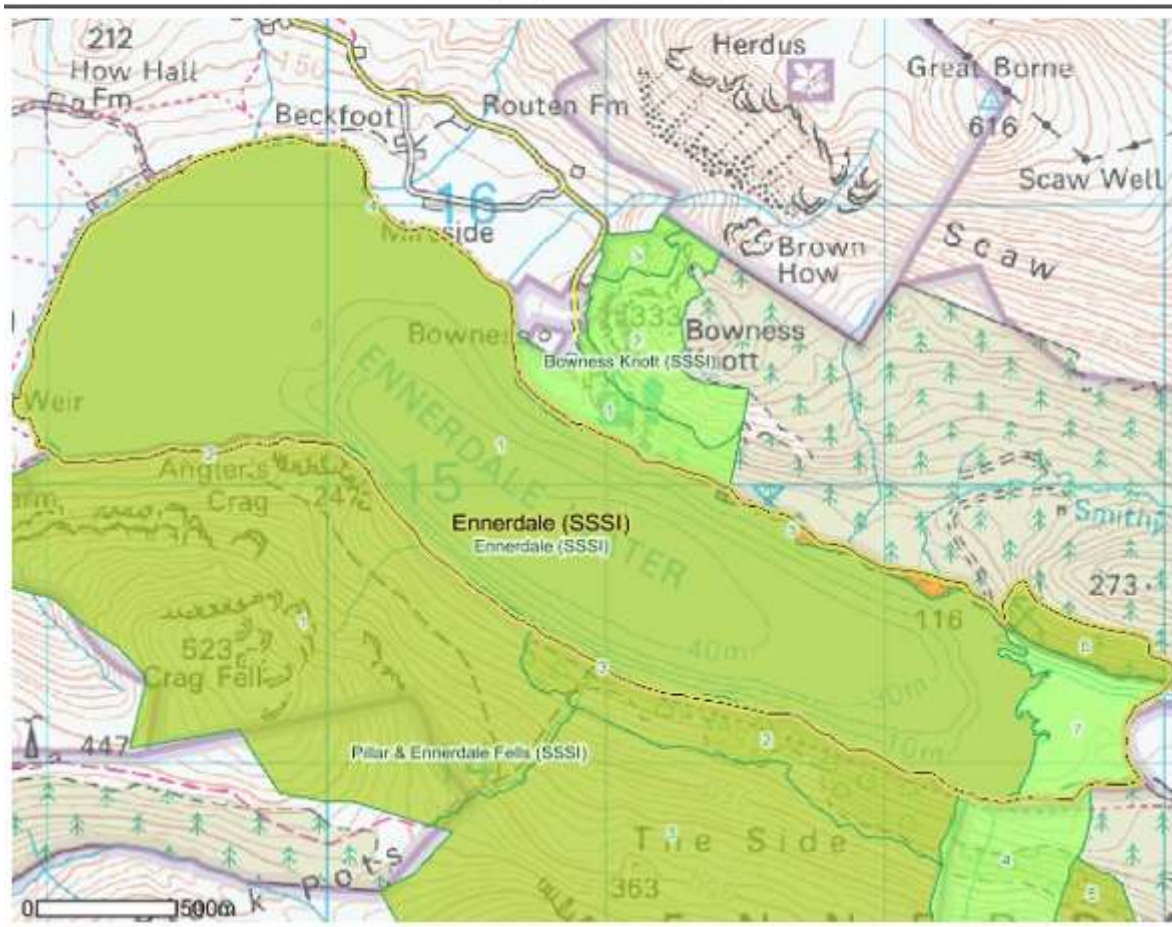
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Appendix 1 Site Map



Nature on the Map

My Map



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- England



Pillar and Ennerdale Fells

Site details

Name of Site: Pillar and Ennerdale Fells
OS Grid Ref: NY 110148
Period of Plan: 2012 to 2022
Area: 425.25ha

Location

Ennerdale and Pillar SSSI is located on the north facing slopes of the Ennerdale valley in West Cumbria around 14km east of Whitehaven within the Lake District National Park.

Description

The site is important in exhibiting one of the best known examples of altitudinal succession in England. From native upland birch-oak woodland at 120m asl on the shores of Ennerdale the vegetation changes through sub-montane heaths and grasslands to montane heaths along the summit ridge at an altitude of 890m. The range of heathland types found on Ennerdale Fell are some of the most important in Cumbria as are the herb-rich upland ledge communities associated with the crags of Pillar. Additional interest is provided by the native broad-leaved woodland of Side Wood and the upland breeding bird community.

As a result of the range of habitats found within the Pillar and Ennerdale Fells SSSI, the site supports one of the best upland breeding bird assemblages in West Cumbria. Breeding species include buzzard, peregrine, merlin, raven, red grouse, wheatear, whinchat and ring-ouzel.

Condition summary

May 2012 SSSI Condition Survey

% Area meeting PSA target	% Area favourable	% Area unfavourable recovering	% Area unfavourable no change	% Area unfavourable declining	% Area destroyed / part destroyed
100.00%	1.86%	98.14%	0.00%	0.00%	0.00%

Issues to be addressed

- Over grazing by sheep has denuded the quality of the habitats especially along the southern ridge where encroachment from the neighbouring common has increased grazing significantly. Whilst repairs and a fenced extension to some of the boundary wall, erected in 2006 has reduced sheep encroachment, evidence from long term micro enclosure monitoring shows that grazing is still significantly limiting restoration.
- Loss of montane and sub alpine habitats due to long term over grazing.
- Impact of forest boundaries both visually and in concentrating grazing pressure
- Management of stock trespass along the site's southern ridge.
- Low levels of native tree regeneration in Side Wood especially the lack of established saplings.
- Non native conifer regeneration into montane flushes around Pillar Rock.

Opportunities

- The Wild Ennerdale Partnership provides the opportunity to manage this site holistically at the landscape scale, pooling resources and effort to protect the special qualities of the site and sharing these with the wider community and visitors.
- Implementation of revised tenancies and HLS agreements.

Objectives of management

- Restore natural range and condition of upland habitats including dry heath, wet heath, blanket bog, flushes, montane communities and native woodland which have been degraded by historic grazing.
- Incorporate "top forest" habitats into the grazing area.
- Encourage a blurring of boundaries between fell, forest and riparian corridors.
- Share the special qualities of the site with the wider community and visitors.

Management actions

- Extend the fenced boundary on the Caw Fell ridge eastward and follow up with a rebuilt walled boundary. Remove sections of fence as wall is extended. Dependent on stone availability and funding.
- Twice monthly shepherd trespassing stock from adjacent common land, reducing in frequency if stock boundary on the Caw Fell ridge discourages trespass.
- Through Farm Business Tenancy and Higher Level Schemes move grazing from intensive sheep dominated to extensive systems of cattle, sheep or mixed stock grazing.
- Remove redundant internal boundary fencing.
- Erect regeneration exclosures in Side Wood.
- Complete removal of non native conifers from montane flushes.
- If stock trespass is reduced to manageable levels then look to remove the forest boundary fences where appropriate to restore the altitudinal succession.

Monitoring

- Annual review of progress against Management actions by Wild Ennerdale Partnership.
- Monthly recording of sheep/cattle numbers and ownership.
- Natural England 5 yearly monitoring.
- Monitor regeneration and planting in Side wood.
- Continue with hanging basket and exclosure monitoring of sub alpine habitats.
- Repeat Forest Development monitoring.

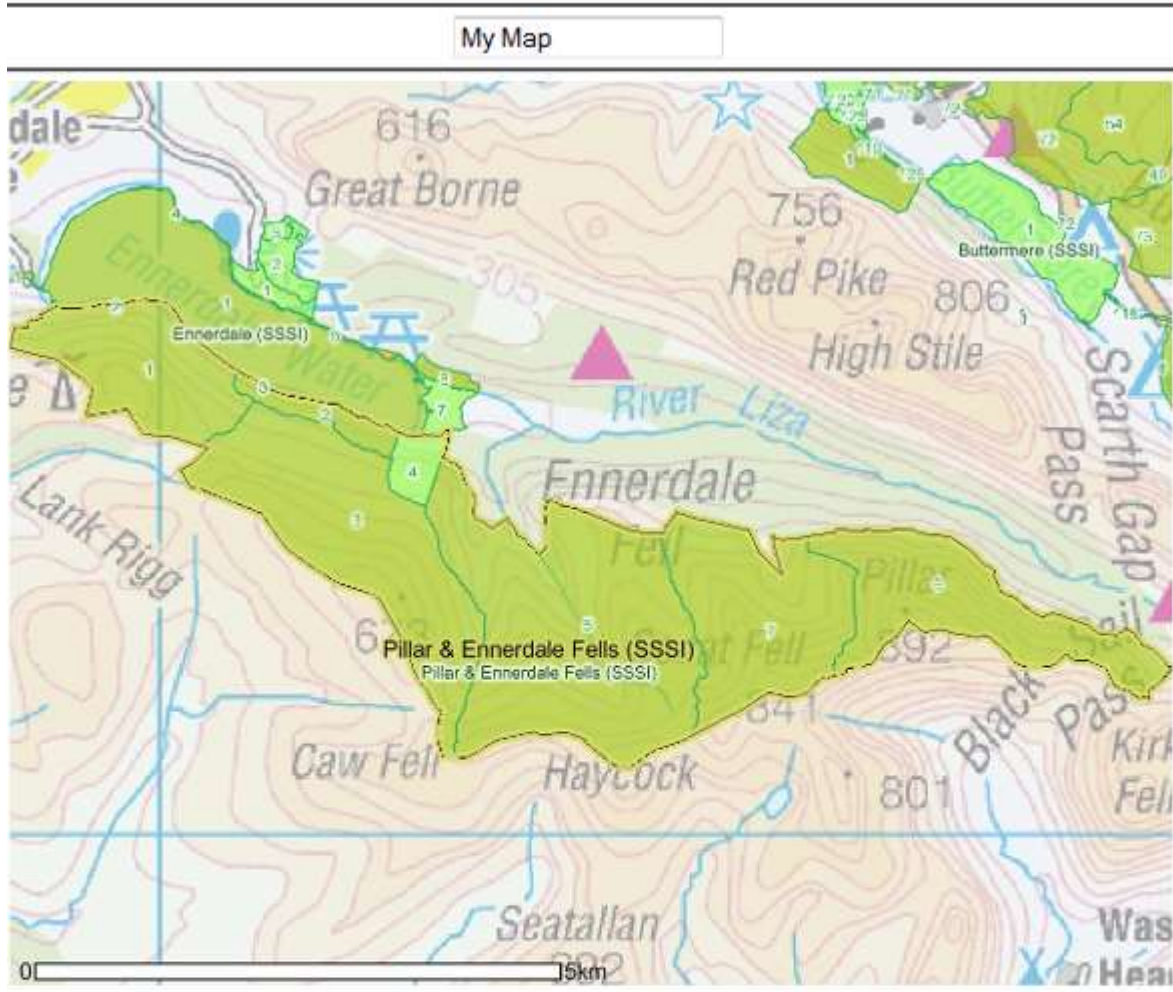
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Appendix 1 Site Map



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SSSI Unit condition - last updated 22 May 2012
- ▭ Favourable Condition
- ▭ Unfavourable Recovering
- ▭ Unfavourable no change
- ▭ Unfavourable Declining
- ▭ Part Destroyed
- ▭ Destroyed
- ▭ Not Assessed
- ▭ Sites of Special Scientific Interest
- ▭ Natural England Regions
- ▭ Natural England Area Teams
- ▭ Scotland, Wales and Ireland
- ▭ Ordnance Survey background mapping
- ▭ England



River Ehen

Site details

Name of Site:	River Ehen (Ennerdale Water to Keekle Confluence)
OS Grid Ref:	NY 070157
Period of Plan:	2012 to 2022
Length:	13.5km in entirety, approx 2km within the boundary of the Wild Ennerdale partners ownership all within Unit 1 of the SSSI.

Location

The River Ehen is on the western fringe of the Lake District. It forms the outfall from Ennerdale Water and flows some 20 km before reaching the Irish Sea at Sellafield.

Description

For much of its upper length the River Ehen is classed as an oligotrophic, or nutrient-poor, river flowing over bryophyte-dominated substrates of shingle, pebbles and rock. Upstream of Ennerdale Bridge the catchment is largely composed of acidic rocks of the Borrowdale Series and Skiddaw Slates. Downstream from Ennerdale Bridge the river is slightly enriched by streams flowing from Limestones and Millstone Grits of the Carboniferous Series.

Between Ennerdale Water and the confluence with the River Keekle at Cleator Moor, the Ehen meanders across a narrow floodplain with extensive areas of riparian woodland and trees. This stretch of the river supports outstanding populations of the freshwater mussel *Margaritifera margaritifera*. Collectively, this is the largest known population of this species in England and the only one showing recent recruitment. It is the third largest population in Britain. It is for this reason the the River Ehen is also designated a Special Area of Conservation (SAC), meaning that it is of European significance.

An important feature of this stretch of the Ehen is the amount of tree shade along the banks. Bankside shade appears to be of great importance for the mussels. Along with the oligotrophic status of the river, the shade from direct sunlight helps to reduce the amount of algal growth in the channel. This would otherwise dominate the river bed and make it unsuitable for the mussels.

Margaritifera margaritifera has a complex lifecycle with part of the juvenile stage dependent on attachment for a short period to young salmon or trout. Later juvenile stages involve burial within the gravel beds of the river. For these reasons, maintenance and successful recruitment of the mussel populations is dependent on the well-being of the whole river system.

Condition status

August 2013 SSSI Condition Survey

SSSI name: River Ehen (Ennerdale Water To Keekle Confluence) Unit 1

% Area meeting PSA target	% Area favourable	% Area unfavourable recovering	% Area unfavourable no change	% Area unfavourable declining	% Area destroyed / part destroyed
0.00%	0.00%	0.00%	0.00%	100.00%	0.00%

In 2006 a survey of the river showed there had been a shift of the entire population since the 1996 baseline survey. Adult mussels were 10 years older and juvenile mussels very scarce and confined to high flow areas of the river. Through further survey work this trend is continuing and it can be concluded that currently there is insufficient juvenile recruitment to sustain the population.

Issues to be addressed

- Lack of recruitment within the mussel population.
- Lack of gravel in upper sections of the river.
- Fish pass doesn't operate correctly.
- Water pollution from agriculture/run off and septic tanks.
- Sedimentation from agricultural drainage and run off from roads.
- Achieving correct level of flow for mussel population
- Physical damage to mussels from people recreating in the water.
- Risk of sedimentation from forestry operations.
- Reversing decline in water quality in Ennerdale Water.
- Removal of in river redundant structures.

Opportunities

- The Wild Ennerdale Partnership provides the opportunity to manage the upper 2km of this site holistically at the landscape scale, pooling resources and effort to protect the special qualities of the site and sharing these with the wider community and visitors.
- ['Pearls in Peril' LIFE + NATURE project](#)
- [West Cumbria Rivers Trust](#).
- Recent purchase of land associated with compensatory measures.
- Farm tenancy changes.
- United Utilities [Sustainable Catchment Asset Management Programme](#).

- Increased knowledge and evidence from long period of survey and assessment work.
- Renaturalisation of Ben Gill.

Objectives of management

- Aim to see site move towards Unfavourable recovering by end of plan period.
- Share the special qualities of the site with the wider community and visitors.

Management Actions

- Support the Ben Gill Restoration project team to deliver the re naturalisation of Ben Gill.
- Complete timber harvesting programme and follow up establishment and integrate with management of valley bottom fields.
- Work with the Scout Centre to reduce the impact of camping and activities on the river.
- Through education and habitat change reduce the impact of visitors on the river between Bleach Green and the lake weir.
- Reduce adverse impacts of farming activity on the river.
- Develop more open native woodland within Broadmoor which may help to reduce sedimentation into the Ehen.
- Complete a full risk assessment before carrying out any forest operations adjacent to Ehen to ensure no impact from sediment or run-off into the river.
- Implement actions from Upper Ehen Diffuse Water Pollution Plan.

Monitoring

- Annual review of progress against Management Actions by Wild Ennerdale Partnership
- Long term annual monitoring of Pearl Mussels funded and led by United Utilities and Environment Agency.
- Natural England monitoring of SSSI status.

References

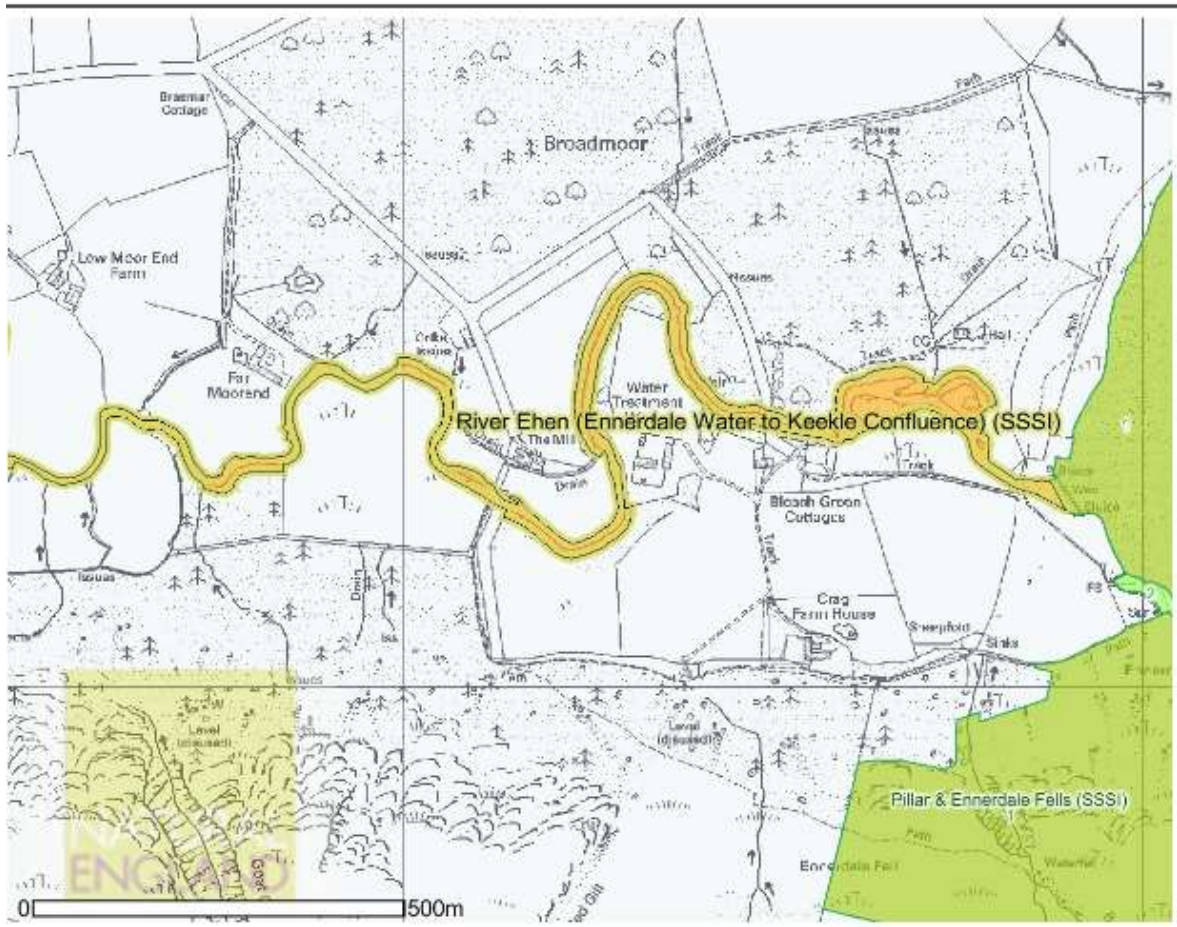
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Appendix 1 Site Map



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Approval

Name: Signature: Date:
On behalf of Natural England

Name: Signature: Date:
On behalf of Forestry Commission England

Name: Signature: Date:
On behalf of the National Trust

Name: Signature: Date:
On behalf of United Utilities