Improvement Programme for England's Natura 2000 Sites (IPENS) Planning for the Future

Site Improvement Plan North Pennine Dales Meadows

Site Improvement Plans (SIPs) have been developed for each Natura 2000 site in England as part of the Improvement Programme for England's Natura 2000 sites (IPENS). Natura 2000 sites is the combined term for sites designated as Special Areas of Conservation (SAC) and Special Protected Areas (SPA). This work has been financially supported by LIFE, a financial instrument of the European Community.

The plan provides a high level overview of the issues (both current and predicted) affecting the condition of the Natura 2000 features on the site(s) and outlines the priority measures required to improve the condition of the features. It does not cover issues where remedial actions are already in place or ongoing management activities which are required for maintenance.

The SIP consists of three parts: a Summary table, which sets out the priority Issues and Measures; a detailed Actions table, which sets out who needs to do what, when and how much it is estimated to cost; and a set of tables containing contextual information and links.

Once this current programme ends, it is anticipated that Natural England and others, working with landowners and managers, will all play a role in delivering the priority measures to improve the condition of the features on these sites.

The SIPs are based on Natural England's current evidence and knowledge. The SIPs are not legal documents, they are live documents that will be updated to reflect changes in our evidence/knowledge and as actions get underway. The information in the SIPs will be used to update England's contribution to the UK's Prioritised Action Framework (PAF).

The SIPs are not formal consultation documents, but if you have any comments about the SIP or would like more information please email us at IPENSLIFEProject@naturalengland.org.uk, or contact Natural England's Responsible Officer for the site via our enquiry service 0300 060 3900, or enquiries@naturalengland.org.uk

This Site Improvement Plan covers the following Natura 2000 site(s)

UK0014775 North Pennine Dales Meadows SAC

Site description

The North Pennine Dales Meadows SAC is a series of isolated fields within the higher parts of the enclosed valley bottoms of several north Pennine and Cumbrian valleys. The SAC is comprised of 58 component Sites of Special Scientific Interest (SSSI), which are located across the counties of Cumbria, Durham, Lancashire, North Yorkshire and Northumberland. It contains the major part of the remaining UK resource of mountain hay meadows and purple moor grass meadows, supporting a characteristic herb-rich vegetation unique to the Pennines and other upland areas of Northern England. The fields are part of the agricultural landscape and economy and are managed by summer cutting for hay; and grazing through the rest of the year.

Plan Summary

This table shows the prioritised issues for the site(s), the features they affect, the proposed measures to address the issues and the delivery bodies whose involvement is required to deliver the measures. The list of delivery bodies will include those who have agreed to the actions as well as those where discussions over their role in delivering the actions is on-going.

Priority & Issue	Pressure or Threat	Feature(s) affected	Measure	Delivery Bodies
1 Fertiliser use	Pressure	H6410 Purple moor-grass meadows, H6520 Mountain hay meadows	Review fertiliser use as part of agri-environment, and review existing consents	Forest Of Bowland AONB, Natural England, North Pennines AONB, Northumberland National Park Authority, Yorkshire Dales National Park Authority, Yorkshire Wildlife Trust, Yorkshire Dales Millennium Trust
2 Change in land management	Threat	H6410 Purple moor-grass meadows, H6520 Mountain hay meadows	Replace Site Management Statements with time-limited consents	Natural England
3 Air Pollution: impact of atmospheric nitrogen deposition	Pressure	H6410 Purple moor-grass meadows, H6520 Mountain hay meadows	Develop and implement Site Nitrogen Action Plan	Defra, Natural England, Natural Environment Research Council (NERC)

4 Change in land management	Pressure/ Threat	H6410 Purple moor-grass meadows, H6520 Mountain hay meadows	Ensure appropriate management continues	Durham Wildlife Trust, Forest Of Bowland AONB, Natural England, North Pennines AONB, Northumberland National Park Authority, Northumberland Wildlife Trust, Yorkshire Dales National Park Authority, Yorkshire Wildlife Trust, Yorkshire Dales Millennium Trust
5 Inappropriate cutting/mowing	Pressure	H6410 Purple moor-grass meadows, H6520 Mountain hay meadows	Promote traditional hay making	Forest Of Bowland AONB, Natural England, North Pennines AONB, Northumberland National Park Authority, Rural Payments Agency (RPA), Yorkshire Dales National Park Authority, Yorkshire Dales Millennium Trust
6 Changes in species distributions	Pressure	H6410 Purple moor-grass meadows, H6520 Mountain hay meadows	Improve site baseline information and monitoring	Natural England, Consultant
7 Inappropriate CSS/ESA prescription	Pressure	H6410 Purple moor-grass meadows, H6520 Mountain hay meadows	Negotiate suitable shut-up dates	Natural England
8 Drainage	Pressure	H6410 Purple moor-grass meadows, H6520 Mountain hay meadows	Encourage maintenance of drainage systems	Cumbria County Council, Environment Agency, Natural England, Lead Local Flood Authority(ies)
9 Overgrazing	Pressure	H6410 Purple moor-grass meadows, H6520 Mountain hay meadows	Promote suitable spring grazing regimes	Natural England
10 Undergrazing	Pressure	H6410 Purple moor-grass meadows, H6520 Mountain hay meadows	Promote suitable aftermath and winter grazing regimes	Natural England

11 Hydrological changes	Threat	H6410 Purple moor-grass meadows, H6520 Mountain hay meadows	Promote measures to reduce soil compaction	Forest Of Bowland AONB, Natural England, North Pennines AONB, Northumberland National Park Authority, Yorkshire Dales National Park Authority, Yorkshire Dales Millennium Trust
12 Inappropriate weed control	Threat	H6410 Purple moor-grass meadows, H6520 Mountain hay meadows	Control herbicide use	Natural England
13 Invasive species	Threat	H6410 Purple moor-grass meadows, H6520 Mountain hay meadows	Monitor effects of and investigate causes of invasive species	Natural England
14 Direct impact from third party	Pressure	H6520 Mountain hay meadows	Control impacts of off-site activities	Environment Agency, Local Authority(ies), Natural England, Local constabulary(ies), Environmental health

Issues and Actions

This table outlines the prioritised issues that are currently impacting or threatening the condition of the features, and the outstanding actions required to address them. It also shows, where possible, the estimated cost of the action and the delivery bodies whose involvement will be required to implement the action. Lead delivery bodies will be responsible for coordinating the implementation of the action, but not necessarily funding it. Delivery partners will need to support the lead delivery body in implementing the action. In the process of developing the SIPs Natural England has approached the delivery bodies to seek agreement on the actions and their roles in delivering them, although in some cases these discussions have not yet been concluded. Other interested parties, including landowners and managers, will be involved as the detailed actions are agreed and delivered. Funding options are indicated as potential (but not necessarily agreed or secured) sources to fund the actions.

1 Fertiliser use

Fertiliser use on certain areas, in particular upland hay meadows, is preventing achievement of favourable condition due to nutrient enrichment.

rennis	ser use on certain areas, in particular up	Dianu nay meauc	ws, is preventin	g acmevement or lavou	irable condition du	e to numerit erincilinerit.	
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
1A	Implement the outcomes of the Uplands Evidence review on the impacts of different rates of nutrient applications on hay meadows via renegotiation of HLS/NELMS prescriptions.	£250,000	2015-20	Rural Development Programme for England (RDPE): Environmental Stewardship Higher Level Scheme (HLS)	Rural Development Programme (RDPE)	Natural England	Forest Of Bowland AONB, North Pennines AONB, Northumberland National Park Authority, Yorkshire Dales National Park Authority, Yorkshire Wildlife Trust, Yorkshire Dales Millennium Trust
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
1B	Commission additional national research identified in the Uplands Evidence Review into the influence of different nutrients and their application on northern hay meadows.	£500,000	2015-20	Investigation / Research / Monitoring	Not yet determined	Natural England	n/a

Action	Action deparintion	Coot optimate	Timogoolo	Machaniam	Eunding ontion	Dolivery load body	Delivery newtooy/el
ACIION	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
1C	Review consents and where renegotiation is unsuccessful source funding to implement outcomes.	£4,100,000	2015-20	Regulation: Compulsory Withdraw/Modify Notice/Consent	Defra	Natural England	n/a
0.01							
2 Ch	ange in land management						
Under	ange in land management lying consents which allow inappropriat instead of signing up to an agri-environ		of the SAC featu	res exist, in the form of	f Site Management	Statements. Land mana	gers could revert back to
Under these	lying consents which allow inappropriat		of the SAC featu	res exist, in the form of Mechanism	f Site Management Funding option	Statements. Land manage	gers could revert back to Delivery partner(s)

3 Air Pollution: impact of atmospheric nitrogen deposition

Nitrogen deposition exceeds site relevant critical loads. This may be partially due to local fertiliser use. In some areas the effects are apparent, where there is a loss of species richness.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
3A	Control, reduce and ameliorate atmospheric nitrogen impacts.	Not yet determined	2015-20	Site Nitrogen Action Plan	Not yet determined	Natural England	Defra, Natural Environment Research Council (NERC)

4 Change in land management

Amalgamation of farm holdings is leading to undermanagement of some meadows. Management for hay is becoming less viable and productivity is reducing, due to lack of liming and farmyard manure input and a lack of soil testing, so pressures tend towards conversion to pasture. Change in land ownership in some areas may lead to a change in management practices. On some parts of the site, stewardship is not in place to ensure appropriate management of the features.

	e in management practices. On some	•	•	•			
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
4A	Advise landowners on appropriate management /suitable farming practices where ownership has changed.	£100,000	2015-20	Advice	Conservation and Enhancement Scheme (CES), New Environmental Land Management Scheme (NELMS), Management plan (not NE funded)	Natural England	Durham Wildlife Trust, Forest Of Bowland AONB, North Pennines AONB, Northumberland National Park Authority, Northumberland Wildlife Trust, Yorkshire Dales National Park Authority, Yorkshire Wildlife Trust, Yorkshire Dales Millennium Trust
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
4B	Implement management scheme/notice if appropriate management is not being carried out	£250,000	2015-20	Regulation: Compulsory Management Scheme/Notice	Not yet determined	Natural England	n/a

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
4C	Offer of funding to ensure hay meadow management practices remain viable.	£500,000	2015-20	Rural Development Programme for England (RDPE): Common Agricultural Policy 2014-20 (New Environmental Land Management Scheme)	Conservation and Enhancement Scheme (CES), New Environmental Land Management Scheme (NELMS)	Natural England	Forest Of Bowland AONB, North Pennines AONB, Northumberland National Park Authority, Wildlife Trust(s), Yorkshire Dales National Park Authority
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
4D	Provide advice on and incentives for application of lime in ways which will enhance the condition of the meadows and where this is not economically viable	Not yet determined	2015-20	Advice	Not yet determined	Natural England	Forest Of Bowland AONB, North Pennines AONB, Northumberland National Park Authority, Yorkshire Dales National Park Authority, Yorkshire Dales Millennium Trust
	ppropriate cutting/mowing						
	witch from production of hay to silage on the common ce hay.	or naylage has red	duced the variab	ollity in cutting date. The	ere is also a lack c	r appropriate equipment, s	skills and understanding to
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
5A	Enforce HLS agreement management, and do not offer derogation except under exceptional circumstances.	Staff time	2015-20	Regulation: SSSI Regulation	Staff time	Natural England	Rural Payments Agency (RPA)

option Delivery lead body Delivery partner(s)
Natural England nent me Natural England AONB, North Pennines AONB, Northumberland National Park Authority, Yorkshire Dales National Park Authority, Yorkshire Dales Millennium Trust
option Delivery lead body Delivery partner(s)
Local partnership Forest Of Bowland AONB, North Pennines AONB, Northumberland National Park Authority, Yorkshire Dales National Park Authority
option Delivery lead body Delivery partner(s)
Rig Natural England Forest Of Bowland AONB, North Pennines AONB, Northumberland National Park Authority, Yorkshire Dales National Park Authority, Yorkshire Dales Millennium Trust
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6	Changes	in speci	ies di	stribu	utions

Declines in the quality of habitats, through changing species composition and/or diversity, are being observed throughout the SAC. Altered drainage may be infuencing the cut area. This is likely to have been happening ever since notification. Baseline data (from notification) and recent monitoring is not detecting further loss of quality.

cut are	ea. This is likely to have been happenin	g ever since noti	fication. Baselir	ne data (from notificatio	n) and recent mon	itoring is not detecting furt	her loss of quality.
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
6A	Low quality threshold in common standard monitoring: amend favourable condition tables and Integrated Site Assessment Tool forms to site-tailor targets based on detailed survey	£40,000	2015-20	Investigation / Research / Monitoring	Not yet determined	Consultant	n/a
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
6B	Investigate the decline or loss of characteristic upland hay meadow species, particularly at the margins of the range of the habitat.	£15,000	2015-20	Investigation / Research / Monitoring		Natural England	n/a
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
6C	Improve monitoring based on-site tailored targets to assess changes in species distribution and detect any declines.	Staff time	2015-20	Investigation / Research / Monitoring	Staff time	Natural England	n/a

7 Inappropriate CSS/ESA prescription	7	Inappro	priate (CSS/ESA	prescri	otion
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Shut up dates are too late for the conservation management of the features in some cases. Some shut up dates (the date at which stock are excluded from the meadow) have been determined due to conflicts with SSSI management on alternative grazing land. There is also inflexibility in shutting up dates and timing of grazing, which means that these cannot be adapted to react to local conditions or the effects of climate change.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
7A	Review and renegotiate existing agreements. Ensure new agreements are in line with guidance (Uplands Evidence Review).	see costs under issue 1 Fertiliser use	2015-20	Rural Development Programme for England (RDPE): Environmental Stewardship Higher Level Scheme (HLS)	Rural Development Programme (RDPE), Higher Level Stewardship (HLS)	Natural England	n/a

8 Drainage

Lack of maintenance, failure and deterioration of drainage systems is causing a dominance of rushes, change in the plant community, waterlogging and consequent problems for management.

Actio	n Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
8A	Reinstatement of drainage where appropriate.	£250,000	2015-20	Rural Development Programme for England (RDPE): Common Agricultural Policy 2014-20 (New Environmental Land Management Scheme)	Rural Development Programme (RDPE), New Environmental Land Management Scheme (NELMS)	Natural England	Cumbria County Council, Environment Agency, Lead Local Flood Authority(ies)

9 Ov	ergrazing						
	les in spring grazing are being observe and and a tendency for increases in lar			higher stock levels on th	ne inbye land. The	ese changes may be relat	ed to controls of grazing
	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
9 A	Review early spring stocking concentrations.	see costs for issue 4	2015-20	Rural Development Programme for England (RDPE): Common Agricultural Policy 2014-20 (New Environmental Land Management Scheme)	New Environmental Land Management Scheme (NELMS)	Natural England	n/a
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
9B	Review grazing prescriptions and indicators of success about sward height and condition in existing agreements - provide clearer guidance about grazing rates and target sward condition.	see costs for issue 1	2015-20	Rural Development Programme for England (RDPE): Environmental Stewardship Higher Level Scheme (HLS)	Rural Development Programme (RDPE)	Natural England	n/a
10 II	ndergrazing						
Lack c	of aftermath grazing, loss of cattle on fa ged as a farm business. There is also					In some cases this is bed	cause the land is not
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
10A	Incentivise the use of cattle as an aftermath grazing tool or implement, where necessary through the use of management scheme/notice.	see costs for issue 4	2015-20	Rural Development Programme for England (RDPE): Common Agricultural Policy 2014-20 (New Environmental Land Management Scheme)	New Environmental Land Management Scheme (NELMS)	Natural England	n/a

11 😃	vdrological changes							
Meado	11 Hydrological changes Meadows are becoming wetter due to milder winters and wet summers, this may also be leading to an earlier start to the growing season having a negative impact on boreal species changes such as wood cranesbill. Soil compaction due to heavy machinery and stock is also causing hydrological changes.							
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)	
11A	Compaction may be altering drainage patterns - review with land manager condition of drains and effects on productivity. Advise on use of machinery and management actions to alleviate compaction.	Not yet determined	2015-20	Advice: Education & awareness raising	New Environmental Land Management Scheme (NELMS)	Natural England	Forest Of Bowland AONB, North Pennines AONB, Northumberland National Park Authority, Yorkshire Dales National Park Authority, Yorkshire Dales Millennium Trust	
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)	
11B	Climate change is potentially leading to more variable weather patterns - use improved favourable condition tables and site tailored tagets as a surveillance tool to detect change.	£10,000	2015-20	Investigation / Research / Monitoring	Not yet determined	Natural England	n/a	
12 ln	appropriate weed control							
There	There is the risk of use of herbicides to control 'undesirable' broad-leaved herbs such as buttercup and pernicious weeds, particularly around the edges of meadows. This can lead to a decline in quality.							
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)	
12A	Improve Natural England in-house expertise in herbicide use, eg increase number of BASIS qualified staff, to facilitate provision of better advice to landowners.	£12,000	2015-20	Advice: Other	Not yet determined	Natural England	n/a	

Action 12B	Action description Educate farmers about broad-leaved herbicide impacts.	Cost estimate £5,000	Timescale 2015-20	<i>Mechanism</i> Advice	Funding option Not yet determined	Delivery lead body Natural England	Delivery partner(s) n/a
Action	n Action description Enforcement of consent or HLS.	Cost estimate Staff time	Timescale 2015-20	<i>Mechanism</i> Enforcement	Funding option Staff time	Delivery lead body Natural England	<i>Delivery partner(s)</i> n/a
Cow p	13 Invasive species Cow parsley is becoming an invasive species. The cause may be linked to changes in hay meadow management, including a reduction in spring/aftermath grazing intensity and possibly atmospheric nitrogen deposition. There is also a problem with blackthorn invasion in one locality. Action Action description Cost estimate Timescale Mechanism Funding option Delivery lead body Delivery partner(s)						
13A	Investigate causes of invasives including cow parsley where it is a problem.	see costs for issue 4	2015-20	Rural Development Programme for England (RDPE): Common Agricultural Policy 2014-20 (New Environmental Land Management Scheme)	New Environmental Land Management Scheme (NELMS)	Natural England	n/a

ction	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
ŀΑ	SSSI enforcement to address septic tank leachate.	£7,500	2015-20	Enforcement	Third party	Natural England	Environment Agency Local Authority(ies), n/a, Local constabulary(ies), Environmental health
ction	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
В	Investigate the appropriate course of enforcement action to have the spoil removed (Raisbeck, Cumbria).	No cost	2015-20	Regulation: SSSI Regulation	Third party	Natural England	Environment Agency Local Authority(ies), n/a, Local constabulary(ies), Environmental health
ction	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
ŀC	Enforce the removal of spoil.	£7,500	2015-20	Enforcement	Third party	Natural England	Environment Agency Local Authority(ies), n/a, Local constabulary(ies), Environmental health

Site details

The tables in this section contain site-relevant contextual information and links

Qualifying features

#UK Special responsibility

North Pennine Dales Meadows SAC H6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)

H6520 Mountain hay meadows

Site location and links

North Pennine Dales Meadows SAC

Area (ha) 497.09 Grid reference NY931256 Map link

Local Authorities Cumbria; Durham; Lancashire; North Yorkshire; Northumberland

Site Conservation Objectives <u>European Site Conservation Objectives for North Pennine Dales Meadows SAC</u>

European Marine Site conservation advice n/a
Regulation 33/35 Package n/a

Marine Management Organisation site plan <u>n/a</u>

Water Framework Directive (WFD)

The Water Framework Directive (WFD) provides the main framework for managing the water environment throughout Europe. Under the WFD a management plan must be developed for each river basin district. The River Basin Management Plans (RMBP) include a summary of the measures needed for water dependent Natura 2000 sites to meet their conservation objectives. For the second round of RBMPs, SIPs are being used to capture the priorities and new measures required for water dependent habitats on Natura 2000 sites. SIP actions for non-water dependent sites/habitats do not form part of the RBMPs and associated consultation.

North Pennine Dales Meadows SAC

River basin <u>Humber RBMP</u> <u>North West RBMP</u> <u>North umbria RBMP</u> <u>Solway Tweed RBMP</u>

WFD Management catchment Derwent (NW), Eden and Esk, Lune, Swale, Ure, Nidd & Upper Ouse, Tyne,

Wear, Wharfe and Lower Ouse

WFD Waterbody ID (Cycle 2 draft) GB102076070600, GB102076070670, GB102076073982, GB102076074070, GB102076074100, GB103023075300,

GB103023075450, GB103024072770, GB104027069030, GB104027069121, GB104027069290, GB112072071790,

GB112072071810, GB112075070400

Overlapping or adjacent protected sites

Site(s) of Special Scientific Interest (SSSI)

North Pennine Dales Meadows SAC

Grassington Hospital Grounds SSSI

Walden Meadows SSSI

Yockenthwaite Meadows SSSI

Bretherdale Meadows SSSI

Bowber Head & Piper Hole Meadows SSSI

Oughtershaw & Beckermonds SSSI

New Close, Calvert Houses SSSI

Cliff Beck Meadow, Buttertubs SSSI

Harkers House Meadows SSSI

Millholme Meadow, Thwaite SSSI

Myttons Meadows SSSI

Wet Sleddale Meadows SSSI

Swindale Meadows SSSI

Raisbeck Meadows SSSI

Barrow Burn Meadows SSSI

Town End Meadows, Little Asby SSSI

Greenhaugh Meadow SSSI

Gowk Bank SSSI

Ashes Pasture & Meadows SSSI

Sandybeck Meadow SSSI

Deepdale Meadows, Langstrothdale SSSI

Arkle Beck Meadows, Whaw SSSI

Scar Closes, Kisdon Side SSSI

Fothering Holme SSSI

Borrow Beck Meadows SSSI

Thorneyburn Meadow SSSI

Askrigg Bottoms SSSI

Pry & Bottom Meadows, Mid Mossdale SSSI

Stephen Ings, Crackpot SSSI

Langcliff Cross Meadow SSSI

Durtrees Burn Grassland SSSI

Knarsdale Meadows SSSI

Cautley Thwaite Meadows & Ecker Secker Beck SSSI

New House Meadows, Malham SSSI

Low Redford Meadows SSSI

Middle Side & Stonygill Meadows SSSI

Bowlees & Friar House Meadows SSSI

Deepdale Meadows SSSI

Gingerfields SSSI

Far High House Meadows SSSI

Aules Hill Meadows SSSI

Upper Wharfedale SSSI

River Derwent & Tributaries SSSI

River Eden & Tributaries SSSI

Richmond Meadows SSSI

Lune Forest SSSI

Middle Crossthwaite SSSI

Mallerstang-Swaledale Head SSSI

Bell Sykes Meadows SSSI

Muker Meadows SSSI

Heatheryburn Bank SSSI

	Catton Lea Meadow SSSI					
	High Knock Shield Meadow SSSI					
	Grains O'th' Beck Meadows SSSI					
	White Ridge Meadow SSSI					
	Wilson Place Meadows SSSI					
	Hannah's Meadows SSSI					
	West Park Meadows SSSI					
	Rigg Farm & Stake Hill Meadows SSSI					
	Mere Beck Meadows SSSI					
	Cornriggs Meadows SSSI					
	West Newlandside Meadows SSSI					
	Peckriding Meadows SSSI					
National Nature Reserve (NNR)						
North Pennine Dales Meadows SAC	Gowk Bank NNR					
	New House Farm, Malham NNR					
	Sandybeck Meadow NNR					
Ramsar						
North Pennine Dales Meadows SAC	n/a					

1	Special Areas of Conservation (SAC) and Special Protection Areas (SPA)						
	North Pennine Dales Meadows SAC						
River Derwent and Bassenthwaite Lake SAC North Pennine Moors SPA							
							Other relevant documents and links
	North Pennine Dales Meadows SAC	Influence of Spring Grazing regime on the floristic diversity and restorative potential of upland hay meadows	Defra project BD1467				

1.0 17/02/2015







