



THE
ENVIRONMENT
PARTNERSHIP

Haweswater Aqueduct Resilience Programme

Chapter 9 - Appendix 9A.1

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United Utilities

Environmental Statement



Water for the North West



Haweswater Aqueduct Resilience Programme

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1. Desk-Based Assessment

1.1 Introduction

- 1) TEP was appointed by United Utilities to complete an Ecological Impact Assessment (EcIA) for the Haweswater Aqueduct Resilience Programme - Proposed Bowland Section. The EcIA is required to inform an Environmental Impact Assessment (EIA) and support production of the Environmental Statement (ES).
- 2) A series of ecological surveys was undertaken to complete the EcIA. This Appendix is one of a series of Ecological Technical Reports (ETRs) produced to support the EcIA. This ETR documents the methods and findings of the ecological desk-based assessment (DBA).

1.2 Methods

- 3) A data gathering exercise was initially completed by United Utilities in August 2018, updated by Jacobs in August 2019, comprising a combination of searches using web-based sources and local biological records centres. TEP completed an updated review of all data sources and findings in May and June 2020. Compiled data sources are described below.
- 4) Lancashire Ecological Records Network (LERN) provided the following data:
 - Non-statutory designated wildlife sites within 2 km of the Proposed Bowland Section
 - Protected and notable species records within 2 km of the Proposed Bowland Section
- 5) Multi-Agency Geographic Information for the Countryside (MAGIC), accessed May to June 2020 via www.magic.gov.uk, identified the following:
 - Statutory nature conservation sites of international and national importance within 5 km of the Proposed Bowland Section
 - Statutory nature conservation sites of less than national importance within 2 km of the Proposed Bowland Section
 - Natural England's Impact Risk Zones (IRZ) overlapping the Proposed Bowland Section
 - Natural England's Priority Habitat Inventory (PHI), Ancient Woodland Inventory (AWI) and European protected species licences (EPSL) within 1 km of the Proposed Bowland Section
- 6) Google maps (<https://www.google.co.uk/maps>), accessed May to June 2020 displayed aerial photographs for the Proposed Bowland Section and DBA search areas, assisting identification and assessment of potential habitats or species which may be present.

2. Statutory Wildlife Sites

2.1 Summary

- 7) No statutorily designated site is located within or adjacent to the Site.
- 8) Natura 2000 (N2k) sites, of international importance for wildlife, including Special Areas of Conservation (SAC), Special Protection Areas (SPAs) or Ramsar sites, and nationally or regionally important wildlife designations within 5km of the Proposed Bowland Section are summarised in Table 1.

Table 1: Statutorily Designated Wildlife Sites

Status	Name	Nearest point	Summary features
SAC	North Pennine Dales Meadows	2.2 km north east	The site is designated for supporting Molinia meadows on calcareous, peaty or clayey-silt-laden soils and for its mountain hay meadows which contain a wide range of rare and local meadow species. The grasslands included show very limited effects of agricultural improvement and have good conservation of structure and function.
SPA	Bowland Fells	2.7 km north west	Annex I upland breeding bird species: <ul style="list-style-type: none"> ▪ hen harrier ▪ merlin The SPA also supports an internationally important population of breeding lesser black-backed gulls which is proposed as an additional feature of the site.
SSSI	Bowland Fells		The SSSI Unit closest to the Proposed Bowland Section comprises unit 1011820, which was last reported to be in 'favourable' condition. The main habitat present is upland bogs.
SSSI	Myttons Meadows	2.2 km north east	The site comprises a series of three fields below Myttons Farm and part of another field to the south, which together represent the largest and best surviving example of traditionally managed, species-rich meadow grassland identified in Lancashire.
SSSI	Bell Sykes Meadow	3.1 km north east	Bell Sykes Meadows is one of the few remaining unimproved herb-rich grasslands present in this part of Lancashire.
SSSI	Langcliff Cross Meadow	3.6 km north east	The SSSIs represent some of the best examples of the few remaining species-rich meadow grasslands in the county
SSSI	Field Head Meadow SSSI	4 km north east	Field Head Meadows consists of a single field of enclosed, moderately herb-rich hay meadow, typical of its type in northern England. Field Head Meadow is one of the few remaining herb-rich grasslands present in this part of Lancashire. The SSSI Unit (1022962) was last reported to be in 'favourable' condition.

Status	Name	Nearest point	Summary features
SSSI	Far Holme Meadow	0.68 km east	The grassland plant communities present support many species characteristic of old hay meadows which have been traditionally managed and left unimproved for many years. Such communities are now scarce nationally and represent a highly vulnerable habitat which, in Lancashire, has been severely reduced by agricultural intensification. The SSSI Unit (1011696) was last reported to be in 'favourable' condition.
SSSI	Robert Hall Moor	2.0 km north	The site is remarkable for the range of plants represented including two nationally rare communities and several species which are rare or very limited in their distribution. This assemblage of species is unique in Lancashire. Its most outstanding feature as a habitat is that it is the only extensive example of species-rich undrained and unimproved base-flushed neutral grassland known to remain in the county. The SSSI Unit (1011731) was last reported to be in 'favourable' condition.
SSSI	Roeburndale Woods	2.0 km west	The extensive woodlands of the Roeburn gorge contain the best examples of the range of northern deciduous woodland types characteristic of the River Lune and its tributaries draining the north side of the Bowland Fells. The SSSI Unit (1011720) was last reported to be in 'favourable' condition.
SSSI	Clear Beck Meadow	2.7 km north west	Although small in size the site represents one of the best examples of species-rich meadow grassland in Lancashire. Unlike the larger, more accessible fields adjacent to it, Clear Beck Meadow has not been agriculturally improved and supports an exceptionally diverse grassland flora. The SSSI Unit (1011480) was last reported to be in 'favourable' condition.

- 9) Data forms for N2k sites located within 5km of the Proposed Bowland Section are presented at Appendix A.
- 10) Citations for SSSIs located within 5km of the Proposed Bowland Section are presented at Appendix B.

2.2 Impact Risk Zones

- 11) Natural England Impact Risk Zones (IRZ) define zones around statutorily designated sites which reflect the particular sensitivities of the features for which those site are notified and indicate the types of development proposal which could potentially have adverse impacts. The Proposed Bowland Section lies within six IRZs, the relevant planning categories and risk thresholds for which are summarised in Table 2.
- 12) The Newton-in-Bowland Compound overlies SSSI IRZs for Bowland Fells SSSI, Myttons Meadows SSSI, Bell Sykes Meadow SSSI and Langcliff Cross Meadow SSSI. The Lower Houses Compound overlies SSSI IRZs for Far Holme Meadow SSSI and Robert Hall Moor SSSI.

Table 2. Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/ SPAs & Ramsar sites (England)

1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?	2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:		
	Newton-in-Bowland Compound	Lower Houses Compound	
		Northern IRZ	Southern IRZ
All Planning Applications	n/a		
Infrastructure	Airports, helipads and other aviation proposals	Airports, helipads and other aviation proposals	
Wind & Solar Energy	Wind turbines	n/a	
Minerals, Oil & Gas	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.	Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction	
Residential	n/a		
Rural Residential	n/a		
Air Pollution	Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m ² , slurry lagoons > 750m ² & manure stores > 3500t	Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m ² , slurry lagoons > 200m ² & manure stores > 250t).	
Combustion	General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.	General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.	
Waste	Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.	Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.	
Composting		Any composting proposal with more than 500 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic	Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic

1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?	2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:		
	Newton-in-Bowland Compound	Lower Houses Compound	
		Northern IRZ	Southern IRZ
		digestion, other waste management.	digestion, other waste management
Discharges		n/a	
Water Supply		n/a	

3. Non-Statutory Wildlife Sites

3.1 Summary

- 13) Non-statutory wildlife sites including Biological Heritage Sites (BHS) Local Geodiversity Sites (LGS) and Special Roadside Verges located within 2 km of the Proposed Bowland Section are identified in Table 3. Citations for CWS are presented at Appendix C.

Table 3. Identification of non-statutory wildlife sites within 2 km of the Proposed Bowland Section

Site Name	Site Reference	Location relevant to Proposed Bowland Section
Gamble Hole Farm Pasture BHS	65SE09	Within Newton-in-Bowland Compound
Newton West Roadside Verge BHS	65SE05	Adjacent to Newton-in-Bowland Compound
River Hodder From Confluence with River Ribble Upstream to Cross of Greet Bridge/ Bowland Fells SSSI Boundary BHS	LSRHO	Crossed by Newton-in-Bowland Compound (construction access)
Over Houses Great Wood BHS	66NW26	190m east from the Lower Houses Compound
Goodber Common (including Summersgill Fell and White Moss) BHS	66SW11	200m south from the Lower Houses Compound
Waddington Fell Road Roadside Verges BHS	74NW01	260m from the Newton-in-Bowland Compound (construction access)
Sugar Loaf and Boarsden Quarries, Bowland LGS	RV/1/013	300m south west from the Newton-in-Bowland Compound
Waddington Fell and Browsholme Moor BHS	74NW02	300m south east from the Newton-in-Bowland Compound
Haw Wood BHS	66NW29	400m north east from the Lower Houses Compound
Newton North Roadside Verges BHS	65SE06	400m north from the Newton-in-Bowland Compound
Great Dunnow Wood BHS	75SW02	500m north east of Newton-in-Bowland Compound
Hole House and Lower House Grasslands BHS	66NW30	500m north east from the Lower Houses Compound
River Hindburn BHS	66NW20	560m east from the Lower Houses Compound
Clerk Laithe BHS	65SE10	650m north from the Newton-in-Bowland Compound
Hole House Wood BHS	66NW31	650m north east from the Lower Houses Compound
Great Dunnow Hill BHS	75SW01	700m north east of Newton-in-Bowland Compound
Bank Wood, High Lot Wood, Over Wood and Mosit Shoe Wood BHS	66NW28	800m east from the Lower Houses Compound

Site Name	Site Reference	Location relevant to Proposed Bowland Section
Gibb's Wood and Bonstone Wood BHS	64NE11	800m south from the Newton-in-Bowland Compound
Helks Wood BHS	66SW15	800m south east from the Lower Houses Compound
Scale Wood BHS	66NW16	800m west of the Lower Houses Compound
Lower Helks Pastures BHS	66SW16	960m south east from the Lower Houses Compound
Meadows Adjoining Far Holme Meadow SSSI BHS	66NW27	1km east from the Lower Houses Compound
Cowkins Coppice BHS	66NW23	1.2km north from the Lower Houses Compound
New Barn Meadow, Lowgill BHS	66NE01	1.2km east from the Lower Houses Compound
Birkett Fell, Hodder Bank Fell and Mossthwaite Fell BHS	64NE07	1.3km south west from the Newton-in-Bowland Compound
Little Dunnaw Wood BHS	75SW03	1.3km north east of the Newton-in-Bowland Compound
Crag House Roadside Verges BHS	64NE09	1.4km south from the Newton-in-Bowland Compound
Foss Bank Wood, Tower Holme Wood and Middleton Wood BHS	66NE02	1.4km east from the Lower Houses Compound
Stubbins Wood (Including Bull Gill Wood, High Holme Wood, Tenter Hill Wood, Far Plain Wood, Bent Close Wood and Long Field Wood BHS	66SE04	1.4km south east of the Lower Houses Compound
Ashnott Wood BHS	64NE12	1.5km south from the Newton-in-Bowland Compound, 500m south west of Lower Houses Compound
Back Lane Roadside Verges BHS	65SE04	1.5km north of the Newton-in-Bowland Compound
Bonstone Brook Pastures BHS	74NW06	1.5km south from the Newton-in-Bowland Compound
Cragg Wood, Holme Wood, Birks Wood and Park House Wood BHS	66NW21	1.5km north from the Lower Houses Compound
Pike Gill Wood (Including Willock Close Wood and High Grasses Wood) BHS	66NW08	1.5km north west from the Lower Houses Compound
Wray Wood Moor BHS	66NW07	1.5km west from the Lower Houses Compound
Bradford Fell, Easington Fell and Harrop Fell BHS	74NW04	1.6km south east from the Newton-in-Bowland Compound
Sugar Loaf BHS	65SE02	1.6km west from the Newton-in-Bowland Compound

Site Name	Site Reference	Location relevant to Proposed Bowland Section
Collinson's Wood BHS	66NW17	1.8km north from the Lower Houses Compound
Oxenhurst Clough Wood BHS	65SE03	1.8km north west from the Newton-in-Bowland Compound
Broad Wood (Including Higher Broad Wood and Deep Gill Wood) BHS	66NW11	1.9km north west from the Lower Houses Compound
Well Beck Wood (Including Helks Home Wood and Middlefield Wood) BHS	66SW13	1.9km south east from the Lower Houses Compound
Upper Hindburn Valley - Grassland and Woodland Between Stairend Bridge and Botton Bridge BHS	66SE02	2.0km south east from the Lower Houses Compound

4. Ancient Woodland and Habitats of Principal Importance

- 14) There are no ancient semi-natural woodlands (ASNW) or Habitats of Principal Importance (HPI) identified on Natural England's Inventory of Ancient Woodland or Priority Habitat Inventories within the Proposed Bowland Section.
- 15) One Habitat of Principal Importance (HPI) was identified on Natural England's Priority Habitat Inventories within the Proposed Bowland Section:
 - Lowland fens –located at the western edge of the Newton-in-Bowland Compound
- 16) HPI and ASNW identified within 2 km of the Proposed Bowland Section include:
 - Good quality semi-improved grassland
 - Lowland calcareous grassland
 - Lowland dry acid grassland
 - Lowland meadows
 - Purple moor grass and rush pasture
 - Upland heath meadows
 - Lowland heathland
 - Upland heathland
 - Blanket bog
 - Lowland fens
 - Upland flushes, fens and swamps
 - Ancient and semi-natural woodland (including: Above Beck Wood, Bank Wood, Cragg/Hole/Birks Woods, Higher Broad Wood, Roeburndale Woods and Scales Woods – Lower House Compound, and Ashnott Wood, Great Dunmow Wood and Oenhurst Wood – Newton-in-Bowland Compound)
 - Deciduous woodland
 - No main habitat but additional habitats present – including the following HPI at less than 50 % cover:
 - lowland meadows and pastures
 - deciduous woodland
 - Grass moorland (Non Priority)

5. Species Records

- 17) Full details of the records for notable species (including protected species, SPI, nationally notable, scarce and/or red list species, local biodiversity priority species) provided by LERN are presented at Appendix D. A summary is provided below and further assessment is presented, where relevant, in the appropriate ETR accompanying the ES.

5.1 Flora

- 18) Notable flora species historically reported within 2 km of the Proposed Bowland Section include:

- Bluebell *Hyacinthoides non-scripta*
- Blueish Veilwort *Metzgeria fruticulosa*
- Globeflower *Trollius europaeus*
- Long-stalked Yellow-sedge *Carex lepidocarpa*
- Marsh Helleborine *Epipactis palustris*
- Pepper-saxifrage *Silaum silaus*
- Welsh Poppy *Meconopsis cambrica*
- Field Woundwort *Stachys arvensis*
- Fragrant Agrimony *Agrimonia procera*
- Greater Butterfly-orchid *Platanthera chlorantha*
- Lily-of-the-valley *Convallaria majalis*
- Marsh-Orchid *Dactylorhiza purpurella*
- Stone Bramble *Rubus saxatilis*

5.2 Birds

- 19) Notable birds species historically reported within 2 km of the Proposed Bowland Section include:

- Curlew *Numenius arquata*
- Oystercatcher *Haematopus ostralegus*
- Lapwing *Vanellus vanellus*
- Barn owl *Tyto alba*
- Mallard *Anas platyrhynchos*

5.3 Mammals

- 20) Notable mammals species historically reported within 2 km of the Proposed Bowland Section include:

- Water vole *Arvicola amphibius*
- West European hedgehog *Erinaceus europaeus*
- Brown hare *Lepus europaeus*

- 21) Bats (protected species and, for certain species, SPI) historically reported within 2 km of the Proposed Bowland Section include:

- Brown long-eared bat *Plecotus auritus*
- Common pipistrelle *Pipistrellus pipistrellus*
- Daubenton's bat *Myotis daubentonii*

- Natterer's bat *Myotis nattereri*
- Noctule *Nyctalus noctula*
- Soprano pipistrelle *Pipistrellus pygmaeus*

5.4 Amphibians and Reptiles

22) Notable herptiles species historically reported within 2 km of the Proposed Bowland Section include:

- Common frog *Rana temporaria*

5.5 Invertebrates

23) Notable invertebrates species historically reported within 2 km of the Proposed Bowland Section include:

- large heath *Coenonympha tullia*
- ringlet *Aphantopus hyperantus*
- small heath *Coenonympha pamphilus*
- Dark green fritillary *Speyeria aglaja*
- Keeled skimmer *Orthetrum coerulescens*
- White-barred twist *Olindia schumacherana*
- Chimney sweeper *Odezia atrata*

5.6 Granted European Protected Species Licences

24) No European Protected Species (EPS) are identified as having been granted within 2km of the Proposed Bowland Scheme. The nearest granted EPS licence is located approximately 2.4 km north east of the Bowland Section (Newton-in-Bowland Compound). This licence was granted for destruction of a bat breeding site in 2010. The next nearest is 3.1 km north east of the Newton-in-Bowland Compound and was granted for destruction of a resting place for common pipistrelle, soprano pipistrelle and brown long-eared bats in 2015. The nearest granted EPS for great crested newts was 4 km west of the Newton-in-Bowland Compound and was granted in 2010.

5.7 Invasive Species

25) No records of Invasive species (Schedule 9 of the Wildlife and Countryside Act 1981 as amended) were received within 2 km of the Proposed Bowland Section.

Appendix A. N2k Data Forms

NATURA 2000 – STANDARD DATA FORM

Special Protection Areas under the EC Birds Directive.

Each Natura 2000 site in the United Kingdom has its own Standard Data Form containing site-specific information. The data form for this site has been generated from the Natura 2000 Database submitted to the European Commission on the following date:

22/12/2015

The information provided here, follows the officially agreed site information format for Natura 2000 sites, as set out in the [Official Journal of the European Union recording the Commission Implementing Decision of 11 July 2011](#) (2011/484/EU).

The Standard Data Forms are generated automatically for all of the UK's Natura 2000 sites using the European Environment Agency's Natura 2000 software. The structure and format of these forms is exactly as produced by the EEA's Natura 2000 software (except for the addition of this coversheet and the end notes). The content matches exactly the data submitted to the European Commission.

Please note that these forms contain a number of codes, all of which are explained either within the data forms themselves or in the end notes.

Further technical documentation may be found here
http://bd.eionet.europa.eu/activities/Natura_2000/reference_portal

As part of the December 2015 submission, several sections of the UK's previously published Standard Data Forms have been updated. For details of the approach taken by the UK in this submission please refer to the following document:
http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

More general information on Special Protection Areas (SPAs) in the United Kingdom is available from the [SPA home page on the JNCC website](#). This webpage also provides links to Standard Data Forms for all SPAs in the UK.

Date form generated by the Joint Nature Conservation Committee
25 January 2016.



NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA),
Proposed Sites for Community Importance (pSCI),
Sites of Community Importance (SCI) and
for Special Areas of Conservation (SAC)

SITE UK9005151
SITENAME Bowland Fells

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- [6. SITE MANAGEMENT](#)

1. SITE IDENTIFICATION

1.1 Type A	1.2 Site code UK9005151	Back to top
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1.3 Site name

Bowland Fells

1.4 First Compilation date 1993-12	1.5 Update date 2015-12
----------------------------------------------	-----------------------------------

1.6 Respondent:

Name/Organisation: Joint Nature Conservation Committee
Address: Joint Nature Conservation Committee Monkstone House City Road Peterborough PE1 1JY
Email:

1.7 Site indication and designation / classification dates

Date site classified as SPA:	1993-12
National legal reference of SPA designation	Regulations 12A and 13-15 of the Conservation Habitats and Species Regulations 2010, (http://www.legislation.gov.uk/ukxi/2010/490/contents/made) as amended by The Conservation of Habitats and Species (Amendment) Regulations 2011 (http://www.legislation.gov.uk/ukxi/2011/625/contents/made).

2. SITE LOCATION

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2.1 Site-centre location [decimal degrees]:

Longitude

-2.5625

Latitude

53.98694444

2.2 Area [ha]:

16007.64

2.3 Marine area [%]

0.0

2.4 Sitelength [km]:

0.0

2.5 Administrative region code and name

NUTS level 2 code

Region Name

UKD4

Lancashire

2.6 Biogeographical Region(s)

Atlantic (100.0
%)

3. ECOLOGICAL INFORMATION

3.2 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

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Species					Population in the site						Site assessment			
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A B C D	A B C		
						Min	Max				Pop.	Con.	Iso.	Glo.
B	A082	Circus cyaneus			r	8	8	p		G	C		A	
B	A098	Falco columbarius			r	20	20	p		G	C		C	
B	A183	Larus fuscus			r	11470	11470	p		G	B		C	

- **Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Type:** p = permanent, r = reproducing, c = concentration, w = wintering (for plant and non-migratory species use permanent)
- **Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see [reference portal](#))
- **Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - to fill if data are deficient (DD) or in addition to population size information
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); VP = 'Very poor' (use this category only, if not even a rough estimation of the population size can be made, in this case the fields for population size

can remain empty, but the field "Abundance categories" has to be filled in)

4. SITE DESCRIPTION

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4.1 General site character

Habitat class	% Cover
N08	50.0
N07	30.0
N16	0.1
N09	19.9
Total Habitat Cover	100

Other Site Characteristics

1 Terrestrial: Soil & Geology: shingle,peat,clay,nutrient-poor,alluvium,acidic,igneous,sandstone,basic,limestone 2 Terrestrial: Geomorphology and landscape: slope,upland,montane,escarpment,valley,hilly

4.2 Quality and importance

ARTICLE 4.1 QUALIFICATION (79/409/EEC) During the breeding season the area regularly supports: Circus cyaneus 1.3% of the GB breeding population Three year mean, 1995-1997 Falco columbarius 1.5% of the GB breeding population Three year mean, 1994-1996 ARTICLE 4.2 QUALIFICATION (79/409/EEC) During the breeding season the area regularly supports: Larus fuscus (Western Europe/Mediterranean/Western Africa) 7.6% of the breeding population Count, as at 1992

4.3 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i o b]
H	M02		B
H	K05		I
H	J01		I
H	F03		I

Rank: H = high, M = medium, L = low

Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification,

T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions

i = inside, o = outside, b = both

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i o b]
H	B06		I
H	A02		I
H	B02		I
H	A04		I

4.5 Documentation

Conservation Objectives - the Natural England links below provide access to the Conservation Objectives (and other site-related information) for its terrestrial and inshore Natura 2000 sites, including conservation advice packages and supporting documents for European Marine Sites within English waters and for cross-border sites. See also the 'UK Approach' document for more information (link via the JNCC website).

Link(s): <http://publications.naturalengland.org.uk/category/3212324>
http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf
<http://publications.naturalengland.org.uk/category/6490068894089216>

5. SITE PROTECTION STATUS (optional)

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5.1 Designation types at national and regional level:

Code	Cover [%]	Code	Cover [%]	Code	Cover [%]
UK04	100.0				

6. SITE MANAGEMENT

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6.1 Body(ies) responsible for the site management:

Organisation:	Natural England
Address:	
Email:	

6.2 Management Plan(s):

An actual management plan does exist:

<input type="checkbox"/>	Yes
<input type="checkbox"/>	No, but in preparation
<input checked="" type="checkbox"/>	No

6.3 Conservation measures (optional)

For available information, including on Conservation Objectives, see Section 4.5.

EXPLANATION OF CODES USED IN THE NATURA 2000 STANDARD DATA FORMS

The codes in the table below are also explained in the [official European Union guidelines for the Standard Data Form](#). The relevant page is shown in the table below.

1.1 Site type

CODE	DESCRIPTION	PAGE NO
A	Designated Special Protection Area	53
B	SAC (includes candidates Special Areas of Conservation, Sites of Community Importance and designated SAC)	53
C	SAC area the same as SPA. Note in the UK Natura 2000 submission this is only used for Gibraltar	53

3.1 Habitat representativity

CODE	DESCRIPTION	PAGE NO
A	Excellent	57
B	Good	57
C	Significant	57
D	Non-significant presence	57

3.1 Habitat code

CODE	DESCRIPTION	PAGE NO
1110	Sandbanks which are slightly covered by sea water all the time	57
1130	Estuaries	57
1140	Mudflats and sandflats not covered by seawater at low tide	57
1150	Coastal lagoons	57
1160	Large shallow inlets and bays	57
1170	Reefs	57
1180	Submarine structures made by leaking gases	57
1210	Annual vegetation of drift lines	57
1220	Perennial vegetation of stony banks	57
1230	Vegetated sea cliffs of the Atlantic and Baltic Coasts	57
1310	Salicornia and other annuals colonizing mud and sand	57
1320	Spartina swards (Spartinion maritimae)	57
1330	Atlantic salt meadows (Glauco-Puccinellietalia maritimae)	57
1340	Inland salt meadows	57
1420	Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)	57
2110	Embryonic shifting dunes	57
2120	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")	57
2130	Fixed coastal dunes with herbaceous vegetation ("grey dunes")	57
2140	Decalcified fixed dunes with Empetrum nigrum	57
2150	Atlantic decalcified fixed dunes (Calluno-Ulicetea)	57
2160	Dunes with Hippophila rhamnoides	57
2170	Dunes with Salix repens ssp. argentea (Salicion arenariae)	57
2190	Humid dune slacks	57
21A0	Machairs (* in Ireland)	57
2250	Coastal dunes with Juniperus spp.	57
2330	Inland dunes with open Corynephorus and Agrostis grasslands	57
3110	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)	57
3130	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea	57
3140	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.	57
3150	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation	57

CODE	DESCRIPTION	PAGE NO
3160	Natural dystrophic lakes and ponds	57
3170	Mediterranean temporary ponds	57
3180	Turloughs	57
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation	57
4010	Northern Atlantic wet heaths with Erica tetralix	57
4020	Temperate Atlantic wet heaths with Erica ciliaris and Erica tetralix	57
4030	European dry heaths	57
4040	Dry Atlantic coastal heaths with Erica vagans	57
4060	Alpine and Boreal heaths	57
4080	Sub-Arctic Salix spp. scrub	57
5110	Stable xerothermophilous formations with Buxus sempervirens on rock slopes (Berberidion p.p.)	57
5130	Juniperus communis formations on heaths or calcareous grasslands	57
6130	Calaminarian grasslands of the Violetalia calaminariae	57
6150	Siliceous alpine and boreal grasslands	57
6170	Alpine and subalpine calcareous grasslands	57
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	57
6230	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	57
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	57
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	57
6510	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)	57
6520	Mountain hay meadows	57
7110	Active raised bogs	57
7120	Degraded raised bogs still capable of natural regeneration	57
7130	Blanket bogs (* if active bog)	57
7140	Transition mires and quaking bogs	57
7150	Depressions on peat substrates of the Rhynchosporion	57
7210	Calcareous fens with Cladium mariscus and species of the Caricion davallianae	57
7220	Petrifying springs with tufa formation (Cratoneurion)	57
7230	Alkaline fens	57
7240	Alpine pioneer formations of the Caricion bicoloris-atrofuscae	57
8110	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)	57
8120	Calcareous and calcshist screes of the montane to alpine levels (Thlaspietalia rotundifolii)	57
8210	Calcareous rocky slopes with chasmophytic vegetation	57
8220	Siliceous rocky slopes with chasmophytic vegetation	57
8240	Limestone pavements	57
8310	Caves not open to the public	57
8330	Submerged or partially submerged sea caves	57
9120	Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion roburi-petraeae or Ilici-Fagenion)	57
9130	Asperulo-Fagetum beech forests	57
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli	57
9180	Tilio-Acerion forests of slopes, screes and ravines	57
9190	Old acidophilous oak woods with Quercus robur on sandy plains	57
91A0	Old sessile oak woods with Ilex and Blechnum in the British Isles	57
91C0	Caledonian forest	57
91D0	Bog woodland	57
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	57
91J0	Taxus baccata woods of the British Isles	57

3.1 Relative surface

CODE	DESCRIPTION	PAGE NO
A	15%-100%	58
B	2%-15%	58
C	< 2%	58

3.1 Conservation status habitat

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	59
B	Good conservation	59
C	Average or reduced conservation	59

3.1 Global grade habitat

CODE	DESCRIPTION	PAGE NO
A	Excellent value	59
B	Good value	59
C	Significant value	59

3.2 Population (abbreviated to 'Pop.' in data form)

CODE	DESCRIPTION	PAGE NO
A	15%-100%	62
B	2%-15%	62
C	< 2%	62
D	Non-significant population	62

3.2 Conservation status species (abbreviated to 'Con.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	63
B	Good conservation	63
C	Average or reduced conservation	63

3.2 Isolation (abbreviated to 'Iso.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Population (almost) Isolated	63
B	Population not-isolated, but on margins of area of distribution	63
C	Population not-isolated within extended distribution range	63

3.2 Global Grade (abbreviated to 'Glo.' Or 'G.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	63
B	Good value	63
C	Significant value	63

3.3 Assemblages types

CODE	DESCRIPTION	PAGE NO
WATR	Non breeding waterfowl assemblage	UK specific code
SBA	Breeding seabird assemblage	UK specific code
BBA	Breeding bird assemblage (applies only to sites classified pre 2000)	UK specific code

4.1 Habitat class code

CODE	DESCRIPTION	PAGE NO
N01	Marine areas, Sea inlets	65
N02	Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	65
N03	Salt marshes, Salt pastures, Salt steppes	65
N04	Coastal sand dunes, Sand beaches, Machair	65
N05	Shingle, Sea cliffs, Islets	65
N06	Inland water bodies (Standing water, Running water)	65
N07	Bogs, Marshes, Water fringed vegetation, Fens	65
N08	Heath, Scrub, Maquis and Garrigue, Phygrana	65
N09	Dry grassland, Steppes	65
N10	Humid grassland, Mesophile grassland	65
N11	Alpine and sub-Alpine grassland	65
N14	Improved grassland	65
N15	Other arable land	65
N16	Broad-leaved deciduous woodland	65
N17	Coniferous woodland	65
N19	Mixed woodland	65
N21	Non-forest areas cultivated with woody plants (including Orchards, groves, Vineyards, Dehesas)	65
N22	Inland rocks, Scree, Sands, Permanent Snow and ice	65
N23	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	65
N25	Grassland and scrub habitats (general)	65
N26	Woodland habitats (general)	65

4.3 Threats code

CODE	DESCRIPTION	PAGE NO
A01	Cultivation	65
A02	Modification of cultivation practices	65
A03	Mowing / cutting of grassland	65
A04	Grazing	65
A05	Livestock farming and animal breeding (without grazing)	65
A06	Annual and perennial non-timber crops	65
A07	Use of biocides, hormones and chemicals	65
A08	Fertilisation	65
A10	Restructuring agricultural land holding	65
A11	Agriculture activities not referred to above	65
B01	Forest planting on open ground	65
B02	Forest and Plantation management & use	65
B03	Forest exploitation without replanting or natural regrowth	65
B04	Use of biocides, hormones and chemicals (forestry)	65
B06	Grazing in forests/ woodland	65
B07	Forestry activities not referred to above	65
C01	Mining and quarrying	65
C02	Exploration and extraction of oil or gas	65
C03	Renewable abiotic energy use	65
D01	Roads, paths and railroads	65
D02	Utility and service lines	65
D03	Shipping lanes, ports, marine constructions	65
D04	Airports, flightpaths	65
D05	Improved access to site	65
E01	Urbanised areas, human habitation	65
E02	Industrial or commercial areas	65

CODE	DESCRIPTION	PAGE NO
E03	Discharges	65
E04	Structures, buildings in the landscape	65
E06	Other urbanisation, industrial and similar activities	65
F01	Marine and Freshwater Aquaculture	65
F02	Fishing and harvesting aquatic resources	65
F03	Hunting and collection of wild animals (terrestrial), including damage caused by game (excessive density), and taking/removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.)	65
F04	Taking / Removal of terrestrial plants, general	65
F05	Illegal taking/ removal of marine fauna	65
F06	Hunting, fishing or collecting activities not referred to above	65
G01	Outdoor sports and leisure activities, recreational activities	65
G02	Sport and leisure structures	65
G03	Interpretative centres	65
G04	Military use and civil unrest	65
G05	Other human intrusions and disturbances	65
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)	65
H02	Pollution to groundwater (point sources and diffuse sources)	65
H03	Marine water pollution	65
H04	Air pollution, air-borne pollutants	65
H05	Soil pollution and solid waste (excluding discharges)	65
H06	Excess energy	65
H07	Other forms of pollution	65
I01	Invasive non-native species	65
I02	Problematic native species	65
I03	Introduced genetic material, GMO	65
J01	Fire and fire suppression	65
J02	Human induced changes in hydraulic conditions	65
J03	Other ecosystem modifications	65
K01	Abiotic (slow) natural processes	65
K02	Biocenotic evolution, succession	65
K03	Interspecific faunal relations	65
K04	Interspecific floral relations	65
K05	Reduced fecundity/ genetic depression	65
L05	Collapse of terrain, landslide	65
L07	Storm, cyclone	65
L08	Inundation (natural processes)	65
L10	Other natural catastrophes	65
M01	Changes in abiotic conditions	65
M02	Changes in biotic conditions	65
U	Unknown threat or pressure	65
XO	Threats and pressures from outside the Member State	65

5.1 Designation type codes

CODE	DESCRIPTION	PAGE NO
UK00	No Protection Status	67
UK01	National Nature Reserve	67
UK02	Marine Nature Reserve	67
UK04	Site of Special Scientific Interest (UK)	67



NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA),
Proposed Sites for Community Importance (pSCI),
Sites of Community Importance (SCI) and
for Special Areas of Conservation (SAC)

SITE **UK0014775**
SITENAME **North Pennine Dales Meadows**

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- [1. SITE IDENTIFICATION](#)
- [2. SITE LOCATION](#)
- [3. ECOLOGICAL INFORMATION](#)
- [4. SITE DESCRIPTION](#)
- [5. SITE PROTECTION STATUS](#)
- [6. SITE MANAGEMENT](#)
- [7. MAP OF THE SITE](#)

Print Standard Data Form

1. SITE IDENTIFICATION

1.1 Type

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B

1.2 Site code

UK0014775

1.3 Site name

North Pennine Dales Meadows

1.4 First Compilation date

1995-06

1.5 Update date

2015-12

1.6 Respondent:

Name/Organisation:	Joint Nature Conservation Committee
Address:	
Email:	

1.7 Site indication and designation / classification dates

Date site proposed	1995-06
---------------------------	---------

as SCI:	
Date site confirmed as SCI:	2004-12
Date site designated as SAC:	2005-04
National legal reference of SAC designation:	Regulations 11 and 13-15 of the Conservation of Habitats and Species Regulations 2010 (http://www.legislation.gov.uk/uksi/2010/490/contents/made).

2. SITE LOCATION

2.1 Site-centre location [decimal degrees]:

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Longitude:	-2.106667
Latitude:	54.625278

2.2 Area [ha]

481.6400

2.3 Marine area [%]

0.0000

2.4 Sitelength [km]:

0.00

2.5 Administrative region code and name

NUTS level 2 code	Region Name
UKC1	Tees Valley and Durham
UKC2	Northumberland and Tyne and Wear
UKD1	Cumbria
UKD4	Lancashire
UKE2	North Yorkshire

2.6 Biogeographical Region(s)

Atlantic	(100.00 %)
----------	------------

3. ECOLOGICAL INFORMATION

3.1 Habitat types present on the site and assessment for them

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Annex I Habitat types						Site assessment	
Code	PF	NP	Cover [ha]	Cave [number]	Data quality	A B C D	A B C

Annex I Habitat types						Representativity Site assessment	Relative Surface	Conservation	Global
6210 B	Code	PF	NP	Cover [ha]	Cave [number]	Data quality	A B C D	A B C	
6410 B				7.37	0.00	G	B	C	B
6520 B				393.02	0.00	G	Representativity A	Relative Surface B	Conservation B
7230 B				1.49	0.00	G	D		
8240 B	X			0	0.00		D		

PF: for the habitat types that can have a non-priority as well as a priority form (6210, 7130, 9430) enter "X" in the column PF to indicate the priority form.

NP: in case that a habitat type no longer exists in the site enter: x (optional)

Cover: decimal values can be entered

Caves: for habitat types 8310, 8330 (caves) enter the number of caves if estimated surface is not available.

Data quality: G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation)

4. SITE DESCRIPTION

4.1 General site character

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Habitat class	% Cover
N09	1.00
N10	99.00
Total Habitat Cover	100

Other Site Characteristics

- 1 Terrestrial: Soil & Geology: limestone,acidic,alluvium,basic,clay,neutral,peat,metamorphic,sedimentary
- 2 Terrestrial: Geomorphology and landscape: valley,floodplain,hilly,upland,slope

4.2 Quality and importance

Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinia caerulea) for which the area is considered to support a significant presence. Mountain hay meadows for which this is one of only two known outstanding localities in the United Kingdom. which is considered to be rare as its total extent in the United Kingdom is estimated to be less than 1000 hectares.

4.3 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i o b]
H	A02		I
H	A03		I
H	A08		B
H	H04		B

Positive Impacts			
Rank	Activities, management	Pollution (optional)	inside/outside [i o b]

	[code]	[code]	
H	A02		I
H	A03		I
H	A04		I
H	B02		I
H	B06		I
H	D05		I
H	D05		I

Rank: H = high, M = medium, L = low

Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification,

T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions

i = inside, o = outside, b = both

4.5 Documentation

Conservation Objectives - the Natural England links below provide access to the Conservation Objectives (and other site-related information) for its terrestrial and inshore Natura 2000 sites, including conservation advice packages and supporting documents for European Marine Sites within English waters and for cross-border sites. See also the 'UK Approach' document for more information (link via the JNCC website).

Link(s): http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf
<http://publications.naturalengland.org.uk/category/3212324>
<http://publications.naturalengland.org.uk/category/6490068894089216>

5. SITE PROTECTION STATUS

5.1 Designation types at national and regional level:

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Code	Cover [%]
UK01	3.00
UK04	100.00

6. SITE MANAGEMENT

6.1 Body(ies) responsible for the site management:

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Organisation:	Natural England
Address:	
Email:	

6.2 Management Plan(s):

An actual management plan does exist:

<input type="checkbox"/>	Yes
<input type="checkbox"/>	No, but in preparation
<input checked="" type="checkbox"/>	No

6.3 Conservation measures (optional)

For available information, including on Conservation Objectives, see Section 4.5.

Appendix B. SSSI Citations

COUNTY: LANCASHIRE

SITE NAME: BELL SYKES MEADOWS

DISTRICT: RIBBLE VALLEY

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

Local Planning Authority: Ribble Valley Borough Council

National Grid Reference: SD 718526

Area: 13.68 (ha.) 33.80 (ac.)

Ordnance Survey Sheet 1:50,000: 103

1:10,000: SD 75 SW

Date Notified (Under 1981 Act): 26 May 1999

Other Information:

1. This is a new site.
2. The site lies within the Forest of Bowland AONB.

Description and Reasons for Notification:

Bell Sykes Meadows lies at an altitude of between 140--150m OD, approximately 0.5km north-east of the village of Slaidburn. The site consists of six fields of unimproved, enclosed, herb-rich grassland. The river alluvium of the flatter ground close to the River Hodder supports three fields of herb-rich flood meadow. The field on the higher ground to the east supports herb-rich northern hay meadow, whilst the leached soils overlying carboniferous limestone on the west facing slope supports two fields of herb-rich seasonally grazed pasture. Bell Sykes Meadows is one of the few remaining unimproved herb-rich grasslands present in this part of Lancashire. This vulnerable habitat has become increasingly scarce nationally and has been largely destroyed in Lancashire due to agricultural intensification.

The seasonally-flooded meadows support a herb-rich, neutral grassland community, typical of its type in northern England. This community is characterised by meadow foxtail *Alopecurus pratensis*, Yorkshire fog *Holcus lanatus*, sweet vernal-grass *Anthoxanthum odoratum*, red fescue *Festuca rubra*, soft brome *Bromus hordeaceus* and crested dog's-tail *Cynosurus cristatus* with greater burnet *Sanguisorba officinalis*, meadowsweet *Filipendula ulmaria*, yellow rattle *Rhinanthus minor*, lady's mantle *Alchemilla glabra*, meadow vetchling *Lathyrus pratensis*, eyebright *Euphrasia* agg, smooth hawk's-beard *Crepis capillaris* and pignut *Conopodium majus*. Other species present also include abundant ribwort plantain *Plantago lanceolata*, red clover *Trifolium pratense*, meadow buttercup *Ranunculus acris*, daisy *Bellis perennis* and common sorrel *Rumex acetosa*. The diversity of these meadows is further enhanced by the presence of meadow cranesbill *Geranium pratense* and melancholy thistle *Cirsium heterophyllum* along the field edges.

The west facing, sloping ground supports herb-rich meadow and, on the steeper ground, herb-rich pasture. These are characterised by common bent *Agrostis capillaris*, sweet vernal-grass, red fescue, crested dog's-tail and field woodrush *Luzula campestris* with greater burnet, lady's mantle, eyebright, yellow rattle, pignut, common cat's-ear *Hypochaeris radicata*, common bird's-foot trefoil *Lotus corniculatus* and selfheal *Prunella vulgaris*. The pasture on the steeper ground, which supports a mosaic of neutral and acidic grassland, is also characterised by sheep's fescue *Festuca ovina*, tormentil *Potentilla erecta*, heath bedstraw *Galium saxatile* and bitter vetch *Lathyrus montanus*.

A small amount of woodland and scrub is also present on the site.

Date Notified: 28th March 1988

File ref: (L) SD 65/2

County: Lancashire **Site Name:** Bowland Fells

District: Lancaster, Ribble Valley, Wyre

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

Local Planning Authority: Lancaster City Council, Ribble Valley Borough Council, Wyre Borough Council

National Grid Reference: SD 620570 **Area:** 15,759.0 (ha) 38,940.5 (ac)

Ordnance Survey Sheet 1:50,000: 97, 98, 102, 103 **1:10,000:** SD 54 NE, NW, SE
SD 55 NE, NW, SE, SW
SD 56 SE, SW
SD 64 NW, SW
SD 65 NE, NW, SE, SW
SD 66 SE, SW
SD 75 NW

Date Notified (Under 1949 Act): 1951 **Date of Last Revision:** 1979

Date Notified (Under 1981 Act): 1988 **Date of Last Revision:** 1988

Other Information:

1. The site includes the former West Bowland Fells and Mallowdale and Bottom Head Fells SSSI.
2. The boundary has been amended by minor deletions and a large extension at this revision.
3. The site is situated within the Forest of Bowland AONB.

Description and Reasons for Notification:

This site encompasses the main upland block within the area of Lancashire known as the Forest of Bowland, an outlier of the Pennine Range situated in the north of the county and to the east of the M6 motorway. Most of this land, stretching from Clougha and Whitray Fell in the north to Parlick in the south, is over 250 m OD and rises sharply to a stream – dissected plateau with the highest point being Ward's Stone at 561 m. The underlying rock is Millstone Grit beneath which lies Carboniferous Limestone.

These extensive upland fells support the largest expanse of blanket bog and heather moorland in Lancashire and provide suitable habitat for a diverse upland breeding bird community which includes three species (hen harrier, merlin and peregrine), which are afforded special protection under the Wildlife and Countryside Act 1981 by virtue of their rarity or vulnerability. Additional interest is provided by the existence of one of the largest lesser black-backed gull colonies in Great Britain, the presence of a number of nationally or locally uncommon plant species and a variety of upland habitats and their associated avifauna.

The most extensive plant communities within the site are dry heather-dominated heathland, generally found on the steeper slopes, and heather *Calluna vulgaris* and cottongrass *Eriophorum vaginatum*-dominated blanket bog which covers the tops of the ridges and shallow slopes.

Within the blanket bog communities bog mosses *Sphagnum* spp. are sparse, due to the effects of past burning practices, although bog rosemary *Andromeda polifolia*, a nationally scarce species, cranberry *Vaccinium oxycoccus*, crowberry *Empetrum nigrum*, and cloudberry *Rubus chamaemorus* are all widely distributed. Some areas of bog have been more heavily burnt and this, perhaps coupled with greater numbers of grazing sheep, has resulted in the loss of heather to give bilberry *Vaccinium myrtillus* and cottongrass bog. In some areas dwarf shrub component has been reduced still further to produce a cottongrass dominated degraded blanket bog community. In places within the site there is active and extensive peat erosion leaving large mounds and hags surrounded by shallow peat and a stony mineral soil.

The extensive areas of *Calluna* heath are generally managed by small patch burning to encourage red grouse. On recently burnt areas, bilberry is quick to recover and is at first dominant over the regenerating heather but the bilberry later becomes less conspicuous as the heather eventually reasserts its dominance. Heavy burning and high levels of sheep grazing have in some areas resulted in the loss of heather and its replacement by a bilberry/wavy hair-grass *Deschampsia flexuosa* community. In other places cowberry *Vaccinium vitis-idaea* has become co-dominant with bilberry, as on the summit plateau of Ward's Stone where these species are associated with a variety of lichens. Where grazing has been heavier still, the dwarf shrubs are replaced by species-poor acid grassland dominated by mat-grass *Nardus stricta* or, to a lesser extent, heath rush *Juncus squarrosus*, or purple moor-grass *Molinia caerulea*. Despite such modifications, the site is of particular value for the extent of heather moorland still remaining, and represents a good example of a habitat type which has been significantly reduced across upland Britain.

On the lower ground, bracken forms extensive stands in some areas. Dense growth of bracken suppresses the ground flora but where it is less dense bilberry community grows beneath, along with other plant species more usually associated with woodland, such as wood sorrel *Oxalis acetosella* and climbing corydalis *Corydalis claviculata*. Chickweed wintergreen *Trientalis europaea* has also been recorded on the site growing beneath bracken and here is nearly at its southern limit and in its only Lancashire location.

A number of interesting plants grow on the Millstone Grit crags, where they are protected from grazing and burning. These include fir clubmoss *Huperzia selago* and also Scottish filmy-fern *Hymenophyllum wilsonii* and hayscented buckler-fern *Dryopteris aemula* in their only Lancashire sites.

Flushes and springs are not common but provide a habitat for the Lancashire rarities lesser twayblade *Listera cordata*, broad-leaved cottongrass *Eriophorum latifolium* and pale forget-me-not *Myosotis stolonifera* – a nationally scarce species. Tree cover in the form of oak *Quercus petraea* scrub is fragmented and occurs on the steep slopes and in the cloughs, adding to the diversity of habitats within the site. Many of the trees are of great age, supporting a variety of lichens, and the shelter they provide allows the growth of carpets of tall ferns.

The maintenance of heather moorland over much of the site has provided an excellent habitat not only for red grouse for which the moors have primarily been managed, but for other moorland birds requiring the presence of heather for nesting cover and as a source of prey. Of these the hen harrier is the most notable: the Bowland Fells represent the only regularly-used

breeding locality in England and thus supports a very important breeding nucleus for this species which is in decline and increasingly experiencing a reduced success in breeding performance. Other nesting predatory birds (raptors) include merlin (another species suffering a continued decline in numbers), peregrine, short-eared owl, sparrowhawk and kestrel. The open moorland and blanket bog communities support other upland birds such as golden plover, ring ouzel, meadow pipit, skylark, whinchat and wheatear while the damp, rushy lower slopes provide ideal habitat for waders such as redshank, curlew, lapwing, snipe and oystercatcher. The fast-flowing upland streams are the typical habitat for common sandpiper, dipper and grey wagtail while the presence of tree cover adjacent to open moorland is ideal for woodcock, redstart and spotted flycatcher.

Mallowdale and Tarnbrook Fells also support one of the five largest breeding colonies of lesser black-backed gulls in Great Britain which probably contains over 10% of the British and 1% of the European populations.

Date Notified: 21 March 1988

File ref: (L) SD 66/4

County: Lancashire

Site Name: Clear Beck Meadow

District: Lancaster

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

Local Planning Authority: Lancaster City Council

National Grid Reference: SD 616676 **Area:** 0.5 (ha) 1.2 (ac)

Ordnance Survey Sheet 1:50,000: 97 **1:10,000:** SD 66 NW

Date Notified (Under 1981 Act): 1988 **Date of Last Revision:** –

Other Information:

1. This is a new site.
2. The site lies within the Forest of Bowland AONB.

Description and Reasons for Notification:

Clear Beck Meadow is situated in the valley of the River Hindburn approximately 1½ km to the east of the village of Wray and at an altitude of 60 m OD. Although small in size the site represents one of the best examples of species-rich meadow grassland in Lancashire. This nationally scarce and highly vulnerable habitat has, in Lancashire, been almost completely destroyed by agricultural intensification, so that a site displaying such an exceptional diversity of plants and containing many species representative of unimproved meadows is regarded as being of outstanding importance in the County context.

The site lies at the foot of a steep, wooded slope on the edge of the floodplain of the River Hindburn and is enclosed on its southern side by Clear Beck, a tributary stream of the Hindburn. Unlike the larger, more accessible fields adjacent to it, Clear Beck Meadow has escaped agricultural improvement and supports an exceptionally diverse grassland flora. Over 80 species have been recorded from within the main sward, while the associated habitats of woodland and open water contribute a further 57 species, located around the edges of the meadow, to the overall range of plants within the site.

The community is of the “northern hay meadow” type, containing a total of 19 different grass species, co-dominated by sweet vernal-grass *Anthoxanthum odoratum* and red fescue *Festuca rubra*, with crested dog’s-tail *Cynosurus cristatus*, Yorkshire fog *Holcus lanatus*, rough meadowgrass *Poa trivialis* and downy oat-grass *Avenula pubescens* occurring frequently within the sward. Other grasses include quaking grass *Briza media* and yellow oat-grass *Trisetum flavescens*, occurring locally within the site and indicative of more base-rich conditions. Notable by its very low frequency is perennial rye-grass *Lolium perenne*, a species much favoured in modern farming practice and commonly an indicator of agricultural improvement.

The grassland is herb-rich throughout, and supports many species characteristic of old meadows, notably pignut, great burnet, wood anemone, ox-eye daisy, common bistort, two

species of lady's mantle *Alchemilla glabra* and *A. xanthochlora*, yellow rattle, betony, eyebright and meadowsweet. In addition are certain old meadow species indicative of base-rich conditions such as rough hawkbit, crosswort and spring sedge *Carex caryophylla*. Of particular note are the colonies of common and heath spotted orchids *Dactylorhiza fuchsii* and *D. maculata* spp. *ericetorum*, and the occurrence of the early purple orchid *Orchis mascula* and the locally scarce adder's tongue fern *Ophioglossum vulgatum*. Orchids and sedges, along with other susceptible species such as adder's-tongue fern, are among the first plants to be lost by an intensification of agricultural practice and are, consequently, rarely found now within hay meadows or pastures. The occurrence of such species, the exceptional range of plants characteristic of old meadows and the site's overall floral diversity, combine to make this one of the most important examples of a habitat type which has all but disappeared from the Lancashire countryside.

Date Notified: 18 March 1994

File ref: (L) SD 66/5

County: Lancashire **Site Name:** Far Holme Meadow

District: Lancaster

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

Local Planning Authority: Lancaster City Council

National Grid Reference: SD 645655 **Area:** 1.66 (ha) 4.10 (ac)

Ordnance Survey Sheet 1:50,000: 97 **1:10,000:** SD 66 NW

Date Notified (Under 1981 Act): 1994 **Date of Last Revision:** –

Other Information:

1. This is a new site.
2. The site lies within the Forest of Bowland A.O.N.B.

Description and Reasons for Notification:

Far Holme Meadow is an area of lowland grassland situated in the valley of the River Hindburn approximately 4½ km to the south west of the village of Wray. It lies at an altitude of 105 m and supports three types of herb-rich neutral grassland in which over 80 species of plants have been recorded.

The meadow lies at the foot of a wooded slope on the edge of the flood plain of the River Hindburn and is enclosed on its northern and western sides by a river. The grassland plant communities present support many species characteristic of old hay meadows which have been traditionally managed and left unimproved for many years. Such communities are now scarce nationally and represent a highly vulnerable habitat which, in Lancashire, has been severely reduced by agricultural intensification.

The majority of the field supports a hay meadow community with sweet vernal-grass *Anthoxanthum odoratum*, cock's-foot *Dactylis glomerata* and red fescue *Festuca rubra*. Other grass species present include meadow foxtail *Alopecurus pratensis*, Yorkshire-fog *Holcus lanatus* and common bent *Agrostis capillaris*. Herbs are well represented within the sward and include such species as great burnet *Sanguisorba officinalis* and intermediate lady's-mantle *Alchemilla xanthochlora*, which are frequent throughout. Smooth lady's-mantle *A. glabra*, meadow vetchling *Lathyrus pratensis* and bitter-vetch *L. montanus* also occur, as do pignut *Conopodium majus*, common knapweed *Centaurea nigra*, rough hawkbit *Leontodon hispidus* and autumn hawkbit *L. autumnalis*.

This grassland is representative of the meadow foxtail – great burnet flood-meadow community, which is especially characteristic of areas where traditional hay meadow treatment has been applied to seasonally flooded land on alluvial soils. Unlike the great majority of hay fields in Lancashire, this site has escaped extensive agricultural improvement and continues to support a diverse grassland flora. The presence of soft-brome *Bromus hordeaceus*, rough meadow-grass *Poa trivialis* and perennial rye-grass *Lolium perenne* in the sward indicates some

agricultural improvement of the field, as does the absence of sedges *Carex* species. Nevertheless, this site represents the only example of this particular vegetation type remaining in the County.

A species-rich bank occurs in the south-eastern corner of the site and where common spotted-orchid *Dactylorhiza fuchsii* and common twayblade *Listera ovata* are frequent. Many of the plants found within the main sward also occur here, together with marsh hawk's-beard *Crepis paludosa*, primrose *Primula vulgaris* and devil's-bit scabious *Succisa pratensis*. This small area is representative of the quaking-grass sub-community of the sweet vernal-grass–wood crane's-bill meadow community.

A damp area at the foot of the wooded slope contains a variety of species characteristic of wet conditions, some of which are indicative of a base-rich influence. Species present include marsh marigold *Caltha palustris*, meadowsweet *Filipendula ulmaria*, wild angelica *Angelica sylvestris* and common mouse-ear *Cerastium fontanum*, with grasses such as crested dog's-tail *Cynosurus cristatus* and sweet vernal-grass. This combination of plants is characteristic of the crested dog's-tail–marsh marigold flood-pasture community.

COUNTY: LANCASHIRE

SITE NAME: FIELD HEAD MEADOW

DISTRICT: RIBBLE VALLEY

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

Local Planning Authority: Ribble Valley Borough Council

National Grid Reference: SD 725524

Area: 3.29 (ha.) 8.13 (ac.)

Ordnance Survey Sheet 1:50,000: 103

1:10,000: SD 75 SW

Date Notified (Under 1981 Act): 25 May 1999

Other Information:

1. This is a new site.
2. The site lies within the Forest of Rowland AONB.

Description and Reasons for Notification:

Field Head Meadow lies at an altitude of 210m OD, approximately 1.3km east of the village of Slaidburn. The site consists of a single field of enclosed, moderately herb-rich hay meadow, typical of its type in northern England. Field Head Meadow is one of the few remaining herb-rich grasslands present in this part of Lancashire. This vulnerable habitat has become increasingly scarce nationally and has been largely destroyed in Lancashire due to agricultural intensification.

The meadow is a variant of the 'northern hay meadow' type. It is characterised by sweet vernal-grass *Anthoxanthum odoratum*, red fescue *Festuca rubra*, Yorkshire fog *Holcus lanatus*, crested dog's-tail *Cynosurus cristatus*, rough meadow-grass *Poa trivialis* and field woodrush *Luzula campestris* with greater burnet *Sanguisorba officinalis*, yellow rattle *Rhinanthus minor*, lady's mantle *Alchemilla glabra*, eyebright *Euphrasia* agg and pignut *Conopodium majus*. Other species present also include abundant ribwort plantain *Plantago lanceolata*, red clover *Trifolium pratense*, meadow buttercup *Ranunculus acris*, daisy *Bellis perennis* and common sorrel *Rumex acetosa*. Yellow oat-grass *Trisetium flavescens*, common knapweed *Centaurea nigra*, autumn hawkbit *Leontodon autumnalis*, common bird's-foot trefoil *Lotus corniculatus*, smooth hawk's-beard *Crepis capillaris* and meadow vetchling *Lathyrus pratensis* are also occasionally present in the sward.

County: Lancashire **Site Name:** Langcliff Cross Meadow

District: Ribble Valley

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

Local Planning Authority: Ribble Valley Borough Council

National Grid Reference: SD 726517 **Area:** 5.3 (ha) 13.1 (ac)

Ordnance Survey Sheet 1:50 000 103 **1:10 000** SD 75 SW

Date Notified (Under 1949 Act): – **Date of Last Revision:** –

Date Notified (Under 1981 Act): 1989 **Date of Last Revision:** –

Other Information:

1. This is a new site.
2. The site lies within the Forest of Bowland AONB

Description and Reasons for Notification:

Langcliff Cross Meadow lies approximately 1g km to the east of the village of Slaidburn and at an altitude of 190 m OD. It represents one of the best examples of the few remaining species-rich meadow grasslands in the county. This nationally scarce and vulnerable habitat has, in Lancashire, been almost completely destroyed by agricultural intensification so that a site displaying such a high diversity of grass and herb species and containing many plants representative of unimproved meadows, is regarded as being of very great importance in the county context.

The community is a variant of the ‘northern haymeadow’ type and contains a total of 19 grass species, co-dominated by sweet vernal-grass *Anthoxanthum odoratum* and red fescue *Festuca rubra*, with crested dog’s-tail *Cynosurus cristatus*, Yorkshire fog *Holcus lanatus*, common bent *Agrostis capillaris* and downy oat-grass *Avenula pubescens* frequent within the sward. The local occurrence of quaking grass *Briza media* and yellow oat-grass *Trisetum flavescens* along with spring-sedge *Carex caryophyllea* indicate pockets of more base-rich conditions.

The grassland is herb-rich throughout and includes many species characteristic of old meadows such as pignut *Conopodium majus*, great burnet *Sanguisorba officinalis*, smooth lady’s-mantle *Alchemilla glabra*, yellow rattle *Rhinanthus minor* and meadowsweet *Filipendula ulmaria*.

The diversity of species found within the site is increased by the presence of a wet area at the eastern end of the field which supports marsh marigold *Caltha palustris*, marsh arrowgrass *Triglochin palustris* and floating sweet-grass *Glyceria fluitans*.

County: Lancashire **Site Name:** Myttons Meadows

District: Ribble Valley

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

Local Planning Authority: Ribble Valley Borough Council

National Grid Reference: SD 703531

Area: 10.0 (ha) 24.7 (ac)

Ordnance Survey Sheet 1:50 000 103

1:10 000 SD 65 SE
SD 75 SW

Date Notified (Under 1949 Act): –

Date of Last Revision: –

Date Notified (Under 1981 Act): 1985

Date of Last Revision: –

Other Information:

1. This is a new site.
2. The site lies within the Forest of Bowland AONB.

Reasons for Notification:

Myttons Meadows are situated on the south-eastern edge of the Forest of Bowland at an altitude of between 155 m and 180 m OD, approximately 1g km north-west of Slaidburn. The site comprises a series of three fields below Myttons Farm and part of another field to the south, which together represent the largest and best surviving example of traditionally managed, species-rich meadow grassland identified in Lancashire. This nationally scarce and highly vulnerable habitat has, in Lancashire, been almost completely destroyed by agricultural intensification so that, in the county context, this site is regarded as being of outstanding importance.

The soils are derived from glacial drift containing fragments of the underlying Carboniferous Limestone and tend to be neutral to calcareous in nature. The variations in depth of drift, soil moisture content and base status are reflected in slight floristic differences evident within the site, while management practices have had a significant effect upon the species composition of the vegetation within the individual fields.

The eastern field adjacent to Croasdale Brook is managed as a traditional hay meadow and supports a uniformly rich and diverse grassland flora with over 95 species having been recorded. The community is of the 'northern hay meadow' type, containing a range of grass species co-dominated by sweet vernal-grass and red fescue with soft brome, hairy oat-grass, Yorkshire fog and common bent occurring frequently within the sward. The uncommon hybrid fescue is also found here along with perennial rye-grass, meadow foxtail and rough meadow-grass. The field is herb-rich throughout

and supports many species characteristic of old meadows, notably wood anemone, common bistort, two species of lady's mantle *Alchemilla glabra* and *A. xanthochlora*, pignut, great burnet, yellow rattle and meadowsweet. In addition are certain old meadow species indicative of base-rich conditions such as rough hawkbit, meadow crane's-bill and cross-wort. A range of sedges occur within the community including spring *Carex caryophyllea*, carnation *C. panicea*, hairy *C. hirta*, glaucous *C. flacca*, flea *C. pulicaris* and pale sedge *C. pallescens*, while occasional wetter areas are dominated by lesser pond-sedge *C. acutiformis* in association with brown sedge *C. disticha*, water avens, marsh marigold and marsh hawk's-beard. Most notable amongst the low-frequency associates of the main community are melancholy thistle (occurring mainly along the edges but also within the main sward), globeflower, common spotted orchid and common twayblade which occur between the Eller Beck and a wall which forms the southern boundary of the field.

The adjacent field to the south contains a small knoll which, presumably because of its shape, has escaped agricultural improvement. The community is akin to that described above but, in addition to melancholy thistle, common spotted orchid and twayblade, includes such notable species as fragrant orchid and the locally scarce adder's-tongue fern.

To the west is a small field formerly part of the larger hay-field above it but fenced off because of steeply sloping ground and waterlogged conditions at the foot of the slope. The management of this field differs from those on either side of it as it is grazed rather than mown, and this is reflected in the patchiness and uneven height of the vegetation. The lower part of the field is wet and the vegetation is dominated by lesser pond-sedge with Yorkshire fog, red fescue, tall fescue and rough meadow-grass and abundant meadowsweet, marsh marigold, creeping buttercup and water avens. Along the eastern boundary the banks of a small stream support globeflower, marsh valerian, marsh hawk's-beard, bitter vetch and great hairy willow-herb with abundant glaucous sweet-grass in the shallow water. The middle section of the field is occupied by a steep bank supporting the same species-rich, northern hay-meadow community as the adjacent fields. Species indicative of base-rich conditions occur, such as hairy oat-grass, quaking grass, glaucous sedge, spring-sedge and rough hawkbit, but in contrast other areas on the upper slopes support species typical of more acid conditions such as mat-grass, common bent, oval sedge, many-headed wood-rush and tormentil.

To the north-west is the largest of the three fields which is also under traditional hay-meadow management with aftermath grazing. The higher frequency of soft brome and perennial rye-grass in this field plus the apparent absence of sedges, is indicative of more intensive agricultural management practices in the past which have altered the species composition to some extent. However, the sward is uniformly rich throughout in grasses and herbs and is typically co-dominated by sweet vernal grass, crested dog's-tail, soft-brome and red fescue, with an abundance of great burnet, yellow rattle and pignut, frequent oxeye daisy, rough hawkbit, meadow buttercup, red clover and lady's mantle *Alchemilla glabra* and *A. xanthochlora* and occasional wood anemone, tufted vetch and burnet saxifrage.

COUNTY: LANCASHIRE

SITE NAME: ROBERT HALL MOOR

DISTRICT: LANCASTER

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

Local Planning Authority: Lancaster City Council

National Grid Reference: SD 632688

Area: 18.8 (ha.) 46.5 (ac.)

Ordnance Survey Sheet 1:50,000: 97

1:10,000: SD 66 NW

Date Notified (Under 1949 Act): 1979

Date of Last Revision: –

Date Notified (Under 1981 Act): 1984

Date of Last Revision: 1984

Other Information:

1. Boundary revised by partial deletion at renotification.

Reasons for Notification:

Robert Hall Moor is an area of wet unimproved grassland, flushes and scrub situated on a drumlin (a glacial mound) rising from about 90m to a height of 107m, 4km south west of Wennington. The site is remarkable for the range of plants represented (over 150 species have been recorded), including two nationally rare communities and several species which are rare or very limited in their distribution. This assemblage of species is unique in Lancashire. Its most outstanding feature as a habitat is that it is the only extensive example of species-rich undrained and unimproved base-flushed neutral grassland known to remain in the county.

The remains of hedges and ditches mark old field boundaries within the site but there is no indication that the land, which is currently used as pasture, has ever been ploughed, re-seeded, under-drained or otherwise improved. The land is wet due to the general impermeability of the clayey soil such that water seeps out of the slopes as numerous flushes or emerges as springs lower down. It supports extensive plant communities which elsewhere are confined to small flushes or have been eliminated altogether by drainage. The water is base-enriched, creating basic influences where it emerges and neutral rather than acid conditions over much of the site.

Most of the grassland consists of a community of purple moor-grass *Molinia caerulea* with an abundance of small sedges *Carex demissa*, *echinata*, *flacca*, *hirta*, *hostiana*, *nigra*, *ovalis*, *panicea*, *pilulifera* and *pulicaris*, with creeping willow and numerous herbaceous species among which jointed rush, devil's-bit scabious, knapweed and marsh ragwort are conspicuous. More open areas, particularly the flushes, support a number of species which have a very local distribution in Lancashire including butterwort, saw-wort, bog pimpernel, bog asphodel, grass of Parnassus, marsh orchid and bird's-eye primrose which is a notably rare plant nationally. This species-rich type of *Molinia* community (as opposed to species-poor *Molinia* which is common on peat) which once no doubt was widespread, has been reduced so much by drainage that it is now considered to be a rare and endangered habitat in Britain. On top of the drumlin and also on higher ground in various places which is not influenced by emergent water there are small areas of acidic marshy grassland, rush dominated and species-poor.

At the base of the drumlin on the south side is another rare community: a small area of marsh dominated by blunt-flowered rush *Juncus subnodulosus* accompanied by characteristic marsh plants such as meadowsweet, water mint, marsh pennywort, angelica, ragged robin, marsh cinquefoil and marsh ragwort. The blunt-flowered rush community, which is associated with basic groundwater, is rare in Britain. The rush itself is rare in

Lancashire, known only at Crag Bank SSSI and a few other scattered locations, and is uncommon in the north west of England as a whole.

There is extensive scrub on the site, mainly of common gorse but also the less common western gorse *Ulex gallii*, hawthorn and rose. Uncommon species such as petty whin and dyer's greenweed have also been recorded. The gorse grades into birch scrub and woodland at the eastern end. The site is crossed by the Thirlmere aqueduct, the route of which is marked by a strip of reseeded grassland. There is a small flighting pond in the lowest part of the site, which is being colonised by pondweed spike-rush and bottle sedges.

County:	Lancashire	Site Name:	Roeburndale Woods
District:	Lancaster		
Status:	Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act, 1981.		
Local Planning Authority:	Lancaster City Council		
National Grid Reference:	SD 609657	Area:	41.7 (ha) 103.0 (ac)
Ordnance Survey Sheet 1:50 000	97	1:10 000	SD 66 NW, SW
Date Notified (Under 1949 Act):	1976	Date of Last Revision:	–
Date Notified (Under 1981 Act):	1983/1984	Date of Last Revision:	1983

Other Information:

1. This site is listed in 'A Nature Conservation Review', edited by D. A. Ratcliffe (1977), Cambridge University Press.
2. The site contains red squirrels, a protected species listed in Schedule 5 of the above Act.
3. The boundary of this site has been revised by a small extension.
4. The site is within the Forest of Bowland AONB.

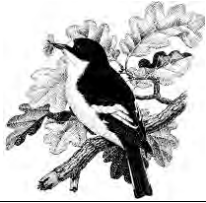
Reasons for Notification:

The extensive woodlands of the Roeburn gorge lie south of the village of Wray in the Lune valley. They contain the best examples of the range of northern deciduous woodland types characteristic of the River Lune and its tributaries draining the north side of the Bowland Fells. These nationally important woods lie mainly on the steep east side of the gorge but extend in places onto the plateau above. They are ungrazed by farm stock, have been little altered by conifer planting, are believed to be an ancient woodland site, and constitute one of the largest areas of broad-leaved woodland in the county.

The Carboniferous sandstone, mudstone and calcareous shales of the Bowland Series give rise to a wide range of soils from acidic podzols to the very basic brown earths which is reflected in the range of woodland types. The most extensive of these is the upland sessile oak wood with a characteristic ground flora including wavy hair-grass, bilberry and heath mosses in the most acid locations such as on the sandstone outcrops of Hill Kirks Scar, but dominated by ferns on the gentler slopes of

Outhwaite Wood where a high proportion of birch occurs in many places. The basic soils of Hill Kirks Wood support western valley ash-wych elm wood with a characteristic ground flora including dog's mercury, wood brome and ramsons. Between this and Outhwaite Wood, and downstream in Alcocks Wood, areas of more intermediate soils support acid sessile oak-hazel-ash woods. The lines of streams are marked by narrow strips of valley alder wood and this expands to occupy Bowskill Wood End and Pasture Wood at the upstream end of the SSSI. On the flood plain below Outhwaite Wood is a small area of bird cherry-alder wood. Small-leaved lime occurs at scattered locations including some fine trees in Bowskill Wood. Other plants of interest include a colony of the rare grass wood fescue *Festuca altissima* and the rare moss *Rhytidiadelphus subpinnatus*. Red squirrels, a protected species, are resident in the wood.

Appendix C. Local Wildlife Site Citations



Lancashire County Heritage Sites

Biological Heritage Site

Biological Heritage Sites
Partnership:

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Site Name: Birkett Fell, Hodder Bank Fell and Mossthwaite Fell

Site Ref: 64NE07

Approved: 08 September 1993

Area (ha): 231.14

Date written/last updated: 01 August 2006

Grid Ref: SD671485

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

Bowland Forest Low, Newton

Description:

The site comprises a large area of upland heath and blanket bog with scattered flushes, situated south of the river Hodder between Whitewell, Dunsop Bridge, Newton and Cow Ark. It includes Burholme Moor and Kitcham Hill as well as Birkett Fell, Hodder Bank Fell and Mossthwaite Fell and rises to an altitude of 283m on the summit of Kitcham Hill.

Much of the site is dominated by Heather with Purple Moor-grass in varying proportions. Other frequently occurring species include Bilberry, Hare's-tail Cottongrass, Heath Rush and Soft-rush. In some places, especially on Hodder Bank Fell, Burholme Moor and the lower eastern slopes of Birkett Fell, Heather is less frequent and the vegetation comprises marshy grassland with Purple Moor-grass dominant. There are also small areas of acid grassland dominated by Mat-grass. Reduced grazing pressures in recent years are resulting in an increase in Heather cover in parts. Bog mosses (*Sphagnum* spp.) occur frequently throughout the site with occasional Cross-leaved Heath and Cranberry.

Additional interest is provided by scattered, species-rich flushes, several of which support Bog Rosemary, a species included in the *Provisional Lancashire Red Data List of Vascular Plants*. Other flush species include Round-leaved Sundew, Cross-leaved Heath and Cranberry.

Cowberry, another Lancashire Red Data Book species, is present on Birkett Fell.

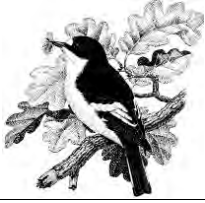
A few mature Scot's Pine, Larch and Beech trees are all that remains of Kitcham Wood.

Guideline(s) for Site Selection:

Swamp and Fen (Fe2)
Heathland (He1)
Flowering Plants and Ferns [(Ff4b)]
Flowering Plants and Ferns [(Ff4a)]

Other Information/Comments:

The site is in the Forest of Bowland Area of Outstanding Natural Beauty.



Lancashire County Heritage Sites

Biological Heritage Site

Biological Heritage Sites
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Site Name: Crag House Roadside Verges

Site Ref: 64NE09

Approved: 08 September 1993

Area (ha): 0.75

Date written/last updated:

Grid Ref: SD687481

Owner/Occupier:

Districts:

Ribble Valley

Parishes:

Newton

Description:

To be completed.

Guideline(s) for Site Selection:

Artificial Habitats (Ar2)

Flowering Plants and Ferns [(Ff4)]

Other Information/Comments:



Lancashire County Heritage Sites

Biological Heritage Site

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Site Name: Gibb's Wood and Bonstone Wood

Site Ref: 64NE11

Approved:

Area (ha): 4.15

Date written/last updated:

Grid Ref: SD692487

Owner/Occupier:

Districts:

Ribble Valley

Parishes:

Newton

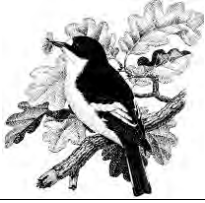
Description:

The site comprises woodland which is ancient semi-natural in character.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd2)

Other Information/Comments:



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Site Name: Ashnott Wood

Site Ref: 64NE12

Approved:

Area (ha): 2.55

Date written/last updated:

Grid Ref: SD693483

Owner/Occupier:

Districts:

Ribble Valley

Parishes:

Newton

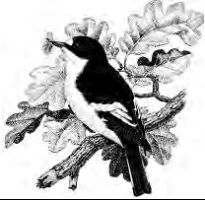
Description:

The site comprises semi-natural woodland which is identified within Natural England's Inventory of Ancient Woodl and.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd1)

Other Information/Comments:



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Site Name: Sugar Loaf

Site Ref: 65SE02

Approved: 01 December 1995

Area (ha): 1.08

Date written/last updated: 05 December 2012

Grid Ref: SD670507

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

Bowland Forest High

Description:

The site comprises a disused limestone quarry and associated semi-natural grassland situated on a prominent, steep sided mound in the Hodder valley about 1km east of Dunsop Bridge. The site supports species-rich limestone grassland on shallow soils and rock outcrops. The sward grades gradually into less diverse, semi-improved grassland on the lower slopes as the soil cover deepens.

Species present include selfheal, fairy flax, harebell, common bird's-foot-trefoil, eyebright, burnet saxifrage, autumn hawkbit, mouse-ear hawkweed, pignut, milkwort, meadow vetchling, common spotted-orchid, meadowsweet, crosswort, yellow oat-grass, quaking grass, field wood-rush and spring sedge.

Ungrazed exposed limestone rock around the top of the mound supports additional species such as dove's-foot crane's-bill, herb-Robert, hairy rock-cress, maidenhair spleenwort and wall-rue, together with rowan and hawthorn scrub.

The site includes a disused lime kiln in which bats have been recorded.

Guideline(s) for Site Selection:

Grassland (Gr1)

Other Information/Comments:

The disused quarry is also a Geological Heritage Site called the Knot or Sugar Loaf (SD 671507).



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Site Name: Oxenhurst Clough Wood

Site Ref: 65SE03

Approved: 01 September 1993

Area (ha): 2.12

Date written/last updated: 01 October 2000

Grid Ref: SD671517

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

Bowland Forest High

Description:

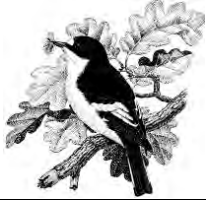
The site comprises a small remnant of semi-natural clough woodland situated 1.5 km north east of Dunsop Bridge. It is listed in the *Lancashire Inventory of Ancient Woodland (Provisional)*, (English Nature, 1994).

The canopy is dominated by ash and oak. Alder, rowan, hazel, holly and hawthorn are also present together with some gorse scrub. However, the wood has been unfenced and grazed by stock for many years. As a result, the canopy is open, there is no understorey, and the ground flora is dominated by grasses.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd1)

Other Information/Comments:



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Site Name: Back Lane Roadside Verges

Site Ref: 65SE04

Approved: 08 September 1993

Area (ha): 0.1

Date written/last updated:

Grid Ref: SD685520

Owner/Occupier:

Districts:

Ribble Valley

Parishes:

Newton

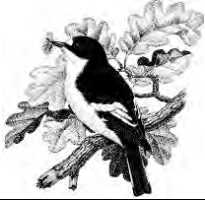
Description:

To be completed.

Guideline(s) for Site Selection:

Artificial Habitats (Ar2)

Other Information/Comments:



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Site Name: Newton West Roadside Verge

Site Ref: 65SE05

Approved: 08 September 1993

Area (ha): 0.22

Date written/last updated:

Grid Ref: SD692501

Owner/Occupier:

Districts:

Ribble Valley

Parishes:

Newton

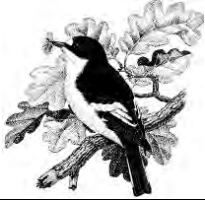
Description:

To be completed.

Guideline(s) for Site Selection:

Artificial Habitats (Ar2)

Other Information/Comments:



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Site Name: Newton North Roadside Verges

Site Ref: 65SE06

Approved: 08 September 1993

Area (ha): 0.28

Date written/last updated:

Grid Ref: SD698508

Owner/Occupier:

Districts:

Ribble Valley

Parishes:

Newton

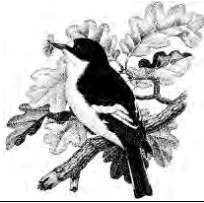
Description:

To be completed.

Guideline(s) for Site Selection:

Artificial Habitats (Ar2)

Other Information/Comments:



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Site Name: Gamble Hole Farm Pasture

Site Ref: 65SE09

Approved: 26 February 2002

Area (ha): 2.52

Date written/last updated: 01 July 2003

Grid Ref: SD687504

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

Newton

Description:

The site comprises an area of wet, semi-natural, neutral grassland with springs and flushes situated approximately 1 km west of the village of Newton. It lies on the lower slopes of a pasture adjoining Heaning Brook and supports a rich variety of plants characteristic of unimproved ancient grassland and flush systems. Four species in the *Provisional Lancashire Red Data List of Vascular Plants* occur here, namely bogbean, tawny sedge, yellow-sedge (*Carex viridula* ssp. *Brachyrrhyncha*) and few-flowered spike-rush.

The site supports a variety of grasses including sweet vernal grass, crested dog's-tail, Yorkshire fog, tufted hair-grass and purple moor-grass together with abundant meadowsweet, sharp-flowered rush, hard rush and soft-rush. Many other species are present including sneezewort, bugle, angelica, harebell, cuckooflower, common knapweed, common spotted-orchid, hemp-agrimony, cat's-ear, meadow vetchling, common and greater bird's-foot-trefoil, ragged-robin, mouse-ear hawkweed, common marsh-bedstraw, selfheal, great burnet, devil's-bit scabious, rough hawkbit, lady's-mantle and quaking grass. Sedges present include common sedge, carnation sedge, star sedge, bottle sedge and brown sedge.

The springs and flushes support many additional plants. These include bogbean, fen bedstraw, marsh arrowgrass, marsh marigold, marsh hawk's-beard, marsh valerian, water mint, water avens, lesser spearwort, brooklime, tawny sedge, yellow sedge, long-stalked yellow-sedge, few-flowered spike-rush, hare's-tail cottongrass and great horsetail. Small beds of lesser pond-sedge and water-cress occur alongside Heaning Brook and a tributary stream.

The site provides habitat for wading birds such as snipe.

Guideline(s) for Site Selection:

Grassland (Gr3)

Swamp and Fen (Fe2)

Flowering Plants and Ferns (Ff4b)

Other Information/Comments:

Lowland hay meadow (which includes species-rich neutral grassland) and swamp and fen are priority habitats in the UK Biodiversity Action Plan.



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Site Name: Clerk Laithe

Site Ref: 65SE10

Approved: 01 February 2002

Area (ha): 1.06

Date written/last updated: 01 August 2002

Grid Ref: SD698510

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

Newton

Description:

The site comprises areas of species-rich pastoral grassland along the banks and slopes of the initial 180 metres of a headwater stream. It lies some 0.5 kilometres north of Newton at an altitude of approximately 170 metres.

The most species-rich grassland within the site occurs on the south-easterly facing slope with abundant burnet-saxifrage, meadow vetchling, cat's-ear, great burnet, betony, Yorkshire-fog and cock's-foot. Frequently occurring species include selfheal, eyebright and quaking grass with occasional dyer's greenweed and glaucous sedge. Flushed areas along the slope add further to the diversity with tufted hair-grass, water avens, meadowsweet and sharp-flowered rush.

The north-westerly facing slope supports occasional to frequent common knapweed, heath bedstraw, cat's-ear, burnet-saxifrage, tormentil and selfheal.

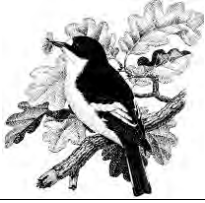
Thinner soils are in evidence on mounds to the north of the spring, and here the plant communities appear more calcareous with frequent rough hawkbit, eyebright, harebell and lady's mantle, and occasional mouse-ear hawkweed and salad burnet.

The vegetation of the stream and streamsides is also diverse with abundant meadowsweet and zigzag clover, and frequent silverweed, water mint and water avens.

Guideline(s) for Site Selection:

Grassland (Gr3)

Other Information/Comments:



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Site Name: New Barn Meadow, Lowgill

Site Ref: 66NE01

Approved: 01 December 1995

Area (ha): 0.35

Date written/last updated: 01 March 2004

Grid Ref: SD651654

Owner/Occupier: Private

Districts:

Lancaster

Parishes:

Tatham

Description:

The site comprises a sloping bank of species-rich semi-natural neutral grassland on the eastern edge of an otherwise species-poor field.

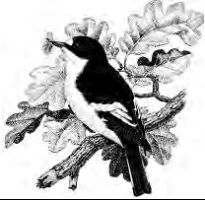
The herb-rich sward includes the following species: yellow rattle, common knapweed, common bird's-foot-trefoil, rough hawkbit, meadow vetchling, self-heal, betony, common spotted-orchid, cat's-ear, oxeye daisy, pignut, meadowsweet, wood horsetail, bluebell, greater stitchwort and ragged robin.

Guideline(s) for Site Selection:

Grassland (Gr3)

Other Information/Comments:

Lowland meadow is a priority habitat in the UK Biodiversity Action Plan. The site adjoins Bank Wood, High Lot Wood, Over Wood and Mosit Shoe Wood Biological Heritage Site (66NW28).



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Site Name: Foss Bank Wood, Tower Holme Wood and Middleton Wood

Site Ref: 66NE02

Approved: 01 September 1993

Area (ha): 7.79

Date written/last updated: 01 April 2001

Grid Ref: SD657652

Owner/Occupier: Private

Districts:

Lancaster

Parishes:

Tatham

Description:

The site comprises semi-natural woodland situated along both sides of Crossdale Beck, approximately 0.5 km north east of Lowgill. Foss Bank Wood and Tower Holme Wood are listed in the *Lancashire Inventory of Ancient Woodland (Provisional)*, (English Nature, 1994) and Middleton Wood is very similar in character.

The canopy of the woods is dominated by oak, birch and sycamore in varying proportions, with alder frequent alongside the beck. Other canopy species include ash, beech, wych elm, Scot's pine and larch. The understorey comprises rowan, hazel, holly and hawthorn, with occasional blackthorn and gorse.

The ground flora includes bluebell, wood-sorrel, dog's mercury, wood sage, wood avens, greater stitchwort, red campion, ivy, bramble, honeysuckle, herb-Robert, foxglove, male-fern, lady-fern, broad buckler-fern, scaly male-fern, hard fern, bracken, tufted hair-grass, wavy hair-grass and creeping soft-grass. Damp areas support meadowsweet, marsh thistle, opposite-leaved golden-saxifrage, common figwort, great woodrush and hairy woodrush. There are some very steep banks and rock outcrops in Foss Bank Wood.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd1)

Other Information/Comments:

The site boundary was extended in 11/97.



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Site Name: Wray Wood Moor

Site Ref: 66NW07

Approved: 01 September 1993

Area (ha): 22.62

Date written/last updated: 01 October 2008

Grid Ref: SD617652

Owner/Occupier: Private

Districts:

Lancaster

Parishes:

Roeburndale

Description:

Wray Wood Moor is a grazed common situated at an altitude of 180m approximately 2.5km south east of Wray. It comprises a mosaic of bog, damp unimproved acid grassland, flushes and a small tarn.

The bog areas support a high cover of bog mosses including *Sphagnum fallax*, *S. palustre*, *S. subnitens*, *S. cuspidatum* and *S. papillosum*. Cranberry, Round-leaved Sundew and Cross-leaved Heath are also present. Other species include Hare's-tail Cottongrass, Star Sedge and Hair-moss (*Polytrichum commune*).

The acid grassland is dominated by Wavy Hair-grass and Mat-grass with frequent/occasional Purple Moor-grass, Sheep's Fescue, Common Bent, Heath Bedstraw, Tormentil, Bilberry, Field Wood-rush, Heath Rush, Soft-rush and Sharp-flowered Rush.

The tarn, known as Wray Wood Moor Tarn, lies in the north west corner of the moor. Broad-leaved Pondweed is present in the tarn. Marginal vegetation includes Common Reedmace and Common Spike-rush. Flushes and bog pools are frequent around the tarn and support abundant Sphagnum. Other species found here include Hair-moss, Common Sedge, Hare's-tail Cottongrass, Marsh Willowherb, Common Marsh-bedstraw, Lesser Spearwort, Cuckooflower, Broad Buckler-fern, Soft-rush, Sharp-flowered Rush and Bulbous Rush.

The moor provides valuable habitat for birds such as lapwing and curlew.

The common hawker dragonfly breeds here.

Guideline(s) for Site Selection:

Bog (Bo3a)

Bog (Bo2a)

Other Information/Comments:

Blanket Bog is a Priority Habitat in the UK Biodiversity Action Plan.



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Site Name: Pike Gill Wood (Including Willock Close Wood and High Grasses Wood)

Site Ref: 66NW08

Approved: 01 September 1993

Area (ha): 8.4

Date written/last updated: 01 February 2001

Grid Ref: SD612665

Owner/Occupier: Private

Districts:

Lancaster

Parishes:

Roeburndale, Wray-with-Botton

Description:

The site comprises semi-natural clough woodland adjoining Hunt's Gill Beck, situated approximately 1km south east of the village of Wray. Most of the woodland is listed in the *Lancashire Inventory of Ancient Woodland (Provisional)*, (English Nature, 1994). The site supports an intimate mix of woodland types including oak woodland on the valley sides and wet woodland dominated by alder in base rich flushes and along the valley bottom.

The oak woodland is dominated by oak and birch, with occasional sycamore over an understorey of rowan, hazel, holly, hawthorn and elder. The ground flora includes bluebell, dog's mercury, wood-sorrel, enchanter's-nightshade, red campion, greater stitchwort, foxglove, wild strawberry, herb-Robert, wood avens, hedge woundwort, heath speedwell, bilberry, bramble, honeysuckle, ivy, male-fern, broad buckler-fern, hard fern, bracken, tufted hair-grass, wavy hair-grass, false brome and Yorkshire fog. Wetter areas and flushes support opposite-leaved golden-saxifrage, bugle, meadowsweet, common nettle, wavy bitter-cress, creeping buttercup and lady-fern.

The wet woodland is dominated by alder with frequent ash and occasional oak, sycamore and birch over an understorey of hazel, hawthorn, rowan, holly and elder. The ground flora includes angelica, bugle, opposite-leaved golden-saxifrage, meadowsweet, yellow pimpernel, creeping buttercup, wood-sorrel, sanicle, bluebell, herb-Robert, wood avens, red campion, greater stitchwort, hedge woundwort, heath speedwell, honeysuckle, bramble, hairy wood-rush, remote sedge, lady-fern, male-fern, broad buckler-fern, hard fern, beech fern, false brome, tufted hair-grass and Yorkshire fog.

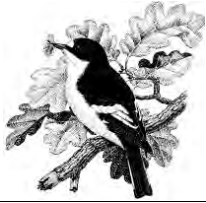
The site also supports some areas of ash dominated woodland. Wych elm occurs frequently in places particularly on steep slopes alongside the beck.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd1)

Other Information/Comments:

The site adjoins Bank Wood and Hunt's Gill Wood Biological Heritage Site (BHS 66NW04).



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Site Name: Broad Wood (Including Higher Broad Wood and Deep Gill Wood)

Site Ref: 66NW11

Approved: 01 September 1993

Area (ha): 6.81

Date written/last updated: 01 June 2001

Grid Ref: SD616673

Owner/Occupier: Private

Districts:

Lancaster

Parishes:

Wray-with-Botton

Description:

The site consists of three adjoining woods; Broad Wood, Deep Gill Wood and Higher Broad Wood. They comprise semi-natural woodland on steeply sloping ground on the south bank of the River Hindburn and along both sides of a tributary stream. The woodland is listed in the *Lancashire Inventory of Ancient Woodland (Provisional)*, (English Nature, 1994).

Broad Wood is dominated by oak, with frequent birch and sycamore, ash and alder. Hazel is abundant in the shrub layer, accompanied by rowan, holly and elder. The ground flora is sparse in places, especially where the slope is steep. Species present include tufted hair-grass, wood avens, common dog-violet, pignut, wood-sorrel, dog's mercury, ramsons, bramble, wood-sedge and hart's-tongue fern.

In parts of Deep Gill Wood beech co-dominates with ash and wych elm in the canopy. Holly and rowan occur in the understorey. The ground flora is dominated by tufted hair-grass with frequent ramsons, enchanter's-nightshade and yellow pimpernel. Wych elm becomes more common at the southern end of the gill and is locally dominant, as is sycamore in places.

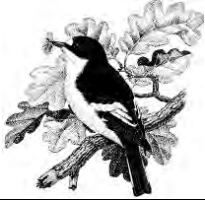
Higher Broad Wood supports alder along the stream, and is dominated by sycamore elsewhere. There is a thin understorey of holly. The following species are present in the ground flora: Yorkshire-fog, creeping buttercup, soft-rush, tufted hair-grass, bramble and broad buckler-fern.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd1)

Other Information/Comments:

The site adjoins Powley Wood (66NW09) and the River Hindburn (66NW20) Biological Heritage Sites. The site forms an integral part of the extensive mosaic of semi-natural habitats in Hindburndale.



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Site Name: Scale Wood

Site Ref: 66NW16

Approved: 01 September 1993

Area (ha): 1.3

Date written/last updated: 01 November 2000

Grid Ref: SD623656

Owner/Occupier: Private

Districts:

Lancaster

Parishes:

Roeburndale

Description:

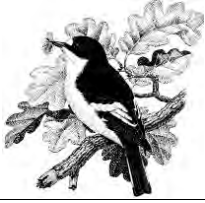
The site comprises a small, semi-natural, clough wood situated approximately 3 km south-east of Wray. It lies on steeply sloping ground alongside Hunt's Gill Beck and a tributary stream and is listed in the *Lancashire Inventory of Ancient Woodland (Provisional)*, (English Nature, 1994).

The canopy is dominated by ash, oak and alder over an understorey of hazel coppice, birch, rowan, hawthorn, elder and willow. The ground flora includes bluebell, hedge woundwort, red campion, foxglove, bramble, honeysuckle, broad buckler-fern, bracken, reed canary-grass and creeping soft-grass.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd1)

Other Information/Comments:



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Site Name: Collinson's Wood

Site Ref: 66NW17

Approved: 01 September 1993

Area (ha): 2.35

Date written/last updated: 01 May 2003

Grid Ref: SD627676

Owner/Occupier: Private

Districts:

Lancaster

Parishes:

Tatham

Description:

The site comprises semi-natural woodland situated on steeply sloping ground along the north bank of the river Hindburn, 2 km east of Wray. It is listed in the *Lancashire Inventory of Ancient Woodland (Provisional)*, English Nature, 1994.

The canopy is dominated by ash and wych elm, although much of the elm is now dead or dying as a result of Dutch elm disease. Other canopy trees include sycamore, oak, birch, rowan, alder and wild cherry. The understorey comprises old hazel coppice, hawthorn and holly. The ground flora has abundant dog's mercury and ramsons with frequent bluebell, bramble and honeysuckle. Other species include greater stitchwort, lesser celandine, wood avens, common dog-violet, pignut, ivy, wood melick and tufted hair-grass.

Landslips have occurred in places. Deer are inhibiting natural regeneration but some new planting is being undertaken.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd1)

Other Information/Comments:

The site adjoins Robin's Close Meadow and the River Hindburn Biological Heritage Sites (66NW34 and 66NW20).



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Site Name: River Hindburn

Site Ref: 66NW20

Approved:

Area (ha): 13.59

Date written/last updated:

Grid Ref: SD635669

Owner/Occupier:

Districts:

Lancaster

Parishes:

Tatham, Wray-with-Botton

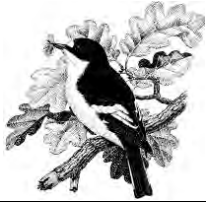
Description:

To be completed.

Guideline(s) for Site Selection:

Rivers and Streams (Ri1)

Other Information/Comments:



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Site Name: Cragg Wood, Holme Wood, Birks Wood and Park House Wood

Site Ref: 66NW21

Approved: 01 September 1993

Area (ha): 17.02

Date written/last updated: 01 June 2001

Grid Ref: SD631671

Owner/Occupier: Private

Districts:

Lancaster

Parishes:

Wray-with-Botton

Description:

The site comprises a band of semi-natural woodland situated on sloping ground along the south bank of the river Hindburn, approximately 2.5 km east of Wray. The site is listed in the *Lancashire Inventory of Ancient Woodland*, (English Nature, 1994).

Much of the woodland is dominated by oak with frequent birch over an understorey of hazel coppice and hawthorn. Sycamore is frequent in Birks Wood. The ground flora is generally acidic in character with frequent creeping soft-grass, bluebell, wood-sorrel, greater stitchwort and bramble. Other species present include honeysuckle, ivy, enchanter's-nightshade, dog's mercury, wood anemone, sanicle, primrose, ramsons, sweet woodruff, wood stitchwort, herb-Robert, red campion, hedge woundwort, wood sage, foxglove, wood avens, bracken, lady-fern, hard fern, wood melick, wavy hair-grass, tufted hair-grass and common bent.

Other areas, such as the steep banks along Force Gill and the north side of Cragg Wood, are dominated by wych elm with ash, oak, birch, sycamore and rowan over an understorey of hazel, holly, elder and bird cherry. Ferns such as broad buckler-fern and male-fern occur frequently here together with great wood-rush.

There are a few small wet areas in Cragg Wood dominated by alder with occasional ash, birch and bird cherry. In these areas the ground flora includes opposite-leaved golden-saxifrage, meadowsweet, marsh-bedstraw, yellow pimpernel, creeping buttercup, bluebell, wood-sorrel, wood stitchwort, remote sedge, broad buckler-fern, tufted hair-grass and Yorkshire fog.

Some of Park House Wood has been felled.

Guideline(s) for Site Selection:

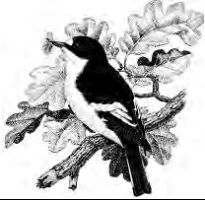
Woodland and Scrub (Wd1)

Other Information/Comments:

Wet woodland is a priority habitat in the UK Biodiversity Action Plan.

The site adjoins the River Hindburn Biological Heritage Site (66NW20).

The site forms an integral part of the extensive mosaic of semi-natural habitats present in Hindburndale.



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Site Name: Cowkins Coppice

Site Ref: 66NW23

Approved: 01 September 1993

Area (ha): 3.39

Date written/last updated: 01 March 2001

Grid Ref: SD635672

Owner/Occupier: Private

Districts:

Lancaster

Parishes:

Tatham

Description:

The site comprises a semi-natural wood situated on a slope of varying steepness adjoining the river Hindburn approximately 3 km east of Wray. The wood is listed in the *Lancashire Inventory of Ancient Woodland (Provisional)*, (English Nature, 1994).

The canopy is made up of a mixture of ash, oak, sycamore, birch and rowan with occasional wych elm, alder and beech. There is an understorey of hazel and hawthorn. Many of the trees and shrubs have been coppiced in the past. Much of the ground flora is dominated by tufted hair-grass and ferns including bracken, male-fern and hard fern. Other species recorded include ivy, honeysuckle, bramble, raspberry, dog's mercury (locally frequent), bluebell, ramsons, wood speedwell, wood-sorrel, common dog-violet, wood sage, wood avens, yellow pimpernel, barren strawberry, foxglove, cleavers, bugle, common nettle, pignut, selfheal, wood-sedge, soft-rush, hairy wood-rush, wood melick, giant fescue, false brome and hairy-brome.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd1)

Other Information/Comments:

The site adjoins the River Hindburn Biological Heritage Site (BHS 66NW20).



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Site Name: Over Houses Great Wood

Site Ref: 66NW26

Approved: 01 September 1993

Area (ha): 6.67

Date written/last updated: 01 June 2000

Grid Ref: SD645655

Owner/Occupier: Private

Districts:

Lancaster

Parishes:

Wray-with-Botton

Description:

The site comprises semi-natural woodland situated on steeply sloping ground along the west side of the river Hindburn. It is listed in the *Lancashire Inventory of Ancient Woodland (Provisional)*, (English Nature, 1994). Wood fescue, (*Festuca altissima*), a species included in the *Provisional Lancashire Red Data List of Vascular Plants*, occurs abundantly in several places.

The canopy is dominated by oak, ash, wych elm and birch, with alder in places alongside the river and tributary streams. Sycamore, wild cherry, lime and beech are also present. There is an understorey of hazel, rowan, hawthorn, holly and bird cherry.

The ground flora includes wood-sorrel, bluebell, dog's mercury, enchanter's nightshade, herb-Robert, hedge woundwort, wood anemone, sanicle, sweet woodruff, primrose, ivy, wood sage, honeysuckle, bramble, bilberry, hairy-brome, wood melick, creeping soft-grass, tufted hair-grass, wavy hair-grass, hard fern, male-fern, lady fern, broad buckler-fern, great horsetail, hairy wood-rush and great wood-rush. Bracken is locally dominant. Damp areas and shale cliffs support additional species such as ramsons, wood stitchwort, opposite-leaved golden-saxifrage, marsh marigold, marsh hawk's-beard, marsh valerian, hemp agrimony, meadow sweet and hard shield-fern.

Guideline(s) for Site Selection:

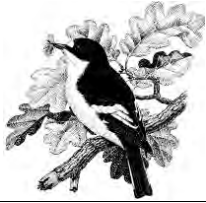
Woodland and Scrub (Wd1)

Flowering Plants and Ferns (Ff4b)

Other Information/Comments:

The site adjoins two other Biological Heritage Sites, namely Meadows adjoining Far Holme Meadow SSSI (BHS 66NW27) and River Hindburn (BHS 66NW20).

The site forms an integral part of the extensive complex of ancient semi-natural woodland which exists in Hindburndale.



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Site Name: Meadows Adjoining Far Holme Meadow SSSI

Site Ref: 66NW27

Approved: 01 September 1993

Area (ha): 3.49

Date written/last updated: 01 June 2000

Grid Ref: SD646654

Owner/Occupier: Private

Districts:

Lancaster

Parishes:

Tatham, Wray-with-Botton

Description:

The site comprises three discrete areas of species-rich, semi-natural grassland adjoining the River Hindburn.

The small field at the north of the site (at SD 644657), situated to the west of Friar Gill, supports damp grassland. Species present here include sweet vernal-grass, Yorkshire-fog, tufted hair-grass, wild angelica, common knapweed, pignut, meadowsweet, bluebell, meadow vetchling, greater bird's-foot-trefoil, greater stitchwort and betony.

To the south is a small area of grassland (at SD 646654) on the flat ground below Over Houses Great Wood and the river. Scattered trees (alder, hawthorn and hazel) are present and there is a woodland element to the grassland, with species such as greater stitchwort, bluebell, wood anemone and wood horsetail occurring.

Other plants present include common knapweed, betony, great burnet, bitter vetch, meadowsweet, pignut, wild angelica, marsh thistle, sneezewort, common spotted-orchid, heath bedstraw and greater bird's-foot-trefoil.

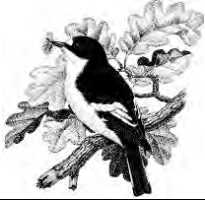
The large meadow at the south of the site (SD 647653) lies on the flood plain of the River Hindburn, at the base of a wooded slope. Species present here include common knapweed, meadowsweet, great burnet, cuckooflower, marsh marigold, meadow vetchling, sharp-flowered rush and cat's-ear. On drier banks plants such as mouse-ear hawkweed, heath bedstraw, tormentil, devil's-bit scabious, betony, lady's-mantle, wood anemone and bluebell are found.

Guideline(s) for Site Selection:

Grassland (Gr3)

Other Information/Comments:

Lowland meadow is a priority habitat in the UK Biodiversity Action Plan.
Part of the site adjoins Far Holme Meadow Site of Special Scientific Interest.



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Site Name: Bank Wood, High Lot Wood, Over Wood and Mosit Shoe Wood

Site Ref: 66NW28

Approved: 01 September 1993

Area (ha): 7.72

Date written/last updated: 01 June 2000

Grid Ref: SD649656

Owner/Occupier: Private

Districts:

Lancaster

Parishes:

Tatham

Description:

The site comprises semi-natural woodland on steeply sloping ground along both sides of Crossdale Beck. The woodland is listed in the *Lancashire Inventory of Ancient Woodland (Provisional)*, (English Nature, 1994).

The canopy is dominated by oak, sycamore and birch, with alder occurring locally. There is an understorey of rowan, hazel, hawthorn and holly. The ground flora includes bluebell, greater stitchwort, dog's mercury, wood-sorrel, yellow pimpernel, broad buckler-fern, creeping soft-grass, tufted hair-grass, common nettle and foxglove.

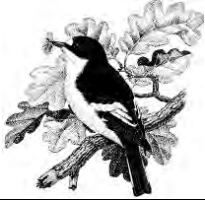
Guideline(s) for Site Selection:

Woodland and Scrub (Wd2)

Woodland and Scrub (Wd1)

Other Information/Comments:

The site is an integral part of the extensive complex of ancient semi-natural woodland existing in Hindburndale. The site adjoins Field Head Meadow Site of Special Scientific Interest, and New Barn Meadow, Hole House Grasslands, Meadows adjoining Far Holme Meadow SSSI and the River Hindburn Biological Heritage Sites (66NE01, 66NW30, 66NW27 and 66NW20).



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Site Name: Haw Wood

Site Ref: 66NW29

Approved: 01 September 1993

Area (ha): 9.17

Date written/last updated: 01 May 2005

Grid Ref: SD640664

Owner/Occupier: Private

Districts:

Lancaster

Parishes:

Wray-with-Botton

Description:

The site comprises a long band of semi-natural woodland adjoining the west bank of the river Hindburn, approximately 3.5km south east of Wray. It is listed in the *Lancashire Inventory of Ancient Woodland, (Provisional)*, (English Nature, 1994). The woodland is notable for the occurrence of Lily-of-the-valley, Wood Fescue and Toothwort which are all included in the *Provisional Lancashire Red Data List of Vascular Plants*.

Much of the woodland lies on steeply sloping ground. The lower slopes are mainly dominated by Wych Elm and Ash with occasional Oak, Sycamore, Bird Cherry, Birch, Rowan and Alder. The understorey comprises frequent Hazel coppice and regenerating canopy species together with occasional Hawthorn, Holly and Elder. The ground flora includes frequent Dog's Mercury, Bluebell, Wood-sorrel, Wood Stitchwort, Woodruff, Ramsons, Lady-fern, Male-fern, Broad Buckler-fern and Great Wood-rush. Other species recorded include Early-purple Orchid, Primrose, Enchanter's-nightshade, Herb-robert, Red Campion, Herb Bennet, Yellow Pimpernel, Barren Strawberry, Hedge Woundwort, Honeysuckle, Bramble, Raspberry, Wood Melick, Tufted Hair-grass, Hairy Wood-rush, Soft Shield-fern, Oak Fern, Hard Fern, Remote Sedge and Pendulous Sedge.

On higher slopes the ground is generally drier and more acidic. Here Oak is abundant in the canopy with frequent Birch and Sycamore. The ground flora in these areas is variable with some areas of Yorkshire Fog and Bluebell, others of Wavy Hair-grass and Bilberry, and open glades with locally frequent bracken, along with many of the species listed above.

The site also includes small areas of wet Alder woodland with ground flora species such as Meadowsweet, Yellow Iris, Opposite-leaved Golden-saxifrage, Bugle, Wild Angelica, Creeping Buttercup, Common Nettle and Reed Canary-grass.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd1)

Other Information/Comments:

- Wet woodland is a priority habitat in the UK Biodiversity Action Plan
- The site boundary was modified in 01/05 to correct a digitising error



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Site Name: Hole House and Lower House Grasslands

Site Ref: 66NW30

Approved: 01 September 1993

Area (ha): 5.75

Date written/last updated: 01 February 2006

Grid Ref: SD644661

Owner/Occupier: Private

Districts:

Lancaster

Parishes:

Tatham, Wray-with-Botton

Description:

The site comprises seven separate but neighbouring parcels of species-rich semi-natural neutral grassland lying on both sides of the river Hindburn approximately 4 km south east of Wray. The nationally scarce eyebright, *Euphrasia rostkoviana* has been recorded from this site, as well as three other species listed in the *Provisional Lancashire Red Data List of Vascular Plants*, namely Greater Butterfly-orchid, Fragrant Agrimony and Melancholy Thistle. The site is thought to be the only remaining locality for Greater Butterfly-orchid in Lancashire.

The grasslands east of the river and north of Hole House Wood are managed as pasture. Species present here include Harebell, Lady's Bedstraw, Bluebell, Cat's-ear, Common Bird's-foot-trefoil, Ragged-Robin, Mouse-ear Hawkweed, Selfheal, Betony, Common Knapweed, Common Spotted- Orchid, Common Twayblade and Primrose. Meadow Saxifrage, an uncommon plant in Lancashire, occurs on woodland edge near the river. Scattered scrub of Gorse, Hawthorn, Birch, Oak and Ash occurs on the valley slopes.

South of Hole House Wood and east of the river are three small isolated areas of interest, the bulk of the surrounding field now being improved grassland. The field bank below the wood supports Sneezewort, Bugle, Wood Anemone, Common Knapweed, Pignut, Meadowsweet, Bluebell, Meadow Vetchling, Lesser Stitchwort, Great Burnet, Harebell, Betony, Devil's-bit Scabious and Field Woodrush. The bank lying south of the track between Hole House farm and the river has a good population of Melancholy Thistle together with Common Nettle, Common Knapweed, Cleavers, Betony, Meadow Buttercup, Cock's-foot and scattered scrub.

A large pasture adjoining the west bank of the river supports areas of damp and drier grassland. Damp ground tends to be dominated by soft-rush, with species such as Meadowsweet, Ragged-Robin, Bog Stitchwort, Brooklime, Wild Angelica, Purple Loosestrife, Marsh Hawk's-beard, Great Burnet, Greater Bird's-foot-trefoil, Bugle, Devil's-bit Scabious, Water Mint, Marsh Horsetail and Marsh Foxtail. Drier ground supports plants such as Fragrant Agrimony, Common Knapweed, Pignut, Selfheal, Meadow Vetchling, Betony, Mouse-ear Hawkweed, Cat's-ear, Field Woodrush, Pale Sedge and Oval Sedge.

Guideline(s) for Site Selection:

Grassland (Gr3)

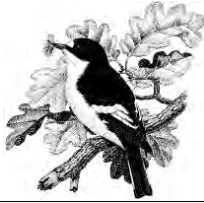
Flowering Plants and Ferns (Ff4)

Flowering Plants and Ferns (Ff3)

Flowering Plants and Ferns (Ff2)

Other Information/Comments:

The site adjoins Hole House Wood (66NW31) and the River Hindburn (66NW20) Biological Heritage Sites. The site is an integral part of the extensive mosaic of semi-natural habitats along the River Hindburn.



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Site Name: Hole House Wood

Site Ref: 66NW31

Approved: 01 September 1993

Area (ha): 1.99

Date written/last updated: 01 March 2001

Grid Ref: SD645661

Owner/Occupier: Private

Districts:

Lancaster

Parishes:

Tatham

Description:

The site comprises semi-natural woodland situated on sloping ground along the eastern bank of the river Hindburn approximately 4 km south east of Wray. It is listed in the *Lancashire Inventory of Ancient Woodland (Provisional)*, (English Nature, 1994).

The canopy is made up of oak, birch, ash, alder, sycamore and wych elm, over an understorey of hazel, hawthorn and rowan. The ground flora includes bluebell, ramsons, wood anemone, pignut, woodruff, herb-Robert, wood avens, yellow pimpernel, wood-sorrel, early-purple orchid, primrose, sanicle, hedge woundwort, greater stitchwort, germander speedwell, early and common dog-violet, tufted hair-grass, creeping soft-grass, wood melick, great horsetail and broad buckler-fern.

Broad-leaved helleborine has been recorded here.

Guideline(s) for Site Selection:

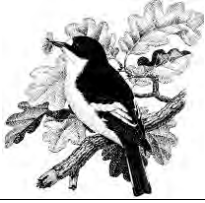
Woodland and Scrub (Wd1)

Other Information/Comments:

The site adjoins two other Biological Heritage Sites, namely Hole House Meadows (BHS 66NW30) and the River Hindburn (BHS 66NW20).

The site forms an integral part of the extensive complex of ancient semi-natural woodland which exists in Hindburndale.

The site boundary was extended in 01/01 to include an additional 0.4 ha of semi-natural woodland.



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Site Name: Upper Hindburn Valley - Grassland and Woodland Between Stairend Bridge and Botton Bridge

Site Ref: 66SE02

Approved: 01 September 1993

Area (ha): 11.05

Date written/last updated: 01 November 2000

Grid Ref: SD654633

Owner/Occupier: Private

Districts: Lancaster
Parishes: Tatham, Wray-with-Botton

Description:

The site comprises a series of semi-natural grasslands situated along the upper reaches of the River Hindburn, together with several small areas of predominantly semi-natural woodland. Collectively these habitats constitute a very valuable mosaic.

The riverside fields support a range of semi-natural grassland types. Neutral grassland predominates and supports species such as common knapweed, meadow vetchling, common bird's-foot-trefoil, great burnet, Autumn hawkbit and pignut. Wetter ground supports plants such as marsh marigold, meadowsweet, sneezewort, water avens, marsh valerian, marsh arrowgrass, angelica, water mint, hemp agrimony and long-stalked yellow-sedge, an uncommon species in Lancashire. Small areas of more acidic grassland occur towards the south of the site with heather, lousewort, mouse-ear hawkweed and devil's-bit scabious.

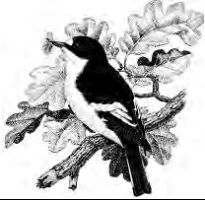
Woodland occupies stretches of moderate to steeply sloping ground alongside the River Hindburn and the tributary Mean Gill. Oak and ash predominate and are accompanied by more occasional birch and rowan, over an understorey of hazel, hawthorn and blackthorn. Alder is found on wetter ground alongside the river. Conifers have been planted in sections of the wood. The following species are present in the ground flora: bluebell, wood-sorrel, wood anemone, wood melick, greater stitchwort, ramsons, enchanter's-nightshade, herb-Robert, yellow pimpernel, dog's mercury, wood sage and bracken.

Guideline(s) for Site Selection:

Grassland (Gr3)
Habitat Mosaics (Hm3)

Other Information/Comments:

The site adjoins Hollinhurst Wood (66SE01), Swans Wood (66SE03), Mean Garth Wood (66SE06) and the River Hindburn (66NW20) Biological Heritage Sites.



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Site Name: Stubbins Wood (Including Bull Gill Wood, High Holme Wood, Tenter Hill Wood, Far Plain Wood, Bent Close Wood and Long Field Wood)

Site Ref: 66SE04

Approved: 01 September 1993

Area (ha): 8.18

Date written/last updated: 01 March 2004

Grid Ref: SD650646

Owner/Occupier: Private

Districts: Lancaster
Parishes: Tatham

Description:

The site comprises a band of semi-natural woodland situated along both sides of Bull Gill and along the eastern side of the River Hindburn to the north. The woodland is listed in the *Lancashire Inventory of Ancient Woodland (Provisional)*, (English Nature, 1994).

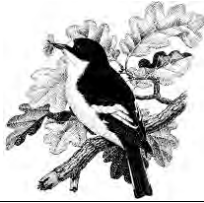
The canopy consists of a mixture of oak, birch, sycamore, ash, wych elm, beech, rowan and alder. There is a shrub layer of hazel with wild cherry, holly, hawthorn and elder. The ground flora includes dog's mercury, honeysuckle, wood-sorrel, bluebell, greater stitchwort, herb-Robert, hedge woundwort, wood avens, bracken, remote sedge, tufted hair-grass, giant fescue and false brome. Sanicle and woodruff occur in more base-rich areas.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd1)

Other Information/Comments:

The site forms an integral part of the extensive complex of ancient semi-natural woodland existing in Hindburndale. The site adjoins Lower Helks Pastures and Meadows adjoining Far Holme Meadow SSSI Biological Heritage Sites (66SW16 and 66NW27).



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Site Name: Goodber Common (Including Summersgill Fell and White Moss)

Site Ref: 66SW11

Approved: 01 September 1993

Area (ha): 914.9

Date written/last updated: 01 July 2001

Grid Ref: SD630625

Owner/Occupier:

Districts:

Lancaster

Parishes:

Roeburndale, Wray-with-Botton

Description:

The site comprises an extensive area of open moorland, situated on a plateau to the north of Bowland Fells. It consists of an intricate mosaic of blanket bog, wet acid grassland and marshy grassland with many flushes and small streams. Approximately half of the site is common land. It is heavily grazed by sheep and there are patches of bare peat.

The site is particularly notable for supporting several upland colonies of the large heath butterfly (polydama form), a nationally scarce species. This is one of only two locations for this butterfly in Lancashire. The other, Winmarleigh Moss, is a lowland site and supports the davus form.

The areas of bog are of considerable botanical interest. They are dominated by hare's-tail and common cottongrass with characteristic mire species such as bog asphodel, cranberry, deer-grass, round-leaved sundew, cross-leaved heath and bog mosses (Sphagnum species). Hare's-tail cottongrass is the main larval food plant of the large heath, whilst cross-leaved heath is an important nectar source for the adult butterfly. Of particular note is the occurrence of bog rosemary, bogbean and dioecious sedge, all species that are included in the Provisional Lancashire Red Data List of Vascular Plants.

The acid grassland is generally dominated by heath rush with sheep's-fescue, wavy hair-grass, mat-grass, common bent, purple moor-grass, tormentil and heath bedstraw. Bilberry occurs occasionally.

Areas of marshy grassland/modified bog are typically dominated by purple moor-grass accompanied by species such as soft rush, greater bird's-foot-trefoil, carnation sedge and bog mosses (Sphagnum species).

The site also provides valuable breeding habitat for upland birds. It is particularly important for golden plover and curlew. Other breeding birds include lapwing, snipe, red grouse, meadow pipit and skylark.

Guideline(s) for Site Selection:

Swamp and Fen	(Fe2)
Bog	(Bo3a)
Flowering Plants and Ferns	[(Ff4b)]
Flowering Plants and Ferns	[(Ff4a)]
Butterflies and Moths	(Le2)

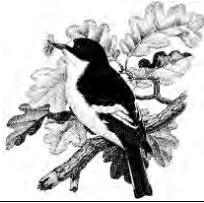
Other Information/Comments:

Blanket bog is a priority habitat in the UK Biodiversity Action Plan.

The large heath is listed in the Red Data Book of European Butterflies, Van Swaay and Warren, 1999.

The southern boundary of the site adjoins Bowland Fells Site of Special Scientific Interest.

463 ha of the site is Common Land (Goodber Common CL No 18).



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Site Name: Well Beck Wood (Including Helks Home Wood and Middlefield Wood)

Site Ref: 66SW13

Approved: 01 September 1993

Area (ha): 6.66

Date written/last updated: 01 January 2002

Grid Ref: SD644637

Owner/Occupier: Private

Districts:

Lancaster

Parishes:

Wray-with-Botton

Description:

The site comprises three adjacent blocks of semi-natural woodland adjoining Helks Brow and Mill Brow, Hindburndale, approximately 5.5 km south east of Wray. The woodland is listed in the *Lancashire Inventory of Ancient Woodland (Provisional)*, (English Nature, 1994).

Well Beck Wood supports frequent alder with birch and oak and more occasional ash and sycamore. Hazel, holly, hawthorn and willow occur in the understorey. The ground flora includes bluebell, wood-sorrel, bramble, broad buckler-fern, male-fern, scaly male-fern and bracken. Tufted hair-grass, bugle, great horsetail and sedges are present in wet areas.

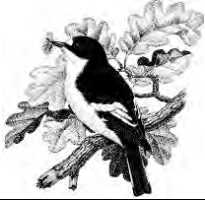
Helks Home Wood and Middlefield Wood are dominated by oak, ash and birch with occasional sycamore. Beech occurs rarely. Alder and wych elm are frequent along the streams. Hazel is abundant in the understorey with some hawthorn and holly. The ground flora includes dog's-mercury, wood-sorrel, greater stitchwort, wood avens, herb-robert, primrose, bugle, ivy, bramble, honeysuckle, bracken, broad buckler-fern, hard fern, hart's-tongue, tufted hair-grass and creeping soft-grass.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd1)

Other Information/Comments:

The site forms part of the extensive complex of semi-natural woodlands present in Hindburndale.



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Site Name: Helks Wood

Site Ref: 66SW15

Approved: 01 September 1993

Area (ha): 8

Date written/last updated: 01 February 2004

Grid Ref: SD645648

Owner/Occupier:

Districts:

Lancaster

Parishes:

Wray-with-Botton

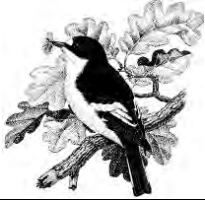
Description:

The site comprises semi-natural woodland which is identified within Natural England's Inventory of Ancient Woodl and.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd1)

Other Information/Comments:



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Site Name: Lower Helks Pastures

Site Ref: 66SW16

Approved: 01 January 2004

Area (ha): 15.62

Date written/last updated: 01 March 2004

Grid Ref: SD647649

Owner/Occupier:

Districts:

Lancaster

Parishes:

Tatham, Wray-with-Botton

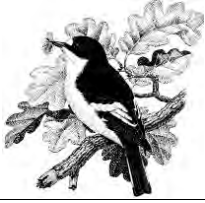
Description:

To be completed.

Guideline(s) for Site Selection:

Grassland (Gr3)

Other Information/Comments:



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Site Name: Waddington Fell Road, Roadside Verges

Site Ref: 74NW01

Approved: 08 September 1993

Area (ha): 0.22

Date written/last updated:

Grid Ref: SD702499

Owner/Occupier:

Districts:

Ribble Valley

Parishes:

Newton

Description:

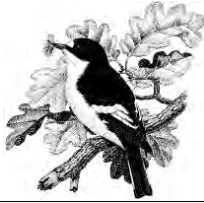
To be completed.

Guideline(s) for Site Selection:

Artificial Habitats (Ar2)

Other Information/Comments:

Lowland Meadows is a Priority Habitat in the UK Biodiversity Action Plan.



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Site Name: Waddington Fell and Browsholme Moor

Site Ref: 74NW02

Approved: 01 September 1993

Area (ha): 268.03

Date written/last updated: 01 March 2004

Grid Ref: SD708476

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

Bashall Eaves, Bowland Forest High, Newton, Waddington

Description:

The site comprises an extensive area of moorland with upland heath, blanket bog, acid grassland and mires lying along the western side of Fell Road (B6478), between Waddington and Newton. It includes Newton Fells, Waddington Fell, Browsholme Moor, Duckpit Hill, Cabin Hill and Stony Hill and ranges in altitude from around 230m in Smelt Mill Clough to 395m at the triangulation pillar on the summit of Waddington Fell. Approximately half of the site is Common Land (Newton Fell).

The higher ground is mainly vegetated by dry dwarf shrub heath dominated by heather with frequent bilberry, crowberry and wavy hair-grass. Cowberry, a species included in the *Provisional Lancashire Red Data List of Vascular Plants*, occurs occasionally on Waddington Fell. Elsewhere, the heathland forms a mosaic with unimproved acidic grassland dominated by mat-grass and heath rush with frequent sheep's-fescue, wavy hair-grass and heath bedstraw.

The site also supports extensive areas of blanket bog. Here the vegetation is dominated by hare's-tail and common cottongrass with bog mosses (*Sphagnum spp.*), hair-moss (*Polytrichum sp.*), heather, bilberry, wavy hair-grass, sheep's-fescue and heath rush. Of particular note is the frequent occurrence of cranberry together with occasional round-leaved sundew, cross-leaved heath and crowberry.

The value of the moorland is enhanced by the presence of several species-rich flushes and valley mires. Species in these areas include round-leaved sundew, bog asphodel, bogbean, marsh pennywort, marsh violet, marsh bedstraw, white sedge, star sedge, long-stalked yellow-sedge, carnation sedge, oval sedge and common sedge. Greater tussock-sedge is also present on the site.

The moorland provides valuable habitat for upland birds such as red grouse.

Common lizard occurs on the site.

Guideline(s) for Site Selection:

Swamp and Fen (Fe2)

Bog (Bo4)

Heathland (He1)

Other Information/Comments:

Blanket Bog, Upland Heathland and Upland Flushes, Fens and Swamps are Priority Habitats in the UK Biodiversity Action Plan.

The site adjoins Bradford Fell, Easington Fell and Harrop Fell Biological Heritage Site (74NW04).

The site is in the Forest of Bowland Area of Outstanding Natural Beauty.

Approximately half of the site is Common Land (Newton Fell CL No 176W).



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Site Name: Bradford Fell, Easington Fell and Harrop Fell

Site Ref: 74NW04

Approved: 01 September 1993

Area (ha): 517.97

Date written/last updated: 01 November 1999

Grid Ref: SD725490

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

Grindleton, Newton, Waddington, West Bradford

Description:

The site comprises an extensive area of upland heath and mire situated on Bradford, Easington and Harrop Fells immediately east of the B6478 between Newton and Waddington. It rises to 396m on the summit of Easington Fell.

Much of Bradford Fell is ungrazed by stock and dominated by mature heather with some bilberry and large stands of bracken in places. Easington Fell and Harrop Fell are common land and have been considerably modified by sheep grazing. Here, most of the vegetation comprises a mosaic of dry dwarf shrub heath, acid grassland, marshy grassland, blanket bog and bracken.

Dry heath areas support varying proportions of heather and bilberry. In many places the heathland occurs as a mosaic with unimproved acid grassland generally dominated by mat grass and heath rush with frequent wavy hair-grass, sheep's-fescue and some *Polytrichum commune*. Wetter areas of marshy grassland are dominated by purple-moor grass and soft-rush in varying proportions. Blanket bog supports species such as hare's-tail and common cottongrass, cross-leaved heath, *Sphagnum* and *Polytrichum* with occasional bilberry and heather.

The presence of a number of mires and flushes provides additional interest to the site. For example, there are several large acidic flushes on Easington Fell in the Skelshaw Brook valley. One flush at SD 727495 is a species-rich example. It is dominated by common cottongrass and *Sphagnum* spp. with soft-rush at the edges. Round-leaved sundew is abundant throughout. Other species include cranberry, marsh pennywort, common sedge, star sedge and notably, bog pimpernel, a species listed in the *Provisional Lancashire Red Data List of Vascular Plants*. Also on Easington Fell (SD 733495) is a deep pool surrounded by a *Sphagnum* dominated basin mire. Plants found here include cranberry and white sedge. On West Bradford Fell (SD 730470) is a small mire with abundant *Sphagnum* spp. and hare's-tail cottongrass. Other species present here include heather, bilberry, crowberry, cross-leaved heath, cranberry and common cottongrass together with bog rosemary and cowberry both of which are included in the *Provisional Lancashire Red Data List of Vascular Plants*.

Also of interest is the occurrence of a nationally scarce liverwort, *Cephalozia catenulata*, which has been recorded on a shaded sandstone boulder on Grindleton Fell. This is the only known location for this species in Lancashire.

The site provides valuable habitat for upland birds such as red grouse.

Guideline(s) for Site Selection:

Swamp and Fen	(Fe2)
Heathland	(He1)
Flowering Plants and Ferns	(Ff4b)
Flowering Plants and Ferns	(Ff4a)
Bryophytes	(Br2)

Other Information/Comments:

- 1.The site includes the following commons: Old Quarries (56W), Old Quarries (57W), Harrop Fell (65W-part only), Easington Fell (66W-part only), Millstone Hill (156W), Newton Fell (176W-part only), Newton Fell (248W) and Part of Newton Fell (408W).
- 2.The site adjoins Waddington Fell and Browsholme Moor Biological Heritage Site (BHS 74NW02) with which it is ecologically continuous.



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Site Name: Bonstone Brook Pastures

Site Ref: 74NW06

Approved: 01 January 2004

Area (ha): 14.77

Date written/last updated: 01 March 2004

Grid Ref: SD700483

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

Newton

Description:

The site comprises two pastures supporting species-rich semi-natural grassland situated approximately 2 km south of the village of Newton. The pastures lie on sloping ground along either side of Bonstone Brook.

The southern pasture, known as Scotch Close, is damp with frequent rushes (hard rush, soft-rush and jointed rush) and supports a mosaic of neutral and acidic grassland. Common bent and crested dog's-tail are abundant. Other grasses include quaking grass, sweet vernal-grass, tufted hair-grass and Yorkshire fog. The sward is uniformly rich and includes frequent common knapweed, fairy flax, selfheal, marsh valerian, ribwort plantain and carnation sedge. Occasional species include sneezewort, lady's-mantle, marsh marigold, meadowsweet, water avens. Cat's-ear, meadow vetchling, rough hawkbit, common and greater bird's-foot-trefoil, lesser spearwort, great burnet, devil's-bit scabious, marsh arrowgrass, star sedge and field wood-rush. Acidic areas support mat-grass, purple moor-grass and heath bedstraw. Heather, bilberry and hair-moss occur rarely.

The northern pasture comprises a mosaic of wet and dry neutral and acidic grassland. Much of it lies on sheltered south-west facing banks and provides valuable habitat for butterflies and other invertebrates. As well as all the grasses and rushes listed above, the pasture supports common bird's-foot-trefoil, cat's-ear, eyebright, selfheal, meadow vetchling, mouse-ear hawkweed, fairy flax, rough hawkbit, common knapweed, lesser stitchwort, lady's mantle, great burnet, meadowsweet, marsh valerian, water avens, sneezewort, devil's-bit scabious, primrose, angelica, water mint and fen bedstraw. Alder is frequent at the western end of the field together with occasional ash and holly. There are also two pheasant enclosures, one of which is planted with young trees.

The site also includes a small area of adjoining damp semi-natural pasture situated on a steep bank at SD 704481 next to a conifer plantation. Plants found here include common bird's-foot-trefoil, cat's-ear, devil's-bit scabious, common knapweed, meadow vetchling, mouse-ear hawkweed, lady's mantle, water avens, marsh violet and primrose.

Guideline(s) for Site Selection:

Grassland (Gr3)

Other Information/Comments:



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Site Name: Great Dunnow Hill

Site Ref: 75SW01

Approved: 01 September 1993

Area (ha): 14.54

Date written/last updated: 03 December 2010

Grid Ref: SD702511

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

Slaidburn

Description:

The site comprises a large limestone reef knoll rising to 212 m situated in the Hodder Valley 0.75 km north east of Newton. The hill supports areas of species-rich calcareous grassland. The species-rich grassland occurs on steep slopes and shallow soils throughout the site. It is also found around the small disused quarry and the lime kiln. Less steep areas with deeper soils support more improved grassland.

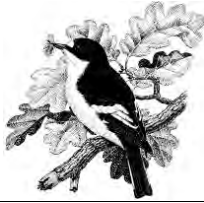
The species-rich areas support a variety of plants including common bird's-foot-trefoil, harebell, eyebright, lady's bedstraw, mouse-ear hawkweed, bitter-vetch, fairy flax, burnet saxifrage, selfheal, bulbous buttercup, salad burnet, betony, wild thyme, heath speedwell and field wood-rush. Grasses and sedges present include common bent, sweet vernal-grass, crested dog's-tail, sheep's-fescue, meadow oat-grass, quaking grass, heath-grass, spring sedge, flea sedge and glaucous sedge.

Guideline(s) for Site Selection:

Grassland (Gr1)

Other Information/Comments:

Lowland Calcareous Grassland is a Priority Habitat in the UK Biodiversity Action Plan.
The site adjoins Great Dunnow Wood Biological Heritage Site (BHS 75SW02).



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Site Name: Great Dunnow Wood

Site Ref: 75SW02

Approved: 01 September 1993

Area (ha): 7.84

Date written/last updated: 01 December 2003

Grid Ref: SD704510

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

Newton

Description:

The site comprises a semi-natural woodland situated on limestone along the north west bank of the river Hodder, approximately 0.75 km north east of Newton. It is shown in the *Lancashire Inventory of Ancient Woodland, (Provisional)*, (English Nature, 1994) as ancient replanted woodland. There are some precipitous limestone cliffs, ledges, rock outcrops and scree within the site and these areas support valuable limestone grassland/herb communities as well as ancient semi-natural woodland. The occurrence of lily-of-the-valley, a species included in the *Provisional Lancashire Red Data List of Vascular Plants*, is notable.

Much of the woodland lies on limestone cliffs, outcrops and scree. In these areas the canopy comprises mainly of ash with frequent wych elm and sycamore and occasional oak over a scattered understorey of hawthorn, blackthorn, hazel, rowan, elder and frequent regenerating ash. There is a good ground flora with abundant dog's mercury and ramsons and frequent bluebell. Other woodland species include enchanter's nightshade, sanicle, wood sage, lesser celandine, Lords-and-Ladies, red campion, primrose, common dog-violet, ivy and bramble. Harebell, giant bellflower, shining crane's-bill, wild basil, hart's-tongue, wall lettuce, wall-rue and maidenhair spleenwort occur on limestone in more open areas. A large colony of pignut is present on the scree.

Above the cliffs where the ground is flatter and on less steep slopes the woodland has been planted. In these areas much of the canopy is dominated by larch, beech and Scot's pine and occasional horse chestnut although ash, wych elm and sycamore are present throughout.

Mezereon, a nationally scarce shrub, has been recorded here in the past.

Guideline(s) for Site Selection:

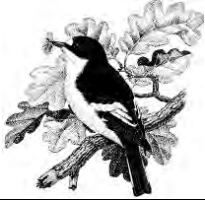
Woodland and Scrub (Wd1)

Rock (Ro1)

Flowering Plants and Ferns (Ff4a)

Other Information/Comments:

The site adjoins Great Dunnow Hill (75SW01) and the River Hodder (LS RHO) Biological Heritage Sites. The site was extended in 12/03.



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Site Name: Little Dunnell Wood

Site Ref: 75SW03

Approved: 01 September 1993

Area (ha): 2.28

Date written/last updated: 01 April 2003

Grid Ref: SD707514

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

Newton

Description:

The site comprises semi-natural woodland situated on the west side of the Hodder Valley, halfway between Newton and Slaidburn. It is listed in the *Lancashire Inventory of Ancient Woodland (Provisional)*, (English Nature, 1994).

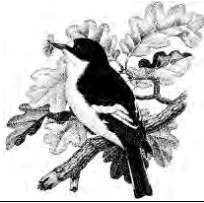
Most of the woodland lies on steeply sloping ground with sheer limestone cliffs and rock outcrops. In these areas the canopy, which is quite open in places, is dominated by ash and wych elm with frequent sycamore. There is a scattered understorey of hazel, hawthorn, rowan, holly and elder together with frequent ash and occasional beech regeneration. The ground flora includes abundant dog's mercury and ramsons with frequent bluebell and lesser celandine. Other species present include wood anemone, red campion, primrose, Lords-and-Ladies, enchanter's nightshade, herb-robert, wood avens, wood sage, wood speedwell, wild strawberry, harebell, ivy, hart's-tongue and wood melick.

On flatter ground above the limestone cliffs the woodland has been planted and contains mature sycamore, beech, larch and Scot's pine along with ash and wych elm. The north eastern corner of the woodland has been felled relatively recently and comprises a mix of planted and regenerating broadleaves.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd1)

Other Information/Comments:



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Site Name: River Hodder From Confluence with River Ribble Upstream to Cross of Greet Bridge/ Bowland Fells SSSI Boundary

Site Ref: LSRHO

Approved: 08 September 1993

Area (ha): 94.9

Date written/last updated: 01 September 2001

Grid Ref: SD710381 to SD702589

Owner/Occupier:

Districts:

Ribble Valley

Parishes:

Aughton, Bailey and Chaigley, Bashall Eaves, Bowland Forest High, Bowland Forest Low
Bowland-with-Leagram, Easington, Great Mitton, Newton, Slaidburn

Description:

The site comprises almost the entire length of the River Hodder, from the Cross of Greet Bridge in the north downstream to its confluence with the River Ribble in the south. The river passes through farmland and a number of small settlements. The site begins on the edge of the Bowland Fells (see Other Information below) and the river flows south to Stocks Reservoir (BHS 75NW07), formed when the river was dammed in 1922. South of the reservoir the river continues on through Slaidburn and Newton before turning west to Dunsop Bridge and then south again to Whitewell, before finally meeting the River Ribble near Great Mitton.

The river is important for otter, a species that is listed in Annex II of the Habitats Directive and in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Otter is a UK Biodiversity Action Plan (BAP) priority species. The Hodder is a Class 1 river (good/excellent water quality) and supports salmon, brown trout, sea trout, bullhead, dace and stone loach. Sandpipers and oystercatchers are associated with areas of shingle.

Three species included in the *Provisional Lancashire Red Data List of Vascular Plants* are present along the riverside, namely yellow star-of-Bethlehem, green figwort and melancholy thistle.

Many of the river banks are lined by woodland or individual trees and shrubs. Trees present include alder, ash, hazel, holly and hawthorn. Ground flora species include bluebell, dog's mercury, wood-sorrel, sanicle, wood anemone, moschatel and ramsons. Marsh hawk's-beard, water avens, opposite-leaved golden-saxifrage, alternate-leaved golden-saxifrage, marsh violet and marsh marigold are present on wetter ground. Elsewhere grassy banks support species such as crested dog's-tail, common bird's-foot-trefoil, autumn hawkbit and meadow saxifrage.

Guideline(s) for Site Selection:

Rivers and Streams	(Ri1)
Flowering Plants and Ferns	(Ff4)?
Flowering Plants and Ferns	(Ff3)
Mammals	(Ma1a)
	?
Fish	(Fi1)

Other Information/Comments:

The river arises outside of the BHS, to the north-west of the Cross of Greet Bridge. This stretch of the river lies within the Bowland Fells Site of Special Scientific Interest (SSSI). The site lies partly within the Forest of Bowland Area of Outstanding Natural Beauty (AONB).

Appendix D. Species Records Tables

TR3 North - Bird Desktop Records

Refer to drawing G7478.02.050.2 for spatial location of species data

Species Records Identifier	Species Common Name	Count
1	Swallow	1
2	Curlew	1
	Swallow	1
3	Curlew	1
4	Curlew	1

TR3 North - Insect Desktop Records

Refer to drawing G7478.02.050.3 for spatial location of species data

Species Records Identifier	Species Common Name	Count
1	Keeled Skimmer	1
2	White-barred Twist	1
3	Large Heath	3
	Small Heath	4
4	Chimney Sweeper	5

TR3 North - Mammal Desktop Records

Refer to drawing G7478.02.050.4-5 for spatial location of species data

Species Records Identifier	Species Common Name	Count
1	Brown Hare	1
2	Brown Hare	1
3	Brown Hare	1
4	Brown Hare	1
5	Brown Hare	1
6	Brown Hare	1
7	Brown Hare	1
8	Brown Hare	1
9	Brown Hare	1
10	Brown Hare	2
11	Brown Hare	1
12	Brown Hare	1
13	Brown Hare	2
14	Brown Hare	1
15	Brown Hare	1
16	Brown Hare	1
17	Brown Hare	1
18	Brown Hare	1
19	Brown Hare	1
20	Brown Hare	1
21	Brown Hare	1
22	Brown Hare	1
23	Brown Hare	1
24	Brown Hare	1
25	Brown Hare	1
26	Brown Hare	1
27	Brown Hare	1
28	Brown Hare	1
29	Brown Hare	1
30	Brown Hare	1
31	Brown Hare	1
32	Brown Hare	1
33	Brown Hare	1
34	Brown Hare	1
35	Brown Hare	1
36	Brown Hare	1
37	Brown Hare	1
38	Brown Hare	2
39	Brown Hare	1
40	Brown Hare	1
41	Brown Hare	1

Species Records Identifier	Species Common Name	Count
42	Brown Long-eared Bat	2
	Common Pipistrelle	2
	Noctule Bat	2
	Soprano Pipistrelle	2
	Unidentified Bat	2
43	Brown Hare	2
44	Soprano Pipistrelle	800
45	Pipistrelle	2
	Soprano Pipistrelle	802
46	Brown Hare	1
47	Brown Hare	1
48	Brown Hare	1
49	Brown Hare	1
50	Brown Hare	1
51	Brown Hare	2
52	Brown Hare	1
53	Brown Hare	1
54	Roe Deer	1
55	Brown Hare	1
56	Brown Hare	4
57	Brown Hare	12
58	Brown Hare	1
59	Brown Hare	1
60	Brown Hare	2
61	Brown Hare	3
62	Brown Hare	1
63	Brown Hare	2
64	Brown Hare	3
65	Brown Hare	2
66	Brown Hare	1
67	Brown Hare	1
68	Brown Hare	1
69	Brown Hare	14
70	Brown Hare	7
71	Brown Hare	10
72	Brown Hare	4
73	Brown Hare	4
74	Brown Hare	19
75	Brown Hare	6
76	Brown Hare	5
77	Brown Hare	2
78	Brown Hare	9
79	Brown Hare	1
80	Brown Hare	4

Species Records Identifier	Species Common Name	Count
81	Brown Hare	2
82	Brown Hare	3
83	Brown Hare	11
84	Brown Hare	2
85	Brown Hare	1
86	Brown Hare	1
87	Brown Hare	1
88	Brown Hare	1
89	Brown Hare	9
90	Brown Hare	6
91	Brown Hare	1
92	Brown Hare	1
93	Brown Hare	2
94	Brown Hare	3
95	Brown Hare	3
96	Brown Hare	1
97	Pipistrelle	8
98	Brown Hare	1
99	Brown Hare	1
100	Brown Hare	2
101	Brown Hare	1
102	Brown Hare	2
103	Brown Hare	3
104	Brown Hare	4
105	Brown Hare	49
106	Brown Hare	8
107	Brown Hare	3
108	Brown Hare	2
109	Brown Hare	1
110	Brown Hare	4
111	Brown Hare	9
112	Brown Hare	1
113	Brown Hare	1
114	Brown Hare	3
115	Brown Hare	1
116	Brown Hare	2
117	Brown Hare	1
118	Brown Hare	6
119	Brown Hare	2
120	Brown Hare	4
121	Brown Hare	1
122	Brown Hare	2
123	Brown Hare	2
124	Brown Hare	1
125	Brown Hare	1
126	Brown Hare	6
127	Brown Hare	1
128	Brown Hare	1

Species Records Identifier	Species Common Name	Count
129	Brown Hare	3
130	Brown Hare	1
131	Brown Hare	3
132	Brown Hare	1
133	Brown Hare	3
134	Brown Hare	4
135	Brown Hare	2
136	Brown Hare	1
137	Brown Hare	1
138	Brown Hare	2
139	Brown Hare	1
140	Brown Hare	1
141	Brown Hare	1
142	Brown Hare	1
143	Brown Hare	1
144	Brown Hare	1
145	Brown Hare	4
146	Brown Hare	1

TR3 North - Plant Desktop Records

Refer to drawing G7478.02.050.6 for spatial location of species data

Species Records Identifier	Species Common Name	Count
1	Broad-leaved Helleborine	2
2	Bluebell	1
3	Bluebell	1
4	Common Spotted-orchid	2
	Fragrant Agrimony	2
	Greater Butterfly-orchid	67
5	Bluebell	1
	Broad-leaved Helleborine	1
	Welsh Poppy	1
6	Bluebell	1
	Field Woundwort	2
	Marsh-Orchid	1
7	Stone Bramble	2
8	Bluebell	1
	Welsh Poppy	1
9	Bluebell	1
10	Bluebell	1
11	Snowdrop	1
12	Snowdrop	1
	Spurge-laurel	1
13	Bogbean	1
	Greater Spearwort	1
	Tutsan	1
14	Bluebell	2
	Lily-of-the-valley	1

TR3 North - Reptile, Amphibian and Fish Desktop Records

Refer to drawing G7478.02.050.7 for spatial location of species data

Species Records Identifier	Species Common Name	Count
1	Brown/Sea Trout	2
2	Brown/Sea Trout	1
3	Brown/Sea Trout	1

TR3 South - Bird Desktop Records

Refer to drawing G7478.02.050.8 for spatial location of species data

Species Records Identifier	Species Common Name	Count
1	Barn Owl	1
2	Oystercatcher	1
3	Buzzard	1
	Curlew	1
4	Mallard	1
5	Lapwing	1
6	Barn Owl	1
	Little Owl	1
7	Greenfinch	1
	Mallard	1
	Pied Wagtail	1
8	Mallard	1
9	Curlew	1

TR3 South - Insect Desktop Records

Refer to drawing G7478.02.050.9 for spatial location of species data

Species Records Identifier	Species Common Name	Count
1	Ringlet	1
2	Dark Green Fritillary	1
	Ringlet	8
	Small Heath	17
3	Ringlet	1

TR3 South - Mammal Desktop Records

Refer to drawing G7478.02.050.10 for spatial location of species data

Species Records Identifier	Species Common Name	Count
1	Natterer's Bat	6
2	West European Hedgehog	1
3	Roe Deer	1
4	Soprano Pipistrelle	400
5	Eurasian Common Shrew	1
6	West European Hedgehog	1
7	Bats	33
8	European Water Vole	1
9	Bats	17
	Daubenton's Bat	486
10	Bats	13
	Daubenton's Bat	14
11	Stoat	1
	West European Hedgehog	1
12	Brown Hare	1
13	Brown Hare	3
	West European Hedgehog	1
14	Brown Hare	1
	Roe Deer	2
15	Brown Hare	8
	Weasel	2
	West European Hedgehog	1

TR3 South - Plant Desktop Records

Refer to drawing G7478.02.050.11 for spatial location of species data

Species Records Identifier	Species Common Name	Count
1	Common Spotted-orchid	1
2	Blueish Veilwort	2
3	Toothwort	2
4	Toothwort	2
5	Pepper-saxifrage	1
6	Bogbean	2
	Long-stalked Yellow-sedge	1
	Marsh Helleborine	285
7	Bogbean	2
	Globeflower	1
	Long-stalked Yellow-sedge	4
	Marsh Helleborine	238
8	Snowdrop	1
9	Snowdrop	1
10	Melancholy Thistle	1
11	Broad-leaved Helleborine	1
12	Bluebell	1
	Snowdrop	1
	Welsh Poppy	1
13	Bluebell	2
	Common Spotted-orchid	1
14	Welsh Poppy	1
15	Melancholy Thistle	1
	Welsh Poppy	1
16	Welsh Poppy	1
17	Snowdrop	1
18	Common Spotted-orchid	1
19	Bogbean	1
20	Long-stalked Yellow-sedge	1
	Welsh Poppy	1
21	Long-stalked Yellow-sedge	1
	Reflexed Saltmarsh-Grass	1
22	Tawny Sedge	1

TR3 South - Reptile, Amphibian and Fish Desktop Records

Refer to drawing G7478.02.050.12 for spatial location of species data

Species Records Identifier	Species Common Name	Count
1	Brown/Sea Trout	8
	Bullhead	6
2	Brown/Sea Trout	16
	Bullhead	7
3	Atlantic Salmon	11
	Brown/Sea Trout	1
	Bullhead	18
4	Atlantic Salmon	21
	Bullhead	62
5	Atlantic Salmon	5
	Bullhead	75
6	Atlantic Salmon	2
	Brown/Sea Trout	8
	Bullhead	12
7	Atlantic Salmon	7
	Bullhead	30
8	Common Frog	1
9	Atlantic Salmon	4
	Brown/Sea Trout	1
	Bullhead	59
10	Atlantic Salmon	10
	Brown/Sea Trout	1
	Bullhead	87
11	Atlantic Salmon	34
	Brown/Sea Trout	17
	Bullhead	414
	European Eel	10
12	Atlantic Salmon	2
	Brown/Sea Trout	2
	Bullhead	2
	European Eel	2
13	Atlantic Salmon	2
	Brown/Sea Trout	2
	Bullhead	2
	European Eel	2
14	Atlantic Salmon	2
	Brown/Sea Trout	2
	Bullhead	2
	European Eel	2
15	Bullhead	2
16	Bullhead	2

Species Records Identifier	Species Common Name	Count
17	Atlantic Salmon	2
	Brown/Sea Trout	2
	Bullhead	2
	European Eel	2