



THE
ENVIRONMENT
PARTNERSHIP

Haweswater Aqueduct Resilience Programme - Proposed Bowland Section

Volume 6

Proposed Ribble Crossing

Technical Appendix 9A.1: Desk Based Assessment

June 2021



Water for the North West

Haweswater Aqueduct Resilience Programme - Proposed Bowland Section

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TEP

Genesis Centre
Birchwood Science Park
Warrington WA3 7BH
Tel: 01925 844004
Email: tep@tep.uk.com
www.tep.uk.com

Offices in Warrington, Market Harborough, Gateshead, London and Cornwall

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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 Ribble Crossing. 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) TEP undertook a review of all data sources, comprising a combination of searches using web-based sources and local biological records centres, in February 2021. Compiled data sources are described below.
- 4) Lancashire Environmental Records Network (LERN) provided the following data:
 - Non-statutory designated wildlife sites within 2 km of the Proposed Ribble Crossing
 - Protected and notable species records within 2 km of the Proposed Ribble Crossing
- 5) Multi-Agency Geographic Information for the Countryside (MAGIC), accessed March 2021 via www.magic.gov.uk, identified the following:
 - Statutory nature conservation sites of international and national importance within 5 km of the Proposed Ribble Crossing
 - Statutory nature conservation sites of less than national importance within 2 km of the Proposed Ribble Crossing
 - Natural England's Impact Risk Zones (IRZ) overlapping the Proposed Ribble Crossing
 - Natural England's Priority Habitat Inventory (PHI), Ancient Woodland Inventory (AWI) and European protected species licences (EPSL) within 1 km of the Proposed Ribble Crossing
- 6) Google maps (<https://www.google.co.uk/maps>), accessed March 2021 displayed aerial photographs for the Proposed Ribble Crossing 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) 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 Ribble Crossing are summarised in Table 1.

Table 1: Statutorily Designated Wildlife Sites

Site	Status	Proximity to Proposed Ribble Crossing	Summary features
Coplow Quarry	SSSI	0.7km south east of the proposals	The site is designated for its geological interest
Salthill and Bellmanpark Quarries	SSSI	1.3km south east of the proposals	The site is designated for its geological interest
Clitheroe Knoll Reefs	SSSI	2.3km south east of the proposals	The site is designated for its geological interest
Little Mearley Clough	SSSI	4.1km south east of the proposals	The site is designated for its geological interest
Hodder River Section	SSSI	4.9km south east of the proposals	The site is designated for its geological interest
Cross Hill Quarry	LNR	0.2 km south of the proposals	Cross Hill is a good example of natural change on a man-made site and has since become an exceptional refuge for wildlife. Once quarrying ceased, the thin soils and exposed rock became revegetated through stages of succession from flower-rich grasslands, to hawthorn scrub and finally woodland. Examples of each stage can still be seen within the site.
Salthill Quarry	LNR	1.3 km southeast of the proposals	At the southeast corner of the reserve, the soil is at its earliest stage of development and supports a sparse vegetation of plants well adapted to the harsh conditions. Bee Orchid, Carline Thistle and Milkwort can be seen growing here in June. You can see Autumn Gentian flowering later in the year in August and September. On the more established soils you will be able to see Cowslips. Ash and Hawthorn trees dominate the woodland. There are also a variety of butterflies and birds. Fossilized rocks are abundant in several areas of the reserve.

2.2 Impact Risk Zones

- 9) 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 Ribble Crossing lies within three IRZs, the relevant planning categories and risk thresholds for which are summarised in Table 2.

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:
All Planning Applications	Assessed as not likely to impact SSSI
Infrastructure	Assessed as not likely to impact SSSI
Wind & Solar Energy	Assessed as not likely to impact SSSI
Minerals, Oil & Gas	Assessed as not likely to impact SSSI
Rural Non Residential	Assessed as not likely to impact SSSI
Residential	Assessed as not likely to impact SSSI
Rural Residential	Assessed as not likely to impact SSSI
Air Pollution	Livestock & poultry units with floorspace > 500m ² , slurry lagoons > 4000m ²
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.
Waste	Assessed as not likely to impact SSSI
Composting	Assessed as not likely to impact SSSI
Discharges	Assessed as not likely to impact SSSI
Water Supply	Assessed as not likely to impact SSSI

3. Non-Statutory Wildlife Sites

- 10) Non-statutory wildlife sites including Biological Heritage Site (BHS) and Important Bird Areas (IBA) located within 2 km of the Proposed Ribble Crossing are identified in Table 3. Citations for BHS are presented at Appendix B.

Table 3. Identification of non-statutory wildlife sites within 2 km of the Proposed Ribble Crossing

Site Name	Designation	Nearest location relevant to Proposed Ribble Crossing	Summary Features
River Ribble from London Road Bridge Preston, in West, to County Boundary, in East	BHS	Adjacent/crossed by the proposals	The site comprises the River Ribble and associated semi-natural habitats from the county boundary at Paythorne downstream to London Road Bridge, Walton-le-Dale, Preston. Throughout the length of the River Ribble the General Quality Assessment is Very Good and Good (A and B) with a localised section with the Fairly Good (C) classification. The river is important for salmon, sea trout, otter and water vole. Along the riverbanks sandy cliffs provide nesting habitat for sand martin and kingfisher, and single banks provide suitability for nesting waders such as oystercatcher, common sandpiper, little ringed-plover and ringed plover. Much of the land associated with the river comprises woodland, grassland and, locally, swamp and tall-herb communities. Section 41 Priority Habitats & Species include Lowland Mixed Woodland, Wet Woodland, Lowland Meadow, Fen, Water Vole, Otter and Reed Bunting. A single record of freshwater pearl-mussel dated 1974 came to light in 2003 for a section of the river upstream of Clitheroe.
Waddington Brickworks Old Working	BHS	0.05 km north of the proposals	The site comprises of old workings colonised by species-rich, semi-natural neutral grassland and used as pasture. The topography is undulating with dry grassy mounds and a low lying, damp, central basin area.
Cross Hill Quarry	BHS	0.2 km south of the proposals	The site comprises of the disused Cross Hill limestone quarries and the adjoining Brungerley Park and supports a mosaic of semi-natural habitats including limestone grassland, scrub and woodland. The site includes Cross Hill Quarry LNR.
Hospital Wood	BHS	0.4 km northwest of the proposals	Semi-natural clough woodland listed in the Lancashire Inventory of Ancient Woodland (Provisional), (English Nature, 1994). The site adjoins Feazer Wood BHS.
Coplow Quarry and Pimlico Road Grasslands	BHS	0.7 km southeast of the proposals	The site comprises of areas of species-rich, semi-natural calcareous grassland and developing scrub at Coplow Quarry. The site includes Coplow Quarry geological SSSI.
Dog House Wood	BHS	0.7 km south of the proposals	The site comprises a small semi-natural wood situated on a steep south facing river cliff above the River Ribble.

Site Name	Designation	Nearest location relevant to Proposed Ribble Crossing	Summary Features
Drakehouse Wood	BHS	0.7 km north of the proposals	Ancient, semi-natural woodland. The wood is listed in the Lancashire Inventory of Ancient Woodland (Provisional), (English Nature, 1994).
Sherburn Wood	BHS	1.0 km southwest of the proposals	The site comprises a long band of semi-natural woodland on a south facing river cliff above a sweeping curve of the River Ribble. The river bank is lined by alder where the ground flora includes hemlock water-dropwort, butterbur, alternate-leaved golden-saxifrage and green figwort, a species included in the Provisional Lancashire Red Data List of Vascular Plants.
Boy Bank	BHS	1.0 km south of the proposals	The site comprises a small, semi-natural woodland known as Boy Bank Wood and a contiguous area of species-rich grassland. To the west the wood merges into species-rich, semi-natural grassland on the steep slope between the river and improved pasture above.
Bellman Farm Marsh	BHS	1.1 km southeast of the proposals	The site comprises the land adjoining Pimlico Brook from near Pimlico Link Road to the wet fields associated with Bellman Farm. The site also includes the area around the old kiln and the adjacent embankment. The wet fields have an underlying peaty soil, indicative of a historical wetland habitat. Formerly managed as meadowland, their vegetation is essentially fen meadow. The wet fields flood in winter attracting mallard, teal, snipe and water rail with lesser whitethroat sedge warbler and reed bunting present through the summer. The site is considered an important moult and roost site for passerines.
Feazer Wood	BHS	1.2 km northwest of the proposals	A semi-natural clough woodland most of the wood is included in the Lancashire Inventory of Ancient Woodland (Provisional), (English Nature, 1994). The site adjoins Hospital Wood BHS.
Salthill Quarry	BHS	1.3 km southeast of the proposals	The site comprises of a mosaic of habitats including limestone grassland, scrub and developing woodland surrounding a former limestone quarry which has been developed as an industrial estate. The main areas of interest are the exposed outcrops and stony ground which have been colonised by a diverse flora. A number of Lancashire BAP birds use the site such as Bullfinch, Lesser Redpoll, Lesser Whitethroat, Linnet, Spotted Flycatcher, Tree Sparrow and Willow Warbler. The Labyrinth Spider occurs here. The site is within the Salthill & Bellmanpark Quarries Geological SSSI and includes much of the Salthill Quarry LNR.

Site Name	Designation	Nearest location relevant to Proposed Ribble Crossing	Summary Features
West Clough Wood	BHS	1.3 km northeast of the proposals	Ancient semi-natural woodland listed in the Lancashire Inventory of Ancient Woodland (Provisional), (English Nature, 1994). The site is in the Forest of Bowland Area of Outstanding Natural Beauty (AONB).
Clitheroe Castle Knoll	BHS	1.7 km south of the proposals	The site consists of several rock outcrops and steep sloping areas of limestone grassland, scrub and developing woodland below Clitheroe Castle.
Bellman Park Quarry	BHS	1.8 km southeast of the proposals	Bellman Park Quarry is cut into one of a series of limestone hills, and is a link in a chain of calcareous habitats and features between Clitheroe and Downham. It forms part of the Salthill and Bellmanpark geological SSSI. Common frog, palmate newt and brown hare have been observed on the site.
Bowland Fells	IBA	Extensive coverage which lies contiguous with the Forest of Bowland AONB. The Proposed Marl Hill Section is entirely situated within the IBA.	An important landscape for upland birds including hen harrier, ring ouzel, whinchat, curlew, golden plover, lapwing, merlin, oyster catcher, peregrine, red grouse, redshank, snipe and stonechat. Other notable wildlife recorded across the landscape includes brown hare, bats (eight species resident in Lancashire) and moths (among the more notable include common heath, emperor, Manchester treble bar, northern spinach, red twin-spot carpet).

4. Ancient Woodland and Habitats of Principal Importance

- 11) There are no ancient semi-natural woodlands (ASNW) identified on Natural England's Inventory of Ancient Woodland within the Proposed Ribble Crossing.
- 12) ASNW is identified 0.46km northwest (Hospital Wood) and 0.92km north (Drakehouse Wood) of the Proposed Ribble Crossing.
- 13) Habitats of Principal Importance (HPI) identified within 1km of the Proposed Ribble Crossing include:
 - Deciduous woodland
 - Good quality semi-improved grassland;
 - Lowland fens; and
 - Watercourse.

5. Species Records

- 14) 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 C. A summary is provided below and further assessment is presented, where relevant, in the appropriate ETR accompanying the ES.

5.1 Flora

- 15) Notable flora historically reported within 2 km of the Proposed Ribble Crossing include:

- Bluebell *Hyacinthoides non-scripta*
- Wintergreen *Pyrola rotundifolia* subsp. *Maritima*
- Fragrant orchid *Gymnadenia conopsea*
- Mezereon *Daphne mezereum*
- Lesser Meadow-rue *Thalictrum minus*
- Hairy Violet *Viola hirta*
- Buckthorn *Rhamnus cathartica*

5.2 Birds

- 16) Notable birds species historically reported within 2 km of the Proposed Ribble Crossing include:

- Kingfisher *Alcedo atthis*
- Black-headed gull *Chroicocephalus ridibundus*
- Swallow *Hirundo rustica*
- Barn owl *Tyto alba*
- Curlew *Numenius arquata*
- House martin *Delichon urbica*
- House sparrow *Passer domesticus*

5.3 Mammals

- 17) Notable mammal species historically reported within 2 km of the Proposed Ribble Crossing include:

- West European hedgehog *Erinaceus europaeus*
- Brown hare *Lepus europaeus*

- 18) Bats (protected species and, for certain species, SPI) historically reported within 2 km of the Proposed Ribble Crossing include:

- Daubenton's bat *Myotis daubentonii*
- Whiskered bat *Myotis mystacinus*
- Common pipistrelle *Pipistrellus pipistrellus*
- Soprano pipistrelle *Pipistrellus pygmaeus*
- Pipistrelle species *Pipistrellus species*

5.4 Amphibians and Reptiles

- 19) Notable amphibian species historically reported within 2 km of the Proposed Ribble Crossing include:

- Common toad *Bufo bufo*
- Common frog *Rana temporaria*

5.5 Invertebrates

20) Notable invertebrates species historically reported within 2 km of the Proposed Ribble Crossing include:

- Autumnal rustic *Eugnorisma glareosa*
- Beautiful snout *Hypena crassalis*
- Gold spangle *Autographa bractea*
- Green-brindled crescent *Allophyes oxyacanthae*
- Beautiful hook-tip *Laspeyria flexula*
- Rosy minor *Litoligia literosa*
- Small phoenix *Ecliptopera silaceata*
- Comma *Polygonia c-album*
- Speckled wood *Pararge aegeria*
- Buff ermine *Spilarctia luteum*
- Oblique carpet *Orthonama vittata*
- Small square-spot *Diarsia rubi*
- White ermine *Spilosoma lubricipeda*
- Dot moth *Melanchra persicariae*
- Swallowtail *Papilio machaon*
- Ringlet *Aphantopus hyperantus*
- Brown rustic *Rusina ferruginea*
- Dusky brocade *Apamea remissa*
- Ghost moth *Hepialus humuli*
- *Didea fasiata*
- Brimstone *Gonepteryx rhamni*
- Small heath *Coenonympha pamphilus*
- Wall *Lasiommata megera*
- White-letter hairstreak *Satyrium w-album*

5.6 Fish

21) Notable fish species historically reported within 2 km of the Proposed Ribble Crossing include:

- Bullhead *Cottus gobio*
- Brown/sea trout *Salmo trutta*.
- European eel *Anguilla Anguilla*
- Atlantic salmon *Anguilla rostrate*
- Grayling *Thymallus thymallus*
- Brook lamprey *Lampetra planeri*

5.7 Granted European Protected Species Licences

- 22) Five European Protected Species (EPS) have been identified as having been granted within 2 km of the Proposed Ribble Crossing. Table 4 summarises the EPS mitigation licences within 2 km of the Proposed Ribble Crossing.

Table 4. EPS Mitigation Licence within 2km of Proposed Ribble Crossing

Licence Ref	Species	Licence start-end date	Licensable activities	Location in relation to Proposed Ribble Crossing
2016-26538-EPS-BDX	Common pipistrelle Soprano pipistrelle	20/10/2016 to 31/10/2016	Impact on a breeding site Damage of a breeding site Damage of a resting place Destruction of a breeding site Destruction of a resting place	0.5km west of the site.

5.8 Invasive Species

- 23) Invasive species (listed on Schedule 9 of the Wildlife and Countryside Act 1981 as amended) historically reported within 2 km of the Proposed Ribble Crossing include:

- Wall cotoneaster *Cotoneaster horizontalis*
- Montbretia *Crocasmia x crocosmiiflora*
- Japanese knotweed *Fallopia japonica*
- Spanish bluebell *Hyacinthoides hispanica*,
- Indian balsam *Impatiens glandulifera*
- Rhododendron *Rhododendron ponticum*

Appendix A. SSSI Citations

File ref: SD 74/3

County: Lancashire

Site Name: Coplow Quarry

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 751432 **Area:** 4.9 (ha) 12.2 (ac)

Ordnance Survey Sheet 1:50,000: 103 **1:10,000:** SD 74 SW, SE

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

Date Notified (Under 1981 Act): 1983 **Date of Last Revision:** –

Other Information:

Boundary revised 1983 by a minor correction.

Reasons for Notification:

Coplow Quarry is a disused limestone quarry situated just north of Clitheroe. The geological interest of the site, in technical terms, may be defined as follows:

This site shows exposures of the Coplow Knoll, of Chadian age, and its associated sediments. These are the best exposures of their kind in the Lower Coplow Knoll “Series”, a sequence of rocks famous for their echinoderm fauna. This is one of the richest sites in the whole of the British Dinantian for such fossil material and it has yielded many type specimens. Coplow is a significant site in studies of carbonate facies relationships (between bank, inter-bank and flank deposits), and the controversial subject of the origins of the knolls in the Bowland Trough. A key Clitheroe Limestone site of outstanding interest for its faunas and carbonate sedimentology.

In layman’s terms, the interest of this site may be expressed more simply, and such a statement is provided below. This should not be taken as definitive and further information as to details of the interest can be obtained from the Nature Conservancy Council.

The faces of Coplow Quarry provide the best known exposures of a series of limestone layers, known as the Lower Coplow Knoll Series, originally formed in the Lower Carboniferous period of geological history, about 340 million years ago. The limestones formed on the bed of a warm, shallow sea which covered this area at that time and which contained a great variety of marine life. The rocks at Coplow Quarry are particularly noted for the rich and varied fossil remains they contain, some of which were first recognised here. An important feature of the Carboniferous limestones of this area is the occurrence of mound-like structures, generally referred to as “reef-knolls”, which formed during deposition of the sediments, partly as a result of the growth, on the sea-bed, of large colonies of marine animals. The precise origin of these features has been debated for many years and Coplow Quarry is important in this context also, as it provides valuable evidence of the form and nature of these structures.

County: Lancashire **Site Name:** Salthill and
Bellmanpark
Quarries

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 758427 **Area:** 18.0 (ha) 44.5 (ac)

Ordnance Survey Sheet 1:50 000 103 **1:10 000** SD 74 SE

Date Notified (Under 1949 Act): 1970 **Date of Last Revision:** 1979

Date Notified (Under 1981 Act): 1987 **Date of Last Revision:** 1987

Other Information:

The site boundary has been modified by a deletion and a small extension at this revision.

This site was formerly named Salthill, Bellmanpark and Peach Quarries.

Description and Reasons for Notification:

This geological site straddles the A671 road immediately to the north-east of Clitheroe and is comprised of three adjacent disused quarries.

The famous Carboniferous Limestone site is the type locality for the fossiliferous Salthill Bank Beds (Chadian) and the Salthill Cap Beds (Arundian) of the Clitheroe Limestone Complex. It provides the best sections through the Chadian and the Knoll Reefs of the Craven Basin, and some of the finest such sections in the English Lower Carboniferous. It shows three-dimensional relationships of reefs associated sediments and rich marine, especially echinoderm, faunas and is a key site for studies of fauna, carbonate sedimentology diagenesis and palaeoecology in the Lower Carboniferous.

Date Notified: 29 January 1987

File ref: (L) SD 74/2

County: Lancashire

Site Name: Clitheroe Knoll Reefs

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 778435

Area: 115.3 (ha) 284.9 (ac)

Ordnance Survey Sheet 1:50,000: 103

1:10,000: SD 74 NE

Date Notified (Under 1949 Act): 1959

Date of Last Revision: 1979

Date Notified (Under 1981 Act): 1987

Date of Last Revision: 1987

Other Information:

The site boundary has been modified by a major deletion and three small extensions at this revision.

Description and Reasons for Notification:

This geological site near Clitheroe is comprised of a roadcutting and a series of small hills running east-west between the villages of Worston and Downham.

The hills are important examples of early Carboniferous “knoll-reefs”. In conjunction with other well-exposed Clitheroe sites this site shows the best examples of such reefs which developed during the Chadian Stage in the Craven Basin. The nature and origins of the reefs have always been matters of controversy. This locality provides a unique opportunity to examine such carbonate build-ups, here expressed as actual knolls in the topography of the present day.

To the north of the knolls a cutting on the A59 road has exposed a seventy metre thick section of the Carboniferous Limestone, represented by the Horrocksford Beds and overlying Bankfield Beds. This important section includes the proposed boundary stratotype for the Chadian Stage, which is placed on the junction of these two rock units. The site has been sampled for foraminifera, which have been used as stratigraphic indicators, including the genus *Eoparastafella* which makes its appearance a few metres above the boundary. This is a key locality for stratigraphic studies in the Lower Carboniferous.

County:	Lancashire	Site Name:	Little Mearley Clough
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 783412	Area:	6.0 (ha) 14.8 (ac)
Ordnance Survey Sheet 1:50 000	103	1:10 000	SD 74 SE
Date Notified (Under 1949 Act):	1959	Date of Last Revision:	1979
Date Notified (Under 1981 Act):	1986	Date of Last Revision:	1986

Other Information:

1. This site falls within the Forest of Bowland AONB.
2. The site boundary has been modified by extension and partial deletion at this revision.

Description and Reasons for Notification:

Little Mearley Clough lies on the steeply-sloping western side of Pendle Hill, approximately 3 km east of Clitheroe. The stream draining the clough has cut down through the rock strata to reveal features of considerable geological interest. In technical terms the interest of this site may be defined as follows:

Little Mearley Clough displays the lowest part of the Namurian, lying conformably on rocks of the Lower Carboniferous. The sequence seen covers the whole of the basal Namurian stage, named after Pendle Hill on which the section occurs, including the *Cravenoceras leion* goniatite horizon. The site is of premier stratigraphic significance for its recognition as the reference section for the Pendleian Stage.

In layman's terms, the interest of this site may be expressed more simply, and such a statement is provided below. This should not be taken as definitive and further information as to details of the interest can be obtained from the Nature Conservancy Council.

Little Mearley Clough provides excellent exposure of rock layers originally laid down during the Namurian period of geological history about 320 million years ago. The sequence spans the entire duration of the oldest subdivision of the Namurian, named the Pendleian Stage after Pendle Hill on which this section occurs. In recognition of the importance of this section, Little Mearley Clough has

been proposed as the standard for this interval of geological time. It is thus a site of national geological importance.

Date Notified: 21 October 1986

File ref: (L) SD 74/5

County: Lancashire **Site Name:** Hodder River Section

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 701400 **Area:** 7.4 (ha) 18.3 (ac)

Ordnance Survey Sheet 1:50,000L: 103 **1:10,000:** SD 74 SE, SD 73 NW, SD 64 SE, SD 63 NE

Date Notified (Under 1949 Act): 1959 **Date of Last Revision:** 1979

Date Notified (Under 1981 Act): 1986 **Date of Last Revision:** –

Other Information:

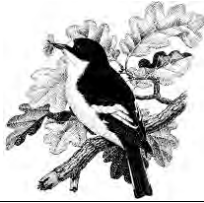
Site boundary unchanged at renotification.

Description and Reasons for Notification:

This site is situated 4 km south west of Clitheroe where the River Hodder has cut down through the rock strata. The geological interest of the site may be defined as follows:

This locality is important for its exposures of marine Lower Carboniferous rocks. Here are exposed a sequence of turbiditic, ancient sediments of Holkerian to Asbian age, including the *Bollandoceras hodderense* beds. As well as being the type locality for these beds and the fossil which gives them their name, it is the type locality for a number of other fossil taxa. The rich invertebrate fauna includes trilobites, bivalves, brachiopods, bryozoans, echinoids and cephalopods. Much potential exists for research on the faunas, sedimentology and stratigraphy of this key Dinantian locality.

Appendix B. Local Wildlife Sites Citations



Lancashire County Heritage Sites

Biological Heritage Site

Biological Heritage Sites
Partnership:

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Natural England

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Site Name: River Ribble from London Road Bridge Preston, in West, to County Boundary, in East

Site Ref: LSRR1

Approved: 01 September 1993

Area (ha): 298.11

Date written/last updated: 05 September 2011

Grid Ref: SD553287 to SD856836

Owner/Occupier: Private

Districts:

Parishes:

Public

Preston

Grimsargh, Preston

Ribble Valley

Aughton, Bailey and Chaigley, Balderstone, Billington and Langho, Bolton-by-Bowland

Chatburn, Clayton-le-Dale, Clitheroe, Dinckley, Dutton, Gisburn, Great Mitton

Grindleton, Horton, Hothersall, Little Mitton, Longridge, Newsholme, Osbaldeston

Paythorne, Ribchester, Salesbury, Sawley, Waddington, West Bradford

South Ribble

Cuerdale, Samlesbury

Description:

The site comprises the River Ribble and associated semi-natural habitats from the county boundary at Paythorne (SD856836) downstream to London Road Bridge, Walton-le-Dale, Preston (SD553287). The Ribble rises high in the Pennines at Newby Head Moss at an altitude of 422m and is one of the largest rivers in North West England. Collectively, the river and its associated habitats support a rich assemblage of plants and animals. Throughout the length of the River Ribble the General Quality Assessment is Very Good and Good (A and B) with a localised section with the Fairly Good (C) classification.

The river is important for salmon, sea trout, otter and water vole.

Along the riverbanks sandy cliffs provide nesting habitat for sand martin and kingfisher, the locations of suitable cliffs being dependant upon localised erosion. Where shingle banks develop, nesting waders include oystercatcher, common sandpiper, little ringed-plover and ringed plover, whilst suitable adjacent fields support breeding waders including lapwing and curlew. Mature trees and woodlands adjacent to the river provide for nesting goosander.

Plant species of interest along the river include the northern spike-rush (a nationally rare species at its southern limit of distribution in the UK), slender tufted-sedge and green figwort. The moss *Cinclidotus mucronatus* (rare in Lancashire) occurs on limestone river boulders in the Clitheroe area. Aquatic species found in the river include stream water-crowfoot and perfoliate pondweed with reed canary-grass, lesser pond-sedge, butterbur and creeping yellow-cress associated with river margins.

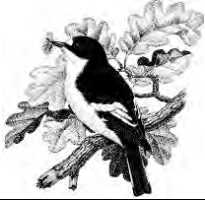
Much of the land associated with the river comprises woodland, grassland and, locally, swamp and tall-herb communities. Riverside woodlands are predominantly, lowland mixed deciduous woodland and wet woodland, and comprise ash, oak, wych elm, sycamore and alder, with shrubs including grey and goat willow, hazel and holly. The ground flora is variable but typically species-rich with bluebell, wood anemone, wood stitchwort, primrose, wood avens, sanicle, early and common dog-violets, alternate-leaved golden-saxifrage and great horsetail. Species-rich grassland occurs locally on field banks above the river and includes species such as common bird's-foot-trefoil, knapweed, tormentil, common cat's-ear, meadow crane's-bill, spring-sedge and quaking-grass. Locally, swamps dominated by yellow iris, lesser pond-sedge and rushes occur in springs and flushes in adjacent fields.

Guideline(s) for Site Selection:

Rivers and Streams	(Ri1)
Flowering Plants and Ferns	(Ff4)?
Flowering Plants and Ferns	(Ff1)
Bryophytes	(Br3)
Mammals	(Ma1a)
Birds	(Bi2)
Molluscs	(Mo1)?
Other Invertebrates	(In1)

Other Information/Comments:

UK BAP Priority Habitats & Species include Lowland Mixed Woodland, Wet Woodland, Lowland Meadow, Fen, Water Vole, Otter and Reed Bunting. A single record of freshwater pearl-mussel dated 1974 came to light in 2003 for a section of the river upstream of Clitheroe.



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Site Name: Waddington Brickworks Old Working

Site Ref: 74SW04

Approved: 08 September 1993

Area (ha): 2.7

Date written/last updated: 16 September 2013

Grid Ref: SD738439

Owner/Occupier:

Districts:

Ribble Valley

Parishes:

Waddington

Description:

The site comprises of old workings colonised by species-rich, semi-natural neutral grassland and used as pasture. The topography is undulating with dry grassy mounds and a low lying, damp, central basin area.

Species on the dry mounds include frequent Quaking Grass, Field Wood-rush, Common Knapweed and Common Bird's-foot-trefoil together with occasional Meadowsweet, Primrose, Pignut, Meadow Vetchling, Self-heal, Water Avens Great Burnet, Rough Hawkbit, Common Spotted-orchid, Betony, Bugle, Lady's Mantle, Mouse-ear Hawkweed and Glaucous Sedge.

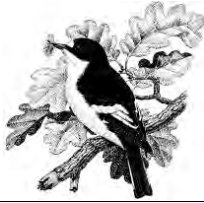
The low lying basin area is dominated by rushes with occasional Meadowsweet, Tufted Hair-grass, Common Spotted-orchid and Carnation Sedge. There is an area of shallow water colonised by Bulrush and Broad-leaved Pondweed.

In places a scrub comprising mainly of Hawthorn with occasional Alder has developed. There is a small plantation of Aspen at the north-eastern side of the site.

Guideline(s) for Site Selection:

Artificial Habitats (Ar1)

Other Information/Comments:



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Site Name: Cross Hill Quarry

Site Ref: 74SW06

Approved: 08 September 1993

Area (ha): 10.29

Date written/last updated: 25 September 2013

Grid Ref: SD745433

Owner/Occupier:

Districts:

Ribble Valley

Parishes:

Clitheroe

Description:

The site comprises of the disused Cross Hill limestone quarries and the adjoining Brungerley Park and supports a mosaic of semi-natural habitats including limestone grassland, scrub and woodland. The site includes Cross Hill Quarry Local Nature Reserve.

The main quarry support a diversity flora. On the open ground and rocks Salad Burnet, Hairy Rock-Cress, Wild Strawberry, Thyme-Leaved Sandwort, Harebell, Wild Thyme, Small Scabious, Parsley Piert, and Majoram occur. Plants of the grassland areas include Field Scabious, Hoary Plantain, Adder's-Tongue, Early-Purple Orchid, Yellow-RattleAutumn Gentian, Burnet-Saxifrage, Bee Orchid, Greater Burnet-saxifrage, Yellow Oat-Grass, Spiked Sedge, Spring-sedge, Cowslip, Primrose, Fairy Flax, Mouse-ear Hawkweed, Lady's Bedstraw, Quaking Grass, Wild Basil, Meadow Crane's-Bill, Lady's-Mantle, Great Burnet, Agrimony, Hybrid Avens, Meadow Oat-Grass, Downy Oat-grass, Rough Hawkbit, Welled Thistle, Common Twayblade, Betony and Hairy Violet. On the damper soils Common Spotted-orchid, Hard Rush, Bugle, Glaucous Sedge, Water Avens and Lesser Pond-Sedge occur. Developing scrub comprises of abundant Ash and Hawthorn with Grey Willow and some Spindle with a herb layer that includes Rough Chervil and Upright Hedge-parsley.

The woodland to the west adjoining Brungerley Park and the River Ribble has a diverse ground flora that includes Giant Bellflower, Toothwort, Goldilocks Buttercup, Early Dog-Violet, Hard Shield-Fern, Bluebell, False-Brome, Hairy Wood-Rush, Ramsons, Pignut, Wood-Sorrel, Moschatel, Wood-Sedge, Wood Anemone, Sanicle, Three-Nerved Sandwort, Lesser Celandine, Greater Stitchwort, Wood Speedwell, Lords-And-Ladies, Dog's Mercury, Hart's-tongue, Giant Fescue, Bearded Couch, Giant Fescue and Wood-Sorrel. A series of flushes support Guelder-rose, Red Currant, Alternate-Leaved Golden-Saxifrage, Wood Stitchwort, Pendulous Sedge, Water Figwort, Yellow Iris, Hemlock Water-Dropwort, Marsh-marigold, Marsh Hawk's-Beard, Great Horsetail and Yellow Loosestrife. Wood Ragwort, Martagon Lily and White Butterbur are established.

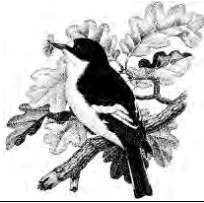
Daubenton's Bat and 45 Khz Pipistrelle have been recorded.

Guideline(s) for Site Selection:

Grassland (Gr1)

Habitat Mosaics (Hm3)

Other Information/Comments:



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Site Name: Hospital Wood

Site Ref: 74SW02

Approved: 01 September 1993

Area (ha): 8.46

Date written/last updated: 01 July 2001

Grid Ref: SD727446

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

Waddington

Description:

The site comprises a semi-natural clough woodland to the north of Waddington. It is listed in the *Lancashire Inventory of Ancient Woodland (Provisional)*, (English Nature, 1994).

The canopy is dominated by wych elm, sycamore and oak, with some ash, alder and beech. There are also a few small stands of conifers. The understorey is of hazel, hawthorn, holly and rowan with some bird cherry, blackthorn, elder, gorse and rhododendron as well as regenerating canopy species.

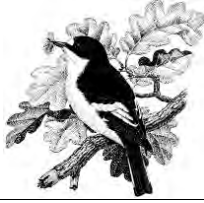
The ground flora has frequent dog's-mercury, enchanter's-nightshade, wood-sorrel, ramsons, bramble, false brome, tufted hair-grass, creeping soft-grass and Lady, male and broad-buckler ferns. Bluebell, woodruff, greater stitchwort, honeysuckle, herb-robert, Lords-and-Ladies, wood sage, red campion, common figwort, foxglove, raspberry, hart's-tongue fern, maidenhair spleenwort, hairy wood-rush, wood horsetail, wood-sedge and wood melick are also present with frequent opposite-leaved golden-saxifrage in the wetter areas.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd1)

Other Information/Comments:

The site adjoins Feazer Wood Biological Heritage Site (74NW03).



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Site Name: Coplow Quarry and Pimlico Road Grasslands

Site Ref: 74SE02

Approved: 01 September 2003

Area (ha): 6.25

Date written/last updated: 25 September 2013

Grid Ref: SD753432

Owner/Occupier:

Districts:

Ribble Valley

Parishes:

Clitheroe

Description:

The site comprises of areas of species-rich, semi-natural calcareous grassland and developing scrub at Coplow Quarry. The site includes Coplow Quarry geological SSSI.

The developing soils are thin and often give way to aggregate. Grasses include Crested Dog's-tail, Cocksfoot, Tufted Hair-grass, Yorkshire Fog, False Oat-grass and Quaking Grass. Other species include abundant Ox-eye Daisy and Selfheal, with locally frequent Spiked Sedge, Cowslip, Lady's Mantle, Bird's-foot Trefoil, Meadow Vetchling, Germander Speedwell, Common Knapweed, Creeping Cinquefoil and Fairy Flax, plus occasional Hairy St. John's-wort, Fragrant Orchid, Hoary Plantain, Marjoram, Wild Strawberry, Eyebright, Common Centaury, Common Spotted Orchid, Goat's-beard, Glaucous Sedge, Hairy Rock-Cress, Harebell, Burnet-Saxifrage, Small Scabious and Wild Thyme. Of particular note is the presence of Bee Orchid.

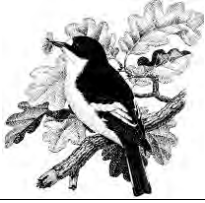
Areas of scrub with abundant Hawthorn, frequent Hazel, Ash, Goat Willow, Dog Rose and occasional Blackthorn have developed with a field layer of locally abundant Dog's Mercury, frequent Ivy, occasional Black Bryony, Ramsons, Hairy Brome, Harebell and scattered Zigzag Clover.

Guideline(s) for Site Selection:

Artificial Habitats (Ar1)

Other Information/Comments:

Site ungrazed with shrub invasion.



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Site Name: Dog House Wood

Site Ref: 74SW09

Approved: 01 December 1996

Area (ha): 1.39

Date written/last updated: 01 February 1997

Grid Ref: SD737427

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

Waddington

Description:

The site comprises a small semi-natural wood situated on a steep south facing river cliff above the River Ribble near Brungerley Bridge.

The wood is dominated by mature oak with some younger ash reaching high into an open canopy. Ivy grows profusely on the oak. Mature ash, sycamore and field maple also occur but are rare. There is an understorey of hawthorn, holly and dog-rose. The ground flora includes ivy, bramble, dog's mercury, primrose, lesser celandine, Lords-and-Ladies, bluebell, wood avens, germander speedwell, bugle, barren strawberry, hedge woundwort, common dog-violet, bearded couch, false brome, tufted hair-grass, wood-sedge and male-fern.

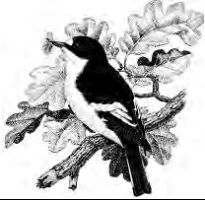
Ash, poplar and beech have been planted on flat ground alongside the river. Here the ground flora includes common nettle, cleavers, creeping buttercup, opposite-leaved golden-saxifrage, marsh thistle, hard rush, reed canary-grass and green figwort, a species included in the *Provisional Lancashire Red Data List of Vascular Plants*.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd2)

Flowering Plants and Ferns [(Ff4)]

Other Information/Comments:



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Site Name: Drakehouse Wood

Site Ref: 74NW05

Approved: 01 September 1993

Area (ha): 19.18

Date written/last updated: 01 May 2006

Grid Ref: SD739453

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

West Bradford

Description:

The site comprises ancient, semi-natural woodland occupying the steep valley sides adjoining Drakehouse and Brocklehurst Brooks, approximately 3km north of Clitheroe. The wood is listed in the *Lancashire Inventory of Ancient Woodland (Provisional)*, (English Nature, 1994).

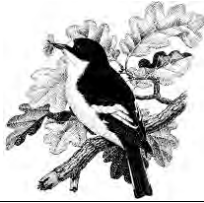
The canopy is dominated by Ash with frequent Oak, Sycamore and Beech and occasional Wych Elm, Birch, Larch and Alder. Scot's Pine is locally frequent. The understorey is made up of frequent Holly with occasional Hawthorn, Hazel, Elder, Rowan, Rose and Rhododendron as well as regenerating canopy species.

Ramsons are locally dominant over large areas of the wood with locally abundant Lesser Celandine and Opposite-leaved Golden Saxifrage. Elsewhere Bluebell, Wood Anemone, Wood-sorrel and Tufted Hair-grass are frequent. Occasional species include Dog's Mercury, Enchanter's Nightshade, Primrose, Hedge Woundwort, Herb-Robert, Lords-and-Ladies, Red Campion, Wood Avens, Meadowsweet, Brooklime, Creeping Buttercup, Common Nettle, Ivy, Honeysuckle, Bramble, Soft-rush and Creeping Soft-grass. Ferns include Broad Buckler-fern, Male-fern, Lady-fern, Bracken, Hart's-tongue and Hard Fern. Other species present include Woodruff, Moschatel, Common Dog-violet, Bittersweet and Wood Sedge.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd1)

Other Information/Comments:



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Site Name: Sherburn Wood

Site Ref: 74SW07

Approved: 01 December 1996

Area (ha): 2.41

Date written/last updated: 01 February 1997

Grid Ref: SD730425

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

Waddington

Description:

The site comprises a long band of semi-natural woodland on a south facing river cliff above a sweeping curve of the River Ribble. Sedimentary rock outcrops below the weir at the eastern end of the wood, whilst further west conglomerate rock is exposed and gives rise to a tufa formation.

The canopy is dominated by oak and ash, scattered dead elm and localised sycamore and beech. Hawthorn, hazel, holly and dogwood are present in the understorey. The varied ground flora includes dog's mercury, bluebell, primrose, woodruff, wood avens, bramble, lesser celandine, barren strawberry, ivy, Lords-and-Ladies, red campion, moschatel, crosswort, herb-Robert, wood-sedge, bearded couch, false brome and tufted hair-grass. On steeper, open slopes giant bellflower and hairy St. John's-wort are present. Hard shield-fern and hart's-tongue fern also occur.

The river bank is lined by alder where the ground flora includes hemlock water-dropwort, butterbur, alternate-leaved golden-saxifrage and green figwort, a species included in the *Provisional Lancashire Red Data List of Vascular Plants*.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd2)

Flowering Plants and Ferns [(Ff4)]

Other Information/Comments:



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Site Name: Boy Bank

Site Ref: 74SW08

Approved: 01 December 1996

Area (ha): 1.82

Date written/last updated: 14 January 2004

Grid Ref: SD735424

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

Clitheroe

Description:

The site comprises a small, semi-natural woodland known as Boy Bank Wood and a contiguous area of species-rich grassland. The site is situated on a bluff line above the south bank of the River Ribble, adjacent to the weir at Waddow.

Much of Boy Bank Wood is steeply sloping and dominated by ash, with some oak and localised Scots pine and larch. Dead wych elm is also present. The understorey consists of hawthorn, hazel and holly with a little blackthorn. The ground flora includes dog's mercury, lesser celandine, common dog-violet, wood avens, lords-and-ladies, red campion and herb-robert. Near the bottom of the slope calcareous flushes give rise to wet alder woodland with some ash and bird cherry. Here the ground flora includes common nettle, meadowsweet, marsh marigold, opposite-leaved golden-saxifrage, large bitter-cress, lesser pond-sedge and green figwort, a species included in the *Provisional Lancashire Red Data List of Vascular Plants*.

To the west the wood merges into species-rich, semi-natural grassland on the steep slope between the river and improved pasture above. The grass sward includes fairy flax, mouse-ear hawkweed, cat's-ear, autumn hawkbit, common bird's-foot trefoil, sneezewort, lady's mantle, bulbous buttercup, betony, quaking grass and glaucous sedge.

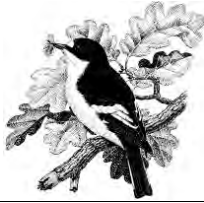
Guideline(s) for Site Selection:

Woodland and Scrub (Wd2)

Grassland (Gr3)

Flowering Plants and Ferns [(Ff4)]

Other Information/Comments:



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Site Name: Bellman Farm Marsh

Site Ref: 74SE03

Approved:

Area (ha): 6.02

Date written/last updated:

Grid Ref: SD759434

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

Chatburn

Description:

The site comprises the land adjoining Pimlico Brook from near Pimlico Link Road to the wet fields associated with Bellman Farm. The site also includes the area around the old kiln and the adjacent embankment.

The wet fields have an underlying peaty soil, indicative of a historical wetland habitat. Their situation between slightly elevated limestone formations to the north west and south east indicates a former valley mire. Formerly managed as meadowland, their vegetation is essentially fen meadow, with frequent to abundant species include meadowsweet, marsh marigold, water mint, brown sedge, yellow iris and, more localized, common valerian and the nationally scarce green figwort. Bulrush (*Typha*) swamp dominates one field and wetter areas associated with the upper section of Pimlico Brook. The latter also supports stands of lesser pond?sedge. The boundary ditches support a similar flora but with grey and bay willow, which in places are colonizing the fields.

Scrub occurs along much of Pimlico Brook where grey willow is dominant with locally dominant bay willow. The herb layer, whilst shaded, is similar to the fields but with locally dominant reed canary?grass and lesser pond?sedge. Hawthorn scrub occurs in drier areas such as along the edge of the railway.

Parts of the embankment and areas around the old kiln support secondary species?rich grassland with common knapweed, common bird's?foot?trefoil, fairy flax, zig?zag clover, glaucous sedge, common spotted?orchid and formerly fragrant orchid. Parts of the embankment are being colonized by ash, other parts having been planted with beech, pines and larch.

The wet fields flood in winter attracting mallard, teal, snipe and water rail with lesser whitethroat, sedge warbler and reed bunting present through the summer. The site is considered an important moult and roost site for passerines.

Guideline(s) for Site Selection:

Woodland and Scrub	(Wd5)
Grassland	(Gr3)
Swamp and Fen	(Fe1)
Artificial Habitats	(Ar1)

Other Information/Comments:

The old kiln needs to be surveyed for bats.

The section of Pimlico Brook N.W. of the railway needs to be surveyed to consider it for inclusion within the site.



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Site Name: Feazer Wood

Site Ref: 74NW03

Approved: 01 September 1993

Area (ha): 4.89

Date written/last updated: 01 September 2005

Grid Ref: SD726454

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

Waddington

Description:

The site comprises a semi-natural clough woodland situated approximately 1.5 km north of Waddington. Most of the wood is included in the *Lancashire Inventory of Ancient Woodland (Provisional)*, (English Nature, 1994).

The woodland lies on steep banks along both sides of Waddington Brook. The canopy is dominated by Ash with frequent Wych Elm, Oak, Rowan, Sycamore and Beech, and occasional Alder, Birch, Spruce and Larch. There is an understorey of Hazel, Hawthorn, Holly and Elder, with occasional Bird Cherry and Rhododendron together with regenerating Ash, Rowan and Wych Elm.

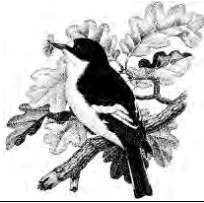
The ground flora has frequent Tufted Hair-grass, Yorkshire-fog, Bramble, Wood Speedwell, Wood-sorrel and Male and Broad-buckler ferns. Other species present include Bluebell, Dog's Mercury, Enchanter's-nightshade, Yellow Pimpernel, Honeysuckle, Ivy, Herb-robert, Red Campion, Foxglove, Wood Aven, Greater Stitchwort, Bracken, Wood Sedge, Hairy Wood-rush, False Brome, Rough Meadow-grass and Creeping Soft-grass with Opposite-leaved Golden-saxifrage, Bugle, Meadowsweet, Brooklime, Creeping Buttercup and Common Nettle in damp areas.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd1)

Other Information/Comments:

The site adjoins Hospital Wood Biological Heritage Site (74SW02).



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Site Name: Salthill Quarry

Site Ref: 74SE01

Approved: 01 September 1993

Area (ha): 8.31

Date written/last updated: 26 September 2013

Grid Ref: SD757426

Owner/Occupier:

Districts:

Ribble Valley

Parishes:

Clitheroe

Description:

The site comprises of a mosaic of habitats including limestone grassland, scrub and developing woodland surrounding a former limestone quarry which has been developed as an industrial estate. The main areas of interest are the exposed outcrops and stony ground which have been colonised by a diverse flora.

The outcrops support Small Scabious, Wild Thyme, Salad Burnet, Hairy St. John's-Wort, Wild Marjoram, Thyme-Leaved Sandwort, False-Brome, Eyebright, Harebell, Carlina Thistle, Fairy Flax, Spring Sedge, Quaking-grass, Blue Fleabane, Wild Strawberry, Oxeye Daisy, Common Bird's-foot-trefoil, Pignut and Mouse-Ear-Hawkweed whilst on the shallow soils of crushed limestone Autumn Gentian, Hairy Rock-Cress, Hoary Plantain, Hairy Violet, Carlina Thistle, Bee Orchid, Milkwort, Heath Speedwell and Glaucous Sedge occur. Buttercup, Great Burnet, Spiked Sedge, Lady's-Mantle, Meadow Crane's-bill, Rough Hawkbit, Yellow Oat-Grass, Betony, Lady's Bedstraw, Upright Hedge-parsley, Yellow-Rattle, Bloody Crane's-Bill, Downy Oat-Grass, Cowslip, Agrimony, Cowslips, Betony, Bloody Crane's-Bill, Bugle, Bulbous Buttercup and Common Knapweed. Common Rock-Rose was last recorded in 1988.

The scrub includes Sweet Briar and Spindle whilst beneath the wooded outcrops to the north of the site both Hard and Soft Shield-Fern occur. Established exotic shrubs include Wayfaring-Tree, Wrinkled Viburnum, *Sorbus mougeotii*, Butterfly-bush and Cotoneasters.

The site is also noteworthy for the presence of the Lancashire BAP bryophytes *Radula complanata*, *Cololejeunea minutissima*, *Aloina aloides*, *Campyliadelphus chrysophyllus*, *Didymodon acutus*, *Ditrichum flexicaule*, *Schistidium robustum*, *Syntrichia laevipila* and *Zygodon conoideus*.

A number of Lancashire BAP birds use the site such as Bullfinch, Lesser Redpoll, Lesser Whitethroat, Linnet, Spotted Flycatcher, Tree Sparrow and Willow Warbler. The Labyrinth Spider occurs here.

Guideline(s) for Site Selection:

Grassland (Gr1)

Artificial Habitats (Ar1)

Other Information/Comments:

The site is within the Salthill & Bellmanpark Quarries Geological SSSI and includes much of the Salthill Quarry Local Nature Reserve.



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Site Name: West Clough Wood

Site Ref: 74NE01

Approved: 01 September 1993

Area (ha): 9.5

Date written/last updated: 01 July 1999

Grid Ref: SD750458

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

Grindleton, West Bradford

Description:

The site comprises ancient, semi-natural woodland occupying the steep sides of West Clough Brook, located between the villages of West Bradford and Grindleton. The woodland is listed in the *Lancashire Inventory of Ancient Woodland (Provisional)*, (English Nature, 1994). West Clough Wood has been considerably modified by past planting, but still retains a ground flora that is characteristic of an ancient woodland.

The canopy comprises beech, sycamore, oak, ash, wych elm, birch and rowan. A small area of conifers has been planted. The understorey comprises hazel, hawthorn and holly. The ground flora supports many ferns, including male-fern, lady-fern and broad buckler-fern. Other species present include tufted hair-grass, false brome, wood melick, dog's mercury, wood-sorrel, ramsons, bluebell, wood anemone, enchanter's-nightshade, wood avens, sanicle, greater stitchwort, hedge woundwort, moschatel, bittersweet, herb-robert and opposite-leaved golden-saxifrage. In places the steep slopes are dominated by bare ground with only a sparse vegetation cover.

Guideline(s) for Site Selection:

Woodland and Scrub (Wd1)

Other Information/Comments:

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



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Site Name: Clitheroe Castle Knoll

Site Ref: 74SW05

Approved: 08 September 1993

Area (ha): 1.04

Date written/last updated: 16 September 2013

Grid Ref: SD742417

Owner/Occupier:

Districts:

Ribble Valley

Parishes:

Clitheroe

Description:

The site consists of several rock outcrops and steep sloping areas of limestone grassland, scrub and developing woodland below Clitheroe Castle.

Plants on the outcrops include Wild Thyme, Harebell, Salad Burnet, Burnet-Saxifrage, Wild Strawberry, Pellitory-Of-The-Wall, Wall Lettuce, Maidenhair Spleenwort, Wall-Rue, Herb-Robert, Ivy, Hawkweed species and French Sorrel.

The grassland flora on the steep slopes includes Hoary Plantain, Rough Hawkbit, Lady's Bedstraw, Common Bird's-Foot-Trefoil, Common Knapweed, Yellow Oat-Grass, Selfheal, Mouse-Ear-Hawkweed, Great Burnet, Greater Burnet-saxifrage and Bulbous Buttercup. The associated scrub comprises of Hawthorn, Blackthorn, Bramble, Grey Willow, Rose and Spindle with a ground flora of Dog's Mercury, Hairy Brome, Lords-And-Ladies, Ivy and Herb Bennet.

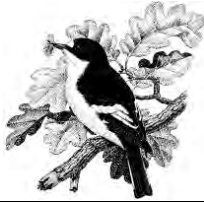
A number of exotic shrubs are established including Butterfly-bush and several Cotoneaster species.

Guideline(s) for Site Selection:

Rock

(Ro2)

Other Information/Comments:



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Site Name: Bellman Park Quarry

Site Ref: 74SE04

Approved: 01 February 1995

Area (ha): 4.25

Date written/last updated: 01 February 1995

Grid Ref: SD761427

Owner/Occupier: Private

Districts:

Ribble Valley

Parishes:

Clitheroe

Description:

Bellman Park Quarry is cut into one of a series of limestone hills, and is a link in a chain of calcareous habitats and features between Clitheroe and Downham. To the west are Clitheroe Castle knoll and Salthill and to the east Crow hill, Worsaw Hill and the A59(T) road cutting. It forms part of the Salthill and Bellmanpark geological SSSI.

The quarry floor comprises variously sized hummocks and mounds as well as areas of flat ground, with a the vegetation ranging from open calcareous to grass dominated swards, together with areas of ash and hawthorn scrub. Species include wild thyme, wild marjoram, mouse?ear?hawkweed, common bird's?foot?trefoil, eyebright, harebell and formerly bee orchid. A depression with standing water supports a stand of bulrush (*Typha*), common spike? rush, lesser and greater spearwort, water mint and stonewort; a deep quarry pond occurs in the SE corner.

Much of the main quarry face and the base of the cliffs have been colonized by ash and hawthorn with locally dog?rose and holly, with a ground flora of herb?robert, wild strawberry, lords?and? ladies, wood and water avens, false brome and hart's?tongue.

Of particular note are the quarry ledges and rim in the SW corner where the vegetation includes quaking?grass, heath?grass, crested hair?grass, lady's bedstraw, small scabious, burnet?saxifrage, wild thyme and carline thistle. Adjacent but outside the quarry fence is a area of agriculturally managed calcareous grassland, which represents a surviving relict sward of the former limestone hill. It supports a similar flora to the quarry ledges.

Common frog, palmate newt and brown hare have been observed on the site.

Guideline(s) for Site Selection:

Grassland (Gr3)

Artificial Habitats (Ar1)

Other Information/Comments:



Appendix C. Species Records Tables

Amphibian Desktop Records

Refer to Figure 9A - Species Desktop
Records - **Amphibian**

Species Record Identifier	Species Common Name
1	Common Frog
2	Common Toad
3	Common Toad

Bird Desktop Records

Refer to Figure 9A - Species Desktop
Records - **Bird**

Species Record Identifier	Species Common Name
1	Kingfisher
2	Barn Owl
3	Curlew
4	House Martin
5	Curlew
6	House Sparrow
7	Black-headed Gull
8	Black-headed Gull
	Curlew
9	Curlew
10	Swallow

Bony Fish, Crustacean, Jawless Fish and Mollusc**Desktop Records**

Refer to Figure 9A - Species Desktop
Records - **Bony Fish, Crustacean,
Jawless Fish, Mollusc**

Species Record Identifier	Species Common Name
1	Bullhead
2	Bullhead
3	Bullhead
4	Brown/Sea Trout
	Bullhead
	European Eel
5	Brown/Sea Trout
	Bullhead
6	Brown/Sea Trout
	Bullhead
7	Brown/Sea Trout
	Bullhead
8	Bullhead
9	Bullhead
10	Atlantic Salmon
	Brown/Sea Trout
11	Brown/Sea Trout
	Bullhead
12	Bullhead
13	Brown/Sea Trout
	Bullhead
14	Bullhead
15	Brown/Sea Trout
	Bullhead
16	Atlantic Salmon
17	Brown/Sea Trout
	Bullhead
	European Eel
18	Atlantic Salmon
	Brown/Sea Trout
	Bullhead
	European Eel
	Grayling
19	Brook Lamprey
	Brown/Sea Trout
	Bullhead
	European Eel
20	Brown/Sea Trout
	Bullhead

Clubmoss, Fern, Fungus, Horsetail, Moss, Lichen
and Liverwort Desktop Records

Refer to Figure 9A - Species Desktop
Records - **Clubmoss, Fern, Fungus,**
Horsetail, Moss, Lichen, Liverwort

Species Record Identifier	Species Common Name
1	Normandina pulchella
2	Blueish Veilwort
	Marble Screw-moss
	River Bristle-moss
3	Soft Shield-fern

Conifer and Flowering Plant Desktop Records

Refer to Figure 9A - Species Desktop Records - **Conifer, Flowering Plant**

Species Record Identifier	Species Common Name
1	Indian Balsam
2	Indian Balsam
3	Indian Balsam
4	Japanese Knotweed
5	Japanese Knotweed
6	Indian Balsam
7	Japanese Knotweed
8	Indian Balsam
9	Japanese Knotweed
10	Early Dog-violet
11	Japanese Knotweed
12	Indian Balsam
13	Indian Balsam
14	Japanese Knotweed
15	Indian Balsam
16	Indian Balsam
17	Indian Balsam
18	Japanese Knotweed
19	Common Spotted-orchid
	Common Twayblade
	Marsh-Orchid
	Southern Marsh-orchid
20	Indian Balsam
21	Indian Balsam
22	Japanese Knotweed
23	Wintergreen
24	Common Spotted-orchid
25	Bee Orchid
26	Fragrant Orchid
27	Indian Balsam
28	Indian Balsam
29	Indian Balsam
30	Southern Marsh-orchid
31	Early Dog-violet
32	Mezereon
33	Indian Balsam
34	Broad-leaved Helleborine
35	Indian Balsam
36	Japanese Knotweed
37	Japanese Knotweed
38	Japanese Knotweed
39	Japanese Knotweed

Species Record Identifier	Species Common Name
40	Spiked Sedge
41	Common Spotted-orchid
42	Bloody Crane's-bill
43	Entire-leaved Cotoneaster
44	Marsh Fragrant-orchid
45	Snowdrop
	Spanish Bluebell
46	Indian Balsam
47	Japanese Knotweed
48	Wall Cotoneaster
49	Bee Orchid
	Fragrant Orchid
50	Snowdrop
51	Rhododendron ponticum
	Snowdrop
52	Columbine
	Monkeyflower
	Montbretia
	Snowdrop
	Spanish Bluebell
53	Tutsan
	Snowdrop
54	Bluebell
	Japanese Knotweed
	Snowdrop
	Yellow Archangel
55	Columbine
	Montbretia
56	Snowdrop
	Spanish Bluebell
57	Bluebell
	Lesser Meadow-rue
	Tutsan
	Yellow Archangel
58	Columbine
	Common Twayblade
	Hairy Violet
	Knotweed
	Snowdrop
	Spiked Sedge
	Spindle

Species Record Identifier	Species Common Name
59	Cotoneaster
	Green Figwort
	Montbretia
	Petty Spurge
	Rhododendron ponticum
	Sand Leek
	Snowdrop
	Tutsan
60	Bee Orchid
	Buckthorn
	Common Spotted-orchid
	Fragrant Orchid
	Marsh Fragrant-orchid
	Petty Spurge
	Spindle
61	Snowdrop
62	Bluebell
	Indian Balsam
63	Snowdrop
64	Snowdrop
	Tutsan
65	Greater Spearwort
66	Montbretia
67	Indian Balsam
	Snowdrop
68	Snowdrop
69	Indian Balsam

Species Record Identifier	Species Common Name
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Insect Desktop Records

Refer to Figure 9A - Species Desktop Records - **Insect**

Species Record Identifier	Species Common Name
1	Autumnal Rustic
	Beautiful Snout
	Gold Spangle
	Green-brindled Crescent
2	Beautiful Hook-tip
3	Rosy Minor
4	Small Phoenix
5	Comma
6	Speckled Wood
7	Buff Ermine
	Oblique Carpet
	Small Phoenix
	Small Square-spot
8	White Ermine
	Broom Moth
	Buff Ermine
9	Dot Moth
	Swallowtail
10	Ringlet
11	Speckled Wood
12	Wall
13	Ringlet
14	Ringlet
15	Speckled Wood
16	Speckled Wood
17	Speckled Wood
18	Speckled Wood
19	Green-brindled Crescent
20	Brown Rustic
	Buff Ermine
	Comma
	Dusky Brocade
	Ghost Moth
	Ringlet
	Small Square-spot
21	Speckled Wood
	Speckled Wood
22	Didea fasciata
23	White-letter Hairstreak
24	Speckled Wood

Species Record Identifier	Species Common Name
25	Speckled Wood
	Wall
26	Ringlet
27	Comma
	Ringlet
	Small Heath
	Speckled Wood
28	Comma
	Speckled Wood
29	Ringlet
	Speckled Wood
30	Brimstone
	Comma
	Ringlet
	Speckled Wood
31	White-letter Hairstreak
	Ringlet
32	Wall
	Wall

Marine Mammal and Terrestrial Mammal Desktop Records

Refer to Figure 9A - Species Desktop Records - **Marine Mammal, Terrestrial Mammal**

Species Record Identifier	Species Common Name
1	Pipistrelle
2	Pipistrelle
3	West European Hedgehog
4	Brown Hare
5	West European Hedgehog
6	West European Hedgehog
7	West European Hedgehog
8	Brown Hare
9	Daubenton's Bat
10	Brown Hare
11	Common Pipistrelle Pipistrelle
12	Bats Daubenton's Bat
13	West European Hedgehog
14	Pipistrelle Bat Species
15	Common Pipistrelle Pipistrelle
16	Common Pipistrelle Soprano Pipistrelle Whiskered Bat
17	Pipistrelle
18	Bats Daubenton's Bat Soprano Pipistrelle
19	Common Pipistrelle
20	Pipistrelle Bat Species Soprano Pipistrelle
21	Common Pipistrelle Pipistrelle
22	Brown Hare
23	Pipistrelle
24	Brown Hare
25	Brown Hare West European Hedgehog
26	Brown Hare Pipistrelle West European Hedgehog
27	Brown Hare West European Hedgehog

Species Record Identifier	Species Common Name
28	Brown Hare West European Hedgehog
29	Brown Hare West European Hedgehog
30	Brown Hare West European Hedgehog
31	Brown Hare
32	Brown Hare