LIST OF APPENDICES:

Appendix 1. Target Notes written in the parish in 1988 during the Phase 1 Habitat Survey of Burnley

Target Notes for 1km square: SD8632:

ID: 7932 Grid ref: 861 329 Date: 01/11/1988 Surveyors: ST & GM. Small plantation by the side of Rowley Hall. Dominant species are: Aesculus hippocastanum, Betula pendula, Quercus sp., Salix caprea and Fraxinus excelsior, with some naturally regenerating Crataegus monogyna. The trees have been planted on neutral grassland which has the following species: Deschampsia cespitosa, Dactylis glomerata, Holcus lanatus, Agrostis capillaris; Juncus effusus, J. conglomeratus; bryophytes; a small patch of Carex acutiformis; Cirsium sp., Tussilago farfara, Ranunculus repens, Urtica dioica, Plantago lanceolata, Geranium robertianum, Galium aparine and abundant Dactylorhiza fuchsii.

ID: 7933 Grid ref: 863 326 Date: 01/11/1988 Surveyors: ST & GM. Lakeside area, partly planted with Alnus glutinosa with some Salix caprea and Betula pendula. The margins are fringed with Juncus effusus with a large clump of Typha latifolia in one corner and Veronica beccabunga. Carex acutiformis is abundant. Other species are: Phalaris arundinacea, Holcus lanatus, Cynosurus cristatus, Deschampsia cespitosa, Phleum sp., Carex hirta; bryophytes; Epilobium sp., Silene dioica, Cirsium sp., Rubus fruticosus agg., Cardamine sp., Tussilago farfara, Plantago lanceolata, Rumex sp. and Heracleum sphondylium, Mentha aquatica, Prunella vulgaris, Achillea ptarmica and Stachys sylvatica. The lake was created c.1981 and stocked with coarse fish. The Borough rubbish tip lies adjacent, so the lake proves very attractive to gulls including some of the scarcer species which use the lake for drinking and cleaning. Since its creation, the lake and adjacent land have consistently attracted over one hundred different species of bird annually.

ID: 7934 Grid ref: 863 327 Date: 01/11/1988 Surveyors: ST & GM. Flush in Alnus glutinosa plantation. Species are Juncus effusus, J. conglomeratus; bryophytes; Deschampsia cespitosa, Cynosurus cristatus, Agrostis capillaris, Holcus lanatus, Phalaris arundinacea, Urtica dioica, Epilobium montanum, Veronica beccabunga, Plantago lanceolata, Potentilla spp., Centaurea nigra, Vicia sp., Cirsium sp., Ranunculus repens, Stellaria sp. and Achillea millefolium.

ID: 7935 Grid ref: 868 329 Date: 01/08/1988 Surveyors: GM, MB & AD. Heckenhurst Reservoir. Drained and filled in (1987), sown with Lolium perenne; Holcus lanatus and Phleum sp. mixed in.

Target Notes for 1km square: SD8633:

ID: 7937 Grid ref: 865 331 Date: 01/08/1988 Surveyors: GM, ME & AD. Acidic flush in semi-improved acidic field with Juncus effusus, Carex panicea and other Carex sp., Cynosurus cristatus, Nardus stricta, Holcus lanatus, Agrostis capillaris, Ranunculus repens, Cardamine partensis, Myosotis scorpioides.

ID: 7938 Grid ref: 865 333 Date: 01/08/1988 Surveyors: GM, ME & AD. Acidic flush in semi-improved acidic field with Juncus conglomeratus, J. articulatus, abundant Carex panicea, C. nigra, C. ovalis, Potentilla erecta, Achillea ptarmica, Succisa pratensis. Small area of Isolepis setacea (scarce).

ID: 7939 Grid ref: 866 333 Date: 01/08/1988 Surveyors: GM, ME & AD. Acidic flush on a sloping riverbank. Juncus articulatus, J. conglomeratus, J. acutiflorus, J. inflexus, Carex panicea, C. nigra, C. ovalis, C. hirta, Equisetum arvense, E. sylvaticum. Some Sphagnum sp. and other bryophytes, Oreopteris limbosperma, Potentilla reptans, P. erecta, Mentha aquatica, Caltha palustris, Filipendula ulmaria, Angelica sylvestris, Lotus sp., Succisa pratensis, Cirsium palustre, Impatiens glandulifera with some regenerating Alnus glutinosa. Good for invertebrates.

ID:7940 Grid ref: 868 333 Date: 01/08/1988 Surveyors: GM, ME & AD. Acidic flush: Juncus conglomeratus, J. effusus, Lychnis flos-cuculi and abundant Hypericum tetrapterum. The general area consists of Juncus flushes in an acid grassland/marshy grassland mosaic within a river valley and is grazed by cattle. See target notes at 865331, 865334 and 866334.

Target Notes for 1km square: SD8732

ID: 7948 Grid ref: 871 327 Date: 01/08/1988 Surveyors: GM, ME & AD. Ageing grass ley, mainly Lolium sp. and Holcus lanatus but with abundant Ranunculus repens, also R. acris, Rumex acetosa, Polygonum persicaria, Trifolium spp. and Geranium sp.

Target Notes for 1km square: SD8733

ID: 7954 Grid ref: 874 4331 Date: 01/08/1988 Surveyors: ME, AD & GM. Track sides and field edge: Deschampsia cespitosa, Holcus lanatus, Juncus sp., Equisetum sylvaticum, E. arvense, Hieracium sp., Achillea ptarmica, Leontodon sp., Prunella vulgaris, Succisa pratensis, Medicago lupulina and abundant Dactylorhiza fuchsii.

Target Notes for 1km square: SD9031:

ID: 8147 Grid ref: 901 310 Date: 01/08/1988 Surveyors: ST & BA. Acidic flushes running into Cant Clough Reservoir with Sphagnum spp., Hydrocotyle vulgaris, Carex echinata, C. nigra, Juncus articulatus, Molinia caerulea. Good site for invertebrates and frogs - breeding site for both. Further survey required; other species may be found.

ID: 8149 Grid ref: 901 315 Date: 01/08/1988 Surveyors: ST & BA. Mosaic of unimproved acidic grassland and dry bog without Sphagnum dominated by Eriophorum vaginatum. Acid grassland species Deschampsia flexuosa, Nardus stricta, Festuca ovina. Site is a hillslope below a hilltop of pure Eriophorum vaginatum bog. Sheep grazing evident.

ID: 8150 Grid ref:902 313 Date: 01/08/1988 Surveyors: ST & BA. Acidic flushes running predominantly SW into Cant Clough Reservoir, winding through a series of mounds formed from dumping of material extracted in excavation of Reservoir and colonised by unimproved acidic grassland dominated by Nardus stricta, Deschampsia flexuosa with Juncus squarrosus. Species in

flush: Eriophorum angustifolium, Juncus effusus, Galium saxatile, Molinia caerulea, Sphagnum spp., Polytrichum spp. On the north side of the track is a small pond with a fringe of Glyceria spp.

ID: 8151 Grid ref: 907 317 Date: 01/08/1988 Surveyors: ST & BA. Dry bog without Sphagnum containing Molinia caerulea and Eriophorum vaginatum in dense tussocks in respective proportions 70:30. Other species: Eriophorum angustifolium, occasional Sphagnum spp., Carex nigra. Grades into small area of Molinia - dominated marshy grassland downslope, where peat depth is probably less than 0.5m. Little grazing of this vegetation apparent.

ID: 8152 Grid ref: 908 318 Date: 01/08/1988 Surveyors: ST & BA. Acidic flush dominated by Juncus effusus, with some areas of quite deep peat. Species present: Cirsium palustre, Hydrocotyle vulgaris, Eriophorum vaginatum, Sphagnum spp., occasional Molinia caerulea. Acidic flush runs through this area down slope into acid grassland.

ID: 8153 Grid ref: 909 313 Date: 01/08/1988 Surveyors: ST & BA. Acidic flushes on slopes of hill dominated by Juncus effusus with patches of blanket bog in between with large patches of Sphagnum spp. and also drier areas dominated by Polytrichum spp. Some very narrow channels of running water. Abundant Eriophorum vaginatum in dense tussocks and abundant Eriophorum angustifolium. Other species: Molinia caerulea, Viola palustris, Stellaria alsine, Hydrocotyle vulgaris; occasional Vaccinium myrtilllus. Steeper slopes above contain dry bog without Sphagnum, dominated by Eriophorum vaginatum. Flushed areas appear largely ungrazed. Further survey required; other species may be found.

ID: 8154 Grid ref: 909 313 Date: 01/08/1988 Surveyor: ST. Cant Clough Beck and Ram's Clough. A mosaic of blanket bog dominated by Eriophorum spp. and Sphagnum spp. with species-rich flushes locally. Site of particular interest from Phase 1. Ref SD93/1 Sc.

Target Notes for 1km square: SD9132:

ID: 8193 Grid ref: 914 321 Date: 01/08/1988 Surveyors: ST & BA. Dry bog without Sphagnum dominated by Eriophorum vaginatum in dense tussocks, with occasional Molinia caerulea. Occasional Empetrum nigrum shoots and small patches on areas of bare peat; lichens and occasional Vaccinium myrtillus also present in these areas, suggesting transition of drying bog to heath vegetation.

The names of the surveyors are as follows:

AD = Adrian Davis.
BA = Bernadette Aspin.
GM = Graham Motley.
ME = Mark Eccles.
ST = Simon Thomas.

Appendix 2. Extracts from the Landscape and Wildlife Strategy for Lancashire (LCC 1990).

The Strategy intended to bring together disparate areas of activity including nature conservation, environmental protection, woodland management and environmental enhancement, in addition to its established role in the reclamation of derelict land, into a co-ordinated framework for environmental action in respect of the natural, semi-natural and man-made habitats and landscapes that make up the non-built fabric of Lancashire ranging from ancient woodland to town parks and from hay meadows to derelict urban sites.

In doing so the Strategy will create a framework for the implementation of the environmental policies contained within the Lancashire Structure Plan, co-ordinate the activities of the various agencies and voluntary organisations concerned for the environment, so as to maximise their effectiveness, and give a new direction to the County Council's capital and revenue programmes concerned with the environment.

The aims of the Strategy were:

a) To monitor and respond to changes in the landscape and wildlife of the County.
b) To conserve commonplace as well as special landscapes, habitats, species and other features of interest and to maintain and develop diverse and attractive landscapes throughout the County.
c) To conserve statutory designated areas and species; Forest of Bowland AONB, Arnside Silverdale AONB, Sites of Special Scientific Interest (SSSI), Scheduled Species, and encourage appropriate management to secure the continuation of nationally important features and species.
d) To restore degraded land, enhance landscapes and habitats, and reverse trends in environmental loss.
e) To promote land management practices compatible with the enhancement and conservation of landscapes and wildlife habitats.
f) To encourage partnership between public, private and voluntary sectors so as to maximise the deployment of resources, skills and expertise in improving environmental quality.
g) To increase environmental awareness and understanding and to involve the community in practical ways.
h) To set a good example to others in terms of the County Council's own management practices and to provide a framework for County Council spending.
i) To attract outside resources into Lancashire.

The section on Landscape Change includes the following statements:

- The majority of the countryside is made up of commonplace features, which when taken together, provide the rich variety of landscape experiences found in rural Lancashire. The commonplace elements which make up these landscapes are the secondary or non-ancient woodlands; hedges, copses and hedgerow trees; ponds and streams; stone walls; and permanent pastures. The problems facing these landscapes are the cumulative effects of damage and neglect of the commonplace landscape features which, when judged in isolation, may not cause particular concern.
- As in the rest of Britain, the overall landscape quality of the County is in decline. Woodlands can be neglected or grazed by livestock; hedgerows are grubbed-out or left unmanaged to decline; stone walls are damaged and left unrepaired; ponds and watercourses are filled in and polluted; hedgerows and other trees reaching maturity are not being replaced;

meadows of improved grasslands lack the variety and colour of former years; the widespread uses of chemical fertilisers, herbicides and pesticides have reduced the wild plant and animal species which were previously widespread.

- The rate of pond loss between 1965 and 1988 was nearly 7 times the rate of pond loss between 1845 and 1965. While these losses are extremely dramatic, what is even more serious is the loss of ponds in very important high-density pond clusters, where ponds exceed 25 per square kilometre and are of particular ecological significance. In these areas the loss between 1965 and 1988 was 51 % compared to 34% in areas with a pond density of 1 to 4 per square kilometre. This is the reverse of the trend between 1845 and 1965 where the losses were 11 % and 48% respectively for such densities. There has clearly been a major acceleration in the rate of pond losses, in the most important ecological areas, over the last 20 years.
- The loss of field boundary hedges is widespread nationally. The Nature Conservancy Council estimated that 170,000 miles of the 500,000 miles of hedgerow existing in 1947 had been lost by 1974. All but 20,000 miles of this loss is attributable to agricultural improvements. This pattern is also reflected in Lancashire. A study of the aerial surveys of 1963 and 1988 has shown that up to 25% of the County's hedgerows have been lost during the 25 years. This loss amounts to about 1,250 kilometres and represents a major landscape change and significant loss of wildlife corridors. As with ponds, no statutory protection exists for this significant landscape and wildlife resource.

The section on Afforestation includes the following statements:

- Compared to other counties, Lancashire has amongst the lowest levels of woodland cover and the planting of new woodlands is seen as an important element of landscape conservation.
- Afforestation can have significant effects on wildlife habitats and nature conservation. Planting land of existing nature conservation significance should be discouraged. Likewise, all planting proposals should be checked against the Lancashire Sites and Monuments Record (SMR) to avoid damage to archaeological sites.
- There are major opportunities to use broadleaved/mixed afforestation to the benefit of landscape conservation and renewal in the 'Countryside Areas' of the County and in appropriate Green Belt areas covered by Policy 20 of the Structure Plan.
- The Green Belt areas in the Leeds and Liverpool Canal Corridor between Blackburn and Colne in particular, would benefit from significant afforestation and would be a candidate area for the Countryside Commission's Community Forests initiative.

Strategy A - Landscape Enhancement and Conservation includes the following:

- The County Council will encourage and promote agricultural and forestry practices which benefit nature conservation. Liaison arrangements will be established with the Forestry Commission, to pursue these objectives.
- Programmes of Landscape Renewal consisting of grassland diversification; hedgerow and hedgerow tree planting; heather restoration; pond restoration and construction; stone walling; the creation of new wetlands and the planting of new woodlands (see Strategy B below) will be promoted through direct action by the County Council; Joint working with District Councils and North West Water Ltd; promotion of activity amongst landowners and estates; supporting, encouraging and facilitating voluntary sector activity.
- The County Council will launch and promote in partnership with the voluntary sector, campaigns for hedgerow planting and pond construction. These will have regard to locations

where the quality and concentration of the hedgerows and ponds are of particular importance. The targets of these campaigns will be:

- To plant or replant 500 kilometres of hedgerow in the next 10 years, in both rural and urban areas;
- To create or restore 2,000 ponds in the next 10 years, in both rural and urban areas.
- To promote these objectives the County Council will run annual promotional campaigns and competitions; give free hedging plants and grant assistance in the construction of new ponds.

Strategy B - Trees and Woodlands includes the following:
The first priority of the Trees and Woodland Strategy is to maintain the existing areas of trees and woodland within the County. The following measures will be taken to achieve these objectives:

- Establishment of a Lancashire Co-operative for marketing the by-products of woodland management operations.
- Promoting and assisting the stock proofing of woodlands under threat from livestock damage.
- Encouraging the management of broadleaved woodlands according to the Forestry Commission's "Guidelines for the Management of Broadleaved Woodlands".
- Discouraging the coniferisation of broadleaved woodlands.
- Promote the planting of new native broadleaved woodlands whenever possible.
- Opportunities for developing the Countryside Commission's "Community Forest" initiative within the Green Belt areas in the Leeds and Liverpool Canal Corridor between Blackburn and Colne will be explored, together with opportunities for the development of urban forestry schemes by District Councils.
- Promotion aimed at increasing the take up of grants available for woodland management for farmers and landowners.
- Developing further the role of voluntary organisations in the management of woodlands, by giving subsidies to make the services of such groups available to farmers and landowners free of charge.
- In this respect 'Adopt a Woodland' schemes will be promoted between landowners and voluntary organisations.
- The County Council will support and promote community involvement in the management of woodlands and has established a Community Woodlands Officer to develop self-sustaining community groups for this purpose.
- The County Council will target its own new planting programme in the landscape renewal priority areas, Urban Greenspace Networks and in the diversification and enhancement of its own landholdings.
- The County Council will give financial assistance to landowners and voluntary organisations for tree and woodland planting projects. Private sector sponsorship will be sought for this initiative in partnership with the voluntary sector, to enable a major campaign to be launched.
- The work and activities of the recently established Trees and Woodlands Forum will be developed to promote and co-ordinate new tree planting and management throughout the County. A network of demonstration sites will be set up to stimulate activity and good practice.
- The County Council will support the Woodland Trust, LTNC and other conservation organisations in the purchase of woodland SSSIs and County Heritage Sites (see Strategy D) in order that they can be brought into effective management.

- The County Council will diversify its own woodlands and manage them as far as possible with the primary objective of nature conservation and will make provision for public access where appropriate.
- Where woodlands form part of the County Agricultural Estate their management will be commensurate with the wider objectives of the Estate.

Strategy C – The Historic Landscape, under which Semi-Natural Habitats and Species Protection includes the following for Ancient and Semi-Natural Habitats:

- The semi-natural habitats are the most valuable areas for wildlife in the County. The importance of these ancient and semi-natural habitats as the primary assets of the County's natural heritage cannot be overstated.
- As with Britain as a whole there are two main issues relating to the semi-natural habitats of the County, firstly the vast and rapid loss of the habitats themselves which are irreplaceable. No matter how much new broadleaved woodland we plant it can never be a substitute for the ancient woodlands which have taken centuries to develop. The second issue relates to management inappropriate to the retention of those areas of semi-natural habitat that still remain. The remaining wildflower meadows in the County are unlikely to survive unless the traditional patterns of management are sustained. Likewise, heather moorland, even where it is not under threat, requires regular management by controlled burning and/ or grazing to ensure its survival.
- The importance of sporting activities, particularly, shooting, in managing land in a manner sympathetic with nature conservation objectives needs to be recognised. Grouse shooting, for example, is a major motive in heather moorlands being managed in a manner compatible with their long-term survival.
- A number of key areas of habitat loss have been identified and the following are examples of the irreversible habitat losses that have and are still taking place in the County:
- *Wildflower Meadows:* Nationally 95% of lowland neutral grasslands, the classic wildflower meadows, now lack significant wildlife interest and only 3% are left undamaged. It is estimated that these figures apply equally accurately to Lancashire and this is reflected in there being only five neutral grassland Sites of Special Scientific Interest (SSSI) in the County covering only 29.6 hectares (73.1 acres). This is a minute amount compared with the hundreds of thousands of acres of improved grasslands in the County.
- *Ancient Woodland:* There are about 2,500 hectares (6,175 acres) of ancient semi-natural woodland left in Lancashire scattered over 388 separate sites. This represents about 0.9% of the land area of the County. Since 1900 about 15% of this woodland has been lost. Unless action is taken, there is strong evidence that much of this remaining woodland will either be lost or more probably become of greatly diminished wildlife value in the foreseeable future. The problem is widespread degradation and neglect. Little management of woodland for its wildlife importance takes place in the County. Much of the woodland is under great pressure from farm stock grazing the woodlands, damaging ground flora and preventing natural regeneration of the trees. The management of these woods whether or not timber production is the main objective should follow the Forestry Commission's guidelines for the management of broadleaved woodland. The importance of small and remnant ancient woodland needs to be recognised as the NCC register of Ancient Woodland excludes areas under 2 hectares. (4.9 acres). Only 11 % of the County's ancient woodland is given protection for its wildlife value by SSSI designation.
- *Limestone Pavements:* These are rare habitats nationally with 45% of the area covered by pavements having been damaged or destroyed by quarrying activities. Only 3% of the pavements that are left remain undamaged. The group of limestone pavements at Gaitbarrows in Lancashire are considered by the Nature Conservancy Council to be the finest

examples of this formation in the UK and is one of the County's two National Nature Reserves. The pavements at Warton Crag SSSI are also of national importance. By no means are all the pavements in Lancashire protected as SSSI and many are still under immediate threat. This threat comes in the form of extraction for garden rockery stone. While a lucrative operation, it can in no way be justified as mineral extraction for strategic reasons.

- *Mosslands (Lowland Raised Mires):* At least 95% of the lowland peat mosses existing in Lancashire in 1948 have been lost. This has mainly been the result of reclamation for agriculture, peat extraction, repeated burning or afforestation. At present only Winmarleigh Moss, an SSSI covering 60 hectares (148 acres), survives in anything like its original condition. Other fragments do still survive, for example at nearby Cockerham Moss and also in the Skelmersdale area. While these sites have been much modified by drainage and peat cutting, they are still of considerable conservation value, particularly as this is now such a rare habitat type in Lancashire. White Moss SSSI, Ribble Valley 10.3 ha. (25.4 acres) is the best surviving example of a basin mire and largest surviving example of an actively growing sphagnum bog in Lancashire. Most of these remaining sites have little or no protection. One or two are identified in Local Plans, however, there is a need for a County-wide policy of both protection and positive management in respect of this special habitat type. As well as their wildlife importance mosslands and lowland raised mires are also important for their archaeological significance.
- *Moorlands:* The loss nationally of upland grasslands, heaths and blanket bogs has been 30% between 1930 and 1980. It is expected that similar rates of loss will apply to Lancashire's important heather moorland. The main reasons for this loss are overgrazing, indiscriminate moor burning, afforestation and the abandonment of grouse moors. While the County's largest area of heather moorland in the Forest of Bowland is designated as a SSSI, this protection alone is unlikely to prevent further loss or more importantly reverse the trend. Recent grant changes now allow for the management of heather moorland. There has also been a resumption of traditional heather management in some areas of Bowland. The NCC has recently made some progress towards securing a management agreement to reduce sheep numbers in parts of the SSSI and it hoped other management agreements will be secured in the future. Management agreements, however, are not seen as the most economic and effective way of pursuing a more ecologically sensitive management of the uplands.
- *Rivers:* Riverine habitats on major rivers and small streams are very important for wildlife in the wider countryside. In this context the river and stream banks are of particular importance. There are thousands of miles of river and stream bank in Lancashire representing a vast wildlife resource. Rivers provide habitats for fish, aquatic invertebrates, otters and other riverine mammals, bankside vegetation, and related ornithological interest. Many species, for example kingfishers and dippers, are wholly dependent upon "territories" of riverine habitat. The main issue relating to the County's rivers is the high level of pollution which is widespread in the south of the County and which diminishes their capacity for carrying a potentially vast range of plant and animal species. Riverbank management and recreational activity also have significant influences on the capacity of stretches of river for sustaining wildlife communities.

For Post-Industrial Habitats:

- Many areas of the County, sites including quarries, drained reservoirs, disused railways and certain types of industrial tips, have been colonised naturally by a wide range of plants and animal communities. In some cases, this colonisation has taken place over many decades. Particularly in the case of communities of very long standing, these sites represent a very important wildlife resource. Some of these sites are amongst the best habitat types in the

County. There is a need to both recognise their importance in the context of pressure for development or redevelopment and to make adequate arrangements for managing particularly rare habitats.

- At the same time, it must be remembered that many of these post-industrial habitats are in a natural state of evolution and that with time the current interest of a site will change.
- Reservoirs represent an important class of post-industrial habitats, particularly, in a County with only two remaining natural lakes; at Hawes Water, Silverdale and Marton Mere, Blackpool. Lancashire has a large number of artificial reservoirs linked both to water catchment and traditional Lancashire manufacturing industries. Many of these reservoirs are significant both in landscape terms and in relation to their wildlife interest, particularly birds. About 100 of these artificial reservoirs are large enough to fall within the scope of the Reservoirs Act 1975, which imposes strict maintenance responsibilities on owners. Some of these reservoirs are no longer required for their original purposes, and the cheapest option in such cases is often drainage involving significant landscape change and loss of habitat. There is a need to address ways in which reservoir owners can be assisted to keep important reservoirs in water.

For Protection and Management:

- There is a widespread threat to the County's most precious wildlife resources. The semi-natural habitats referred to are irreplaceable, as their plant and animal communities have developed over hundreds of years. While habitats for wildlife can be created and be of value they can never be a complete substitute for the remaining semi-natural communities.
- There is a need for two-pronged action in respect of these assets, firstly greater protection and secondly appropriate management of the resources.
- Statutory protection for sites is provided by SSSI designation. The need to conserve non-statutory sites is recognised by the Lancashire Structure Plan Policy 72; Nature Conservation, and non-statutory sites highlighted in Local Plans.
- In addition to conservation through designation, is sympathetic management is required by working with landowners both through the Wildlife and Countryside Act, for SSSIs and, for non-statutory sites, by seeing management agreements with landowners. Opportunities should also be taken for site purchase and leasing, in appropriate circumstances, where sites become available.
- The principle of damage to sites by absent or inappropriate management applies in different ways to most semi-natural habitats.

For Species Protection:

- Lancashire is home to a number of species which are rare or threatened in Great Britain as a whole. Whilst the protection of such species is primarily dependent on the conservation of their habitats, some of these species appear to have particularly critical habitat requirements which are not fully understood. A few seem also to be under threat from factors not directly related to habitat loss. More needs to be known about the status and precise habitat needs of these rare species in Lancashire; whether they are declining, if so, why and what can be done to secure their future survival.

Strategy D - Identification and Protection proposes a range of initiatives to hopefully stem the loss of Lancashire's living heritage:

- A schedule of County Heritage Sites will be set up by the County Council in the following categories: Landscape, Biological, Geological and Archaeological; e.g. "Landscape Heritage Sites", "Biological Heritage Sites", etc.

- The intention is that such sites should be afforded a high protection status. While such sites will be non-statutory and be viewed of lesser status by the government compared to SSSIs, the importance of these sites is their contribution to the heritage of Lancashire and should be recognised when local decisions are taken.
- The sites listed will be graded as being of importance in a 'County' or 'District' context respectively. The precise criteria for inclusion within the list will be determined in consultation with the District Councils, Nature Conservancy Council, Countryside Commission, LTNC and the Lancaster University Archaeological Unit.
- Such sites will include:
  i) All semi-natural habitats in Lancashire of regional importance.
  ii) The best examples of all semi-natural habitat types remaining in Lancashire.
  iii) Other sites which have developed rare plant and animal communities of regional importance.
  iv) Landscape and geological features of county importance.
  v) Landscape heritage sites of county importance.
- District Councils will be encouraged to give protection to County Heritage Sites through their Local Plans and development control practices.
- The County Council will give due weight to the protection of County Heritage Sites when exercising its development control function in respect of its own developments and in respect of minerals and waste disposal applications.
- Where appropriate, owners of County Heritage Sites will be informed of the site's identification and the reasons for the site's importance. Advice will be given on methods of management that will enhance and sustain these sites and on operations and practices likely to damage such sites. Priority needs to be given to semi-natural habitats under immediate threat. In this respect grasslands, mosslands and wetlands are seen as a priority.
- The County Council will encourage the conservation of SSSI's and County Heritage Sites through:
  a) Designation of Local Nature Reserves (LNRs) under Section 21 of the National Parks and Access to the Countryside Act. District Councils will also be encouraged to designate LNRs.
  b) Entering into management agreements with landowners.
  c) Tree Preservation Orders of woodland sites.
  c) Land acquisition by both local authorities and the voluntary sector.
  d) Limestone Pavement Orders under the 1981 Wildlife and Countryside Act will be made for all limestone pavements which are SSSIs and County Heritage Sites.
  e) Promoting detailed Phase II and III habitat surveys of County Heritage Sites, particularly those under threat.
  f) A detailed survey of relict lowland mossland and appropriate measures pursued wherever possible to secure their long-term conservation.
- The main grant aid and licensing agencies will be asked to take account of County Heritage Sites and inappropriate operations affecting them, in the allocation of grant aid and the granting of licenses for works on such sites.
- Appropriate measures, such as raising awareness, site protection, land purchase, management agreements etc., will be taken to promote the protection and conservation of rare and threatened species in Lancashire, with particular reference to the following species protected under the various schedules of the Wildlife and Countryside Act 1981 and occurring within Lancashire:
  Birds: Bittern, Barn Owl, Bearded Tit, Crossbill, Hen Harrier, Kingfisher, Little Ringed Plover, Merlin, Peregrine, Corncrake, Spotted Crake, Goshawk, Quail, Marsh Harrier.
  Mammals: Bats (all species), Badger, Dormouse, Otter, Red Squirrel.

Amphibians and reptiles: Grass Snake, Great Created Newt, Natterjack Toad, Slow Worm, Viviparous Lizard, Adder.
Invertebrates: Crayfish, Duke of Burgundy, High Brown Fritillary, Pearl Bordered Fritillary, Large Heath, Northern Brown Argus, White Letter Hairstreak, Small Blue.

- The preparation of a 'Red Data Book' for Lancashire, listing rare and threatened species in the context of Lancashire, will be explored together with appropriate measures for their conservation as above.
- The County Council will explore with the Nature Conservancy Council, Lancashire Trust for Nature Conservation and all other interested bodies including existing biological recording centres, the best means of compiling a central register of flora and fauna for the County.
- Detailed surveys of all reservoirs in Lancashire covered by the provision of the Reservoirs Act 1975, will be undertaken to identify those of particular importance in relation to the landscape and wildlife of the County. Means of providing financial assistance to owners to facilitate remedial works, in cases where important reservoirs are under threat due to the liabilities of the Act, will be explored.

For Other Man-Made and Urban Landscapes:

- The open land areas of our towns and urban areas present possibly more opportunities for landscape improvement and environmental enhancement than they present environmental problems because large areas of open land in urban areas are owned, controlled and managed by local authorities and other public bodies. Such land takes the form of urban parks; school and college grounds; general public open space, road verges, land aroμnd public buildings, hospitals and other institutions. Likewise, country parks, picnic sites and highway verges in rural areas are land resources under public control.
- The vast majority of this type of land is grassland mown with varying degrees of intensity. There are thousands of acres of such land maintained at public expense with no other purpose than to sustain a neat grassland sward: Much of this land offers great potential for diversification to create landscapes that are of far more widespread environmental benefit than neat lawns. This land offers the potential for the creation of wildlife habitats to replace in part those being lost in the agricultural landscapes.
- Such grassland areas could be diversified as species - rich grassland to compensate for losses of wildflower meadows in rural areas. Other areas could be planted with native tree and shrub species forming small areas of urban woodland. Rural road verges in particular have great potential as a major wildlife resource due to their reservoirs of native plant species. Sometimes, however, the mowing regimes are incompatible with flowering and seed production cycles of plant species concerned.
- There are also such areas in private ownership where habitat enhancement should be encouraged. A particularly good example in this respect are golf courses where considerable scope exists for habitat enhancement through sympathetic management.
- The processes of diversification of this land can lead to an unkempt appearance if careful design and maintenance is not built into the process. Done well, however, such processes lead to more diverse landscapes which are richer in wildlife, visually more pleasing and often less costly to maintain than existing regularly mown grasslands. The Strategy proposes a number of measures, therefore, for landscape diversification of publicly owned and maintained land. It would be desirable for County and District Councils to review their own landholdings and management programmes in this context.
- There is a need to identify networks of urban greenspace which provide not only landscape structures and wildlife corridors, but also a system of recreation spaces for the people living in the urban areas. This would enable a structured approach to the planning and management of open land in urban areas and in the urban fringe.

- The primary function of such networks would not only be to provide habitats for wildlife but also to provide places where people can experience, enjoy and care for nature. In providing for people in this way, valuable wildlife habitats and interesting living landscapes will automatically follow. The importance of people cannot be overstressed. If wildlife, its care and protection becomes commonplace in towns, protecting and safeguarding the valuable landscapes and habitats in the wider countryside becomes far easier.
- These greenspace networks should include not only formal open spaces and managed landscapes, but also river valleys, canals, woodlands, pieces of neglected and waste land which can form wildlife refuges, road verges, railway corridors, church yards and all other open urban land which can provide either habitat for wildlife, areas for recreation or space for planting and other landscape renewal works. Wherever possible these greenspace networks should provide links to the urban fringe and surrounding countryside to provide both a wildlife and recreational bridge between town and country.

Strategy E - Urban Greenspace Networks proposes a number of initiatives for the creation and development of such networks:

- District Councils will be encouraged to define map-based Networks of Urban Greenspace linking together parks, formal open spaces, managed landscapes, neglected land, river valleys, canals, railways, road corridors and other open urban areas which can provide habitat for wildlife, areas for recreation, or space for planting and habitat creation.
- Within Greenspace Networks the County Council will work with the District Council, local community and private sector in targeting resources on environmental enhancement and habitat management.
- District Councils will be encouraged to diversify their land management operations, particularly parks and managed open spaces, to create landscapes capable of supporting a greater diversity of wildlife and creating greater visual diversity.
- The County Council will target the Greenspace Networks as priority areas for landscape diversification in respect of the management of its own land.

Strategy F applies to County Council Land.

For Derelict Land:

- Whilst the worst manifestations of dereliction in Lancashire have been removed, the County still has the third highest incidence of derelict land of any County in England and Wales.
- The largest category of derelict land (40%) relates to excavations and tips relating to former mineral workings. In many cases they occur in upland areas and are either out of sight, are starting to revegetate naturally or have become a longstanding and accepted part of the landscape.
- Many derelict sites, due to their lack of disturbance over many years, have or are developing interesting wildlife communities and have the potential for becoming environmental assets. A few man-made sites are of interest because of their high diversity of species or the rare species of wildlife they now support. The archaeological importance of some derelict sites also needs to be recognised.
- At a time when many natural habitats are being lost in Lancashire, derelict land offers an opportunity for new wildlife habitats to be established and for such sites to be enjoyed by the public.
- What is proposed in this Strategy is that for all derelict land, other than that capable of development after uses, the primary after use should be wildlife habitat creation and

compatible public access. Given such a criteria, the potential for treating large acreages of derelict land at minimum cost is great.

Strategy G - Derelict Land Reclamation puts forward the following proposals:

- In urban areas community involvement in the development, treatment and management of derelict and despoiled sites will be promoted.
- As the emphasis of reclamation activity changes in favour of nature conservation the balance of the land reclamation staff within the County Planning Department will be adjusted to provide the skills in landscape, ecology and landscape management that will be required. This will be achieved by further training of existing staff and redesignating posts as they become vacant.
- For non-development sites, nature conservation and compatible recreation after uses should be pursued as the first objective for all derelict sites. Features of archaeological importance on derelict sites will be protected.
- Low cost treatments and management approaches for nature conservation will be developed for most derelict sites and increasing use will be made of the Small Clearance Grant scheme to treat these sites.

For Increasing Public Awareness, the role of the Voluntary Sector and Community Involvement:

- Under Section 25 of the Wildlife and Countryside Act 1981, local authorities have a duty to bring to the attention of the public and of school children those parts of the Act relating to species protection. This function is reiterated and expanded to include the importance of conservation generally in the 1987 DoE circular on Nature Conservation. Opportunities to carry out this function exist in terms of the County Council's recreational and environmental programmes, its land management functions, as well as through the Education Service and in cooperation with voluntary bodies.
- Increasing public awareness in all aspects of the County's landscape heritage and wildlife is seen as vital to the success of the Strategy. Community involvement, not just of local residents but the whole community including landowners, business, commerce and the public services is seen as the most effective way in developing that awareness.
- There are opportunities to build upon and develop the relationships between field study centres, schools and nature reserves. Educational projects can contribute directly to data which serves a practical purpose in the County environment. This applies at all levels of the education system from primary schools to colleges of higher education and universities. There are opportunities under the National Curriculum for creating new relationships between schools and areas of wildlife and landscape significance in their locality, and linking community initiatives with local education objectives.
- Lancashire College of Agriculture and Horticulture is particularly well-placed to develop the Strategy's initiatives on many fronts in terms of the College's curriculum, specialist expertise and practical implementation.
- The role of the voluntary sector in implementing environmental initiatives in the County has grown significantly in the 1980s. There is also a great deal of interest in environmental work amongst local communities and Parish Councils.
- The Strategy aims to involve all active voluntary organisations and to foster community action in the implementation of the Strategy.
- The voluntary sector conservation organisations complement the environmental activities of local authorities. The voluntary organisations have the ability to bring private and other public sector resources into the County. In recent years significant extra resources have been attracted to Lancashire for environmental works through the activity of the voluntary sector in many fields. With respect to the areas covered by the Strategy, the Lancashire

Trust for Nature Conservation, BTCV, Groundwork Trusts and the Woodland Trust have had significant success in attracting sponsorship and grants for their environmental work.

- Of even greater long-term value is the increased awareness and community involvement generated by the voluntary organisations.
- One problem facing the active and well organised voluntary groups is the funding of fulltime staff who are the catalysts and key organisers of voluntary activity. During the period of the Community Programme many of these key workers posts were established and increased activity built up using Community Programme staff. With the replacement of the Community Programme with the Employment Training Scheme such arrangements are no longer possible and the voluntary sector has recently faced significant financial hardship in trying to fund the posts of key organisers.
- It will be important to ensure that adequate support is given to the key staff in these organisations if the aims and objectives of the Strategy are to be met. An increase in the support for core costs would enable significant increase in their level of activity.

For Community Involvement:

- Involving local communities in the management of sites for landscape and nature conservation will be an important element of the Strategy. Involving local communities in site management has the benefit of providing both resources on the ground and of raising the issue of environmental management amongst the wider public. The achievement of these objectives, will, however require a staff input to generate, advise and encourage community involvement.
- Community involvement is not the sole responsibility of the voluntary sector. Local authorities have a very important role to play in developing community involvement in landscape management. Generating community involvement will require local authorities to adopt a new approach towards the issues of "ownership" and control of land. A key factor will be developing the confidence, amongst local communities, that they can have a definite influence on what happens to a particular piece of land or resource. Projects involving the community immediately raise expectations within that community and these must be recognised in advance and provision made for meeting and facilitating those expectations. The concept of community involvement also presents considerable challenges to professionals and specialist environmentalists who often have preconceived solutions and ideas of best practice. Such views can be seriously challenged once a community's aspirations are expressed. Community projects should not, therefore, be pursued unless there is a willingness in any particular circumstance to respond to the wishes of that community.
- As with the need for staff with skills in landscape, ecology and landscape management, community involvement requires staff in both the public and voluntary sector with skills specific to this area of work.
- The issues relating to increasing awareness, the role of the voluntary sector and community involvement bring sharply into focus the need for genuine partnership between local authorities, voluntary organisations, local people, landowners and the private sector. The implementation of this ambitious Strategy cannot be met in any way by the County Council or District Councils acting alone; what is needed is the pooling of the resources each sector has to offer. Developing genuine and effective partnerships will be a challenge in itself, but without them the impact of the measures proposed in the Strategy will be greatly diminished.

Strategy H- Environmental Education, Partnership and Community Involvement puts forward the following proposals:

- The implementation of each of the Strategy's objectives will be accompanied by appropriate educational and publicity material explaining the importance of the measures being undertaken and what the community as a whole can do to further the Strategy's objectives. Environmental education is seen as applying to the whole community not just the general public of all ages but business, industry and the public institutions.
- The involvement of school children in practical nature conservation projects and management is seen as an important element in environmental education.
- S.25 of the Wildlife and Countryside Act 1981 also requires local authorities to publicise the species protection laws and orders of the Act, with particular reference to school children. Practical involvement in surveying, designing, managing and constructing wildlife habitats is an ideal way of promoting the Act in its wider context. The Education Department and local schools have a vital role to play in developing this aspect of the Strategy.
- Community and voluntary groups are seen as being major partners with the public sector in the implementation of the Strategy. Support and encouragement will be given to the establishment and development of community groups set up for the purpose of carrying out practical environmental works. Parish Councils are also seen as an important base for the development of such initiatives.
- A County Landscape and Wildlife Group will be set up to bring together the local authorities, statutory agencies and voluntary sector conservation organisations, to organise and co-ordinate action in the implementation of the Strategy.
- Universities and Colleges of Higher Education will be encouraged to play an important role in the implementation of the Strategy. The Lancashire College of Agriculture and Horticulture in particular will be closely involved in the development of initiatives across the whole range of the Strategy's proposals.
- Partnership between local authorities, the voluntary sector, local people, landowners and the private sector is seen as the fundamental basis upon which the Strategy will be implemented. Such partnerships will be pursued whenever possible and the fostering of such partnerships will be seen as a priority in the context of resource allocation.
- The County Council will aim to support the core funding of major County-wide conservation organisations who play an active role in the practical implementation of the Strategy on the ground. The intention will be to support at least one key full-time organiser for such organisations.
- Production of an annual compendium of environmental action by local authorities, the voluntary and private sectors will be pursued.

Part 3 – Implementation

Resources

- The rate at which the Strategy can be implemented will be dependent upon the available resources at any particular time and the participation rate of the District Councils, voluntary and private sectors.
- Many of the proposals in the Strategy, particularly in relation to the County Council's own land management practices can be implemented without the need for additional resources. What is required in these instances is a use of existing revenue budgets for maintenance in alternative ways.
- The County Council's capital and revenue programmes for environmental works shall be redirected, much being possible at existing levels of expenditure. The impact of the Strategy will be far greater, however, if additional resources can be found. In this respect it is hoped that the Strategy will attract additional grant aid from the Countryside Commission, Nature Conservancy Council and the Department of the Environment and private sector.

- Resources will always be limited and it is accepted that the Strategy is ambitious. In this context, however, the Strategy sets a target to be strived for and a commitment to make progress.
- The Strategy will be reviewed after 5 years in the light of new information, changed circumstances and performance.
- Priority for Action in the first five years of the Strategy will be to commence the implementation of the following Strategy's objectives:

Strategy A - Landscape Enhancement and Conservation

- Promotion of agricultural and forestry practices beneficial to nature conservation.
- Four Landscape Renewal Pilot Schemes will be developed. Two will coincide with the initial Countryside Recreation Strategy CMAs (Countryside Management Areas) and two others will be identified from areas suffering significant landscape decline.
- The areas chosen will depend upon the interest shown in participation by District Councils and voluntary groups in particular localities. The precise location of the selected areas will be agreed with MAFF and the District Councils concerned.
- Pond and hedgerow campaigns subject to success in obtaining sponsorship.
- One-stop telephone advice link.
- Habitat creation from major engineering operations. Target projects being mineral extraction and major road proposals.

Strategy B -Trees and Woodlands

- Maintain the existing areas of woodland within the County.
- Promoting and assisting stock proofing of woodland under threat from livestock.
- Encouraging management of broadleaved woodlands.
- Discouraging the coniferisation of broadleaved woodland.
- Promote the planting of new woodlands.
- Promote an increase in grant take up for woodland management.
- Develop the role of voluntary organisations in woodland management.
- Support community management of woodlands.
- County Council new planting programmes.
- Woodland Planting Campaign subject to success in gaining sponsorship.
- Diversification of County Council woodlands.

Strategy C -The Historic Landscape

- Information database.
- Check landscape renewal proposals against the Sites and Monuments Register (SMR).

Strategy D - Identification and Protection

- Completion of Phase 1, Wildlife Habitat Survey.
- Prepare schedule of County Heritage Sites.
- District Council Action on SSSIs and County Heritage Sites identification.
- Development Control function with respect to County Heritage Sites.
- Priority action to sustain grasslands, mosslands and wetlands under immediate threat.
- Limestone Pavement Orders, Tree Preservation Orders and relic lowland mossland survey, and detailed surveys of County Heritage Sites under threat.
- Forestry Commission, MAFF, NRA, Countryside Commission and NCC action on County Heritage Sites.
- Species Protection.

- Red Data Book.
- Central register of flora and fauna.
- Reservoirs survey and assistance.

Strategy E - Urban Greenspace Network

- District Councils will be encouraged to define Networks of Urban Greenspace.
- Targeting resources on environmental enhancement and habitat management.
- Landscape diversification of County Council land in Greenspace Networks.

Strategy F - County Council Land

- Review of County Council land management practices.
- Wildlife Gardens and Nature Reserves in school grounds.
- Minimising the use of herbicides and pesticides.
- Review of the use of peat-based products.
- Developing mowing regimes for highway verges sympathetic to wildlife diversification.
- Good conservation practices shall be implemented wherever appropriate as part of good estate management of the County Agricultural Estate.
- Management of woodlands, country parks and picnic sites for nature conservation.
- Interdepartmental Conservation Management Committee.
- Staff training.

Strategy G - Derelict Land

- Pursuit of nature conservation after uses for non-development reclamation sites.
- Development of low-cost treatments and management approaches to the reclamation of sites for nature conservation. Protection of archaeological features.
- Community involvement in the development, treatment and management of derelict sites.
- Training of land reclamation staff to provide appropriate new skills and recruitment of staff with specialist skills.

Strategy H - Environmental Education and Community Involvement

- Environmental education to accompany Strategy implementation.
- Involvement of school children in practical nature conservation projects.
- Support for community groups.
- County Landscape and Wildlife Group.
- Involvement of Lancashire College of Agriculture and Horticulture in the implementation of the Strategy.
- Pursuit of partnership between local authorities, the voluntary sector, local people, landowners and the private sector.
- Financial support of voluntary conservation organisations involved in the Strategy's implementation.

Appendix 1 contained the Lancashire Structure Plan Policies that were relevant to the Strategy, but the Lancashire Structure Plan 1986-1996 was superseded by the Lancashire Structure Plan 1991-2006, The Replacement Joint Lancashire Structure Plan 2001-2016 and more recently by Lancashire 2050 a Strategic Framework for Lancashire. Hence the policies in Appendix 1 are not included here.

Appendix 3. Policies in Burnley's Local Plan 2018.

Policy NE1: Biodiversity and Ecological Networks:

1) All development proposals should, as appropriate to their nature and scale, seek opportunities to maintain and actively enhance biodiversity in order to provide net gains where possible.

2) Development proposals which are likely to have a significant effect on a European Site (SAC/SPA)106 (either individually or in combination with other plans and projects) should be subject to an Appropriate Assessment. Development that is considered to adversely affect the integrity of a European Site will not be permitted.

3) Development proposals will not be permitted where there is likely to be an adverse effect on sites of national importance for biodiversity and/or geology. In exceptional circumstances, development proposals may be considered acceptable where the benefits of the development clearly outweigh both the impacts that the development is likely to have on the defining features of the site and the broader impacts on the national network of that designation. Where adverse effects are unavoidable, these should be minimised and mitigated against, and where this cannot be achieved, compensated for.

4) Development proposals will not normally be permitted where there is likely to be an adverse effect on sites identified as being of local or regional importance for biodiversity and/or geology unless the benefits of the development clearly outweigh the impacts that the development is likely to have on the key ecological features of the site and the wider Ecological Network. Where an adverse effect is likely, applications should be accompanied by a detailed ecological assessment from suitably qualified or experienced persons. Where adverse effects are unavoidable these should be minimised and mitigated against, and where this cannot be achieved, compensated for.

5) Where sites are known or likely to house Protected Species, Priority Species and Priority Habitats, surveys should be carried out by suitably qualified or experienced persons to establish the presence, extent and density of these species and habitats before planning applications are determined and appropriate measures should be taken to safeguard these habitats and species before any development commences.

6) For Protected and Priority Species, the first preference is to avoid disturbance, the second to provide suitable inter-connecting new habitats for these species within the development site. If this is not feasible, suitable alternative habitats should be provided such that there is no net loss of biodiversity.

7) For Priority Habitats, where practicable, areas of Priority Habitat should be retained, enhanced or created within the development site, or, suitable alternative habitat created elsewhere. If this is not feasible, contributions towards the cost of habitat creation or improvement elsewhere may be required. Where for reasons of viability none of the above solutions are possible, the benefits of the development should clearly outweigh the loss of the habitat concerned.

8) Where development may adversely affect the effective functioning or connectivity of Ecological Networks defined on the Policies Map, in addition to meeting any of the above listed policy requirements, schemes should:

a) Where practicable, retain and enhance existing landscape and natural features (e.g. trees, hedges, river banks, watercourses, water bodies and important habitats) in accordance with Policies SP6 and NE2; and
b) Ensure an alternative corridor can be provided to ensure equivalent connectivity is maintained.

Policy NE2: Protected Open Space:

1) Development will not be permitted within the Protected Open Spaces shown on the Policies Map except where the proposals are for appropriate recreational, community and nature conservation uses and where any building and structures would not undermine the fundamental purpose and nature of the site as open space.

2) Protected Open Spaces should be maintained and enhanced for the recreational, amenity, biodiversity or other benefits they provide and as an important component of Burnley's green infrastructure network.

Policy NE4: Trees, Hedgerows and Woodland Protected trees, hedgerows and woodland

1) Development proposals that lead to a loss of protected trees, important hedgerows, prominent mature or aged or veteran trees or areas of mature or ancient woodland will not normally be permitted.

2) The Council will consider the making of Tree Preservation Orders where trees of moderate and high quality which have a life expectancy of at least 10 years and are of visual amenity value may be affected by future development or have been recognised as having public value.

3) Works to protected trees will only be granted consent where these: a) Would not adversely affect the appearance of the tree and the contribution it makes to the visual amenity of the locality; or b) Would improve the health and/or amenity value of the tree.

4) The felling of protected trees will only be allowed where:
   a) The tree is demonstrated to the Council's satisfaction to be in poor health and/or to have lost its intrinsic visual amenity value; or
   b) The tree is causing demonstrable harm/damage to the structural integrity of a building or structure, (evidenced by a structural and arboricultural report prepared by appropriately qualified consultant(s)), and the harm cannot be remedied by other reasonable means.

5) Where the felling of protected trees is allowed, replacement planting will normally be required. Trees and hedgerows within development sites.

6) Development proposals should provide for the protection and integration of other existing trees and hedgerows for their wildlife, landscape and/or amenity value. Where trees or hedgerows will be lost due to new development and this is considered acceptable on balance, the Council may require developers to replant trees of appropriate species on site where it is practicable to do so; or off site where it is not. The extent of replanting will not necessarily be a 1:1 ratio but will reflect the age, number and size of trees or length of hedgerows to be lost and the environment and likely survival rate for replacement trees. Where development proposals would affect or be affected by trees or established woodland on or adjacent to the development site, the Council may expect planning applications to be accompanied by:

a) An arboricultural survey prepared by a suitably qualified and experienced person in accordance with BS: 5837 (2012) 'Trees in Relation to Design, Demolition and Construction' and any subsequent revisions.
b) A landscaping scheme which clearly shows adequate spacing between trees and buildings, taking into account the existing and future size of trees, both above and below ground.

Appendix 4. Policies and Actions in Burnley's Landscape and Wildlife Strategy 1995.

General Landscape and Wildlife Policies:

Site Protection and Designation:

G1 The Council will protect sites statutorily designated as S.S.S.I. and L.N.R., locally designated sites, S.B.I. and S.O.I., County Heritage Site, or R.I.G.S. and other wildlife or geological features which the Council regards as requiring protection on landscape and conservation grounds. Considerable weight will be attached to matters of landscape and wildlife importance where such sites may be adversely affected by a development proposal.

G2 The Council will, in all its actions, take account of the legislative framework for conservation and the requirements to safeguard flora, fauna and their habitats and will honour its international obligations as set down in agreements with other countries.

G3 The Council will continue to monitor and evaluate land in the Borough with landscape and nature conservation value and will designate, or afford protection to, such sites as may be appropriate.

G4 The Council will establish a register of the flora and fauna of the Borough, supplemented by a programme of photographic monitoring of sites, in order to record and provide evidence of site changes and the effects of different management regimes, and will review the possibility of updating the Phase 1 Survey on a five-yearly basis.

GS Where designated or other sites of landscape or wildlife value cross the Borough boundary, the Council will work with the adjoining authorities to secure the protection and conservation of such sites.

For Development Proposals and Land Management:

G6 When proposals are made to carry out development either on or close to designated or other sites of wildlife value, the Council will require the submission of a detailed evaluation of the proposals's impact upon wildlife, together with a statement outlining the measures to be taken for the site's protection before, during and following the completion of works. Whilst it is the Council's understanding that the creation of new habitats cannot fully compensate for the loss of existing habitat, where minded to approve, the Council will seek to ensure that disturbance is kept to a minimum, ensure that the rescue and relocation of species, where feasible, and ensure that equivalent habitats are provided elsewhere.
Additionally. such proposals must be accompanied by a fully specified landscape scheme using native species.

G7 The Council will carefully consider the impact of mineral extraction, alternative energy proposals, waste disposal and large-scale civil engineering proposals on the landscape and wildlife resource. Where the responsible authority is minded to approve the application, assuming that all other planning criteria are met, the Council will require the submission of detailed restoration plans prior to the commencement of work, which retain or replace existing natural features, as far as possible, reflecting the area's landscape character, and enhances the Borough's wildlife resources.

G8 The Council will promote and encourage the reduction of existing levels of air, land and water pollution and will resist development proposals likely to harm identified sites of wildlife value through increased air, land or water pollution.

G9 The Council will, when considering development proposals for the alteration or conversion of buildings, particularly barns, require the applicant to demonstrate special measures for the protection of barn owls and bats where appropriate.

G10 The Council will use Article 4 Directions, where appropriate, to control development and ensure the protection of sites of particular landscape and nature conservation value which are considered under threat.

G11 The Council will seek to strengthen and provide links between Wildlife Corridors in the Borough through its own improvement schemes, in the consideration of development proposals within or in close proximity to a Corridor, by additional planting and by sympathetic provision of open space as appropriate.

G12 The Council will, in its own development proposals and working practices, take full account of the existing and potential landscape and wildlife value of sites. It will, wherever possible, protect and accommodate existing features of value and create new habitats for the expansion of wildlife in the Borough and will seek to control the spread on non-indigenous species such as Japanese Knotweed.

G13 The Council, in its role as landowner in carrying out management and disposal of land, will seek to ensure that land is managed sympathetically with the interests of landscape and nature conservation and that special features are protected, such as hedges, trees and important habitats, including buildings which provide nesting sites for protected birds and roosting sites for bats.

G14 The Council will require the use of appropriate native species in both its own landscape work and in development proposals, and account will be taken of scale, design and diversity in planting schemes. In considering planning applications for new development proposals, the Council will seek to achieve layouts and landscaping sympathetic to wildlife interests.

The Council will enter into Section 106 Agreements with private developers to secure landscape and wildlife protection and enhancement in appropriate circumstances.

Moorland and Moorland Fringe Policies

M1 The Council will seek to protect the character of moorland and moorland fringe areas defined on the Proposals Map and will encourage measures which regenerate moorland vegetation and conserve their underlying structure. Blanket afforestation and stripping of peat deposits will be strongly discouraged.

M2 The Council is mindful of the special landscapes of the moorland area, its value in international terms for its breeding bird community, the contribution made to the setting of the South Pennines and the Site of Special Scientific Interest. Where development proposals are submitted, the Local Planning Authority will consult widely with English Nature, the Countryside Commission and wildlife organisations.

M3 The Council will discourage the improvement of marginal grasslands within the moorland area which might erode the landscape character and wildlife value of important habitats.

M4 The Council is aware of potential conflicts of use between a growing demand for recreation provision, wildlife conservation, and the requirements of upland hill farming, and will endeavour to resolve these through negotiation, liaison and management agreement with landowners, users and advisory bodies to protect the wildlife resource and improve controlled public access and interpretational facilities.

M5 The Council will encourage the retention of traditional structures and buildings within the moorland area and will require the use of sympathetic design, scale and materials where alterations and development are proposed.

M6 The Council will encourage the retention and repair of traditional dry-stone walls, in particular where these occur on prominent roadside locations and alongside well-used recreational routes and rights of way.

M7 The Council will discourage visual saturation by prominent, man-made elements, including pylons, telecommunication masts, wire and post fencing, wind turbines, access roads and unsympathetic waymarking.

M8 The Council will discourage tree planting above 305 metres above sea level (1,000 feet) and will ensure that tree planting within the moorland doughs is sympathetic in scale, location, species and design.

M9 The Council will protect features of archaeological importance, such as crosses, cairn circles, tumuli and standing stones, found within the moorland area.

M10 The Council will encourage farming practices which maintain and enhance important landscape features and wildlife habitats, including woodlands, unimproved grassland and wetland.

M11 The Council will encourage the enhancement of roadside verges, lay-bys and parking facilities by the sympathetic use of planting, signing, surfacing, means of enclosure and litter control.

M12 The Council will continue to liaise and work with North West Water and to support the work of the Worsthorne Moor Management Plan Working Group to ensure the maximum protection and enhancement of the wildlife resource, both on the moor and in all landholdings of North West Water. A number of Wind Turbine Power Generation policies are relevant to the moorland area and these are given in Appendix 3, together with two suggested amendments arising from consultation on the Landscape and Wildlife Strategy.

Agricultural Landscapes Policies:

A1 The Council will support the detailed survey of and protection of important grassland sites and will encourage sympathetic management proposals to secure their survival by liaison with farmers and other private landowners, by promoting management agreements and by seeking statutory protection, where appropriate.

A2 The Council will encourage the retention and maintenance of traditional structures, such as drystone walls, farms and agricultural buildings where they are appropriate in siting, design, scale and use of materials to the South Pennine landscape.

A3 The Council will encourage the establishment, restoration and management of woodland, hedgerows and hedgerow trees where appropriate.

A4 The Council will encourage traditional farming practices that support and conserve features of landscape and wildlife importance, such as hedgerows, woodland, hay meadows, marsh and unimproved grassland.

A5 The Council will support farm diversification schemes that are in keeping with traditional elements of the landscape and are of positive benefit to wildlife, subject to their conformity with existing Local Plan policies.

A6 The Council will attach considerable weight to the protection of the wildlife resource where development proposals may adversely affect important grassland habitats.

A7 The Council will support and encourage changes in agriculture which benefit landscape and nature conservation interests and encourage the use of Management Agreements.

A8 The Council will, where possible, support and encourage the marketing of low-grade broadleaves, especially for local use.

Urban Fringe Policies:

U1 The Council will, in all its actions, encourage improvement measures to reduce visual clutter and landscape degradation through development control, management agreements and landscape enhancement schemes.

U2 The Council will promote tree planting to screen unsightly development, industrial areas and to reclaim derelict land in the interests of landscape and habitat improvement, for recreational use and economic benefit.

U3 The Council will encourage the planting and restoration of traditional hedgerows and hedgerow trees by promoting available grant aid and encouraging management agreement initiatives.

U4 The Council will encourage the restoration and repair of traditional dry-stone walls.

U5 The Council will encourage traditional farming practices that support and conserve features of landscape and wildlife importance, such as hedgerows, woodland, hay meadows, marsh and unimproved grassland. ·

U6 The Council will ensure that any development, alteration or change of use includes design, scale, siting and materials sympathetic to the South Pennine landscape.

Urban Areas and Townscape Policies:

T1 The Council will identify a network of sites which define existing Wildlife Corridors and Links, where necessary in liaison with other local authorities, in order to protect and enhance the corridors and considerable weight will be attached to the maintenance of effective links where development proposals may adversely affect a wildlife corridor.

T2 The Council will, as a priority, examine the potential for declaring Local Nature Reserves to safeguard important and representative local habitats for nature conservation, educational purposes and for the enjoyment of wildlife by the public.

T3 The Council will review the maintenance regimes of its own landholdings and its competitive tendering contracts, to minimise the use of pesticides and herbicides, to adopt maintenance regimes sympathetic to wildlife, and to phase out the use of peat-based products.

T4 The Council will prepare Management Plans for all parks and open spaces in the Borough. These will incorporate management practices that will improve the ecological value and enhance the appearance of the landscape without interfering with existing uses or features. Whilst the creation of new habitats cannot compensate for the loss of semi-natural habitat, management policies will include:-

(a) Planting ornamental and native species or plants which provide food and shelter for wildlife.

(b) Altering grass management regimes where appropriate.

(c) Creating new habitats, for example, ponds, wildflower meadows and woodlands where opportunities arise.

(d) Recycling organic wastes such as leaves.

(e) Reducing, as far as possible, the use of pesticides.

T5 The Council will organise training courses for employees involved in management of land and design of environmental schemes to promote greater awareness of the reasons for nature conservation and the opportunities for promoting it in their work. Training will include:-

(a) Principles of Conservation Management: To provide client-side staff and contract supervisors with an appreciation for and basic understanding of the principles underlying conservation management of ponds, grasslands, woodlands etc.

(b) Practical Conservation Management Techniques: To provide training for contract supervisors and manual staff in the practical techniques of conservation management, for example, managing grassland, coppicing, thinning young woodland, hedge laying etc.

T6 The Council will provide simple- advice in the form of leaflets or exhibitions explaining how householders and businesses can encourage wildlife.

T7 The Council will investigate the preparation of Management Plans for the Commons within the Borough.

Woodland Policies:

W1 The Council will seek to protect, conserve and encourage appropriate management of Ancient Woodlands and considerable weight will be attached to their landscape and wildlife value where development proposals may affect their conservation.

W2 The Council will encourage woodland management and the participation of owners in management agreements with the Forestry Authority.

W3 The Council will implement a tree planting programme to create woodland as an important feature of the landscape, as a wildlife habitat and as an economic resource.

W4 The Council will promote and offer advice on the availability of grants from agencies such as the Forestry Authority, Countryside Commission and English Nature for the better management of and planting of trees and woodlands.

W5 The Council will identify opportunities for and encourage the planting of new woodland using mostly native species in appropriate locations on private and publicly-owned land which will be beneficial to the character, landscape and wildlife of the area, including derelict and under-used open space. Non-native species to this area, such as Sycamore, Beech, Scots Pine, Lodge Pole Pine and Japanese Larch, may be appropriate in some circumstances.

W6 The Council will investigate the potential for and seek support to carry out advance planting on sites involving major development proposals:

W7 The Council will seek to protect and enhance the remaining wooded cloughs in the area and will promote further tree planting in these areas for the benefit of the landscape, wildlife and rural economy of the Borough.

W8 The Council will discourage the planting of trees on sites identified as of existing wildlife and landscape value and archaeological sites shown on the Lancashire Sites and Monuments Record, where this would be harmful to the resource.

W9 The Council will support the continuance of the Tree Warden Scheme.

W10 The Council will continue to support the South Pennines Woodlands Officer, the work of the Canal and Countryside Project Officer (East), and the Lancashire Woodland Project.

W11 The Council will continue to use Tree Preservation Orders to protect trees of landscape, amenity and wildlife value and to encourage owners to enter into management agreements with the Forestry Authority, thereby ensuring protection and financial support.

W12 The Council will promote the planting of Community Woodland within the areas identified by the Strategic Plan to encourage the creation of woodland close to the urban area which allows public access.

Open Water and Wetland Policies:

01 The Council will continue to liaise and work with the National Rivers Authority where development is likely to affect a watercourse and where reclamation, enhancement and habitat creation schemes are proposed to ensure the maintenance and improvement of water quality and the aquatic habitat.

02 Further culverting for land gain purposes will be resisted as this will lead to a deterioration in the resource of the Borough.

03 The Council will seek the protection and restoration of existing ponds, their surrounds and wetlands, especially where they support a rich assemblage of animal or plant species.

04 In its own work and through liaison with the private and voluntary sectors, the Council will promote schemes which create, enhance or restore ponds, their surrounds and wetland habitats wherever possible.

Environmental Awareness Policies:

P1 The Council will attempt to ensure that the public has access to a wide distribution of diverse areas of nature conservation interest, except where wildlife is likely to be adversely affected by disturbance.

P2 The Council will seek to promote, through consultation with school teachers and governors, a programme for the creation of wildlife gardens in school grounds, which involves pupils in their design, creation and management.

P3 Input into classroom teaching will be provided by the Borough Council where relevant.

P4 The Council will promote and encourage community involvement in the environment by providing facilities and advice, particularly on grant availability, and will seek to raise awareness of and actively involve landowners, schools and voluntary groups in the care, enhancement and interpretation of the local wildlife resource.

P5 The Council, in encouraging the participation of the local community in nature conservation issues, will promote and support Neighbourhood Nature Areas, ‘Adopt-a-Woodland' Scheme, Pocket Parks and other forms of community action as appropriate.

P6 The Council will continue to support voluntary groups in their work for the maintenance and improvement of Burnley's natural heritage.

P7 The Council will support and encourage co-operative working with such groups as the Burnley Wildlife Partnership and the Burnley Wildlife Advisory Group in their efforts to safeguard Burnley's wildlife and landscape, in the identification and management of sites of wildlife value, monitoring, community projects and as consultees on development proposals which may affect wildlife.

P8 The Council will, in conjunction with specialist groups, provide relevant written information offering advice, interpretation and help with understanding areas of nature conservation interest and their location throughout the Borough.

P9 The Council will target information at particular groups/areas and will ensure that, where relevant, it is available in the main minority languages.

P10 The Council will continue to promote events and schemes to raise interest in environmental issues.

P11 The Council will support local community/voluntary groups who wish to initiate or take part in awareness raising events.

P12 The Council will support the WATCH Group, an environmental group for the under 16's, and encourage WATCH activities to educate and inform young people.

Appendix 5. Extracts from Lancashire Woodland Vision 2006-2015.

Vision and Objectives for the Moorland Plateaux (South Pennine Moors): To establish robust stewardship of existing woodlands and encourage the natural regeneration of upland oak woodland in valley heads and cloughs.

Opportunities for the Moorland Plateaux:

- Enhance existing semi-natural woodlands through active management.
- Encourage natural regeneration in valley heads through grazing restrictions and stock fencing.
- Increase upland oak woodland cloughs, a priority UK Biodiversity Action Plan (BAP) habitat.
- Enhance the biodiversity and nature conservation value of the moorland habitat mosaic.
- Make woodland connections with long distance ecological networks along cloughs to downstream river valleys.
- Contribute to catchment management and downstream flood control by planting along cloughs.
- Enhance the rights of way network as an outcome of the Countryside Rights of Way Act 2000 (CRoW Act 2000).
- Contribute and add value to the East Lancashire Regional Park.
- Less competition from other landuses raises potential to increase woodland cover in the moorlands.

Challenges for the Moorland Plateaux:

- Ensure that woodland planting and woodland regeneration do not adversely affect the distinctive ecological and historical assets of the moorland landscape.
- Ensure that woodland planting is at a scale and size that is appropriate to the open landscape character, avoiding extensive planting.
- Manage grazing levels to preserve the quality of existing woodlands and allow smallscale natural regeneration in valley heads and cloughs.
- Balance recreational demand and nature conservation interest within woodlands.
- Ensure that local land managers have the skills and support necessary to undertake effective woodland management activities.

Target Areas for New Woodland on the Moorland Plateaux:

- The Moorland Plateaux have low capacity for woodland uplift, although natural regeneration, particularly of upland oak species, should be encouraged in valley heads and cloughs.
- New native woodland planting should, on the whole, be avoided in favour of natural regeneration.
- Grazing exclusion in sheltered valleys and cloughs should be secured to allow for natural regeneration.
- Regeneration should be focused around existing woodlands so as to generate the greatest ecological and visual benefit.
- Linkages to local and long distance ecological networks should be made wherever possible, to ensure the future long-term ecological viability of the Moorland Plateaux woodlands.
- Woodland regeneration should not be encouraged where this will threaten other important habitats or the open character of the landscape, which is important for breeding birds.

Vision and Objectives for the Moorland Fringe (Trawden Fringe): To improve the texture and biodiversity interest of the Moorland Fringe by increasing woodland cover in the valleys and surrounding small farmsteads.

Opportunities for the Moorland Fringe:

- Enhance the characteristic diversity of the Moorland Fringe through small-scale woodland cluster planting with the dual purpose of enhancing ecological diversity.
- Improve the structure and condition of the existing woodland resource through active management.
- Emphasise the topography of the Moorland Fringe through strategically positioned woodland planting.
- Introduce riparian planting within valleys to deliver catchment management priorities for river valleys.
- Introduce small cluster planting to function as ecological stepping stones across the landscape without being visually obtrusive.
- Contribute and add value to the East Lancashire Regional Park.

Challenges for the Moorland Fringe:

- Ensure that new planting is sympathetic to local topography.
- Establish a soft transition to upland moorland by ensuring tree planting is part of a mixed planting with woodland edge species and dwarf shrub heath.
- Ensure that woodland creation does not damage important ecological and archaeological sites.
- Manage grazing to facilitate natural regeneration.
- Ensure that local land managers have the skills and support necessary to undertake effective woodland management activities.

Target Areas for New Woodland in the Moorland Fringe:

- The Moorland Fringe has medium capacity for uplift.
- Woodland should reflect the natural dynamics of the landscape, providing a transition from lowland to moorland via the inclusion of woodland edge and dwarf shrub heath vegetation extending up to the Moorland Plateaux.
- Natural regeneration should be encouraged wherever possible in favour of new planting. However, regeneration and creation activity should be focused on the valleys and small farm woodlands.
- Woodland expansion and creation in river valleys should make a valuable contribution to catchment management and flood attenuation, whilst small farm woodlands will form ecological stepping stones.
- Small-scale woodland should be favoured as blanket planting is inappropriate within this landscape.
- Care must be taken to protect sites of archaeological importance and existing sites of nature conservation value to ensure they are not adversely affected by woodland regeneration and creation.

Vision and Objectives for the Industrial Foothills & Valleys (6a Calder Valley): To develop a well-wooded, functional landscape in and around residential, commercial and industrial developments to improve the image of the area, provide opportunities for outdoor recreation for those who live and work in the area, and enhance environmental quality, particularly along transport corridors.

Opportunities in the Industrial Foothills & Valleys:

- Improve the quality of life for communities living in areas of multiple deprivation.
- Enhance the urban fringe landscape by bringing pockets of derelict, underused and neglected land back into positive use through woodland reclamation.
- Create striking gateway planting along key strategic transport corridors to improve the image of the area.
- Provide an attractive backdrop to urban settlement and give the impression of a well-wooded landscape.
- Contribute and add value to local regeneration initiatives.
- Harness resources arising from new development for woodland creation and management through planning obligations.
- Improve natural capital by strengthening the existing woodland resource through natural regeneration and management, and supplementing existing woodlands through extensive new planting.
- Reverse the fragmentation of woodlands by buffering and linking existing woodlands, particularly those of semi-natural origin.
- Visual containment of unsightly development.
- Use best practice case study examples.
- Improve and enhance accessibility to woodlands via woodland management and creation activities. Highlight the past market value of timber in fuelling the industrial revolution and the potential that timber has for the future e.g. wood fuel.

Challenges in the Industrial Foothills & Valleys:

- Balance the pressures of settlement expansion with the need to provide an integrated landscape and woodland resource for existing and future communities.
- Ensure that the quality and ecological integrity of existing woodlands is not compromised by increases in recreational use.
- Ensure that soft end use reclamation of derelict, underused and neglected land is balanced with competition for hard end use development opportunities in the urban fringe.
- Control damage from grey squirrel and deer grazing which requires educating the public as current public perceptions limit the scale of control.
- Promote woodland as a valuable tourism commodity in an area affected by blight.
- Secure commitment for the many different landowners as condition and accessibility of woodlands is variable and dependent on land ownership. Ensuring all woodlands provide highest environmental, social and economic benefit will be a long-term activity.
- There is a need to encourage long-term community stewardship of the existing woodland resource as many woodlands are under threat from vandalism, fly tipping and anti-social behaviour.

Target Areas for New Woodland in the Industrial Foothills & Valleys:

- The Industrial Foothills and Valleys have high capacity for woodland uplift.
- Woodland planting should be extensive and focused in urban fringe locations and along strategic transport corridors, particularly where there are opportunities to screen unsightly development.
- The Community Forestry model should be applied to this area to ensure that multi-functional woodlands deliver a wide range of public benefits.
- Ambitious gateway planting should be considered at strategic locations to provide distinctive statements of Lancashire's dynamism, using distinctive species and planting arrangements where this is appropriate.
- In particular, opportunities to reclaim derelict, underused and neglected land through woodland creation should be maximised.

- The existing woodland resource should be brought into active management to ensure that opportunities to improve local image are maximised.
- New woodland planting will not deliver significant benefit for some years, so it is important to harness the potential of existing resources to maximum effect at an early stage.

Vision for the Joint Urban Character Area: To ensure that all woodlands deliver maximum benefit to the quality of life of urban residents by shading and sheltering people and buildings, ameliorating the effects of transport and industrial emissions, providing wildlife habitat, especially for birds and invertebrates, complementing built form and providing an amenity resource.

Opportunities in the Joint Urban Character Area:

- To adapt to climate change by planting species tolerant to increases in temperature and storm events in order to protect human comfort, building integrity, and environmental quality.
- Bring all trees and woodlands into active management.
- Establish urban forests on derelict, underused and neglected land associated with industrial and urban fringe landscapes.
- Use urban woodlands as a vehicle for increasing community engagement and social cohesion, enhancing lifelong learning and skills development, and fostering neighbourhood pride.
- Improve outdoor recreation and amenity opportunities for local communities.
- Improve the image of Lancashire's towns and cities, particularly along strategic transport corridors and at prominent gateway locations.
- Increase biodiversity and ecological functionality by providing green wedges from the urban core to the open countryside.
- Use the planning system effectively to integrate existing and new woodlands and trees into development, ensuring that new development contributes to the Lancashire Woodland Vision.
- Introduce shelter planting to soften the hard edges of the built environment adjacent to open countryside.
- Exploit the social benefit of woodlands adjacent to the top 20% most deprived areas within the county.

Challenges in the Joint Urban Character Area:

- Compete for land with more economically competitive land uses.
- Protect woodlands from settlement expansion, particularly within the suburban landscape.
- Balance the introduction of trees into the urban framework with the requirements of utility infrastructure and highway standards.
- Ensure that public perceptions and ownership of trees are enhanced so that vandalism is reduced.
- Identify resources for the stewardship of new and established trees and woodlands.

Target Areas for New Woodland in the Joint Urban Character Area:

- The urban landscape has medium capacity for woodland uplift.
- Activity should be targeted at increasing woodland planting within the urban environment with a primary focus being placed on derelict, underused and neglected land, along strategic transport corridors and at prominent gateway locations.
- Community involvement should be an integral part of any planting scheme to facilitate social cohesion, raise awareness of the value of trees and woodlands, and to ensure the long-term stewardship of urban woodlands.

- Opportunities should be maximised to work with school children, community groups and difficult-to-reach members of the community.
- All urban woodlands should be accessible, with an emphasis on reaching the targets set by Forestry Commission and the Woodland Trust in 'Woods for People'.
- Woodland planting should be integrated into development as a means of increasing overall woodland cover, which rely on the effective integration of woodland development activities with the planning system.

Appendix 6. Extracts from the National Character Area (NCA) profiles 2013 and 2014.

NCA Profile: 35 Lancashire Valleys (NE 2013).

SEO 1: Conserve and manage the Lancashire Valleys' industrial heritage to safeguard the strong cultural identity and heritage of the textile industry with its distinctive sense of place and history, for example by:

- Conserving important geological exposures and providing interpretation, making links between the geology and the industries that relied on these resources.

SEO 2: Increase the resilience and significance of woodland and trees, and manage and expand existing tree cover to provide a range of benefits, including helping to assimilate new infrastructure; reconnecting fragmented habitats and landscape features; storing carbon; and providing fuel, wood products, shelter and recreational opportunities, for example by:

- Protecting, conserving and enhancing the mosaic and diversity of existing woodlands, especially ancient semi-natural woodland, and improve their connectivity.
- Bringing the area's small broadleaved woodlands, particularly on farms, into management, focusing on the visually important clough and ridgeside woodlands on the lower hillsides and the wet woodlands in the valley bottoms, and focusing on farm shelter plantings and copses that are distinctive to the industrial foothills and valleys.
- Planting new broadleaved woodlands, particularly on degraded farmland and vacant industrial land in the urban fringe, focusing on the visually important clough and ridge-side woodlands.
- Managing and restoring hedges and field boundary trees and connecting to existing fragmented and degraded habitats.
- Encouraging sustainable management of existing woodlands to produce surplus timber and biomass for local use – for example, for wood-fired boilers – while maintaining their biodiversity and landscape value, increasing resilience, and regulating soils and water.
- Ensuring that new woodland strengthens the local landscape and enhances biodiversity, providing recreational opportunities where possible.
- Creating new woodlands to assimilate urban development and to enhance rural character and tranquillity where appropriate.
- Promoting and marketing small-scale biomass production through planting on sites that are isolated by development and are not suitable for agriculture, spoil heaps or closed landfill sites.
- Supporting the aims of the North West Regional Forestry Framework and sub-regional strategies.

SEO 3: Manage and support the agricultural landscape through conserving, enhancing, linking and expanding the habitat network, and manage and plan for the associated potential impact of urban fringe development, intensive agriculture and climate change mitigation, for example by:

- Conserving, enhancing and expanding characteristic landscape and important ecological resources, such as species-rich, unimproved/semi-improved meadows and pastures and wetland meadows, including bringing nationally and locally designated habitats into, and maintaining, favourable condition.
- Managing land adjacent to isolated habitats to ensure that they are protected, expanded, buffered and linked to increase habitat connectivity and allow species movement, especially along rivers, the Leeds and Liverpool Canal, mill ponds and clough woodlands.
- Encouraging improved management of grassland and woodland through increased uptake of environmental incentive schemes to provide a farmed landscape of fields, well-managed

hedgerows, mosaics of grass and margins, and small woodlands to benefit species such as farmland birds.

- Managing pressures on remnant farmland adjoining urban areas so that the characteristic stone wall and hedgerow field boundaries, especially those adjacent to urban areas, lanes and important footpaths and viewpoints, are conserved and enhanced.
- Managing and extending permanent grassland, woodland, wetland and riparian habitats along watercourses, the Leeds and Liverpool Canal, cloughs and valley sides to capture sediment, increase holding capacity, slow down run-off and improve infiltration.
- Managing pastures at a sustainable level, to improve soil structure, increase soil carbon storage, aid water infiltration and slow down/reduce water run-off, and safeguard water and soil quality.
- Encouraging expansion of wetland habitats such as reedbeds, woodlands and wet grasslands along valley bottoms, to improve flood mitigation by intercepting and retaining water for longer.

SEO 4: Conserve and manage the distinction between small rural settlements and the densely urban areas and ensure that new development is sensitively designed to contribute to settlement character, reduce the impact of the urban fringe and provide well-designed green infrastructure to enhance recreation, biodiversity and water flow regulation, for example by:

- 'Designing in' green infrastructure principles with housing expansion, business park developments (associated with key road intersections), expansion of water treatment facilities and associated changes such as horsiculture.
- Providing new permissive access that links to open access land, long distance rights of way, country parks and other areas of greenspace.
- Protecting the nature conservation interest of vacant land from new development.
- Improving the urban-rural fringe through careful design and integration of green infrastructure with housing and industry, through linking new developments with the wider countryside and sustainably manage urban activities within agricultural areas.
- Improving, maintaining and expanding semi-natural habitats on farmland, such as meadows, pastures, wetlands and clough woodlands, which may increase the sense of tranquillity in the urban fringes, for example by planting new woodlands and shelter belts, and ensuring new developments are sensitively designed to reduce any visual and infrastructure impacts on rural areas and the urban fringe.
- Ensuring new woodland screens urban fringes to enhance rural character and tranquillity and contributes to recreational value by providing appropriate access to encourage public engagement with and enjoyment of nature.

The following Landscape opportunities in the NCA are also relevant to Hyndburn:

- Bring the area's small broadleaved woodlands, particularly on farms, into management, focusing on the visually-important clough and ridgeside woodlands on the lower hillsides and the wet woodlands in the valley bottoms. Also focus on farm shelter plantings and copses that are distinctive to the industrial foothills and valleys.
- Protect, manage and conserve ancient semi-natural woodlands to reduce grazing, maintain plant/herbs in pasture, and encourage natural regeneration of native species, especially those in cloughs.
- Protect, conserve and actively manage parkland landscapes including restoring links to associated Country houses and farmland, especially in the undulating lowland farmland.
- Conserve and manage wetland/riparian habitats along rivers, streams and the Leeds and Liverpool Canal to protect and support valuable wildlife.

- Create new small native broadleaved woodlands, to provide improved farm shelter, strengthen cloughs and valley side woodlands, enhance the landscape around towns and villages, restore former industrial land and provide a new recreational resource especially in the urban fringe.
- Protect, conserve and strengthen field boundaries both hedgerows and walls, focusing on livestock farms, and relatively intact and visually prominent field boundary patterns, such as those on the Millstone Grit ridge.
- Manage, restore and replant hedgerows and hedgerow trees using species typical of the area.
- Protect, conserve and manage traditional hay meadows and pastures to maintain the diversity of semi-natural grasslands, especially remnant flood plain and upland hay meadows.
- Encourage and support traditional agricultural practices to maintain and enhance species-rich meadows.

In terms of Biodiversity as an Ecosystem Service, the Analysis in NCA35 includes the following:

- Small isolated pockets of Habitats and species have been identified that are of local conservation importance and require action in order to conserve, manage and enhance them.
- Consideration should be given to surrounding areas to promote linking and expansion of habitats (and populations) to improve their biological condition through sensitive land management practices. This may help habitats and species to adapt to climate change, link habitats and allow species movement to strengthen populations to provide a more integrated approach. For example, this could include managing and restoring field margins; providing buffers along watercourses; planting new woodlands; creating linear wildlife corridors along rivers and canals, managing and extending green spaces within urban areas to improve connectivity.
- Lowland meadows are now rarely managed in a traditional way and are confined to the upland fringes where the steeper slopes and smaller field size have made improvement less worthwhile.
- Permanent pastures for livestock grazing also provide conditions for upland waders.
- The urban fringe location enables people to experience and enjoy biodiversity close to home at local nature reserves.

Opportunities for biodiversity as an ecosystem service in NCA35 include the following:

- Encourage improved management to bring nationally and locally designated habitats, into and maintain favourable condition.
- Seek opportunities to conserve, enhance and expand semi-natural habitats and post-industrial habitats.
- There are opportunities to manage the land adjacent to the isolated habitats to ensure that they are protected, expanded, buffered and linked to increase habitat connectivity and allow species movement especially along rivers, Leeds and Liverpool Canal, mill ponds and clough woodlands.
- Encourage opportunities to promote sustainable recreation, public understanding and education opportunities linked to biodiversity.
- Enhance the value of habitats for interpretation, education and visual amenity.
- Encourage improved management of grassland and woodland through increased uptake of environmental incentive schemes to provide a farmed landscape of fields, well-managed hedgerows, mosaics of grass and margins, and small woodlands to benefit species such as farmland birds.

- Seek to improve restoration of mineral / industrial sites, maintaining their soil quality and water flow to maximise their value to wildlife and biodiversity.
- Encourage opportunities to incorporate green infrastructure projects into new developments especially on the urban fringe to enhance sense of place, recreational and biodiversity value.

NCA Profile: 36 Southern Pennines (NE2014).

The Statements of Environmental Opportunity (SEO), Additional Opportunities, Landscape Opportunities, Analysis of Biodiversity as an Ecosystem Service, and Opportunities for Biodiversity as an Ecosystem Service in NCA Profile: 36 that are considered relevant to Worsthorne-with-Hurstwood are presented below:

SEO 1: Safeguard, manage and enhance the large areas of open, expansive moorland and the internationally important habitats and species they support, as well as protecting soils and water resources, for example by:

- Restoring and improving ecological links between moorland habitats (blanket bog, upland heathland, species-rich flushes and mires), for example through introducing responsive grazing regimes, to improve the condition of the vegetation and achieve a strong and resilient ecological network.
- Restoring degraded areas of blanket bog to active sphagnum-dominated bog to promote peat formation.
- Enhancing the full range of moorland habitats to ensure that they support the internationally important assemblage of bird species, allowing the population size to be maintained and, where possible, increased.
- Retaining water or managing run-off by re-wetting moorland (for example through blocking grips, but in ways that do not adversely impact on archaeological evidence or access) to bring blanket bog back into favourable ecological and hydrological condition.
- Restoring degraded heathland communities dominated by mat grass to dwarf shrub communities, introducing sustainable grazing regimes to avoid poaching of soils and aid water infiltration, and ensuring that burning and cutting programmes will promote structural and biological diversity as well as avoiding loss of peaty soils through erosion or oxidation.
- Preventing and controlling wildfires through a collaborative fire control plan.
- Discouraging works or development that reduce the sense of remoteness and ‘wildness’ of the moorlands.

SEO 2: Manage and enhance the pastoral character of the moorland fringes, lower hills and valleys, with their mosaics of pastures and meadows and their strong field patterns defined by drystone walls, to improve ecological networks and strengthen landscape character, for example by:

- Maintaining pastoral land uses and encouraging more extensive and appropriate grazing management.
- Enhancing moorland fringe habitats, to increase species rich grasslands and scrub with varied hydrology, to enhance plant diversity and in particular to provide feeding and nesting to aid the recovery of the twite population.
- Encouraging the expansion and creation of a more ecologically connected patchwork of grasslands – unimproved pastures, rushy pastures, species-rich pastures and meadows – in particular on the moorland fringes and higher shelves of land.

- Introducing flexibility into land management, including less intensive grazing regimes, to encourage a more diverse range of habitats and vegetation types and structure to develop, thus enabling habitats to respond to climate change effects and allowing species to move into more suitable locations.
- Retaining and restoring historic patterns of drystone walls on the moorland fringes, on upland pastures, around farmsteads and settlements, and along tracks.

SEO 3: Protect the comprehensive range of historic landscape features for their cultural value and the contribution they make to local distinctiveness and sense of identity, for example by:

- Ensuring that any restoration or conversion of structures such as mills and bridges takes into account the presence of bats, especially Daubenton's bat, which take advantage of breeding and roosting sites close to water.

SEO 4: Improve opportunities for the enjoyment and understanding of the landscape and to experience a sense of escapism and inspiration, while also conserving the qualities of the landscape and its valuable historic and wildlife features, for example by:

- Managing visitor pressures and ensuring that paths are adequately surfaced and maintained to prevent undue erosion.
- Managing and controlling wildfires, fly-tipping and illegal off-roading through a coordinated approach.
- Providing interpretation of the many geodiversity features of the area, and the role that geology plays in the historic development and land uses in the area.

Additional opportunity 1. Protect the strong relationship between landscape and the underlying geology, the land uses it supports and its significance to the cultural identity of the area, for example by:

- Maintaining key views of landform and geological features, and using semi-natural landcover to enhance and support biodiversity but not obscure landform features, such as open moorland with rock outcrops.

Additional opportunity 2. Manage existing woodlands and extend broadleaved woodland cover in appropriate locations to help deliver climate change mitigation, improve water quality and supply, improve biodiversity, provide biomass, and strengthen landscape character, for example by:

- Restoring, expanding and linking existing fragmented areas of broadleaved woodland and wood pasture, especially on valley sides.
- Ensuring that existing woodlands are actively managed to improve carbon sequestration, enhance biodiversity and potentially provide sources of woodfuel, as well as providing new access opportunities where appropriate.
- Encouraging creation of upland woodland and wood pasture on valley sides, in cloughs and gills, to stabilise banks, reduce erosion, capture carbon and increase wildlife value.
- Ensuring that new woodlands are created in suitable locations and include native species that are suitable for the physical location, thus contributing to the biodiversity resource, making the habitats more resilient to climate change, avoiding damage to historic features and strengthening landscape character.

The following Landscape opportunities in the NCA are also relevant to the parish:

- Protect open moorland and extensive views.
- Protect contrasts between enclosed, wooded valleys and open moorland and upland pastures.
- Protect clear links between land use and underlying geology.

- Protect the mosaics of moorland habitats.
- Protect and manage existing woodland.
- Manage existing species-rich pastures and meadows.
- Manage moorland habitats, to enhance biodiversity and create and extend mosaics of habitats to support key species of international significance.
- Manage the restoration of drystone walling.
- Manage access to protect sensitive sites, avoid impacting on sense of remoteness and provide quiet enjoyment and recreation opportunities for a wide range of users.
- Plan improvements in moorland management to restore peat, create habitat mosaics and enhance biodiversity.
- Plan for a significant increase in woodland on steep valley sides, up cloughs and on suitable sites in areas of upland pastures and moorland fringes.
- Plan an increase in variation in management of upland pastures, to achieve diversity of fields (including textures, colours, biodiversity and other aspects that contribute to landscape character) along with more suitable feeding and nesting sites for Twite and breeding waders, and introduce management regimes to restore and support species-rich pastures / meadows.

In terms of Biodiversity and Geodiversity as Ecosystem Services, the Analysis in NCA36 includes the following:

- Improving the biological condition of the designated resource is likely to involve land management activities that will improve other services.
- This will be achieved principally through an increase in coverage of semi-natural habitat, restoration of natural hydrological systems and sustainable grazing regimes.
- These in turn have the potential to help increase regulation services such as regulating of water quality and soil erosion, while also contributing to sense of place.
- Designated sites provide important and accessible sections allowing the interpretation, understanding and continued research into the geodiversity of the NCA. Exposure of these features also makes a positive contribution toward sense of place and sense of history.

Opportunities for biodiversity and geodiversity as ecosystem services in NCA36 include the following:

- Improve the area of designated in habitat in favourable biological condition.
- Seek opportunities to provide access to and interpretation of the rich geodiversity of the NCA.

Appendix 7. Fauna recorded in/adjacent to Worsthorne-with-Hurstwood.

Taxon group	Scientific name	Common name	WCA	S41	NR/S	BoCC	BHS	LINNS
amphibian	Bufo bufo	Common Toad	1	1			1	
amphibian	Lissotriton helveticus	Palmate Newt	1				1	
amphibian	Lissotriton vulgaris	Smooth Newt	1				1	
amphibian	Rana temporaria	Common Frog	1				1	
amphibian	Triturus cristatus	Great Crested Newt	1	1			1	
			5	**2**	**0**	**0**	**5**	**0**
bird	Acanthis cabaret	Lesser Redpoll		1			1	
bird	Accipiter gentilis	Goshawk	1				1	
bird	Accipiter nisus	Sparrowhawk						
bird	Acrocephalus schoenobaenus	Sedge Warbler						
bird	Actitis hypoleucos	Common Sandpiper						
bird	Aegithalos caudatus	Long-tailed Tit						
bird	Aix galericulata	Mandarin Duck						1
bird	Alauda arvensis	Skylark		1		1	1	
bird	Alcedo atthis	Kingfisher	1					
bird	Alectoris rufa	Red-legged Partridge						1
bird	Anas platyrhynchos	Mallard						
bird	Anser anser f. domesticus	Domestic Goose						1
bird	Anthus pratensis	Meadow Pipit						
bird	Anthus trivialis	Tree Pipit		1		1	1	
bird	Apus apus	Swift						
bird	Ardea cinerea	Grey Heron					1	
bird	Asio flammeus	Short-eared Owl					1	
bird	Asio otus	Long-eared Owl					1	
bird	Aythya fuligula	Tufted Duck						

bird	Buteo buteo	Buzzard						
bird	Carduelis carduelis	Goldfinch						
bird	Charadrius dubius	Little Ringed Plover	1					
bird	Cinclus cinclus	Dipper						
bird	Cinclus cinclus gularis	British Dipper						
bird	Circus cyaneus	Hen Harrier	1	1		1	1	
bird	Columba livia	Rock Dove						
bird	Columba palumbus	Woodpigeon						
bird	Corvus corax	Raven						
bird	Corvus corone	Carrion Crow						
bird	Corvus frugilegus	Rook						
bird	Cuculus canorus	Cuckoo		1		1		
bird	Curruca communis	Whitethroat						
bird	Cyanistes caeruleus	Blue Tit						
bird	Cygnus olor	Mute Swan						
bird	Delichon urbicum	House Martin					1	
bird	Dendrocopos major	Great Spotted Woodpecker						
bird	Emberiza schoeniclus	Reed Bunting		1				
bird	Erithacus rubecula	Robin						
bird	Falco columbarius	Merlin	1			1	1	1
bird	Falco peregrinus	Peregrine	1				1	
bird	Falco tinnunculus	Kestrel						
bird	Fringilla coelebs	Chaffinch						
bird	Fulica atra	Coot						
bird	Gallinago gallinago	Snipe					1	
bird	Gallinula chloropus	Moorhen						
bird	Garrulus glandarius	Jay						
bird	Haematopus ostralegus	Oystercatcher						
bird	Hirundo rustica	Swallow					1	

bird	Lagopus lagopus	Red Grouse						
bird	Linaria cannabina	Linnet				1	1	
bird	Linaria flavirostris	Twite				1	1	
bird	Locustella naevia	Grasshopper Warbler		1		1	1	
bird	Lyrurus tetrix	Black Grouse				1	1	
bird	Mergus merganser	Goosander						
bird	Milvus milvus	Red Kite	1					
bird	Motacilla alba	Pied Wagtail						
bird	Motacilla cinerea	Grey Wagtail				1	1	
bird	Muscicapa striata	Spotted Flycatcher		1		1	1	
bird	Numenius arquata	Curlew		1		1	1	
bird	Oenanthe oenanthe	Wheatear						
bird	Parus major	Great Tit						
bird	Passer domesticus	House Sparrow		1		1	1	
bird	Perdix perdix	Grey Partridge		1		1	1	
bird	Periparus ater	Coal Tit						
bird	Phasianus colchicus	Pheasant						1
bird	Phoenicurus phoenicurus	Redstart						
bird	Phylloscopus collybita	Chiffchaff						
bird	Phylloscopus sibilatrix	Wood Warbler		1		1	1	
bird	Phylloscopus trochilus	Willow Warbler						
bird	Pica pica	Magpie						
bird	Picus viridis	Green Woodpecker						
bird	Pluvialis apricaria	Golden Plover					1	
bird	Podiceps cristatus	Great Crested Grebe						
bird	Prunella modularis	Dunnock						
bird	Pyrrhula pyrrhula	Bullfinch						
bird	Regulus regulus	Goldcrest						
bird	Riparia riparia	Sand Martin					1	

bird	Saxicola rubetra	Whinchat				1	1	
bird	Saxicola rubicola	Stonechat					1	
bird	Scolopax rusticola	Woodcock				1		
bird	Sitta europaea	Nuthatch						
bird	Streptopelia decaocto	Collared Dove						
bird	Strix aluco	Tawny Owl						
bird	Sturnus vulgaris	Starling				1	1	
bird	Sylvia atricapilla	Blackcap						
bird	Sylvia borin	Garden Warbler						
bird	Tachybaptus ruficollis	Little Grebe						
bird	Tringa totanus	Redshank						
bird	Troglodytes troglodytes	Wren						
bird	Turdus iliacus	Redwing	1			1		
bird	Turdus merula	Blackbird						
bird	Turdus philomelos	Song Thrush				1	1	
bird	Turdus pilaris	Fieldfare	1			1		
bird	Turdus torquatus	Ring Ouzel		1		1	1	
bird	Turdus viscivorus	Mistle Thrush				1	1	
bird	Tyto alba	Barn Owl	1					
bird	Vanellus vanellus	Lapwing		1		1	1	
			10	**14**	**0**	**24**	**32**	**5**
fish	Abramis brama	Common Bream						
fish	Anguilla anguilla	European Eel		1				
fish	Barbatula barbatula	Stone Loach						
fish	Cottus gobio	Bullhead					1	
fish	Cyprinus carpio	Common Carp						1
fish	Esox lucius	Pike						
fish	Gasterosteus aculeatus	Three-spined Stickleback						
fish	Gobio gobio	Gudgeon						

fish	Gymnocephalus cernuus	Ruffe						
fish	Perca fluviatilis	Perch						
fish	Phoxinus phoxinus	Minnow						
fish	Rutilus rutilus	Roach						
fish	Salmo trutta	Brown/Sea Trout		1				
fish	Scardinius erythrophthalmus	Rudd						
fish	Tinca tinca	Tench						
			0	**2**	**0**	**0**	**1**	**1**
annelid	Eiseniella tetraedra	Square-Tailed Worm						
annelid	Erpobdella octoculata	A leech						
annelid	Helobdella stagnalis	n/a						
annelid	Theromyzon tessulatum	duck leech						
crustacean	Asellus (Asellus) aquaticus	Water hog lice/slaters						
crustacean	Crangonyx pseudogracilis/floridanus	n/a						1
crustacean	Gammarus pulex/fossarum agg.	n/a						
flatworm	Polycelis sp.	n/a						
harvestman	Leiobunum rotundum	n/a						
harvestman	Opilio canestrinii	n/a						
harvestman	Paroligolophus agrestis	n/a						
insect - alderfly	Sialis sp.	An Alder Fly						
insect - beetle	Adalia bipunctata	2-spot Ladybird						
insect - beetle	Agabus bipustulatus	n/a						
insect - beetle	Agabus guttatus	n/a						
insect - beetle	Agabus sturmii	n/a						
insect - beetle	Agapanthia villosoviridescens	n/a						
insect - beetle	Agelastica alni	Alder Leaf Beetle			1			
insect - beetle	Agonum fuliginosum	n/a						
insect - beetle	Altica lythri	n/a						
insect - beetle	Amara lunicollis	n/a						

insect - beetle	Anacaena globulus	n/a						
insect - beetle	Anacaena lutescens	n/a						
insect - beetle	Anoplotrupes stercorosus	n/a						
insect - beetle	Athous haemorrhoidalis	n/a						
insect - beetle	Bembidion geniculatum	n/a			1			
insect - beetle	Bembidion lampros	n/a						
insect - beetle	Bradycellus ruficollis	n/a						
insect - beetle	Cantharis decipiens	n/a						
insect - beetle	Cantharis pellucida	n/a						
insect - beetle	Carabus nitens	n/a			1			
insect - beetle	Carabus problematicus	n/a						
insect - beetle	Carabus violaceus	Violet Ground Beetle						
insect - beetle	Cassida rubiginosa	Thistle Tortoise Beetle						
insect - beetle	Chilocorus renipustulatus	Kidney-spot Ladybird						
insect - beetle	Chrysolina herbacea	Mint Leaf Beetle						
insect - beetle	Cicindela campestris	Green Tiger Beetle						
insect - beetle	Coccinella hieroglyphica	Hieroglyphic Ladybird						
insect - beetle	Coccinella septempunctata	7-spot Ladybird						
insect - beetle	Coelostoma orbiculare	n/a						
insect - beetle	Ctenicera cuprea	n/a						
insect - beetle	Curculionidae	Weevil						
insect - beetle	Cymbiodyta marginella	n/a						
insect - beetle	Denticollis linearis	n/a						
insect - beetle	Dytiscus sp.	n/a						
insect - beetle	Gastrophysa viridula	Green Dock Beetle						
insect - beetle	Geotrupes sp.	Dor Beetle						
insect - beetle	Grypus equiseti	Horsetail Weevil					1	
insect - beetle	Haliplus immaculatus	n/a						
insect - beetle	Haliplus ruficollis	n/a						

insect - beetle	Haliplus sibiricus	n/a						
insect - beetle	Halyzia sedecimguttata	Orange Ladybird						
insect - beetle	Harmonia axyridis	Harlequin Ladybird						1
insect - beetle	Harmonia quadripunctata	Cream-streaked Ladybird						
insect - beetle	Helophorus obscurus	n/a						
insect - beetle	Hydrobius fuscipes/rottenbergii/ subrotundus	n/a						
insect - beetle	Hydroporus angustatus	n/a						
insect - beetle	Hydroporus gyllenhalii	n/a						
insect - beetle	Hydroporus memnonius	n/a						
insect - beetle	Hydroporus palustris	n/a						
insect - beetle	Hydroporus pubescens	n/a						
insect - beetle	Hygrotus versicolor	n/a						
insect - beetle	Hyphydrus ovatus	n/a						
insect - beetle	Ilybius ater	n/a						
insect - beetle	Ilybius fuliginosus	n/a						
insect - beetle	Laccobius bipunctatus	n/a						
insect - beetle	Laccophilus minutus	n/a						
insect - beetle	Lagria hirta	n/a						
insect - beetle	Leistus fulvibarbis	n/a						
insect - beetle	Limodromus assimilis	n/a						
insect - beetle	Nebria salina	n/a						
insect - beetle	Nebrioporus elegans	n/a						
insect - beetle	Nicrophorus vespilloides	n/a						
insect - beetle	Noterus clavicornis	Larger Noterus						
insect - beetle	Noterus crassicornis	Smaller Noterus						
insect - beetle	Notiophilus aquaticus	n/a						
insect - beetle	Notiophilus biguttatus	n/a						
insect - beetle	Notiophilus palustris	n/a						

insect - beetle	Oreodytes davisii	n/a					1	
insect - beetle	Oreodytes sanmarkii	n/a						
insect - beetle	Otiorhynchus sulcatus	Vine Weevil						
insect - beetle	Paranchus albipes	n/a						
insect - beetle	Phaedon armoraciae	n/a						
insect - beetle	Phratora	n/a						
insect - beetle	Plagiosterna aenea	n/a						
insect - beetle	Platambus maculatus	n/a						
insect - beetle	Plateumaris discolor	n/a						
insect - beetle	Prasocuris marginella	n/a						
insect - beetle	Propylea quattuordecimpunctata	14-spot Ladybird						
insect - beetle	Psyllobora vigintiduopunctata	22-spot Ladybird						
insect - beetle	Pterostichus diligens	n/a						
insect - beetle	Pterostichus madidus	Black Clock						
insect - beetle	Pterostichus strenuus	n/a						
insect - beetle	Rhagium bifasciatum	n/a						
insect - beetle	Rhantus exsoletus	n/a						
insect - beetle	Scirtidae	n/a						
insect - beetle	Selatosomus aeneus	n/a						
insect - beetle	Sermylassa halensis	n/a						
insect - beetle	Timarcha goettingensis	Small Bloody-nosed Beetle						
insect - butterfly	Aglais io	Peacock						
insect - butterfly	Aglais urticae	Small Tortoiseshell						
insect - butterfly	Anthocharis cardamines	Orange-tip						
insect - butterfly	Aphantopus hyperantus	Ringlet						
insect - butterfly	Callophrys rubi	Green Hairstreak					1	
insect - butterfly	Celastrina argiolus	Holly Blue						
insect - butterfly	Coenonympha pamphilus	Small Heath		1				
insect - butterfly	Gonepteryx rhamni	Brimstone					1	

insect - butterfly	Lasiommata megera	Wall		1				
insect - butterfly	Lycaena phlaeas	Small Copper						
insect - butterfly	Maniola jurtina	Meadow Brown						
insect - butterfly	Nymphalis antiopa	Camberwell Beauty						
insect - butterfly	Ochlodes sylvanus	Large Skipper						
insect - butterfly	Pararge aegeria	Speckled Wood					1	
insect - butterfly	Pieris brassicae	Large White						
insect - butterfly	Pieris napi	Green-veined White						
insect - butterfly	Pieris rapae	Small White						
insect - butterfly	Polygonia c-album	Comma					1	
insect - butterfly	Polyommatus icarus	Common Blue						
insect - butterfly	Pyronia tithonus	Gatekeeper						
insect - butterfly	Satyrium w-album	White-letter Hairstreak	1	1			1	
insect - butterfly	Speyeria aglaja	Dark Green Fritillary					1	
insect - butterfly	Thymelicus sylvestris	Small Skipper						
insect - butterfly	Vanessa atalanta	Red Admiral						
insect - butterfly	Vanessa cardui	Painted Lady						
insect - caddis fly	Adicella reducta	n/a						
insect - caddis fly	Agapetus fuscipes	n/a						
insect - caddis fly	Anabolia nervosa	n/a						
insect - caddis fly	Apatania muliebris	n/a						
insect - caddis fly	Athripsodes aterrimus	n/a						
insect - caddis fly	Athripsodes bilineatus	n/a						
insect - caddis fly	Beraea maurus	n/a						
insect - caddis fly	Beraea pullata	n/a						
insect - caddis fly	Chaetopteryx villosa	n/a						
insect - caddis fly	Crunoecia irrorata	n/a						
insect - caddis fly	Drusus annulatus	n/a						
insect - caddis fly	Ecclisopteryx dalecarlica	n/a						

insect - caddis fly	Glossosoma boltoni	n/a						
insect - caddis fly	Halesus digitatus	n/a						
insect - caddis fly	Halesus radiatus	n/a						
insect - caddis fly	Hydropsyche angustipennis	n/a						
insect - caddis fly	Hydropsyche instabilis	n/a						
insect - caddis fly	Hydropsyche pellucidula	n/a						
insect - caddis fly	Hydropsyche saxonica	n/a			1			
insect - caddis fly	Hydropsyche siltalai	n/a						
insect - caddis fly	Limnephilus extricatus	n/a						
insect - caddis fly	Limnephilus flavicornis	n/a						
insect - caddis fly	Limnephilus lunatus	n/a						
insect - caddis fly	Limnephilus marmoratus	n/a						
insect - caddis fly	Melampophylax mucoreus	n/a						
insect - caddis fly	Micropterna sequax	n/a						
insect - caddis fly	Mystacides azurea	n/a						
insect - caddis fly	Mystacides longicornis	n/a						
insect - caddis fly	Odontocerum albicorne	n/a						
insect - caddis fly	Oligotricha striata	n/a			1			
insect - caddis fly	Philopotamus montanus	n/a						
insect - caddis fly	Plectrocnemia conspersa	n/a						
insect - caddis fly	Plectrocnemia geniculata	n/a						
insect - caddis fly	Polycentropus flavomaculatus	n/a						
insect - caddis fly	Potamophylax cingulatus	n/a						
insect - caddis fly	Potamophylax latipennis	n/a						
insect - caddis fly	Potamophylax rotundipennis	n/a			1			
insect - caddis fly	Psychomyia pusilla	n/a						
insect - caddis fly	Rhyacophila dorsalis	n/a						
insect - caddis fly	Rhyacophila fasciata	n/a						
insect - caddis fly	Rhyacophila obliterata	n/a						

insect - caddis fly	Sericostoma personatum	n/a						
insect - caddis fly	Silo nigricornis	n/a						
insect - caddis fly	Silo pallipes	n/a						
insect - caddis fly	Tinodes waeneri	n/a						
insect - caddis fly	Wormaldia occipitalis	n/a						
insect - caddis fly	Wormaldia subnigra	n/a			1			
insect - dragonfly	Aeshna cyanea	Southern Hawker						
insect - dragonfly	Aeshna grandis	Brown Hawker						
insect - dragonfly	Aeshna juncea	Common Hawker						
insect - dragonfly	Aeshna mixta	Migrant Hawker						
insect - dragonfly	Anax imperator	Emperor Dragonfly						
insect - dragonfly	Calopteryx splendens	Banded Demoiselle						
insect - dragonfly	Chalcolestes viridis	Willow Emerald Damselfly						
insect - dragonfly	Coenagrion puella	Azure Damselfly						
insect - dragonfly	Enallagma cyathigerum	Common Blue Damselfly						
insect - dragonfly	Erythromma viridulum	Small Red-eyed Damselfly						
insect - dragonfly	Ischnura elegans	Blue-tailed Damselfly						
insect - dragonfly	Lestes sponsa	Emerald Damselfly						
insect - dragonfly	Libellula depressa	Broad-bodied Chaser						
insect - dragonfly	Libellula quadrimaculata	Four-spotted Chaser						
insect - dragonfly	Orthetrum cancellatum	Black-tailed Skimmer						
insect - dragonfly	Pyrrhosoma nymphula	Large Red Damselfly						
insect - dragonfly	Sympetrum danae	Black Darter						
insect - dragonfly	Sympetrum fonscolombii	Red-veined Darter					1	
insect - dragonfly	Sympetrum sanguineum	Ruddy Darter					1	
insect - dragonfly	Sympetrum striolatum	Common Darter						
hymenopteran	Aglaostigma aucupariae	n/a						
hymenopteran	Aglaostigma fulvipes	n/a						
hymenopteran	Agrypon sp. H	n/a						

hymenopteran	Alomya sp.	n/a						
hymenopteran	Amblyteles armatorius	n/a						
hymenopteran	Ancistrocerus oviventris	n/a						
hymenopteran	Andrena bicolor	Gwynne's Mining Bee						
hymenopteran	Andrena cineraria	Ashy Mining Bee						
hymenopteran	Andrena clarkella	Clarke's Mining Bee						
hymenopteran	Andrena fucata	Painted Mining Bee						
hymenopteran	Andrena fulva	Tawny Mining Bee						
hymenopteran	Andrena haemorrhoa	Orange-tailed Mining Bee						
hymenopteran	Andrena humilis	Buff-tailed Mining Bee					1	
hymenopteran	Andrena lapponica	Bilberry Mining Bee						
hymenopteran	Andrena nigroaenea	Buffish Mining Bee						
hymenopteran	Andrena scotica	Chocolate Mining Bee						
hymenopteran	Andrena tarsata	Tormentil Mining Bee		1				
hymenopteran	Andrena wilkella	Wilke's Mining Bee						
hymenopteran	Andricus quercuscalicis	Knopper Gall						
hymenopteran	Anomaloninae sp.	n/a						
hymenopteran	Anthophora furcata	Fork-tailed Flower Bee						
hymenopteran	Aptesis nigrocincta	n/a						
hymenopteran	Argogorytes mystaceus	Field Digger Wasp						
hymenopteran	Bombus barbutellus	Barbut's Cuckoo Bee						
hymenopteran	Bombus cryptarum	Cryptic Bumblebee						
hymenopteran	Bombus hortorum	Small Garden Bumble Bee						
hymenopteran	Bombus hypnorum	Tree Bumblebee						
hymenopteran	Bombus jonellus	Heath Bumblebee						
hymenopteran	Bombus lapidarius	Red-tailed Bumblebee						
hymenopteran	Bombus lucorum	White-tailed Bumblebee						
hymenopteran	Bombus magnus	Northern White-tailed Bumblebee						
hymenopteran	Bombus monticola	Bilberry Bumblebee						

hymenopteran	Bombus pascuorum	Common Carder Bee						
hymenopteran	Bombus pratorum	Early Bumblebee						
hymenopteran	Bombus rupestris	Hill Cuckoo Bee						
hymenopteran	Bombus sylvestris	Forest Cuckoo Bee						
hymenopteran	Bombus terrestris	Buff-tailed Bumblebee						
hymenopteran	Bombus vestalis	Vestal Cuckoo Bee						
hymenopteran	Chasmias motatorius	n/a						
hymenopteran	Chrysididae sp.	n/a						
hymenopteran	Colletes daviesanus	Davies' Colletes						
hymenopteran	Colletes succinctus	Heather (Girdled) Colletes						
hymenopteran	Cosmoconus sp.	n/a						
hymenopteran	Crossocerus quadrimaculatus	4-Spotted Digger Wasp						
hymenopteran	Diphyus longigena	n/a						
hymenopteran	Dipogon sp.	n/a						
hymenopteran	Dolichovespula norwegica	Norwegian Wasp						
hymenopteran	Dolichovespula saxonica	n/a						
hymenopteran	Dolichovespula sylvestris	Tree Wasp						
hymenopteran	Dusona sp.	n/a						
hymenopteran	Dyspetes luteomarginatus	n/a						
hymenopteran	Ectemnius continuus	n/a						
hymenopteran	Epeolus sp.	n/a						
hymenopteran	Epeolus cruciger	Red-thighed Epeolus						
hymenopteran	Euryproctini sp.	n/a i						
hymenopteran	Formica sp.	Wood Ant						
hymenopteran	Glypta sp.	n/a						
hymenopteran	Halictus rubicundus	Yellow-legged Furrow Bee						
hymenopteran	Hepiopelmus melanogaster	n/a						
hymenopteran	Hepiopelmus variegatorius	n/a						
hymenopteran	Ichneumon cessator	n/a						

hymenopteran	Ichneumon formosus	n/a						
hymenopteran	Ichneumon sarcitorius	n/a						
hymenopteran	Ichneumon stramentor	n/a						
hymenopteran	Lasioglossum calceatum	Common Furrow Bee						
hymenopteran	Lissonota lineolaris	n/a						
hymenopteran	Megachile centuncularis	Patchwork Leafcutter Bee						
hymenopteran	Megachile versicolor	Brown-footed Leafcutter Bee						
hymenopteran	Myrmica lobicornis	n/a						
hymenopteran	Neuroterus quercusbaccarum f. agamic	Common Spangle Causer						
hymenopteran	Nomada fabriciana	Fabricius' Nomad Bee						
hymenopteran	Nomada flava/panzeri	Nomada flava/panzeri						
hymenopteran	Nomada flavoguttata	Little Nomad Bee						
hymenopteran	Nomada glabella	n/a						
hymenopteran	Nomada goodeniana	Gooden's Nomad Bee						
hymenopteran	Nomada lathburiana	Lathbury's Nomad Bee					1	
hymenopteran	Nomada leucophthalma	Early Nomad Bee						
hymenopteran	Nomada marshamella	Marsham's Nomad Bee						
hymenopteran	Nomada ruficornis	Fork-jawed Nomad Bee						
hymenopteran	Nomada rufipes	Black-horned Nomad Bee						
hymenopteran	Nomada zonata	Variable Nomad Bee						
hymenopteran	Odynerus spinipes	Spiny Mason Wasp						
hymenopteran	Osmia bicornis	Red Mason Bee						
hymenopteran	Phymatocera aterrima	Solomon's-seal Sawfly						
hymenopteran	Priocnemis sp.	n/a						
hymenopteran	Sphecodes gibbus	Dark-winged Blood Bee						
hymenopteran	Sussaba flavipes	n/a						
hymenopteran	Tenthredo arcuata/brevicornis/ notha/schaefferi	n/a						

hymenopteran	Tenthredo atra	n/a						
hymenopteran	Tenthredo livida	n/a						
hymenopteran	Tenthredo maculata	n/a						
hymenopteran	Tenthredo mesomela	n/a						
hymenopteran	Tenthredo olivacea	n/a						
hymenopteran	Tenthredo scrophulariae	n/a						
hymenopteran	Tenthredopsis sp.	n/a						
hymenopteran	Tryphon sp.	n/a						
hymenopteran	Vespa crabro	Hornet						
hymenopteran	Vespula germanica	German Wasp						
hymenopteran	Vespula rufa	Red Wasp						
hymenopteran	Vespula vulgaris	Common Wasp						
hymenopteran	Virgichneumon maculicauda	n/a						
insect - mayfly	Baetis niger	Southern Iron Blue		1				
insect - mayfly	Cloeon dipterum	n/a						
insect - mayfly	Ecdyonurus	n/a						
insect - mayfly	Electrogena lateralis	n/a						
insect - mayfly	Ephemera danica	Green Drake						
insect - moth	Abraxas grossulariata	Magpie Moth						
insect - moth	Abrostola tripartita	Spectacle						
insect - moth	Abrostola triplasia	Dark Spectacle						
insect - moth	Acasis viretata	Yellow-barred Brindle						
insect - moth	Achlya flavicornis	Yellow Horned						
insect - moth	Acronicta alni	Alder Moth						
insect - moth	Acronicta leporina	Miller						
insect - moth	Acronicta menyanthidis	Light Knot Grass						
insect - moth	Acronicta psi	Grey Dagger		1				
insect - moth	Acronicta rumicis	Knot Grass		1				
insect - moth	Acronicta tridens	Dark Dagger						

insect - moth	Aethalura punctulata	Grey Birch						
insect - moth	Agriopis aurantiaria	Scarce Umber						
insect - moth	Agriopis marginaria	Dotted Border						
insect - moth	Agrius convolvuli	Convolvulus Hawk-moth						
insect - moth	Agrochola lychnidis	Beaded Chestnut		1				
insect - moth	Agrotis exclamationis	Heart & Dart						
insect - moth	Agrotis ipsilon	Dark Sword-grass						
insect - moth	Agrotis puta	Shuttle-shaped Dart						
insect - moth	Agrotis segetum	Turnip Moth						
insect - moth	Alcis repandata	Mottled Beauty						
insect - moth	Allophyes oxyacanthae	Green-brindled Crescent		1				
insect - moth	Alsophila aescularia	March Moth						
insect - moth	Amphipoea lucens	Large Ear						
insect - moth	Amphipoea oculea	Ear Moth		1				
insect - moth	Amphipyra berbera	Svensson's Copper Underwing						
insect - moth	Amphipyra pyramidea	Copper Underwing						
insect - moth	Amphipyra tragopoginis	Mouse Moth		1				
insect - moth	Anaplectoides prasina	Green Arches						
insect - moth	Anarta myrtilli	Beautiful Yellow Underwing						
insect - moth	Anarta trifolii	Nutmeg						
insect - moth	Anchoscelis litura	Brown-spot Pinion		1				
insect - moth	Anchoscelis lunosa	Lunar Underwing						
insect - moth	Anorthoa munda	Twin-spotted Quaker						
insect - moth	Anticlea derivata	Streamer						
insect - moth	Antitype chi	Grey Chi						
insect - moth	Apamea crenata	Clouded-bordered Brindle						
insect - moth	Apamea crenata ab. combusta	n/a						
insect - moth	Apamea furva	Confused						
insect - moth	Apamea lithoxylaea	Light Arches						

insect - moth	Apamea monoglypha	Dark Arches						
insect - moth	Apamea remissa	Dusky Brocade		1				
insect - moth	Apamea scolopacina	Slender Brindle						
insect - moth	Apamea sordens	Rustic Shoulder-knot						
insect - moth	Apamea unanimis	Small Clouded Brindle						
insect - moth	Aplocera plagiata	Treble-bar						
insect - moth	Aporophyla lueneburgensis	Northern Deep-brown Dart						
insect - moth	Aporophyla lutulenta	Deep-brown Dart		1				
insect - moth	Archiearis parthenias	Orange Underwing						
insect - moth	Atethmia centrago	Centre-barred Sallow		1				
insect - moth	Autographa bractea	Gold Spangle						
insect - moth	Autographa gamma	Silver Y						
insect - moth	Autographa jota	Plain Golden Y						
insect - moth	Autographa pulchrina	Beautiful Golden Y						
insect - moth	Axylia putris	Flame						
insect - moth	Biston betularia form carbonaria	Peppered Moth (dark)						
insect - moth	Brachylomia viminalis	Minor Shoulder-knot		1				
insect - moth	Bryophila domestica	Marbled Beauty						
insect - moth	Bryotropha affinis	Dark Groundling						
insect - moth	Bryotropha domestica	House Groundling						
insect - moth	Bupalus piniaria	Bordered White						
insect - moth	Cabera exanthemata	Common Wave						
insect - moth	Cabera pusaria	Common White Wave						
insect - moth	Callistege mi	Mother Shipton						
insect - moth	Calliteara pudibunda	Pale Tussock						
insect - moth	Campaea margaritaria	Light Emerald						
insect - moth	Caradrina clavipalpis	Pale Mottled Willow						
insect - moth	Caradrina morpheus	Mottled Rustic		1				
insect - moth	Catocala nupta	Red Underwing						

insect - moth	Celaena haworthii	Haworth's Minor		1				
insect - moth	Ceramica pisi	Broom Moth		1				
insect - moth	Cerapteryx graminis	Antler Moth						
insect - moth	Cerastis rubricosa	Red Chestnut						
insect - moth	Cerura vinula	Puss Moth						
insect - moth	Chesias legatella	Streak		1				
insect - moth	Chiasmia clathrata	Latticed Heath		1				
insect - moth	Chloroclysta miata	Autumn Green Carpet						
insect - moth	Chloroclysta siterata	Red-green Carpet						
insect - moth	Chloroclystis v-ata	V-pug						
insect - moth	Cidaria fulvata	Barred Yellow						
insect - moth	Cilix glaucata	Chinese Character						
insect - moth	Cirrhia icteritia	Sallow		1				
insect - moth	Coenobia rufa	Small Rufous						
insect - moth	Colostygia multistrigaria	Mottled Grey						
insect - moth	Colostygia pectinataria	Green Carpet						
insect - moth	Colotois pennaria	Feathered Thorn						
insect - moth	Conistra vaccinii	Chestnut						
insect - moth	Cosmia trapezina	Dun-bar						
insect - moth	Cosmorhoe ocellata	Purple Bar						
insect - moth	Crocallis elinguaria	Scalloped Oak						
insect - moth	Cucullia verbasci	Mullein						
insect - moth	Deilephila elpenor	Elephant Hawk-moth						
insect - moth	Deilephila porcellus	Small Elephant Hawk-moth						
insect - moth	Denticucullus pygmina	Small Wainscot						
insect - moth	Diachrysia chrysitis	Burnished Brass						
insect - moth	Diarsia brunnea	Purple Clay						
insect - moth	Diarsia mendica	Ingrailed Clay						
insect - moth	Diarsia rubi	Small Square-spot		1				

insect - moth	Drepana falcataria	Pebble Hook-tip						
insect - moth	Dryobotodes eremita	Brindled Green						
insect - moth	Dyscia fagaria	Grey Scalloped Bar						
insect - moth	Dysstroma citrata	Dark Marbled Carpet						
insect - moth	Dysstroma truncata	Common Marbled Carpet						
insect - moth	Ecliptopera silaceata	Small Phoenix		1				
insect - moth	Ectropis crepuscularia	Engrailed/Small Engrailed						
insect - moth	Eilema lurideola	Common Footman						
insect - moth	Electrophaes corylata	Broken-barred Carpet						
insect - moth	Ematurga atomaria	Common Heath						
insect - moth	Ennomos alniaria	Canary-shouldered Thorn						
insect - moth	Ennomos fuscantaria	Dusky Thorn		1				
insect - moth	Entephria caesiata	Grey Mountain Carpet		1				
insect - moth	Epiblema sp.	n/a						
insect - moth	Epirrhoe alternata	Common Carpet						
insect - moth	Epirrita dilutata	November Moth						
insect - moth	Epirrita filigrammaria	Small Autumnal Moth						
insect - moth	Erannis defoliaria	Mottled Umber						
insect - moth	Eremobia ochroleuca	Dusky Sallow						
insect - moth	Eugnorisma glareosa	Autumnal Rustic		1				
insect - moth	Eulithis mellinata	Spinach		1				
insect - moth	Eulithis populata	Northern Spinach						
insect - moth	Eulithis prunata	Phoenix						
insect - moth	Eulithis testata	Chevron						
insect - moth	Eupithecia abbreviata	Brindled Pug						
insect - moth	Eupithecia absinthiata	Ling Pug						
insect - moth	Eupithecia absinthiata form goossensiata	Ling Pug form						
insect - moth	Eupithecia assimilata	Currant Pug						

insect - moth	Eupithecia centaureata	Lime-speck Pug						
insect - moth	Eupithecia dodoneata	Oak-tree Pug						
insect - moth	Eupithecia exiguata	Mottled Pug						
insect - moth	Eupithecia icterata	Tawny Speckled Pug						
insect - moth	Eupithecia intricata	n/a						
insect - moth	Eupithecia lariciata	Larch Pug						
insect - moth	Eupithecia linariata	Toadflax Pug						
insect - moth	Eupithecia nanata	Narrow-winged Pug						
insect - moth	Eupithecia pulchellata	Foxglove Pug						
insect - moth	Eupithecia pusillata	Juniper Pug						
insect - moth	Eupithecia subfuscata	Grey Pug						
insect - moth	Eupithecia tenuiata	Slender Pug						
insect - moth	Eupithecia tripunctaria	White-spotted Pug						
insect - moth	Eupithecia virgaureata	Golden-rod Pug						
insect - moth	Eupithecia vulgata	Common Pug						
insect - moth	Euplexia lucipara	Small Angle Shades						
insect - moth	Eupsilia transversa	Satellite						
insect - moth	Euxoa nigricans	Garden Dart		1				
insect - moth	Furcula bicuspis	Alder Kitten						
insect - moth	Furcula bifida	Poplar Kitten						
insect - moth	Furcula furcula	Sallow Kitten						
insect - moth	Gandaritis pyraliata	Barred Straw						
insect - moth	Geometra papilionaria	Large Emerald						
insect - moth	Gortyna flavago	Frosted Orange						
insect - moth	Graphiphora augur	Double Dart		1				
insect - moth	Griposia aprilina	Merveille du Jour						
insect - moth	Gymnoscelis rufifasciata	Double-striped Pug						
insect - moth	Habrosyne pyritoides	Buff Arches						
insect - moth	Hada plebeja	Shears						

insect - moth	Hadena bicruris	Lychnis						
insect - moth	Helicoverpa armigera	Scarce Bordered Straw						
insect - moth	Helotropha leucostigma	Crescent		1				
insect - moth	Hepialus humuli	Ghost Moth		1				
insect - moth	Herminia grisealis	Small Fan-foot						
insect - moth	Herminia tarsipennalis	Fan-foot						
insect - moth	Hofmannophila pseudospretella	Brown House-moth						
insect - moth	Hoplodrina blanda	Rustic		1				
insect - moth	Hoplodrina octogenaria	Uncertain						
insect - moth	Hydraecia micacea	Rosy Rustic		1				
insect - moth	Hydraecia petasitis	Butterbur						
insect - moth	Hydriomena furcata	July Highflyer						
insect - moth	Hydriomena impluviata	May Highflyer						
insect - moth	Hylaea fasciaria	Barred Red						
insect - moth	Hypena proboscidalis	Snout						
insect - moth	Idaea aversata	Riband Wave						
insect - moth	Ipimorpha subtusa	Olive						
insect - moth	Korscheltellus fusconebulosa	Map-winged Swift						
insect - moth	Korscheltellus lupulina	Common Swift						
insect - moth	Lacanobia oleracea	Bright-line Brown-eye						
insect - moth	Lacanobia suasa	Dog's Tooth						
insect - moth	Lacanobia thalassina	Pale-shouldered Brocade						
insect - moth	Lampropteryx suffumata	Water Carpet						
insect - moth	Laothoe populi	Poplar Hawk-moth						
insect - moth	Lasiocampa quercus callunae	Northern Eggar						
insect - moth	Lateroligia ophiogramma	Double Lobed						
insect - moth	Leptologia lota	Red-line Quaker						
insect - moth	Leptologia macilenta	Yellow-line Quaker						
insect - moth	Leucania comma	Shoulder-striped Wainscot		1				

insect - moth	Leucoma salicis	White Satin Moth						
insect - moth	Lithophane leautieri	Blair's Shoulder-knot						
insect - moth	Lithophane semibrunnea	Tawny Pinion						
insect - moth	Litoligia literosa	Rosy Minor		1				
insect - moth	Lomaspilis marginata	Clouded Border						
insect - moth	Lomographa temerata	Clouded Silver						
insect - moth	Luperina testacea	Flounced Rustic						
insect - moth	Lycophotia porphyrea	True Lover's Knot						
insect - moth	Lygephila pastinum	Blackneck						
insect - moth	Macaria liturata	Tawny-barred Angle						
insect - moth	Macaria wauaria	V-moth		1				
insect - moth	Macroglossum stellatarum	Humming-bird Hawk-moth						
insect - moth	Macrothylacia rubi	Fox Moth						
insect - moth	Mamestra brassicae	Cabbage Moth						
insect - moth	Melanchra persicariae	Dot Moth		1				
insect - moth	Mesapamea didyma	Lesser Common Rustic						
insect - moth	Mesapamea secalis	Common Rustic						
insect - moth	Mesoligia furuncula	Cloaked Minor						
insect - moth	Mesotype didymata	Twin-spot Carpet						
insect - moth	Metzneria metzneriella	Meadow Neb						
insect - moth	Mimas tiliae	Lime Hawk-moth						
insect - moth	Mniotype adusta	Dark Brocade		1				
insect - moth	Mormo maura	Old Lady						
insect - moth	Mythimna ferrago	Clay						
insect - moth	Mythimna impura	Smoky Wainscot						
insect - moth	Mythimna pallens	Common Wainscot						
insect - moth	Mythimna straminea	Southern Wainscot						
insect - moth	Mythimna vitellina	Delicate						
insect - moth	Naenia typica	Gothic						

insect - moth	Nemophora degeerella	Yellow-barred Long-horn						
insect - moth	Noctua comes	Lesser Yellow Underwing						
insect - moth	Noctua fimbriata	Broad-bordered Yellow Underwing						
insect - moth	Noctua interjecta	Least Yellow Underwing						
insect - moth	Noctua janthe	Lesser Broad-bordered Yellow Underwing						
insect - moth	Noctua pronuba	Large Yellow Underwing						
insect - moth	Nola confusalis	Least Black Arches						
insect - moth	Nola cucullatella	Short-cloaked Moth						
insect - moth	Nonagria typhae	Bulrush Wainscot						
insect - moth	Notodonta dromedarius	Iron Prominent						
insect - moth	Notodonta ziczac	Pebble Prominent						
insect - moth	Nycterosea obstipata	Gem						
insect - moth	Ochropacha duplaris	Common Lutestring						
insect - moth	Ochropleura plecta	Flame Shoulder						
insect - moth	Odezia atrata	Chimney Sweep						
insect - moth	Odontopera bidentata	Scalloped Hazel						
insect - moth	Oidaematophorus lithodactyla	Dusky Plume						
insect - moth	Oligia fasciuncula	Middle-barred Minor						
insect - moth	Oligia latruncula	Tawny Marbled Minor						
insect - moth	Oligia strigilis	Marbled Minor						
insect - moth	Oligia versicolor	Rufous Minor						
insect - moth	Operophtera brumata	Winter Moth						
insect - moth	Operophtera fagata	Northern Winter Moth						
insect - moth	Opisthograptis luteolata	Brimstone Moth						
insect - moth	Orthosia cerasi	Common Quaker						
insect - moth	Orthosia cruda	Small Quaker						
insect - moth	Orthosia gothica	Hebrew Character						
insect - moth	Orthosia gracilis	Powdered Quaker		1				
insect - moth	Orthosia incerta	Clouded Drab						

insect - moth	Ourapteryx sambucaria	Swallow-tailed Moth						
insect - moth	Panolis flammea	Pine Beauty						
insect - moth	Papestra biren	Glaucous Shears						
insect - moth	Parasemia plantaginis	Wood Tiger						
insect - moth	Parastichtis suspecta	Suspected						
insect - moth	Pasiphila rectangulata	Green Pug						
insect - moth	Pennithera firmata	Pine Carpet						
insect - moth	Peribatodes rhomboidaria	Willow Beauty						
insect - moth	Peridroma saucia	Pearly Underwing						
insect - moth	Perizoma affinitata	Rivulet						
insect - moth	Perizoma albulata	Grass Rivulet						
insect - moth	Perizoma alchemillata	Small Rivulet						
insect - moth	Perizoma bifaciata	Barred Rivulet						
insect - moth	Perizoma flavofasciata	Sandy Carpet						
insect - moth	Petrophora chlorosata	Brown Silver-line						
insect - moth	Phalera bucephala	Buff-tip						
insect - moth	Pheosia gnoma	Lesser Swallow Prominent						
insect - moth	Pheosia tremula	Swallow Prominent						
insect - moth	Phigalia pilosaria	Pale Brindled Beauty						
insect - moth	Phlogophora meticulosa	Angle Shades						
insect - moth	Photedes minima	Small Dotted Buff						
insect - moth	Phragmatobia fuliginosa	Ruby Tiger						
insect - moth	Phymatopus hecta	Gold Swift						
insect - moth	Platyptilia gonodactyla	Triangle Plume						
insect - moth	Plusia festucae	Gold Spot						
insect - moth	Plusia putnami gracilis	Lempke's Gold Spot						
insect - moth	Poecilocampa populi	December Moth						
insect - moth	Polychrysia moneta	Golden Plusia						
insect - moth	Pseudoips prasinana	Green Silver-lines						

insect - moth	Ptilodon capucina	Coxcomb Prominent						
insect - moth	Rhodometra sacraria	Vestal						
insect - moth	Rivula sericealis	Straw Dot						
insect - moth	Saturnia pavonia	Emperor Moth						
insect - moth	Scoliopteryx libatrix	Herald						
insect - moth	Scoparia	Scoparia						
insect - moth	Scotopteryx chenopodiata	Shaded Broad-bar		1				
insect - moth	Selenia dentaria	Early Thorn						
insect - moth	Selenia tetralunaria	Purple Thorn						
insect - moth	Sideridis rivularis	Campion						
insect - moth	Smerinthus ocellata	Eyed Hawk-moth						
insect - moth	Spilosoma lubricipeda	White Ermine		1				
insect - moth	Spilosoma lutea	Buff Ermine		1				
insect - moth	Spodoptera exigua	Small Mottled Willow						
insect - moth	Stilbia anomala	Anomalous		1				
insect - moth	Subacronicta megacephala	Poplar Grey						
insect - moth	Sunira circellaris	Brick						
insect - moth	Syngrapha interrogationis	Scarce Silver Y						
insect - moth	Tethea ocularis	Figure of Eighty						
insect - moth	Thera britannica	Spruce Carpet						
insect - moth	Thera juniperata	Juniper Carpet					1	
insect - moth	Thera obeliscata	Grey Pine Carpet						
insect - moth	Theria primaria	Early Moth						
insect - moth	Thyatira batis	Peach Blossom						
insect - moth	Timandra comae	Blood-vein		1				
insect - moth	Trichopteryx carpinata	Early Tooth-striped						
insect - moth	Triodia sylvina	Orange Swift						
insect - moth	Tyria jacobaeae	Cinnabar		1				
insect - moth	Tyria jacobaeae	Cinnabar		1				

insect - moth	Venusia cambrica	Welsh Wave						
insect - moth	Xanthia togata	Pink-barred Sallow						
insect - moth	Xanthorhoe decoloraria decoloraria	Red Carpet		1				
insect - moth	Xanthorhoe designata	Flame Carpet						
insect - moth	Xanthorhoe fluctuata	Garden Carpet						
insect - moth	Xanthorhoe montanata	Silver-ground Carpet						
insect - moth	Xestia agathina	Heath Rustic		1				
insect - moth	Xestia baja	Dotted Clay						
insect - moth	Xestia castanea	Neglected Rustic		1				
insect - moth	Xestia c-nigrum	Setaceous Hebrew Character						
insect - moth	Xestia sexstrigata	Six-striped Rustic						
insect - moth	Xestia triangulum	Double-square Spot						
insect - moth	Xestia xanthographa	Square-spot Rustic						
insect - moth	Xylena solidaginis	Golden-rod Brindle						
insect - moth	Xylena vetusta	Red Sword-grass						
insect - moth	Xylocampa areola	Early Grey						
insect - moth	Yponomeuta evonymella	Bird-cherry Ermine						
insect - moth	Ypsolopha scabrella	Wainscot Smudge						
insect - moth	Zygaena filipendulae	Six-spot Burnet						
insect - orthopteran	Chorthippus brunneus	Field Grasshopper						
insect - orthopteran	Omocestus viridulus	Common Green Grasshopper						
insect - orthopteran	Tetrix subulata	Slender Ground-hopper					1	
insect - scorpion fly	Panorpa germanica	n/a						
insect - stonefly	Leuctra fusca	n/a						
insect - stonefly	Nemour asp.	n/a						
insect - stonefly	Nemoura cinerea	n/a						
insect - stonefly	Perlodes mortoni	n/a						
insect - true bug	Acanthosoma haemorrhoidale	Hawthorn Shieldbug						
insect - true bug	Callicorixa praeusta	n/a						

insect - true bug	Cercopis vulnerata	n/a						
insect - true bug	Corixa punctata	Punctate Corixa						
insect - true bug	Deraeocoris (Deraeocoris) ruber	n/a						
insect - true bug	Elasmostethus interstinctus	Birch Shieldbug						
insect - true bug	Gerris (Gerris) lacustris	Common Pondskater						
insect - true bug	Gerris (Gerris) odontogaster	Toothed Pondskater						
insect - true bug	Gerris (Gerriselloides) lateralis	n/a						
insect - true bug	Hesperocorixa castanea	n/a						
insect - true bug	Hesperocorixa linnaei	n/a						
insect - true bug	Hesperocorixa sahlbergi	n/a						
insect - true bug	Notonecta (Notonecta) glauca	Common Backswimmer						
insect - true bug	Palomena prasina	Green Shieldbug						
insect - true bug	Pentatoma rufipes	Red-legged Shieldbug						
insect - true bug	Philaenus spumarius	Cuckoo-Spit Insect						
insect - true bug	Picromerus bidens	Spiked Shieldbug						
insect - true bug	Piezodorus lituratus	Gorse Shieldbug						
insect - true bug	Sigara (Sigara) dorsalis	n/a						
insect - true bug	Sigara (Subsigara) distincta	n/a						
insect - true bug	Sigara (Subsigara) falleni	n/a						
insect - true bug	Troilus luridus	Bronze Shieldbug						
insect - true bug	Zicrona caerulea	Blue Shieldbug						
insect - true fly	Anthomyiidae sp.	n/a						
insect - true fly	Austrolimnophila ochracea	n/a						
insect - true fly	Bibio pomonae	n/a						
insect - true fly	Bombylius major	Dark-edged Bee-fly						
insect - true fly	Calliphora	Bluebottle						
insect - true fly	Cheilotrichia cinerascens	n/a						
insect - true fly	Chloromyia formosa	Broad Centurion						
insect - true fly	Chrysopilus cristatus	Black Snipefly						

insect - true fly	Chrysotoxum festivum	n/a						
insect - true fly	Conops flavipes	n/a						
insect - true fly	Conops quadrifasciatus	n/a						
insect - true fly	Conops strigatus	n/a					1	
insect - true fly	Culicoides heliophilus	n/a						
insect - true fly	Cynomya mortuorum	Yellow-faced Blowfly						
insect - true fly	Dasysyrphus venustus	n/a						
insect - true fly	Dexiosoma caninum	n/a						
insect - true fly	Dicranomyia autumnalis	n/a						
insect - true fly	Dicranomyia chorea	n/a						
insect - true fly	Dicranomyia didyma	n/a						
insect - true fly	Dicranomyia fusca	n/a						
insect - true fly	Dicranomyia mitis	n/a						
insect - true fly	Dicranomyia modesta	n/a						
insect - true fly	Dicranophragma nemorale	n/a						
insect - true fly	Dicranota exclusa	n/a						
insect - true fly	Dicranota pavida	n/a						
insect - true fly	Dixa dilatata	n/a						
insect - true fly	Dixa nebulosa	n/a						
insect - true fly	Dixa puberula	n/a						
insect - true fly	Dixa submaculata	n/a						
insect - true fly	Dolichopeza albipes	White-Footed Ghost						
insect - true fly	Eloeophila maculata	n/a						
insect - true fly	Eloeophila trimaculata	n/a					1	
insect - true fly	Empis tessellata	n/a						
insect - true fly	Episyrphus balteatus	Marmalade Hoverfly						
insect - true fly	Erioconopa trivialis	n/a						
insect - true fly	Erioptera divisa	n/a						
insect - true fly	Erioptera fusculenta	n/a						

insect - true fly	Erioptera lutea	n/a						
insect - true fly	Eriothrix rufomaculata	n/a						
insect - true fly	Eristalis pertinax	n/a						
insect - true fly	Eudasyphora cyanella	n/a						
insect - true fly	Eupeodes corollae	n/a						
insect - true fly	Eupeodes latifasciatus	n/a						
insect - true fly	Geomyza balachowskyi	n/a						
insect - true fly	Gonia picea	n/a						
insect - true fly	Graphomya maculata	n/a						
insect - true fly	Gymnocheta viridis	n/a						
insect - true fly	Haematopota crassicornis	Black-horned Cleg						
insect - true fly	Haematopota pluvialis	Notch-horned Cleg						
insect - true fly	Helophilus pendulus	n/a						
insect - true fly	Leucozona lucorum	n/a						
insect - true fly	Limonia flavipes	n/a						
insect - true fly	Limonia macrostigma	n/a						
insect - true fly	Limonia nubeculosa	n/a						
insect - true fly	Linnaemya vulpina	n/a						
insect - true fly	Lucilia sp.	n/a						
insect - true fly	Melanostoma scalare	n/a						
insect - true fly	Molophilus griseus	n/a						
insect - true fly	Muscidae sp.	n/a						
insect - true fly	Myopa buccata	n/a						
insect - true fly	Nemopoda nitidula	n/a						
insect - true fly	Neoascia podagrica	n/a						
insect - true fly	Neomyia cornicina	n/a						
insect - true fly	Neomyia viridescens	n/a						
insect - true fly	Nephrotoma flavipalpis	n/a						
insect - true fly	Oxycera rara	Four-barred Major						

insect - true fly	Panzeria anthophila	n/a						
insect - true fly	Paradelphomyia senilis	n/a						
insect - true fly	Pedicia littoralis	n/a						
insect - true fly	Pegomya sp.	n/a						
insect - true fly	Phaonia tuguriorum	n/a						
insect - true fly	Phasia hemiptera	n/a						
insect - true fly	Physocephala rufipes	n/a						
insect - true fly	Platycheirus albimanus	n/a						
insect - true fly	Platycheirus tarsalis	n/a						
insect - true fly	Poecilobothrus nobilitatus	Poecilobothrus nobilitatus						
insect - true fly	Pollenia amentaria	Black-bellied Clusterfly						
insect - true fly	Portevinia maculata	n/a						
insect - true fly	Psychodidae sp.	A mothfly						
insect - true fly	Ptychoptera albimana	n/a						
insect - true fly	Ptychoptera contaminata	n/a						
insect - true fly	Rhagio scolopaceus	Downlooker Snipefly						
insect - true fly	Rhagio tringarius	Marsh Snipefly						
insect - true fly	Rhingia campestris	n/a						
insect - true fly	Rhipidia maculata	n/a						
insect - true fly	Sargus flavipes	Yellow-legged Centurion			1			
insect - true fly	Sargus iridatus	Iridescent Centurion						
insect - true fly	Scaeva pyrastri	n/a						
insect - true fly	Scathophaga stercoraria	n/a						
insect - true fly	Sepsis punctum	n/a						
insect - true fly	Sicus ferrugineus	n/a						
insect - true fly	Syrphus sp.	n/a						
insect - true fly	Tachina fera	n/a						
insect - true fly	Tachina grossa	n/a						
insect - true fly	Tachina ursina	n/a						

insect - true fly	Tachinidae sp.	n/a						
insect - true fly	Tetanocera sp.	n/a						
insect - true fly	Thelaira nigrina	n/a						
insect - true fly	Tipula alpium	n/a						
insect - true fly	Tipula confusa	n/a						
insect - true fly	Tipula fascipennis	n/a						
insect - true fly	Tipula irrorata	n/a						
insect - true fly	Tipula lateralis	n/a						
insect - true fly	Tipula luna	n/a						
insect - true fly	Tipula luteipennis	n/a						
insect - true fly	Tipula maxima	n/a						
insect - true fly	Tipula melanoceros	n/a						
insect - true fly	Tipula oleracea	n/a						
insect - true fly	Tipula pagana	n/a						
insect - true fly	Tipula paludosa	n/a						
insect - true fly	Tipula rufina	n/a						
insect - true fly	Tipula signata	n/a						
insect - true fly	Tipula staegeri	n/a						
insect - true fly	Tipula subcunctans	n/a						
insect - true fly	Tipula subnodicornis	n/a						
insect - true fly	Tipula unca	n/a						
insect - true fly	Tipula variicornis	n/a						
insect - true fly	Tipula varipennis	n/a						
insect - true fly	Tipula vernalis	n/a						
insect - true fly	Tipula vittata	n/a						
insect - true fly	Tricyphona immaculata	n/a						
insect - true fly	Voria ruralis	n/a						
insect - true fly	Xyphosia miliaria	n/a						
mollusc	Ampullaceana balthica	Wandering Snail						

mollusc	Bithynia tentaculata	Common Bithynia						
mollusc	Cornu aspersum	Common Garden Snail						
mollusc	Galba (Galba) truncatula	Dwarf Pond Snail						
mollusc	Gyraulus (Armiger) crista	Nautilus Ramshorn						
mollusc	Gyraulus (Gyraulus) albus	White Ramshorn						
mollusc	Lymnaea stagnalis	Great Pond Snail						
mollusc	Oxyloma (Oxyloma) elegans	Pfeiffer's Amber Snail						
mollusc	Physa sp. (not fontinalis)	n/a						
mollusc	Physella acuta	n/a						
mollusc	Pisidium sp.	A pea mussel						
mollusc	Planorbarius corneus	Great Ramshorn						
mollusc	Planorbis carinatus	Keeled Ramshorn						
mollusc	Planorbis planorbis	Margined Ramshorn						
mollusc	Potamopyrgus antipodarum	Jenkins' Spire Snail						
mollusc	Radix auricularia	Ear Pond Snail						
mollusc	Sphaerium corneum	Horny Orb Mussel						
mollusc	Sphaerium lacustre	Lake Orb Mussel						
mollusc	Theodoxus fluviatilis	Freshwater Nerite						
spider (Araneae)	Araneus diadematus	Garden Spider						
spider (Araneae)	Araniella sp.	n/a						
spider (Araneae)	Clubiona reclusa	n/a						
spider (Araneae)	Larinioides cornutus	n/a						
spider (Araneae)	Metellina segmentata	n/a						
spider (Araneae)	Salticus scenicus	n/a						
spider (Araneae)	Tetragnatha	n/a						
spider (Araneae)	Theridion mystaceum	n/a						
			1	**50**	**8**	**0**	**16**	**2**
terrestrial mammal	Apodemus sylvaticus	Wood Mouse						
terrestrial mammal	Capreolus capreolus	Roe Deer						

terrestrial mammal	Erinaceus europaeus	West European Hedgehog		1				
terrestrial mammal	Lepus europaeus	Brown Hare		1				
terrestrial mammal	Lutra lutra	Eurasian Otter	1	1			1	
terrestrial mammal	Meles meles	Eurasian Badger	1					
terrestrial mammal	Microtus agrestis	Field Vole						
terrestrial mammal	Myodes glareolus	Bank Vole						
terrestrial mammal	Myotis daubentonii	Daubenton's Bat	1				1	
terrestrial mammal	Myotis nattereri	Natterer's Bat	1				1	
terrestrial mammal	Nyctalus noctula	Noctule Bat	1	1			1	
terrestrial mammal	Oryctolagus cuniculus	European Rabbit						
terrestrial mammal	Pipistrellus nathusii	Nathusius's Pipistrelle	1					
terrestrial mammal	Pipistrellus pipistrellus	Common Pipistrelle	1					
terrestrial mammal	Pipistrellus pygmaeus	Soprano Pipistrelle	1	1				
terrestrial mammal	Plecotus auritus	Brown Long-eared Bat	1	1			1	
terrestrial mammal	Sciurus carolinensis	Eastern Grey Squirrel						1
terrestrial mammal	Sorex araneus	Eurasian Common Shrew						
terrestrial mammal	Sorex minutus	Eurasian Pygmy Shrew						
terrestrial mammal	Talpa europaea	European Mole						
			9	**6**	**0**	**0**	**5**	**1**
reptile	Vipera berus	Adder	1	1				
reptile	Zootoca vivipara	Common Lizard	1	1				
			2	**2**	**0**	**0**	**0**	**0**
			27	76	8	24	59	9

Appendix 8. Flora recorded in/adjacent to Worsthorne-with-Hurstwood.

Taxon group	Scientific name	Common name	Lancashire Key Species
alga	Chlorophyta sp.	Green crusts	
alga	Trentepohlia sp.	n/a	
conifer	Abies sp.	A fir	
conifer	Araucaria araucana	Monkey-puzzle	
conifer	Chamaecyparis lawsoniana	Lawson's Cypress	Lancashire INNS
conifer	X Cuprocyparis leylandi	Leyland Cypress	
conifer	Larix decidua	European Larch	
conifer	Larix x marschlinsii	Hybrid Larch	
conifer	Larix kaempferi	Japanese Larch	
conifer	Picea abies	Norway Spruce	
conifer	Picea sitchensis	Sitka Spruce	Lancashire INNS
conifer	Pinus contorta	Lodgepole Pine	Lancashire INNS
conifer	Pinus nigra	Austrian Pine	Lancashire INNS
conifer	Pinus nigra subsp. laricio	Corsican Pine	Lancashire INNS
conifer	Pinus sylvestris	Scots Pine	NS-excludes
conifer	Pseudotsuga menziesii	Douglas Fir	
conifer	Taxus baccata	Yew	
conifer	Taxus baccata 'Fastigiata'	'Fastigiata' Yew	
conifer	Thuja plicata	Western Red-cedar	
fern	Asplenium ruta-muraria	Wall-rue	
fern	Asplenium trichomanes	Maidenhair Spleenwort	
fern	Athyrium filix-femina	Lady-fern	
fern	Azolla filiculoides	Water Fern	Lancashire INNS
fern	Blechnum spicant	Hard-fern	
fern	Cryptogramma crispa	Parsley Fern	BHS_Species, Lancs BAP 2016

fern	Cystopteris fragilis	Brittle Bladder-fern	
fern	Dryopteris affinis	Scaly Male-fern	
fern	Dryopteris borreri	A buckler-fern	
fern	Dryopteris carthusiana	Narrow Buckler-fern	
fern	Dryopteris dilatata	Broad Buckler-fern	
fern	Dryopteris filix-mas	Male-fern	
fern	Gymnocarpium dryopteris	Oak Fern	
fern	Gymnocarpium robertianum	Limestone Fern	BHS_Species, LBAP 2016
fern	Ophioglossum vulgatum	Adder's-tongue	
fern	Oreopteris limbosperma	Lemon-scented Fern	
fern	Phyllitis scolopendrium	Hart's-tongue	
fern	Polypodium vulgare	Polypodium vulgare	
fern	Polystichum aculeatum	Hard Shield-fern	
fern	Polystichum setiferum	Soft Shield-fern	BHS_Species
fern	Pteridium aquilinum	Bracken	
flowering	Acer campestre	Field Maple	
flowering	Acer platanoides	Norway Maple	Lancashire INNS
flowering	Acer pseudoplatanus	Sycamore	Lancashire INNS
flowering	Acer saccharinum	Silver Maple	
flowering	Achillea millefolium	Yarrow	
flowering	Achillea ptarmica	Sneezewort	
flowering	Aconitum napellus	Aconitum napellus	
flowering	Acorus calamus	Sweet-flag	Lancashire INNS
flowering	Aegopodium podagraria	Ground-elder	Lancashire INNS
flowering	Aesculus hippocastanum	Horse-chestnut	Lancashire INNS
flowering	Agrimonia eupatoria	Agrimony	
flowering	Agrostis canina	Velvet Bent	
flowering	Agrostis capillaris	Common Bent	
flowering	Agrostis gigantea	Black Bent	Lancashire INNS

flowering	Agrostis stolonifera	Creeping Bent	
flowering	Agrostis vinealis	Brown Bent	
flowering	Aira caryophyllea	Silver Hair-grass	
flowering	Aira praecox	Early Hair-grass	
flowering	Ajuga reptans	Bugle	
flowering	Alchemilla glabra	Smooth Lady's-mantle	
flowering	Alchemilla mollis	Garden Lady's-mantle	Lancashire INNS
flowering	Alchemilla vulgaris agg.	Lady's-mantle	
flowering	Alchemilla xanthochlora	Intermediate Lady's-mantle	
flowering	Alisma plantago-aquatica	Water-plantain	
flowering	Alliaria petiolata	Garlic Mustard	
flowering	Allium ursinum	Ramsons	
flowering	Alnus cordata	Italian Alder	Lancashire INNS
flowering	Alnus glutinosa	Alder	
flowering	Alnus incana	Grey Alder	Lancashire INNS
flowering	Alopecurus geniculatus	Marsh Foxtail	
flowering	Alopecurus pratensis	Meadow Foxtail	
flowering	Alyssum saxatile	Golden Alison	
flowering	Amelanchier lamarckii	Juneberry	
flowering	Anemone nemorosa	Wood Anemone	
flowering	Angelica sylvestris	Wild Angelica	
flowering	Anthemis arvensis	Corn Chamomile	**RedList_GB_post2001-EN**
flowering	Anthoxanthum odoratum	Sweet Vernal-grass	
flowering	Anthriscus sylvestris	Cow Parsley	
flowering	Antirrhinum majus	Snapdragon	
flowering	Aponogeton distachyos	Cape-pondweed	Lancashire INNS
flowering	Arabidopsis thaliana	Thale Cress	
flowering	Arabis caucasica	Garden Arabis	
flowering	Arabis hirsuta	Hairy Rock-cress	

flowering	Arctium minus	Lesser Burdock	
flowering	Arenaria serpyllifolia	Thyme-leaved Sandwort	
flowering	Arrhenatherum elatius	False Oat-grass	
flowering	Artemisia vulgaris	Mugwort	
flowering	Arum maculatum	Lords-and-Ladies	
flowering	Aster	A Michaelmas-Daisy	
flowering	Atriplex patula	Common Orache	
flowering	Atriplex prostrata	Spear-leaved Orache	
flowering	Aucuba japonica	Spotted-laurel	Lancashire INNS
flowering	Bellis perennis	Daisy	
flowering	Betula pendula	Silver Birch	
flowering	Betula x aurata	Hybrid Birch	
flowering	Betula pubescens	Downy Birch	
flowering	Brachypodium sylvaticum	False-brome	
flowering	Brassica napus	Rape	
flowering	Brassica rapa	Turnip	Lancashire INNS
flowering	Briza maxima	Greater Quaking-grass	
flowering	Briza media	Quaking-grass	
flowering	Bromopsis ramosa	Hairy-brome	
flowering	Bromus hordeaceus	Soft-brome	
flowering	Bromus sterilis	Barren Brome	Lancashire INNS
flowering	Buddleja davidii	Butterfly-bush	Lancashire INNS
flowering	Butomus umbellatus	Flowering-rush	
flowering	Callitriche hamulata	Intermediate Water-starwort	
flowering	Callitriche stagnalis	Water-starwort	
flowering	Calluna vulgaris	Heather	
flowering	Caltha palustris	Marsh-marigold	
flowering	Calystegia sepium	Hedge Bindweed	
flowering	Calystegia silvatica	Large Bindweed	Lancashire INNS

flowering	Campanula latifolia	Giant Bellflower	
flowering	Campanula poscharskyana	Trailing Bellflower	Lancashire INNS
flowering	Campanula rotundifolia	Harebell	
flowering	Capsella bursa-pastoris	Shepherd's-purse	
flowering	Cardamine amara	Large Bitter-cress	
flowering	Cardamine flexuosa	Wavy Bitter-cress	
flowering	Cardamine hirsuta	Hairy Bitter-cress	
flowering	Cardamine pratensis	Cuckooflower	
flowering	Carduus crispus	Welted Thistle	
flowering	Carex acuta	Slender Tufted-sedge	BHS_Species, LBAP 2016
flowering	Carex acutiformis	Lesser Pond-sedge	
flowering	Carex binervis	Green-ribbed Sedge	
flowering	Carex canescens	White Sedge	
flowering	Carex caryophyllea	Spring-sedge	
flowering	Carex disticha	Brown Sedge	
flowering	Carex echinata	Star Sedge	
flowering	Carex flacca	Glaucous Sedge	
flowering	Carex hirta	Hairy Sedge	
flowering	Carex leporina	Oval Sedge	
flowering	Carex nigra	Common Sedge	
flowering	Carex otrubae	False Fox-sedge	
flowering	Carex pallescens	Pale Sedge	
flowering	Carex panicea	Carnation Sedge	
flowering	Carex pendula	Pendulous Sedge	
flowering	Carex pilulifera	Pill Sedge	
flowering	Carex pulicaris	Flea Sedge	
flowering	Carex remota	Remote Sedge	
flowering	Carex riparia	Greater Pond-sedge	BHS_Species, LBAP 2016
flowering	Carex rostrata	Bottle Sedge	

flowering	Carex strigosa	Thin-spiked Wood-sedge	BHS_Species, LBAP 2016
flowering	Carex sylvatica	Wood-sedge	
flowering	Carex viridula subsp. oedocarpa	Common Yellow-sedge	
flowering	Carlina vulgaris	Carline Thistle	
flowering	Carpinus betulus	Hornbeam	
flowering	Castanea sativa	Sweet Chestnut	
flowering	Centaurea montana	Perennial Cornflower	
flowering	Centaurea nigra	Common Knapweed	
flowering	Centranthus ruber	Red Valerian	
flowering	Cerastium fontanum	Common Mouse-ear	
flowering	Cerastium glomeratum	Sticky Mouse-ear	
flowering	Cerastium tomentosum	Snow-in-summer	
flowering	Ceratocapnos claviculata	Climbing Corydalis	
flowering	Ceratophyllum demersum	Rigid Hornwort	
flowering	Chamerion angustifolium	Rosebay Willowherb	
flowering	Chelidonium majus	Greater Celandine	
flowering	Chenopodium album	Fat-hen	
flowering	Chrysosplenium oppositifolium	Opposite-leaved Golden-saxifrage	
flowering	Circaea lutetiana	Enchanter's-nightshade	
flowering	Cirsium arvense	Creeping Thistle	
flowering	Cirsium palustre	Marsh Thistle	
flowering	Cirsium vulgare	Spear Thistle	
flowering	Claytonia sibirica	Pink Purslane	Lancashire INNS
flowering	Cochlearia danica	Danish Scurvygrass	
flowering	Conopodium majus	Pignut	
flowering	Cornus alba	White Dogwood	Lancashire INNS
flowering	Cornus mas	Cornelian-cherry	
flowering	Cornus sanguinea	Dogwood	
flowering	Cornus sericea	Red-osier Dogwood	

flowering	Corylus avellana	Hazel	
flowering	Cotoneaster horizontalis agg.	Wall Cotoneaster	Lancashire INNS
flowering	Cotoneaster rehderi	Bullate Cotoneaster	Lancashire INNS
flowering	Crataegus monogyna	Hawthorn	
flowering	Crepis capillaris	Smooth Hawk's-beard	
flowering	Crepis paludosa	Marsh Hawk's-beard	
flowering	Crocosmia paniculata	Aunt-Eliza	
flowering	Crocosmia x crocosmiiflora	Montbretia	Lancashire INNS
flowering	Crocus x stellaris	Yellow Crocus	
flowering	Crocus vernus	Spring Crocus	
flowering	Cymbalaria muralis	Ivy-leaved Toadflax	
flowering	Cymbalaria pallida	Italian Toadflax	
flowering	Cynosurus cristatus	Crested Dog's-tail	
flowering	Cytisus scoparius	Broom	
flowering	Dactylis glomerata	Cock's-foot	
flowering	Dactylorhiza fuchsii	Common Spotted-orchid	ECCITES-B
flowering	Danthonia decumbens	Heath-grass	
flowering	Deschampsia cespitosa subsp. cespitosa	Tufted Hair-grass	
flowering	Deschampsia cespitosa subsp. parviflora	Small-flowered Hair-grass	
flowering	Deschampsia flexuosa	Wavy Hair-grass	
flowering	Digitalis purpurea	Foxglove	
flowering	Dioscorea communis	Black Bryony	
flowering	Drosera rotundifolia	Round-leaved Sundew	
flowering	Eleocharis palustris	Common Spike-rush	
flowering	Elodea canadensis	Canadian Waterweed	Lancashire INNS
flowering	Elodea nuttallii	Nuttall's Waterweed	Lancashire INNS
flowering	Elymus caninus	Bearded Couch	
flowering	Elytrigia repens	Common Couch	
flowering	Empetrum nigrum agg.	Crowberry	

flowering	Epilobium brunnescens	New Zealand Willowherb	
flowering	Epilobium ciliatum	American Willowherb	
flowering	Epilobium hirsutum	Great Willowherb	
flowering	Epilobium montanum	Broad-leaved Willowherb	
flowering	Epilobium x interjectum	a hybrid willowherb	
flowering	Epilobium obscurum	Short-fruited Willowherb	
flowering	Epilobium palustre	Marsh Willowherb	
flowering	Epilobium parviflorum	Hoary Willowherb	
flowering	Epilobium roseum	Pale Willowherb	
flowering	Epilobium tetragonum	Square-stalked Willowherb	
flowering	Epipactis helleborine	Broad-leaved Helleborine	ECCITES-B
flowering	Erica cinerea	Bell Heather	
flowering	Erica tetralix	Cross-leaved Heath	
flowering	Eriophorum angustifolium	Common Cottongrass	
flowering	Eriophorum vaginatum	Hare's-tail Cottongrass	
flowering	Euphorbia cyparissias	Cypress Spurge	ECCITES-B
flowering	Euphorbia peplus	Petty Spurge	ECCITES-B
flowering	Euphrasia arctica subsp. borealis	an eyebright	**BHS_Species, RedList_GB_post2001-NT**
flowering	Euphrasia officinalis agg.	Eyebright	
flowering	Fagus sylvatica	Beech	
flowering	Fallopia convolvulus	Black-bindweed	
flowering	Fallopia japonica	Japanese Knotweed	Lancashire INNS
flowering	Festuca arundinacea	Tall Fescue	
flowering	Festuca gigantea	Giant Fescue	
flowering	Festuca ovina agg.	Sheep's Fescue agg.	
flowering	Festuca pratensis	Meadow Fescue	
flowering	X Festulolium loliaceum	Hybrid Fescue	
flowering	Festuca rubra agg.	Red Fescue	
flowering	Festuca rubra subsp. commutata	Chewing's Fescue	

flowering	Ficaria verna subsp. verna	Lesser Celandine subsp.	
flowering	Ficaria verna var. bulbifer	Lesser Celandine var.	
flowering	Filipendula ulmaria	Meadowsweet	
flowering	Filipendula vulgaris	Dropwort	BHS_Species, LBAP 2016
flowering	Forsythia x intermedia	A Forsythia	
flowering	Fragaria ananassa	Garden Strawberry	
flowering	Fragaria vesca	Wild Strawberry	
flowering	Fraxinus excelsior	Ash	
flowering	Fumaria muralis	Common Ramping-fumitory	
flowering	Fumaria officinalis	Common Fumitory	
flowering	**Fumaria purpurea**	**Purple Ramping-fumitory**	**BHS_Species, S.41, LBAP 2016**
flowering	Galanthus ikariae	A snowdrop	ECCITES-B
flowering	Galanthus nivalis	Snowdrop	ECCITES-B
flowering	Galeopsis tetrahit agg.	Common Hemp-Nettle agg.	
flowering	Galium aparine	Cleavers	
flowering	Galium odoratum	Woodruff	
flowering	Galium palustre subsp. palustre	Common Marsh-bedstraw	
flowering	Galium saxatile	Heath Bedstraw	
flowering	Galium uliginosum	Fen Bedstraw	
flowering	Galium verum	Lady's Bedstraw	
flowering	Gaultheria mucronata	Prickly Heath	Lancashire INNS
flowering	Gentianella amarella	Autumn Gentian	LBAP 2016
flowering	Geranium dissectum	Cut-leaved Crane's-bill	
flowering	Geranium endressii	French Crane's-bill	
flowering	Geranium x oxonianum	Druce's Crane's-bill	
flowering	Geranium x magnificum	Purple Crane's-bill	
flowering	Geranium lucidum	Shining Crane's-bill	
flowering	Geranium macrorrhizum	Rock Crane's-bill	
flowering	Geranium phaeum	Dusky Crane's-bill	

flowering	Geranium pratense	Meadow Crane's-bill	
flowering	Geranium pyrenaicum	Hedgerow Crane's-bill	
flowering	Geranium robertianum	Herb-Robert	
flowering	Geranium sylvaticum	Wood Crane's-bill	BHS_Species, LBAP 2016
flowering	Geum rivale	Water Avens	
flowering	Geum x intermedium	Hybrid Avens	
flowering	Geum urbanum	Wood Avens	
flowering	Glechoma hederacea	Ground-ivy	
flowering	Glyceria declinata	Small Sweet-grass	
flowering	Glyceria fluitans	Floating Sweet-grass	
flowering	Glyceria maxima	Reed Sweet-grass	
flowering	Glyceria notata	Plicate Sweet-grass	
flowering	Gnaphalium uliginosum	Marsh Cudweed	
flowering	Gymnadenia conopsea	Common Fragrant-orchid	BHS_Species, ECCITES-B, LBAP 2016
flowering	Hedera colchica	Persian Ivy	
flowering	Hedera helix subsp. helix	Common Ivy	
flowering	Hedera hibernica	Atlantic Ivy	Lancashire INNS
flowering	Helictotrichon pubescens	Downy Oat-grass	
flowering	Heracleum sphondylium	Hogweed	
flowering	Hesperis matronalis	Dame's-violet	
flowering	Hieracium acuminatum	Tall Hawkweed	
flowering	Hieracium sect. Sabauda	A hawkweed	
flowering	Hieracium sect. Vulgata	A hawkweed	
flowering	Hieracium vagum	Glabrous-headed Hawkweed	
flowering	Hippophae rhamnoides	Sea-buckthorn	Lancashire INNS
flowering	Holcus lanatus	Yorkshire-fog	
flowering	Holcus mollis	Creeping Soft-grass	
flowering	Hordeum murinum	Wall Barley	
flowering	Hyacinthoides hispanica	Spanish Bluebell	Lancashire INNS

flowering	Hyacinthoides non-scripta	Bluebell	WACA-Sch8
flowering	Hyacinthoides x massartiana	Hybrid Bluebell	Lancashire INNS
flowering	Hydrocotyle vulgaris	Marsh Pennywort	
flowering	Hypericum androsaemum	Tutsan	BHS_Species
flowering	Hypericum perforatum	Perforate St John's-wort	
flowering	Hypericum pulchrum	Slender St John's-wort	
flowering	Hypericum tetrapterum	Square-stalked St John's-wort	
flowering	Hypochaeris radicata	Cat's-ear	
flowering	Ilex aquifolium	Holly	
flowering	Ilex x altaclerensis	Highclere Holly	
flowering	Impatiens glandulifera	Himalayan Balsam	Lancashire INNS
flowering	Inula helenium	Elecampane	
flowering	Iris pseudacorus	Yellow Iris	
flowering	Iris sp. cultivar	Garden Iris	
flowering	Isolepis setacea	Bristle Club-rush	
flowering	Jacobaea aquatica	Marsh Ragwort	
flowering	Jacobaea erucifolia	Hoary Ragwort	
flowering	Jacobaea vulgaris	Common Ragwort	
flowering	Juncus acutiflorus	Sharp-flowered Rush	
flowering	Juncus articulatus	Jointed Rush	
flowering	Juncus bufonius agg.	Toad Rush agg.	
flowering	Juncus bulbosus	Bulbous Rush	
flowering	Juncus conglomeratus	Compact Rush	
flowering	Juncus effusus	Soft-rush	
flowering	Juncus effusus var. subglomeratus	A Soft-rush variety	
flowering	Juncus inflexus	Hard Rush	
flowering	Juncus squarrosus	Heath Rush	
flowering	Juncus tenuis	Slender Rush	
flowering	Kerria japonica	Kerria	

flowering	Lamiastrum galeobdolon	Yellow Archangel	BHS_Species
flowering	Lamiastrum galeobdolon subsp. argentatum	Variegated Yellow Archangel	Lancashire INNS
flowering	Lamium hybridum	Cut-leaved Dead-nettle	
flowering	Lamium maculatum	Spotted Dead-nettle	
flowering	Lamium purpureum	Red Dead-nettle	
flowering	Lapsana communis	Nipplewort	
flowering	Lathraea squamaria	Toothwort	BHS_Species
flowering	Lathyrus linifolius	Bitter-vetch	
flowering	Lathyrus pratensis	Meadow Vetchling	
flowering	Lemna minor	Common Duckweed	
flowering	Lemna trisulca	Ivy-leaved Duckweed	
flowering	Leontodon hispidus	Rough Hawkbit	
flowering	Leucanthemum vulgare	Oxeye Daisy	
flowering	Levisticum officinale	Lovage	
flowering	Ligustrum ovalifolium	Garden Privet	
flowering	Ligustrum vulgare	Wild Privet	
flowering	Linaria repens	Pale Toadflax	
flowering	Linaria vulgaris	Common Toadflax	
flowering	Linum catharticum	Fairy Flax	
flowering	Littorella uniflora	Shoreweed	
flowering	Lobularia maritima	Sweet Alison	
flowering	Lolium perenne	Perennial Rye-grass	
flowering	Lonicera nitida	Wilson's Honeysuckle	
flowering	Lonicera periclymenum	Honeysuckle	
flowering	Lonicera pileata	Box-leaved Honeysuckle	Lancashire INNS
flowering	Lonicera xylosteum	Fly Honeysuckle	
flowering	Lotus corniculatus	Common Bird's-foot-trefoil	
flowering	Lotus corniculatus var. sativus	A bird’s-foot-trefoil variety	
flowering	Lotus pedunculatus	Greater Bird's-foot-trefoil	

flowering	Lunaria annua	Honesty	
flowering	Luzula campestris	Field Wood-rush	
flowering	Luzula multiflora subsp. congesta	Heath Wood-rush	
flowering	Luzula multiflora subsp. multiflora	Heath Wood-rush	
flowering	Luzula pilosa	Hairy Wood-rush	
flowering	Luzula sylvatica	Great Wood-rush	
flowering	Lycopus europaeus	Gypsywort	
flowering	Lysimachia nemorum	Yellow Pimpernel	
flowering	Lysimachia nummularia	Creeping-Jenny	
flowering	Lysimachia punctata	Dotted Loosestrife	
flowering	Lysimachia vulgaris	Yellow Loosestrife	
flowering	Lythrum salicaria	Purple-loosestrife	
flowering	Malus pumila	Apple	
flowering	Malva moschata	Musk-mallow	
flowering	Matricaria chamomilla	Scented Mayweed	
flowering	Matricaria discoidea	Pineappleweed	
flowering	Meconopsis cambrica	Welsh Poppy	
flowering	Medicago lupulina	Black Medick	
flowering	Melica uniflora	Wood Melick	
flowering	Melilotus albus	White Melilot	
flowering	Melilotus altissimus	Tall Melilot	
flowering	Melilotus indicus	Small Melilot	
flowering	Melilotus officinalis	Ribbed Melilot	
flowering	Mentha aquatica	Water Mint	
flowering	Mentha x piperita	Peppermint	
flowering	Mentha arvensis	Corn Mint	
flowering	Mentha spicata	Spear Mint	
flowering	Mentha x villosa	Apple-mint	
flowering	Mercurialis perennis	Dog's Mercury	

flowering	Mimulus guttatus	Monkeyflower	Lancashire INNS
flowering	Mimulus x robertsii	Hybrid Monkeyflower	Lancashire INNS
flowering	Mimulus luteus	Blood-drop-emlets	Lancashire INNS
flowering	Moehringia trinervia	Three-nerved Sandwort	
flowering	Molinia caerulea	Purple Moor-grass	
flowering	Montia fontana	Blinks	
flowering	Morus nigra	Black Mulberry	
flowering	Mycelis muralis	Wall Lettuce	
flowering	Myosotis arvensis	Field Forget-me-not	
flowering	Myosotis discolor	Changing Forget-me-not	
flowering	Myosotis laxa	Tufted Forget-me-not	
flowering	Myosotis scorpioides	Water Forget-me-not	
flowering	Myosotis secunda	Creeping Forget-me-not	
flowering	Myosotis sylvatica	Wood Forget-me-not	
flowering	Myriophyllum alterniflorum	Alternate Water-milfoil	BHS_Species
flowering	Myriophyllum spicatum	Spiked Water-milfoil	
flowering	Myrrhis odorata	Sweet Cicely	Lancashire INNS
flowering	Narcissus	Cultivated daffodils	
flowering	Nardus stricta	Mat-grass	
flowering	Narthecium ossifragum	Bog Asphodel	
flowering	Nuphar lutea	Yellow Water-lily	
flowering	Nymphaea alba	White Water-lily	BHS_Species
flowering	Odontites vernus	Red Bartsia	
flowering	Oenanthe crocata	Hemlock Water-dropwort	
flowering	Oenanthe pimpinelloides	Corky-fruited Water-dropwort	BHS_Species, LBAP 2016
flowering	Oenothera	Evening Primrose	
flowering	Ophrys apifera	Bee Orchid	BHS_Species, ECCITES-B
flowering	Orchis mascula	Early-purple Orchid	ECCITES-B
flowering	Ornithopus sp.	A bird’s-foot	

flowering	Oxalis acetosella	Wood-sorrel	
flowering	Oxalis corniculata	Procumbent Yellow-sorrel	
flowering	Papaver dubium	Long Smooth-headed Poppy	
flowering	Papaver somniferum	Opium Poppy	
flowering	Parnassia palustris	Grass-of-Parnassus	BHS_Species, LBAP 2016
flowering	Pedicularis sylvatica	Lousewort	
flowering	Pentaglottis sempervirens	Green Alkanet	
flowering	Persicaria amphibia	Amphibious Bistort	
flowering	Persicaria bistorta	Common Bistort	
flowering	Persicaria hydropiper	Water-pepper	
flowering	Persicaria lapathifolia	Pale Persicaria	
flowering	Persicaria maculosa	Redshank	
flowering	Persicaria wallichii	Himalayan Knotweed	Lancashire INNS
flowering	Petasites albus	White Butterbur	
flowering	Petasites hybridus	Butterbur	
flowering	Petasites japonicus	Giant Butterbur	Lancashire INNS
flowering	Phalaris arundinacea	Reed Canary-grass	
flowering	Phalaris canariensis	Canary-grass	
flowering	Philadelphus coronarius	Mock-orange	
flowering	Phleum bertolonii	Smaller Cat's-tail	
flowering	Phleum pratense	Timothy	
flowering	Phragmites australis	Common Reed	
flowering	Pilosella aurantiaca	Fox-and-cubs	Lancashire INNS
flowering	Pilosella officinarum	Mouse-ear-hawkweed	
flowering	Pimpinella saxifraga	Burnet-saxifrage	
flowering	Pinguicula vulgaris	Common Butterwort	
flowering	Plantago lanceolata	Ribwort Plantain	
flowering	Plantago major	Greater Plantain	
flowering	Platanus x hispanica	London Plane	

flowering	Poa annua	Annual Meadow-grass	
flowering	Poa humilis	Spreading Meadow-grass	
flowering	Poa nemoralis	Wood Meadow-grass	
flowering	Poa pratensis	Smooth Meadow-grass	
flowering	Poa trivialis	Rough Meadow-grass	
flowering	Polemonium caeruleum	Jacob's-ladder	
flowering	Polygala serpyllifolia	Heath Milkwort	
flowering	Polygala vulgaris	Common Milkwort	
flowering	Polygonatum x hybridum	Garden Solomon's-seal	
flowering	Polygonum aviculare agg.	Knotgrass	
flowering	Populus alba	White Poplar	Lancashire INNS
flowering	Populus x canescens	Grey Poplar	Lancashire INNS
flowering	Populus nigra 'Italica'	Female Lombardy Poplar	
flowering	Populus nigra subsp. betulifolia	Black-poplar	BHS_Species, LBAP 2016
flowering	Populus x canadensis	Hybrid Black-poplar	
flowering	Populus tremula	Aspen	
flowering	Potamogeton berchtoldii	Small Pondweed	
flowering	Potamogeton crispus	Curled Pondweed	
flowering	Potamogeton natans	Broad-leaved Pondweed	
flowering	Potamogeton polygonifolius	Bog Pondweed	
flowering	Potentilla anglica	Trailing Tormentil	
flowering	Potentilla anglica x mixta	Hybrid Cinquefoil	
flowering	Potentilla anserina	Silverweed	
flowering	Potentilla erecta	Tormentil	
flowering	Potentilla palustris	Marsh Cinquefoil	
flowering	Potentilla reptans	Creeping Cinquefoil	
flowering	Potentilla sterilis	Barren Strawberry	
flowering	Primula - polyanthus hybrid	Primula - polyanthus hybrid	
flowering	Primula veris	Cowslip	

flowering	Primula vulgaris	Primrose	
flowering	Prunella vulgaris	Selfheal	
flowering	Prunus avium	Wild Cherry	
flowering	Prunus cerasifera	Cherry Plum	
flowering	Prunus domestica subsp. domestica	Plum	
flowering	Prunus domestica subsp. insititia	Bullace	
flowering	Prunus laurocerasus	Cherry Laurel	Lancashire INNS
flowering	Prunus padus	Bird Cherry	
flowering	Prunus spinosa	Blackthorn	
flowering	Pulicaria dysenterica	Common Fleabane	
flowering	Pulmonaria officinalis	Lungwort	
flowering	Pyrus sp.	A pear	
flowering	Quercus cerris	Turkey Oak	Lancashire INNS
flowering	Quercus coccinea	Scarlet Oak	
flowering	Quercus ilex	Evergreen Oak	
flowering	Quercus petraea	Sessile Oak	
flowering	Quercus x rosacea	Hybrid Oak	
flowering	Quercus robur	Pedunculate Oak	
flowering	Quercus rubra	Red Oak	
flowering	Ranunculus aconitifolius	Aconite-leaved Buttercup	
flowering	Ranunculus acris	Meadow Buttercup	
flowering	Ranunculus flammula	Lesser Spearwort	
flowering	Ranunculus hederaceus	Ivy-leaved Crowfoot	
flowering	Ranunculus lingua	Greater Spearwort	BHS_Species
flowering	Ranunculus omiophyllus	Round-leaved Crowfoot	
flowering	Ranunculus repens	Creeping Buttercup	
flowering	Ranunculus sceleratus	Celery-leaved Buttercup	
flowering	Reseda lutea	Wild Mignonette	
flowering	Reseda luteola	Weld	

flowering	Rhinanthus minor	Yellow-rattle	
flowering	Rhododendron ponticum	Rhododendron	Lancashire INNS
flowering	Ribes alpinum	Mountain Currant	
flowering	Ribes nigrum	Black Currant	
flowering	Ribes rubrum	Red Currant	
flowering	Ribes sanguineum	Flowering Currant	
flowering	Ribes uva-crispa	Gooseberry	
flowering	Rorippa nasturtium-aquaticum agg.	Watercress	
flowering	Rorippa palustris	Marsh Yellow-cress	
flowering	Rorippa sylvestris	Creeping Yellow-cress	
flowering	Rosa arvensis	Field-rose	
flowering	Rosa caesia subsp. vosagiaca	Glaucous Dog-rose	
flowering	Rosa canina agg.	Dog-rose	
flowering	Rosa 'Hollandica'	Dutch Rose	
flowering	Rosa mollis agg.	Soft Downy-rose	
flowering	Rosa multiflora	Many-flowered Rose	
flowering	Rosa rubiginosa agg.	Sweet-briar	BHS_Species
flowering	Rosa rugosa	Japanese Rose	Lancashire INNS
flowering	Rosa sherardii	Sherard's Downy-rose	
flowering	Rosa spinosissima	Burnet Rose	BHS_Species
flowering	Rosa tomentosa	Harsh Downy-rose	BHS_Species
flowering	Rubus armeniacus	Giant Blackberry	Lancashire INNS
flowering	Rubus bartonii	A bramble	
flowering	Rubus Bedford Giant	Rubus Bedford Giant	
flowering	Rubus chamaemorus	Cloudberry	BHS_Species, LBAP 2016
flowering	Rubus dasyphyllus	A bramble	
flowering	Rubus eboracensis	A bramble	
flowering	Rubus echinatoides	A bramble	
flowering	Rubus fruticosus agg.	Bramble agg.	

flowering	Rubus gibsonii DP Earl MS	A bramble	
flowering	Rubus hylocharis	A bramble	
flowering	Rubus idaeus	Raspberry	
flowering	Rubus incurvatiformis	A bramble	
flowering	Rubus intensior	A bramble	
flowering	Rubus laciniatus	Parsley-leaved Bramble	
flowering	Rubus lindebergii	A bramble	
flowering	Rubus lindleianus	A bramble	
flowering	Rubus loganobaccus	Loganberry	
flowering	Rubus nemoralis	A bramble	
flowering	Rubus newbouldii	A bramble	
flowering	Rubus plicatus	Plaited-leaved Bramble	
flowering	Rubus rufescens	A bramble	
flowering	Rubus scissus	A bramble	
flowering	Rubus spectabilis	Salmonberry	Lancashire INNS
flowering	Rubus sprengelii	A bramble	
flowering	Rubus tuberculatus	A bramble	
flowering	Rubus vestitus	A bramble	
flowering	Rubus warrenii	A bramble	
flowering	Rubus wirralensis	A bramble	
flowering	Rumex acetosa	Common Sorrel	
flowering	Rumex acetosella	Sheep's Sorrel	
flowering	Rumex conglomeratus	Clustered Dock	
flowering	Rumex crispus	Curled Dock	
flowering	Rumex obtusifolius	Broad-leaved Dock	
flowering	Rumex sanguineus	Wood Dock	
flowering	Sagina apetala	Annual Pearlwort	
flowering	Sagina apetala subsp. erecta	Fringed Pearlwort	
flowering	Sagina nodosa	Knotted Pearlwort	

flowering	Sagina procumbens	Procumbent Pearlwort	
flowering	Salix alba	White Willow	
flowering	Salix aurita	Eared Willow	
flowering	Salix caprea	Goat Willow	
flowering	Salix x reichardtii	Hybrid willow	
flowering	Salix cinerea	Common Sallow	
flowering	Salix cinerea subsp. cinerea	Grey Willow	
flowering	Salix cinerea subsp. oleifolia	Rusty Willow	
flowering	Salix daphnoides	European Violet-willow	
flowering	Salix x fragilis	Hybrid Crack-willow	
flowering	Salix pentandra	Bay Willow	
flowering	Salix purpurea	Purple Willow	
flowering	Salix x pontederiana	Hybrid willow	
flowering	Salix repens var. repens	Creeping Willow	
flowering	Salix viminalis	Osier	
flowering	Salix x smithiana	Broad-leaved Osier	
flowering	Sambucus nigra	Elder	
flowering	Sanguisorba officinalis	Great Burnet	
flowering	Sanicula europaea	Sanicle	
flowering	Sasa veitchii	Veitch's Bamboo	
flowering	Saxifraga granulata	Meadow Saxifrage	
flowering	Saxifraga x polita	False Londonpride	
flowering	Saxifraga tridactylites	Rue-leaved Saxifrage	
flowering	Saxifraga x urbium	Londonpride	
flowering	Scorzoneroides autumnalis	Autumn Hawkbit	
flowering	Scrophularia auriculata	Water Figwort	
flowering	Scrophularia nodosa	Common Figwort	
flowering	Sedum acre	Biting Stonecrop	
flowering	Sedum album	White Stonecrop	

flowering	Sedum rupestre	Reflexed Stonecrop	
flowering	Sedum spectabile	Butterfly Stonecrop	
flowering	Sedum spurium	Caucasian-stonecrop	
flowering	Senecio squalidus	Oxford Ragwort	
flowering	Senecio viscosus	Sticky Groundsel	
flowering	Senecio vulgaris	Groundsel	
flowering	Sidalcea malviflora	Greek Mallow	
flowering	Silene dioica	Red Campion	
flowering	Silene flos-cuculi	Ragged-Robin	
flowering	Silene latifolia	White Campion	
flowering	Silene uniflora	Sea Campion	
flowering	Sisymbrium officinale	Hedge Mustard	
flowering	Sisyrinchium bermudiana	Blue-eyed-grass	
flowering	Solanum dulcamara	Bittersweet	
flowering	Solanum nigrum	Black Nightshade	
flowering	Solidago sp.	A goldenrod	
flowering	Solidago gigantea	Early Goldenrod	Lancashire INNS
flowering	Solidago virgaurea	Goldenrod	
flowering	Sonchus arvensis	Perennial Sow-thistle	
flowering	Sonchus asper	Prickly Sow-thistle	
flowering	Sonchus oleraceus	Smooth Sow-thistle	
flowering	Sorbus aria agg.	Common Whitebeam agg.	
flowering	Sorbus aucuparia	Rowan	
flowering	Sorbus x thuringiaca	Bastard Service-tree	
flowering	Sorbus croceocarpa	Orange Whitebeam	
flowering	Sorbus glabriscula	Hupeh Rowan	
flowering	Sorbus intermedia agg.	Swedish Whitebeam agg.	
flowering	Sorbus torminalis	Wild Service-tree	BHS_Species, LBAP 2016
flowering	Sparganium erectum	Branched Bur-reed	

flowering	Spergula arvensis	Corn Spurrey	**RedList_GB_post2001-VU**
flowering	Spergularia marina	Lesser Sea-spurrey	
flowering	Spiraea x pseudosalicifolia	Confused Bridewort	Lancashire INNS
flowering	Stachys arvensis	Field Woundwort	**RedList_GB_post2001-NT**
flowering	Stachys palustris	Marsh Woundwort	
flowering	Stachys sylvatica	Hedge Woundwort	
flowering	Stellaria alsine	Bog Stitchwort	
flowering	Stellaria graminea	Lesser Stitchwort	
flowering	Stellaria holostea	Greater Stitchwort	
flowering	Stellaria media	Common Chickweed	
flowering	Stratiotes aloides	Water-soldier	BHS_Species, Lancs INNS
flowering	Succisa pratensis	Devil's-bit Scabious	
flowering	Symphoricarpos albus	Snowberry	Lancashire INNS
flowering	Symphoricarpos x chenaultii	Hybrid Coralberry	Lancashire INNS
flowering	Symphytum officinale	Common Comfrey	
flowering	Symphytum x uplandicum	Russian Comfrey	Lancashire INNS
flowering	Syringa vulgaris	Lilac	
flowering	Tanacetum parthenium	Feverfew	
flowering	Tanacetum vulgare	Tansy	
flowering	Taraxacum faeroense	Faeroes Dandelion	
flowering	Taraxacum hamatum	Hook-lobed Dandelion	
flowering	Taraxacum nordstedtii	Nordstedt's Dandelion	
flowering	Taraxacum officinale agg.	Dandelion	
flowering	Tellima grandiflora	Fringecups	Lancashire INNS
flowering	Teucrium scorodonia	Wood Sage	
flowering	Thlaspi arvense	Field Penny-cress	
flowering	Thymus polytrichus	Wild Thyme	
flowering	Tilia cordata	Small-leaved Lime	BHS_Species
flowering	Tilia x europaea	Lime	

flowering	Tolmiea menziesii	Pick-a-back-plant	Lancashire INNS
flowering	Torilis japonica	Upright Hedge-parsley	
flowering	Tragopogon pratensis	Goat's-beard	
flowering	Trichophorum caespitosum	Deergrass	
flowering	Trifolium dubium	Lesser Trefoil	
flowering	Trifolium hybridum	Alsike Clover	
flowering	Trifolium medium	Zigzag Clover	
flowering	Trifolium pratense	Red Clover	
flowering	Trifolium repens	White Clover	
flowering	Triglochin palustre	Marsh Arrowgrass	
flowering	Tripleurospermum inodorum	Scentless Mayweed	
flowering	Trisetum flavescens	Yellow Oat-grass	
flowering	Tulipa gesneriana	Garden Tulip	
flowering	Tussilago farfara	Coltsfoot	
flowering	Typha latifolia	Bulrush	
flowering	Ulex europaeus	Gorse	
flowering	Ulex gallii	Western Gorse	
flowering	Ulmus glabra	Wych Elm	
flowering	Ulmus procera	English Elm	
flowering	Urtica dioica	Common Nettle	
flowering	Urtica dioica subsp. galeopsifolia	Common Nettle subsp.	
flowering	Vaccinium myrtillus	Bilberry	
flowering	Vaccinium oxycoccos	Cranberry	
flowering	Valeriana dioica	Marsh Valerian	
flowering	Valeriana officinalis	Common Valerian	
flowering	Verbascum thapsus	Great Mullein	
flowering	Veronica arvensis	Wall Speedwell	
flowering	Veronica beccabunga	Brooklime	
flowering	Veronica chamaedrys	Germander Speedwell	

flowering	Veronica filiformis	Slender Speedwell	
flowering	Veronica hederifolia	Ivy-leaved Speedwell	
flowering	Veronica montana	Wood Speedwell	
flowering	Veronica officinalis	Heath Speedwell	
flowering	Veronica persica	Common Field-speedwell	
flowering	Veronica scutellata	Marsh Speedwell	BHS_Species
flowering	Veronica serpyllifolia	Thyme-leaved Speedwell	
flowering	Viburnum opulus	Guelder-rose	
flowering	Vicia cracca	Tufted Vetch	
flowering	Vicia hirsuta	Hairy Tare	
flowering	Vicia sativa subsp. nigra	Narrow-leaved Vetch	
flowering	Vicia sativa subsp. segetalis	Common Vetch	
flowering	Vicia sepium	Bush Vetch	
flowering	Vicia tetrasperma	Smooth Tare	
flowering	Viola palustris	Marsh Violet	
flowering	Viola riviniana	Common Dog-violet	
flowering	Vulpia bromoides	Squirreltail Fescue	
flowering	Zantedeschia aethiopica	Altar-lily	
horsetail	Equisetum arvense	Field Horsetail	
horsetail	Equisetum fluviatile	Water Horsetail	
horsetail	Equisetum telmateia	Great Horsetail	
horsetail	Equisetum palustre	Marsh Horsetail	
horsetail	Equisetum sylvaticum	Wood Horsetail	
liverwort	Aneura pinguis	A greasewort	
liverwort	Barbilophozia sp.	A pawwort	
liverwort	Calypogeia arguta	Notched Pouchwort	
liverwort	Calypogeia fissa	Common Pouchwort	
liverwort	Calypogeia muelleriana	Mueller's Pouchwort	
liverwort	Cephalozia bicuspidata	Two-horned Pincerwort	

liverwort	Cephalozia curvifolia	Wood-rust	
liverwort	Cephalozia lunulifolia	Moon-leaved Pincerwort	
liverwort	Cephaloziella	n/a	
liverwort	Chiloscyphus polyanthos	St Winifrid's Moss	
liverwort	Conocephalum conicum	Great-scented Liverwort	
liverwort	Conocephalum salebrosum	n/a	
liverwort	Diplophyllum albicans	White Earwort	
liverwort	Fossombronia pusilla	n/a	
liverwort	Frullania dilatata	Dilated Scalewort	
liverwort	Gymnocolea inflata subsp. inflata	Inflated Notchwort	
liverwort	Jungermannia atrovirens	Dark-green Flapwort	
liverwort	Jungermannia eucordifolia	Cordate Flapwort	BHS_Species
liverwort	Jungermannia pumila	Dwarf Flapwort	
liverwort	Lepidozia reptans	Creeping Fingerwort	
liverwort	Lophocolea bidentata	Bifid Crestwort	
liverwort	Lophocolea heterophylla	Variable-leaved Crestwort	
liverwort	Lophozia ventricosa	Tumid Notchwort	
liverwort	Lunularia cruciata	Crescent-cup Liverwort	
liverwort	Marchantia polymorpha	Common Liverwort	
liverwort	Mesoptychia badensis	Scarce Notchwort	BHS_Species
liverwort	Mesoptychia bantriensis	Bantry Notchwort	BHS_Species
liverwort	Mesoptychia turbinata	Top Notchwort	
liverwort	Metzgeria furcata	Forked Veilwort	
liverwort	Metzgeria violacea	Blueish Veilwort	BHS_Species
liverwort	Nardia scalaris	Ladder Flapwort	
liverwort	Orthocaulis atlanticus	Atlantic Pawwort	BHS_Species
liverwort	Orthocaulis floerkei	Common Pawwort	
liverwort	Pellia endiviifolia	Endive Pellia	
liverwort	Pellia epiphylla	Overleaf Pellia	

liverwort	Pellia neesiana	Nees' Pellia	
liverwort	Plagiochila porelloides var. porelloides	Lesser Featherwort	
liverwort	Ptilidium pulcherrimum	Tree Fringewort	
liverwort	Riccardia chamedryfolia	Jagged Germanderwort	
liverwort	Riccardia multifida	Delicate Germanderwort	
liverwort	Scapania irrigua	Heath Earwort	BHS_Species
liverwort	Scapania scandica	Norwegian Earwort	
liverwort	Scapania undulata	Water Earwort	
moss	Amblystegium serpens	Creeping Feather-moss	BHS_Species
moss	Amphidium mougeotii	Mougeot's Yoke-moss	
moss	Archidium alternifolium	Clay Earth-moss	BHS_Species
moss	Atrichum crispum	Fountain Smoothcap	
moss	Atrichum undulatum	n/a	
moss	Atrichum undulatum	Common Smoothcap	
moss	Aulacomnium androgynum	Bud-headed Groove-moss	
moss	Aulacomnium palustre	Bog Groove-moss	
moss	Barbula unguiculata	Bird's-claw Beard-moss	
moss	Blindiadelphus recurvatus	Recurved Rock-bristle	
moss	Brachytheciastrum velutinum	Velvet Feather-moss	
moss	Brachythecium albicans	Whitish Feather-moss	
moss	Brachythecium rivulare	River Feather-moss	
moss	Brachythecium rutabulum	Rough-stalked Feather-moss	
moss	Bryoerythrophyllum recurvirostrum	Red Beard-moss	
moss	Bryum archangelicum	Small-mouthed Thread-moss	
moss	Bryum argenteum	Silver-moss	
moss	Bryum bicolor	Bicoloured Bryum	
moss	Bryum caespiticium	Tufted Thread-moss	
moss	Bryum capillare	Capillary Thread-moss	BHS_Species
moss	Bryum dichotomum	Dune Thread-moss	BHS_Species

moss	Bryum gemmiferum	Small-bud Bryum	
moss	Bryum pallens	Pale Thread-moss	
moss	Bryum pseudotriquetrum	Marsh Bryum	
moss	Bryum pseudotriquetrum var. bimum	Long-leaved Thread-moss var.	BHS_Species
moss	Bryum pseudotriquetrum var. pseudotriquetrum	Long-leaved Thread-moss var.	
moss	Calliergon cordifolium	Heart-leaved Spear-moss	
moss	Calliergon giganteum	Giant Spear-moss	BHS_Species
moss	Calliergonella cuspidata	Pointed Spear-moss	
moss	Campylium protensum	n/a	BHS_Species
moss	Campylium stellatum	n/a	
moss	Campylopus flexuosus	Rusty Swan-neck Moss	
moss	Campylopus introflexus	Heath Star Moss	
moss	Campylopus pyriformis	Dwarf Swan-neck Moss	
moss	Ceratodon purpureus	Redshank	
moss	Climacium dendroides	Tree-moss	
moss	Cratoneuron filicinum	Fern-leaved Hook-moss	
moss	Ctenidium molluscum	Chalk Comb-moss	
moss	Dichodontium palustre	Marsh Forklet-moss	
moss	Dichodontium pellucidum	Transparent Fork-moss	
moss	Dicranella cerviculata	Red-neck Forklet-moss	
moss	Dicranella heteromalla	Silky Forklet-moss	
moss	Dicranella rufescens	Rufous Forklet-moss	
moss	Dicranella schreberiana	Schreber's Forklet-moss	
moss	Dicranella varia	Variable Forklet-moss	
moss	Dicranoweisia cirrata	Common Pincushion	
moss	Dicranum scoparium	Broom Fork-moss	
moss	Dicranum tauricum	Fragile Fork-moss	
moss	Didymodon fallax	Fallacious Beard-moss	

moss	Didymodon ferrugineus	Rusty Beard-moss	
moss	Didymodon insulanus	Cylindric Beard-moss	
moss	Didymodon rigidulus	Perthshire Beard-moss	
moss	Didymodon tophaceus	Olive Beard-moss	
moss	Ditrichum heteromallum	Curve-leaved Ditrichum	
moss	Drepanocladus aduncus	Kneiff's Hook-moss	BHS_Species
moss	Drepanocladus polygamus	Fertile Feather-moss	BHS_Species
moss	Encalypta streptocarpa	Spiral Extinguisher-moss	
moss	Ephemerum serratum	n/a	
moss	Fissidens adianthoides	Maidenhair Pocket-moss	
moss	Fissidens bryoides s.l.	Lesser Pocket-moss	
moss	Fissidens dubius	Rock Pocket-moss	
moss	Fissidens taxifolius	Common Pocket-moss	BHS_Species
moss	Fontinalis antipyretica	Greater Water-moss	
moss	Funaria hygrometrica	Common Cord-moss	
moss	Grimmia pulvinata	Grey-cushioned Grimmia	
moss	Heterocladium heteropterum	n/a	
moss	Homalothecium sericeum	Silky Wall Feather-moss	
moss	Hygrohypnella ochracea	Claw Brook-moss	
moss	Hygrohypnum luridum	Pict-moss	BHS_Species
moss	Hylocomium splendens	Glittering Wood-moss	
moss	Hypnum andoi	Mamillate Plait-moss	
moss	Hypnum cupressiforme	Cypress-leaved Plait-moss	
moss	Hypnum cupressiforme var. lacunosum	Great Plait-moss	
moss	Hypnum cupressiforme var. resupinatum	Supine Plait-moss	
moss	Hypnum jutlandicum	Heath Plait-moss	
moss	Isothecium myosuroides	n/a	
moss	Kindbergia praelonga	Common Feather-moss	
moss	Leptodictyum riparium	Kneiff's Feather-moss	

moss	Leptodontium flexifolium	Bent-leaved Beard-moss	
moss	Lewinskya affinis	Wood Bristle-moss	
moss	Mnium hornum	Swan's-neck Thyme-moss	
moss	Mnium stellare	Starry Thyme-moss	
moss	Musci sp.	A moss	
moss	Orthodontium lineare	Cape Thread-moss	
moss	Orthotrichum anomalum	Anomalous Bristle-moss	
moss	Orthotrichum cupulatum	Hooded Bristle-moss	
moss	Orthotrichum diaphanum	White-tipped Bristle-moss	
moss	Orthotrichum pulchellum	Elegant Bristle-moss	
moss	Oxyrrhynchium hians	Swartz's Feather-moss	
moss	Oxyrrhynchium speciosum	Showy Feather-moss	
moss	Palustriella commutata	n/a	
moss	Palustriella falcata	n/a	BHS_Species
moss	Philonotis calcarea	Thick-nerved Apple-moss	
moss	Philonotis fontana	Fountain Apple-moss	
moss	Physcomitrium pyriforme	Common Bladder-moss	
moss	Plagiomnium affine	Many-fruited Thyme-moss	
moss	Plagiomnium elatum	Tall Thyme-moss	
moss	Plagiomnium ellipticum	Marsh Thyme-moss	
moss	Plagiomnium rostratum	Long-beaked Thyme-moss	
moss	Plagiomnium undulatum	Hart's-tongue Thyme-moss	
moss	Plagiothecium denticulatum	Dented Silk-moss	
moss	Plagiothecium denticulatum var. denticulatum	Swamp Silk-moss	BHS_Species
moss	Plagiothecium succulentum	Juicy Silk-moss	
moss	Plagiothecium undulatum	Waved Silk-moss	
moss	Plenogemma phyllantha	Frizzled Pincushion	
moss	Pleurozium schreberi	Red-stemmed Feather-moss	
moss	Pogonatum aloides	Aloe Haircap	

moss	Pogonatum urnigerum	Urn Haircap	
moss	Pohlia annotina	Pale-fruited Thread-moss	
moss	Pohlia nutans	Nodding Thread-moss	
moss	Pohlia wahlenbergii	Pale Glaucous Thread-moss	
moss	Polytrichum commune s.l.	Common Haircap	
moss	Polytrichum formosum	Bank Haircap	
moss	Polytrichum juniperinum	Juniper Haircap	
moss	Polytrichum piliferum	Bristly Haircap	
moss	Pseudephemerum nitidum	Delicate Earth-moss	
moss	Pseudoscleropodium purum	Neat Feather-moss	
moss	Pseudotaxiphyllum elegans	Elegant Silk-moss	
moss	Ptychomitrium polyphyllum	Long-shanked Pincushion	
moss	Racomitrium aciculare	Yellow Fringe-moss	
moss	Racomitrium affine	Lesser Fringe-moss	
moss	Racomitrium fasciculare	Green Mountain Fringe-moss	
moss	Racomitrium heterostichum	Bristly Fringe-moss	
moss	Racomitrium lanuginosum	Woolly Fringe-moss	
moss	Rhizomnium punctatum	Dotted Thyme-moss	
moss	Rhynchostegium confertum	Clustered Feather-moss	
moss	Rhynchostegium murale	Wall Feather-moss	
moss	Rhynchostegium riparioides	Long-beaked Water Feather-moss	
moss	Rhytidiadelphus loreus	Little Shaggy-moss	
moss	Rhytidiadelphus squarrosus	Springy Turf-moss	
moss	Sanionia uncinata	Sickle-leaved Hook-moss	BHS_Species
moss	Sarmentypnum exannulatum	Ringless Hook-moss	BHS_Species
moss	Schistidium apocarpum	n/a	
moss	Schistidium crassipilum	Thickpoint Grimmia	
moss	Sciuro-hypnum plumosum	Rusty Feather-moss	
moss	Sciuro-hypnum populeum	Matted Feather-moss	

moss	Scorpidium cossonii	Intermediate Hook-moss	
moss	Sphagnum auriculatum	Cow-horn Bog-moss	
moss	Sphagnum capillifolium	Red Bog-moss	
moss	Sphagnum cuspidatum	Feathery Bog-moss	
moss	Sphagnum fallax	Flat-topped Bog-moss	
moss	Sphagnum fimbriatum	Fringed Bog-moss	
moss	Sphagnum palustre	Blunt-leaved Bog-moss	
moss	Sphagnum papillosum	Papillose Bog-moss	
moss	Sphagnum recurvum	A bog-moss	
moss	Sphagnum russowii	Russow's Bog-moss	
moss	Sphagnum squarrosum	Spiky Bog-moss	
moss	Sphagnum subnitens	Lustrous Bog-moss	
moss	Splachnum ampullaceum	Cruet Collar-moss	BHS_Species
moss	Straminergon stramineum	Straw Spear-moss	
moss	Streblotrichum convolutum	n/a	
moss	Tetraphis pellucida	Pellucid Four-tooth Moss	
moss	Thamnobryum alopecurum	Fox-tail Feather-moss	
moss	Thuidium tamariscinum	Common Tamarisk-moss	
moss	Tortula muralis	Wall Screw-moss	BHS_Species
moss	Tortula subulata	Upright Screw-moss	BHS_Species
moss	Tortula truncata	Common Pottia	
moss	Ulota bruchii	Bruch's Pincushion	
moss	Ulota crispa	Crisped Pincushion	
moss	Warnstorfia fluitans	Floating Hook-moss	
moss	Weissia controversa var. controversa	n/a	
stonewort	Chara vulgaris	Common Stonewort	

Appendix 9. Fungi and Lichens recorded in/adjacent to Worsthorne-with-Hurstwood.

Scientific name	Common name	Lancashire Key Species
Boletus badius	Bay Bolete	
Clavulinopsis corniculata	Meadow Coral	
Clavulinopsis helvola	Yellow Club	
Clavulinopsis umbrinella	Beige Coral	BHS_Species
Coprinus comatus	Shaggy Inkcap	
Cuphophyllus pratensis var. pratensis	Meadow Waxcap	
Cuphophyllus virgineus var. virgineus	Snowy Waxcap	
Cystoderma amianthinum	Earthy Powdercap	
Fomitopsis betulina	Razor Strop Fungus	
Geoglossum	Earthtongue	
Gliophorus irrigatus	Slimy Waxcap	
Gliophorus laetus	Heath Waxcap	
Gliophorus psittacinus	Parrot Waxcap	
Hygrocybe ceracea	Butter Waxcap	
Hygrocybe chlorophana	Golden Waxcap	
Hygrocybe coccinea	Scarlet Waxcap	
Hygrocybe conica	Blackening Waxcap	
Hygrocybe insipida	Spangle Waxcap	
Hygrocybe quieta	Oily Waxcap	
Hygrophoropsis aurantiaca	False Chanterelle	
Laccaria amethystina	Amethyst Deceiver	
Laccaria laccata	Deceiver	
Laetiporus sulphureus	Chicken of the Woods	
Lepista sordida	Sordid Blewit	
Mycena aetites	Drab Bonnet	
Polyporus squamosus	Dryad's Saddle	
Porpolomopsis calyptriformis	Pink Waxcap	BHS_Species
Rhytisma acerinum	Sycamore Tarspot	
Acarospora fuscata	n/a	
Baeomyces rufus	n/a	
Caloplaca flavocitrina	n/a	
Caloplaca oasis	n/a	
Candelariella aurella f. aurella	n/a	
Candelariella medians f. medians	n/a	
Cladonia coccifera	Scarlet-Cup Lichen	Nationally Scarce
Coenogonium pineti	n/a	
Lecania	n/a	
Lecanora conizaeoides f. conizaeoides	n/a	
Lecanora polytropa	n/a	
Lecanora soralifera	n/a	
Lecanora sulphurea	n/a	
Lecidella scabra	n/a	
Lepraria incana s. lat.	n/a	

Lepraria incana s. lat.	n/a	
Micarea lignaria var. lignaria	n/a	
Myriolecis dispersa	n/a	
Ochrolechia androgyna	n/a	
Parmelia saxatilis s. lat.	n/a	
Peltigera hymenina	n/a	
Placynthiella icmalea	n/a	
Platismatia glauca	n/a	
Porpidia tuberculosa	n/a	
Protoblastenia rupestris	n/a	
Protoparmeliopsis muralis	n/a	
Pseudevernia furfuracea var. ceratea	n/a	
Psilolechia lucida	n/a	
Ramalina farinacea	n/a	
Sarcogyne regularis	n/a	
Trapelia coarctata	n/a	
Trapeliopsis granulosa	n/a	
Verrucaria hochstetteri	n/a	
Verrucaria muralis	n/a	
Xanthoria parietina	Common Orange Lichen	