Rotherham Biodiversity Action Plan 2012
Woodland Habitat Action Plan

Contents

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List of Habitats Included

National Priority Habitats:
- Lowland mixed deciduous woodland
- Wet woodland
- Wood pasture and parkland

Local Priority Habitats:
- Broadleaved plantation
- Scrub

Habitat Descriptions

Woodlands covered by this action plan include all broadleaf semi-natural woodland and mixed broadleaf and coniferous plantations on former ancient semi-natural woodland sites. Also included are woodland sites of more recent origin.

The UK Habitat Action Plan for **Lowland mixed deciduous woodland** includes woodland growing on the full range of soil conditions, from very acidic to base-rich, and takes in most semi-natural woodland in southern and eastern England, and in parts of lowland Wales and Scotland. It thus complements the ranges of upland oak and upland ash types. It occurs largely within enclosed landscapes, usually on sites with well-defined boundaries, at relatively low altitudes, although altitude is not a defining feature. Many are ancient woods and they include the classic examples of ancient woodland studied by Rackham (1980) and Peterken (1981) in East Anglia and the East Midlands. The woods tend to be small, less than 20ha. Often there is evidence of past coppicing, particularly on moderately acid to base-rich soils; on very acid sands the type may be represented by former wood-pastures of oak and birch.

There is great variety in the species composition of the canopy layer and the ground flora, and this is reflected in the range of associated NVC and Stand Types. *Quercus robur* is generally the commoner oak (although *Quercus petraea* may be abundant locally) and may occur with virtually all combinations of other locally native tree species. [Note: the majority of Rotherham's oaks are hybrids, *Quercus* × *rosacea*, possibly a reflection of our location close to where the lowlands and uplands meet]

In terms of the National Vegetation Classification the bulk of this type falls into W8 (mainly sub-communities a-c in ancient or recent woods; in the lowlands W8d mostly occurs in secondary woodland) and W10 (sub-communities a to d) with lesser amounts of W16 (mainly W16a). Locally, it may form a mosaic with other types, including patches of planted beech dominated woodland, small wet areas, and types more commonly found in western Britain. Rides and edges may grade into grassland and scrub types.

Within Rotherham the most common types of lowland mixed deciduous woodland are Oak Birch woodland and Mixed Ash Woodland:

Oak-Birch Woodland
There is a national Upland Oakwood priority habitat but RMBC is not within the defined upland zone and none of the oak-birch woods in Rotherham exhibit the rich bryophyte communities and other distinguishing features of the upland oak woodland of western Britain; for these reasons the oak-birch woodlands of Rotherham are considered to be a better fit with the national lowland mixed deciduous woodland habitat.

Oak-birch woods are usually found on the acidic soils of the Coal Measures Natural Area and are the most common woodland within Rotherham. They are characterised by a predominance of oak (mainly *Quercus* × *rosacea*, but also sessile oak *Quercus petraea* and pedunculate oak *Quercus robur*) and silver birch *Betula pendula* in the canopy, with varying amounts of holly *Ilex aquifolium*, rowan *Sorbus aucuparia* and hazel *Corylus avellana* as the main understorey shrubs. The field layer varies depending on localized variations in the soil and past and current management practices, but is typically species-poor. Bracken *Pteridium aquilinium* and wavy hair-grass dominate on the most acidic soils with heather and very occasionally bilberry appearing in the canopy openings. On the less acidic soils the floral diversity increases with bramble *Rubus fruticosus*, creeping soft-grass *Holcus mollis* and bluebell *Hyacinthoides non-scripta*

becoming more frequent. In terms of NVC communities, Rotherham's oak-birch woods usually fall into either *Quercus robur - Pteridium aquilinum – Rubus fruticosus* (W10) or *Quercus* spp - *Betula* spp – *Deschampsia flexuosa* woodland (W16).

Many of Rotherham's oak-birch woodlands are ancient woodlands, although clear felling following the two World Wars has resulted in many of these woods being dominated by a maturing, even-aged canopy. Silver birch dominates many of these regenerating woodlands, which is typical of the natural successional development of oakwoods. There is a lack of mature and ancient trees and their associated wildlife in Rotherham's ancient woodlands. Many ancient woodland sites have been planted with non-native trees such as beech *Fagus sylvaticus,* sycamore *Acer pseudoplatanus* and sweet chestnut *Castanea sativa* but ongoing management, particularly in council owned woodlands, is resolving this. Before the beginning of the 20th century most of Rotherham's oak-birch woodlands would have been managed as coppice with standards.

Mixed Ash Woodland

There is a national Upland Mixed Ashwoods priority habitat but this is directed at woods on base-rich soils in the uplands of the north and west, in most of which ash, *Fraxinus excelsior*, is a major species. In Rotherham mixed ash woodlands occur on base-rich or leached soils where ash is a dominant species, although locally field maple, oak (most commonly pedunculate oak), birch, wych elm, small-leaved lime and hazel may be the most abundant species. For these reasons the mixed ash woodlands of Rotherham are considered to be a better fit with the national lowland mixed deciduous woodland habitat.

Other less frequent but characteristic species growing in these woods include wild service-tree *Sorbus torminalis* and large-leaved lime *Tilia platyphyllos*. These typically limestone woods are also important for yew *Taxus baccata* which may form small groves in intimate mosaics with the other major trees, whilst alder *Alnus glutinosa* may occur where there are transitions to wet woodland. Very occasionally Midland hawthorn *Crataegus laevigata* grows in some southerly woods, as Rotherham is near the northern extent of its natural distribution. Despite variations in canopy composition the ground flora remains broadly similar with bluebell, ramsons *Alium ursinum*, primrose *Primula vulgaris*, wood anemone *Anemone nemerosa* and dog's mercury *Mercurialis perennis* reaching local dominance.

Mixed ash woods are usually found on the well-drained, base-rich soils of the Southern Magnesian Limestone Natural Area and Rotherham has some good examples of mixed ashwoods, generally restricted to ancient woodland sites, although small narrow tracts may also be found on the more acidic soils of the Coal Measures, particularly in riparian areas or around flushes and often in the transitional zone between wet woodlands and the adjoining habitat.

NVC plant communities characterized by this habitat in the Borough of Rotherham include *Fraxinus excelsior - Acer campestre - Mercurialis perennis* (W8) and *Fraxinus excelsior - Sorbus aucuparia - Mercurialis perennis* woodland (W9) together with occasional small fragments of *Taxus baccata* woodland (W13) where yew groves occur on the Magnesian Limestone.

Wet Woodland

Wet woodland occurs on poorly-drained or seasonally-wet soils with a range of nutrient and pH status. In the wetter areas alder and willows *Salix* spp. are dominant. Ash, pedunculate and sessile oaks (and hybrids), silver birch and downy birch *Betula pubescens* become more frequent in the transitional zone between the wet woodland and drier woodland habitats. In localized areas aspen *Populus tremula* may be dominant. The non-native sycamore *Acer pseudoplatanus* is also frequent within many wet woodlands. English and wych elms may have been more common in wet wood transitional zones in Rotherham prior to Dutch elm disease. Wet woodlands are frequently narrow, linear strips or small fragments which are generally associated with watercourses, floodplains, springs and wet flushes. In Rotherham, they are often found in a mosaic with other key woodland habitats, in particular acid oak-birch woodlands on the Coal Measures and species-rich mixed ashwoods on the Southern Magnesian Limestone. The field layer in wet woodlands is often diverse and common plants include opposite-leaved golden-saxifrage *Chrysosplenium oppositifolium*, lesser celandine *Ranunculus ficaria*, creeping buttercup *Ranunculus repens*, wood avens *Geum urbanum* and herb Robert *Geranium robertanum*. The moist conditions favour bryophyte communities, but historic air pollution caused by heavy industry may have reduced their presence and diversity in Rotherham's wet woodlands

In Rotherham, many of the most important wet woodlands occur within ancient woods and add considerably to the diversity of such sites. Many of Rotherham's wet woodlands are of recent secondary origin but are still

of ecological significance as their development is a part of the natural succession process and their low, scrub-like habit provides ideal habitat for a range of key species. Alder, willows and birches are pioneer trees, rapidly responding to land-use and environmental change. These trees support particularly high invertebrate populations.

Wet Woodlands in Rotherham tend to be dominated by willow, namely the W1 *Salix cinerea - Galium palustre* woodland, W2 *Salix cinerea - Betula pubescens - Phragmites australis* woodland and W3 *Salix pentandra - Carex rostrata* scrub or by the alder dominated W6 *Alnus glutinosa - Urtica dioica* woodland or W7 *Alnus glutinosa - Fraxinus excelsior - Lysimachia nemorum* woodland.

Lowland Wood Pasture and Parklands

Wood Pasture and Parkland is considered to be a product of historic land management and represent a vegetation structure rather than being a particular plant community. Typically this structure consists of large, open-grown or high forest trees (often pollards) at various densities, in a matrix of grazed grassland, heathland and/or woodland floras. Included in this plan are:

- Wood-pastures and parklands derived from medieval forests and emparkments, wooded commons, parks and pastures with trees in them. Some have subsequently had a designed landscape superimposed in the 16th to 19th centuries. A range of native species usually predominates amongst the old trees but there may be non-native species which have been planted or regenerated naturally.
- Parklands with their origins in the 19th century or later where they contain much older trees derived from an earlier landscape.
- Under-managed and unmanaged wood-pastures with veteran trees, in a matrix of secondary woodland or scrub that has developed by regeneration and/or planting.
- Parkland or wood-pasture that has been converted to other land uses such as arable fields, forestry and amenity land, but where surviving veteran trees are of nature conservation interest. Some of the characteristic wood-pasture and parkland species may have survived this change in state.

The historical continuity and management of parkland and wood pasture habitats provides an important setting for mature and/or ancient or veteran trees and their related invertebrate populations. The ecological habitat value of old and veteran tree populations is often great with trees in avenues and in groupings being considered particularly valuable. This is because there are more ecological habitat niches available and they are more likely to support viable long-term populations of associated species.

The main NVC communities associated with this habitat include *Quercus robur – Pteridium aquilinium – Rubus fruticosus* woodland (W10), *Quercus spp. – Betula spp. – Deschampsia flexuosa* woodland (W16) and *Fagus sylvatica – Deschampsia flexuosa* woodland (W15). Frequently the grassland communities are of interest including the *Festuca ovina – Agrostis capillaris – Galium saxatile* grassland (U4), *Pteridium aquilinium –Galium saxatile* grassland (U20).

Broadleaved Plantation

Woodlands which are planted, rather than having arisen naturally, are termed plantations. Plantations can be created on land that has been historically wooded and even on ancient woodland sites (PAWS). Plantations are characterised by blocks of trees that are all of one age and often consisting of only one or two species of tree within each regular block of planting. Often the species planted were non-native species and in particular conifer, but many plantations were of broadleaves such as oak or beech and often plantations were a mix of conifer and broadleaves. Approximately 50% of council owned woodlands in Rotherham are considered to be broadleaved plantation; there is little coniferous plantation although there are some mixed woodland compartments within ancient semi-natural sites, e.g. Old Spring and Hawks Woods, and these are retained as they provide additional diversity.

Scrub

Scrub can be described as sub-climax woody vegetation; it can include wood margins and hedgerows but can also refer to more extensive stands usually developed by the succession or invasion of neglected bare ground, pasture or meadow. The structure and diversity will reflect the transitional and unstable character; ground flora diversity may be initially rich but as stands age and get denser the field layer will become poorer. Variations in climate and soil will affect scrub variation but key influences are previous land treatment and the availability of seed sources.

The most common NVC scrub community found in Rotherham is W21 *Crataegus monogyna – Hedera helix* scrub but some examples of W23 *Ulex europaeus – Rubus fruticosus* agg. are also present.

Ancient Woodland

Ancient woodland in England is defined as an area of land that is known to have been wooded continuously since at least 1600AD; it is considered to be irreplaceable. Ancient woodlands include both ancient semi-natural woodland and plantations on ancient woodland sites. Ancient woodlands have richer, more characteristic floras, greater vegetation structure and age class diversity than newer woodlands and, in general, have a high nature conservation interest. It is now widely recognised that ancient woodlands support a suite of species that are confined to older sites.

Ancient semi-natural woodland – these are ancient woodland sites that have retained the native tree and shrub cover that has not been planted, although it may have been managed by coppicing or felling and allowed to regenerate naturally.

Ancient replanted woodland - ancient woodland sites where the original native tree cover has been felled and replaced by planting.

Current Status

There are no precise data on the total extent of **lowland mixed deciduous woodland** in the UK, but in the late 1980s the Nature Conservancy Council estimated the total extent of this type to be about 250,000ha. There is however no doubt that the area of this priority type on ancient woodland sites has declined due to clearance, overgrazing and replanting with non-native species, by about 30-40% between the 1930's and 80's.

There are no reliable statistics on the extent of the overall resource of **wood pasture and parkland** in the UK, nor on historical and current rates of loss or degradation of this type of habitat. The figure of 10-20,000ha currently in a working condition given in the habitat statement of the UK Biodiversity Steering Group report is the current best estimate.

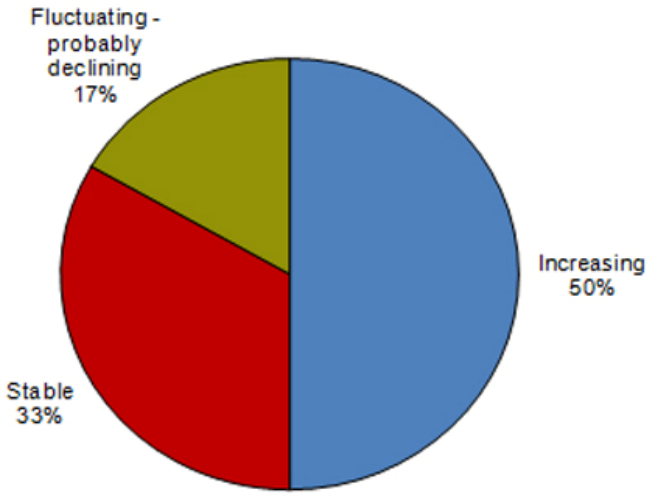
There are no precise data on the total extent of **wet woodland** in the UK, but in the late 1980's the Nature Conservancy Council estimated the total extent of this habitat within ancient semi-natural woodland to be about 25,000 - 30,000ha. The area of recent wet woodland may be at least as large again. Thus a crude estimate of the total wet woodland area in the UK is 50,000 - 70,000ha.

Locally available mapping provides the following estimates of habitat area in Rotherham:

Habitat	Source	Area
Non-coniferous woodland	MasterMap 2010	2,427ha
Non-coniferous scattered trees	MasterMap 2010	105.6ha
Scrub	MasterMap 2010	275.2ha
Oak-birch woodland	BAP Habitat Mapping 2003/04	273.4ha
Ash-elm woodland	BAP Habitat Mapping 2003/04	238.1ha
Wet woodland	BAP Habitat Mapping 2003/04	115.7ha

Rotherham's total area is 28,560ha suggesting that approximately 10% of the borough (2,807.8ha) is wooded (non-coniferous woodland, scattered trees or scrub).

In terms of current quality status the following diagram is taken from the Defra (2011)' A Biodiversity Strategy for England Measuring Progress: 2010 Assessment' document and shows the assessed status of woodland priority habitats as at 2008.



There are no precise data on the current quality status of woodland habitats within Rotherham. An available measure of habitat quality can be taken from the Rotherham Local Wildlife Site system where, as at 30 March 2011, 66 local wildlife sites met the selection guidelines for at least one of the woodland or parkland criteria and, of these, 32 were classed as being in positive management, i.e. 48.5%, which is roughly in line with the national picture. It is accepted that this is not a comprehensive assessment of the quality of Rotherham's woodlands but it is an indicator that could be used to measure future progress.

Key Factors and Influences

The following are considered to be the key issues affecting Rotherham's woodlands; they are not in any order of priority.

- Lack of recognition of the importance of ancient and biologically valuable woodlands, including lack of statutory protection
- Lack of recognition of the value of oak-birch woodlands as ancient woodlands due to the lack of large, mature trees within the woodland structure
- High levels of recreational pressure
- Abuse due to inappropriate activities, e.g. motorcycling, fires, fly-tipping and vandalism
- Constraints on the potential for woodland expansion from development and agriculture
- Fragmentation and isolation of woodlands increasing vulnerability and reducing sustainability
- Cessation of traditional management, e.g. coppicing, reducing the structural diversity of woodlands
- Lack of silvicultural management to restore and maintain favourable condition to ensure long-term survival
- Changes in water-table levels, drainage patterns and hydrology resulting from water extraction, development and climate change
- Air pollution and poor water quality
- Colonisation of invasive and non-native plant species including Japanese knotweed, Himalayan balsam and Spanish bluebell
- Loss of elms to Dutch Elm Disease
- Poor long-term survival of Ash (Ash die-back phenomenon)
- Removal of hedgerows that link woodlands with each other and other habitats
- Local nutrient enrichment leading to changes in soil nutrients and ground flora resulting from agricultural spray and run-off and from residential garden waste

Associated Habitats and Species

Lowland deciduous woodlands can be associated with any of the other priority habitats; habitat mosaics will depend on ground and soil conditions, hydrology and management activity.

The list provided in Appendix Two contains England Priority species that are associated with woodland habitats **and** that have been recorded in Rotherham. The list has been prepared by the Biodiversity Integration Groups, established to bring together habitat and associated species interests at an England level as part of Natural England led research.

Wet woodland combines elements of many other ecosystems and as such is important for many taxa. The high humidity favours bryophyte growth. The number of invertebrates associated with alder, birch and willows, is very large, although some are now confined to just a few sites. Dead wood within the sites can be frequent, and its association with water provides specialised habitats not found in dry woodland.

List of Key Sites of Good Quality

There are currently 66 Local Wildlife Sites that meet the selection guidelines for at least one of the woodland or parkland criteria; these are listed in appendix one. Of these sites 32 are listed as having evidence of positive management in the 2011 national indicator assessment and could be considered to be 'of good quality'. All council owned woodlands are managed in accordance with Forest Stewardship Council standards and Forestry Commission guidelines.

Key wood pasture and parkland habitats occur in the large estates (Sandbeck and Fitzwilliam Wentworth Estates) and at the larger town and country parks.

With regard to scrub habitat there are good examples to be found at Wickersley Gorse, Lindrick Golf Course, Bradgate Brickpits and within former quarry sites.

Sites of Concern

Silver Wood is currently considered to be undermanaged and RMBC is preparing a management plan to support its entry into the English Woodland Grant Undermanaged Woodland Scheme from December 2012.

The preparation of the Local Plan in Rotherham has involved the identification of land that is currently undeveloped but that could be used for residential and employment purposes. None of this land is thought to require the large-scale clearance of any existing woodland but some of the land is adjacent to or in close proximity to woodland. The following sites could be at risk of disturbance and reduction from proposed development:

- Bassingthorpe Spring
- Clough Streamside
- Tropical Butterfly House
- Flatts Valley
- Listerdale Wood

Specific Actions for Key Associated Species

The vast majority of species associated with woodland habitats will benefit from general woodland management activity. The following are considered to be important additional measures that are needed over and above general management in order to fully support the continued presence of certain species.

English Woodland Grant Woodland Improvement Grant: Reversing Woodland Bird Decline in South Yorkshire is resourcing the restoration and creation of woodland glades and rides in Old Spring Wood and Wickersley Wood to support Woodcock, Garden Warbler, Marsh Tit, Willow Tit, Hawfinch and Lesser spotted woodpecker.

Although Badger is not a species listed as a national priority it does receive legal protection and is considered to be a local priority in Rotherham. Specific actions will be identified for woodlands where badgers are known or believed to be present with the aim of conserving the species; this will be delivered via the Badger Species Action plan and by the South Yorkshire Badger Group.

Scale of Potential Biodiversity Action

The majority of woodlands will be able to be assigned a suitable level of management action based on the following scale; actions may be dependant on resources available but also on site specific decisions as to the purpose and state of individual woodlands and the intent of the landowner:

Minimal intervention – habitat management activities will be restricted to health and safety, access and reduction / prevention of invasive species actions where these are highlighted as concerns. Survey / monitoring may occur to ensure up to date environmental information is available.

Structural management – habitat management activities will be put in place to restore or maintain specific structural features or agreed structural diversity. This could include the creation of glades and rides, increasing woodland edge habitat, removing individual mature non-native specimens, creating standing or fallen deadwood habitat and extraction of timber.

Creation / Expansion – agreed action will be taken to allow the extent of a woodland to increase or to create a new area of woodland; this could involve planting or could involve allowing an area to naturally regenerate from its existing habitat or state.

Species-specific actions – as arising; could involve the installation of bird nest boxes, bat roost features, creation and protection of badger setts.

Objectives and Targets

The England Biodiversity Strategy (2011) includes the priority to establish more coherent and resilient ecological networks on land that safeguard ecosystem services for the benefit of wildlife and people. It also proposes that a suitable priority action for Forestry is to bring a greater proportion of our existing woodlands into sustainable management and expand the area of woodland in England. The Yorkshire & Humber Regional Biodiversity Strategy lists the following Forestry Objectives:

- Continue to support the adoption of sustainable practices in forestry and woodland management and promote the achievement of high standards through publicity and award schemes.
- Determine the distribution and status of priority woodland habitats and species within the region, and ensure that regional targets derived from the national woodland habitat and species action plans are met.
- Build on the work that is underway to map existing functional ecological networks to identify areas for potential woodland habitat restoration or creation to fill gaps in the network. Work with landowners, the forestry industry and others to implement these plans.
- Work with woodland owners, the forestry industry and others to undertake a condition assessment of all Ancient Woods within the region and draw up a prioritised plan for their restoration, focusing particularly on planted ancient woodland sites.
- Recognise the role of trees and woodlands in the provision of green infrastructure and in the contribution they can make to meeting Access to Natural Greenspace (ANGSe) standards through delivery of adopted targets for Accessible Woodland within the region.
- Plan for the incorporation of native trees into an enhanced programme of tree planting in the urban environment to benefit from their positive effects on air quality and climate amelioration.
- Provide guidance for biomass production in the region to ensure that it delivers biodiversity benefits alongside climate change mitigation.

The Yorkshire and Humber Biodiversity Delivery Strategy sets the following targets:

	Yorkshire and Humber Target	**Target still to be met 2010-2015**
Native woodland (restoration)	3,780 ha	2,517 ha
Native woodland (expansion)	7,154 ha	3,422.5 ha
Wood pasture (restoration)	40 sites	37 sites
Wood pasture (expansion)	12 sites	Not known

Restoration = Improve the condition of relict habitat so that it qualifies as BAP habitat.
Aim: to restore areas of degraded habitat or remnant elements to a state where it is considered to be BAP habitat in good condition. This leads to an expansion of the extent of the BAP habitat and ultimately an increase in the area in good condition.

Expansion: Increase the extent of the resource
Aim is to establish BAP habitat on land where it is not present and where no significant relicts of the BAP habitat currently exist. The targets should be set for the total amount of expansion to be achieved since plan publication.

In order to support the delivery of national and regional objectives and targets the following are the proposed objectives for the Rotherham Woodlands Biodiversity Action Plan:

<u>Conserve the existing woodland resource by:</u>

- No loss of ancient semi-natural woodlands
- No net loss of woodland cover
- Undertake an appropriate level of management in woodlands that are in the control of Rotherham BAP partner organisations

- Provide support and advice to other landowners to encourage suitable management action at sites not in our control
- Consider the potential for traditional and new woodland products to support suitable management practices, e.g. coppicing, biomass

Expand the existing woodland resource by:

- Identifying new areas for woodland creation; prioritising sites adjacent or close to existing woodland where the principles of natural expansion and colonisation can be used to develop a sustainable woodland ecology
- Agree the provision of buffer zones around existing woodlands that may be affected by development pressure and allow these zones to colonise and succeed naturally
- Increase the area of woodland cover by 10% (using the 2010 MasterMap figures as a baseline) by 2025

Connect the woodland resource by:

- Identifying opportunities to connect existing woodlands via hedgerow planting or new woodland creation
- Identify opportunities to link woodland to other semi-natural habitats, especially hedgerows and watercourses via hedgerow planting or new woodland creation

Promote the special interest of the woodland resource by:

- Providing a rolling programme of habitat and species monitoring within accessible woodlands
- Producing and sharing site based management plans that have biodiversity action as a key principle
- Identify woodlands that meet Local Wildlife Site selection criteria
- Support the delivery of events and educational visits to accessible woodland sites

Rotherham Biodiversity Forum, and other partners, will prepare a prioritised programme of action that will guide delivery across Rotherham over the plan period, i.e. to 2020.

Appendix One - Local Wildlife Sites with Woodland Interest 2011

Site	Site Name	W1	W2	W3	P1	P2	2011 +ve management
2	Loscar Common	T	F	T	F	F	
3	Lob Wells Wood	T	F	T	F	F	
4	Chesterfield Canal	T	T	T	F	F	Yes
5	Nor Wood and Locks	T	T	T	F	F	
6	Rother Valley Country Park	F	F	T	T	F	Yes
7	Nickerwoods & Ponds	F	F	T	F	F	
8	Todwick Common	F	F	T	F	F	
10	Anston Stones Wood	T	T	T	F	F	Yes
11	Lindrick Common	T	F	T	F	F	Yes
12	Dewidales Wood	F	T	T	F	F	
15	Swinston Hill Woods	T	F	T	F	F	
16	Dinnington Colliery Tip	F	T	T	F	F	Yes
19	Langold Holt	T	F	T	F	F	
21	Ivy Lodge Plantation & Rough Wood	T	F	T	F	F	
22	Firbeck Hall Woodlands	T	F	T	F	F	
24	Long and Little Thwaite Woods	T	F	T	F	F	
29	Ulley Country Park	F	F	T	F	F	Yes
30	Burnt Wood	T	F	T	F	F	
31	Treeton Wood	T	F	T	F	F	Yes
32	Treeton Dyke	T	F	T	F	F	Yes
34	Catcliffe Flash LNR	F	F	T	F	F	
36	Whiston Meadows	F	F	T	F	F	Yes
37	Canklow Wood	T	F	T	F	F	Yes
39	Wickersley Gorse	T	T	T	F	F	Yes
42	Wickersley Wood	T	F	T	F	F	Yes
43	King's Pond Plantation	F	F	T	F	F	
44	Thurcroft Hall	T	F	T	F	F	
47	Hooton Levitt (SW) woodlands	T	F	T	F	F	
50	Roche Abbey	T	T	T	F	F	Yes
53	Sandbeck Park	T	F	T	T	F	Yes
55	Maltby Commons & Woodlands	T	F	T	F	F	Yes
58	Lilly Hall	T	F	T	F	F	
61	Gulling Wood and Silver Wood	T	F	T	F	F	
62	Silverwood Tip & Odd Hill	F	F	T	F	F	
63	Listerdale Wood	F	F	T	F	F	
64	Gibbing Greave & Herringthorpe Wood	T	F	T	F	F	Yes
67	Bassingthorpe Spring & Hudson's Rough	T	F	T	F	F	Yes
68	Grange Park	T	T	T	F	F	Yes
69	Keppel's Field LNR	T	F	T	F	F	Yes
70	Lady Clough & Smithy Wood	T	F	T	F	F	
71	Hesley Wood	T	F	T	F	F	
72	Barley Hole Springs	F	F	T	F	F	Yes
75	New Stubbin Colliery & Stubbin Incline	F	F	T	F	F	
76	Warren Vale Local Nature Reserve	T	T	T	F	F	
79	Thrybergh Tip	F	F	T	F	F	
81	Ravenfield Park & Firsby Reservoirs	F	F	T	F	F	Yes
82	Hooton Cliff	T	F	T	F	F	Yes
86	Creighton & Piccadilly Woods	T	F	T	F	F	Yes
87	Wath Wood & Boyd Royd Wood	F	F	T	F	F	Yes
88	Flatts Valley	F	F	T	F	F	
89	Hoober Plantation	F	F	T	F	F	Yes
90	Rainborough Park	T	F	T	F	F	Yes

91	Simon Wood	F	F	T	F	F	Yes
92	Lee Wood	F	F	T	F	F	Yes
93	King's wood	T	F	T	F	F	Yes
95	Skiers Spring Wood	T	F	T	F	F	Yes
96	Rockingham Wood & Shepherd's plantation	F	F	T	F	F	Yes
98	Revel Wood	T	F	T	F	F	
101	Hazel Road Wood	T	F	F	F	F	Yes
103	Monk Wood	F	F	T	F	F	
108	Sheffield & South Yorkshire Navigation	F	F	T	F	F	
116	Clough Streamside	F	F	T	F	F	
117	Thorpe Mine	F	F	T	F	F	
121	Bradgate Brickworks	F	T	F	F	F	
123	Larch Plantation	F	F	T	F	F	
204	Tropical Butterfly House	F	F	T	F	F	

Rotherham Local Wildlife Site Selection – Criteria Summary

(For full details please see Rotherham Local Wildlife Site System: Part 2 Site Selection Guidelines for Rotherham 2010)

Woodland Selection Guidelines

Woodland sites will be eligible for selection as a Local Wildlife Site if they meet any of the following guidelines.

W1 Woodlands with the characteristics of ancient woodland with a minimum species index score of 10 from the indicative species list (Table 9).

W2 Areas of semi-natural woodland of more than 0.5ha in size, of one of the following National Vegetation Classification (NVC) types: -

- W1 *Salix cinerea-Galium palustre* woodland
- W2 *Salix cinerea-Betula pubescens-Phragmites australis* woodland
- W6 *Alnus glutinosa-Urtica dioica* woodland
- W7 *Alnus glutinosa-Fraxinus-Lysimachia nemorum* woodland
- W8 *Fraxinus excelsior - Acer campestre - Mercurialis perennis* woodland
- W9 *Fraxinus excelsior - Sorbus aucuparia - Mercurialis perennis* woodland

W3 Woodland sites of 0.5 hectare or more that:

- If it is an acidic woodland, has a score 6 or more from the indicative species list (Table 10),
- If it is a neutral to calcareous woodland, has a score 12 or more from the indicative species list (Table 11), or
- If it is a wet woodland or scrub community, has a score 10 or more from the indicative species list (Table 12).

Parkland, wood pasture and scattered trees selection guidelines

Sites will be eligible for selection as a Local Wildlife Site if they meet either of the following guidelines:

P1 Parkland or wood pasture sites greater than 2ha that support one or more of the habitats traditionally associated with parkland or wood pasture and support blocks, groupings or scattered old or veteran trees in combination with either grazed woodland or grassland.

P2 Groupings (normally 5 or more) of comparatively old (normally 100 years +) and/or veteran broad-leaved trees in former parkland or wood pasture or similar sites and that are known to support fungi and/or invertebrates and/or lichens that are either characteristic or specialist species of veteran trees.

Appendix Two - List of those England Priority Species that have been recorded in Rotherham and are associated with Woodland Priority Habitats

Scientific name	Common name	Classification	Woodland Type	Habitat
Bufo bufo	Common Toad	amphibian	general woodland	deciduous woodland; clearings and rides
Triturus cristatus	Great Crested Newt	amphibian	general woodland	deciduous woodland; clearings and rides
Anthus trivialis trivialis	Tree Pipit	bird	general woodland	wood edge; open woodland; young conifer plantations
Caprimulgus europaeus europaeus	Nightjar	bird	general woodland	wood-edge; young conifer plantations
Carduelis cabaret	Lesser Redpoll	bird	general woodland	wood-edge; young conifer plantations; pioneer woodland
Coccothraustes coccothraustes s	Hawfinch	bird	general woodland	deciduous woodland; parkland; orchards
Cuculus canorus canorus	Common Cuckoo	bird	general woodland	deciduous woodland
Dendrocopos minor comminutus	Lesser Spotted Woodpecker	bird	general woodland	deciduous woodland; wood pasture/parkland
Emberiza citrinella citrinella	Yellowhammer	bird	general woodland	wood edge; scrub; hedgerows
Emberiza schoeniclus	Reed Bunting	bird	general woodland	wood edge; wet woodland; young forestry plantations
Locustella naevia naevia	Grasshopper Warbler	bird	general woodland	wood edge; scrub; young forestry plantations
Lullula arborea arborea	Wood Lark	bird	general woodland	wood edge, young forestry plantations
Muscicapa striata striata	Spotted Flycatcher	bird	general woodland	deciduous woodland; parkland
Passer montanus montanus	Tree sparrow	bird	general woodland	wood edge; wet woodland, hedgerows; wood pasture/parkland
Phylloscopus sibilatrix	Wood Warbler	bird	general woodland	deciduous woodland
Prunella modularis occidentalis	Dunnock (Hedge Accentor)	bird	general woodland	wood edge; hedgerows; scrub
Pyrrhula pyrrhula pileata	Bullfinch	bird	general woodland	wood edge; hedgerows; scrub; orchards
Streptopelia turtur turtur	Turtle Dove	bird	general woodland	wood edge; scrub, hedgerows
Sturnus vulgaris vulgaris	Starling	bird	general woodland	mature trees; wood edge; hedgerows
Turdus philomelos clarkei	Song Thrush	bird	general woodland	open woodland; wood edge; scrub; wood pasture/parkland
Anomodon longifolius	Long-leaved Tail-moss	bryophyte	general woodland	calc rock faces in woodland (ravines)
Telaranea nematodes	Irish Threadwort	bryophyte	general woodland	deciduous woodland
Boloria euphrosyne	Pearl-bordered Fritillary	butterfly	general woodland	woodland clearings; glades and rides; coppice woodland
Boloria selene	Small Pearl-bordered Fritillary	butterfly	general woodland	woodland clearings; glades and rides; coppice woodland
Erynnis tages	Dingy Skipper	butterfly	general woodland	woodland clearings; glades and rides
Hamearis lucina	Duke of Burgundy	butterfly	general woodland	woodland clearings; glades and rides, coppice woodland
Hipparchia semele	Grayling	butterfly	general woodland	woodland clearings; glades and rides
Leptidea sinapis	Wood White	butterfly	general woodland	woodland clearings; glades and rides

Pyrgus malvae	Grizzled Skipper	butterfly	general woodland	woodland clearings; glades and rides
Satyrium w-album	White Letter Hairstreak	butterfly	general woodland	elm trees; deciduous woodland; wood edge
Erinaceus europaeus	Hedgehog	mammal	general woodland	generalist - deciduous woodland; hedgerows; wood pasture/parkland
Lutra lutra	Otter	mammal	general woodland	generalist - riparian woodland
Mustela putorius	Polecat	mammal	general woodland	deciduous woodland
Nyctalus noctula	Noctule	mammal	general woodland	deciduous woodland; wood edge; wood pature/parkland
Pipistrellus pygmaeus	Soprano Pipistrelle	mammal	general woodland	deciduous woodland - riparian, wood edge, wood pasture/parkland
Plecotus auritus	Brown Long-eared bat	mammal	general woodland	deciduous woodland; wood edge; wood pasture/parkland
Sciurus vulgaris	~~Red Squirrel~~ – no recent records	mammal	general woodland	deciduous and conifer woodland
Cossus cossus	Goat Moth	moth	general woodland	woodland; wood-pasture/parkland
Noctua orbona	Lunar Yellow Underwing	moth	general woodland	woodland rides; plantations
Rheumaptera hastata	Argent and sable	moth	general woodland	deciduous woodland; moorland
Sciota hostilis	Scarce Aspen Knot-horn	moth	general woodland	deciduous woodland
Anguis fragilis	Slow-worm	reptile	general woodland	deciduous woodland; clearings and rides
Natrix natrix	Grass Snake	reptile	general woodland	deciduous woodland; clearings and rides; wet woodland
Vipera berus	Adder	reptile	general woodland	deciduous woodland; clearings and rides
Zootoca vivipara	Common Lizard	reptile	general woodland	deciduous woodland; clearings and rides
Campanula patula	Spreading Bellflower	vascular plant	general woodland	open woodland; wood edge
Fallopia dumetorum	Copse-bindweed	vascular plant	general woodland	deciduous woodland; hedgerows
Ophrys insectifera	Fly Orchid	vascular plant	general woodland	open deciduous woodland; scrub
Bufo bufo	Common Toad	amphibian	wet woodland	deciduous woodland; clearings and rides
Triturus cristatus	Great Crested Newt	amphibian	wet woodland	deciduous woodland; clearings and rides
Carduelis cabaret	Lesser Redpoll	bird	wet woodland	wood-edge; young conifer plantations; pioneer woodland
Dendrocopos minor comminutus	Lesser Spotted Woodpecker	bird	wet woodland	deciduous woodland; wood pasture/parkland
Emberiza schoeniclus	Reed Bunting	bird	wet woodland	wood edge; wet woodland; young forestry plantations
Passer montanus montanus	Tree sparrow	bird	wet woodland	wood edge; wet woodland, hedgerows; wood pasture/parkland
Turdus philomelos clarkei	Song Thrush	bird	wet woodland	open woodland; wood edge; scrub; wood pasture/parkland
Lutra lutra	Otter	mammal	wet woodland	generalist - riparian woodland
Nyctalus noctula	Noctule	mammal	wet woodland	deciduous woodland; wood edge; wood pature/parkland
Pipistrellus pygmaeus	Soprano Pipistrelle	mammal	wet woodland	deciduous woodland - riparian, wood edge, wood pasture/parkland
Plecotus auritus	Brown Long-eared bat	mammal	wet woodland	deciduous woodland; wood edge; wood pature/parkland
Natrix natrix	Grass Snake	reptile	wet woodland	deciduous woodland; clearings and rides; wet woodland

Caprimulgus europaeus europaeus	Nightjar	bird	parkland	wood-edge; young conifer plantations
Coccothraustes coccothraustes	Hawfinch	bird	parkland	deciduous woodland; parkland; orchards
Dendrocopos minor comminutus	Lesser Spotted Woodpecker	bird	parkland	deciduous woodland; wood pasture/parkland
Lullula arborea arborea	Wood Lark	bird	parkland	wood edge, young forestry plantations
Muscicapa striata striata	Spotted Flycatcher	bird	parkland	deciduous woodland; parkland
Passer montanus montanus	Tree sparrow	bird	parkland	wood edge; wet woodland, hedgerows; wood pasture/parkland
Turdus philomelos clarkei	Song Thrush	bird	parkland	open woodland; wood edge; scrub; wood pasture/parkland
Usnea florida	a lichen	lichen	parkland	mature trees; parkland; wayside trees; woodland
Nyctalus noctula	Noctule	mammal	parkland	deciduous woodland; wood edge; wood pature/parkland
Pipistrellus pygmaeus	Soprano Pipistrelle	mammal	parkland	deciduous woodland - riparian, wood edge, wood pasture/parkland
Plecotus auritus	Brown Long-eared bat	mammal	parkland	deciduous woodland; wood edge; wood pature/parkland
Cossus cossus	Goat Moth	moth	parkland	woodland; wood-pasture/parkland

Notes: