Criteria for selection of woodland Local Wildlife Sites in the Sheffield Context

Introduction

There are four overlapping categories of woodland that should be considered for selection as Local Wildlife Sites:

1) Ancient woodland (LBAP Priority Habitat)
    - land that has been continuously wooded since 1600AD or earlier.
2) Upland oakwood (UKBAP Priority Habitat)
    - characterised by a predominance of oak and birch in the canopy, with varying amounts of holly, rowan and hazel as the main understorey species (Maddock, 2008).
3) Wet woodland (UKBAP Priority Habitat)
    - occurring on poorly drained or seasonally wet soils, with alder, birch and willows as the predominant tree species (Maddock, 2008).
4) Woodland with other features of importance for nature conservation, such as
    - populations of BAP Priority Species and/or Red Data Book Species;
    - veteran trees;
    - rookeries, heronries and major bird roosts.

NB: These four categories are not mutually exclusive. For example, Ladies Spring Wood is an ancient woodland with areas of both upland oakwood and wet woodland.

The proposed selection criteria are summarised in the table on page 2 (overleaf).

Summary of Selection Criteria

	Essential	Desirable
Size (applies to all types of woodland)	The site must cover least 0.5 hectare (or be more than 100 metres in length if it is a linear feature, such as riparian woodland).	
Ancient Woodland	The site must be a 'known ancient woodland' (see list in Appendix 1) and/or be listed in the 'Ancient Woodland Inventory' (Appendix 2) and/or hold at least 10 ancient woodland indicators (Appendix 3).	If the site has been subject to replanting, it still retains areas of relict ground flora. If selection is based on the presence of indicator species, there is supporting landscape evidence and allowing for local variations in terrain, drainage and soils, the indicators are evenly distributed across the site.
Upland Oakwood	The canopy must be dominated by mature oak trees. Birch may also be locally abundant but, if so, the woodland must be well-established. Holly and/or rowan and/or hazel must be present in the understorey. Wavy hair-grass and/or creeping soft-grass must be at least frequent in the ground layer, except where excluded by dense shade.	The wood is growing on steeply sloping ground at an altitude of 150 metres or more. The ground/field layer features wildflowers such as wood sorrel and common cow-wheat, with ferns such as broad-buckler and hard fern. Mosses are locally abundant - typically *Dicranum majus*, plus *Sphagnum* spp. in wet areas. Bilberry and/or heather are present in open areas. The wood supports breeding populations of redstart and/or wood warbler and/or pied flycatcher.
Wet Woodland	Underlying soils must be permanently or seasonally wet. The canopy must be dominated by alder and/or birch and/or willow (though other species may be present in drier areas).	Riparian woodland holds relict ancient woodland ground flora. Mosses are abundant in the ground layer. Woodland is associated with wetland habitats (e.g. ponds and marshes).
Other features of importance for nature conservation		The site has recent records of Red Data and/or BAP Priority Species. The site holds veteran trees and associated wildlife. The site hosts a nesting colony of rooks and/or herons. The site is regularly used as a roosting site by large numbers of birds.

Explanatory notes

1) Ancient Woodland

For the purposes of LWS selection, this category covers three overlapping types of woodland:

- known ancient woodland (i.e. with conclusive historical evidence);
- woodland with the characteristics of ancient woodland (e.g. with strong assemblages of ancient woodland indicator species);
- plantations on the site of ancient woodland (also known as 'planted ancient woodland sites' or 'ancient replanted').

NB: These three types of woodland are not mutually exclusive.

a) Known ancient woodland

In the 1980s, Melvyn Jones undertook detailed historical research into the origins of Sheffield's woodlands. His findings were published in several books and articles, including:

- 'Ancient Woods in the Sheffield Area' (Sorby Record no. 24, 1986);
- 'Sheffield's Woodland Heritage' (1989 & 1993).

Mel Jones was able to unearth **conclusive documentary evidence** to show that at least 38 areas of woodland within the city boundary are of ancient origin. All but one of these areas lie inside the Sheffield Local Planning Authority Boundary (SLPAB). For details, see the list in Appendix 1.

According to Mel Jones, *"The woods vary in quality. In some cases their character has been radically altered by the decline in traditional management, by neglect, by vandalism, by mining activity, by the planting of exotics and conifers, and by transport developments"* (Jones, 1993).

Mel Jones' original list has been 'fine-tuned' by other researchers. In the early 1990s, Roger Butterfield undertook studies of Woolley Wood, Roe Woods and Jervis Lum. The 'Fuelling a Revolution' programme later gathered further historical information, much of which is available on-line at http://www.heritagewoodsonline.co.uk.

Mel Jones also lists 12 'known ancient woods now lost'. It is worth noting that traces of some of these woods still survive. For instance, a small fragment of Burngreave Wood is preserved in a corner of Burngreave Cemetery.

b) Sites listed in the Ancient Woodland Inventory

The Ancient Woodland Inventory (AWI) was a nationwide survey initiated by the Nature Conservancy Council in 1981. Potential ancient woodland sites were first identified from early Ordnance Survey maps. The following types of evidence were then used to assess whether each wood was likely to be of ancient origin:

- name;
- situation in the landscape;
- relationship to the surrounding patterns of enclosure;
- presence of indicator species (see below).

The provisional inventories and maps were completed by the early 1990s. The maps were later digitised and made available on-line via http://magic.defra.gov.uk.

The provisional AWI for South Yorkshire was published in 1986. The digitised maps and associated data have recently been added to Sheffield City Council's GIS system.

The minimum size of woods included in the provisional inventory is **2 hectares**. However, in some cases, the woods have been subdivided into compartments/polygons covering less than 2 ha. In south-east England, the inventory is currently being revised and updated to include woods as small as 0.25 ha.

In the Sheffield district, there is a considerable overlap between the AWI and Mel Jones' list of known ancient woods. However, the AWI identifies a number of additional woods that are **likely to be of ancient origin**, even though Mel Jones' research has not uncovered relevant documentary evidence. These additional woods are best described as *"having the characteristics of ancient woodland"*.

The table in Appendix 2 shows many (but not all) of the woods within the SLPAB that are listed in the AWI. Some of the woods in the inventory are, as yet, un-named. Others have been grouped together under a single name (e.g. 'Green Lane Spring', 'Beeley Wood West' and 'River Don Wood West'). To check the status of a particular wood, it is best to visit http://magic.defra.gov.uk or view the appropriate layers on Sheffield City Council's GIS system.

c) Ancient woodland botanical indicator species

The organisms most frequently used as ancient woodland indicators are vascular plants. However, there have also been attempts to develop systems based on mosses, fungi, lichens and invertebrates.

The use of ancient woodland botanical indicators can be traced back to work undertaken by George Peterken in 1970s. The use of them has since become common practice, but its value has been called into question. Writing in 1999, Frances Rose said:

"While the wide use of Ancient Woodland Vascular Plant lists as a surveyor's tool is obviously gratifying to its originators, their sometimes apparently uncritical use leads us to remind users that they should be regarded only as a tool, and not as an infallible guide. The lists should be used intelligently and in combination with other information."

A survey for the Woodland Trust (Glaves et al, 2009) identified a number of concerns *"regarding the robustness of some existing ancient woodland indicator lists and the uncritical way in which some users have been applying these..."*

To be most useful, lists of ancient woodland botanical indicators should ideally be calibrated against local woods of known ancient origin. Lists based on local research are therefore preferable to those derived from national or regional lists.

Mel Jones has compiled a list of 'ancient woodland botanical indicators in South Yorkshire', based on his research into the origins and history of local woods (see Appendix 3). He suggests that woods that hold **ten or more indicators** are likely to be of ancient origin, but cautions that documentary and landscape evidence must also be taken into account.

It is recommended that an adapted version of Mel Jones list should be used to aid the selection of Local Wildlife Sites. The original list (Appendix 3) contains some species which are very scarce within Sheffield Local Planning Area Boundary, being found mainly on sites to the east of Rotherham (i.e. on the magnesian limestone belt). These species have been omitted from checklist in Appendix 4.

Important points to note:

i) old hedgerows can act as a 'reservoir' for plants normally associated with ancient woodland, enabling them to spread relatively quickly into adjoining woodland - even if it is of relatively recent origin;

ii) some plants associated with ancient woodland are also cultivated in gardens and can spread into woodland from fly-tipped garden waste;

iii) in recent decades, woodland wildflowers have been planted in several local woods (e.g. the woods in Meersbrook Park and around Crabtree Pond).

Suggested selection criteria for ancient woodland sites:

Essential	Desirable
The site must cover least 0. 5 hectare (or be more than 100 metres in length if it is a linear feature, such as riparian woodland).	If the site has been subject to replanting, it still retains areas of relict ground flora.
The site must be a 'known ancient woodland' (see list in Appendix 1) and/or be listed in the 'Ancient Woodland Inventory' (Appendix 2) and/or hold at least 10 ancient woodland indicators (Appendix 3).	If selection is based on the presence of indicator species, there is some supporting landscape evidence and allowing for local variations in terrain, drainage and soils, the indicators are evenly distributed across the site.

2) Upland oakwood

Extracts from the UK BAP Priority Habitat description for upland oakwood (Maddock, 2008):

"*Upland oakwoods are characterised by a predominance of oak (most commonly sessile, but locally pedunculate) and birch in the canopy, with varying amounts of holly, rowan and hazel as the main understorey species.*"

"*The range of plants found in the ground layer varies according to the underlying soil type and degree of grazing from bluebell-bramble-fern communities through grass and bracken dominated ones to heathy moss-dominated areas. Most oakwoods also contain areas of more alkaline soils, often along streams or towards the base of slopes where much richer communities occur, with ash and elm in the canopy, more hazel in the understorey and ground plants such as dog's mercury, false brome, ramsons, enchanter's nightshade, and tufted hair grass. Elsewhere small alder stands may occur or peaty hollows covered by bog mosses (Sphagnum spp). These elements are an important part of the upland oakwood system.*"

Extracts from the Peak District LBAP:

"Semi-natural woodland dominated by oak and/or birch was probably one of the most common habitats over much of the Peak District, including the limestone plateau of the White Peak, prior to woodland clearance by prehistoric people. Today it is largely confined to Dark Peak cloughs and valley-sides where it is the main woodland type, with particular concentrations along the valley of the River Derwent."

"Upland oak/birchwoods are at the south-eastern edge of their British range in the Peak District. They often support irreplaceable ancient woodland communities with notable species such as hazel, aspen, wood-sorrel, wood anemone, wood sage, bird cherry,

common cow-wheat, bluebell, and upland birds, such as pied flycatcher and wood warbler. A considerable number of notable invertebrates including northern wood ant, ash-grey slug and the locally increasing purple hairstreak are also characteristic."

The estimated area covered by upland oakwood within the Peak District National Park is 1,688 hectares. Small amounts of this habitat also occur within the Sheffield Local Planning Area Boundary. The Sheffield Biodiversity Audit (2001) identified Blackbrook Wood as a prime example. Other sites, such as the Ladies Spring Wood SSSI, contain areas of upland oakwood which grade into other types of woodland. Remnants of this habitat also survive in a few steep sided valleys close to the Peak Park boundary, such as the one at Hall Broom near Dungworth.

Within the SLPAB oakwoods of this kind are typically found on steeply sloping ground at altitudes between 150 and 300 metres. Such sites are unsuitable for cultivation and may therefore have been continuously wooded for long enough to qualify as ancient woodland. However, the structure and composition of the woodland may have been significantly altered by grazing livestock (and, possibly, activities such as small-scale quarrying and mining).

Suggested selection criteria for upland oakwood sites:

Essential	**Desirable**
The site must cover least 0. 5 hectare.	The wood is growing on steeply sloping ground at an altitude of 150 metres or more.
The canopy must be dominated by mature oak trees.	The ground/field layer features wildflowers such as wood sorrel and common cow-wheat, with ferns such as broad-buckler and hard fern.
Birch may also be locally abundant but, if so, the woodland must be well-established.	Mosses are locally abundant - typically *Dicranum majus*, plus *Sphagnum* spp. in wet areas.
Holly and/or rowan and/or hazel must be present in the understorey.	Bilberry and/or heather are present in open areas.
Wavy hair-grass and/or creeping soft-grass must be at least frequent in the ground layer, except where excluded by dense shade.	The wood supports breeding populations of redstart and/or wood warbler and/or pied flycatcher.

3) Wet woodland

Extracts from the UK BAP Priority Habitat description for wet woodland (Maddock, 2008):

"Wet woodland occurs on poorly drained or seasonally wet soils, usually with alder, birch and willows as the predominant tree species, but sometimes including ash, oak, pine and beech on the drier riparian areas. It is found on floodplains, as successional habitat on fens, mires and bogs, along streams and hill-side flushes, and in peaty hollows."

"...wet woods frequently occur in mosaic with other woodland key habitat types (e.g. with upland mixed ash or oakwoods) and with open key habitats such as fens."

Small amounts of wet woodland can be found along the flood plains of Sheffield's rivers. However, as most of the larger flood plains have been subject to development, the remaining woodland is often confined to a narrow strip along the banks. Riparian woodland frequently holds relict ancient woodland ground flora, even in the built-up parts of the city.

Pockets of wet woodland grow in derelict millponds in some formerly industrialised areas, such as the Rivelin Valley, the Loxley Valley and the Shire Brook Valley. A particularly good example can be seen in the Loxley Valley, immediately upstream of Rowell Bridge. These pockets may be of relatively recent origin, but can support attractive ground flora such as marsh marigold and tufted loosestrife (a Local Red Data Book species).

Wet woodland also occurs where water seeps to the surface along valley sides. Examples can be found in Blackbrook Wood and the lower (south-western) slopes of Loxley Common. Such areas usually form part of a mosaic with other types of woodland (such as upland oakwood). They are often dominated by downy birch or alder, with an abundance of mosses in the ground layer. Characteristic ground flora include tufted hair-grass and soft rush with, sometimes, wildflowers such as marsh violet and devil's bit scabious.

If they are left undisturbed by people and dogs, areas of wet woodland can provide feeding grounds for woodcock (a UK Amber List species). They can also be important habitats for invertebrates, including many species associated with alder, birch and willow.

Suggested selection criteria for wet woodland sites:

Essential	Desirable
The site must cover least 0. 5 hectare (or be more than 100 metres in length if it is a linear feature, such as riparian woodland).	Riparian woodland holds relict ancient woodland ground flora.
Underlying soils must be permanently or seasonally wet.	Mosses are abundant in the ground layer.
The canopy must be dominated by alder and/or birch and/or willow.	Woodland is associated with wetland habitats (e.g. ponds and marshes).

4) Woodland with features of importance for nature conservation

a) BAP Priority Species and/or Red Data Book Species

Important species occurring on woodland sites within the SLPAB include:

- Soft shield-fern (Local Red Data Book, 1991)
- Scaly male fern (Local Red Data Book, 1991)
- Wood barley (Local Red Data Book, 1991)
- Wood Small-reed (Local Red Data Book, 1991)
- Climbing corydalis (Local Red Data Book, 1991)
- Early (pale) dog-violet (Local Red Data Book, 1991)
- Sanicle (Local Red Data Book, 1991)
- Toothwort (Local Red Data Book, 1991)
- Tailing St John's-wort (Local Red Data Book, 1991)
- Green woodpecker (Local Red Data Book, 1991)
- Lesser spotted woodpecker (Local Red Data Book, 1991; UK BAP, 2007; UK Red List, 2009)
- Willow tit (UK BAP, 2007; UK Red List, 2009)
- Wood warbler (UK BAP, 2007; UK Red List, 2009)
- Willow warbler (UK Amber List, 2009)
- Song Thrush (UK BAP, 2007; UK Red List, 2009)
- Spotted flycatcher (UK BAP, 2007; UK Red List, 2009)
- Pied flycatcher (Local Red Data Book, 1991; UK Amber List, 2009)
- Common redstart (UK Amber List, 2009)
- Lesser redpoll (UK BAP, 2007; UK Red List, 2009)
- Badger (Local Red Data Book, 1991)
- Common pipistrelle (Local Red Data Book, 1991; Sheffield LBAP, 2002)
- Soprano pipistrelle (Sheffield LBAP, 2002; UK BAP, 2007)
- Noctule bat (Local Red Data Book, 1991; Sheffield LBAP, 2002; UK BAP, 2007)
- Brown long-eared bat (Local Red Data Book, 1991; Sheffield LBAP, 2002; UK BAP, 2007)

b) Veteran trees

Extracts from 'Veteran Trees: A guide to good management' (Read, 2000):

"*A veteran tree can be defined as: a tree that is of interest biologically, culturally or aesthetically because of its age, size or condition.*

Listed below are characteristic features of veteran trees. The more the tree has, the stronger the indication that it is a veteran:

- *girth large for the tree species concerned*
- *major trunk cavities or progressive hollowing*
- *naturally forming water pools*
- *decay holes*
- *physical damage to trunk*
- *bark loss*
- *large quantity of dead wood in the canopy*
- *sap runs*
- *crevices in the bark, under branches or on the root plate sheltered from direct rainfall*
- *fungal fruiting bodies (e.g. from heart rotting species)*
- *high number of interdependent wildlife species*
- *epiphytic plants*
- *an 'old' look*
- *high aesthetic interest*

Fungal rotting of the heartwood and dead limbs results in a diversity of micro-habitats suitable for other organisms including a potentially very wide range of invertebrates, dependent on such different micro-habitats, and birds such as woodpeckers which prey on them. Epiphytes such as mosses and lichens may require the old bark characteristic of veteran trees to grow on. Although some of the organisms are generalists, many are extremely specialist and are confined to veteran trees. Old trees, as a consequence of their rarity, harbour large numbers of rare and threatened species. The biological importance of a tree is greater if it lives long enough to perpetuate the continuity of habitats for future generations."

Nationally scarce invertebrates, such as the hoverfly *Brachypalpus laphriformis*, have been recorded on veteran trees within the SLPAB. Cavities in veteran trees are used by nesting birds and roosting bats (including some of the BAP Priority Species and Red Data Book Species listed above).

Although Sheffield has an abundance of ancient woodland, large old trees are scarce due to the impact of past management practices (Jones, 1993). It is therefore important to identify and safeguard woods that harbour veteran trees.

c) Rookeries, heronries and major bird roosts

Rooks and herons both nest in colonies in the canopies of mature trees. Although neither species can be described as endangered, their traditional nesting sites are vulnerable to destruction and disturbance. In Sheffield's woods, heronries tend to be rather small - sometimes just one or two nests - and can be easily overlooked.

Outside of the nesting season, many birds use woodland for roosting. Species include rooks, jackdaws, starlings and wintering thrushes. They tend to favour woods with well-developed shrub layers, particularly where cover is offered by evergreen species such as holly, yew and ivy.

Thousands of birds can often be seen heading for local woods as the light fades on a midwinter afternoon. Safeguarding roost sites therefore plays an important role in conserving local birdlife.

Suggested selection criteria for woodland sites with features of importance for nature conservation:

Essential	**Desirable**
The site must cover least 0. 5 hectare (or be more than 100 metres in length if it is a linear feature, such as riparian woodland).	The site has recent records of Red Data and/or BAP Priority Species.
	The site holds veteran trees and associated wildlife.
	The site hosts a nesting colony of rooks and/or herons.
	The site is regularly used as a roosting site by large numbers of birds.

Appendix 1 - List of 'known ancient woods' inside the Sheffield Local Planning Authority Boundary

NB: These are sites for which Mel Jones has found documentary evidence to show that they have been wooded continuously since 1600AD or earlier.

	Woodland	District	Grid Ref	Notes
01	Beeley Wood	Upper Don Valley	SK317927*	See also 'Duckster Wood' and 'Priory Wood'. Also appears in the list in Appendix 2.
02	Birkin Royd	Grenoside	SK319944*	
03	Blackbrook Wood	Rivelin Valley	SK295868*	Only the section east of the brook is ancient. Also appears in the list in Appendix 2.
04	Bowden Housteads Wood	Darnall / Handsworth	SK398867*	Also appears in the list in Appendix 2.
05	The Brushes	Firth Park	SK371908*	Part of this wood is now known as 'Hinde Common Wood'. Also appears in the list in Appendix 2.
06	Buck Wood	Gleadless Valley	SK370844*	Formerly known as 'Berrystorth'. Also appears in the list in Appendix 2.
07	Carr Wood	Gleadless Valley	SK363840*	Also appears in the list in Appendix 2.
08	Chancet Wood	Beauchief	SK343821*	Also appears in the list in Appendix 2.
09	Clough or Ladies Clough Wood	Chapeltown	SK372951	
10	Duckster Wood	Upper Don Valley	SK320920*	Now part of Beeley Wood.
11	Ecclesall Woods	Ecclesall / Sheaf Valley	SK323828*	Also appears in the list in Appendix 2.
12	Gillfield Wood	Totley / Upper Sheaf Valley	SK306787*	Straddles the city boundary. Also appears in the list in Appendix 2.
13	Great Roe Wood	Shirecliffe / Fir Vale	SK356904*	Also appears in the list in Appendix 2 as 'Roe Wood'.

	Woodland	District	Grid Ref	Notes
14	Greno Wood	Grenoside	SK329953*	Also appears in the list in Appendix 2 as ‘Green Lane Spring’.
15	Hall Wood	Burncross / High Green	SK333965*	
16	Hesley Wood	Chapeltown	SK361968*	Chapeltown Park Wood was originally part of Hesley Wood.
17	Hutcliffe Wood	Sheaf Valley	SK333827*	Also appears in the list in Appendix 2.
18	Ladies Spring Wood	Beauchief / Sheaf Valley	SK325815	Site Special Scientific Interest. Also appears in the list in Appendix 2 as ‘Totley Wood’.
19	Lee Shroggs Wood	Ecclesfield	SK347942*	Also appears in the list in Appendix 2 (slightly different spelling)..
20	Little Matlock Wood	Loxley Valley	SK309893	Also appears in the list in Appendix 2.
21	Loxley Common	Wadsley / Loxley	SK312905*	Also appears in the list in Appendix 2.
22	Parkbank Wood	Beauchief	SK337818	Also appears in the list in Appendix 2.
23	Parkin Wood	Chapeltown	SK357973*	Formerly known as ‘Cowley Royd’. Also appears in the list in Appendix 2.
24	Prior Royd	Grenoside	SK322942*	Possibly appears in the list in Appendix 2 as ‘Green Lane Spring’.
25	Priory Wood	Upper Don Valley	SK315928*	Now part of Beeley Wood.
26	Rollestone Wood	Gleadless Valley	SK372835*	Herdings Wood was originally part of Rollestone Wood. Also appears in the list in Appendix 2.
27	Scraith Wood	Southey Green / Wadsley Bridge	SK341910*	
28	Smith’s Wood	Porter Valley	SK323861	Also appears in the list in Appendix 2 as ‘Smith Wood’.
29	Smithy Wood	Chapeltown	SK369955*	

	Woodland	District	Grid Ref	Notes
30	Snaithing Spring	Ecclesall / Millhouses	SK326837*	Also appears in the list in Appendix 2.
31	Thorncliffe Wood	Chapeltown	SK352977*	Also appears in the list in Appendix 2.
32	Tinsley Park Wood	Darnall /Tinsley	SK409883	Remnants on golf course. Also appears in the list in Appendix 2.
33	West Wood	Grenoside	SK328943*	Possibly appears in the list in Appendix 2 as 'Green Lane Spring'.
34	Wheata Wood	Grenoside	SK328942	Possibly appears in the list in Appendix 2 as 'Green Lane Spring'.
35	Wilson Spring	Upper Don Valley / Grenoside	SK321932*	Also appears in the list in Appendix 2.
36	Wincobank Wood	Wincobank	SK375908*	Also appears in the list in Appendix 2.
37	Woolley Wood	Wincobank / Shiregreen	SK384926*	Also appears in the list in Appendix 2.

* These grid references are from the list of known ancient woods in 'Ancient Woods in the Sheffield Area' (Sorby Record no. 24, 1986)

Appendix 2 - Woods listed in the Ancient Woodland Inventory

NB: This list is not comprehensive. Some of the woods in the inventory are, as yet, un-named. Others have been grouped together under a single name (e.g. 'Green Lane Spring', 'Beeley Wood West' and 'River Don Wood West'). To check the status of a particular wood, visit http://magic.defra.gov.uk or view the appropriate layers on Sheffield City Council's GIS system.

	Woodland	District	Grid Ref	Notes
01	Beacon Wood / Storrs Wood	Loxley Valley	SK296895	ASNW.
02	Beeley Wood West	Upper Don Valley	SK315933*	ASNW. This name appears to encompass several woods in the Don Valley. Beeley Wood also appears in the list in Appendix 1.
03	Birley Wood	Birley Moor / Ridgeway	SK405823	PAWS. Close to city boundary.
04	Blackbrook Wood	Rivelin Valley	SK294869	ASNW. Also appears in the list in Appendix 1.
05	Bole Hill Plantation	Limb Valley	SK304830	PAWS.
06	Bowden Housteads Wood	Darnall / Handsworth	SK395863*	ASNW. Also appears in the list in Appendix 1.
07	Briers House Wood / Green Fold Wood	Loxley Valley / Dungworth	SK285902	ASNW. Listed but not named.
08	The Brushes	Firth Park	SK370907	ASNW. Also appears in the list in Appendix 1. Part of this wood is now known as 'Hinde Common Wood'.
09	Buck Wood	Gleadless Valley	SK370843*	ASNW. Also appears in the list in Appendix 1.
10	Cadman Wood	Mosborough / Eckington	SK411798*	PAWS. Straddles city boundary.
11	Carterhall Wood	Charnock Hall	SK385824	ASNW. Close to city boundary.
12	Chancet Wood	Beauchief	SK342819	ASNW.
13	Clough Plantation	Upper Porter Valley	SK285841	PAWS.

	Woodland	District	Grid Ref	Notes
14	Cobnar Wood	Graves Park	SK347822	ASNW.
15	Coneygree Wood / Carr Wood	Gleadless Valley	SK360838*	ASNW. Carr wood also appears in the list in Appendix 1. Grid references also encompass Ashes Wood.
16	Delves Wood	Totley / Upper Sheaf Valley	SK366808	PAWS. Contiguous with Coalpit Wood. Outside city boundary?
17	Ecclesall Wood	Ecclesall / Sheaf Valley	SK321821	ASNW. Also appears in the list in Appendix 1.
18	Forge Rocher Wood	Deepcar / Wortley	SK293990	PAWS. Outside city boundary?
19	Gillfield Wood	Totley / Upper Sheaf Valley	SK311789	PAWS. Listed but not named. Straddles city boundary. Also appears in the list in Appendix 1.
20	Glen Howe	Wharncliffe Side	SK292942	ASNW.
21	Green Lane Spring	Upper Don Valley / Grenoside/ Oughtibridge	SK303956*	PAWS. This name appears to encompass a number of woods in the Wharncliffe / Greno Woods complex.
22	Hagg Wood	Rivelin Valley / Bell Hagg	SK302868*	ASNW / PAWS.
23	Hang Bank Wood	Gleadless Valley	SK364843	ASNW. Listed but not named.
24	Hutcliffe Wood	Sheaf Valley	SK333826	ASNW. Listed but not named. Also appears in the list in Appendix 1.
25	Kent Wood	Ridegeway	SK406813	PAWS. Straddles city boundary.
26	Ladybank Wood	Mosborough / Eckington	SK426801*	ASNW. Straddles city boundary.
27	Lee Shrogs Wood	Ecclesfield	Sk346941	ASNW. Also appears in the list in Appendix 1 (slightly different spelling).
28	Leeshall Wood	Gleadless Valley	SK366834	ASNW.

	Woodland	District	Grid Ref	Notes
29	Little Matlock Wood	Loxley Valley	SK310893	ASNW. Also appears in the list in Appendix 1.
30	Loxley Common	Wadsley / Loxley	SK311904	ASNW. Also appears in the list in Appendix 1.
31	The Lumb	Gleadless Valley	SK370829	ASNW.
32	Lumb Bush / Coumes Wood	Oughtibridge	SK292930*	ASNW.
33	Marriott Wood	Sheaf Valley	SK337830	ASNW. Listed but not named.
34	New Hall Wood	Stocksbridge	SK259984	ASNW.
35	Old Park Wood	Beauchief	SK333809	ASNW. Listed but not named.
36	Oldhay Brook Wood	Totley Brook	SK313802	ASNW.
37	Parkbank Wood / Gulleys Wood	Beauchief	SK336818	ASNW. Parkbank Wood also appears in the list in Appendix 1.
38	Parkin Wood	Chapeltown	SK357964*	ASNW. Also appears in the list in Appendix 1.
39	Poynton Wood	Sheaf Valley	SK322807	ASNW.
40	River Don Wood West	Lower Ewden / Upper Don Valley	SK292959*	ASNW / PAWS. This name appears to encompass Bitholmes Wood, Firth Wood and several other areas of woodland.
41	Roe Wood	Shirecliffe / Fir Vale	SK357903	PAWS. Also appears in the list in Appendix 1 as ‘Great Roe Wood’.
42	Rollestone Wood	Gleadless Valley	SK373835*	ASNW / PAWS. Also appears in the list in Appendix 1.
43	Shirtcliff Wood	Handsworth / Woodhouse	SK418852	ASNW. Listed but not named.
44	Smelter Wood	Handsworth / Richmond	SK406856	ASNW. Listed but not named.
45	Smith Wood	Porter Valley	SK323861	ASNW. Also appears in the list in Appendix 1 as ‘Smith’s Wood’.

	Woodland	District	Grid Ref	Notes
46	Snaithing Spring	Ecclesall / Millhouses	SK326837	ASNW. Also appears in the list in Appendix 1.
47	Spring Wood (Abbeydale Grange)	Sheaf Valley	SK335837	ASNW. Listed but not named.
48	Thorncliffe Wood	Chapeltown	SK350978	ASNW. Also appears in the list in Appendix 1.
49	Tinsley Park Wood	Darnall / Tinsley	SK407882*	PAWS. Listed but not named. Also appears in the list in Appendix 1.
50	Totley Wood	Beauchief / Sheaf Valley	SK325814	ASNW. Also appears in the list in Appendix 1 as 'Ladies Spring Wood'.
51	Trippet Wood	Porter Valley	SK319856	ASNW. Listed but not named.
52	West Wood	High Green	SK336989	ASNW. Close to city boundary.
53	Whiteley Woods	Porter Valley	SK307850	ASNW. Listed but not named.
54	Wilson Spring Wood	Upper Don Valley / Grenoside	SK321932	ASNW. Also appears in the list in Appendix 1.
55	Wincobank Wood	Wincobank	SK375908	ASNW. Also appears in the list in Appendix 1.
56	Wind Hill Wood	Stocksbridge / Midhopestones	SK240986	ASNW.
57	Woolley Wood	Wincobank / Shiregreen	SK382924	ASNW. Listed but not named. Also appears in the list in Appendix 1.

*sample grid reference only; multiple grid references are given for this site in the Ancient Woodland Inventory.

ASNW = 'Ancient & Semi-Natural Woodland'.

PAWS = 'Planted Ancient Woodland Site' (also known as 'Ancient Replanted Woodland' or 'Plantation on the site of Ancient Woodland').

Appendix 3 - Ancient woodland botanical indicators in South Yorkshire

From ‘Sheffield’s Woodland Heritage’ by Mel Jones (1989 & 1993)

HERBS				
1			VS	Barren strawberry
2				Bluebell
3				Broad helleborine
4				Bugle
5			VS	Bush vetch
6				Common cow wheat
7			VS	Common St John’s wort
8				Dog’s mercury
9				Early purple orchid
10				Golden saxifrage
11				Greater stitchwort
12	E	R		Green hellebore
13				Hairy St John’s wort
14	E		VS	Lily-of-the-valley
15	E		VS	Nettle-leaved bellflower
16				Pale wood violet
17				Pignut
18	E			Primrose
19				Ramsons
20				Sanicle
21				Slender St John’s wort
22				Square stemmed St John’s wort
23			VS	Sweet woodruff
24				Toothwort
25				Trailing St John’s wort
26				Water avens
27				Wild strawberry
28			VS	Wood anemone
29				Wood horsetail
30			VS	Wood sorrel
31				Wood speedwell
32			VS	Yellow archangel
33			VS	Yellow pimpernel
GRASSES, SEDGES AND WOODRUSHES				
34			VS	Greater woodrush
35			VS	Hairy woodrush
36		R		Pale sedge
37		R	VS	Pendulous sedge
38	E	R		Purple small reed
39			VS	Remote sedge
40		R		Wood barley
41			VS	Wood melick
42			VS	Wood millet
SHRUBS AND TREES				
43				Field maple
44		R	VS	Midland hawthorn
45	E	R	VS	Wild service tree
46		W		Sessile oak
47	E	R	VS	Small-leaved lime
48	E	R		Spindle tree

Key

E found in east only, especially on limestone
W found predominantly in west and central areas in gritstone and coal measure country
R rare
VS very strongly associated with ancient woodland, rarely occurring elsewhere unless introduced or indicating recently cleared woodland

Appendix 4 - Checklist of Ancient Woodland Indicator Species for Sheffield

Adapted from the list of ancient woodland botanical indicators in South Yorkshire, published in 'Sheffield's Woodland Heritage' by Mel Jones (1989/1993).

Site name: ..... **Grid reference:** .....

Date(s): ..... **Surveyor(s)**: .....

English name	Scientific name	Present?	Notes
Field Maple [ms]	*Acer campestre*		
Bugle	*Ajuga reptans*		
Ramsons	*Allium ursinum*		
Wood anemone [vs]	*Anemone nemorosa*		
Pale sedge	*Carex pallescens*		
Pendulous sedge [vs]	*Carex pendula*		
Remote sedge [vs]	*Carex remota*		
Opposite-leaved golden saxifrage	*Chrysosplenium oppositifolium*		
Pignut	*Conopodium majus*		
Midland hawthorn [vs]	*Crataegus laevigata*		
Broad-leaved helleborine	*Epipactis helleborine*		
Wood horsetail	*Equisetum sylvaticum*		
Wild strawberry	*Fragaria vesca*		
Sweet woodruff [vs]	*Galium odoratum*		
Water avens	*Geum rivale*		

English name	Scientific name	Present?	Notes
Wood barley	*Hordelymus europaeus*		
Bluebell	*Hyacinthoides non-scripta*		
Hairy St John's-wort	*Hypericum hirsutum*		
Trailing St John's-wort	*Hypericum humifusum*		
Common St John's-wort [VS]	*Hypericum perforatum*		
Slender St John's-wort	*Hypericum pulchrum*		
Square-stalked St John's-wort	*Hypericum tetrapterum*		
Yellow archangel [VS]	*Lamiastrum galeobdolon*		
Toothwort	*Lathraea squamaria*		
Hairy wood-rush [VS]	*Luzula pilosa*		
Great wood-rush [VS]	*Luzula sylvatica*		
Yellow pimpernel [VS]	*Lysimachia nemorum*		
Common cow wheat	*Melampyrum pratense*		
Wood melick [VS]	*Melica uniflora*		
Dog's mercury	*Mercurialis perennis*		
Wood millet [VS]	*Milium effusum*		
Early purple orchid	*Orchis mascula*		
Wood-sorrel [VS]	*Oxalis acetosella*		
Barren strawberry [VS]	*Potentilla sterilis*		

English name	Scientific name	Present?	Notes
Sessile oak [ms]	*Quercus petraea*		
Sanicle	*Sanicula europaea*		
Greater stitchwort	*Stellaria holostea*		
Wood speedwell	*Veronica montana*		
Bush vetch [vs]	*Vicia sepium*		
Early (pale) dog-violet	*Viola reichenbachiana*		

Other noteworthy species

.....

.....

.....

.....

Guidance notes

[vs] indicates a species which is very strongly associated with ancient woodland, being rarely found anywhere else.

[ms] indicates that only mature specimens of this species should be used as indicators.

Where possible, please record:

- the distribution of the indicator species within the woodland - are they widespread or confined to specific areas?
- the relative abundance of each species, using the DAFOR scale.

Be wary of species that may have 'escaped' from cultivation, particularly if there are gardens adjoining the wood and/or areas where garden waste has been fly-tipped.

Check for signs of deliberate planting, such as the 'clumping' of bluebells and the presence of cultivated varieties.

Bear in mind that field maple has been widely planted in the Sheffield district since the early 1980s, so only mature specimens can safely be used as indicators.

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