

**CHADDESSEN WOOD
AND
LIME LANE WOOD
LOCAL NATURE RESERVE**

OAKWOOD, DERBY

**MANAGEMENT PLAN
2012-2021**



James Frith MIEEM

Ecological Consultancy

January 2012

Chaddesden Wood and Lime Lane Wood Local Nature Reserve Oakwood, Derby

Council Statement

Chaddesden Wood Local Nature Reserve (LNR) was declared as the first Derby City LNR in 1991. The third management plan in 2012 includes an extension into Lime Lane Wood and a linked hedgerow feature. The designation provides protection for the site and expands its capacity to link to other areas of green space and wildlife features in a continuous manner. Lime Wood is a smaller area of woodland with in part similar characteristics to the larger woodland. The hedgerow was originally a Parish Boundary feature and its high species complement means that it relates to others in the City that are Local Wildlife Sites and important sites for wildlife.

Local Nature Reserves in Derby are related to sites that have been declared by Derbyshire Wildlife Trust as Local Wildlife Sites. These sites have been identified by their importance for nature in a City environment. This work is supported by the Derby Nature Conservation Strategy, Derby Greenprint and City of Derby Local Plan Review. The site is also served by the cycling and footpath network, access to LNRs in the City is supported by the Rights of Way Improvement Plan.

In Oakwood the newly formed Friends of Chaddesden Wood has emerged from the original management group. They have contributed significantly to the production of the plan, consulting with other local residents and are in the process of producing a new nature trail leaflet. They are highly active and meet once a month to do conservation work, and participate in events such as the Oakwood gala. The woodland is a popular dog walking and running track, with visitors coming from the neighbouring Springwood Leisure centre and Parkview primary School. The LNR also provides a valuable resource for youth groups such as Cubs and Brownies who meet at the nearby Oakwood Community Centre to explore and learn about the biodiversity that exists within their locality. The proximity to Oakwood Park makes for a popular change of environment for people with free time. The work of the Friends group is essential in maintaining the integrity of the site for local people.

The Chaddesden Wood and Lime Lane Wood LNR remains one of 10 LNRs in Derby. The Council is committed to their future and continues to look for ways to strengthen their place in the City by extending their size, following the management plan or supporting associated local groups from the community and their ideas. We plan to renew the single path and promote Access-for-All pending successful funding applications.

The WildDerby project continues to use its network to support the partnership between wildlife and people in the City for the benefit of people and wildlife. Small amounts of funding are available to help with volunteer management and other funding is sourced by grant. We thank everyone for their continued help.

CONTENTS

Page

Council Statement

Stage 1: Description

1.1. General information 1

1.1.1 Location 1

1.1.2 Summary description 1

1.1.3 Land tenure 1

1.1.4 Map coverage 2

1.1.5 Photographic coverage 2

1.2 Environmental Information 2

1.2.1 Physical 2

1.2.1.1 Climate 2

1.2.1.2 Hydrology 2

1.2.1.3 Geology 2

1.2.1.4 Topography 2

1.2.1.5 Soils 2

1.2.2 Biological 3

1.2.2.1 Flora 3

1.2.2.2 Fauna 9

1.2.3 Cultural 9

1.2.3.1 Archaeological/Past land use 9

1.2.3.2 Present land use 9

1.2.3.3 Past management for nature conservation 9

1.2.3.4 Public interest 10

1.3 Bibliography 11

Stage 2: Evaluation and Objectives 12

2.1 Conservation status of the site 12

2.1.1 Historic 12

2.1.2 Present 12

2.2 Evaluation of the features 12

2.2.1 Evaluation 12

2.2.2 Identification/confirmation of important features 16

2.2.3 The site in wider perspective and implications for management 17

2.2.4 Specified limits 17

2.2.5 Ideal management objectives 18

2.3 Factors influencing management 19

2.3.1 Natural trends 19

2.3.2 Man induced trends 19

2.3.3 External factors 19

2.3.4 Obligations and legal constraints 19

	Page
2.3.5 Management constraints	20
2.3.6 Impact assessment	20
2.4 Operational objectives and management options	21
2.4.1 Rationale with operational objectives	21
2.4.2 Identification of operational objectives and selection of management options, outline prescriptions and project groups	26
Stage 3: Prescription	28
3.1. Project register and description	28
3.2 Ten year work programme	36
Plan 1 Boundaries and access points	
Plan 2 Compartments	
Plan 3.1 Management summary – Chaddesden Wood	
Plan 3.2 Management summary – Lime Lane Wood	
Plan 3.3 Management summary – connecting hedge	
Appendix 1 Woodland stand record cards 2002	
Appendix 1.2 Woodland Survey Forms 2011	
Appendix 2 Species for Chaddesden Wood: Flora	
Appendix 3 Bryophyte survey of Chaddesden Wood LNR 2010	
Appendix 4 Species for Lime Lane Wood: Flora	
Appendix 5 Hedgerow survey form 2011 for the connecting hedge	
Appendix 6 Species for Chaddesden Wood: Fungi	
Appendix 7 Species for Chaddesden Wood: Mammals	
Appendix 8 Species for Chaddesden Wood: Birds	
Appendix 9 Species for Chaddesden Wood: Invertebrates	
Appendix 10 Chaddesden Wood LNR Byelaws	

Stage 1: Description

Chapter 1.1. General information

1.1.1 Location

National Grid reference: SK382390
OS sheet number: 128 (1:50 000)
County: Derbyshire
District: Oakwood, City of Derby

The site lies on the north eastern edge of Derby near the border with Erewash District Council. It comprises two blocks of woodland joined by an established hedgerow. Chaddesden Wood forms the larger block of woodland, in the west. It is linked by roughly 600 metres of hedgerow to a smaller block of woodland, Lime Lane Wood, to the east. The main pedestrian access point to Chaddesden Wood is in the south eastern corner of the wood, from Springwood Drive. Additional access points enter from Silverburn Drive and Diamond Drive at the western end, Foxglove Drive in the north, one in the north eastern corner behind Cherrybrook Drive and one on the eastern boundary off Evergreen Close. A paved footpath follows the length of the hedge providing access throughout its length. It is additionally crossed by Cherrybrook Drive, Limesdale Avenue and Gilderdale Way. The main access to Lime Lane Wood is from the footpath that runs through the north of the wood, linking Littledale Close and Furrows Close. **Map 1** shows the site boundaries and access points.

1.1.2 Summary description

Chaddesden Wood and Lime Lane Wood both lie on the 107 metre contour on gently sloping ground with a southern aspect. The hedge that links them is a remnant of the agricultural land that preceded the housing development and features many veteran oaks along its length. The three features form an ecological unit that have survived from the previous landscape. They now lie within the context of the extensive recent housing development, with only one side of Chaddesden Wood now bordering open farmland. The underlying geology of boulder clay overlying Keuper Marl produces a heavy and slightly acidic soil prone to surface gleying and consequent waterlogging. Both woodlands are occupied by acidic oak-birch woodland. Chaddesden Wood is already managed as a Local Nature Reserve and it is proposed to extend the boundary to include Lime Lane Wood and the connecting hedgerow. Both woodlands are in the ownership of Derby City Council. The ownership of the hedge needs to be clarified. It may lie on publicly owned land, though some sections may still be retained by the Developer.

1.1.3 Land tenure

Owner: Derby City Council, The Council House, Corporation Street, Derby, DE1 2XJ, own both woodlands. Chaddesden Wood purchased in March 1991 from Balfour Beatty.

Total area: The total area of the site is 11.61 hectares.

Tenancy Agreements: There are no tenancy agreements on the site.

Common Rights: There are no common rights associated with the site.

1.1.4 Map coverage

Ordnance Survey

1:50,000 Landranger Map Sheet 128

1:25,000 Pathfinder Map Sheet 832

1:25,000 Explorer Map Sheet 259

1:10,000 Sheet SK33NE

Geological Survey

Geological Map of Derbyshire 1973 1:10,000

Geological Survey of Great Britain (England and Wales) 1973 1:50,000 Sheet 125

Soils of England and Wales. Sheet 3 Midland and Western England 1983 1:250,000

1.1.5 Photographic coverage

Derby City Council: Alf Bousie - Bramble development in compartment 5.

Derby Museum: Bill Grange - Series of photographs by Mr A Rowland circa 2000-2002.

Chapter 1.2 Environmental Information

1.2.1 Physical

1.2.1.1 Climate

The only available information on the climate of Derby is found in Clapham's Flora of Derby (1969). Compared with the Peak District to the north Chaddesden Wood enjoys longer hotter summers and relatively warmer winters.

1.2.1.2 Hydrology

As the site is essentially on the top of a hill there are no watercourses present. However, a system of drains is evident throughout the both woods and following most of the hedgerow. These are of unknown origin and most are now blocked and do not function as active drains, though some still hold standing water during periods of heavy rain. Two boreholes were established in 1999 to monitor ground water levels in Chaddesden Wood. It is too early to identify any trends on the basis of the monitoring so far.

1.2.1.3 Geology and soils

The soil survey map identifies the area as having Typical Stagnogleys of the Dunkeswick association. These are described as "slowly permeable seasonally waterlogged fine loamy or fine loamy over clayey soils" developing over Till from Palaeozoic and Mesozoic sandstone and shales.

1.2.1.4 Topography

The site lies near the summit of a low ridge of land giving very gentle slopes throughout. The land generally falls from north-east to south-west across the site.

1.2.2 Biological

1.2.2.1 Flora

1.2.2.1.2 Habitats

Map 2 shows the compartments that have been used to subdivide the site.

Woodland.

All the woodland conforms to the Typical sub-community of W10 *Quercus robur*-*Pteridium aquilinum*-*Rubus fruticosus* woodland. Woodland stand record cards surveyed in 2002 for Chaddesden Wood and 2011 for Lime Lane Wood are included in Appendix 1.

Chaddesden Wood

The entire site is wooded although substantial woodland glades occur in some compartments. There are some significant variations in stand structure through the wood, described below.

Compartment 1

This is the core area of the woodland with the best structure overall. Canopy cover is 70% or greater dominated by pedunculate oak. There are some canopy breaks where sycamore has been removed, though a few semi-mature trees remain. The sub-canopy and shrub layers are dense and varied, up to 60% cover, with frequent holly and widespread and abundant hazel. Birch, oak and sycamore saplings are frequent and there are scattered hawthorn and elder. Regeneration of hazel, holly, birch and oak is frequent. The field layer is mostly bramble up to 1 metre high with patches of creeping soft-grass and bluebell between. Bracken and rosebay willowherb occur locally.

Compartment 2

Distinguished by the dominance of oak in the canopy and a very sparse shrub layer. Canopy cover is 80 to 90% but the sub-canopy and shrub layers are less than 10% cover consisting of a few birch and rowan and one or two wych elm. Hazel occurs sparsely in the north and there is the occasional hawthorn and a few patches of birch saplings. Regeneration is limited to patchy oak and birch and very occasional hazel, hawthorn, holly and rowan. The field layer is dominated extensively by bramble with some patches of bracken. Locally in the south are patches of creeping soft-grass and bluebell.

Compartment 3

A thin band of woodland along the south-western end of the site but with a very good structure. The canopy is dominated by oak but there is more age variation than the rest of the wood with some older trees in the east as well as some younger ones entering the canopy. Occasional sycamore occur, mostly in the west, and there are a few planted beech and hornbeam. There is a sparse sub-canopy of birch, holly and rowan and a locally dense shrub layer of hazel. Fairly frequent sapling and seedling regeneration of most woody species. The field layer is typical for that of the whole wood ranging from low dense carpets of creeping soft-grass and bluebell to dense tangles of bramble and scattered bracken.

Compartment 4

Moderately poor structure with even-aged oak dominating the canopy at a cover of 70%. Some large gaps occur where sycamore has been removed though a few remain in the canopy. Sparse sub-canopy and shrub layer consisting of a few clumps of birch and hazel and scattered hawthorn and elder. Regeneration limited to infrequent saplings of oak, birch, holly and rowan. Field layer is mostly bramble dominated but with patches of rosebay willowherb, bracken and creeping soft-grass.

Compartment 5

This has the poorest structure of the wood. The even-aged canopy is a mixture of oak and sycamore varying from 80% cover down to 30% with large openings where sycamore has been felled. Very sparse sub-canopy and shrub layer with only a few hazel, holly and elder. Poor regeneration generally with scattered sapling stage sycamore, holly and rowan but abundant sycamore seedlings throughout. Field layer typical of the wood with patches of dense bramble, scattered bracken and areas of creeping soft-grass and bluebell.

Compartment 6

The distinguishing feature of this stand is the abundance of birch, from young saplings up to small trees forming a dense sub-canopy throughout the stand. The canopy is almost entirely oak, but fairly open, especially in the south, with an overall cover of roughly 60%. The shrub layer has occasional holly and hazel but is bolstered by abundant sapling growth of birch and oak. Some saplings of sycamore also occur and there is occasional regeneration of holly and hazel. In the north of the stand the field layer is dominated by dense bramble and bracken. To the south creeping soft-grass and bluebells tend to be more frequent.

Compartment 7

The structure of this stand is continuous with compartment 1 apart from a slight decrease in the abundance of hazel and holly in the shrub layer. There is also slightly more sycamore regeneration and scattered *Spirea*.

Compartments 8 & 9

A narrow stand along the north-western end of the wood. It has a more varied canopy structure than most of the wood. It is still oak dominated but here is more age variation with a proportion of 'middle-aged' trees entering the canopy. A few birch, wych elm, aspen and ash add to the diversity. In the west sycamore becomes more frequent. The shrub layer is varied in the east with widespread hazel and scattered holly, hawthorn and elder. In the west *Rhododendron* forms the main element of a poorer shrub layer with localised snowberry. There is good regeneration of oak, birch, hazel, holly and sycamore. The field layer is dominated by bramble over large areas but otherwise has the same pattern of localised bracken, creeping soft-grass and bluebell.

Compartment 10

This is currently short-mown grassland on either side of the footpath that runs between the wood and the housing to the east.

Lime Lane Wood

Compartment 17

This block of woodland has an even-aged canopy of mature oak and silver birch. The understorey has occasional large hawthorn and young trees of birch and wych elm. This grades into the shrub layer which contains some large hazel plus a few holly and elder. There is widespread natural regeneration of tree and shrub species, mostly birch, hazel and holly with a small amount of rowan. There are also some young plants of cherry laurel in the north-west corner of the wood.

Compartment 18 & 19

This areas are currently short-mown grassland on either side of the footpaths that run between the wood and the adjacent housing on either side.

Hedges

Connecting hedge

This hedgerow follows the line of a former Parish Boundary (between Chaddesden and Breadsall) and is already a prominent feature on G Sanderson's 1835 map (20 miles around Mansfield). It is also clearly shown on the 1879-1882 Ordnance Survey map. It is therefore quite likely to be of ancient origin. The number of veteran oaks it holds, spread throughout its length, supports this conclusion. These two characteristics qualify it under Local Wildlife Site criteria (H1). Recent management has lead to a varying structure as described below:

Compartment 11

A short length of tall, sparse hawthorn and hazel alongside a ditch that has been deepened recently. Two veteran oak. Poor field layer with abundant nettles.

Compartment 12

A stretch of large outgrown hedge either side of a deep, dry ditch. Mixed hazel, hawthorn, oak and holly with frequent bramble. Five veteran oak at the eastern end.

Compartment 13

This section runs close up against a new panel fence along the properties to the north. It is mostly unmanaged and outgrown, though some sections have been replanted with young hawthorn. Species include hawthorn, blackthorn, holly and hazel. There are 6 veteran oaks along this stretch, 2 of which are now enclosed within the gardens of the adjoining properties. There is a small group of ornamental shrubs that have been planted at the western end.

Compartment 14

This is a continuation of Compartment 13 to the west but here the shrubs have been topped to the height of the adjacent fence. It is dominated by hawthorn and hazel. The adjacent grassland is mown short right up to the base of the hedge. Lining the boundary of the properties to the south is a newer length of planted hedge composed of ornamental species. This is not on the line of the original hedge.

Compartment 15

This is one of only two significant gaps in the hedge, where it has been removed to create the Benmore Court cul-de-sac. It has been replaced by 3 isolated groups of

cotoneaster within an area of sort-mown grassland. The planting also includes a few whitebeam, Italian alder and rowan. There is one veteran oak in the grassland on the original line of the hedge.

Compartment 16

This section has a rather irregular structure with some original hawthorn, hazel and holly, but also more recently planted young hawthorn. There are also some small plants of cherry laurel, which may have been planted or may have seeded in. There are 3 mature oaks.

Compartment 17

The western half of this section is a newly planted hedge that has now grown quite tall (4m – 5m). It is all hawthorn, but with young cotoneaster beneath, which may have been planted or may have seeded in. For 60 metres at the eastern end the hedge has been removed creating a significant gap immediately to the west of Lime Lane Wood. One veteran oak remains at the eastern end of this section.

Woodland boundary hedges

Chaddesden Wood

Compartment H1

This borders the wood along the entire boundary of woodland compartment 2. It was replanted for most of its length in 1995, the shrubs now reaching 4 metres in height. Planted species include: hawthorn, field maple, hazel, holly, guelder-rose and wild rose. In the north is an older hawthorn hedge that has been laid in the last 5 years. A ditch runs outside the hedge which has colonised with bramble, nettle, bracken and rosebay willowherb.

Compartment H2

This borders the north side of the wood along compartment 8. It is mostly recently planted shrubs of hawthorn, holly, hazel and field maple. Owing to the shaded conditions growth has been slow and the plants are still small. Outside the hedge along the field ditch, however, there is moderately dense growth of birch and willow scrub up to 6 metres tall. Open stretches have a field layer of bramble, bracken and tussocky grasses.

Compartment H3

A patchy remnant hedge of old hawthorn can still be seen along this length together with a boundary ditch all overhung by the canopy of the adjacent oak. Shrubs have grown up on the outside of this to obscure the hedgeline, however. There are also some patches of aspen extending out onto the verge. Where open there is a patchy field layer of bramble, cock's-foot and false oat-grass.

Compartment H4

The hedge along this south-facing boundary has been laid previously and regrowth is now up to 4 metres tall. The centre of this length has a high proportion of sycamore which has suppressed all growth of other species making a gappy hedge. At either end is more vigorous growth of hawthorn. The hedge includes a few English elm, the only seen on the site. As an adjunct to the hedge a variety of shrubs have been planted along the edge of the school playing field adjacent to the wood.

Lime Lane Wood

Compartment H5

This hedge has the best structure of those around Lime Lane Wood, benefiting from the southern aspect. It is mainly hawthorn and has been cut and laid fairly recently giving a compact structure up to 1.5m tall. There are occasional holly and oak as well as a few suckers of English elm.

Compartment H6

This is rather a gappy hedge, suffering from heavy shading from overhanging oak trees in places. It is mainly hawthorn which has been cut and laid fairly recently. There is at least one large willow that extends out of the woodland onto the adjacent grassland. Bramble is a significant component. The adjacent grassland is mown short up to the base of the hedge.

Compartment H7

The hedge along the northern boundary is also rather shaded and gappy. It too has been cut and laid recently. It is composed of hawthorn, blackthorn and hazel. There is a deep ditch outside of the wood lined with dense nettles.

Compartment H8

On this side of the wood the hedge is an irregular feature composed of tall hawthorn (up to 5m tall) with occasional large holly, oak and ash. There is a dense stand of blackthorn at the southern end that is extending out across the dry ditch into the adjacent grassland. Bramble is common and is also spreading out into the grassland in places.

Aquatic habitats

Ponds

Several ponds occur within Chaddesden Wood, all man-made. The oldest consist of three small interlinked ponds dug on the line of the drainage ditch in the eastern corner of compartment 4. Such is the pressure from visitors around these ponds that there has been little chance for any development of associated flora. The water in the largest pond is very turbid, mainly due to dogs jumping in and out, and has minimal aquatic flora. The least trampled margins of the smaller ponds have a flora consistent with the adjacent woodland with patches of creeping soft-grass, some rosebay willowherb and trailing bramble. All three ponds are seasonal, drying out by late summer and through the autumn. In 2009 two more ponds were dug in Compartment 3, located out of sight of the main paths through the wood. One of these was made by blocking a drainage ditch with railway sleepers. It is unlined and holds water seasonally. It has developed a range of aquatic vegetation including a large amount of soft rush. A smaller pond was made close by using a pond liner. This has yet to develop any aquatic vegetation, but was used as a breeding site by toads in spring 2011. In the same year a third pond was dug in Compartment 6, again by blocking a drainage ditch with railway sleepers. It too is unlined and holds water seasonally.

1.2.2.1.2 Flowering plants, mosses and ferns

Chaddesden Wood

There have been a number of botanical surveys of Chaddesden Wood over the last 20 years. The earliest available, by Kirby 1983 was followed by more comprehensive surveys by Futter, Bailey & Cannon in 1988, Wilmot in 1992 and Derby Natural History Society in 1998. A further survey was commissioned in the preparation of this plan in 2002.

Surveys have recorded 102 species of vascular plant, including a number of non-natives. This includes 21 species of trees and shrubs, 46 forbs, 17 grasses, 1 sedge, 2 rushes, one horsetail and 4 ferns.

Of particular significance are: bluebell, listed as a species of conservation concern in the Lowland Derbyshire Biodiversity Plan; hairy woodrush is known only from this location in Derby, though it has not been reconfirmed in recent surveys and may have been lost to the site. Appendix 2 lists the flowering plant species recorded with their respective importance in local and County terms.

A detailed survey of the bryophytes of the wood was carried out by N Law in 2010. In total 21 species were recorded during the survey, comprising 16 mosses and 5 liverworts. All of the species recorded are relatively common species that might be expected to be present in lowland woodlands within England. The full list is included in Appendix 3.

Lime Lane Wood

Vascular plant surveys have been made by Brown & Wilmot (Jan 1987), Futter, Raynes & Bailey (June 1988), Court (May 2000) and most recently by N Law for the in October 2007, all as part of the Local Wildlife Site designation. This lists 36 species of vascular plants and 2 bryophytes. The range of species is almost identical to Chaddesden Wood, the only addition being wood sage (*Teucrium scorodonia*). Appendix 4 lists the plant species recorded in all these surveys.

Connecting hedge

The hedge was surveyed during summer 2011 following a standard hedgerow recording format that included records of vascular plants. The range of species fell within those recorded from the woodland blocks. The hedgerow survey form, including list of plants recorded is included in Appendix 5.

1.2.2.1.3 Fungi

Survey of Chaddesden Wood in autumn 1991 revealed 67 species of fungi. The vast majority of these were associated with oak, either living on dead wood or leaf litter. More recent surveys by Beverley Rhodes in October 2006 lists 46 species and October 2011 lists 26 species. **Appendix 6** contains the species recorded in Chaddesden Wood. There are no fungi records for Lime Lane Wood or the hedgerow.

1.2.2.2 Fauna

1.2.2.2.1 Mammals

Mammals have been poorly recorded on the site. There are some old records for Chaddesden Wood, which include three species of bat as the most significant feature. A more recent bat survey undertaken in 2011 by Vanessa Amaral-Rogers, a student at Derby University, revealed 5 species of bat regularly using the wood for foraging. There are also recent records from Derbyshire Bat Conservation Group of Nathusius' pipistrelle foraging in the area. A full list of mammal records for Chaddesden Wood is included in **Appendix 7**. There are no mammal records for Lime Lane Wood or the hedgerow.

1.2.2.2.2 Birds

Regular records of birds were been made between 1994 and 2000. This revealed 60 species associated with the wood of which 27 are known to breed on the site. They include a number of species of conservation concern including breeding song thrush, blackbird, dunnoek, spotted flycatcher and goldfinch. A full list of these early records is given in **Appendix 8**. More recent records from Chaddesden Wood include a list of 19 species all included on the earlier list. There are no systematic bird records for Lime Lane Wood but casual records made during the various botanical surveys (see 1.2.2.1.2) list 11 species including spotted flycatcher and green woodpecker.

1.2.2.2.3 Invertebrates

There has been a limited amount of invertebrate recording. Butterflies and dragonflies have been recorded systematically between 1995 and 2000. A moth watch in 2001 and an OPAL survey in 2011 produced some additional records. A list of invertebrates recorded is included in **Appendix 9**.

1.2.3 Cultural

1.2.3.1 Archaeological/Past land use

There is little recorded history available. The two woodland blocks are assumed to be remnants of a much larger area of forest that formerly bordered the north-eastern edges of Derby. Evidence of ridge and furrow within Chaddesden Wood indicates that at some time, most likely the middle ages, parts of the wood were cleared for cultivation. The connecting hedge marks the line of a Parish Boundary and is clearly shown on the OS Map of 1879 – 1882.

1.2.3.2 Present land use

Chaddesden Wood is designated as a Local Nature Reserve and managed with the dual objectives of nature conservation and public access. Lime Lane Wood and the connecting hedgerow lie within an area of public open space forming a corridor within the Oakwood development.

1.2.3.3 Past management for nature conservation

Since acquiring Chaddesden Wood in 1991 Derby City Council has undertaken a programme of management works designed to maximise the nature conservation interest of the site. These have been guided by a management plan for the site. Main activities have included removal of sycamore and *Spirea*, hazel coppicing, hedge laying and transplanting saplings of trees and shrubs. There has also been work to

construct and maintain the ponds. A full schedule of works for the 10 years from 2001 is included in **Appendix 10**.

1.2.3.4 Public interest

The public are allowed free access to the Chaddesden Wood at all times. Access points restrict use to pedestrians although some mountain bikes manage to find a way into the wood. The main activity is dog walking, though many families with young children visit. The pond forms a focus for visitors resulting in erosion around the banks. In addition to the surfaced circular path around the wood there is a network of smaller paths criss-crossing the interior. These receive a lower level of use but sufficient to maintain a regular pattern. Apart from a few benches there are no recreational facilities. The only formal access provision at Lime Lane Wood is a surfaced footpath that crosses the northern part of the wood. A number of small informal paths wind through the woodland, but appear to have a low level of use. There is one area where youths congregate near one of the large oak trees resulting in a trampled bare ground surface.

Activities on the reserve are co-ordinated by a group of committed volunteers – The Friends of Chaddesden Wood.

Chapter 1.3 Bibliography

Amaral-Rogers, V. (2011) A study into the habitat use of *Pipistrellus pipistrellus* in an urban environment

Bousie, A. (1991) Management Plan for Chaddesden Wood

Clapham, AR. (1969) A Flora of Derbyshire

Derbyshire Wildlife Trust (1998) Mid Derbyshire Biodiversity Action Plan

Elkington, T & Wilmot, A (1996) Endangered Wildlife in Derbyshire

Frith, J. (2002) Management Plan for Chaddesden Wood

Futter, K, Bailey, M & Cannon, H (1988) Vascular plant list for Chaddesden Wood

Golson, D. (2010) *The Birds of Chaddesden Wood*

Nature Conservancy Council (1984) Ancient Woodland Inventory; Derbyshire.

Rhodes, B. (2011) Fungi list for Chaddesden Wood

Smith, P (1991) Fungi list for Chaddesden Wood

Tillet, D Bird, butterfly and dragonfly lists for Chaddesden Wood from 1994 - 2000.

Wilmot, A (1992) Vascular plant list for Chaddesden Wood

Stage 2: Evaluation and Objectives

Chapter 2.1 Conservation status of the site

2.1.1 Historic

The wildlife importance of Chaddesden Wood was first recognised in 1974 when, following a survey by Wilmot, it was included in the list of ‘County Treasures’ in Derbyshire. This interest was formalised in 1983 following further survey by Kirby when the wood was listed under the newly formed Biological Sites Register as site number DE033. The site was recorded as ancient woodland on the Nature Conservancy Council’s Ancient Woodland Inventory in 1984. The most detailed survey came in 1988 (Futter et al) when the site was reclassified as a Grade 1 BSR site and given its current site number DE001. Shortly afterwards the site was purchased by Derby City Council which quickly resulted in its designation as a Local Nature Reserve in 1991. The Wildlife Sites Review in 2000 confirmed its status as a Grade 1 site. Lime Lane Wood was surveyed in 1988 and added to the Biological Sites Register as site number DE028. The origins of the wood are difficult to trace. The most recent resurvey of the site notes: “The wood is too small to have been considered under the Derbyshire Ancient Woodland Inventory and the wood supports very few woodland plants that would be considered to be indicative of Ancient Woodland. Despite this, the wood may be ancient in origin”

2.1.2 Present

The entry for Chaddesden Wood on the Derbyshire Biological Sites Register cites it as “a large (for Derby) area of woodland containing a high proportion of native broad-leaved species. This kind of woodland is becoming increasingly rare and threatened habitat in Derby”. The wood’s ground flora, bird population and the remnants of ridge and furrow are all listed as features of interest. The LNR citation refers also to the wood as “one of Derby’s largest areas of semi-natural woodland” and its listing in the Ancient Woodland Inventory.

Chapter 2.2 Evaluation of the features

2.2.1 Evaluation

2.2.1.1 Size

Covering an area of 9.3 ha Chaddesden Wood is one of the largest blocks of woodland within Derby City. The only other equivalent areas are within Allestree Park, some 4 km to the northwest. The addition of Lime Lane Wood at 0.75 ha, linked by the ancient hedgerow corridor increases the value of the site.

2.2.1.2 Diversity

In common with W10 woodlands of its type Chaddesden Wood and Lime Lane Wood do not have a high degree of diversity. Structurally the woodland is fairly uniform, particularly in the canopy, and the only other habitats present are the boundary hedges, transient glades and the limited area of open water. Species diversity is also fairly low, again typical of acid oak-birch woods of this type.

2.2.1.3 Naturalness

This is principally a natural site, woodland being the expected climax community for the area, with the site thought to have been wooded since at least 1600. Evidence of ridge and furrow, particularly prominent in compartment 4, indicates that there has not always been a woody cover over parts of the site, though it may not have been all cleared at once. The current canopy structure obviously owes much to management with an even-aged canopy of either planted or selected stems dominating. The presence of Rhododendron, beech, hornbeam and Scot's pine are further indications of modification to the woody layer.

2.2.1.4 Rarity

Woodland is a rare habitat within the city and the Trent Valley generally, with a very small percentage of land area taken up by the habitat. Ancient semi-natural woodland is recognised as a priority habitat in the Lowland Derbyshire Biodiversity Action Plan. The connecting hedgerow, and the hedges around the woodland blocks, are ancient in origin and contain a large number of veteran trees. This qualifies them under the Local Wildlife Site guidelines. Hedgerows are also a priority habitat in the Lowland Derbyshire Biodiversity Action Plan.

The wood contains the only locations in Derby for hairy woodrush.

The following mammal records are of significance;

- Common pipistrelle: Priority BAP
- Soprano pipistrelle: Priority BAP
- Myotis sp. (Natterer's bat & Whiskered bat): Derbyshire RDB
- Noctule bat: Priority BAP

Birds recorded on the site include the following species which are Priority Biodiversity Action Plan species (although many represent old records not confirmed recently – marked #):

- reed bunting#
- bullfinch#
- spotted flycatcher#
- song thrush#
- skylark#
- linnet#
- dunnoek
- cuckoo#

The RSPB and BTO in their Birds of Conservation Concern (1996) list the following species on their Red List:

- cuckoo#
- wood warbler#
- yellowhammer#
- linnet#
- spotted flycatcher#
- song thrush#
- lesser spotted woodpecker#

- skylark#
- starling #
- fieldfare#

and on their Amber List:

- bullfinch#
- kestrel#
- dunnock
- stock dove#
- green woodpecker#
- swallow#
- woodcock#

From the relatively small number of invertebrate records the following are mentioned in the Derbyshire Red Data Book (as with the birds some of these have not been seen recently – marked #):

- purple hairstreak
- gatekeeper
- wood white# (this may have been a captive release)
- *Cydia splendana* (moth)#
- emperor dragonfly#

2.2.1.5 Fragility

The woodland on the site is intrinsically a robust habitat that should be able to maintain its integrity under varying environmental and man-induced factors. Decline in interest is likely to involve a slow rate of change that will largely be recoverable in the early stages. Natural regeneration within the wood is healthy and recent management has reduced the potential impact of non-native species. Human impact on the site is localised and does not compromise the ecological processes of the woodland.

2.2.1.6 Typicalness

Chaddesden Wood and Lime Lane Woods are a good example in the range of variation of acidic oak-birch woodland in the lowlands. Canopy, shrub and field layers are all very typical of the community. Associated bird life shows a wide range of typical woodland species.

2.2.1.7 Recorded history

There is relatively little recorded history of the cultural aspects of the wood. Most available records start at the time of the development of the surrounding land for housing in the 1980s. Wildlife records start with the first full plant survey in 1983. Other surveys followed in 1988, 1992 and 1998. Some early casual records of other groups are available from the late 1980s but comprehensive records of birds, butterflies and dragonflies did not start until 1994.

2.2.1.8 Position in an ecological unit

Recent housing development has completely isolated the wood from supporting habitats to the south and west by extending the urban fringe of Derby to the edges of the wood. Open countryside borders the north of the wood with hedges connecting it to the open farmland landscape beyond. Breadsall Railway Cutting LNR is less than

a kilometre to the north which supports scrub and woodland habitats. Semi-natural woodland is also present in Allestree Park to the west, Breadsall Moor to the north and Locko Park to the east. These are all close enough to support the woodland bird community using Chaddesden Wood. The nearest area of Ancient Woodland is Spondon Wood roughly 4 km to the south-east.

2.2.1.9 Potential value

Chaddesden Wood and Lime Lane Woods are close to their maximum potential for the habitat they represent. Future management should make improvements to the woodland structure, principally by diversifying the age structure and eliminating the non-native component of the woody layers. There is not likely to be a substantial increase in species diversity.

2.2.1.10 Intrinsic appeal

The wood has a high level of appeal to the general public, reflected in the number of visitors it attracts from the local area. The mature oak canopy, carpets of bluebells in the spring and occasional sunny glades make it a pleasant site to visit, helped by the level access and surfaced circular path. As well as the informal use it receives from a wide range of age groups it has potential as an educational resource and as a research/study site for schools and colleges within the city.

2.2.2 Identification/confirmation of important features

SITE FEATURES		IMPORTANCE		
		National	County	City
1	Geology & Geomorphology			
	Boulder clay overlying Keuper Marl			Moderate
	Mildly acid mineral Soil			Low
2	Vegetation type			
	Ancient semi-natural woodland		High	
	Hedgerows			High
3	Species			
	Plants			
	bluebell	High		
	hairy woodrush			High
	Mammals			
	common pipistrelle	High		
	soprano pipistrelle	High		
	noctule bat	High		
	natterer's bat		High	
	whiskered bat		High	
	Birds			
	song thrush	High		
	reed bunting	High		
	bullfinch	High		
	spotted flycatcher	High		
	linnet	High		
	dunnock	High		
	cuckoo	High		
	lesser spotted woodpecker	High		
	yellowhammer	High		
	wood warbler	High		
	starling	High		
	fieldfare	High		
	kestrel	Moderate		
	stock dove	Moderate		
	green woodpecker	Moderate		
	swallow	Moderate		
	woodcock	Moderate		
	Invertebrates			
	purple hairstreak			High
	speckled wood			High
	gatekeeper			High
	emperor dragonfly		High	
	<i>Cydia splendana</i>		High	
4	Archaeology			
	Ridge and furrow			High

2.2.3 The site in wider perspective and implications for management

Ancient semi-natural woodland is a fragmented resource which has declined nationally since the 1950s. In Derbyshire as a whole it now covers only 2% of the land area. The Lowland Derbyshire BAP area has just under 3000 ha of ancient woodland but nearly half of this has been replanted with non-native species. To reflect the limited nature of the resource all ancient semi-natural woodland sites over 2 ha are recognised as County Wildlife Sites. Very few of these are in sympathetic nature conservation management. Some SSSIs in the south of the county are managed by the Wildlife Trust, others are sympathetically managed by Local Authorities. There is thus great importance in maintaining the habitat quality of those examples where nature conservation can be made a priority.

2.2.4 Specified limits

2.2.4.1 Woodland

- Oak should be maintained as the canopy dominant, but an increase in the cover of other native species is acceptable.
- Canopy cover should not become complete, there should always be some openings to allow sunny glades to develop.
- Sycamore should not increase its representation in any age class. This will mean controlling regeneration so that current recruitment at seedling and sapling stage does not develop.
- Beech should not be allowed to regenerate, but the current canopy trees can be maintained for their value as veterans.
- No regeneration of conifers should be allowed.
- The cover and distribution of rhododendron should be kept at its current level. Any regeneration away from compartment 9 should be removed.
- The overall cover of non-native shrubs (including snowberry and *Spirea*) should not be allowed to exceed current levels.
- The current proliferation of small paths through the woodland is likely to be limiting populations of ground nesting birds. The network should be reduced by 25% to leave larger core areas of undisturbed habitat.

2.2.4.2 Hedge

- The hedgerow should have no gaps greater than 5 metres (apart from road crossings).
- The overall cover of all non-native shrubs should not be allowed to exceed current levels.
- No regeneration of non-native tree or shrub species should be allowed.
- Tall, unmown grass margins of at least 1 metre width should be allowed to develop along all hedge margins.
- All mature oak trees to be allowed to develop veteran features including dead wood.

2.2.5 Ideal management objectives

- To maintain the habitats present in favourable conservation status.
- To maintain the populations of key species.
- To monitor key species and habitat condition in order to adapt future management.
- To encourage use of the site as a research facility.
- To raise awareness of the nature conservation value and management of the site through formal and informal educational use.
- To secure and maintain the boundaries in order to control public access.
- To minimise destructive human impacts.

Chapter 2.3 Factors influencing management

2.3.1 Natural trends

Natural processes would have the following effects in the absence of management:

- Sycamore would become a main component of canopy and sub-canopy over the next 50 to 100 years.
- The proportion of beech in the canopy would increase slowly.
- Rhododendron would gradually extend as a dominant component of the shrub layer.
- Other non-native shrubs including snowberry and *Spiraea* would increase their representation forming dense stands locally.
- Hedgerows will grow out into lines of mature trees/shrubs and lose their identity.
- The ponds will fill up with silt and leaf litter with the loss of open water areas.

2.3.2 Man induced trends

The current use of the site is having minimal impact on the wildlife interest. Of most concern is the network of small paths cutting through the middle of the wood. These seem to be maintained by fairly infrequent use and their extent in Chaddesden Wood does not seem to have reduced slightly compared with surveys in 1988 and 2001. It would seem, therefore that the situation is improving. Localised areas in both woods suffer a higher level of damage, attributed to children playing, including lighting fires. At current levels, though unsightly this has little impact on the ecology of the wood. Neither wood seems to suffer from regular dumping of garden waste with the associated risk of introducing competitive non-native plant species.

2.3.3 External factors

The wood is fairly independent of factors in the immediate vicinity. The most important issue is the connection afforded to a network of habitats in the countryside bordering the north of the site. Development threatening this remaining link should be resisted.

2.3.4 Obligations and legal constraints

Legal obligation: Wildlife & Countryside Act 1981 (and subsequent amendments)

A number of sections are applicable including an obligation not to damage or disturb protected species or birds during the nesting season, the control of the spread of undesirable species and restrictions on the introduction of plant and animal species. Obligations arising from the designation of the site as a Local Nature Reserve are also covered by this legislation.

Legal obligation: Occupier Liability Act

As owners and occupiers of the land this imposes an obligation to ensure that every reasonable care is taken to remove any risk to visitors and trespassers alike.

Legal obligation: Health & Safety at Work Act

All operations carried out on the site must be undertaken by appropriately trained personnel using equipment and methods approved by the Health and Safety Executive. Operations must comply with both National and City Council safety procedures.

Legal obligation: Weeds Act 1959

Requires that the following plants are controlled:

creeping thistle (*Cirsium arvense*)

spear thistle (*Cirsium vulgare*)

curled dock (*Rumex crispus*)

broad-leaved dock (*Rumex obtusifolius*)

ragwort (*Senecio jacobaea*)

Legal obligation: Disability Discrimination Act 1998

This imposes obligations in relation to signage, information media, access provision and volunteer opportunities

Legal obligation: Tree Preservation Order

A Woodland Tree Preservation Order has been placed on the wood.

Legal obligation: Byelaws

Current byelaws applicable to the wood are included in Appendix 10.

2.3.5 Management constraints

The existing level of management input to the site should be sufficient to steadily improve the woods structure to its optimum. This is principally co-ordinated by the Friends Group, although it involves a wider range of voluntary assistance from a number of different groups including DCPWA, BTCV, Derby College, DART and Groundwork.

A continued input is needed to maintain the physical boundaries of the site to control the type of public access allowed. Continued maintenance of the post and rail fencing, kissing gates and chicanes will require an annual budget to allow for routine replacement of the infrastructure.

Management of the site should be informed by a better understanding of the invertebrate interest, which is currently patchy. Resources should be made available to research the invertebrate fauna of the wood with particular reference to the distribution of dead wood and open glades.

2.3.6 Impact assessment

The indications are that the wood has a positive management outlook. Most of the natural ecological processes are intact and there are relatively minor adverse impacts, both natural and man-induced. Current management input should be sufficient to reverse the negative trends and reach an optimum condition for the wood. Additional resources may be needed to maintain control on public use of the wood and to research some of the less well-recorded wildlife groups that are likely to be of significance for future management.

Chapter 2.4 Operational objectives and management options

2.4.1 Rationale with operational objectives

Ideal objective: To maintain the habitats present in favourable conservation status.

Woodland

The majority of compartments in both woodlands are currently in good condition. Site native species are dominant and natural regeneration is sufficient to maintain the current woody structure in most of the woodland. The 2002 Chaddesden Wood Management Plan, however, identified three features which detracted from the optimum structure at that time: firstly there was a lack of immature trees, which had resulted in a lack of a middle storey across the wood; secondly the shrub layer was patchy; and thirdly non-native species, particularly sycamore, were locally frequent and regenerating vigorously. Since the 2002 plan was written there has been substantial development of the shrub layer and understorey in parts of the wood, and these aspects are starting to resolve themselves through natural regeneration. This could still be enhanced by planting native shrubs in compartments where the shrub layer is still sparse. There was rather more hazel coppicing undertaken than was planned during the early part of the period. The woodland structure would benefit if there were no more coppicing during the next 5 years (to 2017), to allow the shrub layer to develop. A coppice rotation of the hazel could be reinstated during the last 5 years of the plan (2018-2022). Management implemented under the plan has already significantly reduced the canopy cover of sycamore. This should no longer be considered a priority, though if canopy trees are to be sacrificed to meet other objectives, such as creating dead wood or open glades, sycamore should be targeted. There still needs to be a programme of eliminating sapling stage recruitment of sycamore, which is frequent in some areas. Other non-natives include beech, as both mature trees and saplings, and horse chestnut, which occurs as scattered saplings. The mature beech trees are concentrated in compartment 3 and are some of the oldest trees in the wood. They should be retained for their veteran qualities. Further development of beech in the canopy elsewhere in the wood, however, would have similar detrimental effects as the sycamore and should be prevented. Sapling beech should therefore be removed, apart from a few selected as small trees to replace the veteran trees in due course. Any regeneration of *Rhododendron* away from compartment 9 should be removed together with all snowberry, *Spirea* and cherry laurel seedlings in Lime Lane Wood.

For the period of the current plan there should be sufficient gaps in the canopy to maintain the habitat diversity as a result of the sycamore that has already been cleared. There are still some areas where natural regeneration is slow following sycamore clearance, as in compartment 5. Here oak seedlings should be transplanted from compartments where they are abundant to fill the gaps. To aid survival amongst the dense bracken they should be hand weeded during the first 3 years following planting.

A substantial amount of dead wood has been created by the recent removal of sycamore and there is now little need to increase this over the next 10 years.

However, if surveys reveal important species of invertebrate or fungi that are selectively dependent on particular species such as oak, this would justify steps to increase the amount of oak deadwood. In some compartments the oak canopy is very crowded with even-aged trees. This might provide the circumstances where some of the suppressed trees might be ringbarked to leave standing dead stems.

Diversification of the ground flora is only likely to be achieved by allowing ground conditions to become wetter. In these types of acid oak-birch woodland the drier the soil conditions the poorer the ground vegetation becomes, resulting ultimately in simply a continuous layer of bracken. The more diverse sub-communities are characteristic of wetter conditions. The old network of ditches would have drained the site in the past but are probably of limited effectiveness now. They should not be maintained any longer but allowed to fill up gradually to allow the water table to rise naturally.

Operational objective:

1. To maintain the woodland in favourable conservation status where:

- There is no reduction in area of the woodland habitat.
- 90% of cover in each layer is site-native.
- The canopy covers 30-90% of the area and has a minimum of 50% oak.
- The understorey and shrub layers cover at least 30% of the area.
- The ground flora covers at least 50% of the area, 80% of which is referable to the W10 community.
- Veteran trees are retained for as long as possible.
- Dead trees and fallen timber are retained.
- Regeneration is sufficient to maintain canopy density and diversity.
- All planting material is locally native.

Woodland Boundary Hedgerows

A shrubby margin to the wood is a valuable feature. The sunny open aspect and seasonal flowering of shrubs provides habitat for a wide range of invertebrates which in turn support bird populations. They are also important in supporting the 5 species of bat that forage around the woodland margins. Hedges exist around most of the woodland edge in both woods. Some lengths have been laid in the past, other stretches are recently planted. Maintenance of the hedges by laying should be timed to optimise the hedgerow structure. This will require careful assessment as each section will develop at a different rate depending on conditions on the edge of the wood. In short, shaded north-facing sections will require laying on a longer rotation than open south-facing sections. The hedges around Lime Lane Wood have been laid recently and may not need to be done again in the life of this plan. Where a high proportion of sycamore makes up the hedge a poor structure results. It should be removed on the next laying cycle and gaps planted with suitable site native shrubs. The shrubby edge effect to the woodland could be enhanced substantially in several locations by planting mown areas adjacent to both woods with a variety of site native shrubs.

Operational objective:

2. To maintain the woodland boundary hedgerows and associated features in favourable conservation status where:

- Hedgerows consist of a minimum of 3 site native species.
- Non-native species are eradicated.
- Hedgerows are managed on an appropriate cycle of cutting and laying.

Woodland ponds

The small, shallow ponds in compartment 4 continue to form a focus for visitor pressure with subsequent severe degradation of the habitat. There appear to be no dependent aquatic species in the largest pond. Various remedies have been tried but so far with little success. It seems that the visual appeal of an area of open water simply attracts too much attention, particularly with dogs continually jumping in and out of the pond. These ponds should be left to develop as best they can. There are some wetland plants in the area furthest from the path and these may develop providing the ponds are at least seasonally wet. The surrounding canopy should be kept back to ensure an open sunny aspect to help the vegetation develop. The two ponds in compartment 3 have to date received far less visitor pressure. These should essentially be left to develop naturally.

Operational objective:

3. To maintain the ponds in favourable conservation status where:

- Plant cover is dominated by site native species.
 - Water quality is maintained.
 - An open aspect is maintained by limiting the tree canopy.
-

The Connecting Hedge

The value of the connecting hedge is to provide a corridor linking the two blocks of ancient woodland. In this way it allows populations of birds, bats, small mammals and invertebrates to move freely between the woodland blocks. It also acts to knit together the line of veteran oak trees that have been retained through this part of the housing development. Without the support of the hedge these trees would be isolated and their value would be much reduced. A number of aspects are important if the hedge is to function in this way. Firstly, there need to be minimal gaps in the line of the hedge. Obviously where roads cross the hedge is going to be broken, but elsewhere there needs to be a continuous cover of shrubs. Secondly the hedge should have a dense structure, providing good cover for wildlife throughout its length. Cutting and laying the hedge in the traditional manner will enhance its structure and rejuvenate the shrubs stimulating dense new growth of shoots. A margin of tall, unmown grass along the bottom of the hedge will further enhance the amount of cover it offers to wildlife. Finally the composition should be of native tree and shrub species. Ornamental species of shrubs do not necessarily offer suitable habitat, especially for invertebrates, and may therefore act as a barrier in the hedge. Regeneration of cotoneaster and laurel should be removed.

Operational objective:

4. To maintain the connecting hedgerow and associated veteran oak trees in favourable conservation status where:

- Non-native species are eradicated.
- Hedgerows are managed on an appropriate cycle of cutting and laying.
- A margin of tall, unmown grass is allowed to develop at the base of the hedge.
- All mature oak trees are retained and allowed to develop veteran features.
- Gaps are reduced to a minimum by planting native shrubs.

Ideal objective: To monitor key species and habitat condition in order to adapt future management.

There are clearly a number of gaps in our knowledge of the populations of some key species. Apart from plants and fungi records for other groups are sketchy. Some key species need to be reconfirmed (for example the birds). In other groups (for example deadwood invertebrates) there is no information available and key species may be being overlooked. All these gaps need to be addressed during the period of the plan.

Operational objectives:

5. **To monitor all priority Biodiversity Action Plan, Derbyshire Red Data Book and locally significant species.**
 6. **To monitor the condition of the habitats in comparison with their favourable conservation status.**
 7. **To re-survey the invertebrate populations with particular reference to deadwood dependent groups.**
 8. **Modify management plan to accommodate revised list of key species.**
-

Ideal objective: To encourage use of the site as a research facility.

The benefits of offering the site as a research facility is that additional expertise is drawn in. This should help provide information about the site which will add to the overall knowledge of its wildlife value and help inform future management decisions.

Operational objective:

9. **To encourage the use of the site for research and study by local universities, colleges and natural history groups.**
-

Ideal objective: To raise awareness of the nature conservation value and management of the site through formal and informal educational use.

Chaddesden Wood receives a great deal of use from the general public, some of whom obviously visit on a daily basis and have developed an attachment for the wood. Such public usage can compromise the achievement of management aims, particularly in woodlands, if management tasks are seen as damaging and therefore resisted. To avoid situations like this The Friends Group has worked to promote an understanding of the wildlife interest of the wood and the processes that support it as a way of achieving an appreciation for the need for active management, even where this involves felling mature trees. This involves a two-prong approach. A programme of activities that foster an understanding of the wood has been developed, including the development of a revised Nature Trail and Leaflet. As an ongoing source of information a community website has been developed. This provides a background to the wood, its wildlife and ecology, advertises events and contacts and also acts as a discussion forum.

Operational objectives:

- 10. Promote the site through a range of informal events such as guided walks.**
- 11. Encourage use of the site by local schools.**
- 12. Maintain the nature trail and supporting leaflet.**
- 13. Provide on-site interpretation and press releases prior to major management tasks.**
- 14. To maintain the community website for the wood.**

Ideal objective: To secure and maintain the boundaries in order to control public access.

It is important that the designation of the woods as an area of particular interest to wildlife is respected. Clear and effective boundaries are an essential part of this process as they define the limits of the protected area. In such an urban setting a certain amount of vandalism is to be expected. It is important that any damage is repaired quickly to maintain respect for the boundaries and avoid a descending spiral of damage.

Operational objective:

- 15. Maintain fences, kissing gates and chicanes around site boundary.**

Ideal objective: To minimise destructive human impacts.

Although the wood suffers generally very little from human impacts some activities undoubtedly cause disturbance to wildlife, especially ground nesting birds. The network of small paths through the centre of the wood should be further reduced to give some larger refuge areas. This should be achieved by vegetation management and by upgrading the existing surfaced circular path. Areas where youths congregate should be kept clear of accumulating litter and debris that attracts further attention. During episodes of persistent vandalism patrols should be organised through the wood to break the cycle of damage.

Operational objectives:

- 16. To reduce the network of small paths through the centre of the wood.**
 - 17. To reduce the attractiveness of the wood to further vandalism.**
 - 18. To enforce the byelaws and patrol the wood at periods of peak pressure.**
-

2.4.2 Identification of operational objectives and selection of outline prescriptions.

Ideal objective	Operational objective	Outline prescription
To maintain the habitats present in favourable conservation status:		
	1. To maintain the woodland in favourable conservation status.	1. Remove sapling sycamore, beech, horse chestnut and rhododendron. 2. Remove snowberry, <i>Spirea</i> and cherry laurel 3. Coppice hazel. 4. Retain fallen deadwood. 5. Maintain gaps in canopy. 6. Transplant oak seedlings. 7. Plant shrubs. 8. Allow ditch network to degrade.
	2. To maintain the woodland hedgerows in favourable conservation status.	1. Lay hedgerows on rotation. 2. Remove sycamore and replant gaps. 3. Plant up adjacent open areas with site native shrubs.
	3. To maintain the woodland ponds in favourable conservation status.	1. Maintain open aspect.
	4. To maintain the connecting hedgerow in favourable conservation status.	1. Lay sections of hedge on rotation. 2. Remove non-native regeneration. 3. Replant gaps with native shrubs 4. Retain veteran features on oaks. 5. Develop margins of tall grassland
To monitor key species and habitat condition in order to adapt future management:		
	5. To re-survey/monitor all priority Biodiversity Action Plan, Derbyshire Red Data Book and locally significant species.	1. Liaise with local experts/societies. 2. Collect species data.
	6. To monitor the condition of the habitats in comparison with their favourable conservation status.	1. Collect condition data on habitats.
	7. To re-survey the invertebrate populations with particular reference to deadwood dependent groups.	1. Collect species data on invertebrates.
	8. Modify management plan to accommodate revised list of key species.	1. Assess new species data for BAP, DRDB and locally significant species. 2. Devise objectives to maintain species population levels.

Ideal objective	Operational objective	Outline prescription
To encourage use of the site as a research facility:		
	9. To encourage the use of the site for research and study by local universities, colleges and natural history groups.	1. Liaise with educational establishments. 2. Liaise with local natural history groups.
To raise awareness of the nature conservation value and management of the site through formal and informal educational use:		
	10. Promote the site through a range of informal events such as guided walks.	1. Liaise with other organisations. 2. Organise annual programme of events. 3. Publicise programme.
	11. Encourage use of the site by local schools.	1. Liaise with local schools. 2. Provide specialist staff for on-site activities.
	12. Maintain the nature trail and supporting leaflet.	1. Re-survey route every 5 years. 2. Produce revised leaflet if necessary. 3. Maintain marker posts.
	13. Provide on-site interpretation and press releases prior to major management tasks.	1. Produce written material. 2. Distribute to local press/on site.
	14. Maintain the community website.	1. Maintain website.
To secure and maintain the boundaries in order to control public access.		
	15. Maintain fences, kissing gates and chicanes around site boundary.	1. Regularly survey boundaries. 2. Carry out repairs to structures.
To minimise destructive human impacts.		
	16. To reduce the network of small paths through the centre of the wood.	1. Block off selected paths. 2. Upgrade the margins of the surfaced path.
	17. To reduce the attractiveness of the wood to further vandalism.	1. Regularly remove debris and damage at main vandalism spots.
	18. To patrol the wood at periods of peak pressure.	1. Liaise with residents groups and police. 2. Establish prioritised patrols.

Stage 3: Prescription

3.1. Project register and description

Operational objective 1: To maintain the woodland in favourable conservation status.

Outline prescription 1.1: Remove sapling sycamore, beech, horse chestnut and rhododendron.

Project

Clear During winter clear saplings of all stages of the target species (*except* rhododendron in compartment 9). To ensure systematic coverage work on a compartment per year basis. See also Outline Prescription 1.4.

Treat Treat cut stumps with approved herbicide to prevent regrowth.

Outline prescription 1.2: Remove snowberry, *Spirea* and cherry laurel.

Project

Clear During winter clear all growth stages of the target species. Young seedling may be pulled up, older plants will need to be cut.

Treat Treat cut stumps with approved herbicide to prevent regrowth.

Outline prescription 1.3: Coppice hazel.

Project

Promote During the first 5 years of the plan allow all hazel to mature to create a sub-canopy and encourage more seeding.

Coppice During winter coppice groups of hazel stems sufficiently large to open the shrub layer and allow light to reach the ground flora. Coppice areas on a 10-year rotation. See also Outline Prescription 1.4.

Outline prescription 1.4: Retain fallen deadwood.

Project

Retain Retain any naturally fallen limbs of all tree species.

Piles During management operations retain deadwood of all diameters and create invertebrate piles of rotting timber in both sunny and shaded conditions.

Outline prescription 1.5: Maintain gaps in canopy.

Project

Survey After year 5 survey the woodland to estimate the overall canopy cover and identify all gaps large enough to allow sunlight to reach the woodland floor. If canopy cover exceeds 90% or all gaps are small identify potential locations for new gaps.

Create During winter fell or ringbark canopy trees to create new gaps large enough for sunlight to reach the woodland floor.

Outline prescription 1.6: Transplant oak seedlings.

Project

Transplant Select oak seedlings from areas within the wood where they are abundant and transplant to compartments with poor regeneration.

Weed Weed transplanted seedlings for first 3 years following transplanting.

Outline prescription 1.7: Plant shrubs.

Project

Propagate Collect seeds/cuttings of hazel, holly, rowan and hawthorn and propagate young plants.

Plant During autumn/winter plant propagated shrubs in compartments 2, 4 & 5.

Outline prescription 1.8: Allow ditch network to degrade.

Project

Non-intervention

Operational objective 2: To maintain the woodland hedgerows in favourable conservation status.

Outline prescription 2.1: Lay hedgerows on rotation.

Project

Survey Inspect hedges to establish in which year each needs laying.

Lay During winter lay hedgerows on rotation according to their rate of growth.

Outline prescription 2.2: Remove sycamore and replant gaps.

Project

Clear Clear sycamore where they occur in any hedgeline that is being laid.
See also Outline Prescription 1.6.

Treat Treat cut stumps with approved herbicide to prevent regrowth.

Plant Plant gaps with site native shrubs.

Outline prescription 2.3: Plant up adjacent open areas with site native shrubs.

Project

Liaison Liaise with appropriate maintenance section to agree change in regime for areas adjacent to wood selected for shrub planting.

Plant During autumn/winter plant adjacent areas with site native shrubs.

Operational objective 3. To maintain the woodland ponds in favourable conservation status.

Outline Prescription 3.1: Maintain open aspect.

Project

Clear Clear developing scrub from pond margins.

Operational objective 4. To maintain the connecting hedgerow in favourable conservation status.

Outline prescription 4.1: Lay hedgerows on rotation.

Project

Survey Inspect hedge to establish in which year each section needs laying. During winter lay a single section on rotation according to the rate of growth.

Outline prescription 4.2: Remove regeneration of non-native shrubs.

Project

Clear During winter clear all growth stages of the target species. Young seedling may be pulled up, older plants will need to be cut.

Treat Treat cut stumps with approved herbicide to prevent regrowth.

Outline prescription 4.3: Plant up gaps with native shrubs.

Project

Plant During autumn/winter plant up gaps with site native shrubs.

Outline prescription 4.4: Retain veteran features on mature oak trees.

Project

Liaison Liaise with City Council departments and local residents to ensure dead wood is retained on veteran trees.

Lay During hedgelaying ensure no material is removed from the veteran oaks in the hedge.

Outline prescription 4.5: Allow margins of tall grassland to develop along hedge.

Project

Liaison Liaise with City Council departments to modify mowing regime on grassland adjacent to the hedge to leave a 1-metre margin unmown.

To monitor all priority Biodiversity Action Plan, Derbyshire Red Data Book and locally significant species.

Outline Prescription 5.1: Liaise with local experts/societies.

Project

Liaison Liaise with local individuals and natural history groups to involve them in species recording ensuring a good range of coverage of species groups.

Outline Prescription 5.2: Collect species data.

Project

Survey Re-survey on a regular basis all priority BAP, Derbyshire RDB and locally significant plants, mammals, birds and invertebrates listed in Table 2.2.2. Plants should be surveyed on a 5-yearly basis. All other groups should be surveyed annually.

Operational objective 6. To monitor the condition of the habitats in comparison with their favourable conservation status.

Outline prescription 6.1: Collect condition data on habitats.

Project

Monitor Assess the condition of woodland, hedgerow and wetland habitats against their respective favourable condition criteria. Monitor wetland every 3 years; woodland and hedges every 5 years.

Operational objective 7. To re-survey the invertebrate populations with particular reference to deadwood dependent groups.

Outline Prescription 7.1: Collect species data on invertebrates.

Project

Survey Survey the wood for invertebrates paying particular attention to groups dependent on standing and fallen deadwood and open sunny glades.

Operational objective 8. Modify management plan to accommodate revised list of key species.

Outline Prescription 8.1: Assess new species data for BAP, DRDB and locally significant species.

Project

Assess Review all species data produced by new surveys to identify additional species which fall into the categories of conservation significance.

Outline Objective 8.2: Devise objectives to maintain species population levels.

Project

Revise Review management plan to assess whether newly identified species of conservation concern are accommodated. Revise plan introducing new projects where necessary to ensure populations of these species are maintained.

Operational objective 9. To encourage the use of the site for research and study by local universities, colleges and natural history groups.

Outline Prescription 9.1: Liaise with educational establishments.

Project

Liaison Liaise with relevant individuals from Derby and Nottingham Universities to encourage use of the site for undergraduate and post graduate research. Develop projects which will aid an understanding of the management of the wood.

Outline Prescription 9.2: Liaise with local natural history groups.

Project

Liaison Liaise with local natural history groups and encourage them to set up long term studies in the wood which will provide data of relevance to the management of the site.

Operational objective 10. Promote the site through a range of informal events such as guided walks.

Outline Prescription 10.1: Liaise with other organisations.

Project

Liaison Liaise with other organisations such as local natural history groups in order to run joint events.

Outline Prescription 10.2: Organise annual programme of events.

Project

Co-ordinate Take responsibility for co-ordinating events run jointly with partner organisations to produce a balanced programme of events throughout the year.

Outline Prescription 10.3: Publicise programme.

Project

Publicise Produce printed material and press releases to publicise the annual programme of events. See also Outline Prescription 13.1.

Operational objective 11. Encourage use of the site by local schools.

Outline Prescription 11.1: Liaise with local schools.

Project
Liaison Liaise with local schools to assess how the wood could be used as a teaching resource.

Outline Prescription 11.2: Provide specialist staff for on-site activities.

Project
Staff Arrange activity days for schools to be run by specialist staff from outside organisations such as DWT.

Operational objective 12. Maintain the nature trail and supporting leaflet.

Outline Prescription 12.1: Re-survey nature trail route.

Project
Survey Survey route of nature trail every 5 years to ensure features are still relevant.

Outline Prescription 12.2: Produce revised leaflet.

Project
Produce Consider revising leaflet after 5-year review of trail (see 12.1).

Outline Prescription 12.3: Maintain marker posts.

Project
Erect Erect new marker posts to replace any that area damaged.

Operational objective 13. Provide on-site interpretation and press releases prior to major management tasks.

Outline Prescription 13.1: Produce written material.

Project
Produce Produce written material in the form of press releases and posters to be put up on site explaining the background, benefits, location, extent and timing of proposed management tasks.

Outline Prescription 13.2: Distribute to local press/on site.

Project
Distribute At least 2 weeks in advance of management work distribute press releases to local press and put up posters on site.

Operational objective 14. To maintain a community website for the wood.

Outline Prescription 14.1: Maintain website.

Project

Update Ensure website is updated regularly to take account of organised events, management tasks and feedback from local residents and other interested parties.

Operational objective 15. Maintain fences, kissing gates and chicanes around site boundary.

Outline Prescription 15.1: Regularly survey boundaries.

Project

Inspect Inspect entire boundary and note damage to fences and other structures on a monthly basis.

Outline Prescription 15.2: Carry out repairs to structures.

Project

Repair Carry out immediate repairs to replace damaged structures.

Operational objective 16. To reduce the network of small paths through the centre of the wood.

Outline Prescription 16.1: Block off selected paths.

Project

Block During winter select some of the smallest paths and block both ends using brash from woodland management tasks. By choosing paths with dense bramble either side they should quickly become impassable as the vegetation grows the following summer.

Outline Prescription 16.2: Upgrade the surfaced path.

Project

Surface Ensure a high standard of surface on the existing circular path to allow access for all. Construct clear margins to establish it as the approved route.

Operational objective 17. To reduce the attractiveness of the wood to further vandalism.

Outline Prescription 17.1: Regularly remove debris and damage at main vandalism spots.

Project
Remove Collect and remove on monthly basis all debris, including litter, fire sites, broken branches and dens, which have collected around the vandalism 'hot-spots'.

Operational objective 18. To enforce the byelaws and patrol the wood at periods of peak pressure.

Outline Prescription 18.1: Liaise with residents groups and police.

Project
Liaison Ensure a co-ordinated approach to the enforcement of bylaws by regular contact between City Council, Ranger Service, Police and resident's groups.

Outline Prescription 18.2: Establish prioritised patrols.

Project
Patrol Assign resources/responsibilities to ensure a presence on the site at times of peak pressure.

3.2 Ten year work programme 2012-2021

Objective	Prescription and Project	1	2	3	4	5	6	7	8	9	10
Woodland	Remove non-native saplings Clear Treat	X X		X X		X X		X X		X X	
	Remove snowberry, <i>Spirea</i> and cherry laurel. Clear Treat		X X		X X		X X				
	Coppice hazel. Promote Coppice	X	X	X	X	X	X	X	X	X	X
	Retain fallen deadwood. Retain Piles	X X	X	X X	X	X X X	X	X X	X	X X	X X X
	Maintain gaps in canopy. Survey Create					X	(X)			(X)	
	Transplant oak seedlings Transplant Protect		X X		X X		X X		X X		X X
	Plant shrubs. Propagate Plant	X	X	X	X		X				X X
	Allow ditch network to degrade. Non-intervention	X	X	X	X	X	X	X	X	X	

Objective	Prescription and Project	1	2	3	4	5	6	7	8	9	10
Woodland Hedgerows	Lay hedgerows Survey Lay		X (X)		X (X)		X (X)		X (X)		X (X)
	Remove sycamore Clear Treat Plant		(X) (X) (X)		(X) (X) (X)		(X) (X) (X)		(X) (X) (X)		(X) (X) (X)
	Plant shrubs adjacent Liaison Plant	X	X		X						
	Maintain open aspect Clear				X			X			X
Connecting Hedgerow	Lay hedgerows Survey Lay			X (X)		X (X)		X (X)		X (X)	
	Remove regenerating non-native shrubs Clear Treat	X X					X X				
	Plant up gaps with native shrubs Plant		X	X							
	Retain veteran features on oaks Liase	X	X	X	X	X	X	X	X	X	X
	Develop tall grassland margins Liase	X	X	X	X	X	X	X	X	X	X

Objective	Prescription and Project	1	2	3	4	5	6	7	8	9	10
Re-survey/monitor species	Liaise with experts Liaison	X	X	X	X	X	X	X	X	X	X
	Collect species data Survey	X	X	X	X	X	X	X	X	X	X
Monitor habitat condition	Collect condition data Monitor			X		X	X			X	X
Survey invertebrates	Collect species data Survey	X					X				
Modify management plan	Assess new species data Assess	X					X				
	Devise objectives Revise	(X)					(X)				

Objective	Prescription and Project	1	2	3	4	5	6	7	8	9	10
Encourage research and study	Liaise with universities Liaison	X	X	X	X	X	X	X	X	X	X
	Liaise with natural history groups Liaison	X	X	X	X	X	X	X	X	X	X
Promote the site through events	Liaise with other groups Liaison	X	X	X	X	X	X	X	X	X	X
	Organise programme Co-ordinate	X	X	X	X	X	X	X	X	X	X
	Publicise programme Publicise	X	X	X	X	X	X	X	X	X	X
Encourage use by local schools	Liaise with schools Liaison	X	X	X	X	X	X	X	X	X	X
	Staff on-site activities Staff	X	X	X	X	X	X	X	X	X	X
Maintain nature trail and leaflet	Re-survey Survey					X					
	Produce leaflet Produce					X					
	Maintain posts Erect					(X)					

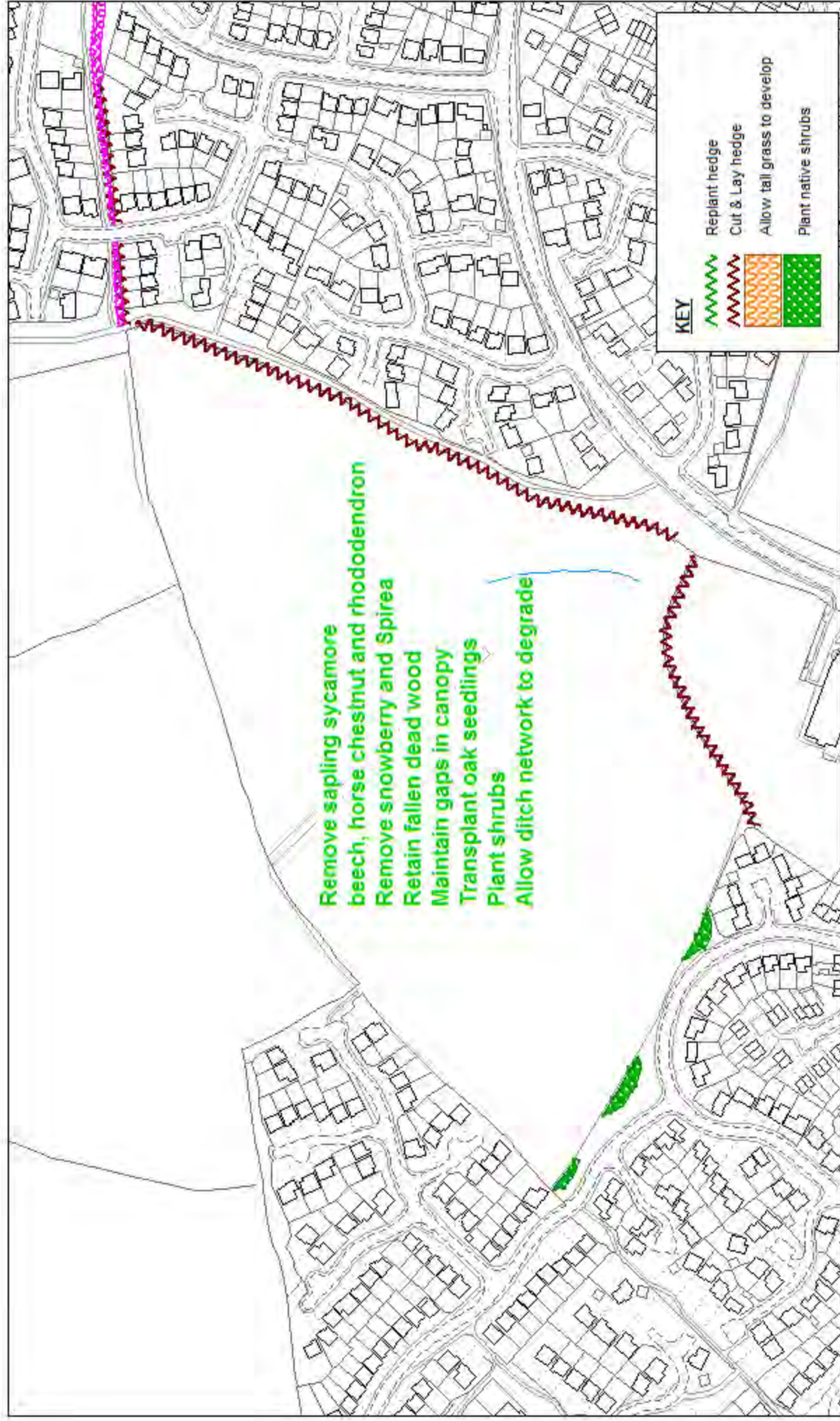
Objective	Prescription and Project	1	2	3	4	5	6	7	8	9	10
Provide interpretation and press releases prior to management tasks	Produce material Produce	X	X	X	X	X	X	X	X	X	X
	Distribute to press/on site Distribute	X	X	X	X	X	X	X	X	X	X
To maintain a community website for the wood.	Maintain website Maintain	X	X	X	X	X	X	X	X	X	X
Secure and maintain boundaries	Survey boundaries Inspect	X	X	X	X	X	X	X	X	X	X
	Carry out repairs Repair	X	X	X	X	X	X	X	X	X	X
Reduce the network of small paths	Block small paths Block	X	X	X	X	X	X	X	X	X	X
	Upgrade circular path Surface	X				X			X		
Reduce further vandalism	Remove debris Remove	X	X	X	X	X	X	X	X	X	X
Enforce byelaws and patrol wood	Liaise with groups Liaison	X	X	X	X	X	X	X	X	X	X
	Establish patrols Patrol	X	X	X	X	X	X	X	X	X	X



**Chaddesden and Lime Lane Woods Management Plan
Plan 1 Boundaries and Access points**



**Chaddesden and Lime Lane Woods Management Plan
Plan 2 Compartments**



Chaddesden and Lime Lane Woods Management Plan Plan 3.1 Management Summary Chaddesden Wood



Chaddesden and Lime Lane Woods Management Plan
Plan 3.2 Management Summary Lime Lane Wood



Chaddesden and Lime Lane Woods Management Plan Plan 3.3 Management Summary Connecting hedge

Appendix 1 Woodland stand record cards 2002

	Tx	Tp	Ts	Tc	Tn	Cx	Ct	Px	Pc	Sx	Sc	St	Js	Jp	Jv
Acer cam															
Acer pse					R							R	LF		
Aescu hip															
Alnus glu															
Betul pend					R							R	R		
Betul pub															
Carp bet															
Casta sat															
Conifer sp															
Coryl ave										A			O	F	
Crata mon											R			R	
Crata oxy															
Euony eur															
Fagus syl														R	
Frang aln															
Fraxi exc															
Ilex aqu					O							LF		OF	
Junip com															
Larix sp															
Malus syl															
Picea sp															
Pinus syl															
Popul tre															
Prunu avi															
Prunu lau															
Prunu pad															
Prunu spi															
Querc cer															
Querc pet															
Querc rob						A							O	R	LF
Rhamn cat															
Rhodo pon															
Salix alb															
Salix aur															
Salix cap															
Salix cin															
Salix fra															
Salix pen															
Salix vim															
Sambu nig										R					
Sorbu ari															
Sorbu auc														R	
Sorbu tor															
Taxus bac															
Thely san															
Tilia cor															
Tilia eur															
Tilia pla															
Ulmus car															
Ulmus gla															
Ulmus pro															
Vibur lan															
Spicea										R					
	Tx	Tp	Ts	Tc	Tn	Cx	Ct	Px	Pc	Sx	Sc	St	Js	Jp	Jv
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					
Ulmus pro															
Vibur lan															
Spicea										R					

HABITATS, VEGETATION STRUCTURE

Date	Grid Ref.	Site	Stands 187 NVC
HABITATS WITHIN STAND			
RIDES, GLADES OPEN AREAS Vegetation-size-shade-permanence-edges	P	Limited areas where canopy has been thinned primarily to remove sycamore. Transient glades becoming colonized by bramble and tree saplings.	
PONDS, STREAMS, RIVERS Vegetation-size-substrate-bank-shade	N		
ROCKS Size-abundance-outcrop-scrub-cliff-surface stone-acid-basic	N		
BOG, FEN, FLUSHES Vegetation-size-wetness-acid-basic	N		
DEAD WOOD Size-felled or fallen-abundance-decay-standing trees-holes or hollows	P	Limited standing dead timber. A few large dead limbs in older oaks - some hole-nesting birds. Not too much on ground either - some large sycamore trunks and a few piles of brush.	
OTHER HABITATS OR COMMUNITIES Mosaics-transitions-	N		
VEGETATION STRUCTURE			
BARE GROUND Extent-distribution-sunny banks	P	Limited to a few braked patches - compacted.	
LITTER LAYER Drifts-thickness-type of litter	P	Locally extensive up to 2-3 cm deep under bramble stands	
BRYOPHYTE LAYER on wood-on rocks-on ground-carpet	N		
HERB LAYER Height-cover-distribution-broad type	P	Varied but mostly bramble up to 1m over bare litter. Locally bracken and rosebay willowherb. Some patches creeping soft-grass/bluebell	
SHRUB LAYER Height-cover-uniformity	S	Richer varied up to 6-8m; abundant hazel and holly. Varied sapling species	
TREE LAYER Height-cover-uniformity-age	S	Fairly uniform oak dominated but with a scattering of younger oaks & occasional birch	
EPHYPHYTES/CREEPERS Type-position on tree-abundance	N		

P - Present N - None seen S - Significant contribution

WOODLAND TREES AND SHRUBS

2

County

	Tx	Tp	Ts	Tc	Tn	Cx	Ct	Px	Pc	Sx	Sc	St	Js	Jp	Jv
Acer cam															
Acer pse														R	
Aescu hip														R	
Alnus glu															
Betul pend					R							R		LD	
Betul pub															
Carp bet															
Casta sat															
Conifer sp															
Coryl ave										R	R			R	
Crata mon										R		R		R	
Crata oxy															
Euony eur															
Fagus syl														R	
Frang aln															
Fraxi exc															
Ilex aqu											R			R	
Junip com															
Larix sp															
Malus syl															
Picea sp															
Pinus syl sp	R														
Popul tre															
Prunu avi															
Prunu lau															
Prunu pad															
Prunu spi															
Querc cer															
Querc pet															
Querc rob					A							R	R	LF	
Rhamn cat															
Rhodo pon															
Salix alb															
Salix aur															
Salix cap															
Salix cin															
Salix fra															
Salix pen															
Salix vim															
Sambu nig										R					
Sorbu ari															
Sorbu auc					R							R		R	
Sorbu tor															
Taxus bac															
Thely san															
Tilia cor															
Tilia eur															
Tilia pla															
Ulmus car															
Ulmus gta															
Ulmus pro															
Vibur lan															

Tx	Tp	Ts	Tc	Tn	Cx	Ct	Px	Pc	Sx	Sc	St	Js	Jp	Jv
Sx	Sc	Js	Jp	Jv										

Clem vit														
Daph lau														
Heder hel														
Ligust vul														
Lonic per														
Mahon aqu														
Myrica ga														
Ribes nig														

Ribes syl
Ribes uva
Rosa arv
Rosa can
Saxat sco
Ulex eur
Ulex gal
Vibur opu

Recorder

SITE

COMPARTMENT 2

Date

GRID REF.

Ancient
Semi-nat.Recent
Semi-nat.Ancient
plantn.Recent
plantn.D = dominant
A = abundant
F = frequent
O = occasional
R = rare

Distinguished by dominance of oak in canopy and very sparse sub-canopy/shrub layer. No other species in canopy, though a few native birch and one or two rowan occur. Shrub layer very sparse, but hazel locally frequent in north and a few patches of birch saplings where oaks thin in south. Have elder + hawthorn. Regeneration limited to a patchy oak + birch and very occasional hazel, hawthorn, holly, rose. Field layer extensively dominated by bramble, with bracken in places.

Area occupied by each type

0-0.5 ha	0.5-2	2-10	10-20	20+ ha
	W10			

Tree Layer	Height	Cover	Shrub Layer	Height	Cover
	20m	80-90%		6m	10%

Age class abundance (all species)

O/mature	mature	young trees	saplings	seedlings	coppice
-	A	O	R/VLF	R	R

Tp Planted tree

Cx coppice

Sc climber

Tn Self-sown tree

Ct regrowth from stump

St young tree

Ts standard in c-w-s

Px pollard (2.5m+)

Js seedling

Tc grown from coppice

Pc pollard (1-2.5m)

Jp sapling

Tx any other tree

Sx shrub

Jv sucker

HABITATS, VEGETATION STRUCTURE

Date	Grid Ref.	Site	Stand 2	NVC W10
HABITATS WITHIN STAND				
RIDES, GLADES OPEN AREAS Vegetation-size-shade-permanence-edges	P	Occasional small clearings in south with creeping soft-grass + bluebell. Being lost to oak/birch sapling regen.		
PONDS, STREAMS, RIVERS Vegetation-size-substrate-bank-shade	N			
ROCKS Size-abundance-outcrop-scree-cliff-surface stone-acid-basic	N			
BOG, FEN, FLUSHES Vegetation-size-wetness-acid-basic	N			
DEAD WOOD Size-felled or fallen-abundance-decay-standing trees-holes or hollows	P	Occasional standing dead oak. Some larger limbs dead on mature oaks. Very little fallen dead wood, a few large limbs. Woodpecker holes.		
OTHER HABITATS OR COMMUNITIES Mosaics-transitions-	P	Hedge along eastern boundary. Hawthorn, holly. Has been laid in north.		
VEGETATION STRUCTURE				
BARE GROUND Extent-distribution-sunny banks	P	Pathes, trampled bare ground. Rare - max. width 0.5m		
LITTER LAYER Drifts-thickness-type of litter	S	Extensive, up to 2-3cm deep under straggly cover of bracken 60% of stand.		
BRYOPHYTE LAYER on wood-on rocks-on ground-carpet	N			
HERB LAYER Height-cover-distribution-broad type	P	Bramble dominates most of stand with occasional bracken. Where this thin cover species-poor creeping soft-grass/bluebell.		
SHRUB LAYER Height-cover-uniformity	P	Sparse, some hazel in north. Patchy oak/birch saplings esp. in south. All others rare.		
TREE LAYER Height-cover-uniformity-age	S	Uniform age/height/cover. Mature oak up to 20+cm. Thin in south.		
EPIPHYTES/CREEPERS Type-position on tree-abundance	N			

P - Present N - None seen S - Significant contribution

WOODLAND TREES AND SHRUBS

2

County

	Tx	Tp	Ts	Tc	Tn	Cx	Ct	Px	Pc	Sx	Sc	St	Js	Jp	Jv
Acer cam															
Acer pse					R	R							LA	LF	
Aescu hip															
Alnus glu															
Betul pend												R	R		
Betul pub															
Carp bet	R										R				
Casta sat															
Conifer sp															
Coryl ave						R				LA				O	
Crata mon										R		R			
Crata oxy															
Euony eur															
Fagus syl	R													R	
Frang aln															
Fraxi exc													R	R	
Ilex aqu					R						O			LF	
Junip com															
Larix sp															
Malus syl															
Picea sp	R														
Pinus syl															
Popul tre				R											VIF
Prunu avi															
Prunu lau															
Prunu pad															
Prunu spi															
Querc cer															
Querc pet															
Querc rob				R	D						O		O/LE		
Rhamn cat															
Rhodo pon															
Salix alb															
Salix aur															
Salix cap															
Salix cin															
Salix fra															
Salix pen															
Salix vim															
Sambu nig										R					
Sorbu ari															
Sorbu auc				R									R	O	
Sorbu tor															
Taxus bac															
Thely san															
Tilia cor															
Tilia eur															
Tilia pla															
Ulmus car															
Ulmus gla															
Ulmus pro															
Vibur lan															

Recorder J.F

SITE

COMPARTMENT 3

Date 23.5.02

GRID REF.

Ancient
Semi-nat.☒ Recent
Semi-nat.Ancient
plantn.Recent
plantn.

D = Good varied structure in canopy and shrub layer with widespread and abundant regeneration.

O = dominant: Canopy dominated by oak, mostly even-aged but with some older-looking trees on boundary of wood, and some younger trees entering canopy at eastern end.

A = abundant: A few over-mature specimen beech in east and a few hornbeam in same area with ^{few} younger trees (20-30yr).

F = frequent: Occasional mature yewmore in canopy.

O = occasional: Sub-canopy of scattered birch, holly + rowan but all very sparse. Variable shrub layer, densest in centre of stand where there is abundant hazel. Also fairly frequent holly and a few elder.

R = rare: Shrubs layer enhanced by fairly frequent sapling regeneration, especially around glades, of all species mentioned above. Scattered pockets of seedling regeneration of most species, including locally abundant yewmore, but also locally with

Area occupied by each type

0 - 0.5 ha

0.5 - 2

2 - 10

10 - 20

20 + ha

W10

Tree
LayerHeight
80%Cover
20+mShrub
LayerHeight
40%Cover
6m

Age class abundance (all species)

O/mature
Rmature
Ayoung trees
Fsaplings
Fseedlings
LAcoppice
R

Tp Planted tree

Tn Self-sown tree

Ts standard in c-w-s

Tc grown from coppice

Tx any other tree

Cx coppice

Ct regrowth from stump

Px pollard (2.5m+)

Pc pollard (1-2.5m)

Sx shrub

Sc climber

St young tree

Js seedling

Jp sapling

Jv sucker

Clem vit
Daph lau
Heder hel
Ligustr vul
Lonic per
Mahon aqu
Myrica ga
Ribes nig

Ribes syl
Ribes uva
Rosa arv
Rosa can
Saxif sco
Ulex eur
Ulex gal
Vibur opu

HABITATS, VEGETATION STRUCTURE

Date 23.5.02 Grid Ref.

Site

Stand 3

NVC W10

HABITATS WITHIN STAND		
RIDES, GLADES OPEN AREAS Vegetation-size-shade-permanence-edges	P	Occasional small glades (5m dia.) especially in east. Either bramble dominant (usually) or carpeted with bluebells / creeping soft-grass. Gradually being colonised by saplings in most cases.
PONDS, STREAMS, RIVERS Vegetation-size-substrate-bank-shade	N	
ROCKS Size-abundance-outcrop-scrub-cliff-surface stone-acid-basic	N	
BOG, FEN, FLUSHES Vegetation-size-wetness-acid-basic	N	
DEAD WOOD Size-felled or fallen-abundance-decay-standing trees-holes or hollows	P	Fair amount of fallen dead wood including large stems and branches. Small amount of standing deadwood in form of smaller limbs of oaks. No large dead trees.
OTHER HABITATS OR COMMUNITIES Mosaics-transitions-	N	
VEGETATION STRUCTURE		
BARE GROUND Extent-distribution-sunny banks	P	Very limited under densest shade of holly, yew, blackthorn. Shaded.
LITTER LAYER Drifts-thickness-type of litter	P	Limited in extent but occasional shallow (<2cm) drifts of deciduous leaves.
BRYOPHYTE LAYER on wood-on rocks-on ground-carpet	N	
HERB LAYER Height-cover-distribution-broad type	S	Extensive over whole unit but generally species poor. Ranges from low dense carpets of bluebells to tangle of bramble up to 1.5m. Bracken local.
SHRUB LAYER Height-cover-uniformity	S	Extensive and quite varied. Centre of unit has abundant young hazel (not primarily coppiced) to 2-3m.
TREE LAYER Height-cover-uniformity-age	S	Uniform height/age for oak for most of unit. A few much older trees in east.
EPIPHYTES/CREEPERS Type-position on tree-abundance	N	

P - Present N - None seen S - Significant contribution

	Tx	Tp	Ts	Tc	Tn	Cx	Ct	Px	Pc	Sx	Sc	St	Js	Jp	Jv
Acer cam															
Acer pse															
Aescu hip															
Alnus glu															
Betul pend															
Betul pub															
Carp bet															
Casta sat															
Conifer sp															
Coryl ave															
Crata mon															
Crata oxy															
Euony eur															
Fagus syl															
Frang aln															
Fraxi exc															
Ilex aqu															
Junip com															
Larix sp															
Malus syl															
Picea sp															
Pinus syl															
Popul tre															
Prunu avi															
Prunu lau															
Prunu pad															
Prunu spi															
Querc cer															
Querc pet															
Querc rob															
Rhamn cat															
Rhodo pon															
Salix alb															
Salix aur															
Salix cap															
Salix cin															
Salix fra															
Salix pen															
Salix vim															
Sambu nig															
Sorbu ari															
Sorbu auc															
Sorbu tor															
Taxus bac															
Thely san															
Tilia cor															
Tilia eur															
Tilia pla															
Ulmus car															
Ulmus gla															
Ulmus pro															
Vibur lan															

Recorder J.F.

SITE COMPARTMENT 4

Date 23.5.02

GRID REF.

Ancient
Semi-nat.Recent
Semi-nat.Ancient
plantn.Recent
plantn.

D = dominant

A = abundant

F = frequent

O = occasional

R = rare

Area occupied by each type

0 - 0.5 ha

0.5 - 2

2 - 10

10 - 20

20 + ha

W10

Tree
LayerHeight
20+mCover
70%Shrub
LayerHeight
3-4mCover
20%

Age class abundance (all species)

O/mature

mature

young trees

saplings

seedlings

coppice

Tp Planted tree

Tn Self-sown tree

Ts standard in c-w-s

Tc grown from coppice

Tx any other tree

Cx coppice

Ct regrowth from stump

Px pollard (2.5m+)

Pc pollard (1-2.5m)

Sx shrub

Sc climber

St young tree

Js seedling

Jp sapling

Jv sucker

Clem vit
Daph lau
Heder hel
Ligul vul
Lonic per
Mahon aqu
Myrica ga
Ribes nig

Ribes syl
Ribes uva
Rosa arv
Rosa can
Saxat sco
Ulex eur
Ulex gal
Vibur opu

HABITATS, VEGETATION STRUCTURE

Date	Grid Ref.	Site	Stand 4	NVC W10
HABITATS WITHIN STAND				
RIDES, GLADES OPEN AREAS Vegetation-size-shade-permanence-edges	P	Same large clearings (10m dia) where mature sycamore have been felled. Now colonised by bramble with little sign of tree/stand regeneration.		
PONDS, STREAMS, RIVERS Vegetation-size-substrate-bank-shade	N			
ROCKS Size-abundance-outcrop-scrub-cliff-surface stone-acid-basic	N			
BOG, FEN, FLUSHES Vegetation-size-wetness-acid-basic	N			
DEAD WOOD Size-felled or fallen-abundance-decay-standing trees-holes or hollows	S	Plenty of large diameter stems from felled sycamore on ground. Occasional dead limbs on larger oaks plus 1 or 2 standing dead trees		
OTHER HABITATS OR COMMUNITIES Mosaics-transitions-	P	Ponds at eastern end. Shallow, no aquatic vegetation. Frog tadpoles present in one		
VEGETATION STRUCTURE				
BARE GROUND Extent-distribution-sunny banks	P	Very limited - occasional trampled path		
LITTER LAYER Drifts-thickness-type of litter	P	Limited to occasional shallow drifts of deciduous tree litter		
BRYOPHYTE LAYER on wood-on rocks-on ground-carpets	N			
HERB LAYER Height-cover-distribution-broad type	P	Mostly bramble-dominated up to 1.5m tall. More locally tall herbs (rosebay willowherb), bracken, or bluebell/creeping soft-grass		
SHRUB LAYER Height-cover-uniformity	P	Sparse hazel to 3-4m, mostly young, but some nice old shrubs near pond. Occasional saplings and sycamore stump regrowth		
TREE LAYER Height-cover-uniformity-age	S	Mostly even-aged oak with occasional sycamore. Some large gaps from recent sycamore felling.		
EPIPHYTES/CREEPERS Type-position on tree-abundance	N			

P - Present N - None seen S - Significant contribution

WOODLAND TREES AND SHRUBS

2

County

	Tx	Tp	Ts	Tc	Tn	Cx	Ct	Px	Pc	Sx	Sc	St	Js	Jp	Jv
Acer cam														R*	
Acer pse					LF								A	O	
Aescu hip															
Alnus glu															
Betul pend															
Betul pub															
Carp bet															
Casti sat															
Conifer sp															
Coryl ave										R				R	
Crata mon															
Crata oxy															
Euony eur															
Fagus syl															
Frang ain															
Fraxi exc															
Ilex aqu										R				O	
Junip com															
Larix sp															
Malus syl															
Picea sp															
Pinus syl															
Popul tre															
Prunu avi															
Prunu lau															
Prunu pad															
Prunu spi															
Querc cer															
Querc pet															
Querc rob					FA									R*	
Rhamn cat															
Rhodo pon															
Salix alb															
Salix aur															
Salix cap															
Salix cin														R	
Salix fra															
Salix pen															
Salix vim															
Sambu nig										R				R	
Sorbu ari															
Sorbu auc														R	
Sorbu tor															
Taxus bac															
Thely san															
Tilia cor															
Tilia eur															
Tilia pla															
Ulmus car															
Ulmus gla															
Ulmus pro															
Vibur lan															

	Tx	Tp	Ts	Tc	Tn	Cx	Ct	Px	Pc	Sx	Sc	St	Js	Jp	Jv
--	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

	Sx	Sc	Js	Jp	Jv
--	----	----	----	----	----

	Sx	Sc	Js	Jp	Jv
--	----	----	----	----	----

	Sx	Sc	Js	Jp	Jv
--	----	----	----	----	----

	Sx	Sc	Js	Jp	Jv
--	----	----	----	----	----

	Sx	Sc	Js	Jp	Jv
--	----	----	----	----	----

	Sx	Sc	Js	Jp	Jv
--	----	----	----	----	----

	Sx	Sc	Js	Jp	Jv
--	----	----	----	----	----

	Sx	Sc	Js	Jp	Jv
--	----	----	----	----	----

	Sx	Sc	Js	Jp	Jv
--	----	----	----	----	----

Recorder J. FRITH

SITE

COMPARTMENT 5

Date 12.5.02

GRID REF.

Ancient
Semi-nat.Recent
Semi-nat.Ancient
plantn.Recent
plantn.

Poorer structure of all compartments. Canopy has mixture of mature oak and sycamore. Much of sycamore has been felled leaving some large gaps in the canopy. Shrub layer very sparse, a few hazel, holly and elder only.

Regeneration very sparse at sapling stage; a few sycamore, holly, rowan, but abundant seedlings of sycamore throughout.

Central clearing recently planted with young oak, field maple, guelder rose.

Goat willow and guelder rose add some variety.

Juvenile Tawny Owl

Area occupied by each type

0-0.5 ha	0.5-2	2-10	10-20	20+ ha
----------	-------	------	-------	--------

Tree Layer	Height	Cover	Shrub Layer	Height	Cover
	20+ m	30-80%		6m	5-10%

Age class abundance (all species)

O/mature	mature	young trees	saplings	seedlings	coppice
—	A	R	R	A	R

Tp Planted tree

Tn Self-sown tree

Ts standard in c-w-s

Tc grown from coppice

Tx any other tree

Cx coppice

Ct regrowth from stump

Px pollard (2.5m+)

Pc pollard (1-2.5m)

Sx shrub

Sc climber

St young tree

Js seedling

Jp sapling

Jv sucker

HABITATS, VEGETATION STRUCTURE

Date Grid Ref Site Stand 5 NVC

HABITATS WITHIN STAND		
RIDGES, GLADES OPEN AREAS Vegetation-size-shade-permanence-edges	P	Newly created clearing in centre of stand where sycamore have been felled. Part grassy, part brambles. Some bracken + rosebay willow-herb
PONDS, STREAMS, RIVERS Vegetation-size-substrate-bank-shade	N	
ROCKS Size-abundance-outcrop-scrub-cliff-surface stone-acid-basic	N	
BOG, FEN, FLUSHES Vegetation-size-wetness-acid-basic	N	
DEAD WOOD Size-felled or fallen-abundance-decay-standing trees-holes or hollows	P	Small amount of standing dead timber on older oaks. Large quantity of recently-felled sycamore left to decay. - Large trunks and some brush piles.
OTHER HABITATS OR COMMUNITIES Mosaics-transitions-	N	
VEGETATION STRUCTURE		
BARE GROUND Extent-distribution-sunny banks	P	Trampled bare ground in clearing where kids play Localised
LITTER LAYER Drifts-thickness-type of litter	P	Moderately extensive drifts up to 2-3cm deep under cover of brambles mostly deciduous tree leaf: some bracken in wet.
BRYOPHYTE LAYER on wood-on rocks-on ground-carpet	N	
HERB LAYER Height-cover-distribution-broad type	P	Patchy - extensive brambles over leaf litter. Some bracken and rosebay willow-herb. Limited creeping soft-grass/bluebell
SHRUB LAYER Height-cover-uniformity	P	Poor, up to 6m, less than 10%
TREE LAYER Height-cover-uniformity-age	P	Up to 20+ m, mixed oak + sycamore, even-aged. Large recent clearings (sycamore removal).
EPIPHYTES/CREEPERS Type-position on tree-abundance	N	

P - Present N - None seen S - Significant contribution

	Tx	Tp	Ts	Tc	Tn	Cx	Ct	Px	Pc	Sx	Sc	St	Js	Jp	Jv
Acer cam															
Acer pse														R	
Aescu hip															
Alnus glu															
Betul pend					O							A	R	A	
Betul pub															
Carp bet															
Casta sat															
Conifer sp															
Coryl ave										K				R	
Crata mon													R	R	
Crata oxy															
Euony eur															
Fagus syl														R	
Frang aln															
Fraxi exc					R										
Ilex aqu												R	R	R	
Junip com															
Larix sp															
Malus syl															
Picea sp															
Pinus syl															
Popul tre					LF										LF
Prunu avi															
Prunu lau															
Prunu pad															
Prunu spi										LF					LF
Querc cer															
Querc pet															
Querc rob					F							F	O	A	
Rhamn cat															
Rhodo pon														R	
Salix alb															
Salix aur															
Salix cap															
Salix cin					R										
Salix fra															
Salix pen															
Salix vim															
Sambu nig										R					
Sorbu ari															
Sorbu auc															
Sorbu tor															
Taxus bac															
Thely san															
Tilia cor															
Tilia eur															
Tilia pla															
Ulmus car															
Ulmus gla												R			
Ulmus pro															
Vibur tan															

Distinguishing feature of this unit is the abundance of birch, from young saplings up to small trees. Forms a dense shrub layer/sub-canopy virtually throughout the stand. Canopy oak-dominated, even-aged cores varying from scattered tree in south to more-or-less continuous canopy in north. Occasional mature birch and a single ash also contribute to canopy. Small patch of aspen. Remainder of shrub layer has abundant sapling oak, occasional young holly and very scattered young hazel. All other rare. Regeneration principally oak + birch with very sparse holly and hazel. Potential problem with sycamore at sapling stage.

Speckled wood
Brimstone
Large white

Area occupied by each type

0 - 0.5 ha	0.5 - 2	2 - 10	10 - 20	20 + ha
	W10			

Tree Layer	Height	Cover	Shrub Layer	Height	Cover
	20m	60%	Small trees	70%	10m

Age class abundance (all species)

O/mature	mature	young trees	saplings	seedlings	coppice
—	O/F	A	A	F/A	—

Tp Planted tree	Cx coppice	Sc climber
Tn Self-sown tree	Ct regrowth from stump	St young tree
Ts standard in c-w-s	Px pollard (2.5m+)	Js seedling
Tc grown from coppice	Pc pollard (1-2.5m)	Jp sapling
Tx any other tree	Sx shrub	Jv sucker

Tx	Tp	Ts	Tc	Tn	Cx	Ct	Px	Pc	Sx	Sc	St	Js	Jp	Jv
Clem vit														
Daph lau														
Heder hel														
Ligustr vul														
Lonic per														
Mahon aqu														
Myrica ga														
Ribes nig														

Ribes syl
Ribes uva
Rosa arv
Rosa can
Sarcoc
Ulex eur
Ulex gal
Vibur opu

HABITATS, VEGETATION STRUCTURE

Date Grid Ref. Site Stand 6 NVC W10

HABITATS WITHIN STAND		
RIDES, GLADES OPEN AREAS Vegetation-size-shade-permanence-edges	P	Moderate-sized, semi permanent clearings in south of stand becoming colonised by young oak/birch. Grassy with bluebells and patchy dense bramble and bracken.
PONDS, STREAMS, RIVERS DITCH Vegetation-size-substrate-bank-shade	P	Deep ditch runs through mid, dam in base with occasional standing water. <i>Stellaria holotica</i> and <i>Carex remota</i> on banks.
ROCKS Size-abundance-outcrop-scrree-cliff-surface stone-acid-basic	N	
BOG, FEN, FLUSHES Vegetation-size-wetness-acid-basic	N	
DEAD WOOD Size-felled or fallen-abundance-decay-standing trees-holes or hollows	P	Frequent standing dead oak in south. Some dead branches on mature oak in rest of stand. Very little fallen dead timber just very occasional larger limbs.
OTHER HABITATS OR COMMUNITIES Mosaics-transitions-	N	
VEGETATION STRUCTURE		
BARE GROUND Extent-distribution-sunny banks	N	
LITTER LAYER Drifts-thickness-type of litter	P	Drifts of dense litter under deepest shade of dense birch and bramble - localized.
BRYOPHYTE LAYER on wood-on rocks-on ground-carpets		
HERB LAYER Height-cover-distribution-broad type	S	Extensive, grassy plus bluebells. Patchy in places under denser shade. Widespread bramble. Bracken locally.
SHRUB LAYER Height-cover-uniformity	S	Mainly composed of sapling oaks such. Occasional hazel, holly, elder.
TREE LAYER Height-cover-uniformity-age	S	Uniform age mature oak, cover variable from 30-40% in south to 70-90% in north.
EPIPHYTES/CREEPERS Type-position on tree-abundance	P	Occasional honeysuckle on lower stems of shrub layer.

P - Present N - None seen S - Significant contribution

WOODLAND TREES AND SHRUBS

2

County

	Tx	Tp	Ts	Tc	Tn	Cx	Ct	Px	Pc	Sx	Sc	St	Js	Jp	Jv
Acer cam															
Acer pse					LA								RLA	O	
Aescu hip															
Alnus glu															
Betul pend					R							R		CO	
Betul pub															
Carp bet															
Casta sat															
Conifer sp															
Coryl ave										O	O		R	O	
Crata mon												R		R	
Crata oxy															
Euony eur															
Fagus syl														R	
Frang ain															
Fraxi exc					R										
Ilex aqu												R		O	
Junip com															
Larix sp															
Malus syl															
Picea sp															
Pinus syl	R														
Popul tre					R										LF
Prunu avi															
Prunu lau															
Prunu pad															
Prunu spl															
Querc cer															
Querc pet															
Querc rob					R	A						R	R	O	
Rhamn cat															
Rhodo pon										LA				R	
Salix alb															
Salix aur															
Salix cap															
Salix cin														R	
Salix fra															
Salix pen															
Salix vim															
Sambu nig										R					
Sorbu ari															
Sorbu auc															R
Sorbu tor															
Taxus bac															
Thely san															
Tilia cor															
Tilia eur															
Tilia pla															
Ulmus car															
Ulmus gla										R					
Ulmus pro															
Vibur lan															
norberry										WLF					
	Tx	Tp	Ts	Tc	Tn	Cx	Ct	Px	Pc	Sx	Sc	St	Js	Jp	Jv
	Sx	Sc	Js	Jp	Jv					Sx	Sc	Js	Jp	Jv	
Clem vit								Ribes syl							
Daph lau								Ribes uva							
Heder hel								Rosa arv							
Ligust vul								Rosa can							
Lonic per								Sarot sco							
Mahon aqu								Ulex eur							
Myrica ga								Ulex gal							
Ribes nig								Vibur opu							

Recorder

SITE

COMPARTMENTS 8 & 9

Date

GRID REF.

Ancient
Semi-nat.Recent
Semi-nat.Ancient
plantn.Recent
plantn.

D = dominant

A = abundant

F = frequent

O = occasional

R = rare

L = locally

Canopy a bit more varied than rest of wood. Essentially oak still dominates but there is a more varied age structure with a proportion of 'middle-aged' trees (40-60 years) entering the canopy. In the west sycamore becomes abundant. Shows layer quite varied with independent hazel, most recently coppiced, scattered holly, holly, holly. In west abundant Rhododendron and some localized snowberry. Saplings of birch and oak add to this layer. Rare occurrence of myrtle, aspen and ash add to diversity. Good regen of oak, birch, hazel, holly but also some sycamore especially in west.

Area occupied by each type

0-0.5 ha

0.5-2

2-10

10-20

20+ ha

W10

Tree
Layer

Height

Cover

Shrub
Layer

Height

Cover

20m

90%

4m

40-60%

Age class abundance (all species)

O/mature

mature

young trees

saplings

seedlings

coppice

—

A

O

F

O(LA)

O

Tp Planted tree

Tn Self-sown tree

Ts standard in c-w-s

Tc grown from coppice

Tx any other tree

Cx coppice

Ct regrowth from stump

Px pollard (2.5m+)

Pc pollard (1-2.5m)

Sx shrub

Sc climber

St young tree

Js seedling

Jp sapling

Jv sucker

HABITATS, VEGETATION STRUCTURE

Date	Grid Ref.	Site	Stands 849 NVC
HABITATS WITHIN STAND			
RIDES, GLADES OPEN AREAS Vegetation-size-shade-permanence-edges	P	A few restricted clearing where canopy fragments toward centre of stand. Temporary - already colonising with varied saplings	
PONDS, STREAMS, RIVERS Vegetation-size-substrate-bank-shade	N		
ROCKS Size-abundance-outcrop-scree-cliff-surface stone-acid-basic	N		
BOG, FEN, FLUSHES Vegetation-size-wetness-acid-basic	N		
DEAD WOOD Size-felled or fallen-abundance-decay-standing trees-holes or hollows	P	Limited to occasional mostly small diameter dead timber of canopy oaks. Very little on ground, a few small branches	
OTHER HABITATS OR COMMUNITIES Mosaics-transitions-	P	Hedge along northern boundary recently planted. Natural colonisation of bush along boundary ditch.	
VEGETATION STRUCTURE			
BARE GROUND Extent-distribution-sunny banks	P	Limited to trampled bare ground of occasional informal paths	
LITTER LAYER Drifts-thickness-type of litter	P	Widespread under denser shade of bramble & Rhodo. up to 2-3cm deep	
BRYOPHYTE LAYER on wood-on rocks-on ground-carpet	N		
HERB LAYER Height-cover-distribution-broad type	P	Dominated by bramble over large area. Where more open tends to be creeping soft-grass + Sheepsbit. Some stands rosebay with brambles. Locally scattered bracken	
SHRUB LAYER Height-cover-uniformity	S	Varied up to 6m but averaging less. Dense patchy Rhodo. = with otherwise hazel coppice and small tree regeneration mostly.	
TREE LAYER Height-cover-uniformity-age	S	Mostly oak dominated but with sycamore = canopy = well. Some variation - centre of stand with younger oaks reaching canopy height.	
EPIPHYTES/CREEPERS Type-position on tree-abundance	N		

P - Present N - None seen S - Significant contribution

APPENDIX 1.2 Woodland Survey Forms 2011

2a  2000

WOODLAND SURVEY SHEET. COMPOSITION & STRUCTURE

Surveyor **J Frith**

Site name **Lime Tree Wood**

Date of survey **21.7.11**

Unit number

	Tx	Tp	Ts	Tc	Tn	Cx	Ct	Px	Pc	Sx	Sc	St	Js	Jp	Jv
Acer cam															
Acer pse															
Aescu hip															
Alnus glu															
Betul pen	A											O	O		
Betul pub															
Carp bet															
Casta sat															
Conifer sp															
Coryl ave										O		O	O		
Crata mon										R		O			
Crata oxy															
Euony eur															
Fagus syl															
Frang aln															
Fraxi exc	R													R	
Ilex aqu										O		O	R	O	
Junip com															
Larix sp															
Malus syl															
Picea sp															
Pinus syl															
Popul tre															
Prunu avi													R		
Prunu lau															
Prunu pad															
Prunu spi										LP				LP	
Querc cer															
Querc pet															
Querc rob	A												R	R	
Rham cat															
Rhodopon															
Salix alb															
Salix aur															
Salix cap															
Salix cin										R					
Salix fra															
Salix pen															
Salix vim															
Samb nig										R					
Sorbu ari															
Sorbu auc														R	
Sorbu tor															
Taxus bac															
Thely san															
Tilia cor															
Tilia spp															
Tilia pla															
Ulmus car															
Ulmus gla												R			
Ulmus pro												R		O	
Vibur lan															

NB Entries in *italics* indicate occurrence is localised

Sx	Sc	Js	Jp	Jv	Sx	Sc	Js	Jp	Jv
Clem vit					Ribes syl				
Daph lau					Ribes uva				
Heder hel					Rosa arv				
Ligust vul					Rosa can				
Lonic per					Sarot sco				
Maho aqu					Ulex eur				
Myrica ga					Ulex gal				
Ribes nig					Vibur opu				

Overstorey species and age classes

Mature even-aged canopy composed principally of oak and birch in varying proportions

Sub-storey structure

Occasional large hawthorn and young trees of birch and myrtle etc. Holly occasional. Grader into shrub layer

Shrub layer composition

Same large old hazel stools, plus younger ones coming on. Some holly plus a few hawthorn and elder

Regeneration

Mostly birch, hazel and holly where light allows. Small amount of rowan

Boundaries/grazing/threats

Bounded by hedges that have been managed recently. Some well-used paths.

Tree layer	Height (m)	Cover (%)	Shrub layer	Height (m)	Cover (%)
	20m	80-100%		6m	5-30%

Age class abundance (all species, using DAFOR system)

O/mature	Mature	Young trees	Saplings	Seedlings	Coppice
	D	O	O	R	

Tp Planted tree

Tn Self-sown tree

Ts Standard in c-w-s

Tc Grown from coppice

Tx Any other tree

Cx Coppice

Ct Regrowth from stump

Px Pollard (2.5m+)

Pc Pollard (1-2.5m)

Sx Shrub

Sc Climber

St Young tree

Js Seedling

Jp Sapling

Jv Sucker

HABITATS, VEGETATION STRUCTURE

Date	Grid Ref.	Site	Line Tree Wood	Stand	18	NVC	W10
HABITATS WITHIN STAND							
RIDES, GLADES OPEN AREAS Vegetation-size-shade-permanence-edges		P	Canopy mostly closed. Some openings in the north giving small glades with bracken and bramble				
PONDS, STREAMS, RIVERS Vegetation-size-substrate-bank-shade		N					
ROCKS Size-abundance-outcrop-scrree-cliff-surface stone-acid-basic		N					
BOG, FEN, FLUSHES Vegetation-size-wetness-acid-basic		N					
DEAD WOOD Size-felled or fallen-abundance-decay-standing trees-holes or hollows		P	Some standing dead stems of birch. A few dead oak limbs in canopy. Varying diameter fallen wood, but scarce overall.				
OTHER HABITATS OR COMMUNITIES Mosaics-transitions-		P		Woodland boundary hedger present on all 4 sides			
VEGETATION STRUCTURE							
BARE GROUND Extent-distribution-sunny banks		P	Small area of trampled bare ground in central 'play area' and bigger paths				
LITTER LAYER Drifts-thickness-type of litter		S		Deep litter beds present especially at base of bramble			
BRYOPHYTE LAYER on wood-on rocks-on ground-carpet		P	Very sparse. A little present on fallen branches				
HERB LAYER Height-cover-distribution-broad type		P		Variable height, 20-80cm. Large areas of bramble & bracken, some <u>Holcus</u> & rockway willowherbs			
SHRUB LAYER Height-cover-uniformity		P		See form 2a			
TREE LAYER Height-cover-uniformity-age		P					
EPIPHYTES/CREEPERS Type-position on tree-abundance		N					

P - Present N - None seen S - Significant contribution

Appendix 2

Species for Chaddesden Wood: Flora

English name	Scientific name
<i>Trees and shrubs:</i>	
field maple	<i>Acer campestre</i>
sycamore	<i>Acer pseudoplatanus</i>
horse chestnut	<i>Aesculus hippocastanum</i>
silver birch	<i>Betula pendula</i>
downy birch	<i>Betula pubescens</i>
hornbeam	<i>Carpinus betulus</i>
sweet chestnut	<i>Castanea sativa</i>
hazel	<i>Corylus avellana</i>
hawthorn	<i>Crataegus monogyna</i>
beech	<i>Fagus sylvatica</i>
ash	<i>Fraxinus excelsior</i>
holly	<i>Ilex aquifolium</i>
honeysuckle	<i>Lonicera periclymenum</i>
apple	<i>Malus domestica</i>
pisyle	<i>Pinus sylvestris</i>
aspen	<i>Populus tremula</i>
blackthorn	<i>Prunus spinosa</i>
pedunculate oak	<i>Quercus robur</i>
rhododendron	<i>Rhododendron ponticum</i>
dog rose	<i>Rosa canina</i> agg.
bramble	<i>Rubus fruticosus</i> agg.
raspberry	<i>Rubus idaeus</i>
goat willow	<i>Salix capraea</i>
grey willow	<i>Salix cinerea</i>
elder	<i>Sambucus nigra</i>
rowan	<i>Sorbus aucuparia</i>
-	<i>Spirea salicifolia</i>
snowberry	<i>Symphoricarpos rivularis</i>
yew	<i>Taxus baccata</i>
wych elm	<i>Ulmus glabra</i>
guelder-rose	<i>Viburnum opulus</i>
<i>Grasses, sedges and rushes:</i>	
common bent	<i>Agrostis capillaris</i>
meadow foxtail	<i>Alopecurus pratensis</i>
false oat-grass	<i>Arrhenatherum elatius</i>
wild-oat	<i>Avena fatua</i>
hairy-brome	<i>Bromus ramosus</i>
remote sedge	<i>Carex remota</i>
cock's-foot	<i>Dactylis glomerata</i>

English name**Scientific name***Grasses, sedges and rushes (cont):*

tufted hair-grass	<i>Deschampsia cespitosa</i>
meadow fescue	<i>Festuca pratensis</i>
red fescue	<i>Festuca rubra</i>
Yorkshire-fog	<i>Holcus lanatus</i>
soft rush	<i>Juncus effusus</i>
perennial rye-grass	<i>Lolium perenne</i>
hairy woodrush	<i>Luzula pilosa</i> (K Futter DCWP 05/88)
wood melick	<i>Melica uniflora</i>
wood millet	<i>Milium effusum</i>
reed canary-grass	<i>Phalaris arundinacea</i>
timothy	<i>Phleum pratense</i>
annual meadow-grass	<i>Poa annua</i>
smooth meadow-grass	<i>Poa pratensis</i>

Forbs:

wild angelica	<i>Angelica sylvestris</i>	
mugwort	<i>Artemisia vulgaris</i>	
common orache	<i>Atriplex patula</i>	
daisy	<i>Bellis perennis</i>	
shepherd's-purse	<i>Capsella bursa-pastoris</i>	
hairy bitter-cress	<i>Cardamine hirsuta</i>	
sticky mouse-ear	<i>Cerastium glomeratum</i>	
fat-hen	<i>Chenopodium album</i>	
spear thistle	<i>Cirsium vulgare</i>	
foxglove	<i>Digitalis purpurea</i>	
rosebay willowherb	<i>Epilobium angustifolium</i>	
great willowherb	<i>Epilobium hirsutum</i>	
broad-leaved willowherb	<i>Epilobium montanum</i>	
common hemp-nettle	<i>Galeopsis tetrahit</i>	
cleavers	<i>Galium aparine</i>	
wood avens	<i>Geum urbanum</i>	
ivy	<i>Hedera helix</i>	
hogweed	<i>Heraclium sphondylium</i>	
bluebell*	<i>Hyacinthoides non-scripta</i>	*(priority BAP)
wood-sorrel	<i>Oxalis acetosella</i>	
ribwort plantain	<i>Plantago lanceolata</i>	
greater plantain	<i>Plantago major</i>	
knotgrass	<i>Polygonum aviculare</i>	
black-bindweed	<i>Polygonum convolvulus</i>	
pale persicaria	<i>Polygonum lapathifolium</i>	
redshank	<i>Polygonum persicaria</i>	
lesser celandine	<i>Ranunculus ficaria</i>	
creeping buttercup	<i>Ranunculus repens</i>	

English name**Scientific name***Forbs (cont.):*

curled dock
broad-leaved dock
common figwort
common ragwort
groundsel
red campion
bittersweet
perennial sow-thistle
prickly sow-thistle
hedge woundwort
greater stitchwort
common chickweed
common dandelion
red clover
white clover
scentless mayweed
colt's-foot
common nettle

Rumex crispus
Rumex obtusifolius
Scrophularia nodosa
Senecio jacobaea
Senecio vulgaris
Silene dioica
Solanum dulcemara
Sonchus arvensis
Sonchus asper
Stachys sylvatica
Stellaria holostea
Stellaria media
Taraxacum officinale agg.
Trifolium pratense
Trifolium repens
Tripleurospermum maritimum
Tussilago farfara
Urtica dioica

Ferns and horsetails:

lady-fern
broad buckler-fern
male-fern
field horsetail
bracken

Athyrium filix-femina
Dryopteris dilitata
Dryopteris filix-mas
Equisetum arvense
Pteridium aquilinum

Appendix 3

Species for Chaddesden Wood. Bryophytes. N Law (2010)

Scientific name	English name
<i>Amblystegium serpens</i>	Creeping feather-moss
<i>Brachythecium rutabulum</i>	Rough-stalked feather-moss
<i>Bryum capillare</i>	Capillary threadmoss
<i>Calypogeia arguta</i> *	Notched pouchwort
<i>Dicranella heteromalla</i>	Silky forkletmoss
<i>Dicranoweisia cirrata</i>	Common pincushion
<i>Dicranum tauricum</i>	Fragile forkmoss
<i>Fissidens bryoides</i>	Lesser pocketmoss
<i>Hypnum cupressiforme</i> var. <i>cupressiforme</i>	Cypress-leaved plait-moss
<i>Kindbergia praelonga</i>	Common feather-moss
<i>Lophocolea bidentata</i> *	Bifid crestwort
<i>Lophocolea heterophylla</i> *	Variable-leaved crestwort
<i>Metzgeria furcata</i> *	Forked veilwort
<i>Mnium hornum</i>	Swan's-neck thyme-moss
<i>Orthotrichum affine</i>	Wood bristlemoss
<i>Orthotrichum lyellii</i>	Lyell's bristlemoss
<i>Pellia epiphylla</i> *	Overleaf pellia
<i>Polytrichum formosum</i>	Bank haircap
<i>Pseudotaxiphyllum elegans</i>	Elegant silkmoss
<i>Rhynchostegium confertum</i>	Clustered feather-moss
<i>Ulota bruchii</i>	Bruch's pincushion

* = liverwort

Appendix 4

Species for Lime Lane Wood: Flora

<i>Agrostis capillaris</i>	Common Bent
<i>Alopecurus geniculatus</i>	Marsh Foxtail
<i>Arrhenatherum elatius</i>	False Oat-grass
<i>Betula pendula</i>	Silver Birch
<i>Betula pubescens</i>	Downy Birch
<i>Carex paniculata</i>	Greater Tussock-sedge
<i>Centaurea nigra</i>	Common Knapweed
<i>Chamerion angustifolium</i>	Rosebay Willowherb
<i>Cirsium arvense</i>	Creeping Thistle
<i>Corylus avellana</i>	Hazel
<i>Crataegus monogyna</i>	Hawthorn
<i>Dactylis glomerata</i>	Cock's-foot
<i>Deschampsia caespitosa</i>	Tufted Hair-grass
<i>Digitalis purpurea</i>	Foxglove
<i>Dryopteris dilatata</i>	Broad Buckler-fern
<i>Dryopteris filix-mas</i>	Common Male Fern
<i>Dryopteris filix-mas</i> agg.	Male Fern
<i>Epilobium montanum</i>	Broad-leaved Willowherb
<i>Fraxinus excelsior</i>	Ash
<i>Galium aparine</i>	Cleavers
<i>Geum urbanum</i>	Herb Bennet
<i>Hedera helix</i>	Ivy
<i>Heracleum sphondylium</i>	Hogweed
<i>Holcus lanatus</i>	Yorkshire-fog
<i>Holcus mollis</i>	Creeping Soft-grass
<i>Hyacinthoides non-scripta</i>	Bluebell
<i>Ilex aquifolium</i>	Holly
<i>Juncus effusus</i>	Soft Rush
<i>Larix</i> sp.	a larch
<i>Milium effusum</i>	Wood Millet
<i>Poa annua</i>	Annual Meadow-grass
<i>Poa pratensis</i> sens.lat.	Smooth Meadow-grass
<i>Poa trivialis</i>	Rough Meadow-grass
<i>Prunus laurocerasus</i>	Cherry Laurel
<i>Prunus spinosa</i>	Blackthorn
<i>Pteridium aquilinum</i>	Bracken
<i>Quercus robur</i>	Pedunculate Oak
<i>Rosa canina</i> agg.	Dog Rose
<i>Rosa</i> sp.	a rose (unidentified)
<i>Rubus fruticosus</i> agg.	Bramble
<i>Rubus idaeus</i>	Raspberry
<i>Rumex obtusifolius</i>	Broad-leaved Dock
<i>Salix cinerea</i>	Grey Willow
<i>Sambucus nigra</i>	Elder
<i>Senecio jacobaea</i>	Common Ragwort
<i>Silene dioica</i>	Red Campion
<i>Solanum dulcamara</i>	Bittersweet
<i>Sorbus aucuparia</i>	Rowan

<i>Taraxacum sp.</i>	Dandelion agg.
<i>Teucrium scorodonia</i>	Wood Sage
<i>Ulmus glabra</i>	Wych Elm
<i>Ulmus procera</i>	English Elm
<i>Ulmus sp.</i>	an elm
<i>Urtica dioica</i>	Common Nettle
<i>Eurhynchium praelongum</i>	a moss
<i>Eurhynchium striatum</i>	a moss

APPENDIX 5. Hedgerow Survey Forms 2011

Field Survey Form

Local Hedgerow Field Survey Form											
TITLE OF SURVEY: <i>Chadderton Wood Ltd Management Plan</i>											
Grid Ref	100km	Easting					Northing				
	Letters or numbers	10km	1km	100m	10m	1m	10km	1km	100m	10m	1m
	SK	3	8	8	2	1	3	9	2	2	9

Date	2	3	0	8	2	0	1	1	Hedgerow No	
Surveyor(s):									Side Surveyed - Both	☒ Y ☐ N
<i>J. FRITH</i>									Side A	☒ N ☐ E ☐ S ☐ W
									Side B	☐ N ☐ E ☒ S ☐ W

1 - NAME OF LANDOWNER/CONTACT DETAILS		
Name:	Address	Tel:
<i>Deby City Council</i>	<i>Roman House Frier Gate DEBY</i>	
1a - Permission granted to enter details onto database YES/NO		
1b - Permission granted to publish ownership information (if relevant) YES/NO		

2 - SURVEY TIMES AND WEATHER/OTHER CONDITIONS THAT MAY AFFECT THE SURVEY		
2a - Start time: <i>13.15</i>	2b - Finish time: <i>16.45</i>	2c - Weather: <i>Dry, overcast</i>
2d - Were there any difficulties in surveying the hedgerows? If so please describe.		YES NO
Difficulty(ies):		

3 - HEDGEROW TYPE			
3a - Shrubby hedgerow	☐	3b - Line of trees	☐
3c - Shrubby with line of trees	☒		

4 - LENGTH (m) - between nodes or intersections with other hedgerows, to nearest 5m	<i>625m</i>
---	-------------

5 - CONNECTIONS - total number of other hedgerows connected to each end of the hedgerow	End 1	End 2	Total
	<i>1</i>	<i>1</i>	<i>2</i>

6 - EXTENT OF SURVEY	6a - Whole hedgerow	☒	6b - 30m Section(s)	
----------------------	---------------------	-------------------------------------	---------------------	--

7 - ADJACENT LAND USE							
		Side A	Side B			Side A	Side B
7a - Arable	Arable crop			7e - Road/Route	Major Road		
	Uncropped margin				Minor Road	✓	
7b - Grass	Improved				Track (unsurfaced)		
	Semi-improved	✓	✓		Footpath	✓	✓
	Unimproved				Rail		
7c - Woodland	Young				Canal		
	Semi-mature			7f - Water	River		
	Mature				Stream		
7d - Other	Garden	✓	✓		Lake/pond		

8 - ASSOCIATED FEATURES – See also Part B section 18				
	Side A	Side B		
8a - Bank - Height (in metres) to nearest 25cm			8f - Ditch - internal - Dry (tick)	✓
8b - Average herb vegetation height (cm) to nearest 5cm			8g - Ditch - internal - Wet (tick)	
8c - Fence (tick)	✓	✓	8h - Fence - internal	
8d - Ditch - external - Dry (tick)				
8e - Ditch - external - Wet (tick)				

9 - UNDISTURBED GROUND (measured from the centreline of the hedgerow)			Side A	Side B
9a - Average width of undisturbed ground (m) to nearest 50cm*			2.5m	2.5m
9b - Average width of perennial herbaceous vegetation (m) to nearest 50cm*				
NB * mark N/A or road etc if a road or built feature or hedge is adjacent to grassland or woodland				

10 - NUTRIENT ENRICHMENT GROUND FLORA INDICATOR SPECIES								
Estimate % cover of each species within a 2m wide band alongside the hedgerow (to nearest 5%)								
10a - Nettles	Side A	Side B	10b - Cleavers	Side A	Side B	10c - Docks	Side A	Side B
	5%			1%	1%		1%	

11 - RECENTLY INTRODUCED, NON-NATIVE SPECIES			
11a - RECENTLY INTRODUCED, NON-NATIVE GROUND FLORA SPECIES			
	Species	Side A	Side B
% cover of introduced species in the hedge-bottom (to nearest 5% or enter just the name if <5%)			
11b - RECENTLY INTRODUCED, NON-NATIVE WOODY SPECIES			
	Species	Side A	Side B
% cover of introduced species in the shrub layer (to nearest 5% or enter just the name if <5%)	Cotoneaster sp.		
	Viburnum sp.		
	Buddleia sp.		
	Leptandria		
Prunus laurocerasus			

12 - HEDGEROW SHAPE – See also Part B section 19a

What shape is the hedgerow? - Circle diagram of cross-section that most closely resembles hedgerow.



a) Trimmed & dense ✓



b) Intensively managed



c) Untrimmed	
--------------	--



d) Tall & leggy



e) Untrimmed, with outgrowth



f) Recently coppiced
(facing view)



g) Recently laid
(facing view)

h) Other - Sketch

13 - DIMENSIONS

13a - Average Height (m)
Excluding bank, to nearest 25cm

3.5m

13b - Average Width (m)
At the widest point of canopy; excluding bank, to nearest 25cm

3m

14 - INTEGRITY - Continuity and height of canopy along hedgerow

14a - % GAPS - percentage gaps, to nearest 5%

 5%

14b - Any gaps >5m? (Y/N)

Y

14c - Average height of base of canopy (m) to nearest 25cm

50mm

15 - ISOLATED HEDGEROW TREES – See also Part B section 21

Use one row per specimen or one row and a number if there are many individuals of the same species in the same size class. Estimate DBH to nearest 5cm or nearest 1cm if DBH less than 5cm.

Species

DBH
(cm)

Species

DBH
(cm)

Quercus robur (19 total)

80-100

[illegible]

16 – NOTES – Whole hedgerow or 30m survey section
16a - Fauna (evidence of)
16b - Features (including evidence of recent planting)
16c - Photograph numbers

17 - WOODY SPECIES - Add any others, including non-natives.					
Species	Shrubs % cover	Trees No.	Species	Shrubs % cover	Trees No.
Alder, common (<i>Alnus glutinosa</i>)			Plum, wild (<i>Prunus domestica</i>)		
Apple, crab (<i>Malus sylvestris</i>)			Poplar, black (<i>Populus nigra betulifolia</i>)		
Ash (<i>Fraxinus excelsior</i>)			Privet, wild (<i>Ligustrum vulgare</i>)		
Aspen (<i>Populus tremula</i>)			Rose, dog- (<i>Rosa canina</i>)	1 1/2	
Beech (<i>Fagus sylvatica</i>)			Rose, field- (<i>Rosa arvensis</i>)		
Birch, downy (<i>Betula pubescens</i>)			Rose (<i>Rosa</i> sp.)		
Birch, silver (<i>Betula pendula</i>)		1	Rowan (<i>Sorbus aucuparia</i>)		
Blackthorn (<i>Prunus spinosa</i>)	10 0/10		Spindle (<i>Euonymus europaeus</i>)		
Broom (<i>Cytisus scoparius</i>)			Sycamore (<i>Acer pseudoplatanus</i>)		
Buckthorn (<i>Rhamnus cathartica</i>)			Wayfaring-tree (<i>Viburnum lantana</i>)		
Cherry, wild (<i>Prunus avium</i>)			Willow, grey (<i>Salix cinerea</i>)	1 1/2	
Dogwood (<i>Cornus sanguinea</i>)			Willow, goat (<i>Salix caprea</i>)		
Elder (<i>Sambucus nigra</i>)					
Elm, English (<i>Ulmus procera</i>)					
Elm, wych (<i>Ulmus glabra</i>)					
Elm, (<i>Ulmus</i> sp.)					
Gorse (<i>Ulex europaeus</i>)					
Gorse, western (<i>Ulex gallii</i>)					
Guelder rose (<i>Viburnum opulus</i>)					
Hawthorn (<i>Crataegus</i> sp.)	70 1/2				
Hazel (<i>Corylus avellana</i>)	20 1/2				
Holly (<i>Ilex aquifolium</i>)	2 1/2				
Hornbeam (<i>Carpinus betulus</i>)					
Lime, large-leaved (<i>Tilia platyphyllos</i>)					
Lime, small-leaved (<i>Tilia cordata</i>)					
Maple, field (<i>Acer campestre</i>)			Bramble (<i>Rubus fruticosus</i> agg.)	5 1/2	
Oak, pedunculate (<i>Quercus robur</i>)	2 1/2	19	Honeysuckle (<i>Lonicera periclymenum</i>)		
Oak, sessile (<i>Quercus petraea</i>)			Ivy (<i>Hedera helix</i>)	2 1/2	
Pear (<i>Pyrus communis sensu lato</i>)			Traveller's-joy (<i>Clematis vitalba</i>)		
Pine, Scots (<i>Pinus sylvestris</i>)			% Gaps/access openings	5 1/2	

20 - GROUND FLORA SPECIES

Species		DAFOR		Species		DAFOR	
<i>Agrostis</i> sp. Bent				<i>Plantago lanceolata</i> - Ribwort plantain			
<i>Alopecurus pratensis</i> - Meadow foxtail				<i>Plantago major</i> - Greater plantain			
<i>Anthoxanthum odoratum</i> - Sweet vernal-grass				<i>Potentilla reptans</i> - Creeping cinquefoil			
<i>Arrhenatherum elatius</i> - False oat-grass		0		<i>Primula vulgaris</i> - Primrose			
<i>Cynosurus cristatus</i> - Crested dog's-tail				<i>Pteridium aquilinum</i> - Bracken		R	
<i>Dactylis glomerata</i> - Cocksfoot		0		<i>Ranunculus repens</i> - Creeping buttercup		R	
<i>Elytrigia repens</i> - Couch				<i>Rubus fruticosus</i> - Bramble		0	
<i>Festuca rubra</i> - Red fescue				<i>Rumex</i> sp. - Docks		R	
<i>Holcus lanatus</i> - Yorkshire fog		0		<i>Senecio jacobaea</i> - Ragwort			
<i>Holcus mollis</i> - Creeping soft-grass		0		<i>Silene dioica</i> - Red Campion			
<i>Lolium perenne</i> - Perennial rye-grass				<i>Stellaria holostea</i> - Greater stitchwort			
<i>Phleum pratense</i> - Timothy				<i>Trifolium pratense</i> - Red clover			
<i>Poa annua</i> - Annual meadow-grass				<i>Trifolium repens</i> - White clover		R	
<i>Poa trivialis</i> - Rough meadow-grass				<i>Urtica dioica</i> - Common nettle		LF	
				<i>Veronica chamaedrys</i> - Ivy-leaved speedwell			
				<i>Viola</i> sp. - Violet			
				<i>Green robanum</i>		R	
				<i>Stachys sylvatica</i>		R	
<i>Achillea millefolium</i> - Yarrow				<i>Epilobium angustifolium</i>		R	
<i>Alliaria petiolata</i> - Garlic mustard				<i>E. hirsutum</i>		R	
<i>Anemone nemorosa</i> - Wood anemone							
<i>Anthriscus sylvestris</i> - Cow parsley							
<i>Arum maculatum</i> - Lords-and-ladies							
<i>Centaurea nigra</i> - Common knapweed							
<i>Cirsium arvense</i> - Creeping thistle							
<i>Cirsium vulgare</i> - Spear thistle							
<i>Galium aparine</i> - Cleavers		0					
<i>Galium mollugo</i> - Hedge bedstraw							
<i>Geranium dissectum</i> - Cut-leaved cranesbill							
<i>Geranium molle</i> - Dove's-Foot cranesbill							
<i>Geranium robertianum</i> - Herb-Robert							
<i>Glechoma hederacea</i> - Ground ivy				Bryophytes - mosses & liverworts			
<i>Hedera helix</i> - Ivy		LO		Bare ground		A	
<i>Heracleum sphondylium</i> - Hogweed		R					
<i>Hyacinthoides non-scripta</i> - Bluebell							
<i>Mercurialis perennis</i> - Dog's mercury							

Appendix 6

Species for Chaddesden Wood: Fungi

6.1 Pre-2002 records

ORD	NAME	ASSOCIATED ORGANISM	MEDIUM	ECO	COL	DET	CON	HERB
01	Armillaria bulbosa	Quercus robur	leaf litter	A111		PB		
01	Clitocybe clavipes	Quercus robur	leaf litter	A111		PRS		
01	Clitocybe nebularis	Quercus robur	leaf litter	A111		PRS		
01	Clyocybe odora	Quercus robur	leaf litter	A111		JV		
01	Colybia butyracea	Quercus robur	leaf litter	A111		PRS		
01	Colybia dryophila	Quercus robur	leaf litter	A111		PRS		
01	Colybia erythropus	Quercus robur	wood-rotten	A111		PRS		
01	Colybia peronata	Quercus robur	leaf litter	A111		PRS		
01	Cortinarius azureus	Quercus robur	leaf litter	A111	PRS	PRS		PRS
01	Crepidotus variabilis	Grass	leaves-dead	A111		PRS		
01	Flamulina velutipes	indet	stump-rotten	A111	PRS	PRS		
01	Grifolia frondosa	Quercus robur	trunk-living	A111		PRS		
01	Gymnopilus jononius	Quercus robur	Trunk-living	A111		PRS		
01	Gymnopilus penetrans	Quercus robur	wood-rotten	A111		PRS		
01	Hebeloma crustuliformis	Populus tremula	leaf litter	A111		PRS		
01	Hygrophoropsis aurantica	Quercus robur	leaf litter	A111		PRS		
01	Lacaria amythistina	Quercus robur	leaf litter	A111		JV		
01	Lacaria lacata	Quercus robur	leaf litter	A111	PRS	PRS		
01	Lacaria lacata	Quercus robur	leaf litter	A111		PRS		
01	Meripilus giganteus	Quercus robur	wood-dead	A111		JV		
01	Mycena alcalina	Quercus robur	stump-rotten	A111	PRS	PRS		
01	Mycena cinerella	Quercus/Bracken	debris	A111	PRS	PRS		
01	Mycena filopes	Quercus robur	leaf litter	A111		PRS		
01	Mycena galericulata	Quercus robur	leaf litter	A111		JV		
01	Mycena inclinata	Quercus robur	wood-rotten	A111	PRS	PRS		
01	Pholiota alnicola	indet	trunk-rotten	A111	PRS	PRS		
01	Plerotus ostyatus	Quercus robur	trunk-living	A111		PRS		
01	Pluteus cervinus	Quercus robur	wood-rotten	A111		PRS		
01	Pluteus umbrosus	Quercus robur	wood-rotten	A111		PRS		
01	Psathyrella candolleana	indet	stump-dead	A111		PRS		
01	Psathyrella hydrophylla	Quercus robur	leaf litter	A111	PRS	PRS		
01	Tricholoma saponaceum	Quercus robur	leaf litter	A111	PRS	PRS		
01	Tubaria furfuracea	Quercus robur	leaf litter	A111		PRS		
02	Bjerkandra adusta	Quercus robur	leaf litter	A111		PRS		
02	Ceriporia exelsa	indet	wood-rotten	A111		PRS		
02	Clavaria cristata	Quercus robur	leaf litter	A111	PRS	PRS		
02	Clavulinopsis fusiformis	Bracken	grass	A111		PRS		
02	Coriolus versicolor	Quercus robur	wood-dead	A111		JV		
02	Merulius tremellosus	indet	wood-rotten	A111		PRS		
02	Phlebia merismoides	indet	wood-rotten	A111		PRS		
02	Stereum purpureum	indet	wood-dead	A111		PB		
02	Sterum gausapatum	indet	wood-dead	A111		PB		
02	Typhula quisquiliaris	Bracken	leaves-dead	A111		PRS		
04	Boletus badius	Quercus robur	leaf litter	A111	PRS	PRS		
04	Boletus pruinatus	Quercus robur	leaf litter	A111	PRS	PRS		
07	Calocera palidospathulata	indet	branch-dead	A111		PRS		
07	Dacrymyces stillatus	Quercus robur	wood-rotten	A111		PRS		
11	Lycoperdon foetidum	Quercus robur	leaf litter	A111		PRS		
11	Lycoperdon perlatum	Quercus robur	leaf litter	A111		JV		
14	Phalus impudicus	Quercus robur	leaf litter	A111		PRS		
16	Lactarius quietus	Quercus robur	leaf litter	A111		PRS		
16	Russula atropurpurea	Quercus robur	leaf litter	A111	PRS	PRS		
16	Russula ochroleuca	Betula pendula	leaf litter	A111	PRS	PRS		

ORD	NAME	ASSOCIATED ORGANISM	MEDIUM	ECO	COL	DET	CON	HERB
16	<i>Russula rosea</i>	<i>Quercus robur</i>	leaf litter	A111		PRS		
17	<i>Scleroderma citrinum</i>	<i>Quercus robur</i>	soil	A111		PRS		
20	<i>Exidia glandulosa</i>	<i>Quercus robur</i>	branch-dead	A111	PRS	PRS		
39	<i>Bulgaria inquinans</i>	<i>Quercus robur</i>	wood-dead	A111		PRS		
39	<i>Cudoniella ariculare</i>	<i>Quercus robur</i>	wood-rotten	A111		PRS		
39	<i>Orbilia xanthostigma</i>	<i>Quercus robur</i>	wood-rotten	A111	PRS	PRS		
40	<i>Nectria cinerbarina</i>	<i>Quercus robur</i>	wood-dead	A111		PRS		
50	<i>Peziza micropus</i>	<i>Quercus robur</i>	wood-rotten	A111	PRS	PRS		
55	<i>Daldinia concentrica</i>	<i>Quercus robur</i>	trunk-rotten	A111		PRS		
55	<i>Xylaria hypoxylon</i>	<i>Quercus robur</i>	stump-dead	A111		PRS		
55	<i>Xylaria polymorpha</i>	indet	trunk-rotten	A111	PRS	PRS		
91	<i>Brefeldia maxima</i>	<i>Quercus robur</i>	wood-rotten	A111	PRS	PRS		PRS
92	<i>Arcyria denudata</i>	<i>Quercus robur</i>	wood-rotten	A111	PRS	PRS		PRS
92	<i>Trichia contorta</i>	<i>Quercus robur</i>	wood-rotten	A111	PRS	PRS		PRS
92	<i>Trichia varia</i>	<i>Quercus robur</i>	wood-rotten	A111	PRS	PRS		PRS

6.2 Chaddesden Wood LNR Fungus Foray 5th October 2006

The foray was, as always in ancient woodland, an interesting rummage. Plenty of the usual types, with some mycorrhizal associates and many brackets found. Good to find typical oak associates such as Beefsteak but also the more unusual as is the Conifer Mazegill. Great to see the Toad's ear (a new one for Peter and myself) and *Pluteus chrysophaeus*, a bright little yellow bonnet, which, by the time we had got home, had pink gills.

<i>Russula ochroleuca</i> Yellow russula	<i>Trametes versicolor</i> Turkey tail
<i>Lactarius turpis</i> Ugly milkcap	<i>Bjerkandra adusta</i> Smoky bracket
<i>Lactarius quietus</i> Oakbug milkcap	<i>Schizopora paradoxa</i> Split porecrust
<i>Mycena filopes</i> Iodine bonnet	<i>Phlebia tremellosa</i> Jelly rot
<i>Mycena galericulata</i> Common bonnet	<i>Handkea utriformis</i> Mosaic puffball
<i>Clitocybe gibba</i> Common funnelcap	<i>Handkea excipuliformis</i> Pestle puffball
<i>Ampulloclitocybe clavipes</i> Clubfoot	<i>Lycoperdon pyriforme</i> Stump puffball
<i>Armillaria mellea</i> Honey fungus	<i>Scleroderma areolatum</i> Leopard earthball
<i>Laccaria amethystea</i> Amethyst deceiver	<i>Scleroderma verrucosum</i> Scaly earthball
<i>Marasmius alliaceus</i> Garlic parachute	<i>Phallus impudicus</i> Stinkhorn
<i>Collybia confluens</i> Clustered toughshank	<i>Auricularia auricular-judae</i> Jelly ear
<i>Collybia peronata</i> Wood woollyfoot	<i>Calocera viscosa</i> Yellow stagshorn
<i>Megacollium platyphylla</i> White-laced shank	
<i>Hygrophoropsis aurantiaca</i> False chanterelle	
<i>Pluteus cervinus</i> Deer shield	<i>Otidea bufonia</i> Toad's ear
<i>Pluteus chrysophaeus</i>	<i>Collybia erythropus</i> Redleg toughshank
<i>Paxillus involutus</i> Brown roll-rim	<i>Xylaria hypoxylon</i> Stagshorn
<i>Hypholoma fasciculare</i> Sulphur tuft	<i>Xylaria polymorpha</i> Dead man's fingers
<i>Agaricus augustus</i> The Prince	<i>Daldinia concentrica</i> Cramp ball
<i>Agaricus subperonatus</i>	<i>Nectria cinnabarina</i> Coral spot
<i>Psathyrella piluiformis</i> Common stump brittlestem	
<i>Laccrymaria lacrymabunda</i> Weeping widow	
<i>Coprinus micaceus</i> Glistening inkcap	
<i>Crepidotus variabilis</i> Variable oysterling	
<i>Boletus badius</i> Bay boletus	
<i>Boletus chrysenteron</i> Red-cracked boletus	
<i>Boletus pruinatus</i> Matt bolete	
<i>Polyporus durus</i> Bay polypore	

Polyporus leptcephalus Blackfoot polypore
Grifola frondosa Hen of the woods
Laetiporus sulphureus Chicken of the woods
Fistulina hepatica Beefsteak fungus
Ganoderma australe Southern bracket
Piptoporus betulinus Birch polypore
Daedaleopsis confragosa Blushing bracket
Rigidoporus ulmarius
Gloeophyllum abietinum Conifer mazegill
Stereum hirsutum Hairy curtain crust

List completed by Beverley Rhodes (BMS) according to ref. Roger Phillips (2006) with the expert assistance of Peter Smith (BMS) and the help of 70 volunteers.

6.3 Fungus Foray WildDerby Chaddesden Wood and Springwood 2 October 2011 Derby City Council

A gentle walk on a lovely afternoon provided us with a good selection of wood-loving species. Both mycorrhizal and saprophytic types are in the list. Key species were Blue Roundhead, Yellow Shield on elm and Beefsteak Fungus on oak. Thank you to everyone who assisted with finding and producing the list. 26 species:

Amanita muscaria Fly Agaric
Armillaria mellea Honey Fungus
Boletus chrysenteron Red-cracked Boletus
Clitocybe gibba Common Funnel Cap
Clitocybe nebularis Clouded Agaric
Collybia butyracea Buttercap
Collybia confluens Clustered Toughshank
Coprinus lagopus Haresfoot Inkcap
Coprinus micaceus Glistening Inkcap
Fistulina hepatica Beefsteak
Grifola frondosa Hen of the Woods
Handkea utriformis Mosaic Puffball
Leccinum scabrum Brown Birch Bolete
Leitoporus sulphureus Chicken of the Woods
Lycoperdon perlatum Common Puffball
Lycoperdon pyriformis Stump Puffball
Macrolepiota rhacodes Shaggy Parasol
Marasmius oreades Fairy Ring Champignon
Mycena arcangeliana Angels Bonnet
Paxillus involutus Brown Roll Rim
Pluteus chrysophaeus Yellow Sheild
Scleroderma areolatum Common Earthball
Stereum hirsutum Hairy Stereum
Stropharia caerulea Blue Roundhead
Trametes versicolor Turkey Tail
Xylaria polymorpha Dead Man's finger

Appendix 7

Species for Chaddesden Wood: Mammals

English name	Scientific name
<i>Pre-2002 records;</i>	
Common pipistrelle**	<i>Pipistrellus pipistrellus</i>
Whiskered bat*	<i>Myotis mystacinus</i>
Natterer's bat*	<i>Myotis nattereri</i>
Mole	<i>Talpa europaea</i>
Rabbit	<i>Oryctolagus cuniculus</i>
Grey squirrel	<i>Sciurus carolinensis</i>
Fox	<i>Vulpes vulpes</i>
 <i>July 2011 records</i>	
Common pipistrelle**	<i>Pipistrellus pipistrellus</i>
Soprano pipistrelle**	<i>P. pygmaeus</i>
Nathusius' pipistrelle	<i>P. nathusii</i>
Myotis sp.*	<i>Myotis sp.</i>
Noctule**	<i>Nyctalus noctula</i>
Serotine	<i>Eptesicus serotinus</i>

KEY

** = Priority BAP

* = Derbyshire Red Data Book entry

Appendix 8

8.1 Species for Chaddesden Wood: Birds 1994 - 2000

Siskin

KEY

Linnet*

Redpoll

Bold = RSPB/BTO red list

*Bullfinch**

Italic = RSPB/BTO amber list

Greenfinch

* = Priority BAP

Chaffinch

House Sparrow

Tree Sparrow

Goldfinch

Yellowhammer

Brambling

Reed Bunting*

Chiffchaff

Willow Warbler

Blackcap

Whitethroat

Garden Warbler

Wood Warbler

Cuckoo*

Spotted Flycatcher*

Tawny Owl

Long Eared Owl

Sparrowhawk

Kestrel

Little Owl

Buzzard

Blue Tit

Great Tit

Coal Tit

Long Tailed Tit

Willow Tit

Marsh Tit

Song Thrush*

Mistle Thrush

Blackbird

Robin

Redwing

Fieldfare

*Dunnock**

Wren

Magpie

Carrion Crow

Jay

Pied Wagtail

Stock Dove

Collared Dove

Woodpigeon

Jackdaw

Starling

Green Woodpecker

Great Spotted Woodpecker

Lesser Spotted Woodpecker

Swallow

House Martin

Nuthatch

Treecreeper

Goldcrest

Swift

Skylark*

Woodcock

KEY

Bold = RSPB/BTO red list

Italic = RSPB/BTO amber list

* = Priority BAP

8.2 Bird records from Chaddesden Wood 2 April 2010

1. Blue Tit (x10, using new nest boxes)
2. Great Tit (x6)
3. Long-Tailed Tit (x9)
4. Great Spotted Woodpecker (drumming)
5. Jackdaw (x11, building nests in holes in oak trees)
6. Collared Dove
7. Wood Pigeon (x16, one building nest in holly tree)
8. Dunnock (or Hedge Sparrow) (x4)
9. Sparrowhawk (flying along western boundary)
10. Robin (x11)
11. Nuthatch (x2)
12. Tree Creeper
13. Carrion Crow (x5)
14. Greenfinch
15. Goldfinch
16. Chaffinch
17. Wren
18. Chiffchaff (singing)
19. Willow Warbler (heard singing on 19th April 2010)

8.3 Species for Lime Lane Wood: Birds 1988 – 2007

Spotted flycatcher*

Willow warbler

Wren

Blue tit

Balckbird

Chaffinch

Robin

Carrion crow

Magpie

Woodpigeon

Green woodpecker

Appendix 9

9.1 Species for Chaddesden Wood: Invertebrates 1995 - 2000

Butterflies

Peacock
Painted Lady
Red Admiral
Small Tortoiseshell
Gatekeeper*
Wall Brown
Comma
Meadow Brown
Speckled Wood*
Small Copper
Small White
Large White
Orange Tip
Brimstone
Clouded Yellow
Green Veined White
Essex Skipper
Purple Hairstreak*
Holly Blue

Dragonflies

Brown Hawker
Emperor*

Moths

Carcina quercana
Cydia splendana*
Agriphila tristella
Mother of pearl
Trachycera advenella
Oak hook-tip
Small fan-footed wave
Common carpet
Small phoenix
Willow beauty
Common white wave
Iron prominent
Shuttle-shaped dart
Large yellow underwing
Lesser yellow underwing
Lesser broad-bordered underwing
Six-striped rustic
Marbled beauty
Copper underwing agg.
Dunbar
Slender brindle
Common rustic agg.
Scarce silver-lines
Snout

KEY

* = Derbyshire Red Data Book entry

9.2 Invertebrate records 6th August 2011

Ground Surfaces

1. Slugs - Leopard Slug (x1)
2. Bees/Wasps (x6)
3. Ants (x1)
4. Earwigs (dead)
5. Spiders/Harvestman (x2)
6. Woodlice (x7)
7. Centipedes (x1)

Appendix 10
Byelaws for Chaddesden Wood LNR

CITY OF DERBY



BYELAWS

Relating to Pleasure Gardens

Sinfin Golf Course
Sinfin Moor Park
Sinfin Recreation Ground
South Avenue Open Space
Staunton Avenue Recreation Ground
Stockbrook Street Recreation Ground
Sunnyhill Recreation Ground
Tennessee Road Open Spaces
Vicarage Road Playing Fields
Whitehouse Farm Open Space
Wilkins Drive Open Space
Willowcroft Road Open Space
Winbledon Road Open Space
Windermere Crescent Recreation Ground
Windmill Hill Plantation Open Space
Winslow Green Open Space
Wollaton Road Open Space

PART II: Pleasure grounds in respect of which byelaws are made under
Sections 12 and 15 of the Open Spaces Act 1906

Abbey Hill Road Playing Fields
Allstree Park
Chellaston Recreation Ground
Craddock Avenue Open Space
Field Lane Playing Fields
Havenbault Lane Open Space
King George V Playing Fields
Mackworth Park
Mullion Place Play Space
Oregon Way Recreation Ground
Oulton Close Open Space
Sunnydale Open Space

Kedleston Road Woodland
Lathkill Road Open Space
Ludgate Walk Open Space
Mackworth Recreation Ground
Manor Farm Recreation Ground
Manor Road Open Space
Munsfield Road Open Space
Markeaton Park
Markeaton Recreation Ground
Marylebone Crescent Open Spaces
Moor End Open Space
Mundy Play Centre
Mundy Pleasure Ground
Municipal Sports Ground and Athletics Stadium
Normanton Park
Nunsfield House Ground
Osmaston Park
Parker's Piece
Penilton Close Open Space
Perth Street Open Space
Pit Close Recreation Ground
Prince Charles Avenue Open Space
Priory Estate Play Space
Quarn Park Play Space
Queensway Open Space
Racecourse Playing Fields
Riverside Gardens
Riverside Gardens, Full Street
Riverside Walk
Roe Farm Recreation Ground
Rowditch Recreation Ground
Rykneld Recreation Ground
Sandringham Drive Open Space
Sapperton Close
Seymour Close Open Space
Shelton Lock Playing Fields
Sherwood Foresters' Recreation Centre
Sherwood Recreation Ground

THE SCHEDULE

PART 1: Pleasure grounds in respect of which byelaws are made under

Section 164 Public Health Act 1875

Albert Road Estate Play Space
Allenton Playing Fields
Allestree Recreation Ground
Alvaston Park
Appleton Close Open Space
Arboretum
Aycliffe Gardens Open Space
Bass Recreation Ground
Bath Street Open Space
Bendall Green Recreation Ground
Birdcage Walk Open Spaces
Boulton Lane Open Spaces
Boulton Lane Recreation Ground
Bramble Brook Open Space
Brunswick Close Open Space
Calder Close Open Space
Carron Close Open Space
Chaddesden Park
Chester Green
Clemson's Park
The Copse, Darley Abbey
Cornwall Road Open Space
Darley Abbey Park
Darley Playing Fields
Darley Street Open Space
Derwent Park
Dorchester Avenue Open Space
Elvaston Lane Recreation Ground
Exeter Street Open Space
Gravel Pit Lane Open Space
Half Moon Plantation Open Space
Hill Top Playground
Isleworth Drive Open Spaces

BYELAWS

made under Section 164 of the Public Health Act 1875, and Sections 12 and 15 of the Open Spaces Act 1906 by DERBY CITY COUNCIL with respect to the PLEASURE GROUNDS set out in the Schedule hereto.

1. Throughout these byelaws the expression "the Council" means DERBY CITY COUNCIL and the expression "the pleasure ground" means the pleasure grounds set out in the Schedule hereto.
2. An act necessary to the proper execution of his duty in the pleasure ground by an officer of the Council or by any person or servant of any person employed by the Council shall not be deemed an offence against these byelaws.
3. A person shall not in the pleasure ground
 - (i) wilfully, carelessly or negligently soil or defile any wall or fence in or enclosing the pleasure ground, or any building, barrier, railing, post or seat, or any erection or ornament;
 - (ii) climb any wall or fence in or enclosing the pleasure ground, or any tree, or any barrier, railing, post or other erection;
 - (iii) wilfully, carelessly or negligently remove or displace any barrier, railing, post or seat, or any part of any erection or ornament, or any implement provided for use in the laying out or maintenance of the pleasure ground.
4. A person shall not, except in pursuance of a lawful agreement with the Council, or otherwise in the exercise of any lawful right or privilege, bring or cause to be brought into the pleasure ground any cattle, sheep, goats, pigs or horses or any beast of draught or burden.
5. (i) A person shall not, except in the exercise of any lawful right or privilege, bring or cause to be brought into the pleasure ground any barrow, truck, machine or vehicle other than—
 - (a) a wheeled bicycle, tricycle or other similar machine;

(b) a wheel-chair or perambulator drawn or propelled by hand and used solely for the conveyance of a child or children or an invalid;

provided that where the Council set apart a space in the pleasure ground for the use of any class of vehicle, this byelaw shall not be deemed to prohibit the driving in or to that space by a direct route from the entrance to the pleasure ground of any vehicle of the class for which it is set apart.

(ii) A person shall not, except in the exercise of any lawful right or privilege, ride any bicycle, tricycle or other similar machine in any part of the pleasure ground.

6. No person shall in the pleasure ground skate on rollers, wheels or any other mechanical contrivance, to the danger of other persons.

7. A person who brings a vehicle into the pleasure ground shall not wheel or station it over or upon—

(i) any flower bed, shrub or plant, or any ground in course of preparation as a flower bed, or for the growth of any tree, shrub or plant;

(ii) any part of the pleasure ground where the Council by a notice board affixed or set up in some conspicuous position in the pleasure ground prohibit its being wheeled or stationed.

8. A person shall not affix any bill, placard or notice to or upon any wall or fence in or enclosing the pleasure ground, or to or upon any tree, or plant, or to or upon any part of any building, barrier or railing, or of any seat, or of any other erection or ornament in the pleasure ground.

9. A person shall not in the pleasure ground walk, run, stand, sit or lie upon

(i) any grass, turf or other place where adequate notice to keep off such grass, turf or other place is exhibited;

provided that such notice shall not apply to more than one fifth of the area of the pleasure ground;

The foregoing byelaws are hereby confirmed by the Secretary of State and shall come into operation on the first day of DECEMBER 1978.



Signed by authority of
the Secretary of State.

Sgd. (R. F. D. SHUFFREY)
An Assistant Under Secretary
of State

HOME OFFICE
LONDON, SW1

16 NOVEMBER, 1978

pleasure ground play or take part in any game so specified in such a manner as to exclude persons not playing or taking part in the game from the use of such a space.

13. A person resorting to the pleasure ground and playing or taking part in any game for which the exclusive use of any space in the pleasure ground has been set apart shall

- (i) not play on the space any game other than the game for which it is set apart;
- (ii) not in any pleasure ground play any game with a hard ball except in those areas set aside for that purpose;
- (iii) in preparing for playing and in playing, use reasonable care to prevent undue interference with the proper use of the pleasure ground by other persons;
- (iv) when the space is already occupied by other players, not begin to play thereon without their permission;
- (v) where the exclusive use of the space has been granted by the Council for the playing of a match, not play on that space later than a quarter of an hour before the time fixed for the beginning of the match unless he is taking part therein;
- (vi) except where the exclusive use of the space has been granted by the Council for the playing of a match in which he is taking part, not use the space for a longer time than two hours continuously, if any other player or players make known to him a wish to use the space.

14. Where the Council charge a fee for use of any part of the pleasure ground for tennis, putting, bowling or any other game or sport, a person shall not commence to play until he has purchased a ticket entitling him to play, which ticket shall be retained and shown on demand to any officer of the Council.

15. A person shall not in any part of the pleasure ground which may have been set apart by the Council for any game, play or take part in any game when the state of the ground or other cause makes it unfit for use and a notice is set up in some conspicuous position prohibiting play in that part of the pleasure ground.

16. A person shall not in the pleasure ground

- (i) except as hereinafter provided erect any post, rail, fence, pole, tent, booth, stand, building or other structure;
- (ii) hang, spread or deposit any linen or other fabric for drying or bleaching;
- (iii) sell, or offer or expose for sale, or let or hire, or offer or expose for letting to hire, any commodity or article unless, in pursuance with an agreement with the Council or otherwise in the exercise of any lawful right or privilege, he is authorised to sell or let to hire in the pleasure ground such commodity or article.

17. A person shall not in the pleasure ground wilfully obstruct, disturb, interrupt, or annoy any other person in the proper use of the pleasure ground, or wilfully obstruct, disturb or interrupt any officer of the Council in the proper execution of his duty, or any person or servant of any person employed by the Council in the proper execution of any work in connection with the laying out or maintenance of the pleasure ground.

18. A person shall not take part in any public show or performance in the pleasure ground. Provided that this byelaw shall not apply to any person taking part in a band show or any other entertainment held in the pleasure ground in pursuance of an agreement with the Council.

19. Every person who shall offend against any of these byelaws shall be liable on summary conviction to a fine not exceeding Fifty pounds.

20. Every person who shall infringe any byelaw for the regulation of the pleasure ground may be removed therefrom by an officer of the Council, or by any constable, in any one of the several cases hereinafter specified, that is to say—

- (i) where the infringement of the byelaw is committed within the view of such officer or constable, and the name and residence of the person infringing the byelaw are unknown to and cannot be readily ascertained by such officer or constable;

(ii) where the infringement of the byelaw is committed within the view of such officer or constable and, from the nature of such infringement, or from any other fact of which such officer or constable may have knowledge, or of which he may be credibly informed, there may be reasonable ground for belief that the continuance in the pleasure ground of the person infringing the byelaw may result in another infringement of a byelaw, or that the removal of such person from the pleasure ground is otherwise necessary as a security for the proper use and regulation thereof.

21. The byelaws relating to the pleasure ground which were made by the Mayor Aldermen and Burgesses of the Borough of Derby on the Fifth day of February 1930, the First day of May 1935, the Eighteenth day of February 1964, the Sixteenth day of June 1964 and the Eighth day of July 1965 and were confirmed by the Minister of Health on the First day of April 1930, the Fifteenth day of August 1935 and by the Secretary of State on the Seventeenth day of April 1964, the Twenty-first day of August 1964 and the Twenty-sixth day of August 1965 respectively and any other byelaws whatsoever relating to the pleasure ground are hereby repealed.

*THE COMMON SEAL of
DERBY CITY COUNCIL was
hereunto affixed this seventh day
of September, 1978 in the
presence of*

Sgd. ERNEST PRESTON

City Secretary

C.S.

(ii) any flower bed, shrub or plant, or any ground in course of preparation as a flower bed, or for the growth of any tree, shrub or plant.

10. A person shall not in the pleasure ground

(i) bathe, wade or wash in any ornamental lake, pond, stream or other water;

(ii) wilfully, carelessly or negligently foul or pollute any such water;

(iii) take, destroy or attempt to take, destroy or wilfully disturb any fish in any such water except in those areas set aside for that purpose;

(iv) take, injure or destroy or attempt to take, injure or destroy, or wilfully disturb or worry or illtreat, any fowl in any such water or elsewhere in the pleasure ground;

provided that this byelaw shall not prohibit wading in those places set aside for that purpose.

11. A person shall not cause or suffer any dog belonging to him or in his charge to enter or remain in the pleasure ground unless such dog is kept under proper control, and he effectively restrains

(i) from causing annoyance to any person;

(ii) from worrying or disturbing any animal or waterfowl;

(iii) from entering any lake, pond or stream or any paddling, swimming or boating pool or other water, or any sandpit or similar place equipped for children's play.

12. Where the Council set apart any such part of the pleasure ground as may be fixed by the Council, and described in a notice board affixed or set up in some conspicuous position in the pleasure ground, for the purpose of any game specified in the notice board which, by reason of the rules or manner of playing, or for the prevention of damage, danger or discomfort to any person in the pleasure ground may necessitate, at any time during the continuance of the game, the exclusive use by the player or players of any space in such part of the pleasure ground—a person shall not in any space elsewhere in the

