Stapleford Hill Woodland Local Nature Reserve

Management Plan
2020 - 2025

Broxtowe Borough COUNCIL

THE wildlife TRUSTS
Nottinghamshire

This management plan was produced by Nottinghamshire Wildlife Trust in partnership with Broxtowe Borough Council.

April 2020

Contents

INTRODUCTION

Stapleford Hill is located across the road from Bramcote Hills Park. It is dominated by the 'Hemlock Stone', a large stone monolith. The main habitats comprise oak and birch woodland. Panoramic views can be seen from the top of the woodland.

The first management plan (2008 – 2013) was produced by Nottinghamshire Wildlife Trust on behalf of Broxtowe Borough Council. This plan covers the period 2020-25.

The management proposals contained within this plan have been developed in consultation with Officers of Broxtowe Borough Council, the Practical Conservation Volunteers (PCV), Nottinghamshire Wildlife Trust, representatives of the local mountain bike group who use the site and the local community.

Local Nature Reserve status was declared for Stapleford Hill Woodland in 2008 and affords the site greater protection. LNR status not only protects the area's habitats and wildlife but also increases people's awareness of their environment. It is a place where children can learn about nature, and the local community can become involved in the management of their local green space.

PART 1: ROLES AND RESPONSIBILITIES

1.1 Broxtowe Borough Council

The site is owned by Broxtowe Borough Council https://www.broxtowe.gov.uk/. The Council's corporate plan for 2020-2024 has 5 key priorities with a series of corresponding objectives and targeted outcomes. Those most relevant to this plan are:-

Priority
Environment. The environment in Broxtowe will be protected for future generations.

Objective
Develop plans to reduce the Borough's carbon emissions to net zero by 2027 and start implementing them.
Invest in parks and open spaces.

1.2 Natural England

Natural England is an executive non-departmental public body, sponsored by the Department for Environment, Food & Rural Affairs (Defra). It is the Government's adviser for the natural environment in England, helping to protect England's nature and landscapes for people to enjoy and for the services they provide. Natural England provides advice on the declaration of LNRs in England and maintains a database of these sites.

https://www.gov.uk/government/organisations/natural-england
http://www.lnr.naturalengland.org.uk/Special/lnr/lnr_search.asp

1.3 Environmental organisations

The Council works in partnership with many organisations to deliver improvements on open spaces for wildlife. For instance, the Nottinghamshire Wildlife Trust, Nottinghamshire Biodiversity Action Group, Nottinghamshire Biological and Geological Record Centre (NBGRC) and Practical Conservation Volunteers CIC.

PART 2: DESCRIPTION

2.1 Location and map coverage

The site lies approximately 1.5km north of Stapleford, 1km north of Bramcote and 1.7km south east of Trowell. It is situated west of Coventry Lane A6002, with Bramcote Hills Park on the opposite side of the road. The grid reference for the Centre of the site is SK 49865 38776. The site can be found on Ordnance Survey Landranger map no.129 (1:50,000 scale) & Ordnance Survey Explorer map no. 260 (1:25,000 scale). A location map is provided at Appendix 1.

2.2 Size and ownership

The Local Nature Reserve boundary is 6.92ha but the entire site encompasses approximately 7.5 hectares. Stapleford Hill Woodland is solely owned by Broxtowe Borough Council and forms part of the chain of sites known locally as Bramcote Ridge.

2.3 Soil and geology

Soil – The soil is coarse yet loamy over soft sandstone (The Soil Survey of England and Wales (1983)) and is typical of soils derived from sandstone, which tend to be free-draining, slightly acidic and typically support oak-birch woodland and heathland.

Geology – The geology underlying the woodland consists of the Nottingham Castle Sandstone Formation (formerly known as the Bunter Pebble Beds) and the Lenton Sandstone Formation (Lower Mottled Sandstone) both of which form part of the Sherwood Sandstone Group (Bunter Sandstones). The formation consists of buff and red mottled medium to coarse-grained sandstones with fine parallel laminations and cross bedding (Frost & Smart 1979) 1909: Geological survey Great Britain: (England & Wales) Sheet 125: Derby 1" to 1 mile.

This formation was laid down in the Triassic period approximately 230 million years ago and covers nearly a quarter of the County, occurring as a broad belt between Nottingham and South Yorkshire.

The Hemlock Stone, a RIGS (Regionally Important Geological Site) is situated to the SE of the woodland. The sandstone platform on which the pillar stands, plus the lowermost 2m part of the pillar itself is Lenton Sandstone, the remainder is the overlying Nottingham Castle Sandstone formation. Towards the top of the Hemlock Stone the Nottingham Castle sandstone contains high concentrations of extraformational quartzite pebbles, forming a much stronger cap to the stone than the underlying sandstone. This factor gives rise to the theory that the Hemlock Stone was formed over many years by erosion. However, the British Geological Survey's view is that it was caused by quarrying (Howard 2002). There is evidence of quarrying in other parts of the woodland causing some exposed steep sandstone quarry outcrops but these were formed much later in history, in the 20th century.

2.4 Aspect, topography and altitude

The wood lies 74 metres above sea level at its lowest point, rising to 101 metres above sea level at its summit. Its aspect varies as the woodland occurs around the slopes of a hill.

2.5 Access

The main vehicular access point for maintenance is located off the A6002 (Coventry Lane) via a field gate. There is a National Trail path (the Robin Hood Way) which bisects the woodland SE to NW. There is a large public car park at Bramcote Hills Park, with a pedestrian crossing across Coventry Lane.

2.6 Surrounding land use

Stapleford Hill Wood is incorporated within Bramcote Ridge, a sandstone ridge that forms a linear open green space and wildlife corridor extending over 2 ½ miles from Wollaton Park in the City of Nottingham to agricultural land to the south of Trowell.

The wood is bounded to the SW by a residential estate, to the east by the A6002, to the NE by land associated with Bramcote Crematorium and to the west by agricultural land.

The boundary of the site with land associated with the Bramcote Crematorium is not clear on the ground. A large section of the former quarry lies between the Stapleford Hill Woodland site covered by this plan and the current crematorium boundary fence. This wet woodland area is owned by Broxtowe Borough Council and was purchased as part of the crematorium site.

2.7 Site Description

Stapleford Hill Wood is a deciduous oak / birch woodland characteristic of the Sherwood sandstone geology and landscape character area.

The site is less used by walkers than the neighboring Bramcote Hill Park Woodland but is used by mountain bikers with restricted permission, subject to regular review, granted by the Borough Council. This needs to be carefully monitored as biking activity has caused soil and sandstone erosion throughout the woodland, particularly to the SE and the hills and holes area to the NW of the site. Biking activities may pose a safety risk to pedestrian users of the site and their use is restricted to defined areas with specific routes for access.

Panoramic views of the surrounding areas can be seen from the summit of the woodland and in the past these views have been enhanced with judicial pruning and coppicing of trees.

2.8 Statutory Designations

Stapleford Hill Woodland was declared a Local Nature Reserve (LNR) in 2008.

2.9 Non-statutory Designations

The woodland was identified as a botanical Local Wildlife Site in 2011. It is described by Nottinghamshire Biological and Geological Records Centre as 'A mosaic of dry acid grassland and oak and birch woodland'.

The Hemlock Stone is designated a RIGS (Regionally Important Geological Site). RIGS are geological or geomorphologic sites of regional importance that are considered worthy of protection for their educational, research, historical or aesthetic importance (Nature Conservancy Council 1991).

The woodland is subject to the following policy protection afforded in the Broxtowe Local Plan Part 2 (adopted October 2019):

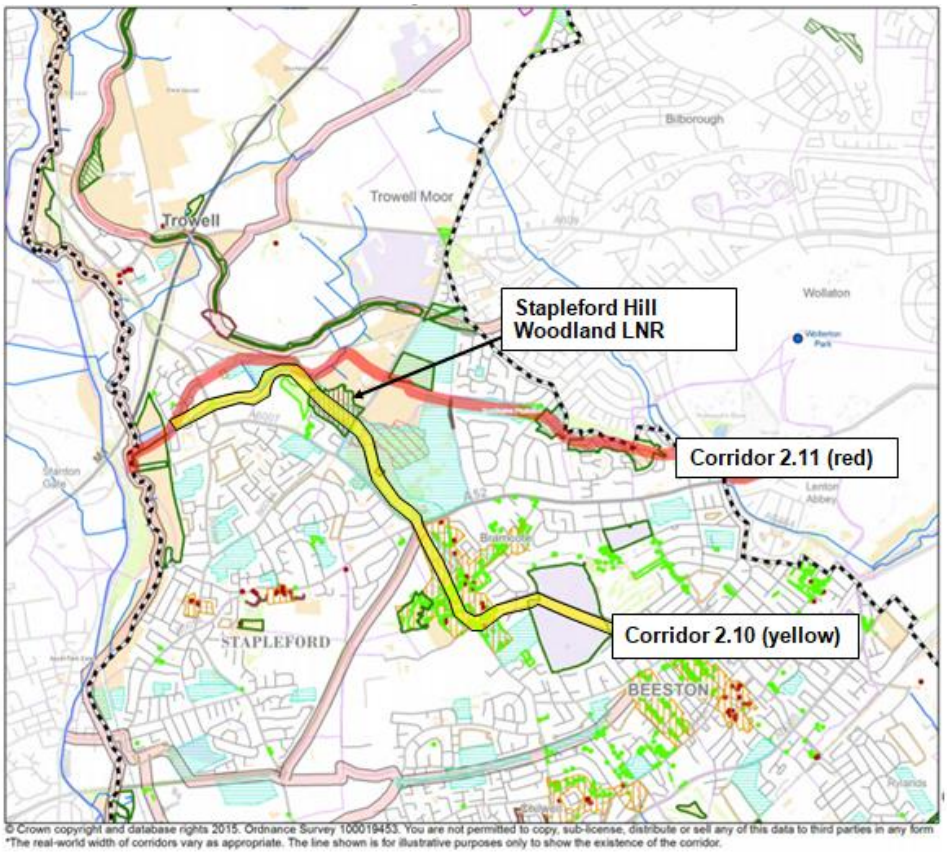
- Local Green Space (Prominent Areas for Special Protection) (Policy 27.1d)
- Local Green Space (Policy 27.3)
- Informal Open Space (Policy 28c)
- Local Nature Reserves (Policy 28f)
- Local Wildlife Sites (Policy 31.1a)

Broxtowe Borough Council has published a Green Infrastructure (GI) Strategy covering 2015 – 2030. In this strategy, linear GI corridors have been classified as primary (core) corridors, and secondary corridors. The Biodiversity Opportunity Mapping exercise (BOM) (Broxtowe BOM Report, Notts Biodiversity Action Group, 2014) fed into the development of this strategy. The BOM

has identified habitats which could be created and extended in the corridors, to create greater ecological connectivity and habitat enhancement.

Stapleford Hill Woodland and Bramcote Hills Park (and woodland LNR) forms part of corridor 2.10 which extends from the western edge of Stapleford, through Bramcote to the northern edge of Beeston. The corridor includes Alexandria Plantation LNR and Sandy Lane LNR, as well as Moorbridge Wetland LWS, Bramcote Moor Grassland. The GI strategy recognises that woodlands within the corridor could benefit from biodiversity enhancement works.

The woodland is also located to the south of corridor 2.11 *Erewash to Wollaton*, see figure below.



The BOM identified the potential to extend woodland (plantation and semi-natural) and grassland habitat (comprising semi-improved neutral grassland, unimproved acid grassland and marsh/marshy grassland types) on and near to both of these corridors.

PART 3: EVALUATION & OBJECTIVES

3.1 Evaluation of site features (Ratcliffe's criteria)

3.1.1 Size

The wood is approximately 7.5 ha (18.5 acres) and is therefore a significant ecological resource for an urban fringe location. However, Stapleford Hill is part of the much larger green / wildlife corridor of Bramcote Ridge, which links the urban deer parkland of Wollaton Hall Park with the open countryside to the south of Trowell. This corridor is therefore a highly significant ecological resource within the borough providing opportunities for transitory migration of species between urban and rural habitats.

3.1.2 Diversity

The woodland contains a diverse range of habitats as it is situated around a summit and therefore contains slopes on all aspects; north, south, east and west. The woodland contains areas of acid grassland, north facing wet or damp woodland and light and grassy south facing woodland. It is therefore likely that the woodland accommodates a wide range of faunal species, which will be confirmed through surveys and monitoring.

3.1.3 Naturalness

It is likely that the woodland occurred naturally as it is situated on an undulating hill with sandstone outcrops, which would not have been cultivatable for agriculture or suitable for building development at the time when many woodlands were lost to agricultural clearance. Compartment 6 however, which contains abundant sycamore may have been used as an access point for quarrying activities and may well have been planted with sycamore when quarrying ceased to provide rapid revegetation and restoration.

The flora present within the woodland is highly characteristic of woodland found on sandstone. Slopes on each aspect i.e. north, south etc, also consist of species characteristic of those aspects. The woodland has not been subject to nutrient input through adjoining land use and its flora is therefore typical of woodlands found on nutrient- poor free draining acidic soils.

3.1.4 Rarity

The Sherwood Natural Area has a high proportion of woodland cover but much of the classic oak/birch woodland and heathland that is indigenous to the area has been lost to coniferous woodland. Stapleford Hill occurs at the southernmost tip of this Natural Area and is situated in a predominantly urban environment. This makes the wood an unusual and valuable ecological and recreational resource that is of local and county importance.

Oak/birch woodland is a Nottinghamshire Biodiversity Action Plan priority habitat as is Lowland Dry Acid Grassland, which occurs in compartment 1.

A site such as this one that supports a number of priority habitats is not common and should be managed to protect and enhance those habitats.

3.1.5 Fragility

Whilst use of the site by mountain bikers is being managed by the Borough Council in partnership with local group members, this type of use within the wood poses a threat to the woodland through soil erosion and erosion of geological outcrops and damage to woodland ground flora and vegetation structure. However, working with the group a defined area area of the wood has been zoned where cycling is permitted and a 'code of conduct' has been drawn up with the cyclists, who are largely supportive and follow the guidance set by the council.

3.1.6 Typicalness

The site and its flora is typical of woodland found on sandstone geology and situated on a variety of aspects.

3.1.7 Recorded history

The woodland exists in the same proportions as today on Sanderson map of 1835 (Sanderson 1835) (see Appendix 2). It is therefore likely that the woodland has been in existence for much longer than this.

3.1.8 Position in an ecological/geographical unit

The wood forms part of a much larger linear habitat or wildlife corridor, which stretches from Wollaton Park in the City of Nottingham to agricultural land to the north and west of the wood. Its individual value, whilst great, is far outweighed by its value as part of this corridor connecting urban habitats to rural habitats, aiding floral and faunal transitory migration.

3.1.9 Potential value

Stapleford Hill is already realising great potential value as a recreational and a nature conservation resource.

The woodland also has potential as a resource for local communities through the provision of further volunteer days, working in partnership with Practical Conservation Volunteers ,guided walks and participation in survey training and subsequent on site surveys.

Further ecological potential could be realised through appropriate management to improve structural and floral diversity, which in turn should increase faunal diversity.

3.1.10 Intrinsic appeal

The site has great intrinsic appeal as a recreational resource and is a destination site for its geological interest, the Hemlock Stone. The woodland provides a valuable recreational green space that local people can enjoy without the need for transport provision or financial expenditure. The floral, structural and topographical diversity provides recreational and wildlife interest and ensures that exploring is a worthwhile activity.

A diverse woodland bird population, encouraged by good provision of standing dead wood habitat adds to the intrinsic value and enjoyment of the wood.

3.2 Objectives

- Ensure that Stapleford Hill Woodland is a safe environment for recreational purposes
- Protect and enhance LBAP Priority Habitats
- Protect and enhance floral diversity
- Protect and enhance structural diversity
- Protect and enhance dead wood, moss, fern and lichen habitats
- Maintain a managed restriction on mountain biking use in the wood
- Promote and enhance the recreational potential of the wood
- Promote and enhance community involvement in the wood.

3.3 Factors Influencing Management

- Safety - the entire site is accessible at all times, therefore in the interest of public safety, all possible measures should be taken to ensure public safety whilst work is being carried out, including closing paths where appropriate

- Community involvement - local community and interest groups should be involved in and consulted upon the practical and strategic management of the woodland at every possible opportunity.

- Practical management – much of the practical work is carried out by the Practical Conservation Volunteers (PCV), however, the number of workdays that can be accommodated during appropriate seasons is limited.

- Legal obligations - work likely to cause disturbance to breeding birds
- i.e. felling and scrub clearance cannot be undertaken during the bird breeding season (March to September inclusive). Therefore, all felling and scrub clearance must be undertaken during the autumn and winter as it is an offence to disturb any wild bird (with the exception of pest species) while it is tending a nest containing eggs or chicks, until the chicks have *successfully* fledged. To do so would be a criminal offence under The Wildlife & Countryside Act 1981 (as amended).

- Protected species - mature trees identified for felling that are likely to provide roosting opportunities for bats should be surveyed by a licensed bat worker prior to felling. All species of British bat plus their roosting sites are protected by The Wildlife & Countryside Act 1981 (as amended), the CROW Act 2000 and The Conservation of Habitats and Species Regulations 2017

- Accommodate and where possible enhance the amenity / recreational value of the site.

- Annual or bi-annual meetings regarding the management of the site are required to identify a work programme and schedule of works. Meetings should involve Broxtowe Borough Council Parks and Environment team, PCV, contractors, Nottinghamshire Wildlife Trust and anyone else likely to carry out work on site.

- Ongoing funding for the management identified cannot be guaranteed for the full term of the plan. It may therefore be necessary for some tasks to be rolled over into subsequent years, to be completed when funding becomes available.

- The new 'Field Farm' housing development off Ilkeston Road comprises upto 450 new homes and this will increase the number of people visiting the site and the impacts that the additional use of a green space brings.

3.4 Current Woodland Conditions

The composition of Stapleford Hill Woodland is characteristic of woodlands growing on sandstone geology, and as the woodland is situated around a summit and contains all aspects i.e. north facing, south facing etc, this is reflected in its flora. Therefore, the site provides a diverse range of habitats with acid grassland to the east, low-lying damp / wet woodland with good moss and fern communities to the north and lighter and warmer grassy sloped woodland to the south.

The woodland has only a small area dominated by sycamore to the north of the wood, which is spreading into adjoining compartments. Work to fell sycamore trees was undertaken as part of the previous management plan and this work will continue as part of this management plan to slow

this encroachment to allow the wood to remain characteristic of Sherwood oak / birch woodland long into the future.

The woodland has a varied topography being 74 metres above sea level at its lowest point, rising to 101 metres above sea level at its summit. The slopes to the south of the wood are gently rising whilst slopes to the north are steep and hazardous in places. There are also numerous disused quarries with some steep cliff-faces, which provide much local variety in topography across the central section of the site.

The site has been divided into eight management compartments. A management compartment map is provided at Appendix 4. The following section describes each compartment and provides a view on management.

Compartment 1

Compartment 1 is situated to the east of the woodland and consists of an area of amenity mown acid grassland on an east facing slope, leading up to the Hemlock Stone. The compartment is bounded on the east by an established planted hedgerow, post and rail fencing and the A6002, Coventry Lane and to the north and south by woodland and scrub. A consolidated stone path bisects the grassland area.

Features – This compartment is highly visible from the A6002, the walled garden at Bramcote Hills Park and is the main entrance to the Stapleford Hill Wood. The dominating feature of this compartment is the Hemlock Stone itself and also an area of acid grassland, characterised by by Wavy Hair-grass (*Deschampsia flexuosa*) and Sheep's Sorrel (*Rumex acetosella*).This is an additional habitat in what is predominantly a woodland setting and may be defined as Lowland acid grassland, a Nottinghamshire Biodiversity Action Plan priority habitat. This habitat has become rare and threatened through a lack of management, resulting in the increasing dominance of coarse grasses, bracken, scrub and trees at the expense of acid grassland flora and fauna.

Management Requirements
The path that leads to the grassland area, off the main footpath from the entrance, is lined on either side by trees and tall shrubs creating a closed–in feeling. These should be coppiced to allow more light onto the path and to provide a more open aspect.

Some young self-set oak trees and other scrub are encroaching into the grassland area, particularly to the south along the woodland edge. These should be removed to halt encroachment onto the grassland and efforts made to restore the area back to grassland, which is a valuable ecological resource. This will also have the benefit of improving the views of the Hemlockstone, a major visitor attraction.

The grassland is currently maintained as amenity grassland and mown frequently, severely limiting its potential as habitat for invertebrates. The banked section to the north of the stone path should be reduced to a once-annually cutting regime to allow grasses and herbaceous species to flower and set seed and be of more benefit to invertebrates.

The Hemlock stone itself would benefit from periodic scrub removal, as if scrub is allowed to develop on it the roots of saplings could damage this very important geological feature.

Compartment 2

Note: Mountain biking allowed in part of this area

Canopy – Pedunculate Oak (*Quercus robur*) and Silver Birch (*Betula pendula*) with occasional Field Maple (*Acer campestre*) and Sweet Chestnut (*Castanea sativa*)

Shrub Layer – Sparse but Holly (*Ilex aquifolium*) and Elder (*Sambucus nigra*) dominant

Ground Layer – Bare earth dominant with areas of Bracken (*Pteridium aquilinum*) and Bramble (*Rubus fruticosus agg.*)

Features – The area between the Hemlock Stone and the summit of the wood is currently subject to heavy wear and soil erosion from use by mountain bikers. This is large areas of steep bare earth which can be slippery under foot and will not revegetate. Some good standing deadwood exists to the north of the compartment, which should be retained, as should the naturally regenerating yew.

Management Requirements – Signs should continue to be placed at strategic positions to advise walkers about the potential of mountain biking in this compartment. Felled timber should be strategically placed along desire-line footpaths bisecting steep slopes in the area between the Hemlock Stone and the summit of the woodland that are outside of the area where permissive use has been given for mountain biking. This will help keep pedestrians to designated routes.

There are some large Sycamores (*Acer pseudoplatanus*) in this compartment, which would cause significant gaps in the canopy if they were felled. It is therefore recommended that all sycamore saplings and seedlings are removed and seedlings weeded out on a regular basis to promote regeneration of native species. When enough regeneration of native species has occurred, the large sycamores should be removed to allow the native species to grow on, this however will probably not be possible for many decades.

Compartment 3

Canopy – Beech (*Fagus sylvatica*) and Sweet Chestnut (*Castanea sativa*) dominant

Shrub Layer – Self-set beech understorey

Ground Layer – Bare earth and leaf litter dominant ground layer

Features – Compartment 3 is situated on a north facing slope which is boundered to the north by Bramcote Crematorium. The compartment is particularly shaded because of the beech dominated canopy and this is reflected in the lack of shrub and ground layer vegetation. A good population of bluebell (Hyacinthoides non-scripta) is present here.

Management Requirements – Monitor beech and sweet chestnut regeneration and limit if necessary. Retain as much standing deadwood as is practicable when taking into consideration health and safety issues.

Compartment 4 – Horseshoe Gully

Note: Mountain biking is allowed in part of this area.

Canopy – Oak and silver birch dominant canopy with occasional Norway Maple *(Acer platanoides)*

Shrub Layer – good holly shrub layer with occasional ash, sycamore and sweet chestnut self-set saplings

Ground Layer – leaf litter dominant with occasional bracken, bramble and good moss communities in some areas

Features – Compartment 4 consists of a series of slopes and sandstone outcrops, which ultimately lead to low lying woodland which is permanently damp, hence the occasional but significant moss communities at ground level. Favourable amounts of lying deadwood exist at the

bottom of the valley.

Management Requirements – Signs should continue to be placed at strategic positions to advise walkers about the potential of mountain biking in this compartment.

Sycamore and sweet chestnut could be a problem in future on the slopes and in the valleys of this compartment. Any work on the steeper slopes will be difficult and will require the use of ropes to ensure personnel safety but, if possible, the regeneration of sycamore and sweet chestnut on the slopes and in the valley should be halted to allow ash, oak and silver birch to dominate.

Due to the ground and light conditions many of the trees in the valleys are tall and spindly and readily topple in high winds and heavy snow. This has produced an abundance of damp lying deadwood, which is a highly valuable habitat and should therefore be retained.

Compartment 5 – Quarry and Summit Area

Note: Mountain biking allowed in part of this area

Canopy – Birch / oak dominant canopy with frequent sycamore regeneration
Shrub Layer – Holly dominant
Ground Layer – bare earth and leaf litter dominant with good fern communities in the lower areas of the compartment.

Features – This compartment is dominated by a large sandstone quarry face to the east which leads to a steep sided valley culminating in damp / wet woodland. This compartment also contains the trig point and stone outcrop at the summit of the woodland.

Management Requirements – Signs should continue to be placed at strategic positions to advise walkers about the potential of mountain biking in this compartment. Ultimately all of the sycamore in the compartment needs to be removed. Care will need to be taken when removing sycamore from the steep sided valley and should be undertaken by contractors experienced in climbing and rope work.

The steepness of the slopes in this area, along with the potentially wet nature of the footpaths presents a risk of walkers falling or slipping down slopes. Attempts in the past to restrict access have been unsuccessful. Limiting access if achievable would however create areas of non-intervention in the valleys, favouring species less tolerant of disturbance. However, the regeneration of sycamore will have to be monitored and halted to prevent the spread into other areas.

Remove any graffiti from the trig point at the summit as an ongoing requirement.

Maintain open views to vistas by regular pruning and coppicing of trees as required.

Consider installing interpretation panel detailing views, distances and possibly some history.

Consider installing a metal bench, concreted into the ground to allow people reaching the summit to rest and enjoy the views.

Compartment 6

Canopy – Sycamore dominant canopy

Shrub Layer – sparse elder dominant shrub layer

Ground Layer – bare earth dominant and frequently excavated by off-road cyclists to make

mounds and hollows. Bracken and bramble on slopes not subject to cycling activities

Features – This compartment is situated at one of the lowest points of the woodland and contains an area used by mountain bikers, with a series of mounds and jumps.

The canopy in this compartment remains heavily dominated by sycamore despite some felling. All of the sycamore in this area should be removed to prevent spread into other areas of the woodland, which at present have little or no sycamore invasion.

Management Requirements – Fell the remainder of sycamore in this compartment to prevent spread into nearby compartments. The compartment will appear denuded for some time however. It is felt that the negative impact is outweighed by benefit to the remainder of the woodland in slowing down the spread of sycamore.

Any large sycamore in the bottom of the valley should be crown reduced and ring-barked during the dormant season, to provide a substantial resource of standing dead wood.

Regeneration of sycamore should be monitored annually and any seedlings removed.

Compartment 7

Canopy – Oak and sycamore dominant canopy
Shrub Layer – Very little shrub layer
Ground Layer – Bramble, bracken and leaf litter dominant ground layer

Features – This compartment is situated at the most north westerly point of the woodland. It has an open aspect with views over the surrounding countryside. To the NW of the compartment there is a footpath which leads, via farmland to Trowell Open Space.

Management Requirements – Remove any sycamore in the compartment to halt the spread into adjoining, sycamore free compartments and to allow native indigenous species to dominate.

NB – This area contains several overgrown hollows which are craters formed when the local Home Guard used this area for hand grenade and mortar practice during World War II. Care should be taken to retain the craters for their local history interest.

Compartment 8

Canopy – Oak dominant canopy

Shrub Layer – Holly dominant shrub layer with occasional yew

Ground Layer – grass dominant ground flora which is a reflection of its south facing aspect, with occasional ground ivy in shadier areas.

Features – south facing slope with some small areas of dry acid grassland.

Management Requirements – Many of the oaks in this area are of a similar age and have grown together to form a closed canopy. Some thinning should be undertaken to allow more light to the woodland floor allowing natural regeneration and ultimately a wider age range of trees. Where possible and away from paths, trees should be coppiced at 2.5m and ring-barked to provide standing dead wood.

3.5 Management Proposals

Ongoing engagement with the mountain bikers who use this site to contain and monitor their activities is a key element of the plan.

A sustained effort to remove all sycamore and Norway maple should be maintained to prevent encroachment into areas presently unaffected. This will affect mainly compartments 4, 5, 6 and 7, though the only sycamore dominant compartment is compartment 6. This felling should be undertaken on a commercial basis if possible, to allow the revenue collected from the timber to contribute to the management cost.

Any mature trees identified for removal could be crown reduced and ring-barked during the dormant season to provide additional standing deadwood habitat for use by invertebrates, fungi and birds. These trees should be located well away from footpaths.

Brash from felled trees could be chipped and used on site to 'make good' worn or desire line paths, or to create habitat piles.

Total eradication of sycamore at this site should be the ultimate goal as, at present, the sycamore has not had the opportunity to encroach throughout.

Remove all sycamore saplings and seedlings by hand. This process can be carried out by volunteer groups and will be ongoing throughout the life of the management plan. Regrowth could be treated with herbicide in accordance with appropriate control measures for woodland management purposes.

Funding for a well-constructed path through the site – compartments 1, 2, 7 and 8 with possible links from compartment 3 and up to the triangulation point should be investigated. These should have a sealed surface on inclines to prevent washout. The new Fields Farm development will have a significant impact on the site in terms of increased visitor numbers and further justify development of a high quality pedestrian link through.

Maintain checks on tree condition to ensure that there are no trees or limbs likely to pose health and safety threats. Any trees fallen in areas not likely to cause health and safety issues should be left in situ to enhance the deadwood habitats. Standing dead trees should also be left in situ unless they are close to public areas or footpaths.

Continue to look to close off areas adjacent to desire lines and consolidated footpaths that are adjacent to steep slopes.

Strategically place and secure felled trunks traversing slopes to prevent cyclists encroaching into areas not designated for mountain biking.

Maintain openings in the canopy around the summit to maintain viewing points from the summit of the wood.

Consider installing interpretation at the viewing points at the summit detailing what can be seen from each point.

Continue to remove graffiti from trig point at summit and check condition of existing waymarkers throughout the woodland

Consider installing a metal bench to encourage visitors to sit and enjoy the view after walking to the summit.

Given that the last breeding bird survey was undertaken in 2005, it is appropriate to undertake another survey during the period of this plan.

PART 4: MANAGEMENT DETAILS

4.1 Management Projects and Prescriptions

Reference Number	Project Title	Prescription
4.1.1	Fell sycamore and Norway maple	• All felling should take place outside of the bird breeding season (March to September) unless the work is for Health & Safety reasons. If felling needs to be undertaken during the period March to September, the tree subject to felling plus all other trees and shrubs likely to be affected by the felling should be checked for nests by a suitably qualified person prior to work commencing. • Selected large specimens situated away from footpaths should be ring-barked during the dormant season to provide standing deadwood habitat • All regrowth could be treated with herbicide in the summer following felling, in accordance with appropriate control measures for woodland management purposes • Felling should be undertaken on a commercial basis if possible, to allow income generated to contribute to the management budget. • If commercial felling is not possible, trunks felled should be logged into large logs and piled on site, away from slopes and footpaths, to form additional habitat. • Brash should be chipped and used on site to 'make good' paths • All timber not required for making log piles or forming barriers should be removed off site • Visitors should be excluded from felling areas using tape and warning signs. • For the duration of the work, erect signs informing visitors about work being carried out and reasons for it.
4.1.2	Remove sycamore saplings and seedlings	• Sapling and seedling removal, unless proposed for heavily shrubbed areas, can be carried out at any time of year. • Sycamore saplings should be removed by cutting as close to the ground as possible using loppers or bow saws. • The resultant small diameter timber should be removed from site or chipped, as it may be used to start fires. • All regrowth could be treated with herbicide in the summer following felling, in accordance with appropriate control measures for woodland management purposes • All sycamore seedlings should be removed by hand by pulling on an ongoing basis throughout the term of the management plan.

4.1.3	Seek funding for and construct surfaced footpath through site, including link to triangulation point and northern entrance from Coventry Lane running behind the Hemlockstone	• Sealed surface on inclines to prevent washout. • Path through site from entrance on Coventry Lane near pedestrian crossing to agricultural land to the north • Links from main path behind Hemlockstone to northern entrance on Coventry Lane and also up to triangulation point.
4.1.4	Maintain annual health & safety check on trees	• Trees close to footpaths and close to areas that visitors are encouraged to use should be checked annually, outside of the bird breeding season for signs of instability or dead limbs. • Trees identified for health & safety work should be scheduled into work programmes outside of the bird breeding season (March to September) • If felling is essential during the period March to September, the tree subject to felling, plus all other trees and shrubs likely to be affected by the felling, should be checked for nests by a suitably qualified person prior to work commencing. If active nests are found, these areas should be taped off and avoided until chicks have successfully fledged. If trees in the close vicinity of footpaths are naturally retrenching (dying back) they should be de-limbed rather than felled. • Felled branches should be retained on site and placed at the base of the trees if possible.
4.1.5	Use of felled trees to restrict access	• Strategically place felled tree trunks to restrict unauthorised use
4.1.6	Maintain viewing points from the summit	• Favourable vistas will be maintained by coppicing or pruning the tops of individual trees outside of the bird breeding season (March to September), to reveal views of the distant countryside/city.
4.1.7	Install interpretation at the summit	• Consider installing interpretation panel at summit to explain views, distances, history etc.
4.1.8	Remove graffiti from trig point and check condition of waymarkers	• Check and remove graffiti from trig point on a regular and ongoing basis. • Check condition and visibility of waymarkers and rectify any problems encountered
4.1.9	Install bench at summit	• Consider installing a metal bench at the summit to encourage visitors to stop and enjoy the view.
4.1.10	Mowing regime on acid grassland	• Mowing regime on banked area below Hemlockstone relaxed to once-annual in autumn.

4.1.11	Scrub and tree clearance either side of grassed area in front of Hemlockstone	• Tree saplings removed and stumps treated with herbicide in accordance with appropriate control measures for woodland management purposes • Scrub and bracken removed in late autumn.
4.1.12	Coppicing of trees alongside main section of path running in from Coventry Lane.	• Selective coppicing and thinning to maintain welcoming entrance.
4.1.13	Undertake bird survey	• Working with local ornithologists to carry out survey of breeding birds on the site.

4.2 Five Year Work Plan

Reference Number	**Prescription**	**Y e a r s**				
		1	**2**	**3**	**4**	**5**
		2020/21	**2021/22**	**2022/23**	**2023/24**	**2024/25**
4.1.1	Fell sycamore and Norway maple	1	1	1		
4.1.2	Remove sycamore saplings and seedlings	1	1	1	1	1
4.1.3	Seek funding and construct surfaced path			2	2	2
4.1.4	Check trees annually for health and safety hazards	1	1	1	1	1
4.1.5	Use of felled trees to restrict access		2	2		
4.1.6	Maintain viewing points from summit		2			2
4.1.7	Install interpretation at summit				3	
4.1.8	Remove graffiti from trig point and check waymarkers	2	2	2	2	2
4.1.9	Install bench at summit				3	
4.1.10	Change grassland mowing	2	2	2	2	2
4.1.11	Scrub management around grassland	1	1			

4.1.12	Coppice trees near entrance		2	2		
4.1.13	Undertake bird surveys		2			

Priority - 1 is high, 2 is medium, 3 is low

4.3 Annual Work Plan

Key
PCV – Practical Conservation Volunteers

Year 1 – 2020/21

Reference Number	Priority (1-3)	Compartment/Prescription Detail	Season (Sp/Su/ Au/Wi)	Who (contractor, Broxtowe BC, volunteer group)
4.1.1	1	• Remove all sycamore from compartments 6 and 7 on a commercial basis, if possible and treat stumps • Fell or ring-bark sycamore and Norway maple from compartments 4 and 5 • Spray off regrowth, if any, with herbicide	Au/Wi Au/Wi Sp/Su/ Au/Wi	Contractor or PCV or Broxtowe BC
4.1.2	1	• Ongoing removal of sycamore saplings and seedlings throughout wood	Au/Wi	PCV/Volunteer group
4.1.4	1	• Maintain annual health and safety checks on tree condition in region of footpaths, summit and Hemlock Stone	SP/Su/ Au/Wi	Broxtowe BC
4.1.8	2	• Remove graffiti from trig point at summit on an ongoing basis and check condition and visibility of waymarkers	Sp/Su/ Au/Wi	Broxtowe BC
4.1.10	2	Change grassland mowing regime	Sp/Su	Broxtowe BC
4.1.11	1	Scrub management around grassland	Au/Wi	Broxtowe BC

Year 2 – 2021/22

Reference Number	Priority (1-3)	Compartment/Prescription Detail	Season (Sp/Su/ Au/Wi)	Who (contractor, Broxtowe BC, volunteer group)
4.1.1	1	• Fell any remaining trees in region of quarry (comp 5) to expose quarry	Au/Wi	PCV
4.1.2	1	• Ongoing removal of sycamore saplings and seedlings in all compartments	Au/Wi	PCV/Volunteer group
4.1.4	1	• Maintain annual health and safety checks on tree condition in region of footpaths, summit and Hemlock Stone	SP/Su/ Au/Wi	Broxtowe BC
4.1.5	2	• Use of felled trees to restrict access	Au/Wi	Contractor
4.1.6	2	• Maintain viewing points at summit by pruning tree canopy	Au/Wi	Contractor/Broxtowe BC
4.1.8	2	• Remove graffiti from trig point at summit on an ongoing basis and check condition and visibility of waymarkers	Sp/Su/ Au/Wi	Broxtowe BC
4.1.10	2	• Change grassland mowing regime	Sp/Su	Broxtowe BC
4.1.11	1	• Scrub management around grassland	Au/Wi	Broxtowe BC
4.1.12	2	• Coppice trees near entrance	Au/Wi	PCV
4.1.13	2	• Undertake bird survey	Sp/Su	Local ornithological group

Year 3 – 2022/23

Reference Number	Priority (1-3)	Compartment/Prescription Detail	Season (Sp/Su/ Au/Wi)	Who (contractor, Broxtowe BC, volunteer group)
4.1.1	1	• Fell any remaining sycamore or Norway maple throughout woodland	Au/Wi	PCV
4.1.2	1	• Ongoing removal of sycamore saplings and seedlings in all compartments	Au/Wi	PCV/Volunteer group
4.1.3	2	• Seek funding and construct path	Au/Wi	Broxtowe Borough Council /contractor
4.1.4	1	• Maintain annual health and safety checks on tree condition in region of footpaths, summit and Hemlock Stone	SP/Su/ Au/Wi	Broxtowe BC
4.1.5	2	• Use of felled trees to restrict access	Au/Wi	Contractor
4.1.8	2	• Remove graffiti from trig point at summit on an ongoing basis and check condition and visibility of waymarkers	Sp/Su/ Au/Wi	Broxtowe BC
4.1.10	2	• Change grassland mowing regime	Sp/Su	Broxtowe BC
4.1.12	2	• Coppice trees near entrance	Au/Wi	Broxtowe BC

Year 4 – 2023/24

Reference Number	Priority (1-3)	Compartment/Prescription Detail	Season (Sp/Su/ Au/Wi)	Who (contractor, Broxtowe BC, volunteer group)
4.1.2	1	• Ongoing removal of sycamore saplings and seedlings in all compartments	Au/Wi	PCV/Volunteer group
4.1.3	2	• Seek funding and construct path	Au/Wi	Broxtowe BC/Contractor
4.1.4	1	• Maintain annual health and safety checks on tree condition in region of footpaths, summit and Hemlock Stone	Sp/Su/ Au/Wi	Broxtowe BC
4.1.7	3	• Install interpretation at summit	Au/Wi	Contractor
4.1.8	2	• Remove graffiti from trig point at summit on an ongoing basis and check condition and visibility of waymarkers	Sp/Su/ Au/Wi	Broxtowe BC
4.1.9	3	• Install a metal bench at summit	Sp/Su/ Au/Wi	Broxtowe BC
4.1.10	2	• Change grassland mowing regime	Sp/Su	Broxtowe BC

Year 5 – 2024/25

Reference Number	Priority (1-3)	Compartment/Prescription Detail	Season (Sp/Su/ Au/Wi)	Who (contractor, Broxtowe BC, volunteer group)
4.1.2	1	• Ongoing removal of sycamore saplings and seedlings in all	Au/Wi	PCV/Volunteer group
4.1.3	2	• Seek funding and construct path	Au/Wi	Broxtowe BC/Contractor
4.1.4	1	• Maintain annual health and safety checks on tree condition in region of footpaths, summit and Hemlock Stone	Sp/Su/ Au/Wi	Broxtowe BC
4.1.6	2	• Maintain viewing points at summit by pruning tree canopy if required.	Au/Wi	Contractor/Broxtowe BC
4.1.8	2	• Remove graffiti from trig point at summit on an ongoing basis and check condition and visibility of waymarkers	Sp/Su/ Au/Wi	Broxtowe BC
4.1.10	2	• Change grassland mowing regime	Sp/Su	Broxtowe BC

This plan may need to be altered in response to site monitoring and should be reviewed after a 3 year period

4.4 References

Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stroud DA and Gregory RD (2015) **Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man**. British Birds 108, 708–746. Available online at britishbirds. co.uk/wp-content/uploads/2014/07/BoCC4.pdf

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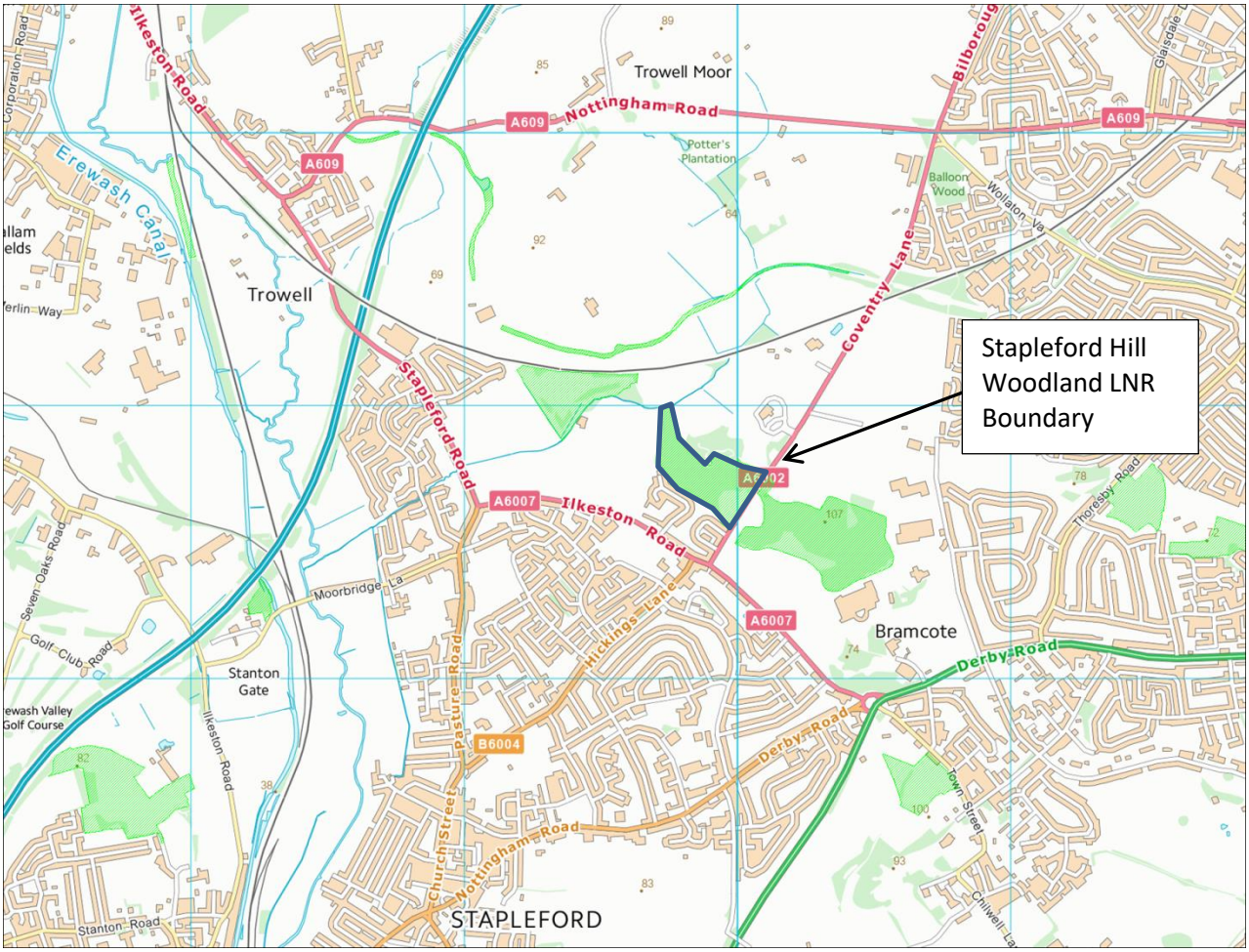
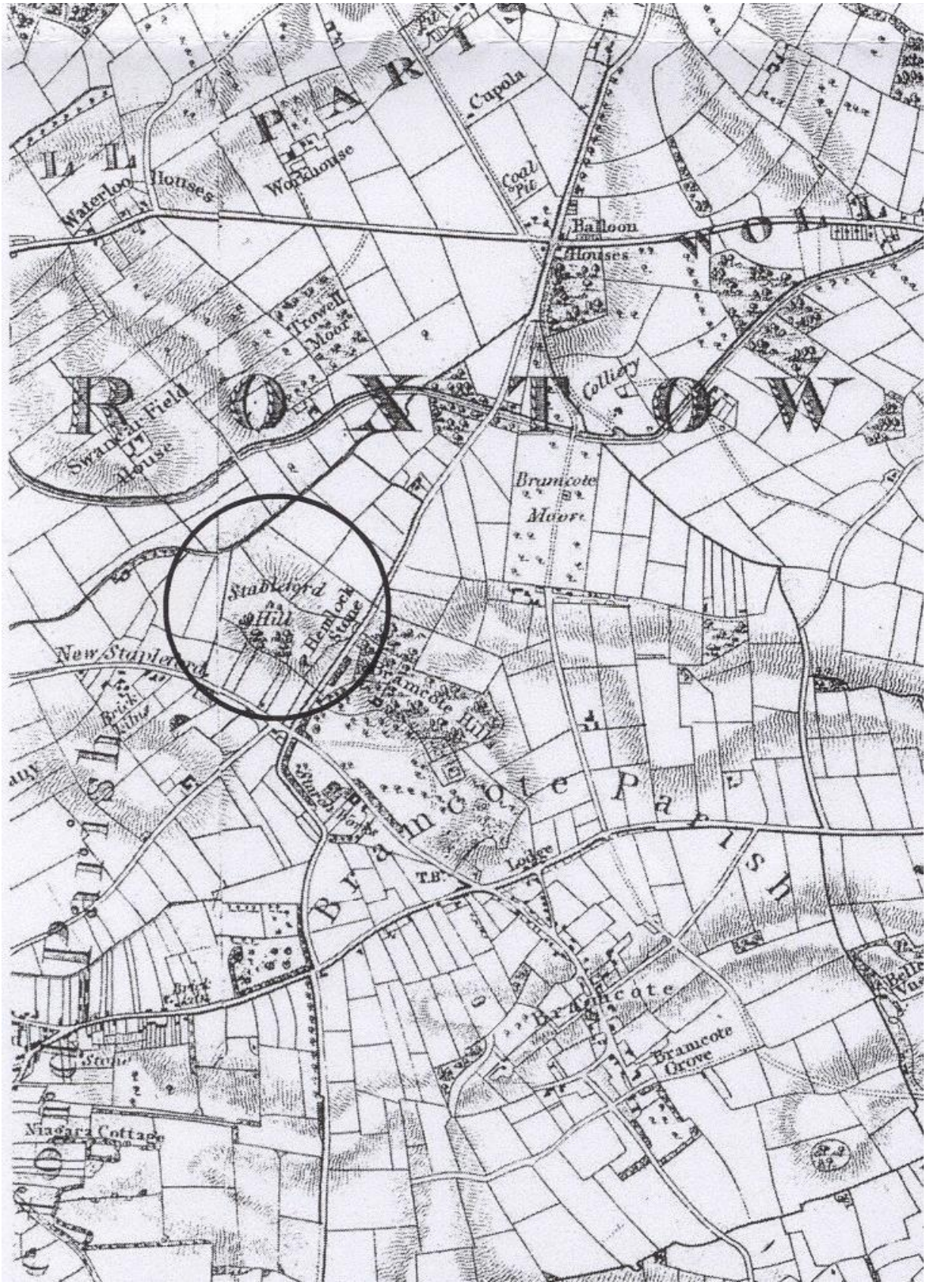
Sanderson, G. (1935). **Sanderson's Map, Twenty Miles round Mansfield.** Technical Print Services Ltd, Notts.

PART 5: APPENDICES

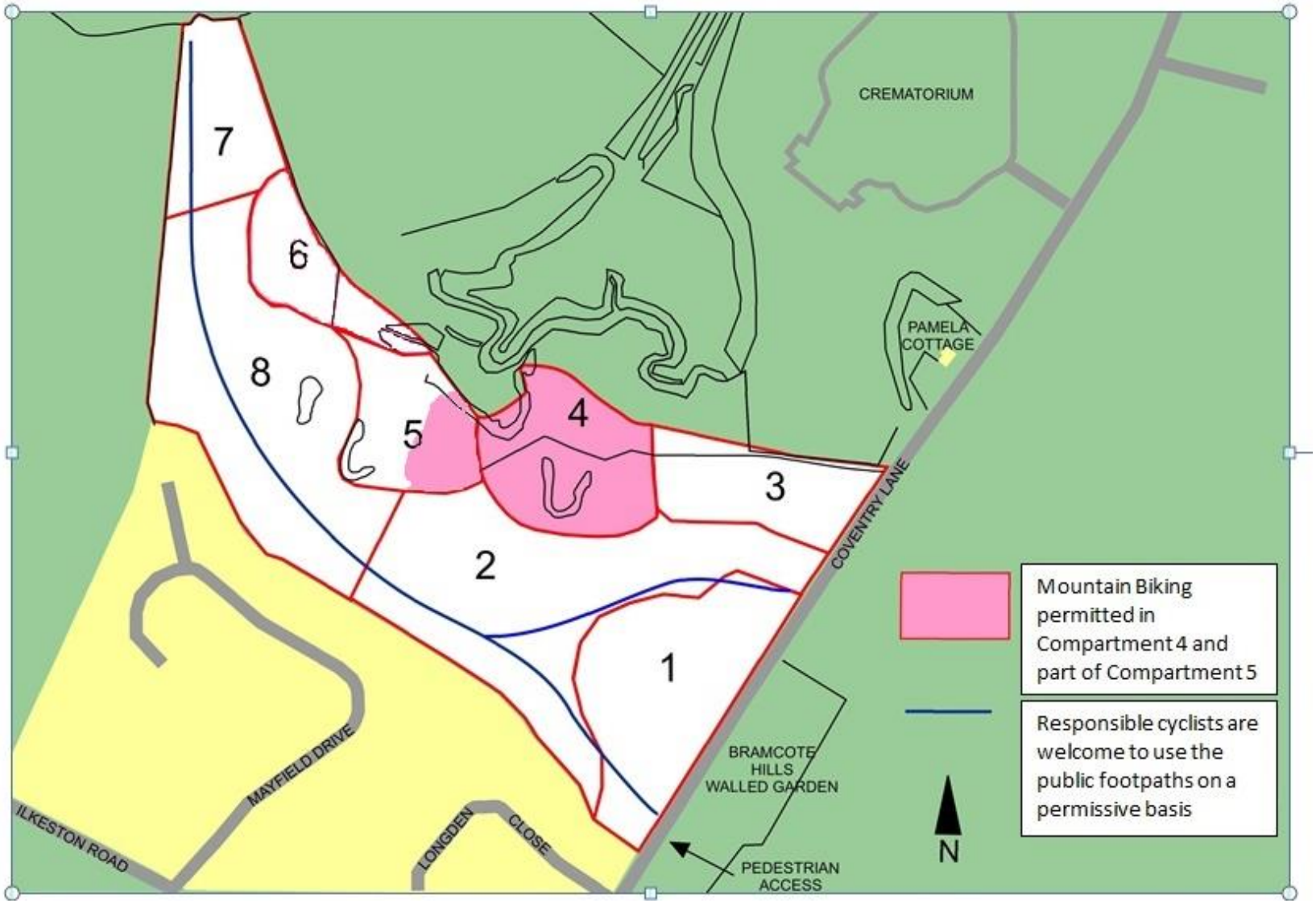
Appendix 1 Location Plan



Appendix 2 Sanderson's Map (1835)



Appendix 3 Stapleford Hill Woodland compartment map



Appendix 4 Species records

The following species have been recorded within a 1km radius of Stapleford Hill Woodland. All the records are dated post-2010. Data has been kindly provided by Nottinghamshire Biological and Geological Reocrds Centre in March 2020.

Taxon	**Species**
Bat*	Brown long-eared
Bat	Bat sp.
Bat	Brown Long-eared
Bat	Common Pipistrelle
Bat	*Myotis* sp.
Bat	*Nyctalus* sp.
Bat	Soprano Pipistrelle
Bat*	Brown long-eared
Bat*	Common Pipistrelle
Bat*	Noctule
Bat*	Soprano Pipistrelle
Butterfly	White-letter Hairstreak
Herpetofauna	Common Frog
Herpetofauna	Common Toad
Herpetofauna	Grass Snake
Herpetofauna	Great Crested Newt
Herpetofauna	Smooth Newt
Invasive Species	*Crassula helmsii*
Invasive Species	*Impatiens glandulifera*
Mammal	Bank Vole
Mammal	Hedgehog
Mammal	Stoat
Nottinghamshire Rare Plant Register Species	*Chenopodium murale*

Appendix 5 Stapleford Hill Woodland Botanical Species List

Data kindly provided by the Nottinghamshire Biological and Geological Records Centre (survey dated 3/5/2017)

Ferns

Asplenium scolopendrium	Hart's-tongue
Dryopteris affinis agg.	Scaly Male-fern
Dryopteris borreri	a buckler-fern
Dryopteris dilatata	Broad Buckler-fern
Dryopteris filix-mas	Common Male Fern
Polypodium vulgare sens. lat.	Polypody
Pteridium aquilinum	Bracken

Grasses and rushes

Agrostis capillaris	Common Bent
Arrhenatherum elatius	False Oat-grass
Deschampsia flexuosa	Wavy Hair-grass
Festuca ovina	Sheep's-fescue
Holcus lanatus	Yorkshire-fog
Holcus mollis	Creeping Soft-grass
Juncus effusus	Soft-rush
Lolium perenne	Perennial Rye-grass
Milium effusum	Wood Millet
Poa annua	Annual Meadow-grass
Poa trivialis	Rough Meadow-grass
Schedonorus giganteus	Giant Fescue

Herbaceous plants

Anthriscus sylvestris	Cow Parsley
Arctium minus	Lesser Burdock
Circaea lutetiana	Enchanter's-nightshade
Cirsium vulgare	Spear Thistle
Epilobium hirsutum	Great Willowherb
Epilobium montanum	Broad-leaved Willowherb
Ficaria verna	Lesser Celandine
Galium aparine	Cleavers
Geranium robertianum	Herb-robert
Geum urbanum	Wood Avens
Heracleum sphondylium	Hogweed
Hieracium agg.	Hawkweed
Hyacinthoides hispanica	Spanish Bluebell
Hyacinthoides non-scripta	Bluebell
Impatiens glandulifera	Indian Balsam
Medicago lupulina	Black Medick
Mercurialis perennis	Dog's Mercury
Moehringia trinervia	Three-nerved Sandwort
Plantago major	Greater Plantain
Ranunculus repens	Creeping Buttercup
Rumex acetosella	Sheep's Sorrel
Rumex obtusifolius	Broad-leaved Dock
Rumex sanguineus	Wood Dock
Senecio jacobaea	Common Ragwort
Silene dioica	Red Campion
Taraxacum agg.	a dandelion
Urtica dioica	Common Nettle
Veronica chamaedrys	Germander Speedwell
Veronica hederifolia	Ivy-leaved Speedwell

Trees and shrubs

Acer campestre	Field Maple
Acer platanoides	Norway Maple
Acer pseudoplatanus	Sycamore
Alnus glutinosa	Alder
Alnus incana	Grey Alder
Betula pendula	Silver Birch
Betula pubescens	Downy Birch
Castanea sativa	Sweet Chestnut
Cotoneaster simonsii	Himalayan Cotoneaster
Crataegus monogyna	Hawthorn
Fagus sylvatica	Beech
Fraxinus excelsior	Ash
Hedera helix	Common Ivy
Ilex aquifolium	Holly
Ilex x altaclerensis	I. aquifolium x perado
Lonicera periclymenum	Honeysuckle
Prunus avium	Wild Cherry
Quercus robur	Pedunculate Oak
Rhododendron ponticum	Rhododendron
Ribes rubrum	Red Currant
Rosa canina	Dog Rose
Rubus fruticosus agg.	Bramble
Rubus idaeus	Raspberry
Salix caprea	Goat Willow
Salix fragilis	Crack-willow
Sambucus nigra	Elder
Sorbus aucuparia	Rowan
Taxus baccata	Yew
Ulex europaeus	Gorse
Vinca minor	Lesser Periwinkle