



White Hill Woods

Management Plan 2014-2019

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THE WOODLAND TRUST

INTRODUCTION

The Trust's corporate aims and management approach guide the management of all the Trust's properties, and are described on Page 4. These determine basic management policies and methods, which apply to all sites unless specifically stated otherwise. Such policies include free public access; keeping local people informed of major proposed work; the retention of old trees and dead wood; and a desire for management to be as unobtrusive as possible. The Trust also has available Policy Statements covering a variety of woodland management issues.

The Trust's management plans are based on the identification of Key Features for the site and setting objectives for their management. A monitoring programme (not included in this plan) ensures that these objectives are met and any necessary management works are carried out.

Any legally confidential or sensitive species information about this site is not included in this version of the plan.

PLAN REVIEW AND UPDATING

The information presented in this Management plan is held in a database which is continuously being amended and updated on our website. Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations. Please either consult The Woodland Trust website www.woodlandtrust.org.uk or contact the Woodland Trust (wopsmail@woodlandtrust.org.uk) to confirm details of the current management programme.

There is a formal review of this plan every 5 years and a summary of monitoring results can be obtained on request.

WOODLAND MANAGEMENT APPROACH

The management of our woods is based on our charitable purposes, and is therefore focused on improving woodland biodiversity and increasing peoples' understanding and enjoyment of woodland. Our strategic aims are to:

- Protect native woods, trees and their wildlife for the future
- Work with others to create more native woodlands and places rich in trees
- Inspire everyone to enjoy and value woods and trees

All our sites have a management plan which is freely accessible via our website www.woodlandtrust.org.uk. Our woods are managed to the UK Woodland Assurance Standard (UKWAS) and are certified with the Forest Stewardship Council® (FSC®) under licence FSC-C009406 and through independent audit.

In addition to the guidelines below we have specific guidance and policies on issues of woodland management which we review and update from time to time.

We recognise that all woods are different and that the management of our sites should also reflect their local landscape and where appropriate support local projects and initiatives. Guidelines like these provide a necessary overarching framework to guide the management of our sites but such management also requires decisions based on local circumstances and our Site Manager's intimate knowledge of each site.

The following guidelines help to direct our woodland management:

1. Our woods are managed to maintain their intrinsic key features of value and to reflect those of the surrounding landscape. We intervene when there is evidence that it is necessary to maintain or improve biodiversity and to further the development of more resilient woods and landscapes.
2. We establish new native woodland using both natural regeneration and tree planting, but largely the latter, particularly when there are opportunities for involving people.
3. We provide free public access to woods for quiet, informal recreation and our woods are managed to make them accessible, welcoming and safe.
4. The long term vision for our non-native plantations on ancient woodland sites is to restore them to predominantly native species composition and semi-natural structure, a vision that equally applies to our secondary woods.
5. Existing semi-natural open-ground and freshwater habitats are restored and maintained wherever their management can be sustained and new open ground habitats created where appropriate.
6. The heritage and cultural value of sites is taken into account in our management and, in particular, our ancient trees are retained for as long as possible.
7. Woods can offer the potential to generate income both from the sustainable harvesting of wood products and the delivery of other services. We will therefore consider the potential to generate income from our estate to help support our aims.
8. We work with neighbours, local people, organisations and other stakeholders in developing the management of our woods. We recognise the benefits of local community woodland ownership and management. Where appropriate we allow our woods to be used to support local woodland, conservation, education and access initiatives.
9. We use and offer the estate where appropriate, for the purpose of demonstration, evidence gathering and research associated with the conservation, recreational and sustainable management of woodlands. In particular we will develop and maintain a network of long-term monitoring sites across the estate.
10. Any activities we undertake will conform to sustainable forest management principles, be appropriate for the site and will be balanced with our primary objectives of enhancing the biodiversity and recreational value of our woods and the wider landscapes.

SUMMARY

This public management plan briefly describes the site, specifically mentions information on public access, sets out the long term policy and lists the Key Features which drive management actions. The Key Features are specific to this site - their significance is outlined together with their long (50 year+) and short (5 year) term objectives. The short term objectives are complemented by a detailed Work Programme for the period of this management plan. Detailed compartment descriptions are listed in the appendices which include any major management constraints and designations. A short glossary of technical terms is at the end. The Key Features and general woodland condition of this site are subject to a formal monitoring programme which is maintained in a central database. A summary of monitoring results is available on request.

1.0 SITE DETAILS

Site name:	White Hill Woods
Location:	Easington Lane
Grid reference:	NZ367450, OS 1:50,000 Sheet No. 88
Area:	81.83 hectares (202.21 acres)
Designations:	Area of Landscape Value, Community Forest, Site of Special Scientific Interest

2.0 SITE DESCRIPTION

2.1 Summary Description

In summer, a vibrant wildflower meadow buzzing with bees and visited by many colourful butterflies provides a warm welcome at the entrance of this young native woodland. Mostly planted in 2008, the wood forms an extension to Elemore Woods, also owned by the Trust, and together they make a great place for a walk. If you're feeling adventurous, you could even try the orienteering course that ranges across the two sites.

2.2 Extended Description

White Hill Woods is situated on the magnesian limestone plateau to the east of Durham City and immediately south of Easington Lane (NZ 368 451) and covers an area of 82.02ha. The bulk of the site lies in County Durham but around 17.5ha at the northern end of the woods (sub-cpt 40a, 40e and the northern half of sub-cpt 40d) falls into Tyne & Wear. Prior to planting, most of the site consisted of arable farmland, except for Hetton Grove (cpt 38) that was planted with trees in 2001 and Cherry Garth (cpt 39) which forms a small ribbon of existing broadleaved woodland along the southwest edge of the site. Most of the land has a southeast-facing aspect, sloping gently down to Coldwell Burn that runs along the southern boundary. Two overhead power lines cross the site: a national grid line passes north-south through sub-cpt 40b and a low voltage power line runs east-west over sub-cpts 40b and 40c. A high pressure gas main also runs north-south through sub-cpt 40b to the west of the national grid services.

The edge of Easington Lane forms the woods' northern boundary and the B1280 encloses its eastern boundary. To the south lies Pig Hill Site of Special Scientific Interest (SSSI) consisting of rare CG8 grassland; unit 2 of which is an old quarry forming part of Cherry Garth. Arable farmland lies to the west and amenity grassland to the northwest. At its southwest corner, Cherry Garth and Hetton Grove link the new woods with the Trust's existing woodland complex known as Elemore Woods.

The bulk of the site will consist of new native broadleaved woodland among which ash then oak will be numerically the most dominant species. Some less common species like small leaved lime and spindle are also included to reflect the unique nature of the magnesian limestone that can accommodate species more usually associated with southern England. Sub-cpt 40f has been deep inversion ploughed and sown with a mix of wildflower seeds to create a swath of colourful wildflower meadows along the northern edge of the woods. Not only do these help boost biodiversity in the new woods but also create an aesthetically pleasing route onto site and create a buffer between the houses along South View and the trees. At the southern edge of the woods, sub-cpt 40g was also deep ploughed and sown with wildflower seeds but the objective here is to create species rich grassland to buffer, protect and ultimately extend the SSSI grassland remnant in Cherry Garth.

White Hill Woods, along with Elemore Woods, will create 152.1ha (376 acres) of publicly accessible woodland stretching continuously for around 4 km (2.5 miles) between Easington Lane in Tyne and Wear and Littleton in Co. Durham and will provide significant informal recreational opportunities. The new woods will enjoy an extensive network of interlinking paths, rides and open spaces, some of which will also provide a permissive route for horse riders. The land for White Hill Woods was purchased in January 2008 with financial assistance from County Durham Environmental Trust (CDENT), Heritage Lottery Fund (HLF), SITA Trust, Biffaward, local people and others. Woodland establishment is also being funded with the help of these organisations and the Forestry Commission.

3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

By bus: There are bus stops on the A182 in both Easington Lane and South Hetton, a few minutes' walk from the woods.

By train: The nearest train station is Seaham (7km/4.5miles). Take bus 60 to New Seaham Mill Inn, then bus 61 to Easington Lane.

For up-to-date information on public transport, visit traveline.org.uk (0871 200 22 33).

By car: There is no car park, but parking is available in Easington Lane or South Hetton. Parking on South View is not recommended as this road is very narrow.

(February 2017)

3.2 Access / Walks

There are four pedestrian kissing gates along South View road in Easington Lane and another at the wood's main entrance next to the junction of the B1280 and the A182. A flight of steps down from the B1280 provides further access from the south east and another kissing gate entrance to the north west provides access off the track running southwards from Elemore Vale.

The wood has an extensive network of interlinking paths, rides and open spaces. There is a public footpath from Elemore Woods. All other routes on site are permissive, including one for horse riders.

An orienteering course runs through White Hills Woods and Elemore Woods. You can approach it from Easington Lane, Elemore Vale or Littleton. Sturdy footwear is needed as some of the control sites are on steep slopes.

4.0 LONG TERM POLICY

White Hill Woods will be managed in order to ensure healthy native high forest broadleaved woodland is successfully established and maintained across the site so that, over the long-term (50 to 100 years plus), the woods becomes self-perpetuating through natural regeneration, ensuring its existence in perpetuity. Informal public access will be encouraged by mowing annually the permissive paths, rides and other open spaces to ensure these remain unobstructed for walkers. By carrying out these activities, contributions will be made towards achieving the Trust's corporate objectives of increasing the area of new native woodland and also increasing enjoyment and understanding of woodland.

The wildflower meadow making up sub-cpt 40f will be maintained in perpetuity as open ground to keep a buffer zone between the woodland and the houses along South View in Easington Lane. Although the intention is to maintain a species rich sward of native wildflowers across sub-cpt 41f, no specific vegetation type is being aimed for and besides annual mowing and the control of noxious weeds (if required), the meadow will be allowed to develop without active intervention. Sub-cpt 41g will also be maintained in perpetuity as open ground to buffer the rare CG8 magnesian limestone grassland SSSI in the old quarry in Cherry Garth (sub-cpt 39b). The sward across this area will be actively managed to create a species rich MG5 grassland community, one of the naturally occurring grassland types found on the magnesian limestone.

5.0 KEY FEATURES

The Key Features of the site are identified and described below. They encapsulate what is important about the site. The short and long-term objectives are stated and any management necessary to maintain and improve the Key Feature.

5.1 Informal Public Access

Description

Public access to White Hill Woods will be provided in a number of different ways. The new woods will incorporate into their design an extensive network of permissive paths, rides and open spaces to facilitate unobstructed access for walkers. Horse riders will also be catered for by the creation of a horse riding route that will begin and end at the main entrance off the B1280 and will run alongside the main access track and utilise the open space left under the overhead power lines to create a safe off-road circular route for local riders. A permanent orienteering course will also be created that will cover both White Hill Woods and the Trust's existing Elemore Woods to provide a structured activity for visitors and local schools to enjoy.

Significance

Providing public access to woods is a cornerstone of the Trust's management approach to its properties and is encapsulated in its corporate objective of increasing enjoyment and understanding of woodland. With long-term illness being around three times the national average in Easington District, there is a clear need for green exercise opportunities such as walking. White Hill Woods, along with Elemore Woods will provide 152.1ha (376 acres) of publicly accessible land and therefore represents a significant new recreational resource right on the doorstep of Easington Lane and South Hetton. The two woods also create an important green access corridor stretching for around 4km (2.5 miles) between Easington Lane in Tyne & Wear and Littleton in County Durham. With regards the new horse riding route, the Easington Equestrian Study carried out by Durham County Council and published in February 2009, highlights the critical shortage of off-road riding opportunities for horse riders in the district, with 22% of respondents reporting having had an accident involving a motor vehicle.

Opportunities & Constraints

The location of a large horse riding stables opposite the main entrance to the woods offers the opportunity for a number of local riders to benefit from the new route and will also provide safe off-road riding for young disabled riders who use these stables, thus reaching a wider audience of access users. Because the riders from this local stable, by virtue of its location, are going to benefit significantly from the new horse riding route, we will work with them to encourage a culture of self-policing to ensure riders stick to the designated route.

With the new woods coming right up to the edge of Easington Lane and South Hetton, access to both the new and existing woods is significantly improved for residents of both these communities. However, a lack of on-site car parking does mean that access for those travelling to the woods is more restricted, particularly as little suitable local parking is available. Vandalism and theft is also a threat to realising the full potential of the horse riding route and orienteering course, as the marker posts required to create these are very susceptible to damage or theft.

Factors Causing Change

Vandalism of entrances and motorbike and ATV trespass along rides.

Long term Objective (50 years+)

To maintain free and unobstructed access to all parts of the wood for visitors in the future by maintaining entrances in a safe and usable condition and by keeping all permissive rides and other open areas free of obstruction for walkers and horse riders.

Short term management Objectives for the plan period (5 years)

All paths, rides and open spaces created when the woods were planted in 2009 and 2010, including the horse riding route and orienteering course, will be kept free of obstructions by mowing three times a year. All entrances will also be inspected three times a year to ensure these are maintained in a safe and serviceable condition for public use. Public safety will be protected by carrying out periodic tree safety surveys and by maintaining a site risk assessment of all hazards on site and carrying out any necessary work identified in order to minimise the dangers these present to visitors to the wood.

5.2 New Native Woodland

Description

Between January 2009 and December 2010, 107,200 native trees and shrubs will be planted across 64.75 ha for former arable farmland to create a group of new native woods next to Easington Lane in Tyne & Wear and South Hetton in County Durham.

Significance

Native broadleaved woodland is a vital habitat for many plants and animals found in the UK. Over the centuries, our countryside has lost most of its natural tree cover, with a consequent loss of biodiversity. By planting new native woodland we are helping to reverse this depletion and fragmentation of the countryside. Planting on former farmland provides a net gain in biodiversity that will increase as the woods develops. Consequently, increasing the area of new native woodland is one of the Trust's four key corporate objectives that the creation of White Hill Woods helps to fulfil. At a local level, the magnesian limestone plateau has few native broadleaved woods and so the creation of White Hill Woods will provide a significant contribution to the plateau's mosaic of habitats.

Opportunities & Constraints

The creation of White Hill Woods provides the opportunity to extend and buffer the existing woodland complex known as Elemore Woods and to create a continuous corridor of woodland stretching for 4km (2.5miles) between Easington Lane in Tyne & Wear and Littletown in County Durham.

Factors Causing Change

None identified at this time

Long term Objective (50 years+)

To ensure that native high forest broadleaved woodland is successfully established on this site and to ensure this remains healthy and vigorous so that, over the long-term, the woods becomes self-perpetuating through natural regeneration, ensuring their existence in perpetuity.

Short term management Objectives for the plan period (5 years)

By December 2010, 107,200 native broadleaved trees and shrubs will have been planted across 64.75 ha of former arable farmland and by December 2013, young woodland will have become established in all four sub-cpts and no further weeding or beat-up will be required. Between 2014 and 2019, the woodland will be managed on a minimum intervention basis, allowing the trees to grow and become fully established. Active intervention will only occur if ash die-back infects the ash trees on site and we are required by the statutory authority to remove/replace infected trees.

5.3 Semi Natural Open Ground Habitat

Description

Unit 2 of the much larger Site of Special Scientific Interest (SSSI) known as Pig Hill is located in Cherry Garth (sub-cpt 39b). This consists of an old disused limestone quarry covering approximately 0.53ha (designated area of unit = 0.67ha) and designated for its CG8 magnesian limestone grassland community containing blue moor-grass and small scabious (*Sesleria caerulea* and *Scabiosa columbaria*), along with other species, such as common rock rose (*Helianthemum nummularium*), salad burnet (*Sanguisorba minor*) and lady's bedstraw (*Galium verum*).

Significance

Blue moor-grass - small scabious grassland (NVC type: CG8) is unique to County Durham and Tyne & Wear within the British Isles. Natural England surveys suggest that less than 65 ha of this grassland now remain in the North East, mostly on small scattered sites consisting of unimproved pasture and secondary grasslands arisen in abandoned limestone quarries. Pig Hill (of which the quarry site in Cherry Garth is a part) is one of the most extensive surviving examples of primary magnesian limestone in Britain, therefore its protection and preservation is of national importance. The steep hill slopes support an extensive area of primary magnesian limestone grassland in which blue moor-grass, *Sesleria albicans*, is abundant. The rich assemblage of grassland species includes a number of rare and local species, bird's-eye primrose, *Primula farinosa*, adder's-tongue fern, *Ophioglossum vulgatum*, lesser club-moss, *Selaginella selaginoides*, and grass of Parnassus, *Parnassia palustris*, as well as an inland colony of sea plantain, *Plantago maritima*. Notable among the fauna is the Durham Argus butterfly, *Aricia artaxerxes salmaccis*, a form which is only found in the magnesian limestone areas of Durham.

Opportunities & Constraints

The Woodland Trust's ownership of Cherry Garth has provided the opportunity to prevent the CG8 grassland in unit 2 being lost. Prior to Trust ownership, the site was in unfavourable declining condition but restoration works carried out in early 2009 has now moved this unit into unfavourable recovering condition. Because the quarry is located in woodland, controlling scrub encroachment and woodland regeneration is always going to be a constraint that will require regular active intervention if this area is to maintain as grassland. Traditionally the management of calcareous grassland is achieved through grazing however in this case this is not an option due to the limited size of the area.

Factors Causing Change

Invasive sycamore, Natural succession to broadleaved woodland, Spread of bramble. Illegal motor vehicle access.

Long term Objective (50 years+)

To preserve sub-cpt 39b as CG8 grassland and expand this to its maximum designated area of 0.67ha by further scrub clearance and tree felling in the future.
To maintain the condition of the SSSI as favorable.

Short term management Objectives for the plan period (5 years)

The open ground in the old quarry containing the CG8 grassland will be strimmed each year in late August/early September once the flowers have had time to seed and the arisings removed from site. A floral survey of the field layer was carried out in spring 2010 to establish a baseline for future monitoring. During the summer 2014, the field layer will be inspected to check that no adverse impacts are occurring that could damage the floral diversity of this CG8 grassland community. Subsequent formal inspections will be carried out every 3 years.

During this plan period the short term objective is to:

- maintain the condition of the SSSI as favorable.

This will include the following operational works:

- Strim the open ground on the SSSI site and rake up and remove the arisings. Work to be undertaken in early to mid-September.

5.4 Open Ground Habitat

Description

Sub-cpt 40f consists of a 4.86 ha wildflower meadow sown in 2009 along the northern boundary of the woods. The land was first subject to deep inversion ploughing in autumn 2008 to bring the nutrient poor sub-soils to the surface and bury the top soil and its weed bank. The plough soil was left to weather down over winter then harrowed and sown in March 2009 with 30kg/ha of annual and 10kg/ha of perennial wildflower species.

Sub-cpt 40g was established to create 3.0 ha of species rich MG5-type grassland to buffer and protect the SSSI grassland site within the old quarry in Cherry Garth. The quarry contains CG8 grassland and forms unit 2 of the much larger Pig Hill SSSI that is situated on the southern edge of the new woods.

Significance

Species rich wildflower meadows have become increasingly rare with the rise of modern farming and the increased use of herbicides and pesticides, so creating this meadow will help address this decline. Although the methods used here tend to create an artificially rich sward in the first few years, this will evolve over time as grasses and other herbs seed into the meadow and it becomes more natural. The sowing of pure wildflower seed does provide a much welcomed rapid increase in biodiversity on young woodland creation sites like White Hill Woods that otherwise tend to be rather dull in their early years of development. Along the northern boundary, the meadow also fulfils the important function of creating a buffer zone between the houses on South View and the planted trees, avoiding future problems of shading and over hanging trees interfering with traffic movement along South View Road, as well as maintaining the open views currently enjoyed by these houses for much longer.

Opportunities & Constraints

Germination has been slow and patchy, possibly due to a relatively dry spring. Even though the meadow has been deep ploughed, rapeseed is still coming through and the arable weed Northern Knotgrass is also wide spread.

The whole sub-cpt 40g was subject to a detailed geophysical survey that revealed some irregular and linear features. Though questionable, in case these features are archaeological in nature, four areas were marked on the ground and only ploughed to a normal depth of 25-30cm

Factors Causing Change

Invasion of grass species, Colonisation of volunteer cereals & arable weeds

Long term Objective (50 years+)

To create a colourful and species-rich habitat along the northern boundary of the woods that will both create an interesting point of access to the woods for visitors and also maintain some open ground between the trees and the road and houses on the southern edge of Easington Lane.

Short term management Objectives for the plan period (5 years)

To establish and maintain a species rich wildflower meadow by flailing the sward each year in September or October to remove the dead heads of the flowers and prepare the sward for the following year's spring growth. During summer 2014, the meadow will be inspected to check that no adverse impacts are occurring that could damage its floral diversity but accepting changes in species composition over time due to succession and natural colonisation. Subsequent formal inspections will be carried out every 5 years.

5.5 Secondary Woodland

Description

Sub-compartments 39a and 39c are comprised of mature secondary woodland and located on steep SW facing banks. They are located either side of unit 2 of Pig Hill SSSI.

Significance

Native broadleaved woodland is a vital habitat for many plants and animals found in the UK.

Opportunities & Constraints

Opportunities - Management of light levels to promote natural regeneration.

Constraints - Difficult to access with a vehicle should timber extraction be required.

Factors Causing Change

Illegal motorbike access.

Long term Objective (50 years+)

To maintain a vigorous and healthy forest of native broadleaves.

Promote natural regeneration to diversify age class structure.

Promote a vigorous shrub and field layer.

Short term management Objectives for the plan period (5 years)

During this plan period the short term objective is to:

-Monitor the condition of the wood

This will include the following operational works:

-Condition Assessment

6.0 WORK PROGRAMME

Year	Type of Work	Description	Due By
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APPENDIX 1: COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Key Features Present	Designations
38a	7.50	other oak spp	2001	High forest	People issues (+tve & -tve)	Informal Public Access	Area of Landscape Value
<p>Hetton Grove occupies 7.5ha on the west side of White Hill Woods on level ground that slopes gently eastwards to join sub-cpt 40c. Planted by William Young of Hetton-le-Hill Farm in 2001, the ground was ripped prior to planting with predominantly mixed native broadleaves at approximately 2.1m spacing to give a minimum stocking density of 2250 trees/ha. Oak (40%) is the most numerous species planted, followed by ash (30%) then wild cherry (10%), rowan (5%) Scots pine (5%) and 10% native shrubs (hazel, hawthorn, blackthorn, holly guelder rose and elder). An unknown number of beech trees were also added, though not specified in the WGS contract, so the percentages quoted here (taken from the WGS contract) may vary somewhat to accommodate these. A public footpath (Pittington No 32) runs northwards along the western side of Hetton Grove, linking Elemore Woods to the south with the old clay pit site and semi-metalled track running up to Elemore Vale. A low voltage overhead power line on wooden poles also crosses its northern end.</p>							
39a	0.79	Lime species	1900	High forest	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Informal Public Access	Area of Landscape Value
<p>Sub-cpt 39a consists of semi-mature/mature broadleaved woodland covering 0.79ha located to the east sub-cpt 39b. It occupies steep slopes along its northern side and level ground to the south. Coldwell Burn flows along its southern boundary next to which stand a line of mature multi-stemmed lime trees. The rest of the woodland cover consists of semi-mature ash and sycamore, with only the odd cherry tree. A scatter of elder and hawthorn provides a sparse understorey whilst the field layer contains a good mix of herbs such as bluebells, wood anemone, stitchwort and herb Robert.</p>							
39b	0.53	Open ground		Non-wood habitat	Legal issues, Site structure, location, natural features & vegetation	Informal Public Access	Area of Landscape Value, Site of Special Scientific Interest
<p>Sub-cpt 39b consists of an old abandoned quarry extending to 0.53ha (designated area of unit = 0.67ha) and forms unit two of Pig Hill SSSI. Designated for its CG8 magnesian limestone grassland community containing blue moor-grass and small scabious (<i>Sesleria caerulea</i> and <i>Scabiosa columbaria</i>), along with other species, such as common rock rose (<i>Helianthemum nummularium</i>), salad burnet (<i>Sanguisorba minor</i>) and lady's bedstraw (<i>Galium verum</i>). Between January and March 2009, the bulk of the quarry area was cleared of encroaching scrub and regenerating trees and strimmed by volunteers from Durham Wildlife Trust to bring this SSSI back into unfavourable recovering condition. Larger trees consisting of ash and sycamore and mature hawthorn scrub still exists around the edges of the quarry, covering around 40% of the designated area.</p>							

39c	0.59	Ash	1920	High forest	Very steep slope/cliff/quarry/mine shafts/sink holes etc	Informal Public Access	Area of Landscape Value
<p>Sub-cpt 39c occupies 0.59ha on a steep southwest-facing slope to the northwest of sub-cpt 39b and consists mostly of mature ash with some sycamore. Where any understorey exists, it consists of elder and hawthorn and the ground flora contains a good covering of bluebells in spring.</p>							
40a	7.58	Ash	2009	High forest	People issues (+tve & -tve)	Informal Public Access	Area of Landscape Value
<p>Sub-cpt 40a is located on Sheriff's Moor at the northeast side of White Hill Woods and covers 7.58 ha of level ground previously used for arable farming. A high pressure gas main crosses its eastern corner. The ground was ploughed in October 2008 and then left over winter for the soils to weather down then harrowed and sown with grass seed at the beginning of March 2009. To create the planting sward, the following species were used, which are found naturally within the grasslands of the magnesian limestone: common bentgrass (15%), creeping bentgrass (11%), crested dog's tail (15%), sheep's fescue (27%) and red fescue (27%). The first seventy trees were planted by representatives from the project's funding bodies and children from Ludworth Primary School. 13320 trees and shrubs were planted by the end of March using contractors working for Lowther Forestry at stocking density of 2000 trees/ha to allow for some losses, as all trees and shrubs were planted without protection. Species planted include: common ash (33.2%), pedunculate oak (18.7%), small leaved lime (4.8%), field maple (4.8%), silver birch (9.6%), dogwood (2.7%), dog rose (2.7%), guilder rose (2.7%), spindle (1.3%), hazel (9.6%), blackthorn (4%), rowan (4.8%) and wild cherry (1.1%).</p>							
40b	27.03	Ash	2009	High forest	People issues (+tve & -tve), Services & wayleaves	Informal Public Access	Area of Landscape Value
<p>Sub-cpt 40b covers 27.03 ha and occupies gently undulating ground to the south of the main access track. A high voltage National Grid power line passes over it running north-south and a low voltage one travelling west-southeast. To the west of the high voltage power line and running parallel to it is high pressure gas main. The ground was ploughed in October 2008 and left to weather over winter then harrowed and sown with grass seed in March 2009 to create the planting sward. For the sward, the following species were used, which are found naturally within the grasslands of the magnesian limestone: common bentgrass (15%), creeping bentgrass (11%), crested dog's tail (15%), sheep's fescue (27%) and red fescue (27%). Sub-cpt 40b was planted in quarter four 2009 when 39,490 trees and shrubs will be planted without protection at a stocking density of 2000 trees/ha using the following species: common ash (33.2%), pedunculate oak (18.7%), small leaved lime (4.8%), field maple (4.8%), silver birch (9.6%), dogwood (2.7%), dog rose (2.7%), guilder rose (2.7%), spindle (1.3%), hazel (9.6%), blackthorn (4%), rowan (4.8%) and wild cherry (1.1%).</p>							
40c	18.65	Ash	2010	High forest	People issues (+tve & -tve)	Informal Public Access	Area of Landscape Value

Sub-cpt 40c covers 18.65 ha and occupies gently undulating ground alongside Hetton Grove (cpt 38) and south of the western end of the main access track. A low voltage power line passes over the land running east-west. The ground was ploughed in October 2008 and left to weather over winter then harrowed and sown with grass seed in March 2009 to create the planting sward. For the sward, the following species were used, which are found naturally within the grasslands of the magnesian limestone: common bentgrass (15%), creeping bentgrass (11%), crested dog's tail (15%), sheep's fescue (27%) and red fescue (27%). Sub-cpt 40c was planted in quarter one 2010 when 32,920 trees and shrubs were planted without protection at a stocking density of 2000 trees/ha using the following species: common ash (33.2%), pedunculate oak (18.7%), small leaved lime (4.8%), field maple (4.8%), silver birch (9.6%), dogwood (2.7%), dog rose (2.7%), guilder rose (2.7%), spindle (1.3%), hazel (9.6%), blackthorn (4%), rowan (4.8%) and wild cherry (1.1%).

40d	11.05	Ash	2010	High forest	People issues (+tve & -tve)	Informal Public Access	Area of Landscape Value
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Sub-cpt 40d covers 11.05 ha occupying White Hill that lies to the northwest of the main access track. The county boundary runs east-west through the middle of 40d so that it's northern half falls into Tyne & Wear and its southern half in Co. Durham. The ground slopes gently to the south and west and was ploughed in October 2008 and left to weather over winter then harrowed and sown with grass seed in March 2009 to create the planting sward. For the sward, the following species were used, which are found naturally within the grasslands of the magnesian limestone: common bentgrass (15%), creeping bentgrass (11%), crested dog's tail (15%), sheep's fescue (27%) and red fescue (27%). Sub-cpt 40d was planted in quarter four 2010 when 20,590 trees and shrubs were planted without protection at a stocking density of 2000 trees/ha using the following species: common ash (33.8%), pedunculate oak (17.7%), small leaved lime (5.0%), field maple (5.0%), silver birch (10.0%), dogwood (2.8%), dog rose (2.8%), guilder rose (2.8%), spindle (1.4%), hazel (9.2%), blackthorn (4.1%), rowan (4.2%) and wild cherry (1.2%).

40e	0.44	Oak (pedunculate)	2010	High forest	People issues (+tve & -tve)	Informal Public Access	Area of Landscape Value
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Sub-cpt 40e covers 0.44 ha and occupies the extreme northwest corner of the site. The ground was ploughed in October 2008 and left to weather over winter then harrowed and sown with grass seed in March 2009 to create the planting sward. For the sward, the following species were used, which are found naturally within the grasslands of the magnesian limestone: common bentgrass (15%), creeping bentgrass (11%), crested dog's tail (15%), sheep's fescue (27%) and red fescue (27%). Sub-cpt 40e was planted by contractors in quarter four 2010 with 880 trees and shrubs will be planted without protection at a stocking density of 2000 trees/ha using the following species: common ash (20%), pedunculate oak (40%), hazel (20%) and rowan (20%).

40f	4.86	Open ground		Non-wood habitat	People issues (+tve & -tve)	Informal Public Access	Area of Landscape Value
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The wildflower meadow that makes up sub-cpt 40f extends over 4.86 ha along the northern boundary occupying mostly level ground. A low voltage overhead power line crosses the western half of 41f and a sewer also runs through this area. Prior to deep ploughing, the whole sub-cpt was subject to a detailed geophysical survey that revealed part of a ringed enclosure on White Hill. This archaeological feature, along with a buffer zone around it, was protected by restricting ground preparation across this area to normal agricultural ploughing. The rest of sub-cpt 41f was subject to deep inversion ploughing in October 2008 using a Bovlund plough in order to bury the agricultural weed bank and expose the nutrient poor sub-soil for sowing. The soil was then left to weather and break down over the winter before being harrowed and sown in March 2009 with native wildflower seed supplied by Landlife National Wildflower Centre in Liverpool. Seeding was carried out at a sowing density of 30kg/ha for annuals and 10kg/ha for perennials using 18 different species (see record 3 under Wildlife Conservation in Reference Information section).

40g	3.00	Open ground		Non-wood habitat	Management factors (eg grazing etc), Sensitive habitats/species on or adjacent to site, Site structure, location, natural features & vegetation	Informal Public Access	Area of Landscape Value
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Sub-cpt 40g was established to create 3.0 ha of species rich MG5-type grassland to buffer and protect the SSSI grassland site within the old quarry in Cherry Garth. The quarry contains CG8 grassland and forms unit 2 of the much larger Pig Hill SSSI that is situated on the southern edge of the new woods. Prior to deep ploughing, the whole sub-cpt was subject to a detailed geophysical survey that revealed some irregular and linear features. Though questionable, in case these features are archaeological in nature, four areas were marked on the ground and only ploughed to a normal depth of 25-30cm. The rest of sub-cpt 41g was subject to deep inversion ploughing in October 2008 using a Bovlund plough in order to bury the agricultural weed bank and expose the nutrient poor sub-soil for sowing. The soil was then left to weather and break down over the winter before being harrowed and sown in March 2009 with native wildflower seed supplied by Landlife National Wildflower Centre in Liverpool. Seeding was carried out at a sowing density of 5kg/ha using fifteen MG5 species (see record 4 under Wildlife Conservation in Reference Information section).

GLOSSARY

Ancient Woodland

Ancient woods are defined as those where there has been continuous woodland cover since at least 1600 AD. In Scotland ancient woods are defined strictly as sites shown as semi-natural woodland on the 'Roy' maps (a military survey carried out in 1750 AD, which is the best source of historical map evidence) and as woodland all subsequent maps. However, they have been combined with long-established woods of semi-natural origin (originating from between 1750 and 1860) into a single category of Ancient Semi-Natural Woodland to take account of uncertainties in their identification. Ancient woods include Ancient Semi-Natural Woodland and plantations on Ancient Woodland Sites (see below). May support many species that are only found in ancient woodland.

Ancient Semi - Natural Woodland

Stands in ancient woods defined as those consisting predominantly of native trees and shrubs that have not obviously been planted, which have arisen from natural regeneration or coppice regrowth.

Ancient Woodland Site

Stands in ancient woods that have been converted to plantations, of coniferous, broadleaved or mixed species, usually for timber production, including plantations of native species planted so closely together that any semi-natural elements of the understorey have been suppressed.

Beating Up

Replacing any newly planted trees that have died in the first few years after planting.

Broadleaf

A tree having broad leaves (such as oak) rather than needles found on conifers (such as Scots pine).

Canopy

The uppermost layer of vegetation in a woodland, or the upper foliage and branches of an individual tree.

Clearfell

Felling of all trees within a defined area.

Compartment

Permanent management division of a woodland, usually defined on site by permanent features such as roads. See Sub-compartments.

Conifer

A tree having needles, rather than broadleaves, and typically bearing cones.

Continuous Cover forestry

A term used for managing woods to ensure that there are groups or individual trees of different ages scattered over the whole wood and that some mature tree cover is always maintained. Management is by repeated thinning and no large areas are ever completely felled all at once.

Coppice

Trees which are cut back to ground levels at regular intervals (3-25 years).

Exotic (non-native) Species

Species originating from other countries (or other parts of the UK) that have been introduced by humans, deliberately or accidentally.

Field Layer

Layer of small, non-woody herbaceous plants such as bluebells.

Group Fell

The felling of a small group of trees, often to promote natural regeneration or allow planting.

Long Term Retention

Discrete groups of trees (or in some cases single trees) that are retained significantly past their economic felling age. Operations may still be carried out within them and thinning is often necessary to maintain stability.

Minimum Intervention

Areas where no operations (such as thinning) will take place other than to protect public safety or possibly to control invasive exotic species.

Mixed Woodland

Woodland made up of broadleaved and coniferous trees.

National vegetation classification (NVC)

A classification scheme that allows an area of vegetation to be assigned to the standardised type that best matches the combination of plant species that it contains. All woodlands in the UK can be described as being one of 18 main woodland types (W1 - W18), which principally reflect soil and climatic conditions. For example, Upland Oakwoods are type W11, and normally occur on well drained infertile soils in the cooler and wetter north and west of Britain. Each main type can be subdivided into numerous subtypes. Most real woods contain more than one type or sub-type and inevitably some woods are intermediate in character and can't be properly described by any sub type.

Native Species

Species that arrived in Britain without human assistance.

Natural Regeneration

Naturally grown trees from seeds falling from mature trees. Also regeneration from coppicing and suckering.

Origin & Provenance

The provenance of a tree or seed is the place where seed was collected to grow the tree or plant. The origin is the geographical location within the natural range of a species from where seeds/tree originally derives. Thus an acorn collected from a Turkey oak in Edinburgh would have an Edinburgh provenance and a southern European origin.

Re-Stocking

Re-planting an area of woodland, after it has been felled.

Shrub Layer

Formed by woody plants 1-10m tall.

Silviculture

The growing and care of trees in woodlands.

Stand

Trees of one type or species, grouped together within a woodland.

Sub-Compartment

Temporary management division of a compartment, which may change between management plan periods.

Thinning

The felling of a proportion of individual trees within a given area. The remaining trees grow to fill in the space created.

Tubex or Grow or Tuley Tubes

Tubes placed over newly planted trees or natural regeneration that promote growth and provide protection from animals such as rabbits and deer.

Weeding

The control of vegetation immediately around newly planted trees or natural regeneration to promote tree growth until they become established. Either by hand cutting or with carefully selected weed killers such as glyphosate.

Windblow/Windthrow

Trees or groups of trees blown over (usually uprooted) by strong winds and gales.