WOODLAND TRUST

Dutton Park

Management Plan 2015-2020

MANAGEMENT PLAN - CONTENTS PAGE

ITEM Page No.

MAPS

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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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:	Dutton Park
Location:	Dutton
Grid reference:	SJ577767, OS 1:50,000 Sheet No. 117
Area:	64.05 hectares (158.27 acres)
Designations:	Ancient Semi Natural Woodland, Community Forest, Green Belt, Local Wildlife Site, Planted Ancient Woodland Site, Special Landscape Area

2.0 SITE DESCRIPTION

2.1 Summary Description

Dutton Park lies in the Weaver Valley between Dutton and Acton Bridge in North Cheshire with the imposing 22 arches of the Dutton railway viaduct crossing the River Weaver. The site is a rich mosaic of habitats from grassland meadows beside the river, ponds and scrapes, scrub and hedgerows, two Ancient Semi Natural Woodlands and over 50 hectares of new native woodland that was planted. The site was previously farmland and grazed by cattle which had caused damage to the ancient woodlands by trampling in them. Since the Woodland Trust bought the land the ancient woods have been fenced and are now recovering and the meadows are being managed for conservation by Cheshire Wildlife Trust. There are two public right of way crossing the meadows by the river and a new network of grass paths around the site.

2.2 Extended Description

Dutton Park is located in the attractive Weaver Valley, an Area of Landscape Value in North West Cheshire. It is two miles to the south of the M56 and the town of Runcorn and about a mile to the south west of the small village of Dutton. The Dutton railway viaduct carries the West Coast railway line over the valley and forms an impressive feature in the landscape. The landscape is predominantly mixed dairy and arable farmland, wooded copses and several large private estate woods including ancient woodland. The area has one of the largest concentrations of ancient woodland in Cheshire

The site covers 64 hectares and was acquired by the Woodland Trust in 2006, before then it had been owned by Cheshire County Council and grazed by a tenant farmer. The landscape of the site varies from riverside meadows alongside the River Weaver rising up a wooded scarp slope to higher flat ground which was previously grassland for grazing cattle. It is now a mosaic of habitats including ancient semi-natural woodland (ASNW), new native woodland, scrub and open ground areas, wildflower meadows, ponds and scrapes. The Woodland Trust also owns another wood less than a mile away along Lodge Lane called Longacre Wood, which is an ASNW.

Approximately 25,000 native broadleaf trees (covering 36 ha) were planted in 2006-7 to create new native woodland which is a key feature of the site. The planting comprised English oak, ash, silver birch, rowan, wild cherry and shrubs (holly, hazel, hawthorn, blackthorn and dog rose) since 2006. An additional area of 2.75 ha was deep ploughed and sown with wildflowers by Landlife in summer 2007, followed by planting with tree seed as a trial, low cost method of creating new woodland. This later area has been slower to develop than the areas planted with whips, but the seeds have germinated and young trees are now established and growing well.

The site has two areas of ASNW which are a key feature due the scarcity of this type of habitat in Cheshire. They had been severely damaged by over grazing and inappropriate management before the Trust owned the site. Park Brow wood was being trampled and grazed by cattle who wandered unrestricted in the wood. This has now been fenced and already shows signs of natural regeneration establishing and the ground flora is recovering. Quick Wood in the western most part of the site is a Planted Ancient Woodland Site (PAWS) which in the 1990s had a crop of larch planted in the wood. In 2008 the Woodland Trust stem injected some of the larch to kill them and allow more light to reach the woodland floor to encourage native tree species to regenerate and preserve the ASNW ground flora species. Surveys of both woodlands show they still have ground flora ASNW indicator species present including remnants of Bluebell, Ramsons, Wood Sorrel, Wood Anemone, Dogs Mercury and the locally rare Moschatel in Quick Wood.

The once wildflower rich, riverside meadows had been overgrazed by the previous tenant farmer which had reduced the abundance and diversity of the flora. After the Woodland Trust took ownership of the site the meadows were leased long term to Cheshire Wildlife Trust to manage by conservation grazing which they do with a herd of Longhorn cattle to try to re-establish the diverse flora.

Dutton Park is an important site locally for wildlife and several parts of the site have been designated as Local Wildlife Sites. Over 50 bird species have been recorded including woodland, wetland and rough grassland species and birds of prey are frequently seen on site including buzzard, kestrel, tawny owl and peregrines, which have nested on the railway viaduct arches.

There are several ponds of varying size across the site and four new wet scrapes were created in an area of grassland in 2008 to provide a greater range of habitats for amphibians and birds. Pond surveys were carried out in 2008 and found several species of amphibians to be present in the ponds. The ponds used to be used regularly by people fishing without permission, causing issues with rubbish and camp fires. Most of the fish were removed from the ponds around 2007 which has reduced the problem although some ponds still retain fish and fishing still goes on but is not causing the same level of problems as before.

Informal public access is another key feature of the site and there is a network of approximately 2km of unsurfaced grass paths throughout the site. Two public bridlepaths also cross the site on the meadows near to the River Weaver and route 55 of the National Cycleway route passes along the riverside path. The site is not well used and most visitors walk/ ride along edge of the site using the riverside path.

3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

Dutton Park is situated between Dutton and Acton Bridge in North Cheshire. There is no visitor car parking on site. Lodge Lane which is the nearest public road to the site is narrow and signs prohibit parking on it. The best public access point to the site is on foot from the Leigh Arms pub on the A49 Warrington Road at Bartington. There is parking near the pub on the north side of the river. Cross under the road bridge and walk along the river for approximately a mile towards Dutton Locks. Just past the locks cross over the large footbridge to Dutton Park.

3.2 Access / Walks

There are several public rights of way (bridlepaths and footpaths) across the site as well as permissive grass mown paths through areas of the new woodland.

4.0 LONG TERM POLICY

The long term intention for Dutton Park is to create and maintain high forest of mixed native broadleaves including ancient semi- natural woodland and a mosaic of other habitats including scrub, open ground, scrapes, ponds and species rich wildflower meadows. It will be primarily managed as a landscape and conservation feature. The key drivers for any woodland operations will be for public access and ensuring the woodland is resilient for the future.

Ancient Semi-Natural Woodland (ASNW) and this will be protected to maintain a diverse range of tree and ground flora indicator species. The Planted Ancient Woodland Site (PAWS) will be assessed to determine the ancient woodland indicator species are under threat and if necessary management operations carried out to maintain it as native broadleaf woodland.

Areas of new native woodland will be left to develop naturally to maturity. However it may be necessary to intervene in order to diversify the species mix and age structure in order to maintain a resilient woodland. The species rich wildflower meadows next to the river are leased to Cheshire Wildlife Trust and will continue to be managed to maintain/ enhance their biodiversity value through the continued grazing to promote meadow species. Other open ground areas will be left to develop naturally into scrub/ open ground habitat. The ponds and scrapes will be subject to minimal intervention.

Public access to the site will be maintained to ensure the site is welcoming and safe for visitors to enjoy. As the woodland develops, path edges will be maintained under a variable cutting regime including coppicing to create a more varied woodland edge structure and to maintain sight lines for visitors.

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 Ancient Semi Natural Woodland

Description

Park Brow Wood (sub compartment 4a) is designated in English Nature's Ancient Woodland Inventory as Ancient Semi Natural Woodland. The woodland is dominated by sycamore with other species including ash, silver birch, oak, cherry and wych elm. There has been little natural regeneration in the past due to cattle wandering freely within the wood and causing damage. However since fencing the wood to keep cattle out, there is now signs of regeneration especially of ash and sycamore. The shrub layer of the woodland is diversely structured with species including hazel, hawthorn, elder, holly, gorse, and dog rose. Ground flora in the woodland is relatively diverse although many years of grazing and trampling has caused damage. There are still many ASNW indicator species present including bluebell, ramson, dogs mercury, lesser celandine, wood anemone and fern species. The woodland contains significant levels of deadwood, both standing and fallen which offers an excellent habitat for birds and invertebrates.

Significance

Cheshire is one of the least wooded counties in England with less than 4% woodland cover and ASNW in Cheshire is rare. This area has the second highest concentration of ASNW in Cheshire which therefore makes this site especially important for the county. Park Brow wood has been designated a Local Wildlife Site by Cheshire Wildlife Trust because of the ancient woodland habitat which is a Biodiversity Action Plan priority habitat for Cheshire.

Opportunities & Constraints

The fencing of the wood to keep cattle out should give the ancient woodland indicator species the opportunity to recover. Additionally the buffering of the ancient woodland with new native woodland provides an opportunity to increase the biodiversity across the site through the spread of ancient woodland indicator species into the new woodland areas.
The steep slope in the wood makes management access difficult.

Factors Causing Change

Squirrel damage (bark stripping) is severe in many of the new planted blocks.
Tree disease especially Chalara will lead to loss of Ash within the site.

Long term Objective (50 years+)

In the long term Park Brow Wood should continue to develop as native mixed broadleaf Ancient Woodland with appropriate ground flora indicator species and natural regeneration.
It should be allowed to develop by natural processes where possible and subject to minimal intervention. There should be an increasing amount of dead wood (standing and fallen) in the woodland.

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

There is no management work planned in the ASNW during the plan period apart from any resulting from tree safety inspections.
During the plan period tree health and the effect of damage on young trees caused by squirrels will be monitored and a sustainable solution to reduce damage will be sought.

5.2 New Native Woodland

Description

Over 28.8 hectares of new native broadleaf woodland has been planted by the Woodland Trust from 2006 to 2008. The new woodland areas have established well and now require minimal aftercare. A further 7.4ha was planted by the site's previous owners. An additional area of 2.75 ha within compartment 2B was deep ploughed and sown with wildflowers and tree seed in 2007 as a trial low cost method of creating new woodland. This later area has been slower to develop than the areas planted with whips, but the young trees are now established and growing well.

Significance

Cheshire has less than 4% woodland cover so creating this sizeable area of new native woodland adds to the amount of woodland in the area and provides important habitat for biodiversity in the local area. Despite the site's previous history of intensive cultivation its location in the Weaver Valley acts as a wildlife corridor which enables the passage of wildlife species to and from the site and the wider countryside. This new woodland planting at Dutton Park serves to extend and buffer the existing ASNW and a mosaic of other habitats such as wildflower meadows, wet scrapes and ponds.

Opportunities & Constraints

There are likely to be opportunities for additional tree planting in some areas to replace losses caused by squirrel damage and tree disease (Chalara).
In some parts of the site there are difficulties for management access due to very steep slopes and wet ground, however most of the areas of new planting have good management access.

Factors Causing Change

Rabbit damage has caused the loss of some new trees.
Squirrel damage (bark stripping) is severe in many of the new planted blocks.
Tree disease especially Chalara will lead to loss of Ash within the site.

Long term Objective (50 years+)

In the long term (50+ years) the woodland should be left to develop naturally where possible to become native mixed broadleaved woodland with a diverse age, structure and species composition. The amount of dead wood, both fallen and standing will increase which will enhance the biodiversity value particularly for invertebrates. The new woodland will be the core in a mosaic of different inter-relating habitats including scrub, meadows and grassland, ponds and wet scrapes. Over time the Ancient Woodland ground flora indicator species and wildlife should colonise the new woodland and spread across the site.

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

There will be minimal intervention during the plan period apart from operations for public access and safety along paths.
Tree guards and shelters on young trees will be removed during the plan period.
Tree health and the effect of damage on young trees caused by squirrels will be monitored and a sustainable solution to reduce damage will be sought.

5.3 Pond

Description

There are 7 ponds across compartments 1, 5, 6 and 7. The largest of them are two connected linear ponds known locally as Dutton flashes or ponds, which were once part of the old river course and are now ox-bow lakes isolated from the river. These have previously been stocked with fish particularly carp and been fished for decades. Due to on going problems with anti social behaviour from fishermen, the Trust arranged for a local angling club to remove significant numbers of fish in 2007. However not all fish were removed and numbers have since increased, partially it is believed through illegal introduction of fish in the ponds.

Significance

Cheshire has one of the highest densities of ponds in the countryside in the UK and as a result is a stronghold for newts and in particular the protected Great Crested Newt.
Dutton Park provides a mosaic of habitats including ponds which make it an ideal site for supporting populations of newt species. Surveys of the ponds carried out in 2004 identified the presence of frogs, toads, smooth and palmate newts in most of the ponds, and Great Crested Newts were found in 3 of the ponds.

Opportunities & Constraints

A constraint for managing the ponds for biodiversity is that they have a long history of being fished. Despite the Trust removing significant numbers of fish from the ponds in 2007 and attempting to stop fishing since then it has continued and is very difficult to stop because many of the ponds are away from paths and to an extent hidden from view.
Opportunities should be investigated to manage the fishing on some of the ponds which may reduce the anti-social issues on site and with appropriate management help to improve the ponds for wildlife.

Factors Causing Change

Fishing and anti-social behaviour (vandalism, camp fires) is an on going issue that can have a detrimental impact on the pond environment if uncontrolled. However it has in recent years been less of a problem.

Long term Objective (50 years+)

in the long term the ponds should provide a valuable aquatic habitat on the site that will support a range of wildlife species, particularly amphibians including Great Crested Newts.

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

No habitat management work is planned for the ponds during the plan period. The Trust will continue to work with Cheshire Wildlife Trust and our neighbours to seek a solution to manage and reduce the problems caused by illegal fishing on site.

5.4 Open Ground Habitat

Description

There is approximately 18 hectares of open ground habitat mostly in compartments 5 and 6. These are wet meadow areas and have been leased to Cheshire Wildlife Trust to manage through conservation grazing to attempt to improve their biodiversity value. They are grazed during the summer months with a herd of English longhorn cattle.

Significance

Wet wildflower meadows such as at Dutton Park are an important wildlife habitat which has significantly reduced in area in recent decades across the UK. They provide a rich diversity of wildflower species which are important habitat and food sources for bees, butterflies, birds and a variety of small mammal species. The meadows at Dutton Park provide valuable areas of open ground for birds of prey to hunt. The site and adjoining areas has kestrels, buzzards, peregrines, tawny owls and barn owls, which is a local BAP species.

Opportunities & Constraints

This area had lost many of its wildflower species through a combination of overgrazing and herbicide spraying to kill grassland "weeds" by the previous farmer.
By introducing low intensity conservation grazing on the site there is a real opportunity to try to reverse the decline of these meadows and increase the wildflowers diversity found here.

Factors Causing Change

The neighbouring farmer's cattle from time to time get onto the meadows which could lead to further overgrazing.

Long term Objective (50 years+)

In the long term the wet meadows should provide a valuable wildlife habitat with a diverse rich sward of wildflowers.

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

During the plan period Cheshire Wildlife Trust will continue to graze the meadows for conservation. Appropriate action will be taken if necessary to prevent the neighbouring farmer's cattle gaining access to the meadows. In 2016/17, CWT plan to re-survey the meadows to see if there has been any change in flora diversity.

5.5 Planted Ancient Woodland Site

Description

Compartment 8 (Quick Wood) is designated as Ancient Semi-Natural Woodland (ASNW) on the English Nature Ancient Woodland Inventory.
It is managed by the Trust as a planted ancient woodland site (PAWS) and contains European larch which was planted in the 1990s.
The main broadleaved species in the wood are sycamore, silver birch, ash, cherry, oak and hybrid black poplar. The shrub layer is diversely structured and includes holly, hazel, elder and thorn. Ancient woodland ground flora species are present throughout the wood.

Significance

Cheshire is one of the least wooded counties in England with less than 4% woodland cover and ASNW in Cheshire is rare. This area has the second highest concentration of ASNW in Cheshire which therefore makes this especially important for the county. Many of the other ancient woodlands locally are part of private estates and landowners.

Opportunities & Constraints

By gradually reducing the number of larch in the wood this should allow the ASNW tree species and ground flora the opportunity to increase and regenerate. The buffering of the ancient woodland with new native woodland provides an opportunity to protect the ASNW and increase the biodiversity across the site by the spread of ancient woodland indicator species into the new woodland areas. The woodland is relatively small, narrow and in a steep sided clough making management access difficult and so stem injection of the larch was recommended as the easiest method to control the larch. Protected species on the site impose conditions on working practices and timing of operations in parts of the wood.

Factors Causing Change

Regeneration of larch will need to be monitored and controlled. Rabbits are present across the site and could impact on any natural regeneration, although levels of rabbit damage appears at present to be minimal. Allowing too much light into the wood could allow coarse vegetation esp. bramble and nettle to dominate so the control of larch needs to be done gradually.

Long term Objective (50 years+)

In the long term (50+ years) the PAWS area should have reverted to predominantly broadleaf Ancient Woodland. Following the control of the larch it will be managed by minimal intervention and natural processes will be favoured with standing dead trees left where safe to do so. There will be an increasing amount of dead wood (standing and fallen) throughout the site including in the watercourses. Natural regeneration will follow the collapse of mature trees. Ancient Woodland ground flora indicator species should be widespread.

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

During the plan period a PAWS assessment will be carried out to monitor the impact of the previous stem injection of larch and to identify future restoration work.

5.6 Informal Public Access

Description

The site has good provision for public access throughout the site with approximately 2 km of permissive grass footpaths in addition to existing public footpaths and two bridle paths. Part of the National Cycleway route passes along the riverside bank.

Significance

The network of footpaths and bridle paths link the site to the wider countryside and villages in the Weaver Valley which attracts visitors from further afield as well as from nearby towns in North Cheshire. The site is also close to another Woodland Trust site, Longacre Wood, which is approximately 1 mile to the north and is linked via Lodge Lane and public footpaths.

Opportunities & Constraints

Management access is difficult or very poor in some parts of the site, especially the ASNW/ PAWS areas. Previous issues with a neighbouring farmer have resulted in additional locked access gates being required to prevent unauthorised access. There is no parking at the site and parking on nearby roads is very limited.

Factors Causing Change

Damage to paths from vehicles/ horses using them; vegetation encroachment as the trees grow up in the new planted areas which will require ride edge management in future.

Long term Objective (50 years+)

The network of footpaths will offer all year round access for visitors to the wood. Where necessary for visitor access and safety, ride edges will be opened up to improve sight lines and visibility through a programme of edge coppicing.

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

Footpaths and tracks will be maintained by cutting back vegetation (two or three times a year) to maintain public access. Entrances, boundaries and site infrastructure will be inspected and maintained as part of the EMC.
During the plan period an assessment of current public access and infrastructure will be carried out to identify any future work required.
Coppicing along path edges will be undertaken if necessary to improve sightlines for public access.

6.0 WORK PROGRAMME

Year	Type of Work	Description	Due By

APPENDIX 1: COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Key Features Present	Designations
1a	16.55	Oak (pedunculate)	2006	Wood establishment	Sensitive habitats/species on or adjacent to site, Services & wayleaves		Community Forest
This is the largest compartment situated in the northern part of the site and abuts farmland to the north and west, with a hedge and ditch along the boundary. The north eastern boundary is fenced and borders the railway line. The south western boundary partially borders agricultural land, as well as compartments 7a and 8a along. The south eastern boundary is stock fenced and abuts an access track owned by the Trust. There is a pond surrounded by some mature trees in the middle of the compartment. The pond was netted of fish in December 2006 and an amphibian survey carried out in 2008. Over 14,000 mixed native trees were planted in early 2006. Additionally an area of new trees were planted by the previous tenant farmer in 2001 adjoining the boundary with compartment 8a. The compartment is 75% (12.38 ha) new native woodland and 25% (4.17 ha) open ground. The planting mix comprises of: English (Pedunculate) oak 35%, ash 25%, silver birch 10%, rowan 10%, wild cherry 10% and woody shrubs: hawthorn (3.33%), blackthorn (3.33%) and dog rose (3.33%). A number of wet scrapes were excavated in the southern part of the compartment in December 2008. Two barn owl boxes have been fitted on old telegraph poles and along part of an old fence in the southern boundary of the compartment a series of tree sparrow boxes have been erected. There is public access around the perimeter of the compartment on mown grass paths and the access track. An overhead electric HV line runs above ground NE to SE.							
2a	5.79	Oak (pedunculate)	2007	Wood establishment	Archaeological features, Services & wayleaves		Community Forest
This compartment is on a slope gently rising to a plateau in the southern part of the compartment. It is bordered by a ditch/mound and hedge line on the north western side adjoining Dutton Park Farm and a farm access track, the south western boundary is alongside the railway line, and the eastern boundary abuts compartment 4a (Park Brow wood). In the far north eastern corner are some stones which represent the remains of the old chapel for the Dutton Estate which was left un-planted. The compartment was planted with nearly 6000 new native trees in February 2008 and is 80% (4.92ha) new woodland and 20% (1.23 ha) open ground. It was part deep ploughed and wild flower seeded mainly in the area west of 2b as part of a forest of flowers project. The remaining areas of 2a were planted into the turf. The planting mix was English (Pedunculate) oak 31%, ash 25%, silver birch 11%, rowan 7% and woody shrubs: hazel 5%, hawthorn 11%, blackthorn 5% and dog rose 5%. A plastic mesh grass management access track runs north to south west through the compartment.							

2b	2.98	Birch (downy/silver)	2007	Wood establishment	No/poor vehicular access within the site		Community Forest
This sub compartment abuts sub compartment 2a on all sides apart from to the east where is abuts compartment 4a. The area was deep ploughed in August 2007, then seeded with a native wildflower mix, followed by seeding with native tree species in September 2007. The tree species used were silver birch (40%), oak (30%), ash (20%) and 10% shrubs including hawthorn, hazel and blackthorn. They were sown to achieve 1100 stems per ha. The seed was partially machine sown (birch/ash/hawthorn/hazel and blackthorn) and the rest was hand sown by volunteers (oak). In addition to this 2000 acorns were placed in half length tree tubes as an experiment to see if germination rates were increased if protected from vole damage. The trees have been slower to establish and grow in this area compared to where trees were planted as whips elsewhere on the site. 300 whips were planted in 2012/13 to beat up the planting density. In the southern section of this compartment the deep plough disturbed an old land drain causing a flooded wet area to establish. This has rush and iris growing in it and has become a feeding ground for snipe.							
3a	4.38	Oak (pedunculate)	2006	Wood establishment			Community Forest
This compartment contains 3240 new native trees planted in November 2006. It is a flat area of 4.38ha with a hedge line (predominantly Hawthorn) running NE to SW along an access track owned by the WT. The north eastern boundary borders the mainline rail link. The south western boundary borders a continuation of the access track. The south eastern boundary borders a pond and some new planting completed in 2001 by the previous tenant farmer. The compartment is 67% (2.95 ha) new native woodland and 33% (1.43 ha) open ground which includes paths rides and a small damp marl pit which has been filled with sub soil in the past. The planting mix comprises of: English (Pedunculate) oak 32%, ash 24%, silver birch 10% rowan 10%, wild cherry 12% and woody shrubs: hawthorn 4%, blackthorn 4% and dog rose 4%.							
4a	3.30	Sycamore	1946	Min-intervention	No/poor vehicular access within the site, Very steep slope/cliff/quarry/mine shafts/sink holes etc		Ancient Semi Natural Woodland, Community Forest, Local Wildlife Site

This compartment called Park Brow is Ancient Semi Natural Woodland (ASNW). It is a long thin woodland on a south facing steep slope to the east of Dutton railway viaduct. It is mostly sycamore with some ash, oak and other mixed broadleaved trees. There are remnants of ASNW flora including bluebells and dogs mercury. The site had been heavily grazed by the previous tenant farmer, but cattle have now been excluded and this is allowing natural regeneration to develop and the ground flora to recover. The ground flora has been surveyed in 2006 and 2007 (copy in site file) and includes bluebells, dogs mercury, wood sorrel and primroses. The compartment is designated a Local Wildlife Site.							
5a	9.94	Open ground	1900	Non-wood habitat	Legal issues, Management factors (eg grazing etc), People issues (+tve & -tve)		Local Wildlife Site
This area was previously a wet wildflower meadow that was overgrazed by the previous tenant before the Trust took ownership of the site. It is now leased long term to Cheshire Wildlife Trust who are grazing the land for conservation with Longhorn cattle to improve its wildlife value. The north western boundary of the compartment borders Park Brow wood and the railway line forms the western boundary. The River Weaver forms the southern and eastern boundaries. The compartment has two ponds called Park Brow pools but also known locally as the Dutton flashes which were once part of the old course of the river. They are designated as a Local Wildlife Site and were netted of fish in December 2006. There is a public bridleway (part of the national cycle route) that runs along the river bank on the southern and eastern boundaries. Another public bridlepath crosses the compartment near Park Brow wood and the pools. A right of access for the owners of Pickerings cottage crosses the compartment near to the river bank. The owner of Primrose Cottage has limited access by permission from the WT only for fuel delivery. In the northern corner of this compartment a barn owl box has been erected on an old telegraph pole.							
6a	7.78	Open ground	1900	Non-wood habitat	Legal issues, Management factors (eg grazing etc), Mostly wet ground/exposed site, People issues (+tve & -tve), Services & wayleaves		

This area was previously a wet wildflower meadow that was overgrazed by the previous tenant before the Trust took ownership of the site. It is now leased long term to Cheshire Wildlife Trust who are grazing the field with Longhorn cattle to improve the wildflower species diversity. A small pond was dug in 2007 to provide water for grazing animals.
The northern boundary of the compartment is a stock proof fence bordering the newly planted woodland in compartment 7a. The southern boundary is along the river bank, with the railway viaduct forming the eastern boundary. The western boundary is the southern end of Quick Wood (cpt 8), adjoining farmland and the boundary fences and walls of two neighbouring cottages. The western edge of the site is very wet.
A small scrubby area of woodland exists in the eastern area of the site containing a few mature ash and oak with an understory of hawthorn. There are also a number of remnant hawthorn hedges left on this field.
There is a public bridlepath along the river bank and two footpaths cross the field from the bridlepath up the slope towards the woodland in cpt 7a with access over the fence via wooden stiles.
A right of access for the owners of Pickerings cottage crosses this compartment near to the river bank. The owner of Primrose Cottage has limited access by permission from the WT only for fuel delivery.
There is an old salt mine test shaft in the centre of this compartment. This was capped with wood and protective fencing in 2008.

7a	6.96	other oak spp	2001	Wood establishment	Sensitive habitats/species on or adjacent to site, Services & wayleaves		Community Forest

This compartment contains nearly 6000 native trees that were planted in planted Autumn 2001 by the previous tenant farmer. It is on a flat part of the site at the top of the main scarp slope that runs east to west. The northern and eastern boundaries are fenced and abut neighbouring compartments. The northern boundary is also partially hedged except along the boundary with compartment 1 where the fence has been removed to allow better access people and wildlife. The western boundary abuts Quick Wood (compartment 8) and is partially fenced with old stock fencing. The eastern boundary is fenced and borders the railway line.
The compartment is 80% (5.92ha) new native woodland and 20% (1.48 ha) open ground.
The planting mix comprised sessile oak 17% English (Pedunculate) oak 17%, ash 15%, field maple 12%, rowan 4%, wild cherry 3% and woody shrubs: holly 2%, hazel 5%, hawthorn 3%, blackthorn 2%.
There are 3 ponds within the compartment which were all netted to remove fish in December 2006. The ponds were surveyed in 2008 and several GCN eggs were found in the pond in the NW corner of the compartment. The other two ponds still have fish present and are located in the eastern part of the compartment. Both have steep banks and work was carried out in 2008 to create a shelved bank on one side of each pond to allow easier access for wildlife and for public safety. There is a network of mown grass footpaths through the compartment.

8a	1.84	Sycamore	1900	PAWS restoration	Gullies/Deep Valleys/Uneven/Rocky ground, Mostly wet ground/exposed site, No/poor vehicular access within the site, Sensitive habitats/species on or adjacent to site, Very steep slope/cliff/quarry/mine shafts/sink holes etc		Community Forest, Local Wildlife Site, Planted Ancient Woodland Site
This compartment is called Quick Wood and is located on the western boundary of the site in a steep sided clough with a stream running from north to south. It is bordered by farmland to the west and new native woodland planted in compartments 1a and 7a to the east and north. The southern boundary abuts the wet meadow area in compartment 6a. The canopy is mixed broadleaved species including sycamore, oak, beech, ash, alder, birch, cherry, and hybrid black poplar along with European Larch which was planted in the 1990's by the previous owner of the wood. There is a well established shrub layer including holly, hazel, elder hawthorn, blackthorn, raspberries and ivy. The ground flora has species indicative of ASNW including bluebell, ramson, primrose, dogs mercury, lesser celandine, wood anemone and locally rare Moschatel. In 2008, approximately 50-60 of the larch were stem injected with glyphosate to kill them which has been successful. There is no public access into Quick Wood.							

Appendix 2: Harvesting operations (20 years)

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2018	1a	Ride edge Coppice	0.20	5	1
2023	2b	Ride edge Coppice	0.50	10	5
2026	2b	Thin	10.00	4	40

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.