

Londonthorpe Woods

(Plan period – 2016 to 2021)



WOODLAND
TRUST

Management Plan Content Page

Introduction to the Woodland Trust Estate

Management of the Woodland Trust Estate

The Public Management Plan

Location and Access

Introduction to the Woodland Trust Estate

The Woodland Trust owns and cares for well over 1,250 sites covering almost 30,000 hectares (ha) across the UK. This includes more than 4,000ha of ancient semi-natural woodland and almost 4,000ha of non-native plantations on ancient woodland sites and we have created over 5,000ha of new native woodland. We also manage other valuable habitats such as flower-rich grasslands, heaths, ponds/lakes and moorland.

Our Vision is:

“A UK rich in native woods and trees for people and wildlife.”

To realise all the environmental, social and economic benefits woods and trees bring to society, we:

- **Create Woodland** – championing the need to hugely increase the UK’s native woodland and trees.
- **Protect Woodland** – fighting to defend native woodland, especially irreplaceable ancient woodland and veteran trees; there should be no loss of ancient woodland
- **Restore Woodland** – ensuring the sensitive restoration of all damaged ancient woodland and the re-creation of native wooded landscapes.

Management of the Woodland Trust Estate

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.

The following principles provide an overarching framework to guide the management of all our sites but we recognise that all woods are different and that their management also needs to reflect their local landscape, history and where appropriate support local projects and initiatives.

1. Our woods are managed to maintain their intrinsic key features of value and to reflect those of the surrounding landscape. We intervene in our woods when there is evidence that it is necessary to maintain or improve biodiversity, safety and to further the development of more resilient woods and landscapes.
2. We establish new native woodland for all the positive reasons set out in our Conservation Principles, preferably using natural regeneration but often by planting trees, 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. Where possible, we pro-actively engage with people to help them appreciate the value of woods and trees.
4. The long term vision for all our 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 natural and cultural heritage value of sites is taken into account in our management and in particular, our ancient trees are retained for as long as possible.
7. Land and woods can generate income both from the sustainable harvesting of wood products and the delivery of other services. We therefore consider the appropriateness of opportunities 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 encourage our woods to be used for 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. We maintain a network of sites for long-term monitoring and trials leading to reductions in plastics and pesticides.
10. Any activities we undertake are in line with our wider Conservation Principles, conform to sustainable forest management practices, are appropriate for the site and balanced with our primary objectives of enhancing the biodiversity and recreational value of our woods and the wider landscapes.

The Public Management Plan

This public management plan describes the site and sets out the long term aims for our management and lists the Key Features which drive our management actions. The Key Features are specific to this site – their significance is outlined together with our long, 50 years and beyond, and our short, the next 5 years, term objectives for the management and enhancement of these features. The short term objectives are complemented by an outline Work Programme for the period of this management plan aimed at delivering our management aims.

Detailed compartment descriptions are listed in the appendices which include any major management constraints and designations. Any legally confidential or sensitive species information about this site is not included in this version of the plan.

There is a formal review of this plan every 5 years and we continually monitor our sites to assess the success of our management, therefore this printed version may quickly become out of date, particularly in relation to the planned work programme.

Please either consult The Woodland Trust website

www.woodlandtrust.org.uk

or contact the Woodland Trust

operations@woodlandtrust.org.uk

to confirm details of the current management programme.

A short glossary of technical terms can be found at the end of the plan.

Location and Access

Location maps and directions for how to find and access our woods, including this site, can be found by using the following link to the Woodland Trust web-site which contains information on accessible woodlands across the UK

<https://www.woodlandtrust.org.uk/visiting-woods/find-woods/>

In Scotland access to our sites is in accordance with the Land Reform Act (of Scotland) 2003 and the Scottish Outdoor Access Code.

In England, Wales and NI, with the exception of designated Public Rights of Ways, all routes across our sites are permissive in nature and where we have specific access provision for horse riders and/or cyclists this will be noted in the management plan.

The Management Plan

1. Site Details
2. Site Description
3. Long Term Policy
4. Key Features
 - 4.1 f1 Secondary Woodland
 - 4.2 f2 Connecting People with woods & trees
 - 4.3 f3 Open Ground Habitat
5. Work Programme

Appendix 1 : Compartment Descriptions

GLOSSARY

1. SITE DETAILS

Londonthorpe Woods

Location:	nr Grantham Grid reference: SK943375 OS 1:50,000 Sheet No. 130
Area:	77.21 hectares (190.79 acres)
External Designations:	Access Land, Area of Landscape Value, Local Wildlife Site
Internal Designations:	Tree For All Site, Welcoming Sites Programme

2. SITE DESCRIPTION

Londonthorpe Woods is a diverse 75ha native woodland site with a diverse range of habitats. The site lies on the Northeastern edge of Grantham abutting the Alma Park industrial estate, and the National Trust's Belton House property. It was acquired in 2 phases, with most of the acquisition taking place in 1991, followed by the southern section (Alma Park) being gifted to The Trust slightly later in 1993 by South Kesteven District Council.

The largest component of the site is relatively young secondary woodland planted during the period 1993-95. This land was formerly farmland and the planting took place in 3 phases over this period. A diverse range of native broadleaves make up the woodland including oak, ash, field maple, cherry and hornbeam. Significant areas of open grassland were retained within the design of this woodland, to complement the parkland landscape associated with Belton House. Some of the grassland has acquired considerable floristic interest, with good displays of native wild flowers in the Spring and Summer including cowslips and orchids.

The southern stretch of the wood, known as Alma Park includes an area of much older woodland on the top of the limestone escarpment to the east (known as Alma Wood). Alma Wood was planted around 1854 at the time of the battle of Alma, and contains a good collection of mature and veteran trees including beech, oak, horse chestnut and sycamore. Most of Alma Park though is a mixed mosaic habitat of open grassland, scrub, with a scattering of mature trees (especially oak), with fine views over the town from the higher ground. A number of smaller and more recent plantations have been created on the western side of Alma Park, adjacent to the industrial estate. These trees were planted between 2020 and 2023, with the help of local volunteers and The Belmont Primary School, to help screen the site from some of the large industrial warehouses.

The site has benefited in recent years from a Lottery funded project (called Reconnecting Grantham), which has added new improvements and infrastructure. Improvements have included a new carpark which contains 23 spaces including 2 designated disabled bays. There is also an overflow extension to the carpark, which is opened during busy periods of the year (such as school holidays) and for engagement activities and group meetings. The total carparking capacity of the site is 40 cars. A surfaced track now runs from the edge of town, through the site and to the carpark, providing an off-road route of almost 1km for cyclists of pedestrians. Another surfaced path (for pedestrians only) runs in a loop to and from the carpark and provides an easy flat walking route of 1.2km for visitors with a range of physical abilities. Two outdoor classrooms are situated at either end of the site, with purpose-built seating and perimeter fencing to exclude dogs. The classrooms are used by schools and other special-interest groups as quiet areas for younger people to experience nature and learn in the outdoors. A number of waymarked trails help guide visitors around the site and through the local landscape, linking to the eastern section of the National Trust's Belton House property (known as Bellmount). Some of the trails pass by the Bellmount Tower on National Trust land, which is a local landmark sited on top of the escarpment and faces west towards Belton House itself. The Reconnecting Grantham project has also helped to forge strong partnership working with The National Trust at Belton.

In addition to the above there is also approximately another 10km of managed paths through the site for visitors to enjoy, and 12 additional entrances to gain access from, making the site very accessible and an important place for public enjoyment of the countryside on the edge of Grantham. With the Woodland Trust's head office being located in Grantham, the site also serves as a demonstration area for the work of the charity and is frequently used for training and meetings by Trust staff.

The Key features relevant to this site are:

Secondary Woodland

Connecting people with woods and trees

Semi-natural open ground habitat

3. LONG TERM POLICY

The plantations will reach maturity and become ecologically functional woodland habitats composed of a mixture of native broadleaved trees, with a variety of age classes from young regeneration to old veterans and everything in-between. The main tree species are likely to be oak, lime, field maple, rowan and birch along with minor components of hornbeam, cherry and ash. Ash dieback disease will greatly reduce the percentage of ash in the woods. Natural processes, including trees loss due to disease, will help to diversify the woodland structure, but some silvicultural intervention will be necessary to maintain a diverse resilient woodland habitat. Veteran trees will be retained for as long as biologically possible, with management carried out to ensure they have sufficient light and room to grow and develop.

The mature area of woodland known as Alma Wood will be allowed to develop through mainly natural processes, allowing mature trees to naturally senesce and become veterans. Limited intervention may be necessary though to ensure the succeeding cohort of trees is not dominated by sycamore, but instead a range of species including oak and beech are present. Regeneration of Sweet chestnut and Horse chestnut will be accepted in Alma Wood, because of their connection with the original planting.

Given the large amount of permanent open ground and wood pasture present on the site, the woodlands will only have a small number of open rides and glades. The main rides being the cycleway and the steep path up to the viewpoint on the edge of Alma Wood. The ride edges will have a multi-tiered structure, with effectively 3 zones (short grass, longer grass and shrub layer). The woodland edges at the interface with other permanent open ground will have a similar tiered structure in most areas, with silvicultural management (coppicing & felling) being necessary to achieve this. Several small glades will also be present, most notably at the viewpoint and towards the southern end of Compartment 3.

The local deer population will be at a balanced and sustainable level to ensure they are not posing a threat to the ecology and natural regeneration of the woodland. Although public access and local engagement are a high priority for this site, this will be managed to ensure it is not having a major adverse impact on the biodiversity of the site. Where possible we will work with our partners at The National Trust on a landscape level to jointly managing land for conservation across the two landownerships, sharing best practice, resources and working together on issues which impacting across the landscape such as deer management. This may also include reducing the impact that grey squirrels have across the woodland landscape.

The 30 ha open ground component of the site will be retained and managed as predominantly wood pasture habitat because of its inherent ecological value and botanical diversity. The general balance of the open ground will be approximately 80% grassland & 20% trees and scrub. However, this will vary in extent across the site, for instance parts of Alma Park are likely to contain a lot more scrub than the meadows in sub-compartment 3b. Coarse plant species such as nettle, dock and thistle will not be allowed to cover more than 5% of the total open ground to prevent their domination of the grassland. The scrub/tree component will consist of small groups of trees, single trees, patches of gorse and bramble and bracken clumps. Mature trees, especially oak will be retained in the open ground for as long as possible with the objective of developing additional veterans, and any current veterans will also be retained and managed, so they live as long as possible. Conservation grazing with cattle is likely to be the preferred tool for managing this component of the site, because this will create the greatest structural diversity. However, parts of the site which have a high visitor presence, such as sub-compartment 1b next to the carpark, are likely to be unfavourable for stock grazing because of the potential conflict.

The aspiration for the future is for Londonthorpe Woods to remain a very accessible site with high quality visitor

infrastructure, including a car park, public information and interpretational materials. We will continue to promote the site as place for local people and local groups to use, and to enjoy and learn about the natural environment and trees. We will continue to maintain our partnership with The National Trust at Belton House and maintain accessible links and trails with Bellmount (the openly accessible element of the Belton House estate). We will encourage our visitors to consider green forms of travel to the site, especially using our 1km multi-user cycle path from the edge of Grantham. Heritage assets such as the firing wall will continue to be preserved and cared for. There will continue to be a good network of well-managed paths and entrances around the site, plus several surfaced routes – the multi-user cycleway and easy access path. The site will be made as safe as practical through regular safety inspections of trees, infrastructure and other hazards. Londonthorpe Woods will continue to be promoted internally as a ‘shop window’ for The Woodland Trust’s work, and used by staff groups for training, meetings, events and visits.

4. KEY FEATURES

4.1 f1 Secondary Woodland

Description
<p>The main woodland component is relatively recent secondary woodland dating from 1993-95, covering over 40ha of the site. In places, and especially to the north in compartments 1 and 3 the woodland is broken up into small blocks interspersed with open grassland habitat. The plantations contain a diverse mix of species including ash, oak, wild cherry, hornbeam, field maple, birch, rowan and lime. There are also many different shrub species present including hawthorn, blackthorn, hazel, spindle and dogwood. Ash trees in the plantations are being affected by ash dieback. Recent thinning works in 2020 and 2022 within compartments 1 and 2 has removed many diseased ash trees and also aided the development of natural regeneration within the stands. Within the new plantations there is also occasional older pre-plantation trees of oak and ash, previously positioned within former hedgerows or fields. This is most notable in compartment 3, with some of the older trees having reached veteran age and condition.</p> <p>There is also 4ha of much older established broadleaved woodland at the top of the escarpment to the East, known as Alma Wood. This is thought to have been planted around 1854, the date of the Battle of Alma, from which the name is derived. Alma Wood is very diverse in structure and species and contains a good collection of mature and veteran trees including beech, oak, horse chestnut, sweet chestnut, small leaved lime and sycamore. The exposed location at the top of the hill has led to windblow and limb damage, accelerating the development of veteran features and fungi within the trees.</p> <p>A number of smaller, more recent plantations have also been created between 2020 and 2023 on the western side of Alma Park. These were deliberately created to help screen the site from some of the large warehouses next door at the Alma Industrial Park. They contain a mixture of native broadleaves including oak, birch, rowan, alder, hazel and field maple.</p> <p>Ground flora throughout the majority of the woodland blocks is not very diverse, given the young age of most of the woodland blocks. But Alma Wood does contain some specialist woodland flora such as enchanter's nightshade and dog's mercury.</p> <p>Browsing by deer has been recorded to be having an impact on woodland regeneration in some parts of the site, and there is widespread damage to broadleaved trees from grey squirrels.</p>
Significance
<p>Londonthorpe Woods provides a significant core area of woodland habitat in a County (Lincs) of very limited woodland cover and links well with other semi-natural habitats at Belton House, creating a very large area of connected land, managed primarily for conservation and public access. Londonthorpe Woods is the closest Woodland Trust site to the charity's Head office in Grantham, and acts as a demonstration site and a place for staff training.</p>
Opportunities & Constraints
<p>Opportunities: The proximity of the site to The Woodland Trust head office in Grantham offers the opportunity for Londonthorpe Woods to be a demonstration site for the work of the charity.</p> <p>There is the ongoing opportunity to work in partnership with The National Trust at neighbouring Belton House on</p>

conservation and visitor engagement projects and to share resources.

Constraints: Ground conditions can be very wet during the winter months, limiting management operations to the warmer drier times of the year.

Factors Causing Change

Pests and diseases, especially ash dieback disease.

Increasing visitor numbers and possible disturbance to wildlife (especially dogs)

Deer browsing affecting ground flora and regeneration. S

Squirrel damage to established trees

An ageing and declining tree stock in Alma wood (compartment 4), compounded by wind damage.

Long term Objective (50 years+)

The plantations will reach maturity and become ecologically functional woodland habitats composed of a mixture of native broadleaved trees, with a variety of age classes from young regeneration to old veterans and everything in-between. The main tree species are likely to be oak, lime, field maple, rowan and birch along with minor components of hornbeam, cherry and ash. Ash dieback disease will greatly reduce the percentage of ash in the woods. Natural processes, including trees loss due to disease, will help to diversify the woodland structure, but some silvicultural intervention will be necessary to maintain a diverse resilient woodland habitat. Veteran trees will be retained for as long as biologically possible, with management carried out to ensure they have sufficient light and room to grow and develop.

The mature area of woodland known as Alma Wood will be allowed to develop through mainly natural processes, allowing mature trees to naturally senesce and become veterans. Limited intervention may be necessary though to ensure the succeeding cohort of trees is not dominated by sycamore, but instead a range of species including oak and beech are present. Regeneration of Sweet chestnut and Horse chestnut will be accepted in Alma Wood, because of their connection with the original planting.

Given the large amount of permanent open ground and wood pasture present on the site, the woodlands will only have a small number of open rides and glades. The main rides being the cycleway and the steep path up to the viewpoint on the edge of Alma Wood. The ride edges will have a multi-tiered structure, with effectively 3 zones (short grass, longer grass and shrub layer). The woodland edges at the interface with other permanent open ground will have a similar tiered structure in most areas, with silvicultural management (coppicing & felling) being necessary to achieve this. Several small glades will also be present, most notably at the viewpoint and towards the southern end of Compartment 3.

The local deer population will be at a balanced and sustainable level to ensure they are not posing a threat to the ecology and natural regeneration of the woodland. Although public access and local engagement are a high priority for this site, this will be managed to ensure it is not having a major adverse impact on the biodiversity of the site.

Where possible we will work with our partners at The National Trust on a landscape level to jointly managing land for conservation across the two landownerships, sharing best practice, resources and working together on issues which impacting across the landscape such as deer management. This may also include reducing the impact that grey squirrels have across the woodland landscape.

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

During this plan period the main objectives for the woodland component of the site will be:

- To add further structural diversity to some the earlier plantations which are not developing sufficient diversity via

natural means (compartment 3), by undertaking silvicultural management in 2025 to approx 6ha of woodland. Management will seek to remove trees being severely affected by disease (ash dieback), in particular, and aid the development of natural regeneration. The woodland edges in this compartment will also be improved and be made more tiered through these works by appropriate coppicing and felling along priority edges. This will create a lower growing shrub zone on the interface with open ground.

- To carry out priority halo thinning around veteran trees at the same time as the silvicultural works to ensure that the veterans remain vigorous and have adequate growing space.
- To ensure establishment of the newer plantations in Alma Park (compartment 5) through appropriate annual management operations such as weed control.
- To manage the local deer population through an annual deer management contract using qualified and licenced stalkers.
- Consideration will also be given to reducing the impact of grey squirrels, working in conjunction with our National Trust partners. In 2024 we aim to make a decision on whether effective control methods can be introduced which are sustainable in a landscape context.
- To allow the majority of mature trees in Alma Wood to develop and senesce through natural processes unless they pose a risk to public safety. The quantity of young sycamore developing in approx 1ha of the wood will be reduced gradually over the plan period (by volunteers). Restocking will also be undertaken in Alma Wood in any gaps created. Approx 300 new native saplings will be planted each year which will include oak, beech, lime, hazel and field maple.
- The major rides and glades will receive annual management through wide-cut mowing to ensure they stay open and sunny. In total 1000m of ride will be managed and 2 small glades of approx 0.5ha in size. Some coppicing will also be carried out along the cycleway ride to improve the woodland edge habitat and prevent encroachment. It is estimated that approx 100m of coppicing and felling will be carried out along the cycleway edge gradually over the plan period.
- and to monitor the impact of ash dieback disease and other threats through regular surveillance visits every 2 years.

4.2 f2 Connecting People with woods & trees

Description

Londonthorpe Wood is a very accessible woodland site with a large network of managed paths (over 10km) giving the visitor many different alternative routes and experiences. With 20 entrances the site is accessible from a variety of locations including the Alma park industrial estate on the edge of Grantham and National Trust owned land to the north, known as Bellmount (part of Belton House). Since 2020 the site has benefited from investment through a successful lottery-funded project known as 'Reconnecting Grantham' which has increased the standard of facilities and accessibility, as well as bringing new visitors to the wood. Access between National Trust and Woodland Trust land has also been significantly improved, with a range of landscape trails now available to follow across the 2 ownerships. Londonthorpe Woods benefits from having its own car-park, located off Five Gates Lane, which was re-built in 2021 with funding from the 'Reconnecting Grantham' project. The car park is split into 2 adjoining halves, the main half is open every day during daylight hours and has 23 spaces including 2 designated disabled bays. The other half of the car park (the over-flow) was specifically created to accommodate special groups, events and staff meetings (due to proximity of the site to Woodland Trust head office); it can hold at least 20 cars as well as mini-buses and other vehicles for group transport. The over-flow is also opened to the public at busy times of the year such as school holidays. The whole car park is closed overnight for security reasons. Toilet facilities are available at the site, with a (waterless) compost toilet located at the far end of the over-flow carpark. The toilets can be used everyday when the main car park is open. Welcome signage is in place at all entrances, and at the major gateways (carpark, Fifth Ave entrance and cycleway entry point) there are orientation panels and information about the site and surrounding landscape. The majority of paths through the site are on unsurfaced/natural ground but there are several surfaced paths. Leading

from the car park are two surfaced paths, which allow all-year round, dry access through the site for visitors. One path, known as the easy access path is a circular route on flat ground and is 1.2km in length. This path is for pedestrians and wheelchairs/mobility scooters only. A second surfaced path is a linear route travelling from the car park/Five Gates Lane to a linked right of way at The Alma Park Industrial estate. For visitors wanting to use this path from the town they need to start at the public right of way next the McCann concrete factory. The path can be used by cyclists as well as pedestrians giving it a multi-user function. It potentially provides an off-road route for 'green' travel from the town to the woods, which was the main purpose of its creation.

A significant amount of community involvement exists at the site, including volunteers carrying out practical conservation work, wildlife recording and leading guided walks for visitors. There are 2 outdoor classrooms on site for use by schools and other learning providers, which are located at the southern point of the site (in Alma Park) and next to the large pond in the northeast quadrant. The site is very used by local visitors, community groups and by Woodland Trust staff, because of the close proximity of Woodland Trust Grantham office.

There are a number of heritage assets on site, which have local historical connections. In particular these include a World War 2 (WWII) practice firing wall, and machine gun range in Alma Park. Very close to Alma Wood, but just off our estate there is also the remains of a WWII grenade store, which links very well to WWII features in Alma Park.

Significance

Londonthorpe Woods together with neighbouring National Trust land at Belton House provides a large accessible area of greenspace and woodland next to the busy and expanding town of Grantham. Visitor numbers are high, even during winter months, due to the investment of surfaced paths in the site.

Opportunities & Constraints

The proximity of the site to the edge of Grantham, combined with high quality visitor infrastructure, provides an ongoing opportunity to engage with a large and diverse population of people, about woodland conservation and wildlife.

Improved access can also introduce problems, such as illegal motorised vehicles and targeted vandalism.

Factors Causing Change

Anti-social problems arising from increased visitor numbers and accessibility. This includes vandalism, off-road motorised vehicles, wildlife disturbance by dogs and littering.

Long term Objective (50 years+)

The aspiration for the future is for Londonthorpe Woods to remain a very accessible site with high quality visitor infrastructure, including a car park, public information and interpretational materials. We will continue to promote the site as place for local people and local groups to use, and to enjoy and learn about the natural environment and trees. We will continue to maintain our partnership with The National Trust at Belton House and maintain accessible links and trails with Bellmount (the openly accessible element of the Belton House estate). We will encourage our visitors to consider green forms of travel to the site, especially using our 1km multi-user cycle path from the edge of Grantham. Heritage assets such as the firing wall will continue to be preserved and cared for. There will continue to be a good network of well-managed paths and entrances around the site, plus several surfaced routes – the multi-user cycleway and easy access path. The site will be made as safe as practical through regular safety inspections of trees, infrastructure and other hazards.

Londonthorpe Woods will continue to be promoted internally as a 'shop window' for The Woodland Trust's work, and used by staff groups for training, meetings, events and visits.

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

During this plan period the short term objective will be ensure that the site remains a high quality visitor experience, with the community involved in the care and management of the wood. Although the investment provided by The 'Reconnecting Grantham' Lottery project will end during 2024 continued maintenance of facilities will take place to ensure a high standard. The following activities will be undertaken to meet this objective:

- The annual management of an extensive network of paths, surfaced tracks (cycleway and easy access track), entrances and welcome signage and interpretation. This will also include regular annual management of the car-park and weekly management of the compost toilet. Several monitoring checks will also be undertaken over the plan period to check on the standard of visitor facilities.
 - Installation of new interpretation material to help the people understand and appreciate some of the natural and heritage assets on the site such as the WW II firing range. This will be installed in 2024
 - Regular safety checks of site hazards to ensure the site is as safe as practicable. Potential hazards include trees in high risk zones, ponds, culverts and road crossing points
 - Continued support for community volunteering at the site, in partnership with The National Trust. The following volunteering opportunities are likely to continue to be supported so long as there is interest: practical conservation volunteering, volunteer guided walk leaders and volunteer ecological recorders.
 - Regular inspection and maintenance of heritage assets such as the firing wall and machine gun firing range in Alma Park. In 2024 restoration work will be carried out on the firing wall to reduce its deterioration and remove graffiti.
 - Continued partnership working with The National Trust at Belton House to ensure a shared access offer across the landscape and to also share resources in engaging with the wider community and targeted groups.
 - The ongoing maintenance of 2 outdoor classrooms to assist school groups to use the site. A pond dipping platform will be installed in 2024 at one of the outdoor classrooms to develop the experience.
- Continued efforts to minimise anti-social activities, working with the authorities as necessary.

4.3 f3 Open Ground Habitat

Description

This key feature consists of the major areas of permanent open ground present on the site, which includes the majority of Alma Park and the open managed meadows in the north of the site: compartments 1b, 3b and 5a totalling over 30ha. The habitat throughout all these areas is mixed and diverse and there are notable patches of scrub, especially in Alma Park which contain a gorse thicket at the southern end, as well as mature single trees and groups of trees (mainly oak and ash). On the whole the grassland is neutral with a heavy clay content but it is more calcareous on the higher escarpment of Alma Park. Alma Park contains a network of damp flushes and ephemeral streams and there are also several ponds contained within the open ground, the most notable being the one towards the northern boundary (compartment 3b). In recent years cattle grazing has been used to manage approx 20ha of the open ground (compartments 3b and 5a). The open ground in 1b (closest to the car park) has been managed through annual mowing, rather than grazing animals, to avoid conflict with the high number of visitors using that part of the site. The open ground is floristically diverse in parts of the site, in part due to a 'Forest of Flowers' project in the early development years of the site, where flower seed was scattered across the ground. In the early spring there is now a particular abundance of cowslip, followed by orchids, knapweed, Lady's bedstraw, and other native species later on in the

<p>summer. A current Countryside Stewardship agreement is in place, which helps guide and financially support the conservation grazing until the end of 2029.</p>
<p>Significance</p>
<p>Native wildflower meadows are now a scarce resource in the landscape (over 90% lost since World war II). This type of habitat provides diversity within the site, as an alternative to woodland, and the open conditions are helping to support the growth and development of older trees, some of which are now becoming veterans.</p>
<p>Opportunities & Constraints</p>
<p>The open ground and meadows offer habitat diversity, and there is the opportunity to develop more veteran trees across the site through a wood pasture management approach. The floral displays, especially cowslips in the early Spring, attract and engage visitors with the site. Conservation grazing has an ongoing maintenance cost associated with it.</p>
<p>Factors Causing Change</p>
<p>A build of scrub could lead to a reduction in open ground if management operations and grazing are insufficient Annual goat willow growth is increasing in the northern section of sub-compartment 3b and could reduce the quality of the open ground.</p>
<p>Long term Objective (50 years+)</p>
<p>The 30 ha open ground component of the site will be retained and managed as predominantly wood pasture habitat because of its inherent ecological value and botanical diversity. The general balance of the open ground will be approximately 80% grassland & 20% trees and scrub. However, this will vary in extent across the site, for instance parts of Alma Park are likely to contain a lot more scrub than the meadows in sub-compartment 3b. Coarse plant species such as nettle, dock and thistle will not be allowed to cover more than 5% of the total open ground to prevent their domination of the grassland. The scrub/tree component will consist of small groups of trees, single trees, patches of gorse and bramble and bracken clumps. Mature trees, especially oak will be retained in the open ground for as long as possible with the objective of developing additional veterans, and any current veterans will also be retained and managed, so they live as long as possible. Conservation grazing with cattle is likely to be the preferred tool for managing this component of the site, because this will create the greatest structural diversity. However, parts of the site which have a high visitor presence, such as sub-compartment 1b next to the carpark, are likely to be unfavourable for stock grazing because of the potential conflict.</p>
<p>Short term management Objectives for the plan period (5 years)</p>
<p>The main objective during this plan period is to ensure that the large open areas of the site (1b, 3b and 5a) are managed to achieve a general balance of 80% grassland, 20% trees and scrub, accepting that there will be localised variation across the various compartments. Annual grazing management with cattle will be carried out in sub-compartments 3b and 5a during the months March to November, with stock being present in only one or two of the individual grazing compartments at any one time, and rotated between these compartments across the season. The aim will be to prevent the over-abundance of coarse grasses or excessive woody growth, if grazing is too light. But similarly, overgrazing will be avoided, which could lead to prolonged bare ground, poaching of the wetter areas, or domination of weed species (docks, nettle, thistle etc). Some mechanical cutting of scrub and brambles may be required, additional to the grazing, to ensure the parameters are being met, especially in Alma Park. Monitoring will be carried out over the</p>

course of the plan period to review the effectiveness of the management activities, and to determine whether the parameters are being met and if additional mechanical cutting is required in 3b and 5a. Sub-compartments 1b will be managed through annual mowing, preserving an element of uncut areas for scrub and trees to develop. The northernmost section of sub-compartment 3b will receive additional annual cutting and targeted herbicide application to control the development of young goat willow, which has become invasive. Monitoring will further ensure that herbicide is used only when absolutely necessary. Signage will be erected to inform the public whenever conservation grazing is happening on the site.

5. WORK PROGRAMME

Year	Type Of Work	Description	Due Date
2019	LC - Fly Tipping	Works associated with removing fly tipped waste – one off /unplanned litter and rubbish removal	December
2019	SL - Tree Safety Works - Zone A	Work associated with planned tree safety works alongside areas such as car parks, roadsides and boundaries	December
2019	SL - Routine Safety Work	Works associated with undertaking planned visitor and structure safety orientated actions, such as erection/creation or maintenance of safety features such as fencing, rails, re-pointing of retaining walls etc	December
2020	LC - Fly Tipping	Works associated with removing fly tipped waste – one off /unplanned litter and rubbish removal	February
2020	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	March
2020	CS - General Consultancy	Use of external consultant to support Woodland Trust site management	March
2020	SL - Tree Safety Emergency Work	Work associated with unplanned emergency tree safety works – such as clearance of fallen trees/branches and associated repairs	April
2020	LC - Fly Tipping	Works associated with removing fly tipped waste – one off /unplanned litter and rubbish removal	April
2020	CS - General Consultancy	Use of external consultant to support Woodland Trust site management	April
2020	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	May
2020	SL - Routine Safety Work	Works associated with undertaking planned visitor and structure safety orientated actions, such as erection/creation or maintenance of safety features such as fencing, rails, re-pointing of retaining walls etc	June
2020	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	July

Year	Type Of Work	Description	Due Date
2020	LC - Fly Tipping	Works associated with removing fly tipped waste – one off /unplanned litter and rubbish removal	August
2020	SL - Tree Safety Works - Zone A	Work associated with planned tree safety works alongside areas such as car parks, roadsides and boundaries	August
2020	SL - Tree Safety Emergency Work	Work associated with unplanned emergency tree safety works – such as clearance of fallen trees/branches and associated repairs	October
2020	PE - Interpretation & Signage	Works associated with the provision of visitor signage, waymarking, interpretation features and leaflets	October
2020	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	December
2020	AW - Management Access Maintenance	Works associated with the maintenance of management access infrastructure and tracks Such as repairs to vehicle entrance points, maintaining vehicle bridges and repairing / reinstating surfaced management access routes.	December

APPENDIX 1 : COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
1a	6.96	Ash	1993	High forest	Landscape factors, Legal issues	Area of Landscape Value
<p>Phase III of the planting undertaken at Londonthorpe in 1994/95. This area is more open than the previous two phases and almost a third is scattered in small blocks through the large areas of open grassland that dominate in this compartment. The species planted are oak, ash, rowan and birch with a scattering of woody shrubs and minor broadleaved species including several fruit trees (apple, pear and cherry) One veteran ash exists on the roadside in the south west corner. The soils in this compartment area appear to be dryer and less fertile than the rest of the site, therefore growth and development has been correspondingly slower. This compartment holds the car parking area for the site which was improved in 2003 with new post and rail fencing and the roadside hedge laying to reduce the extent of unauthorised dumping and anti-social behaviour which was previously prevalent, and is still occasional. The proximity to the car park and large areas of open space make this compartment very popular with Dog walkers, who make up 98% of the user base in 2012.</p>						
1b	11.14	NULL		Non-wood habitat	Landscape factors, Legal issues	Area of Landscape Value
<p>Large open grassland areas left unplanted for landscaping, amenity and habitat diversity reasons; integrating the woodland creation site with the adjacent Belton Park (National Trust). These meadow areas are very popular with dog walkers. The extent of dog walking concentrated in this area has led to problems with the amount of dog mess left on site to the detriment of usage by other groups. Now the trees are becoming well established in this compartment and the planting outline is apparent in the landscape. Managed on a 2 year cutting rotation (since 2012) to prevent vegetation succession, un-mown areas contain natural regeneration and areas of scrub. Small patches of scrub and a scattering of infield standards is desirable, but these areas should not be allowed to become too prolific.</p> <p>The area holds three veteran trees (one oak and two ash) within the open areas which are relics of the parkland landscape. These require special consideration when planning management activity. One old ephemeral pond exists on the northern boundary.</p> <p>In 2007 an area of "forest of flowers" meadow creation was completed, with deep ploughing and sowing of a mixture of annuals and perennial meadow species. While initially stunning, many of the annual species have disappeared. This makes the area look quite bare at times, and a more natural hay meadow with wild flowers would be more aesthetically pleasing and provide better opportunities for wildlife. Although high disturbance from dogs is a significant constraint.</p>						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
2a	25.17	Oak (pedunculate)	1992	High forest	Landscape factors, Legal issues, Mostly wet ground/exposed site, No/poor vehicular access within the site	Area of Landscape Value
<p>phase I of the Londonthorpe planting carried out in 1993, consisting of a mix of oak, ash, birch, field maple, sweet chestnut, rowan with some small glades of yew and patches of shrubs along the rides. The compartment, planted on the scarp slope up to the Alma Wood area, contains 4.2 ha of open space which encompass electricity wayleaves and open woodland rides. The planting is now very well established, with closed canopy and a top height of around 6-7 meters in 2013. Although not as busy as the area on the lower ground, it is still a very popular site and good views can be obtained from the top of the hill looking north east across Belton Park. An area of open ground has been left to maintain this view indefinitely.</p> <p>The area contains nine veteran trees (oaks and ash) which are relics from old hedgerows rather than open parkland trees that are found below. Management will take these trees carefully into consideration.</p> <p>The lane on the north east boundary was frequently used for fly tipping. Although not in our ownership the owner of the lane (adjacent farmer) agreed that we could gate it off in 2005. The fly tipping problem has ceased.</p> <p>The woodland is bounded on the upper edge by cpt 4 -Alma Wood - and the two are now integrating well.</p>						
3a	6.72	Ash	1995	High forest	Landscape factors, Legal issues	Area of Landscape Value
<p>Phase II of the planting at Londonthorpe carried out in quarter 1 1994. The species are the same mixture as the other phases: mostly oak and ash with field maple, birch, rowan, sweet chestnut, and a wide range of native shrub spp. The soils in this area are richer/more moist than in 1A and growth has been correspondingly better. This subcpt is intimately mixed with large areas of open space -3B. It contains 5 veteran trees in the old hedgerow that bisects north/south and one open park tree, again all oak and ash . One or two of these are little more than stumps with secondary growth, but represent good deadwood habitat, contain hollows and areas of rot. Management of the site will preserve these old parkland relics, together with the old hedge-line so that its species can in time colonise the surrounding woodland area. As the wood establishes, this area has produced a great deal of natural regeneration of ash and hedgerow species which are now blurring the distinction between planted and open areas nicely. Some interesting successional habitats are emerging.</p> <p>In 2006 an additional area of planting was carried out by central office staff members.</p>						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
3b	6.66	NULL		Non-wood habitat	Landscape factors, Legal issues	Area of Landscape Value

Large open grassland areas left as unplanted, mainly for landscaping reasons: to integrate the woodland creation site with the adjacent Belton Park (National Trust). The large areas of open space are cut on a 2 year rotation to prevent vegetation succession, but with patches of scrub and occasional self-set infield trees retained for added interest. A “forest of flowers” area was created in 2007 in the North West corner of the compartment, which is cut annually. Sedge and goat willow regen are creeping in to the wetter areas of this.

The paths through are cut regularly and the area is well used. A small area of planting was carried out by central office staff in spring 2006.

The area holds five veteran trees - which are relics of the previous parkland landscape. These require special consideration when planning management activity.

A pond was dug at the northern boundary at the time of planting but this has become dried up and a fairly ephemeral wetland feature over the years.

All over the sub compartment natural regeneration of ash and hedgerow species is blurring the distinction between planted areas and open ground

4a	4	Sycamore	1856	High forest	Landscape factors, Legal issues, No/poor vehicular access within the site, People issues (+tve & -tve), Site structure, location, natural features & vegetation	Area of Landscape Value
----	---	----------	------	-------------	---	-------------------------

An area of mature woodland on top of the scarp slope known locally as “Alma Wood”. Believed to be have been planted in the mid-1850s following the battle of Alma in the Crimean War which took place 20th September 1854. The woodland is an intimate mixture of typical parkland landscaping species - beech, sycamore, horse chestnut, oak, sweet chestnut and ash with a few natural colonisers - field maple and birch. Based on an old hedge line the wood has since been colonised by a variety of native woodland plants such as dogs mercury, wood anemone, wood dock, enchanter’s nightshade and cuckoo pint which in some places gives the wood flora an ancient woodland feel. Given a long period of under management, its exposed position and age , the wood has suffered considerably from storm damage in recent decades and a large amount of deadwood habitat has been produced which is rare in the area. A large amount of standing deadwood is also developing naturally as a result of tree senescence: ranging from branch death and internal cavities to whole dead trees. There is fine balance between managing tree safety above the well-used path, retaining over mature standards and deadwood habitat for a long as possible.

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
<p>The wood on the whole appears very robust, despite a relatively narrow age range, and previous canopy gaps have rapidly filled with regeneration which appears to be mostly ash and sycamore but also with some oak and beech.</p>						
5a	15.06	NULL		Non-wood habitat	Archaeological features, Landscape factors, Legal issues	Access Land
<p>An area of open rough pasture donated to the Trust in 1993 by South Kesteven District Council for the purpose originally of tree planting and public access provision. Due to its high conservation interest, the area has since been managed as open grassland and scrub under a Countryside Stewardship Scheme which encompassed hedge planting, fencing of the site, the removal of eyesore structures and the establishment of a grazing regime to maintain a varied sward and keep back scrub encroachment. Grazing the site is difficult due to its location, without proper made up access for stock, and the occasional problems with vandalism. The area adjoins the Trust's Londonthorpe Wood to the north.</p> <p>The area comprises a mixture of neutral and calcareous grassland interspersed with damp flushes, ephemeral stream lines and patches of scrub concentrated mainly at the south end and in the northern field. At the south end is a large patch of gorse/ bramble scrub colonised by hawthorn where the young growth is protected. In the northern half of the site, seperated off by a newly established hedgeline the areas of dry grassland are mixed intimately with dense patches of hawthorn and also thistle and nettle patches (which occur on the damper east boundary). There are many anthills scattered all over the site and the pockets of scrub and successional habitat make it good for insect life. The area of open grassland on site is curenly approximately 11 ha. One or two older ex-parkland trees are approaching veteran status as growth tails off and these are to be managed along with the parkland trees in adjacent Londonthorpe wood.</p> <p>The site was previously used as a rifle range but almost all structures have since been removed leaving a couple of retaining walls which are currently in a reasonable condition.</p> <p>Due to its position next to the housing estates on the north side of Grantham, the area is heavily used for recreation by loca people.</p>						

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.

Windblow/Windthrow

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

Registered Office:

The Woodland Trust, Kempton Way, Grantham, Lincolnshire NG31 6LL.

The Woodland Trust is a charity registered in England and Wales no. 294344 and in Scotland no. SC038885. A non-profit making company limited by guarantee. Registered in England no. 1982873. The Woodland Trust logo is a registered trademark.