

Greater Manchester Forest Plan 2020-2029



Forestry England
forests and woodlands
have been certified in
accordance with the UK
Woodland Assurance
Standard (UKWAS)



Summary

The Greater Manchester Forest Plan comprises of 13 separate woodlands that cover an area from the centre of Manchester north and east towards the West and South Pennine Moors Sites of Special Scientific Interest (SSSI). The woodlands have been designed as community woodlands that comprise of an extensive network of surfaced paths that lead visitors through broadleaved woodland, open grassland and heathland habitats.

Much of the area was former industrial and the new woodlands provide a valuable green space that helps improve air quality, bring wildlife back into the city and encourage the public to enjoy the outdoors.

The woodlands were created as part of the [Newland Project](#) and Capital Modernisation Fund (CMF) forming part of the [Red Rose Forest](#)– [Greater Manchester Community Forest](#), [Pennine Edge Forest](#) and are managed today by [Forestry England](#) forming part of the [City Forest Park](#) initiative in partnership with Manchester [City of Trees](#) , the [Pennine Edge Forest](#) and have recently become part of the new [Northern Forest](#).

Forestry England run and support community groups and local businesses to run health and education activities throughout the year . These are designed for the whole community and varying user groups to enjoy and appreciate the woods on their doorsteps.

Central Forest District - Greater Manchester Forest Plan

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1. What are Forest Plans?

Forest Plans are produced by us, Forestry England, as a means of communicating our management intentions to a range of stakeholders. They aim to fulfil a number of objectives:

- To provide descriptions of our woodlands to show what they are like now.
- To explain the process we go through in deciding what is best for the woodlands' long-term future.
- To show what we intend the woodlands to look like in the future.
- To detail our management proposals, for the first ten years so we can seek approval from the statutory regulators.

The Forest Plan is a 'felling and restock' plan and is written at a landscape scale and does not set out the detailed yearly management operations for each small piece of a wood, known as a coupe*. It is not possible to say which year a particular operation will take place, but we can say in which five-year period it should happen. Before operations are undertaken Operational Plans are written by the forester before each felling and restock operation takes place. These outline in detail the site specific details that need taking into account when undertaking the felling and restocking operations.

All tree felling in the UK is regulated and a licence is required before trees can be felled; the scale of tree felling in Central England Forest District, which this plan forms part of, is such that the Forest Plan is the best mechanism for applying for this licence. Responsibility for checking that the plan meets all the relevant standards and statutes lies with the Forestry Commission, formally known as Forest Services. If all the criteria are met, full approval is given for the management operations in the first ten years (2020 - 2029) and outline approval for the medium term vision (2030 - 2069).

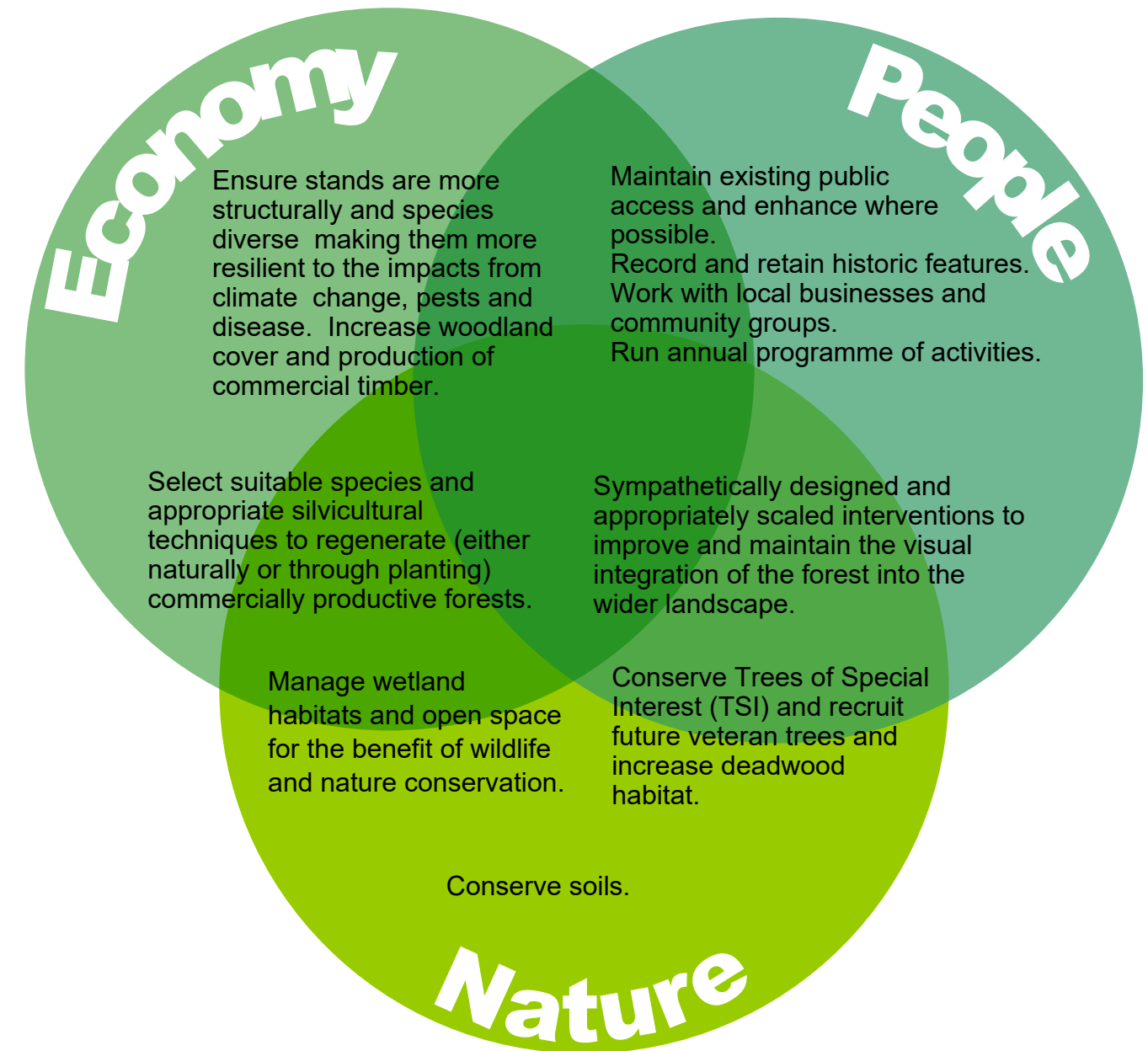
All of our forests and woodlands in this Forest District are certified by the Forest Stewardship Council® (FSC®) and the Programme for the Endorsement of Forest Certification™ (PEFC™). All Forestry Commission forests and woods are independently certified as sustainably managed, to continue to benefit future generations.



We use some technical words and phrases in the text because they best describe what we are doing. These technical words are identified throughout the plan with an asterisk * and their meaning shown in a glossary at the back of the plan (Appendix II).

2. Management Objectives

Protecting and Expanding England's Forests and Woodlands and Increasing their Value to Society and the Environment



We are growing the future:

We think beyond our own generation. We are developing forests today while carefully planning the

The Greater Manchester woodlands have been created over the last 30 years as part of a regeneration project to enrich the local environment following the decline of the traditional mining and heavy industry. The most recent planting sites (Hurst, Horrocks) have been established on ex-agricultural land and were chosen due to their close proximity to local communities and linkage to existing sites. The early plantings were undertaken as part of the [Red Rose Forest*](#), [Newlands*](#), [Pennine Edge Forest*](#) and Capital Modernisation Fund (CMF) project and today lies at the centre of [Manchester City of Trees*](#) and [City Forest Park*](#) initiative and lies within [The Northern Forest*](#),

Forestry England aims and objectives for the Great Manchester Forest Plan has been to promote active and healthy living, in a safe traffic free environment. Over the last 30 years these sites have been transformed from their former derelict sites into a diverse mixture of grassland and woodland habitats that is enjoyed by thousands of people every week.

Forestry England with the help from local community groups, volunteers and businesses have helped the forest take shape and continue to grown and develop.

Looking forward Forestry England will help secure and grow the economic, social and natural capital value of these woodlands for the local communities and businesses



Pic.1 Heather developing along woodland edges



Pic.2 Drinkwater 'Big Forest Find' planting day 2020

2.1 Economic

Currently the only annual income generated from these woodlands is through grazing agreements, wayleaves, farm business tenancies, fishing lease, recreation, sporting and filming events. Over the next 10 years harvesting operations will begin across all sites as outlined in the felling maps and this will generate a sustainable income source through the production of approximately 2,000 cubic meters of timber in each 5 year period.

Annual maintenance costs are quite extensive due to the 34km of paths, 60ha of open space and infrastructure that require checking and managing at regular intervals throughout the year.



Pic.3 Cut open grassland

To help reduce the annual mowing cost and increase the production of timber the area of land currently managed as open land will be reviewed to assess ecological value. A proportion of these areas that have limited biodiversity will be planted with trees to extend adjacent woodlands and produce commercial timber in the future.

33ha of ash has been planted covering 11% of the woodland area and this has now become infected with a pathogen called Chalara ash die back which is killing ash across Europe. This disease kills the young ash before it matures and will have a major impact on future timber yields and the British countryside. To address this ash will be removed as stands are thinned in groups to create space for the areas to be replanted with more resilient tree species. This will reduce the woodlands productive capacity for the next 30 years until the new stands start to produce timber resources from thinning.



Pic.4 Visible signs of Chalara ash die back in young and mature ash trees

Forestry England will continue to work with others to keep the Greater Manchester Woodlands a special place for wildlife, for people to enjoy and for businesses to thrive – encouraging and supporting new and existing business activity. Due to the small size of these woodlands and the level of public access Forestry England recognises that the income from such sites will be more limited but their value to the local community and the ecosystem-services* they provide makes these sites some of our most valued assets.

2.2 Social

The key management objective for these woodlands from their conception back in 1992 was for them to provide a safe and welcoming green spaces for families and to bring communities together. Through the provision of surfaced trails which allows unrestricted clean access underfoot for 12 months of the year, public events to promote the sites, the links with local resident over the last 30 years has



Pic.6 Internal views at Drinkwater

surrounding countryside and city landscapes.



Pic.7 Forestry staff helping visitors



Pic.5 Valley side suitable for planting in Hurst Wood

flourished. A wide variety of groups as well as families and individuals have become actively involved in helping foster a sense of ownership of these public forests and help to shape them as they grow. Hundreds of people use the woodland every day and thousands each week. Each woodland has its own key view points where visitors can enjoy spectacular views over the



Pic.8 Moston Vale

These as well as the internal views of water features, historical buildings/structures, flora and fauna are what makes these woodlands so popular. With links to the National Cycle Routes and the growing popularity of cycling as a leisure activity the woodlands have provided a safe traffic free environment for cyclists of all abilities and have been used to host bikeability training days. A 'blue' moderate ability mountain bike route has been created in Waterdale as is a popular feature for the site.



Pic.9 Cyclist in Waterdale

Forestry England also organises its own events calendar each year with educational guided walks, tree planting and regular volunteer activities on site.



Pic.10 Forestry England guides events

Strong links have been established with a number of groups including Salford University, Willmott Dixon, Salford Friendly Anglers and the Swinton & Pendlebury Angling Association who let the fishing rights on 5 ponds and help manage the aquatic vegetation on and

around the ponds.

The open feel on many of the paths has been lost now the trees are becoming established and this has shaded out the ground flora. When forestry operations are carried out the tree line adjacent to access routes will be moved back at varying depths to open up the paths and allow a herbaceous layer to become established and provide an important link between the short vegetation, shrub layer and tree canopy. By varying the depth of the woodland edge it will help remove the 'hard' linear edge which is now forming and provide sheltered sun traps for wildlife and increasing diversity and the aesthetic value of the woods to visitors.



Pic.11 Established woodland enclosing the footpath



Pic.12 Forestry England staff and volunteers at the 'Big Forest Find' public event 2019

The cultural heritage and links to past land uses can be seen all around you as you walk around the woodlands along the surrounding skyline. Remains of Belfield print works are still visible amongst the emerging woodland and the entrance stone to the site lies as a reminder to visitors where they are and the sites significance in the development of the area. In Drinkwater the ruins of the main entrance to Irwell House which was used as a



Pic.14 Waterdale multi user route passing through disused railway tunnel

smallpox hospital still survive. The concrete pad where the old water works once stood between Drinkwater and Waterdale provides the ideal venue for the current events area and the impressive railway viaduct and tunnel create impressive architectural features. None of these features have been scheduled for conservation but will be taken into consideration when operational plans are written to ensure features of cultural significance are conserved and enhanced where possible.

The



Pic.15 Moston Vale surfaced path

woodlands are easily accessible on foot from nearby residential areas and two small car parks have been provided at Horrocks and Silverdale. Within each woodland picnic areas, seating and Hurst and Horrocks have interpretation panels which shows the facilities on site and wildlife visitors may see.

2.3 Environmental

The woodlands have created a wildlife sanctuary in the heart of Manchester, Rochdale, Harpurhey and Bolton urban and ex-industrial landscape and along with the new planting on ex-agricultural land at Horrocks and Hurst each woodland now provides a valuable oasis for wildlife which now supports hundreds of species. At a 'Big Forest Find' event that took place in 2019 where members of the public along with Forestry England staff found and recorded 207 different species of flowers, insects and mammals on just one day [Link iNaturalist](#). One of the key habitats that has helped the woodlands develop and diversify the species found there are the water bodies. The rivers, streams, ponds and wet woodland habitats

create wildlife corridors linking up the varying woodland and grassland habitats that have established around them. Today sandmartins, kingfisher and barn owls are feeding and nesting within the woodlands while high above buzzards and Peregrine falcons patrol the skies.

Due to the young age of the woodlands the number of Trees of Special Interest * (TSI) is limited and the quantity of large diameter standing deadwood scarce or absent in some woodlands. To increase the volume of deadwood and TSI two areas have been identified as natural reserves where the woodlands will be left to evolve naturally and allow for a build up of deadwood. Other areas shown on the Silvicultural Systems* map will be managed as long term retention and here trees will be retained beyond their normal rotation length and allowed to reach their biological maturity.

Forestry England staff will also identify individual trees to be managed as future TSI and ensure these are retained in perpetuity to ensure the volume of deadwood increases steadily and can be maintain long into the future.



Pic.16 Fungi on dead tree stump

Himalayan Balsam, Japanese Knotweed and Giant Hogweed are now present in many of the woodlands. Forestry England is actively managing these invasive weeds and has a 5 year management plan which in the first year has proved very successful. As a trial following treatment some areas will be planted with evergreen conifers to help suppress any regrowth and see if this will provide a more environmentally friendly control measure longterm.



Pic.17 Elephant hawk moth

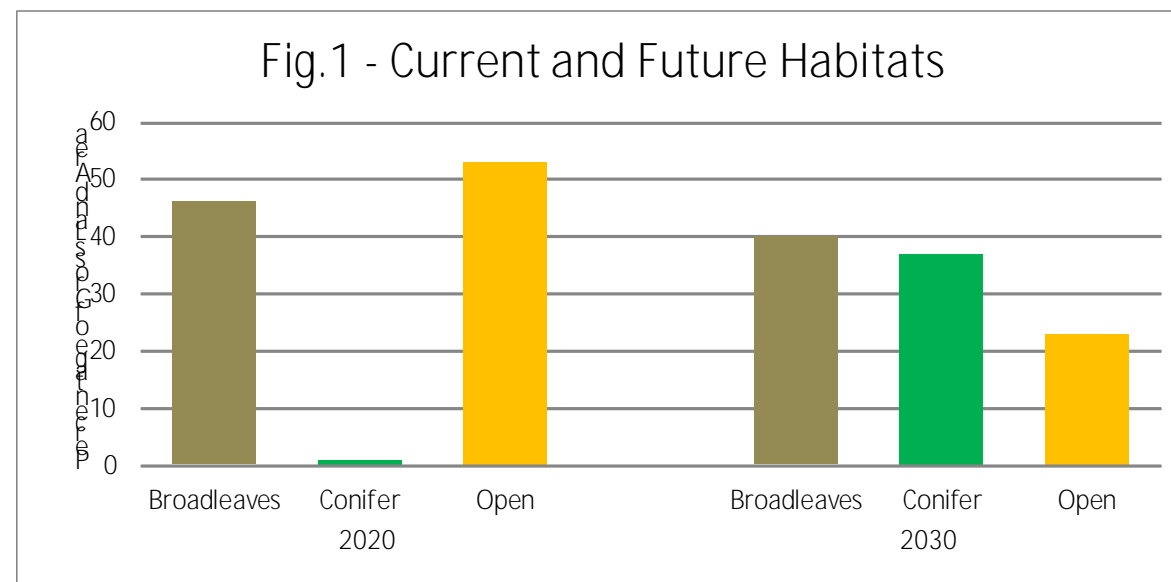
Before any operations take place in the woodlands the forester will work with the ecologists and beat staff to identify opportunities and potential threats to the woodland ecosystem. Then through careful planning when forestry operations are carried out the available habitats for wildlife will be diversified and the age structure, variety of tree species and light levels within the woodlands will create a diverse mix of feeding and nesting sites.



Pic.18 Salad Burnet

3. Intended land use

The woodlands' composition and structure will change gradually over time, through the introduction of small-scale group felling operations and an expansion of woodland areas. The current woodland areas is only 47% of the land area and this will be increased to 77% and the open areas reduced from 53% to 23% by the end of the plan.



The new planting stock will allow for the species that will be better suited to the predicted climate that Greater Manchester will experience in the later part of the 21st Century. Evergreen conifers will be used to replace the infected ash stands and provide a greater level of cover for wildlife through winter, whilst producing commercial logs.

Ash will be lost due to Chalara ash die back and this will create a dramatic change in the short term, especially in Horrocks and Hurst Wood where ash dominates many stands, (see current species map). Prior to any planting being undertaken the forester will assess each site looking at aspect, soils and hydrology and then using the Ecological Site Classification (ESC) * models select a range of species that are best suited for each site and that have been sourced from latitude 2 to 5 degrees south of



Pic.19 Isolated evergreen conifers in the deciduous woodland.

Manchester.

This will increase the tree's suitability to future climatic conditions and increase the chances of the woodland remaining a healthy productive ecosystem long into the future. Suitable species for the region are aspen, black poplar, hornbeam, alder, Norway maple, Pedunculate oak, Wildservice tree, small-leaved lime, walnut, Douglas fir, Lawson cypress, Maritime pine, Scots pine, Oriental spruce, coastal redwood and Sitka spruce.

No one species will dominate the future woodland and management operations will look to develop stands of high quality timber in both the broadleaf and conifer stands .

Rabbits, Hares, Muntjack and Roe deer are present in the area and these will need to be managed to ensure the trees are able to become established. High levels of squirrel damage is occurring adjacent to Philips Park in Waterdale and Forestry England will work with neighbouring landowners to control grey squirrels and reduce the number of trees they are now killing.

Table.1 The Greater Manchester Forest Plan Contribution towards the Central District and commitments to UKWAS and UKFS

	Forest Plan Area	Forest Plan Percentage	Forest District Area	Forest District Percentage
Total Area	313.6	100	28,170	100
Total Wooded Area	242	72	23,909	84.9
Open Habitat (>10%)	71.6	32.7	4,181	14.8
Natural Reserves - Plantation (1%)	10.5	3.3	174.3	1.4
Natural Reserves - Semi Natural (5%)	0	0	396	3.3
Longterm Retentions & Low Impact Silvicultural Systems (>1%)	234.9	74.9	14,524	51.6
Area of Conservation Value (>15%) including LISS	302	96	16,194	57.5

National Strategy	District Strategy	Forest Plan Objective	Monitoring
Economy: 1) Maintain the land within our stewardship under UKWAS certification, 2) Improve the economic resilience of our woods and forests, 3) Encourage and support business activity on and around Forestry England estate.	1) Adapting our management practices to suit the character and requirements of local woodlands whilst satisfying national standards and business requirements. 2) We will use the opportunity presented by additional, unscheduled clear felling as a result of disease control to accelerate the diversification of both conifer and broadleaf species appropriate to each local area and site type, and in some areas trialling species which may not have been previously planted in forest conditions, using a range of silvicultural systems.	Establish economically and ecologically sustainable crops employing low impact silvicultural systems wherever possible. Establish an appropriate balance between open space and woodland. Ensure stands are more structurally and species diverse making them more resilient to the impacts from climate change, pests and disease.	This will be reviewed every 10 years as part of the FP review process and any changes recorded in the sub compartment data base. ESC* will be used to help select suitable species for each restock site and any new planting sites. Once the crops start to produce commercial timber, production forecasts will be run to quantify the resources available and ensure longterm sustainable forest management. Production forecasts will be run annually and data form part of the Central Districts business plan.
Environment, Nature and History: 1) Improve the resilience of the natural environment of the Estate under our Stewardship, 2) Realise the potential of the Public Forest Estate for nature and wildlife, 3) Maintain and improve the cultural and heritage value of the Estate.	1) Adapting more sensitive timber harvesting arrangements and adopting recent FC guidance on forest operations to reduce the impact of forest operations on soils and ground vegetation on sensitive sites. 2) Contributing to and undertaking control programmes to limit the impact of deer and other species on woodland habitats in order to reduce the adverse impacts of grazing and disturbance to native habitats and their flora and Fauna 3) Where possible, work with interested parties to explore ways to maintain or improve features of cultural or heritage value to the local community.	Employ minimal invasive silvicultural techniques to maintain soil structure, stability and site infrastructure. Identify existing locations of TSIs* and demonstrate appropriate management to recruit future veteran trees. Identify appropriate areas to increase deadwood habitat and propose management to maintain a sustainable resource. Identify key species and habitats and make appropriate provision for their requirements. Demonstrate appropriate management to enhance and maintain the ecological value of the non-designated priority habitats and reduce the impact from invasive species.	Silvicultural systems are shown in the forest plan and will be reviewed prior to any operations taking place and maintain soil stability. Trees of Special Interest (TSI) and deadwood habitats will be identified and recorded on the conservation layer of ensure they are retained in perpetuity. Grassland and wetland habitats will be managed sympathetically through a varied cutting programme to create a diverse habitat that provides a wide variety of secondary woodland habitats for the local fauna. New planting will be used to suppress invasive vegetation. The above will be monitored by the beat team and recorded in the operational plans with any major changes being recorded at the 5year design plan review.
People: 1) Encourage communities to become involved in the Forestry England estate, its management and direction, 2) Provide high quality woodland-based recreational opportunities for people and business, 3) Enable everyone, everywhere to connect with the nations' trees and forests so that they understand their importance and act positively to safeguard forests for the future.	1) Provide safe and accessible woodlands. 2) Offering opportunities for quiet recreation and adventurous activities, to enable people to experience the potential health and wellbeing benefits. 3) Developing partnership with private businesses and public bodies to expand and improve recreational opportunities across the estate. 4) Creating a wide variety of opportunities for schools, groups, families and individuals to engage with and learn about trees and forests in accordance with the National and District Strategies. 5) Encouraging third party environmental educators and other partners to offer learning opportunities on the public forest estate	Diversify species composition and structure, and plan sympathetically designed and appropriately scaled interventions to improve and maintain the visual integration of the woodlands into the wider landscape. Maintain existing public access and enhance where possible. Work with local businesses to provide a wider range of services and facilities on site. Continue to develop and run a programme of events and activities for volunteer group and members of the public.	As part of the design plan review process the visual impact of harvesting operations on landscape will be made and the viewpoints and vistas assessed to ensure their design is still appropriate. Any changes will be recorded in the revised plan. Public access and facilities will be monitored and maintained by the beat team on a regular basis throughout the year.

Appendix I

Glossary

Canopy

The mass of foliage and branches formed collectively by the crowns of trees.

Clearfell System

The removal of all trees in one operation (>0.5ha).

City of Trees

City of Trees is an innovative and exciting movement in Manchester aimed at transforming underused, unloved woodland and planting 3 million trees.

Coupes

Areas of forest that have been or will be managed together.

Ecological Site Classification (ESC)

ESC is an online tool set up by Forest Research that assists a user in choosing a tree species for a given site. The system is built on four climatic variables and two edaphic (soil) properties.

Ecosystem

An ecosystem includes all the living things (plants, animals and organisms) in a given area, interacting with each other, and also with their non-living environments (weather, earth, sun, soil, climate).

Ecosystem– Services

Are the variety of goods and services upon which people depend, and that arise from ecosystems. Ecosystem Services are commonly categorised into Provisioning (e.g. water, food production), Regulating (e.g. the control of climate and diseases), Cultural (e.g. aesthetic values, recreational opportunities), and the underpinning Supporting services (e.g. crop pollination).

England Forestry Strategy (now England's Trees Woodlands and Forests)

Describes how the Government will deliver its forestry policies in England, and sets out the Government's priorities for the next five to ten years.

Forestry England

The part of the Forestry Commission that following devolution is responsible for the management of the Public Forest Estate woodlands in England.

Forestry and Water guidelines

Forests and Water is one of a series of seven guidelines that support the United Kingdom Forestry Standard (UKFS). The UKFS and guidelines outline the context for forestry in the UK; set out the approach of the UK government to sustainable forest management; define standards and requirements; and provide a basis for regulation and monitoring; including national and international reporting.

Forest Plan (FP)

An approved plan that outlines felling operations over a 10 year period, outlining proposals over the next 50 years. The FP's are reviewed every 5 years and redrawn and approved every 10 years.

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Forest Stewardship Council (FSC)

An internationally recognised body made up of non-government organisations promoting sustainable forest management to the forest industry and consumers.

Historic Environment

The physical remains of every period of human development starting from 450,000 years ago and include earthworks, buried remains, structures and buildings.

Landscape Character

England is renowned for its rich, diverse and beautiful landscapes which have their own distinct local character. These have been shaped over many thousands of years by natural influences such as soil and landform and by generations of human activity.

Long Term Retention

Trees that are being retained beyond their normal economic / commercial age.

Low Impact Silvicultural Systems (LISS)

Describes a number of felling systems (shelterwood, group felling, selection systems) which avoid large-scale felling coupes and which maintain forest canopy at one or more levels.

Newlands

Launched in the summer of 2003 by the Forestry Commission and the regional development agency, Newlands was an exciting regeneration programme to reclaim large areas of derelict, underused and neglected (DUN) land across the North West of England and transform it into thriving, durable, community woodlands

Native (and honorary-native) The trees making up the woodland are part of England's natural (or naturalised) flora. Determined by whether the trees colonised Britain without assistance from humans since the last ice age or in the case of 'honorary natives' were brought here by people but have naturalised in historic times.

Natural regeneration

The growth of trees from seed found in the soil or cast from adjacent trees and shrubs.

Natural Reserve

Natural reserves are predominantly wooded, are permanently identified and are in locations which are of particularly high wildlife interest or potential. They are managed by minimum intervention unless alternative management has higher conservation or biodiversity value.

Northern Forest

The Northern Forest stretches from Liverpool and Chester to Hull, through Manchester, Leeds and Sheffield and is aimed at planting 50million trees and increasing the area of woodland cover and community woodlands.

Glossary

Open grown trees

Trees that have been given space to develop a large crown and natural shape as opposed to tree planted closely in a plantation managed for timber and biomass.

Operational Plans (Ops1)

Detailed site plans that are prepared in advance of all major forest operations and identify site constraints, opportunities and areas requiring special treatment or protection.

Pennine Edge Forest

The Pennine Edge Forest is the woodland and environmental initiative for the east of Greater Manchester conurbation and includes the boroughs of Oldham, Rochdale, Stockport and Tameside.

Public Forest Estate (PFE)

The woodlands managed by Forestry England which would include both freehold and leasehold land.

Public Rights of Way (PROW)

Access routes open to the public through legal designation.

Red Rose Forest

Red Rose Forest launched in 1992, with the ambition to transform the landscape of Greater Manchester through the planting of trees, and the creation, and management of woodlands.

Restocking

The re-establishment of trees where felling has taken place. Restocking may be achieved through natural regeneration, but it is more usually associated with replanting.

Ride

Forestry term for unsurfaced roads, paths and tracks within a woodland.

Secondary Woodland

Woodlands that have been established on land that was formally used as pasture, meadow, arable, quarries, etc and has not continually been wooded

Selective Felling

Where individual trees of varying sizes are selected and removed from a stand. The whole stand is worked, and the aim is to maintain full stocking of all tree sizes and ages, from seedlings to mature trees, in any one area.

Silvicultural Systems

Techniques of managing a forest through a variety of cutting / felling patterns over varying time scales.

Sub-compartments

Areas of forest comprising a more or less homogeneous crop in terms of age, species composition and condition. Their boundaries may change as the forest develops after felling and restocking.

Glossary

Strategic Plan

Serves as a guide to the management of woodlands within Central England Forest District. It divides the district into zones for the purpose of management, and ensures that forestry activities reflect the local ecological, social and cultural individuality of woodland. Strategic objectives for each zone are presented within the context of the Government's strategic priorities for forestry in England (e.g. forestry for rural development; forestry for economic regeneration; forestry for recreation, access and tourism and forestry for the environment and conservation).

Thinning

The removal of a proportion of the trees in a sub-compartment to improve the quality of the remaining trees, accelerate individual tree growth and provide income.

UK Forestry Standard (UKFS)

Outlines the Government's criteria and standards for the sustainable management of forests in the UK.

UK Woodland Assurance Standard (UKWAS)

A voluntary scheme for the independent assessment of forest management in the UK. The Scheme has been developed by a partnership of forestry and environmental organisations in response to the growing consumer demand for timber products from sustainably managed forests.

Understory Woodland Species

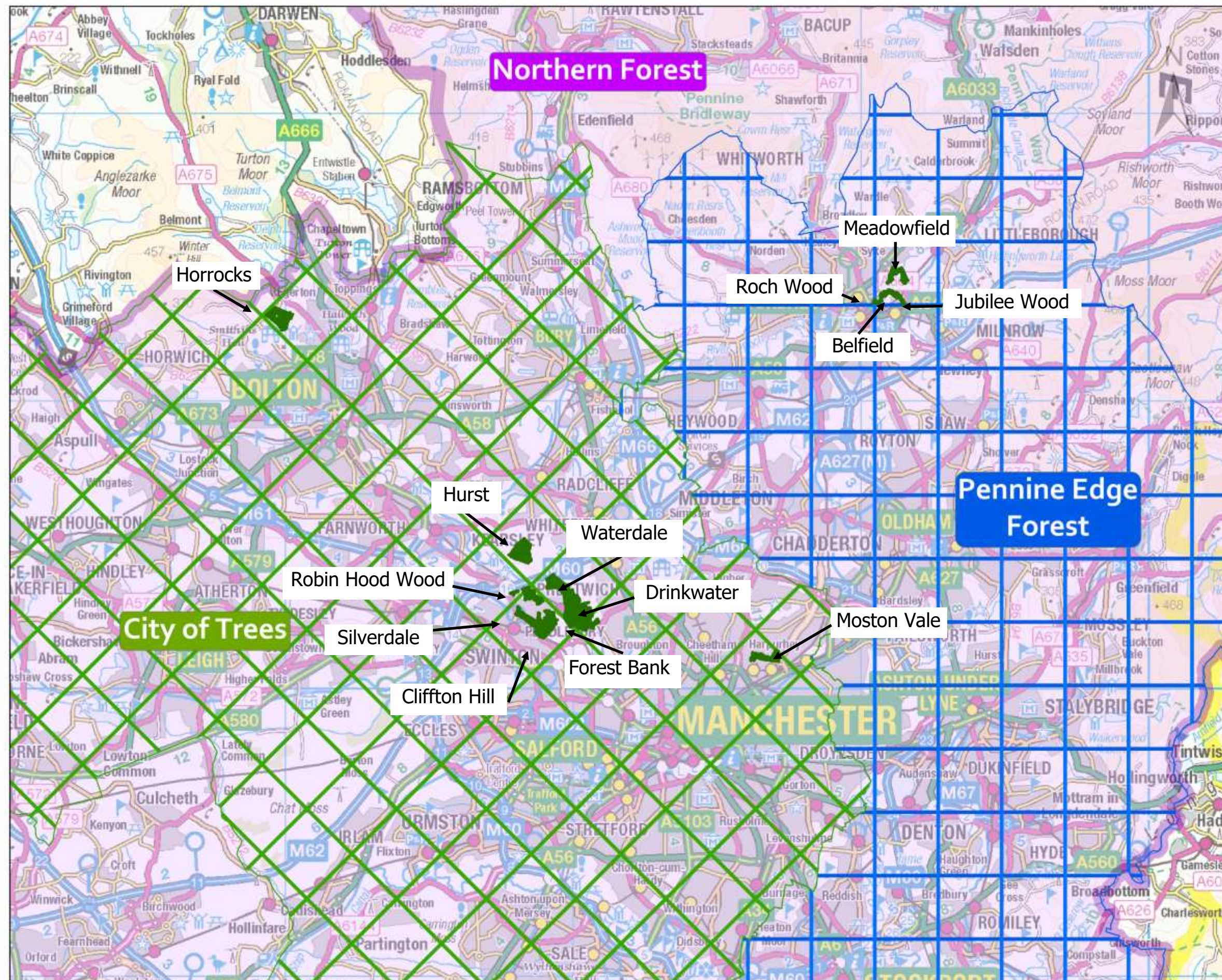
Minor tree species that live under the top canopy trees, or are pioneer species that arrive in clearings before climax tree species become established. Once the overstory becomes established these minor species are usually restricted to the woodland edge where light levels allow them to survive.

Trees of special interest (TSI)

A tree that is of interest biologically, aesthetically or culturally because of its age, or a tree that is in the ancient stage of its life, or a tree that is old relative to others of the same species.

Yield Class

Yield class is a measure of the growth rate of a tree crop and is the maximum average rate of volume increment (increase) that a particular crop can achieve. For example, a crop capable of a maximum annual increment of 14 m³ per hectare has a yield class of 14.



Central Forest District

The Greater Manchester Forest Plan comprises of 313.7ha of mainly new woodlands set in the heart of Manchester, Rochdale and on the outskirts of Bolton.

The community woodlands were planted between 1985 and 2000 and are dominated by broadleaved species. The woodlands incorporate a good network of paths and open spaces to create an easily accessible facility for the local community to enjoy.

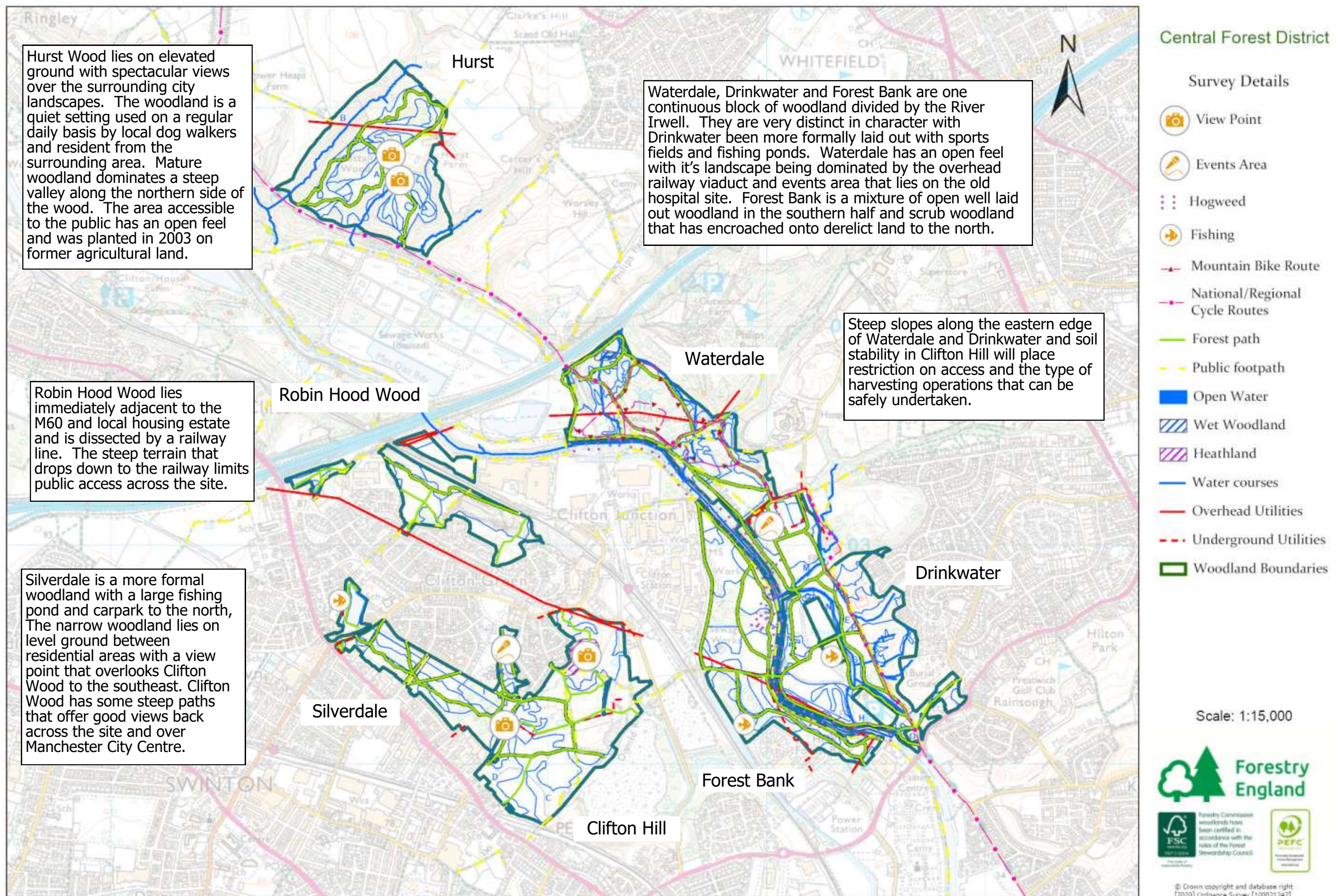
Each woodland has its own distinct characteristics with strong links still visible to the area's industrial heritage, open space and wetland habitats.

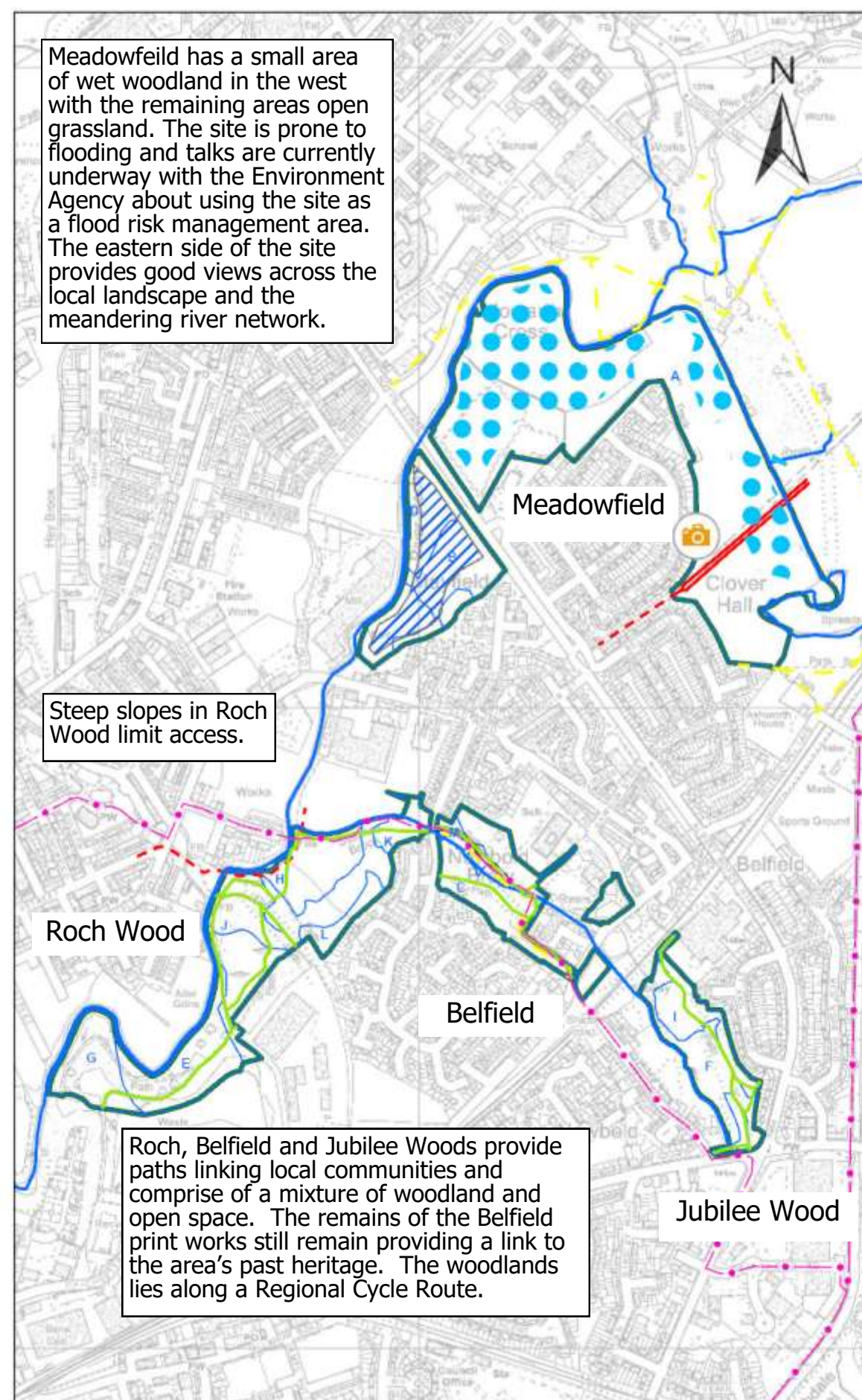
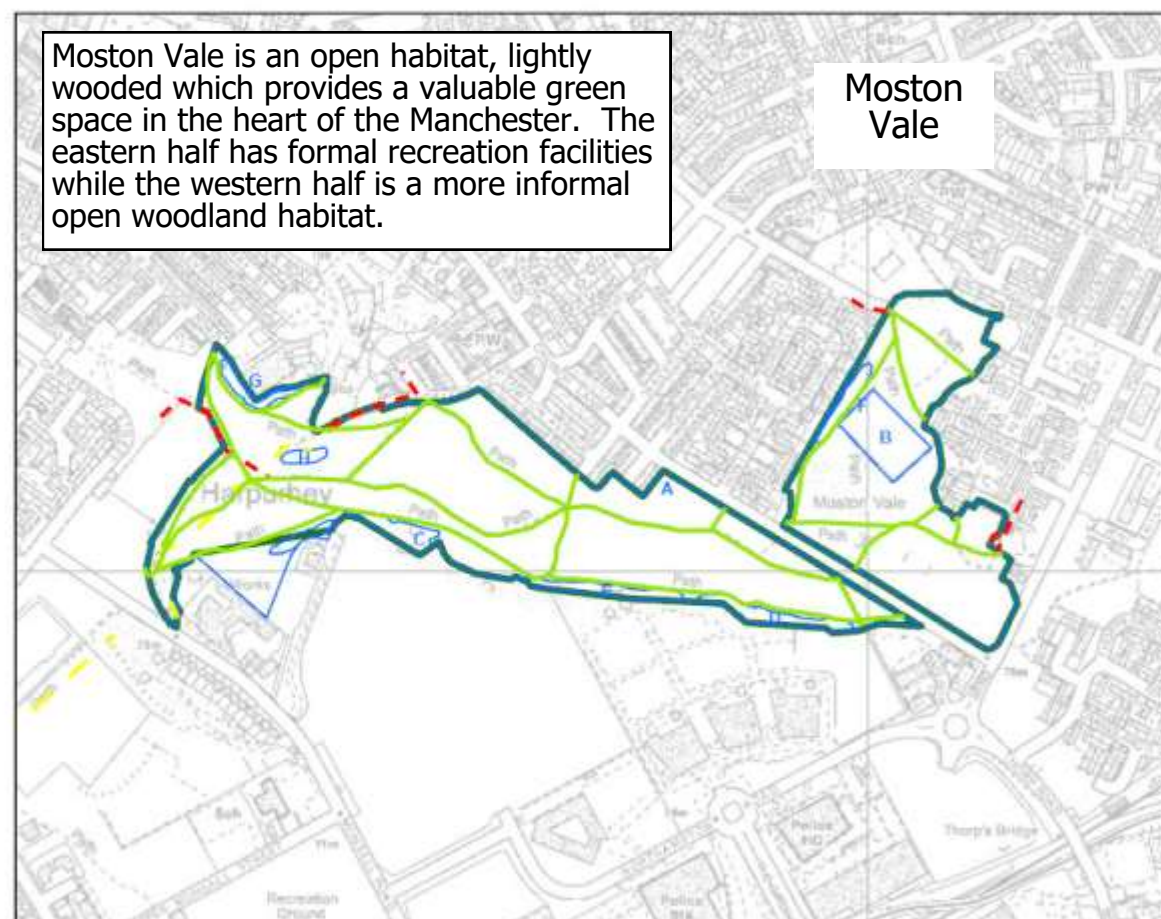
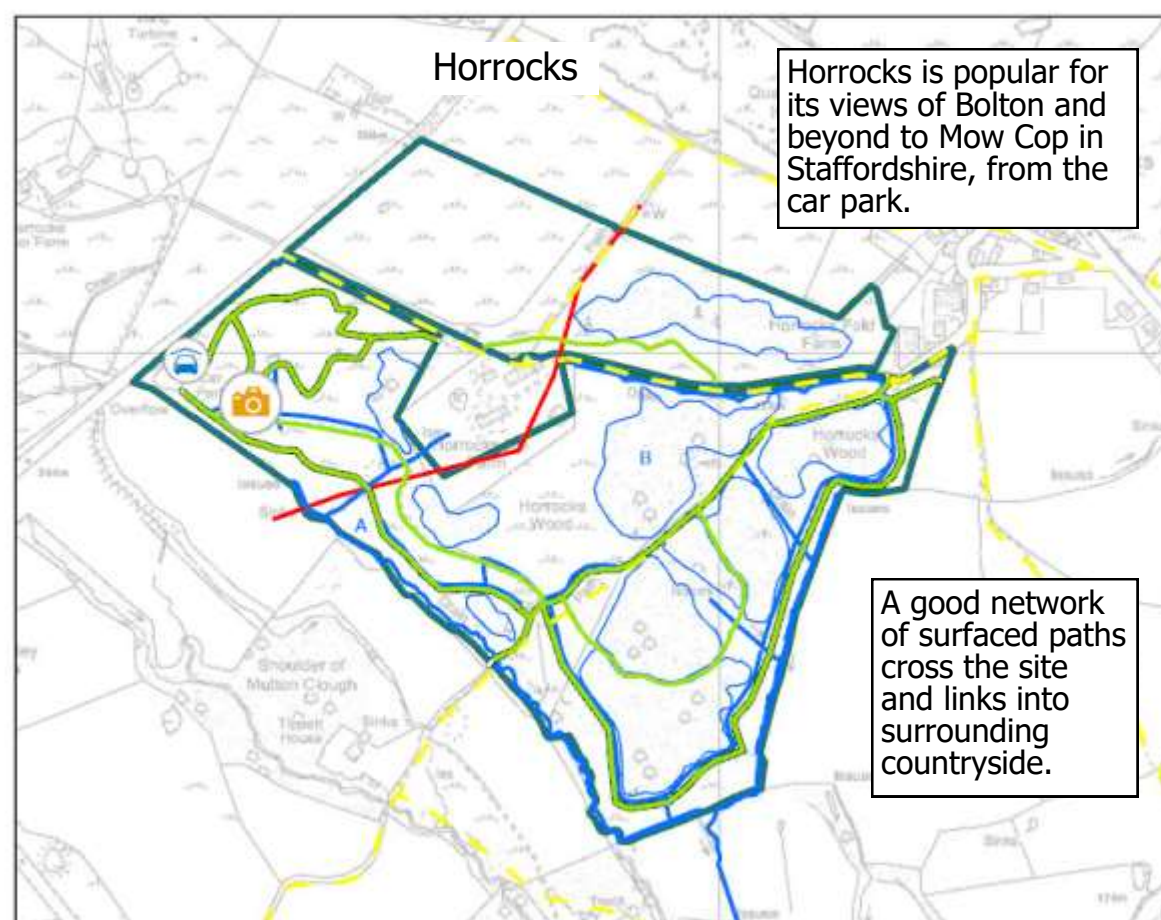
Now the woodlands have become properly established they are playing a valuable role in the Manchester City of Trees Project, Pennine Edge Forest and Northern Forest. The woodlands provide an outdoor education resource, contribute towards the local communities health and wellbeing and are helping tackle climate change and air pollution in the city.

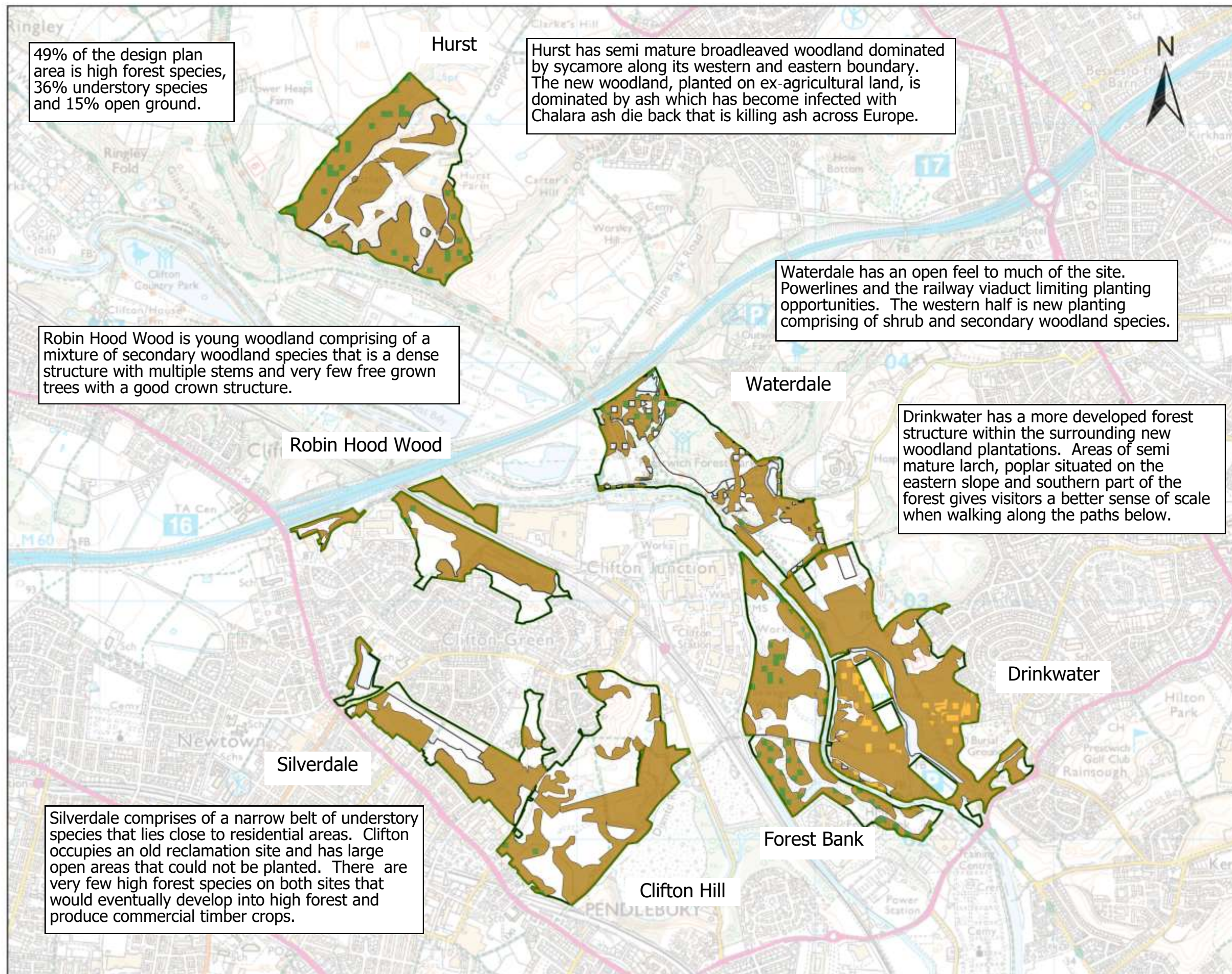
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Central Forest District

Current Species

-  Larch
-  Evergreen Conifer
-  Broadleaves

High Forest Species

Sycamore
Oak
Ash
Birch
Larch
Lime
Poplar
Aspen
Scots pine

Understory/Shrub Species

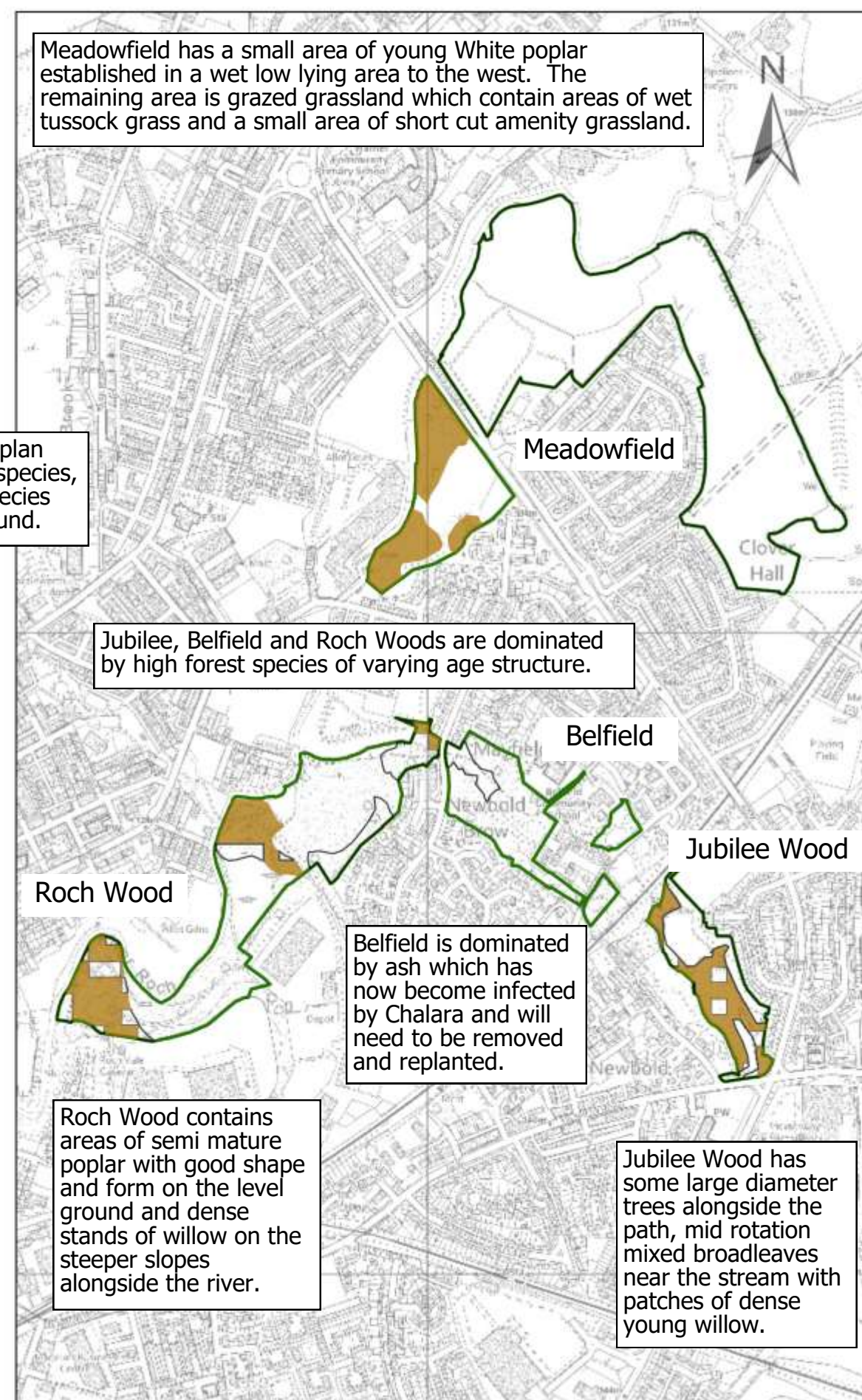
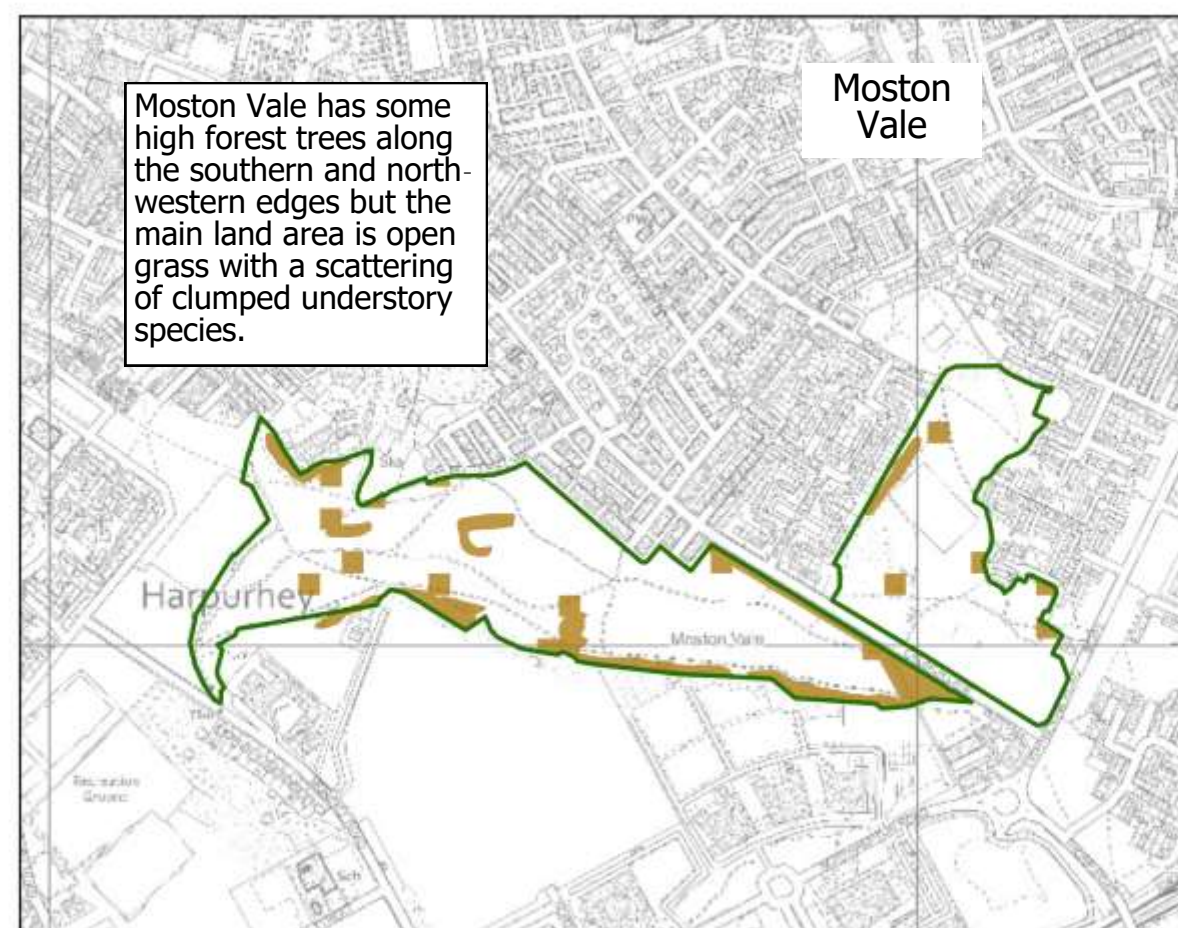
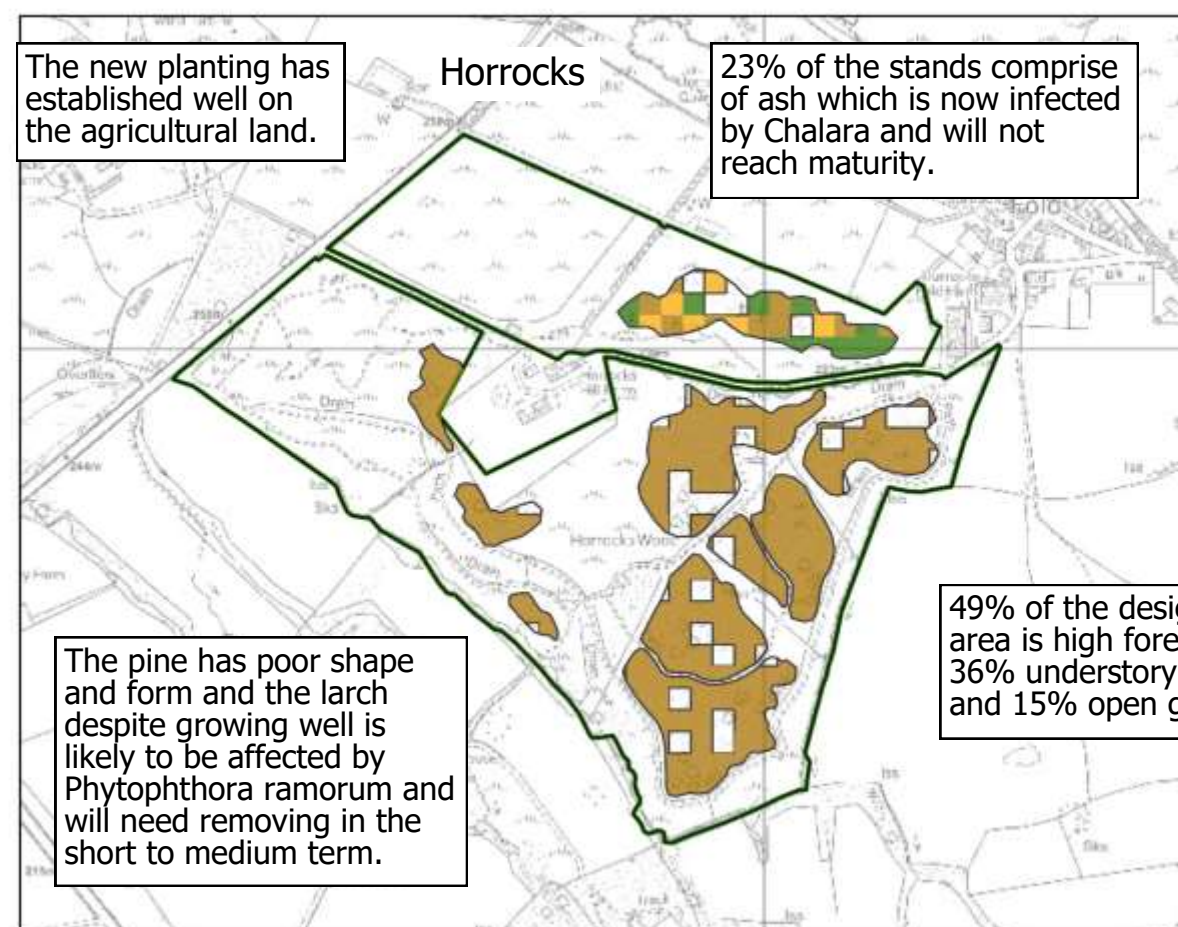
Field maple
Hawthorn
Hazel
Rowan
Wild cherry
Wild service
Goat Willow
White Willow
Alder

Scale: 1:15,000



Forestry England
forests and woodlands
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Standard (UKWAS)





Central Forest District

Current Species

-  Larch
-  Evergreen Conifer
-  Broadleaves

High Forest Species

Sycamore
Oak
Ash
Birch
Larch
Lime
Poplar
Aspen
Scots pine

Understory/Shrub Species

Field maple
Hawthorn
Hazel
Rowan
Wild cherry
Wild service
Goat Willow
White Willow
Alder

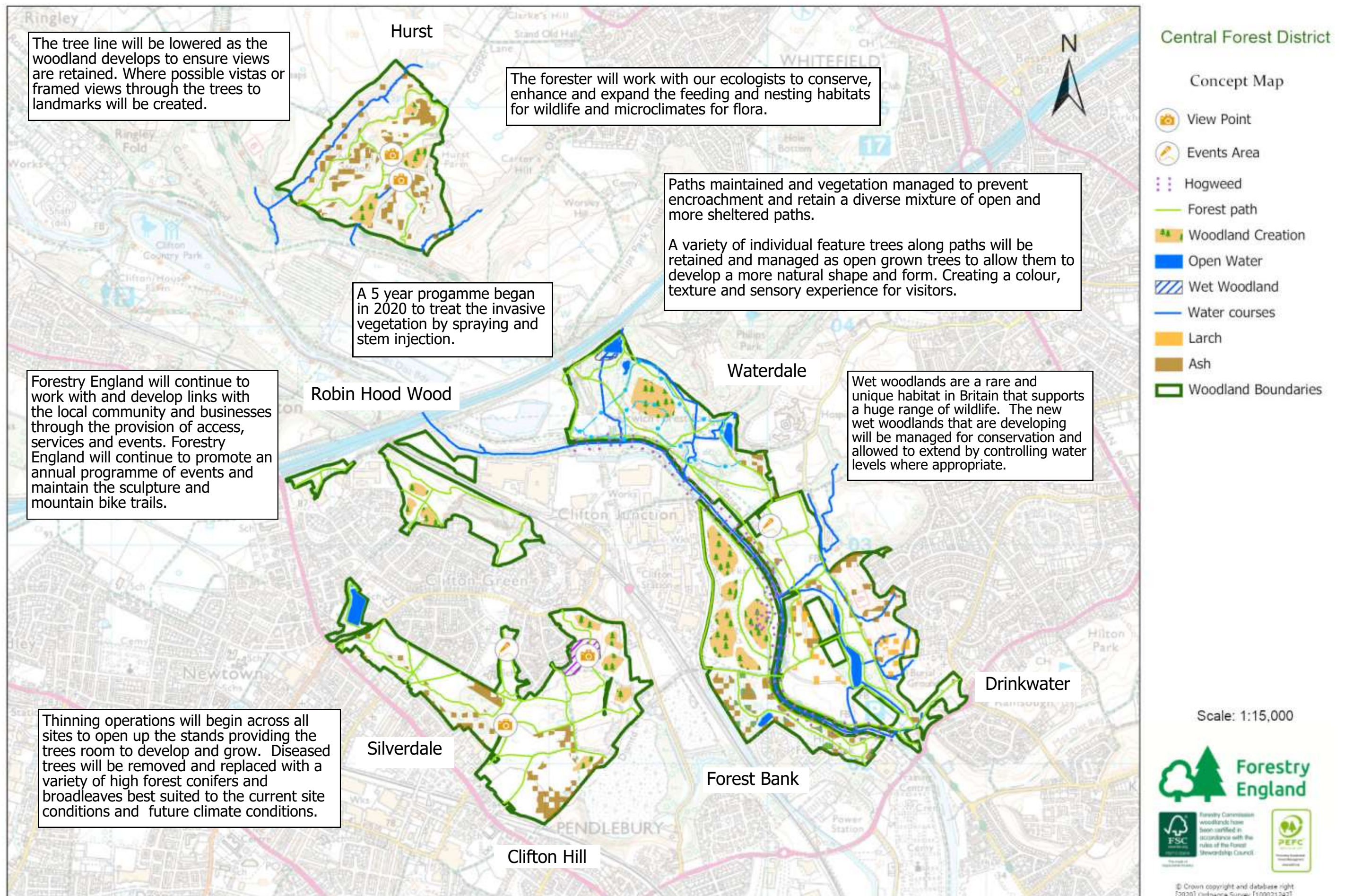
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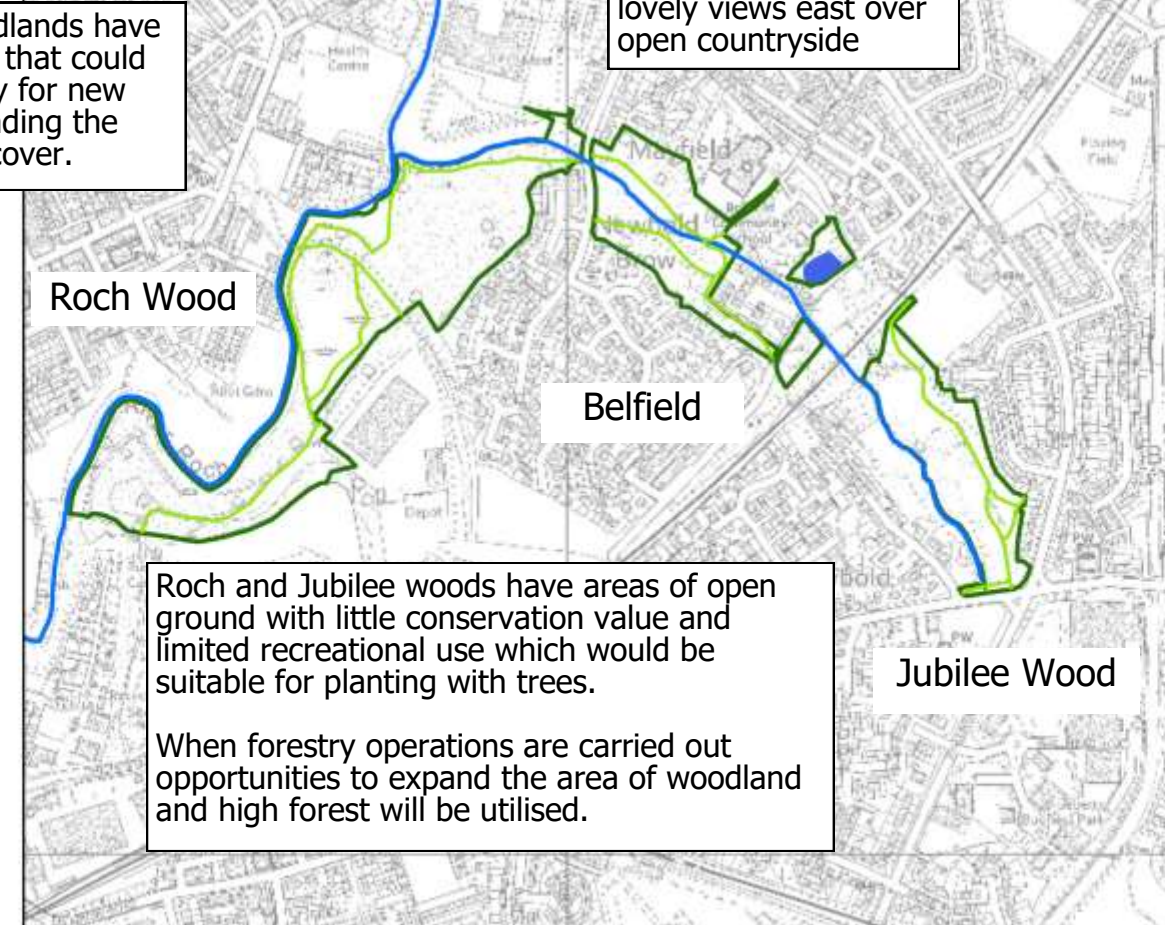
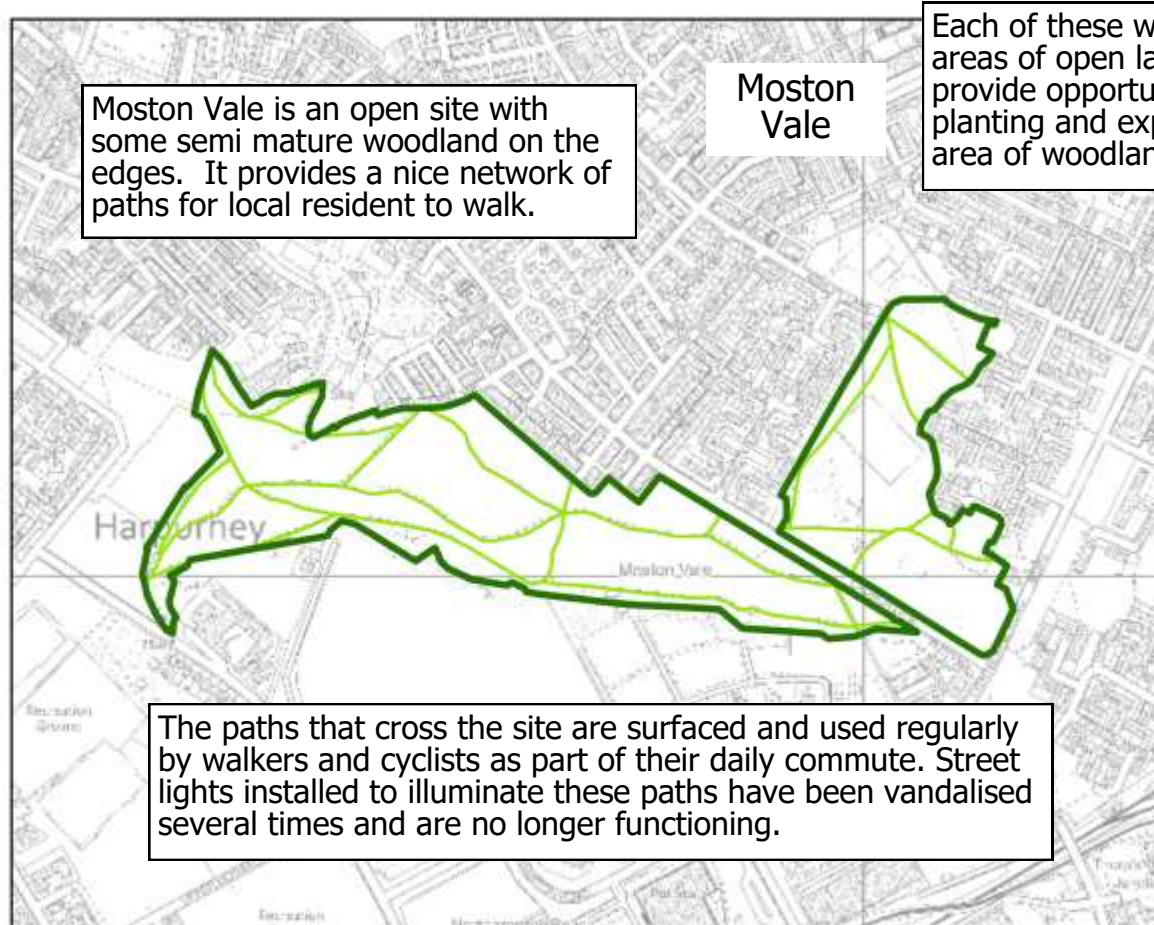
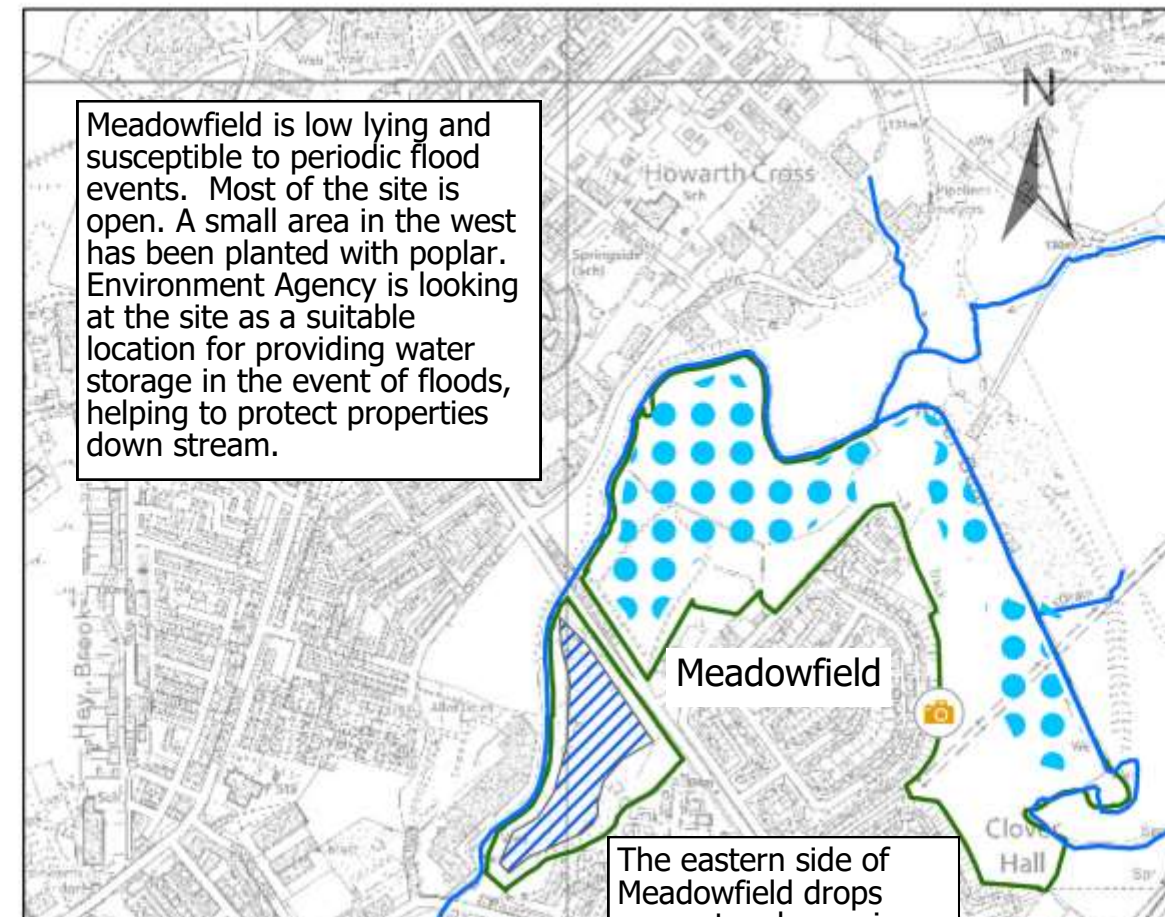
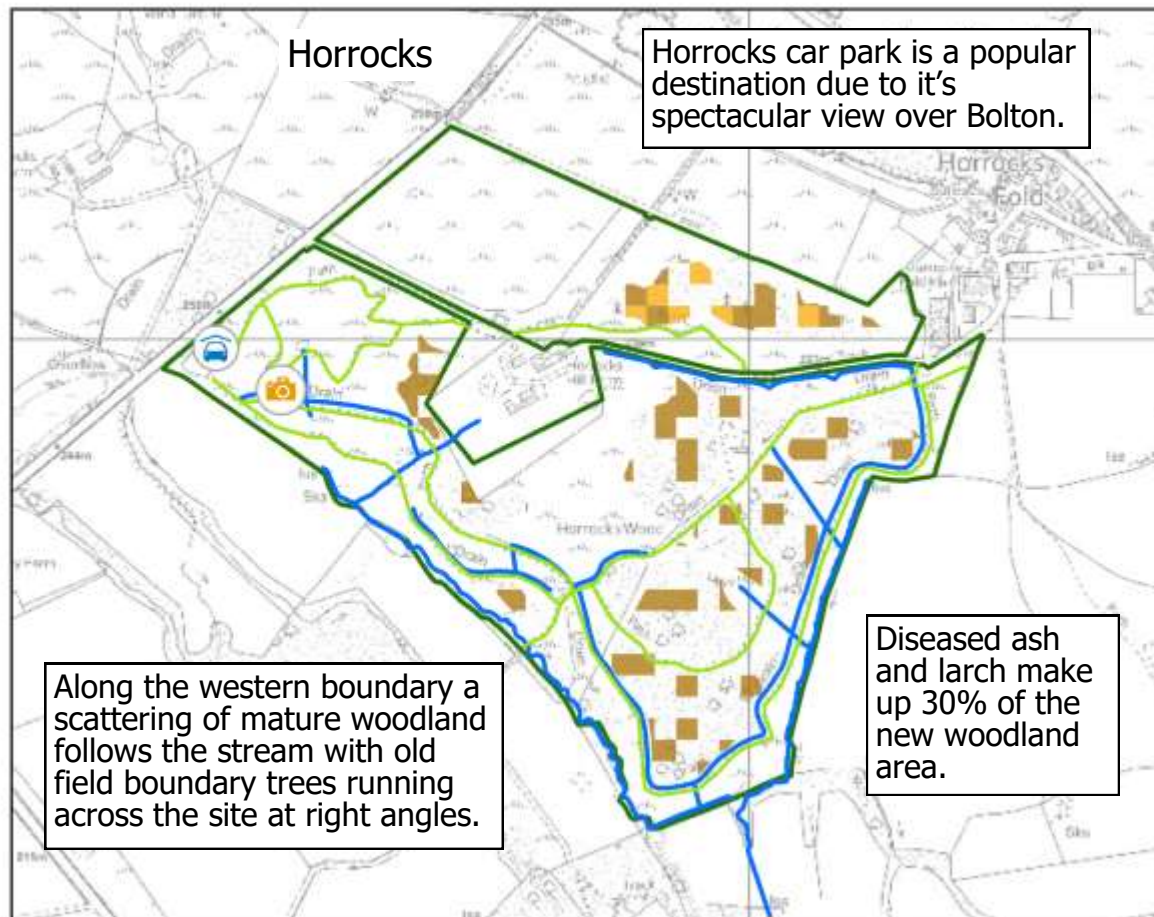


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Central Forest District

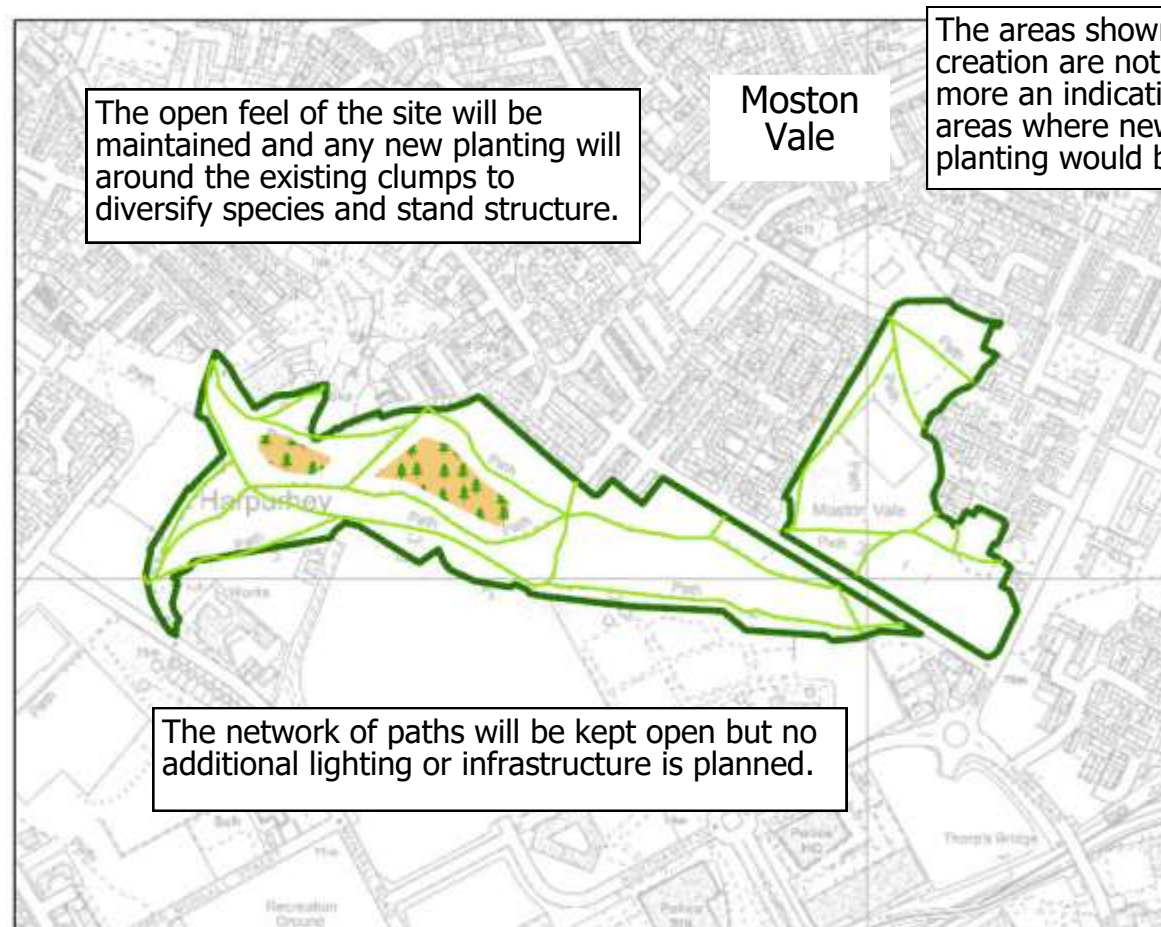
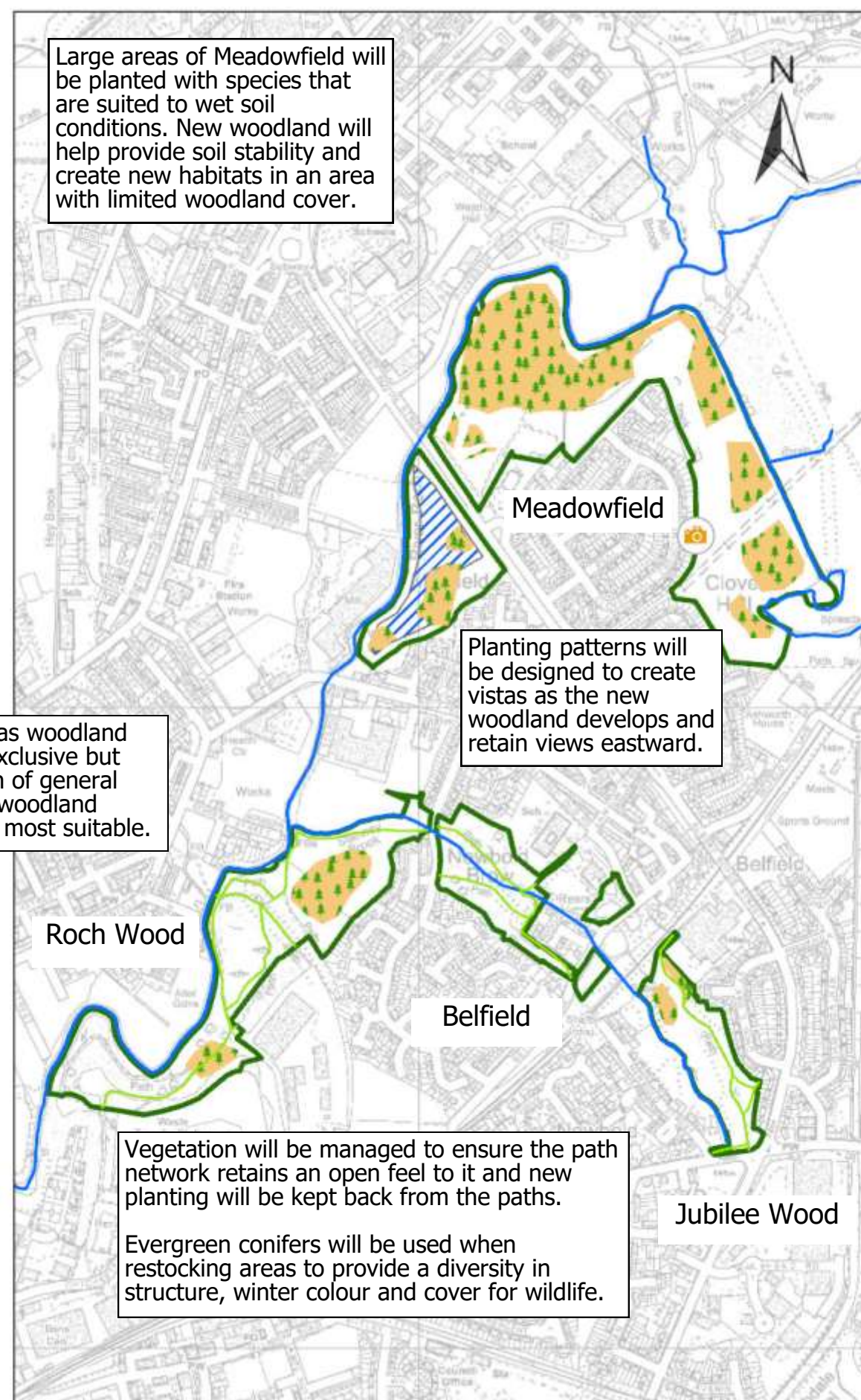
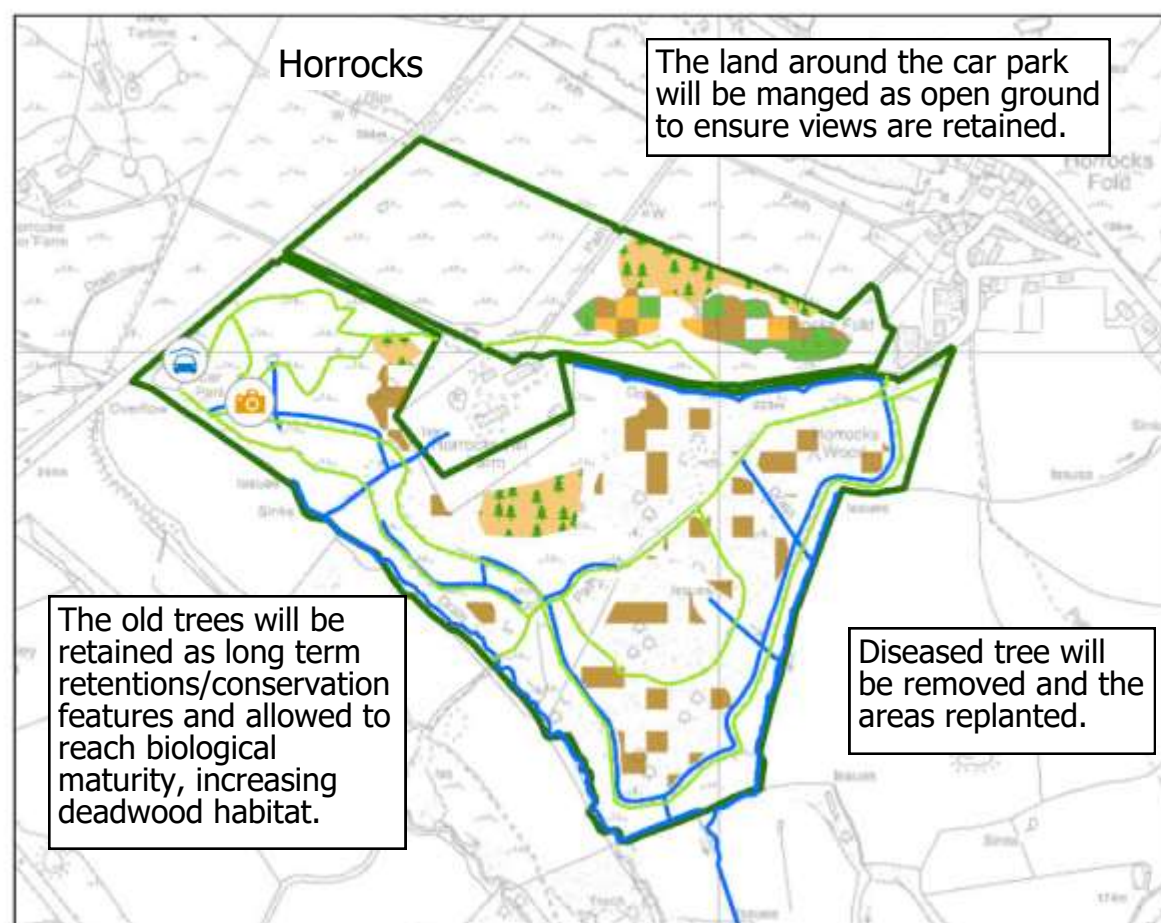
Analysis Map

- Car Parks
- View Point
- Events Area
- Forest path
- Open Water
- Wet Woodland
- Water courses
- Larch
- Ash
- Flood Mitigation
- Woodland Boundaries

Scale: 1:8,000



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Central Forest District

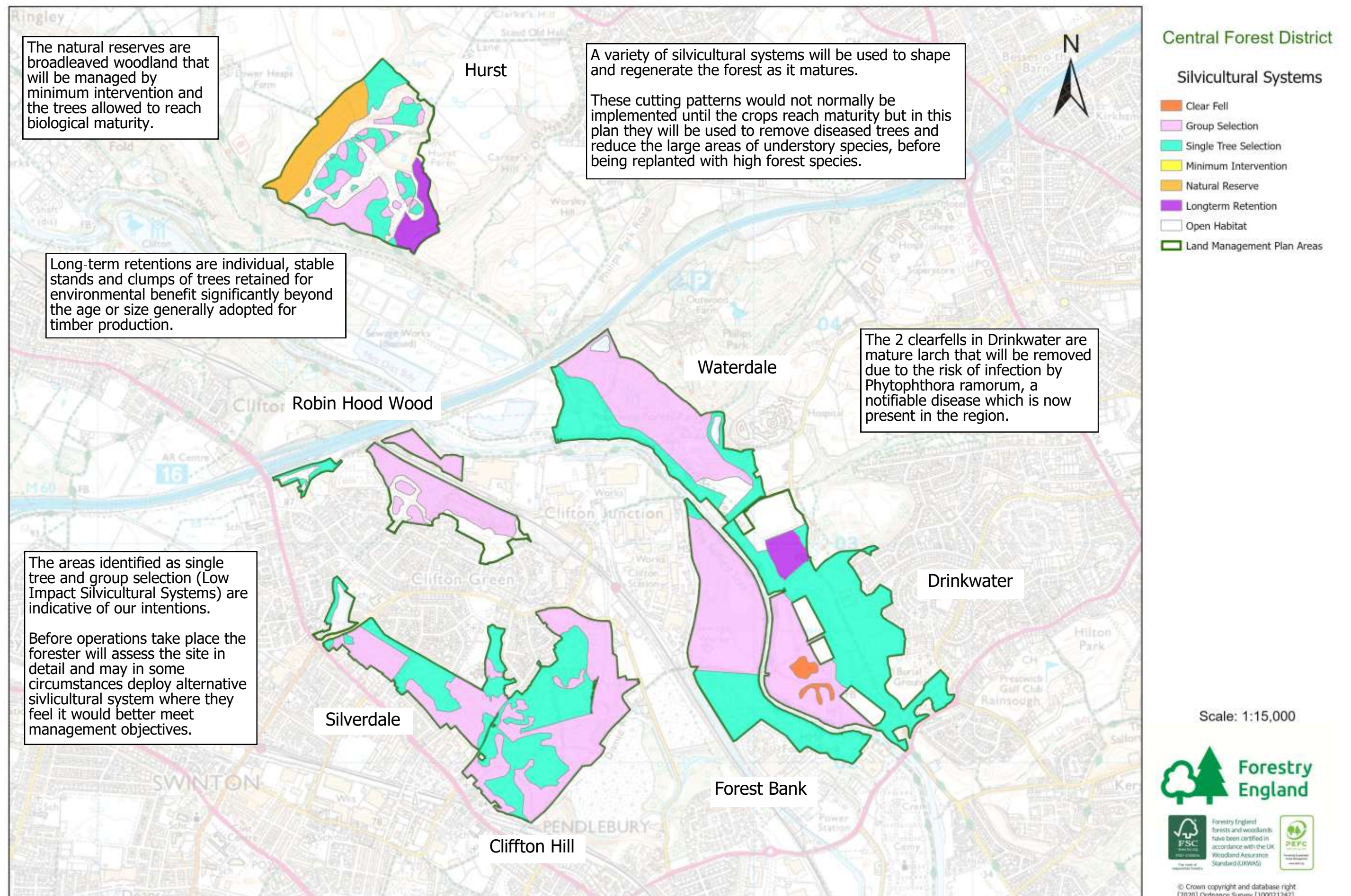
Concept Map

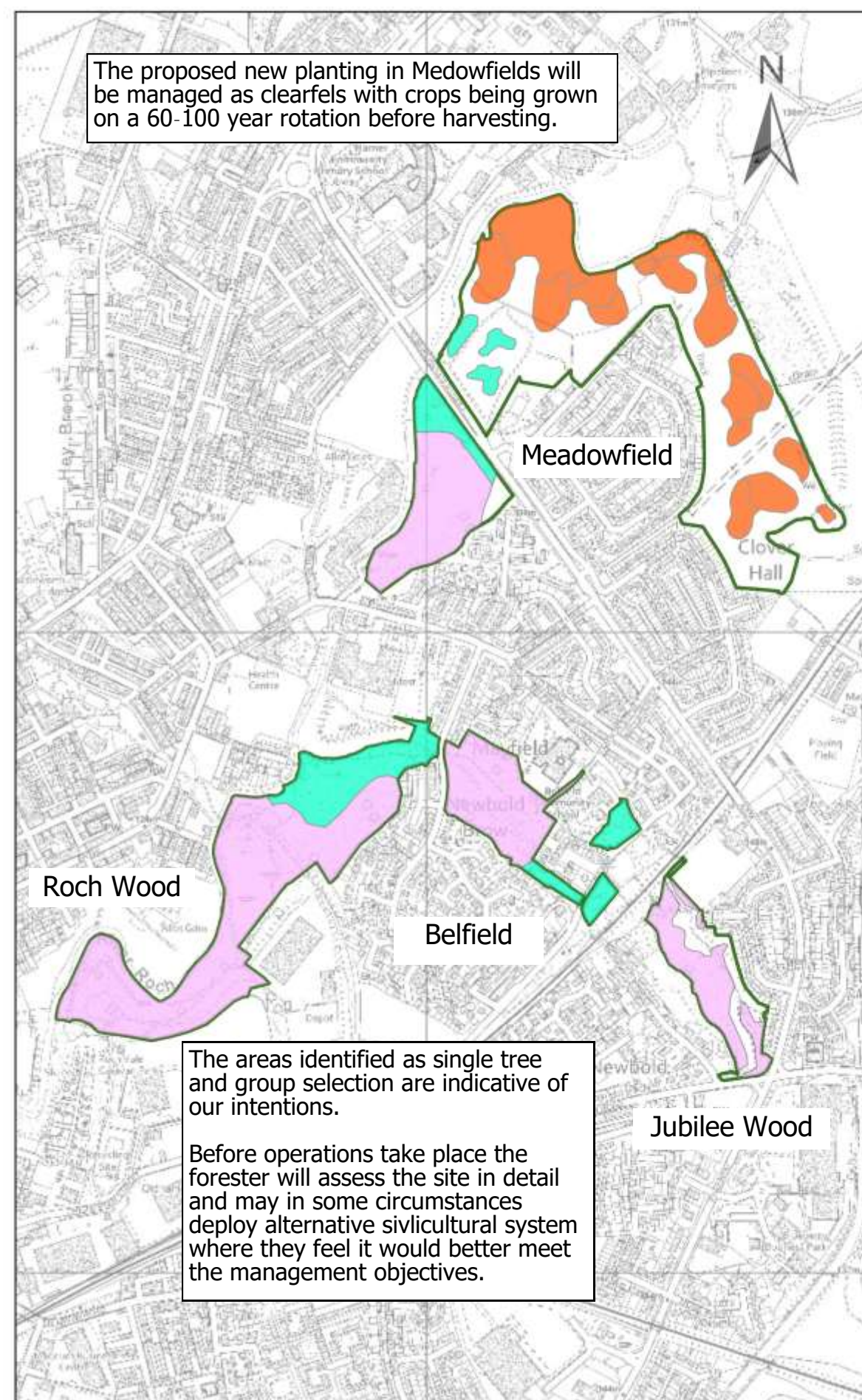
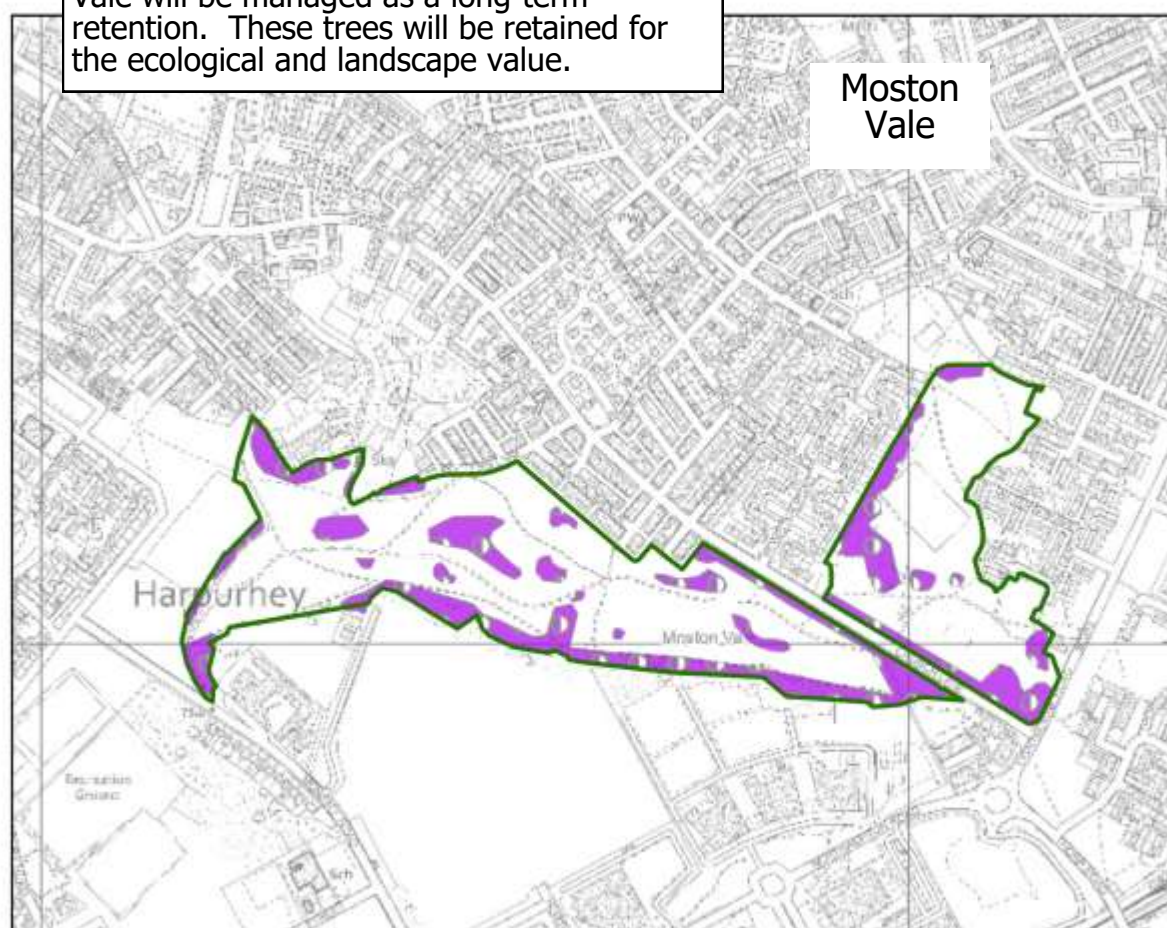
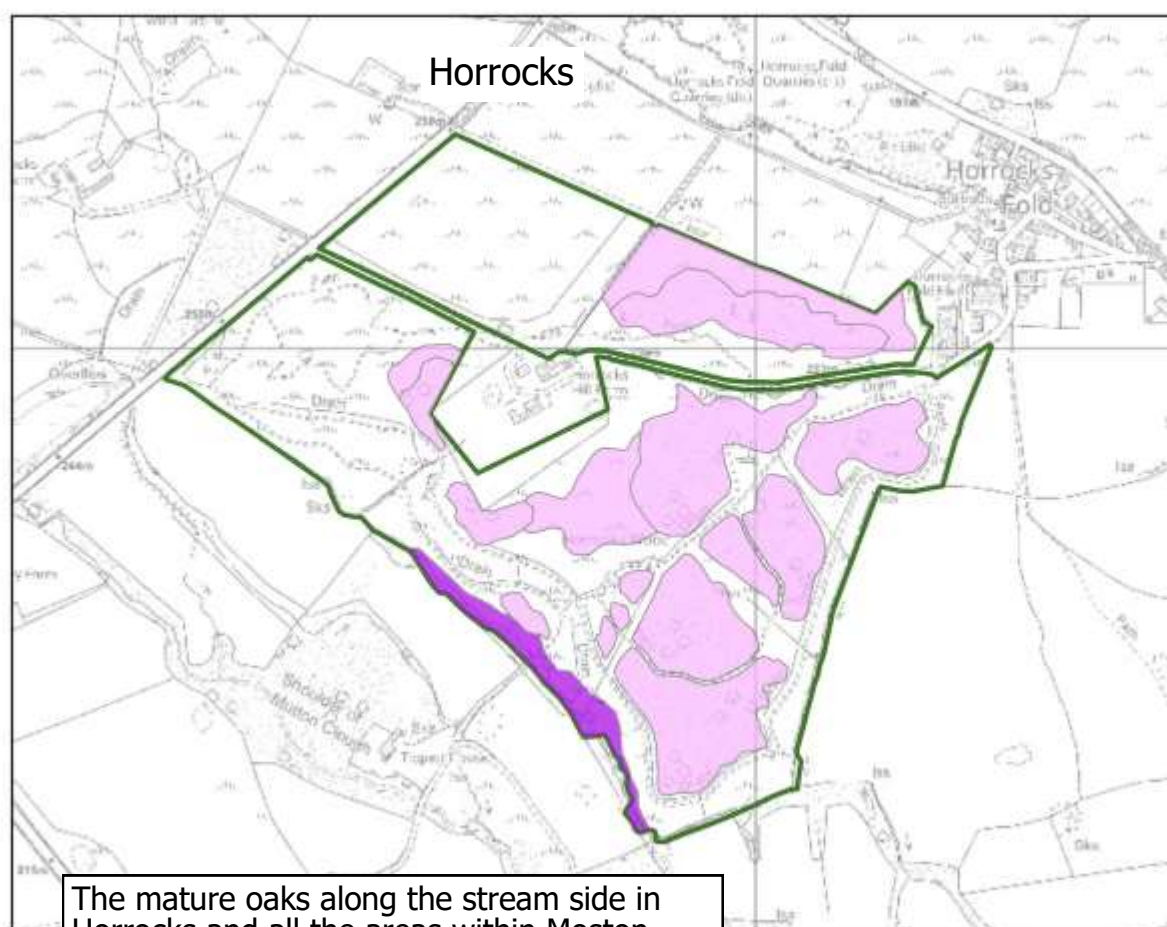
- Car Parks
- View Point
- Forest path
- Woodland Creation
- Open Water
- Wet Woodland
- Water courses
- Larch
- Ash
- Woodland Boundaries

Scale: 1:8,000



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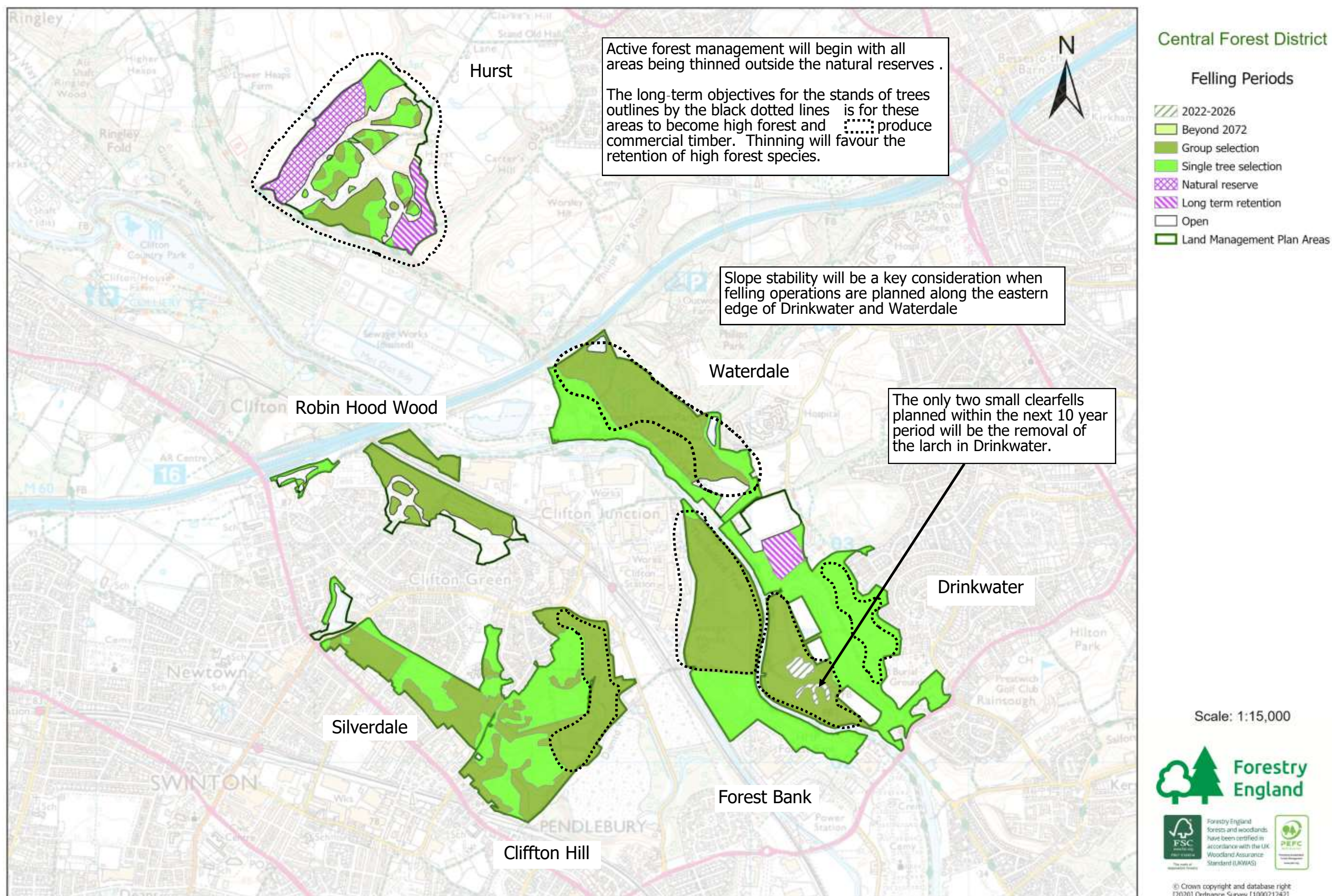
Silvicultural Systems

- Clear Fell
- Group Selection
- Single Tree Selection
- Minimum Intervention
- Natural Reserve
- Longterm Retention
- Open Habitat
- Land Management Plan Areas

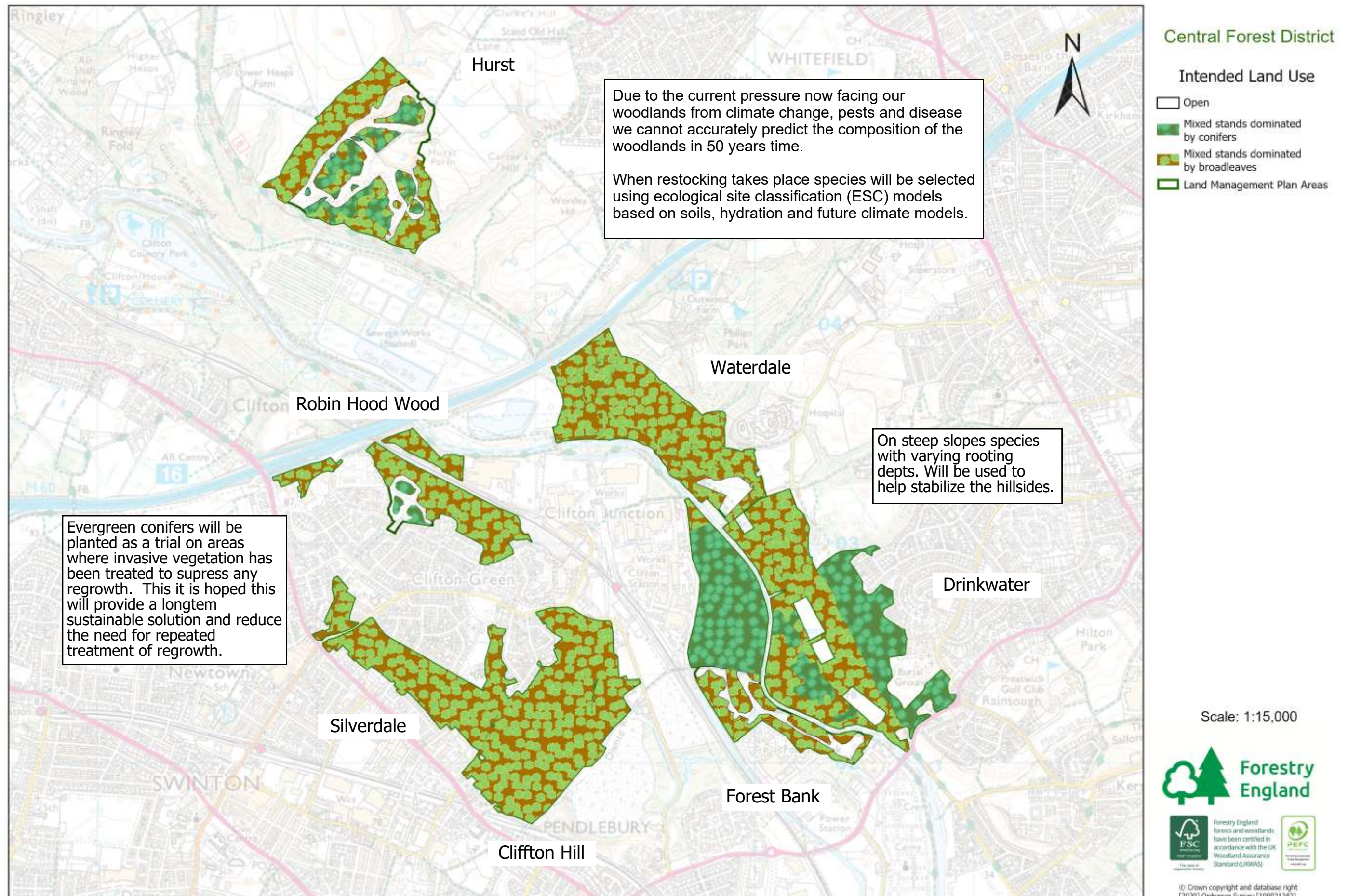
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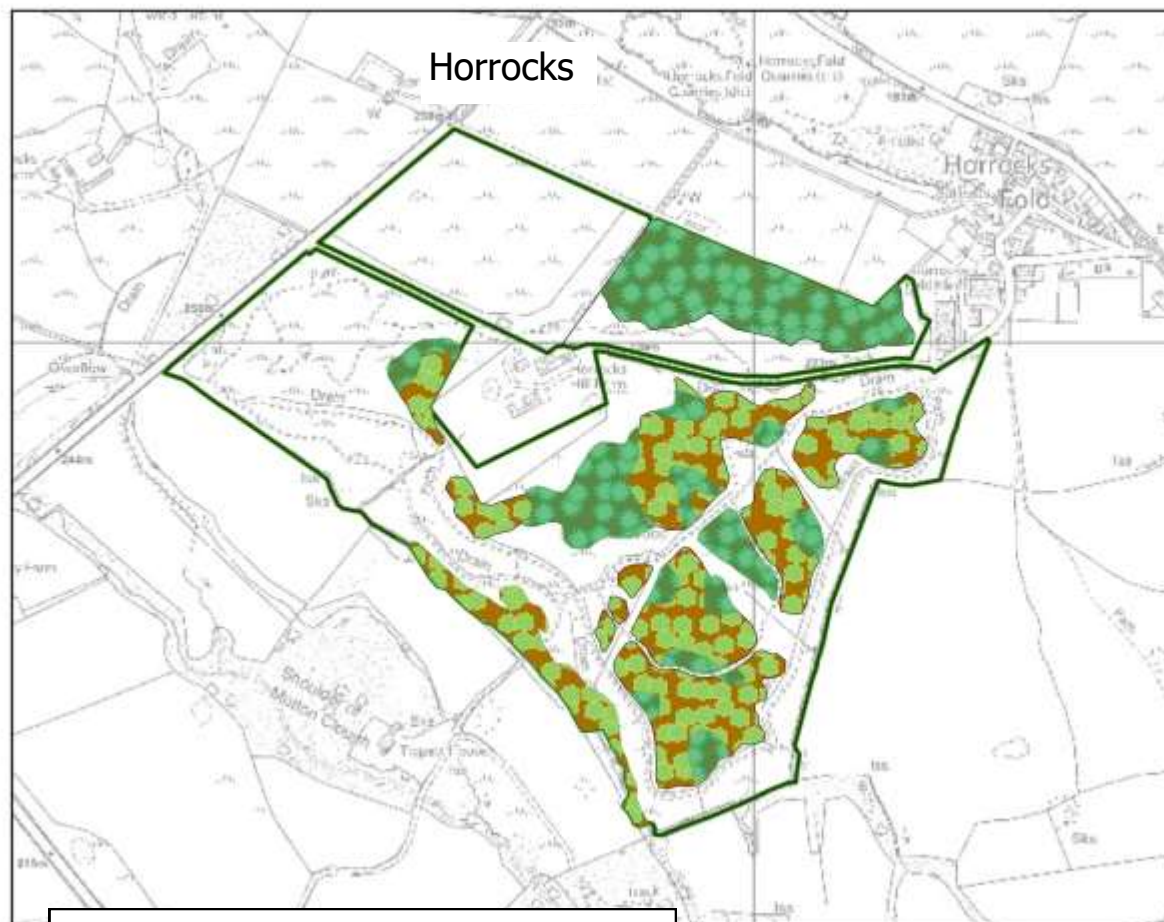


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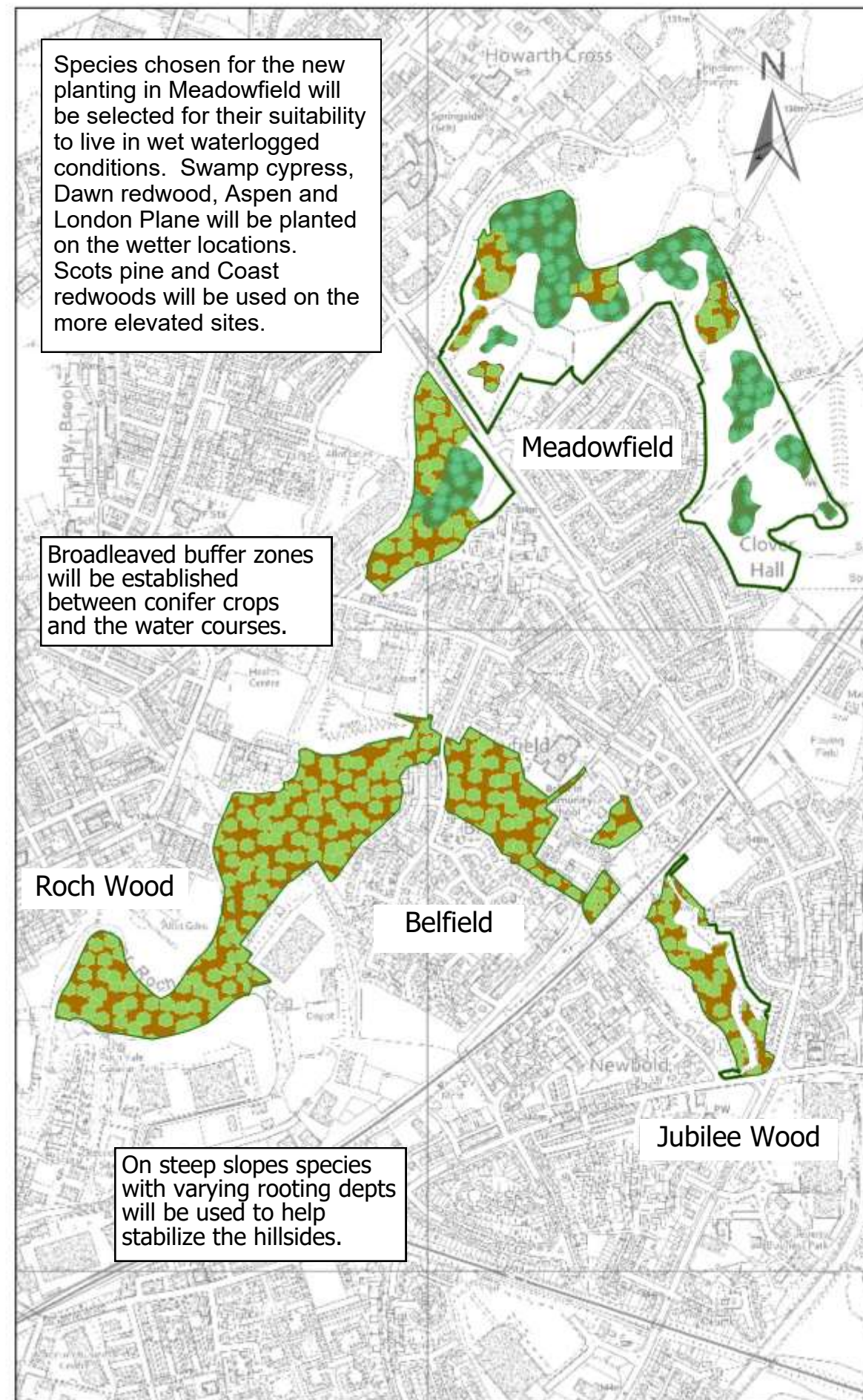
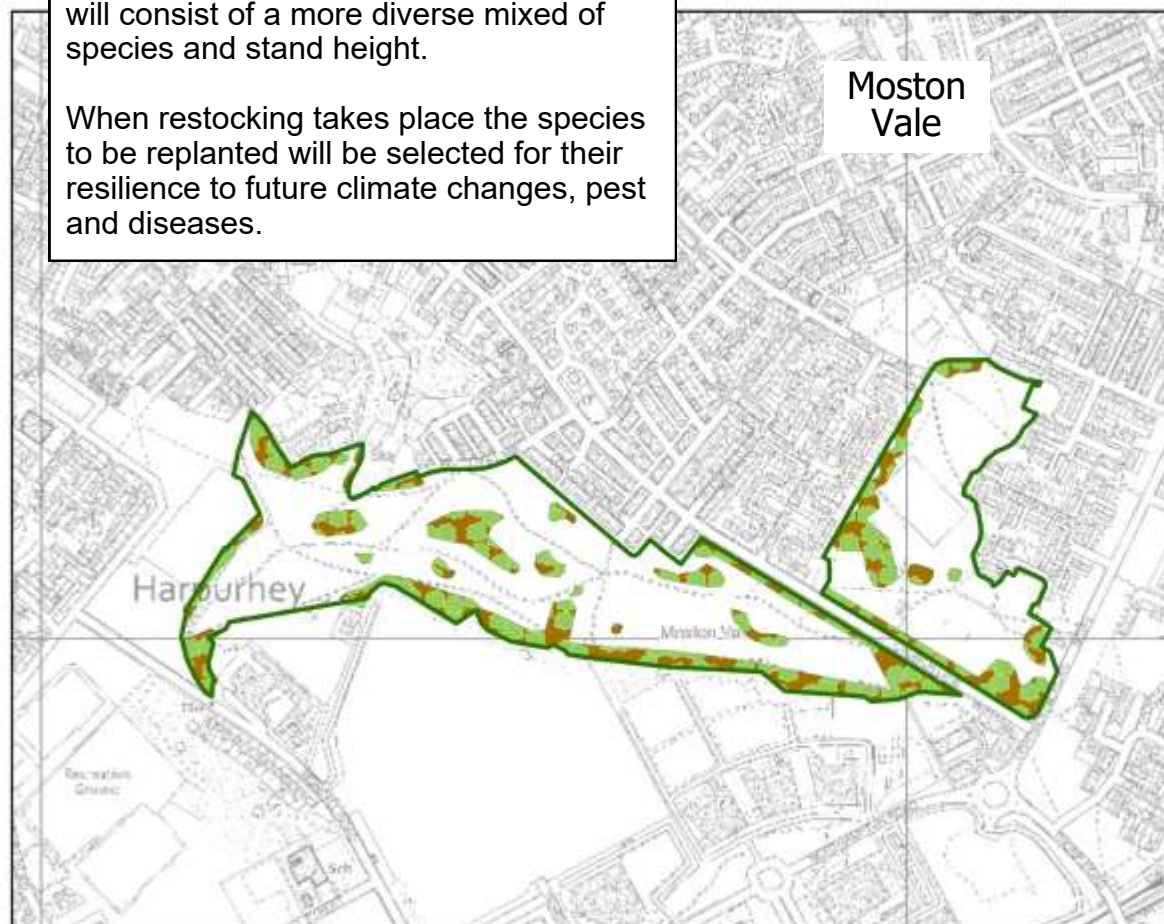






The future woodland structure on all site will consist of a more diverse mixed of species and stand height.

When restocking takes place the species to be replanted will be selected for their resilience to future climate changes, pest and diseases.



Central Forest District

Intended Land Use

- Open
- Mixed stands dominated by conifers
- Mixed stands dominated by broadleaves
- Land Management Plan Areas

Scale: 1:8,000



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