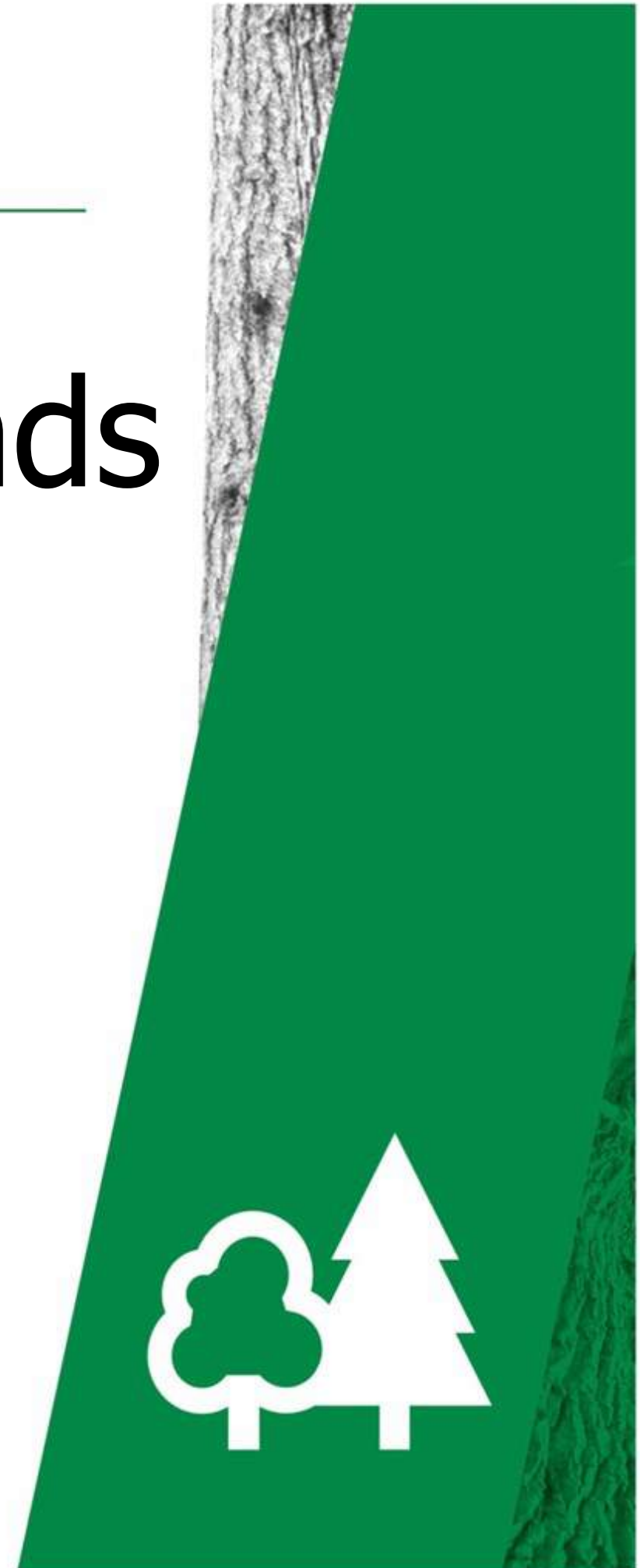


Market Rasen Woodlands Forest Plan

2024 – 2034



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





Pic.1: Open water in Willingham Wood

Contents

	<u>Page</u>
Summary	3
Application for Forest Plan Approval	4
1. What are Forest Plans?	5
2. Review of Previous Forest Plan	5
3. Management Objectives	6
3.1 Economy	6
3.2 Nature	7
3.3 People	8
4. Harvesting Operations	8
5. Intended Landuse	9
6. Contribution towards Central District's commitments to UKWAS and UKFS of the Market Rasen Woodlands FP	10
7. Terms of Reference	11
Appendix I - Glossary	12
Appendix II - Market Rasen Woods in the landscape	15
Maps:	
Location	16
Soils and Designations	17
Survey	19
Current Species	21
Analysis	23
Concept	25
Silvicultural Systems	27
Felling Phases	29
Intended Landuse	35
Fig.1: Change in species diversity since 2009	5
Fig.2: Current structural diversity	6
Fig.3: Silvicultural systems by forested area	8
Fig.4: Woodland composition change over the next rotation	9
Fig.5: Woodland designations by area	18
Fig.6: Current species components	21
Pic.1: Open water in Willingham Wood	2
Pic.2: An informal trail in Willingham Wood	3
Pic.3: Common wintergreen (<i>Pyrola minor</i>)	7
Pic.4: Nightjar (<i>Caprimulgus europaeus</i>)	7
Pic.5: An oak TSI in Dog Kennel Wood	8
Pic.6: A view from the waymarked trail in Willingham Wood	10
Table 1: Timber volumes and clearfell areas	7

Summary

This Forest Plan (FP) summarises proposals by Forestry England for the management of the Market Rasen Woodlands in West Lindsey, Lincolnshire. The Market Rasen Woodlands FP area totals 960.1ha and comprises the woods of Osgodby (69.8ha), Usselby (22.6ha), Middle Rasen (56ha), Walesby Moor (105.5ha), Walesby (91.9ha), Willingham (284.9ha), Dog Kennel (158.3ha), Legsby (129.8ha), Eleanor (15.3ha) and Lynwode (26ha). These form a semi-continuous arc around the town of Market Rasen (*see Location Map, p.16*). The tenure is entirely freehold and there is public access throughout the FP area.

The Market Rasen Woodlands sit within the Central Lincolnshire Vale National Character Area* (NCA) which is characterised by a tranquil, rural and sparsely settled landscape, largely used for the growing of arable crops; predominantly cereals. Landform in the local landscape is low-lying and gently undulating, with the elevation of the woods ranging from 24m in Osgodby to a high point of 62m at the summit of Hamilton Hill in Willingham Wood. The woodlands are prominent in the wider landscape only when viewed from the Lincolnshire Wolds National Landscape (*see Appendix II, p.15*). Locally the woods are visible from public roads and the villages of Walesby and Tealby (*see Survey Maps, p.19&20*).

The main soil type of the Market Rasen Woodlands is gley podzol underlain by mudstone bedrock and prone to seasonal/intermittent waterlogging (*see Soils and Designations Maps, p.17&18*). The forests themselves are predominantly undesignated secondary woodland, with the southern woods of Legsby, Eleanor and Lynwode being Ancient Woodland featuring both Plantations on Ancient Woodland Sites (PAWS)* and Ancient and Semi-Natural* Woodland (ASNW).

The primary management objectives for the Market Rasen Woodlands FP are to:

- Sustainably grow commercial timber to maximise yields and prioritise timber quality, using species and systems resilient to the impacts of pests, diseases and climate change.
- Ensure stands are more structurally diverse, actively managing the woodland to promote age- and species-diversity.
- Continue the restoration of PAWS through the gradual reduction of exotic species.
- Maintain and improve riparian areas, open areas and woodland edge habitats for the benefit of wildlife.
- Conserve the ecological and heritage features.
- Maintain public access throughout the woodlands.



Pic.2: An informal trail in Willingham Wood

Application for Forest Plan Approval

i Plan Area Identification:

Forest District: Central Forest District
 Beat: East Beat
 Name: Market Rasen Woodlands Forest Plan
 Nearest Town: Market Rasen

Grid References (access):

Osgodby	TF 0935 9258
Usselby	TF 1034 9205
Middle Rasen	TF 1020 9201
Walesby Moor	TF 1184 9088
Walesby	TF 1230 9161
Willingham	TF 1362 8847
Dog Kennel	TF 1425 8840
Legsby	TF 1404 8722
Eleanor & Lynwode	TF 1123 8523

Local Planning Authority: West Lindsey District Council

ii Designations:

NCA* Central Lincolnshire Vale (Profile 44)
 Ancient Woodland* and PAWS*
 Chapel Hill Scheduled Ancient Monument *(SAM)
 Adjacent to Linwood Warren Site Of Special Scientific Interest* (SSSI)

iii Date of Commencement of Plan: On approval.

Market Rasen Woodlands FP approved on 21/06/24

Proposed felling and restocking summary for 10 year FP period:

	Conifers	Broadleaves	Total
Clearfelling	169.8ha	27.4ha	197.2ha
Restocking	165.8ha	56.6ha	222.4ha
Regeneration Felling (LISS)	Up to 22.3ha	Up to 108.9ha	Up to 131.2ha

The above figures refer to the gross area and exclude routine thinning operations. Restocking includes both planting and natural regeneration and incorporates the existing felled coupes (25.2ha) with the planned clearfells during the FP period.

Forest Plan maps are attached

In addition to the proposed clearfelling, 328ha will be managed using Low Impact Silvicultural Systems* (LISS). This will be done through the removal of small groups of trees, removing no more than 40% of the stems within any single management unit/compartment over the plan period. This operation will provide sufficient light to boost growth of the understorey and ground flora, allow adequate space for the development of crowns and stem form for quality timber and accelerate individual tree growth; and will also be supported, where necessary, by planting.

All of our forests and woodlands are certified to the Forest Stewardship Council® (FSC®) licence code FSC-C123214 and the Programme for the Endorsement of Forest Certification (PEFC) licence code SA-PEFC-FM-006972 standards.

All Forestry England forests and woods are independently certified as sustainably managed, to continue to benefit future generations.



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



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 show what we intend the woodlands to look like in the future.
- To detail our felling and restocking management proposals for the first 10 years in order to obtain approval from the statutory regulator.

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 (see *Appendix I, p.12-14*).

A FP is a ‘felling and restocking’ plan and is written at a landscape scale. It does not set out the detailed yearly management operations for each small area in a wood, known as a coupe*. It is not possible to say in which year a particular operation will take place, but we can say in which five year period it should happen. These detail site-specific features and constraints including recreation, ecological or archaeological features and the measures in place to account for these during works. This FP does not deal with the specific management of such features; planning for these elements follows a different management cycle and process.

Terms of Reference (see *p.11*) set out Forestry England’s management objectives for the plan area, how these relate to national and district policies, and how these will be monitored.

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 is such that the FP 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. If all the criteria are met, full approval is given for the management operations in the first 10 years and outline approval for the medium term vision (10 years to 50 years).

2. Review of Previous Forest Plan

The previous Market Rasen FP was approved in April 2010 and extended for a further 5yrs in April 2020. The main objectives of this FP were to:

- Produce sustainable high quality timber whilst diversifying the age and species structure of the woodland.
- Ensure diversity of woodland type by using a wide range of management techniques including coppicing.
- Further improve recently created habitats such as heathland and wet woodland sites.
- Monitor and protect rare and priority habitats.
- Continue to improve both internal and external landscapes.
- Provide high quality recreation and educational opportunities and facilities.

The previous FP approved a total of 132ha clearfell area. Since 2010 a net total of 116.7ha has been felled (*this figure includes clearfelling and strip felling but excludes thinning*). Species- and age-diversity has improved by design; with (mostly) Corsican pine being replaced with alternative conifers or birch (*Fig.1*) and through the phased felling/restock of mature stands.

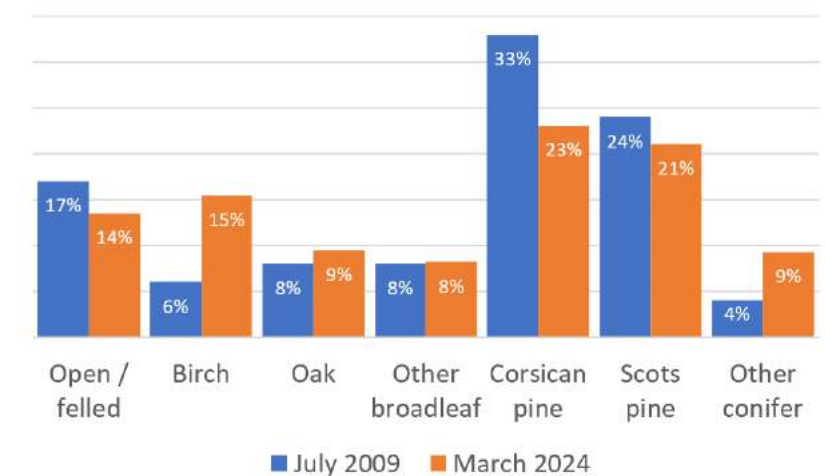


Fig.1: Change in species diversity since 2009

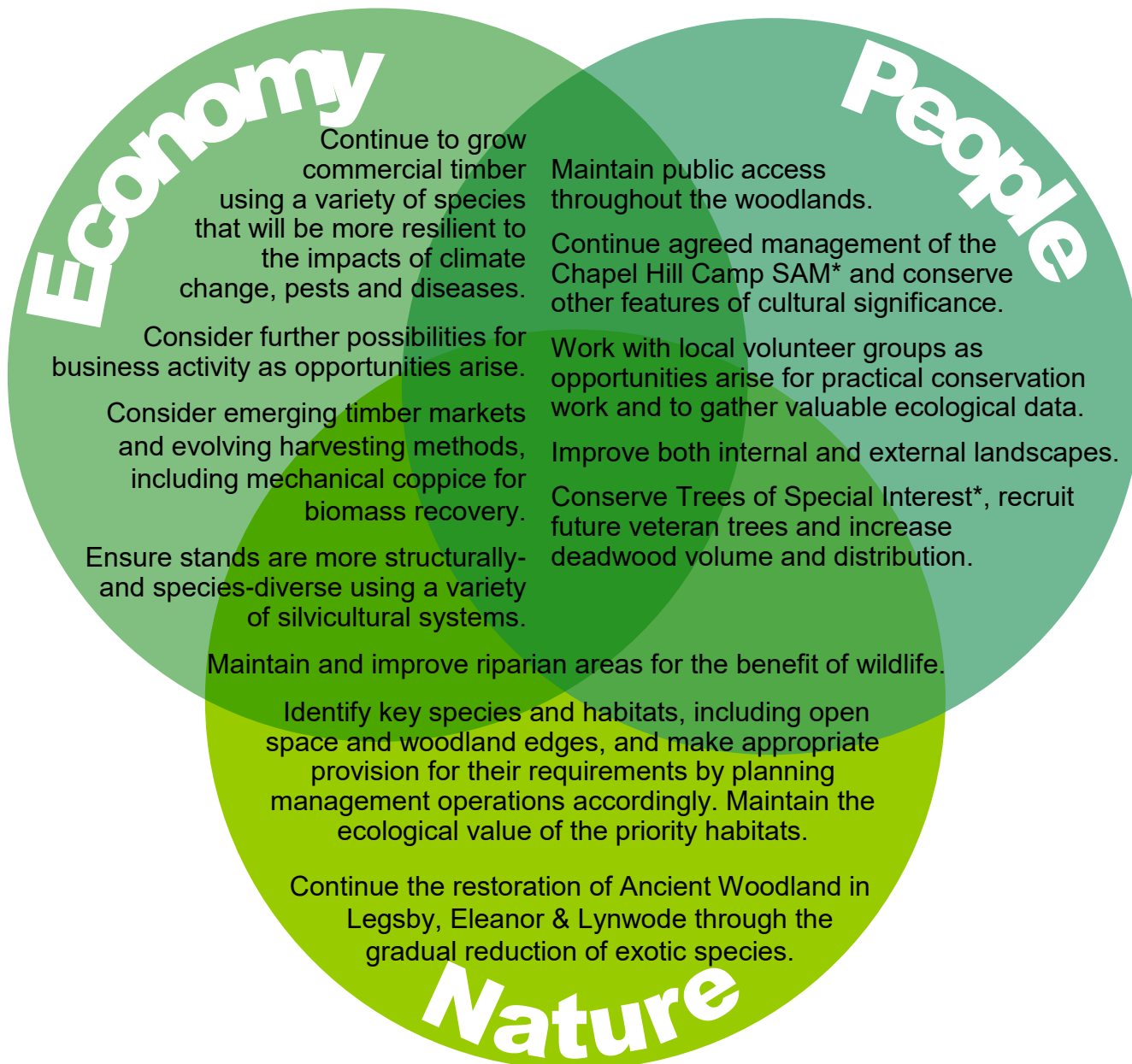
Clearfell/restock, LISS* and underplanting management techniques have all been used within the Market Rasen woodlands. Traditional coppice management was previously undertaken by volunteers but this has ceased since Covid. Wet woodland improvements and maintenance have occurred, including the alder carr in Dog Kennel and leaky dams in Willingham. Heathland areas have been slow to spread and are generally limited to the old hospital site in Osgodby and open rides and road edges in Walesby Moor. PAWS* restoration has continued in Legsby, Eleanor and Lynwode with a gradual reduction in conifers and reversion to broadleaf species. Internal and external landscapes have been improved by following the designed coupe shapes and through ride widening.

The final objective to provide high quality recreation and educational opportunities and facilities appears to overstate the aspiration of the previous FP and the available resources required to deliver this. There is a waymarked walking trail in Willingham and the network of informal paths allow visitors to enjoy and explore the woods. Other recreation for specific groups is supported through the Forestry England permissions system. There are currently no education facilities.

3. Management Objectives

Forestry England’s mandate is to protect and expand England’s forests and woodlands and increase their value to society and the environment. Our mission is to connect everyone with the nation’s forests by creating and caring for our forests for people to enjoy, wildlife to flourish and businesses to grow.

In the Market Rasen Woodlands FP area we aim to achieve the following objectives:



3.1 Economy

Timber production will be managed on a sustainable basis, improving future revenues by focussing on quality conifer and broadleaf sawlogs and by maximising yield. Emerging markets, including biomass on shorter growing rotations, will also be considered for suitable crops. During restock, Forestry England will continue to introduce compatible species and species mixes to improve resilience against future pests and diseases and ensure woodland habitats can be adapted to the rapid climate change we are now seeing. This will enable us to continue to provide sustainable timber resources needed by society while maintaining other woodland ecosystem services* including biodiversity, water and soil regulation, carbon storage, and support for people’s wellbeing and cultural values.

The Market Rasen Woodlands are predominantly undesignated secondary woodland. See *Fig.5 & Designations and Soil Type Maps, p.17&18*). 62% of the wooded area is coniferous, being dominated by Corsican and Scots pine (See *Fig.6 & Current Species Maps, p.21&22*). Unfortunately the health of Corsican pine has been adversely impacted by Dothistroma Needle Blight* (DNB), resulting in a substantial reduction in growth and yield. Younger stands (<40yrs) are the worst affected. In secondary woodland areas mitigation measures include the premature felling or strip felling* of these stands ahead of restocking with alternative productive conifer species.

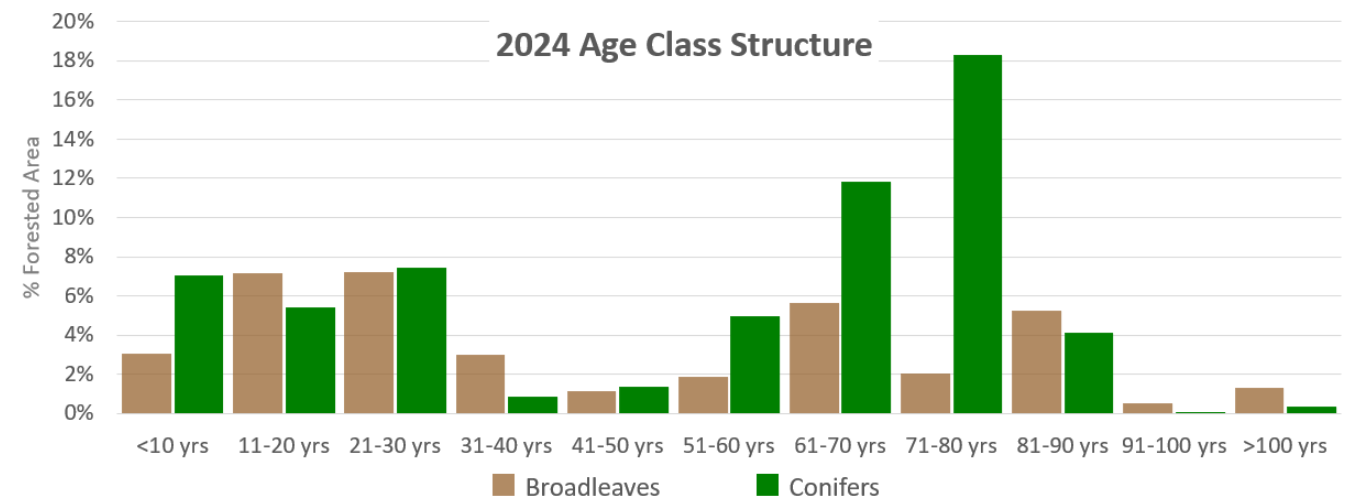


Fig.2: Current structural diversity

Fig.2 above shows the current structural diversity; highlighting significant peaks of conifers in the 60-80yr age classes. These trees are the remainder of the extensive pine plantations from the 1950s and 1960s and are now at or beyond commercial maturity. The FP contains a number of clearfells in these areas; designed to balance economic felling age with efficient harvesting whilst considering the forest-scale impact. Restocking using a wider range of species of varying rotation lengths will improve the future forest structure, offer alternative management options for stands, and lead to more consistent timber production.

Table 1: Timber volumes and clearfell areas

Forecast Period	Average annual timber volume (m ³)	Average annual clearfell area (ha)
2024-2026	7086	20.4
2027-2031	9217	20.7
2032-2036	7203	16.8
3037-2041	9220	16.1
2042-2046	8305	9.3
2047-2051	5763	7.1

Table 1 displays the predicted average annual timber production (from clearfelling, selective felling and thinning combined) alongside the average annual clearfell area for the next six five-year periods. The annual combined volumes are split approximately 85% from conifer & 15% from broadleaf.

Any opportunities to engage with third party partners or businesses to generate secondary income sources will be considered where these align with wider FP objectives.

3.2 Nature

The Market Rasen Woodlands support many different wildlife species including great crested newt, nightjar and recently goshawk. The occurrence of dung beetles is also notable; Walesby being assessed as ‘best in county’ in 2016 for hosting a total of 11 different species. The FP area contains a number of important and priority habitats for nature. These include ancient woodland*, wet woodland, chalk rivers and heathland.

Ancient and native woodlands support high levels of biodiversity. Most of Legsby and the entireties of Eleanor and Lynwode are classified as Ancient Woodland* (See *Fig.5 & Southern Woods Soils and Designations Map, p.18*). Ecological surveys have recorded ancient woodland indicator species in these areas including wood anemone, wood-sorrel, bluebell, primrose, ramsons, dog's mercury, lady-fern, hard fern, remote sedge, wood-sedge, wood millet and large numbers of lily-of-the-valley. Continuing to protect and gradually restore these woods to predominantly native species is a priority for this plan.

Willingham Wood is bisected by the River Rase and a tributary to it; both of which are likely chalk rivers. All of the watercourses and waterbodies in the Market Rasen woodlands and their associated riparian zones will be managed to improve their ecological value, with forest operations in the vicinity conducted in accordance with Forest and Water Guidelines* (see *Analysis & Concept Maps, p.23-26*).



Pic.3: Common wintergreen (*Pyrola minor*)

The alder carr in Dog Kennel is an important shady and wet fen, prominent species being bulbous rush and tussocks of the locally-uncommon white sedge. Other more scattered plants include bog pondweed, narrow buckler-fern, water figwort, greater bird's-foot-trefoil, and sharp-flowered rush on the northern edge of its range. Nearby is the site of a former colony of common wintergreen (*Pic.3*). Our intention is to manage this area sensitively, with the hope it remains in the seed bank and eventually returns to the area. Other important flora within the Market Rasen Woods include the polypody fern and the green helleborine and southern marsh orchids.

Another priority for Forestry England is the management of open land and associated woodland edge habitat for the benefit of wildlife. 11.5% of the Market Rasen Woodlands is open space (see *Current Species Maps, p.21&22*). Additional transitional open space is created by the clearfelling cycle, temporarily open whilst the next rotation of forest becomes established.



Pic.4: Nightjar (*Caprimulgus europaeus*)

This habitat is important for species such as nightjar (*Pic.4*). Ride widening is anticipated during the FP period which will expand and enhance the open habitat and improve deer management. It is hoped ride expansion will also promote the spread of heathland plants in Walesby Moor. Opportunities to introduce conservation grazing in specific areas of Walesby Moor and Middle Rasen are currently under consideration.

There are currently 104 Trees of Special Interest* (TSI) recorded throughout the Market Rasen Woodlands, which are to be retained for generations to come. We will continue to record TSI and future TSI as they are identified, so they can be conserved and protected during management operations. These ancient, veteran and notable trees are highly important for biodiversity and an invaluable part of our natural heritage, providing unique ecological conditions and supporting entire ecosystems. Similarly, where appropriate, dead and dying trees may be retained to increase ecologically-valuable deadwood habitat.



Pic.5: An oak TSI in Dog Kennel Wood

Challenges for the woodlands include the high incidence of deer and grey squirrel, which will be proactively managed by Forestry England. Browsing pressure from deer, rabbit and hare mean most restock coupes will likely need fencing except for the least palatable species. The appetite of non-native grey squirrels for bark stripping increases the susceptibility of young trees (especially beech, oak, sycamore and birch) to secondary infections and can often lead to tree death. Further adverse effects include stunted tree development and inhibited form, plus reduced carbon capture potential and yield.

Rhododendron and Himalayan balsam are present in the woodlands, primarily in Dog Kennel and Willingham. Work to remove these invasive species will occur during the plan period when there are forest operations in the vicinity.

3.3 People

The Market Rasen Woodlands are entirely dedicated as open access land under CRoW (Countryside and Rights of Way Act, 2000). All of the woods are popular with locals and other visitors alike, who can use the forest roads, public footpaths and network of informal paths to enjoy the forests. Visitors to Willingham Wood also benefit from a large carpark and waymarked walking trail near to the picnic area, plus a café and toilets in the adjacent lay-by (owned and run by Lincolnshire County Council).

Our permissions system supports further recreational opportunities; including archery, huskies training, search and rescue training, orienteering, a local shoot, and a cycling agreement for the informal mountain bike trails on Hamilton Hill. Forestry England values and will continue to engage with groups who share our interest in conserving the ecological and cultural value of the Market Rasen Woodlands.

There are a number of known heritage features within the FP area (see *Survey Maps, p.19&20*), the most significant being the medieval moated site located at Chapel Hill (SAM* reference 1016694). This is thought to be the site of a 14th century hermitage. Other known historic elements include cropmark enclosures and trackways; WWII features from the former training camp at Usselby; a Roman pottery kiln; a bloomery hearth; a relic orchard and a possible barrow site. All known features of historic and cultural significance are recorded to ensure forest operations in their vicinity are managed appropriately. Similarly any new findings will also be recorded.

4. Harvesting Operations

A range of silvicultural systems* will be used in the Market Rasen Woodlands, designed to create and effectively manage the existing stands and create ideal conditions to establish the next rotation of trees (see *Fig.3 & Silvicultural Systems Maps, p.27&28*).

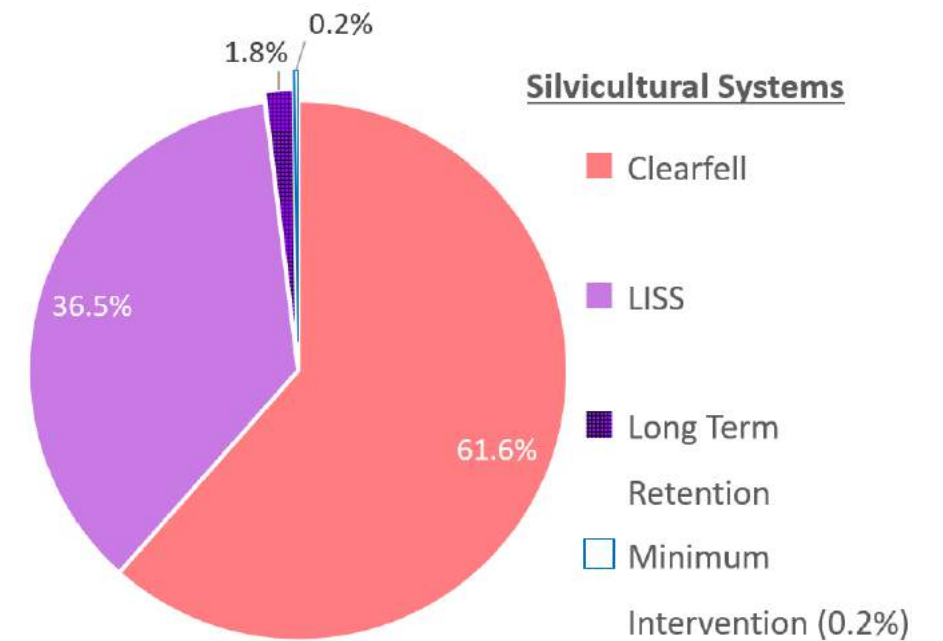


Fig.3: Silvicultural systems by forested area

Over 61% of the total wooded area will still be managed under a clearfell and restocking programme, providing cost-effective timber production and transitional open space for wildlife. This clearfell proportion is likely to reduce over future rotations; since restocking with alternative conifer species and species-mixtures plus gradual PAWS* restoration will increase the opportunities for forest management using LISS*.

A total of 204.2ha of clearfell will be undertaken during the 10 year FP approval period comprising 61 coupes (see *Felling Phases Maps, p.29-34*). These clearfell coupes are mainly coniferous (170.1ha) and involve economic felling of mature conifer crops, PAWS* restoration, and premature felling of DNB*-infected younger pine stands. A further 19ha (gross) of young Corsican pine stands will be restructured using strip felling. The clearfells planned in broadleaf areas during the next 10yrs total 34.1ha and involve short rotation mechanical coppice for biomass production.

Management of remaining broadleaf stands will be mostly through LISS* group felling systems (group selection and small coupe felling). This entails creating small clearings of between 0.25ha-2ha to restructure the crops and diversify their age and species composition, also improving the woodlands' resilience and adaptive capacity. The size and shape of the clearings will be designed around the light requirements of the trees to become established (considering aspect* and shade cast by adjacent stands), helping create optimum growing conditions. For the benefit of wildlife larger clearings will be elongated to maximise edge habitat. LISS management is also planned in 55.7ha of coniferous/mixed woodland. The use of LISS should also offer greater protection to soils and ground flora by maintaining canopy cover; thus reducing the likely impacts of extreme weather events and variation in micro climates throughout the day and between seasons.

For the benefit of wildlife a total of 15.7ha of woodland is planned for Long Term Retention* and a further 2ha as Minimum Intervention* or Natural Reserve*. These management types prioritise conservation and environmental benefit.

In addition to the aforementioned felling programme, thinning assessments will be made every 5 years and thinning operations planned accordingly. Managing stand density and light availability through thinning is essential for each tree's crown and root system to develop fully, helping ensure the trees remain stable in the wind as they mature. Thinning operations are also an important source of timber and timber revenue.

As part of our Operational Planning* process, all forest operations are carefully considered beforehand and their delivery takes the specific ecology, heritage, and constraints of the site into account. Operations will be carried out in line with all relevant regulations and best practice guidance as summarised in UKFS* and UKWAS*. Forestry operations may take place at any time of the year. This is necessary to strike a balance between the greatly increased risks of damage to flora and increased soil compaction associated with working during the wetter winter months and the need to minimise disturbance to designated habitats, species and breeding birds.

5. Intended Landuse

Woodland types within the Market Rasen Woodlands is currently split 61% conifer-dominated to 36% broadleaf-dominated (see *Fig.4 below*). PAWS* restoration and conversion to broadleaves in other ecologically-important areas will result in broadleaf woodland increasing to an estimated 45% of the forested area during the next rotation.

To increase forest-scale resilience to current and future pests, diseases and climatic changes we aim to introduce a wider range of tree species during restock where appropriate. This forms part of our portfolio approach to restock, which also includes accepting natural regeneration and using planting stock of local provenance and/or from 2 to 5 degrees south where possible.

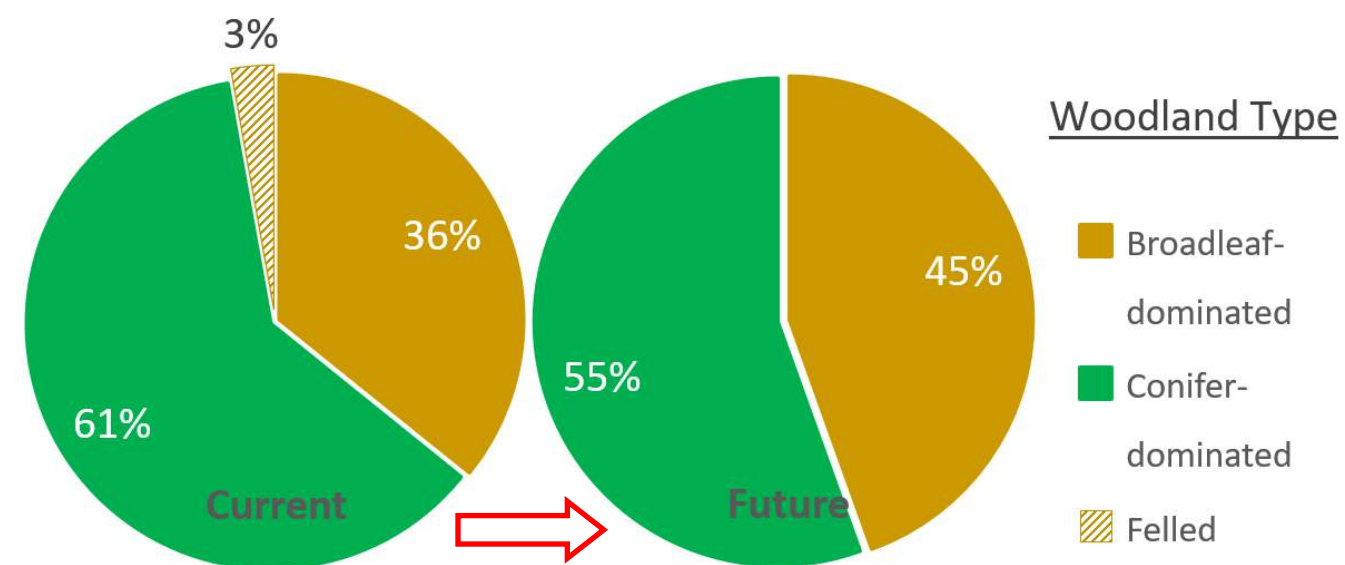


Fig.4: Woodland composition change over the next rotation

6. Contribution towards Forestry England Central District's commitments to UKWAS and UKFS from the Market Rasen Woodlands FP

	Forest Plan Area (ha)	Forest Plan Percentage	Forest District Area (ha)	Forest District Percentage
Total Area	960	100%	27,144	100%
Total Wooded Area	849.9	88.5%	23,909	88%
Open Habitat (>10%)	110.1	11.5%	3,235	12%
Natural Reserves* - Plantation (1%)	0	0%	251	1.57%
Natural Reserves - Semi Natural (5%)	1.6	0.17%	381	4.81%
Long-term Retentions* & LISS* (>1%)	342.7	38.3%	14,637	54%
Area of Conservation Value (>15%) <i>including designations, Ancient Woodland*, PAWS*, Open Habitat, Minimum Intervention*, Natural Reserves, Long Term Retentions</i>	534.8	55.7%	17,582	64.8%



Pic.6: A view from the waymarked trail in Willingham Wood

7. Terms of Reference

National Strategy	District Strategy	Forest Plan Objective	Monitoring
<p>Economy:</p> <p>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 the Estate.</p>	<p>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 clearfelling 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.</p>	<p>Continue to grow commercial timber using a variety of species that will be more resilient to the impacts of climate change, pests and diseases to maximise yields. Consider emerging timber markets and evolving harvesting methods, including mechanical coppice for biomass recovery. Ensure stands are more structurally diverse, actively managing the woodland to promote age- and species-diversity. Consider further possibilities for business activity as opportunities arise.</p>	<p>Forestry operations and restocking will be recorded in the Forestry England sub-compartment database and monitored at 5 year mid-term review and 10 year renewal. As above.</p> <p>Monitor as part of the 10 year forest plan renewal.</p> <p>No monitoring required.</p>
<p>Nature:</p> <p>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.</p>	<p>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.</p>	<p>Continue the restoration of Ancient Woodland in Legsby, Eleanor & Lynwode through the gradual reduction of exotic species. Identify key species and habitats and make appropriate provision for their requirements. Maintain the ecological value of the priority habitats present. Maintain and improve riparian areas for the benefit of wildlife. Manage open and woodland edge habitats for the benefit of flora and fauna. Identify existing locations of TSI and demonstrate appropriate management to recruit future veteran trees and increase the volume and distribution of deadwood.</p>	<p>Ancient Woodland restoration will be monitored as part of the 10 year forest plan renewal. Monitored as part of the operational planning process.</p> <p>As above.</p> <p>As above.</p> <p>Existing and future TSI to be recorded on the conservation database, reviewed as part of operational planning process, at the 5 year mid-term review and as part of the 10 year forest plan renewal.</p>
<p>People:</p> <p>1) Encourage communities to become involved in the 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.</p>	<p>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.</p>	<p>Continue to improve both internal and external landscapes through the diversification of woodland structure and through interventions which are sympathetically designed and appropriately scaled. Continue management of the Chapel Hill Camp Scheduled Ancient Monument in line with the agreed management plan. Maintain informal public access throughout the Market Rasen woodlands. Work with local volunteer groups for practical conservation work and to gather valuable ecological data as opportunities arise. Engage with third party partners and local organisations where compatible with wider Forest Plan objectives.</p>	<p>Species composition, age structure and coupe design reviewed at 5 year mid-term review and as part of the 10 year forest plan renewal.</p> <p>Monitored as part of the operational planning process.</p> <p>No monitoring required.</p> <p>Monitor via Forestry England's permissions system.</p> <p>As above.</p>

Appendix I

Glossary

Acute Oak Decline

Acute oak decline is a complex syndrome in which several damaging agents interact and cause a serious decline in tree condition, and can kill oak trees within four to six years of the onset of symptoms. The agents can be abiotic or biotic; the latter often include insects and fungi which are not capable of invading healthy trees but which can be very destructive to stressed oaks. Symptoms include characteristic weeping cankers/lesions in the bark.

Ancient Woodland

Areas of semi-natural native woodland that have had continuous woodland cover since at least 1600. They are particularly rich in biodiversity and this is often notable in their characteristic ground flora.

Aspect

The direction a slope faces. This can have a strong influence on the microclimate, ground vegetation, soils and hydrology.

Canopy

The mass of foliage and branches formed collectively by the crowns of trees. The shade it casts has a strong influence on the plants, trees and shrubs beneath it.

Carr Woodland

A wet woodland area, usually dominated by willow, birch and alder species.

Chalara Ash Dieback

Ash dieback is a highly destructive fungus killing native ash trees across the UK. Young and coppiced trees will die quickly once infected, more mature ash may survive for a number of years once infected. Causes the timber to lose strength, become brittle and trees to start dropping limbs.

Chronic Oak Decline

Chronic oak decline is a complex disorder of oak trees which several damaging agents interact either simultaneously or sequentially to bring about a serious, long term decline in tree health and condition. It differs from acute oak decline (above), which causes a much faster, and usually fatal, decline in tree health.

Clearfell System

Cutting down of an area of woodland (if it is within a larger area of woodland it is typically a felling greater than 0.25 ha). Sometimes scattered or small clumps of trees may be left standing within the felled area.

Climax Species

Tree species that will eventually dominate the forest canopy, maximising their exposure to sunlight and out-competing other species.

Coppice

Coppicing is a Lower Impact Silvicultural System (LISS) based on regeneration by regrowth from cut stumps (coppice stools). The same stool is used through several cycles of cutting and regrowth. Coppice can also refer to an area of woodland in which the trees or shrubs are periodically cut back to ground level to stimulate growth and provide wood products. 'Coppice with standards' refers to coppice with a scatter of trees grown on a long rotation to produce larger-sized timber and to regenerate new seedlings to replace worn out stools.

Coupes

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

Dothistroma Needle Blight (DNB)

DNB is a fungal disease affecting mainly pine species. The fungus affects the needles of the infected tree, which are eventually shed. This can continue year on year and gradually weaken the tree, significantly reducing timber yields. It can also eventually lead to mortality.

Ecological Site Classification (ESC)

ESC is an online tool developed by Forest Research to help a forester choose tree species that are suited to a specific site. It models how well each species is likely to grow using information on climate and soil properties. It can also be used to forecast how climate change may impact suitability.

Ecosystem

An ecosystem is an interconnected network formed of all the living things in a given area (plants, animals and organisms) and their interactions with each other and their non-living environments (eg: weather, earth, sun, soil & climate).

Ecosystem Services

Ecosystem services are the goods and services that people depend on that arise from ecosystems. They are usually categorised into Provisioning (eg: timber, water, food production), Regulating (eg: regulation of climate and diseases), Cultural (eg: recreational opportunities, aesthetic value) and Supporting services that underpin these (eg: crop pollination).

England Trees Action Plan

Sets out the Government's long-term vision for the treescape it wants to see in England by 2050 and beyond.

Forestry England

Forestry England is the executive agency of the Forestry Commission that is responsible for managing the Nation's Forests in England.

Forests and Water Guidelines

One of seven sets of guidelines that support the United Kingdom Forestry Standard (UKFS). The UKFS and guidelines outline the context for forestry in the UK; set out the UK Government's approach 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 FP is primarily a landscape-scale felling and restocking plan. It provides a holistic, long-term approach to planning and forest design, detailing felling operations over a 10 year period for the purposes of licencing felling and outlining proposals over the next 50 years. FPs are reviewed every 5 years and redrawn and approved every 10 years.

Forest Stewardship Council® (FSC®)

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

Group Selection

A method of managing irregular stands in which regeneration is achieved by felling trees in small groups. Group selection involves felling groups of trees (generally <0.25 ha per group)

Historic Environment

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

Landscape Character

England is renowned for its rich, diverse and beautiful landscapes which have their own distinct local characters. 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

Individual, stable stands and clumps of trees retained for environmental benefit significantly beyond their normal economic age or size.

Glossary (continued...)

Lower Impact Silvicultural Systems (LISS)

Silvicultural systems including group selection, shelterwood or under-planting, small coupe felling, coppice or coppice with standards, minimum intervention and single tree selection systems which are suitable for windfirm conifer woodlands and most broadleaved woodlands.

Minimum Intervention

Management with no systematic felling or planting of trees. Operations normally permitted are fencing, control of exotic plant species and vertebrate pests, maintenance of paths and rides and safety work. Management only involves the basic inputs required to protect the woodland from external forces or ensure succession of key habitats and species.

the Nation's Forests

The woodlands managed by Forestry England. These include both freehold and leasehold land. (Previously referred to as the Public Forest Estate.)

National Character Area (NCA)

Broad divisions of landscape form the basic units of cohesive countryside character, on which strategies for both ecological and landscape issues can be based. There are 159 Character Areas, each of which is distinctive with a unique 'sense of place'.

National Nature Reserve (NNR)

NNRs were established to protect some of our most important habitats, species and geology, and to provide 'outdoor laboratories' for research. Most NNRs offer opportunities to the public to experience wildlife first hand and learn more about nature conservation.

Native

Native tree species colonised Britain without human assistance at the end of the last ice age, before the English Channel cut Britain off from mainland Europe.

Naturalised

Naturalised trees have colonised Britain since the land divide with mainland Europe and are growing and reproducing successfully within their natural climatic range without human intervention.

Natural Regeneration

The growth of new trees from seed found in the soil or cast from adjacent trees. Regeneration only occurs where suitable seed sources and conditions are present.

Natural Reserve

Natural Reserves are predominantly wooded, usually mature and intended to reach biological maturity. They are permanently identified and in locations which are of particularly high wild-life interest or potential. They are managed by minimum intervention unless alternative interventions have higher conservation or biodiversity value.

Nest Planting

Trees planted in small groups which are distributed across the restock site with remaining unplanted areas left to naturally regenerate. A useful way to introduce new species or provenances to a site.

Notifiable Disease

Some tree pests and diseases are notifiable, which means that, in England, they must be reported to the Forestry Commission or Animal & Plant Health Agency. Notifiable tree pests and diseases are typically those with the potential to cause greatest damage to our trees, woods and forests.

Open Grown Trees

Trees that have been given space to develop a large crown and natural shape. In comparison trees planted closely in a plantation managed for timber or biomass tend to have a more uniform shape.

Open Space

Areas within a forest without trees, such as glades, stream sides, grass or heathland, water bodies, rocky areas, roads and rides.

Operational Plans

Detailed site plans prepared in advance of all major forest operations providing guidance to Forestry England staff and contractors. They identify site constraints, opportunities and areas requiring special treatment or protection.

Phytophthora ramorum and *P.pluvialis*

P.ramorum is a very destructive pathogen affecting over 150 plant species, particularly larch trees. Some broadleaved plants (such as sweet chestnut and rhododendron) can also host *P.ramorum*. *P.pluvialis* was first recorded in the UK in 2021 and affects a range of species including Douglas fir and western hemlock.

Plantation on Ancient Woodland Site (PAWS)

Ancient Woodland areas where semi-natural woodland has been cleared and replaced by plantation, often including non-native species. PAWS sites can include both broadleaved and conifer woods and often retain remnant ancient woodland features like species-rich ground flora or undisturbed soils. Also known as Ancient Replanted Woodland.

Pollarding

A form of pruning where the upper branches of a tree are removed, promoting a dense head of foliage and branches. Cutting is usually around 2.4 metres above ground – the height that wild animals or domesticated stock could reach. Traditionally, trees were pollarded for fodder or for wood. Fodder pollards are generally pruned every two to six years, wood pollards at longer intervals, usually of eight to 15 years, to produce upright poles for eg: fence rails and posts.

Production Forecast

The projected volume of biomass that the forest will produce each year. Calculations are based on species, age, net area and yield class.

Public Rights of Way (PROW)

Access routes open to the public through legal designation. These include footpaths, by-ways and bridleways.

Respacing

Thinning of dense natural regeneration at a young age (generally when trees are 2-5m tall) to produce a more consistent crop, focus available resources on the remaining trees and promote good development.

Restocking

The 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 which provide access for management and other activities.

Scheduled Ancient Monument (SAM)

A scheduled monument is a site that is legally protected because of its historical importance.

Secondary Woodland

Woodland that has been established on land formerly used for another purpose (eg: as pasture, arable fields, quarries, etc.). Unlike ancient woodland it has not been continuously wooded in the past.

Seed Trees

Trees with good shape and growth rates chosen to produce seed for restocking. Seed trees need to be of an age and size where they produce fertile seeds in large quantities.

Glossary (continued...)

Selective Felling (Regeneration 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.

Semi-natural woodland

Those woodlands which are comprised mainly of locally native trees and shrubs, and have some structural characteristics of natural woodland.

Shade Tolerant Species

Trees that have adapted to lower light levels and will regenerate and establish freely under the shade of the surrounding tree canopy, as opposed to light demanding species which require full sun/high light levels to establish and grow.

Silvicultural Systems

Silviculture is the process of tending, harvesting and regenerating a forest. Different patterns of felling and regeneration form distinct 'silvicultural systems'. Different systems may be suitable for different management objectives (eg: conservation in an ancient woodland vs timber production in a conifer plantation).

Site of Special Scientific Interest (SSSI)

A SSSI is a formal conservation designation. Usually, it describes an area that is of particular interest to science due to the rare species of fauna or flora it contains - or even important geological or physiographical features that may lie in its boundaries.

Small Coupe Felling

A small-scale clearfelling system. The system is imprecisely defined but coupes are typically up to 2 ha in extent, with the larger coupes elongated in shape so the edge effect is still high.

Special Area of Conservation (SAC)

SACs are protected areas in the UK designated under the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales. These areas form an internationally important network of high-quality conservation sites that make a significant contribution to conserving Annex I and Annex II habitats and species.

Special Protection Area (SPA)

SPAs are protected areas selected to protect one or more rare, threatened or vulnerable bird species listed in Annex I of the Birds Directive, or specific regularly occurring migratory species. They form an internationally important network of high-quality conservation sites that make a significant contribution to conserving important habitats and species.

Strategic Plan

Forestry England's guide to the management of woodland in Central England Forest District. It divides the district into zones for the purpose of management and ensures forestry activities reflect the local ecological, social and cultural individuality of each woodland.

Strip Felling

Strip felling involves removal of some trees in rows, leaving strips of mature trees in place rather than clearfelling a crop in one operation. This creates space between remaining trees suitable for planting new trees (especially species that require sheltered growing conditions) and maintains woodland cover while new trees are established. The width of strips may vary and multiple strips are removed from one stand at a time.

Sub-compartments

Areas of forest that form a homogeneous crop in terms of age, species composition and condition. They may be split across several locations and their boundaries may change as the forest develops after felling and restocking.

Thinning

The removal of a proportion of trees in a forest after canopy closure, usually to promote growth and greater value in the remaining trees.

Trees of Special Interest (TSI)

Trees that are of interest biologically, aesthetically or culturally because of their age, or trees that are in the ancient stage of their life, or trees that are old relative to others of the same species. Also referred to as Veteran or Ancient trees.

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

Understorey Woodland Species

Minor tree species that live under top canopy trees or are 'pioneer' species that arrive in clearings before climax species become established. Once the overstorey is established understorey species are more common on woodland edges and clearings where light levels are higher.

Wood Pasture

Wood pasture is derived from the traditional practice of managing trees in tandem with grazing, characteristically combining at least some open grown or pollarded veteran trees or shrubs and diverse and dynamic open and open-woodland habitats.

Yield Class

Yield class is a measure of the growth rate of a tree crop on a given site. It describes the maximum average volume increase that a particular crop can achieve on 1 ha of land each year. For example, a crop capable of a maximum annual growth of 14 m³ per hectare has a yield class of 14. Yield Class varies depending on factors including the species, how it is managed and local site conditions.

Appendix II - Market Rasen Woods in the landscape



Dog Kennel

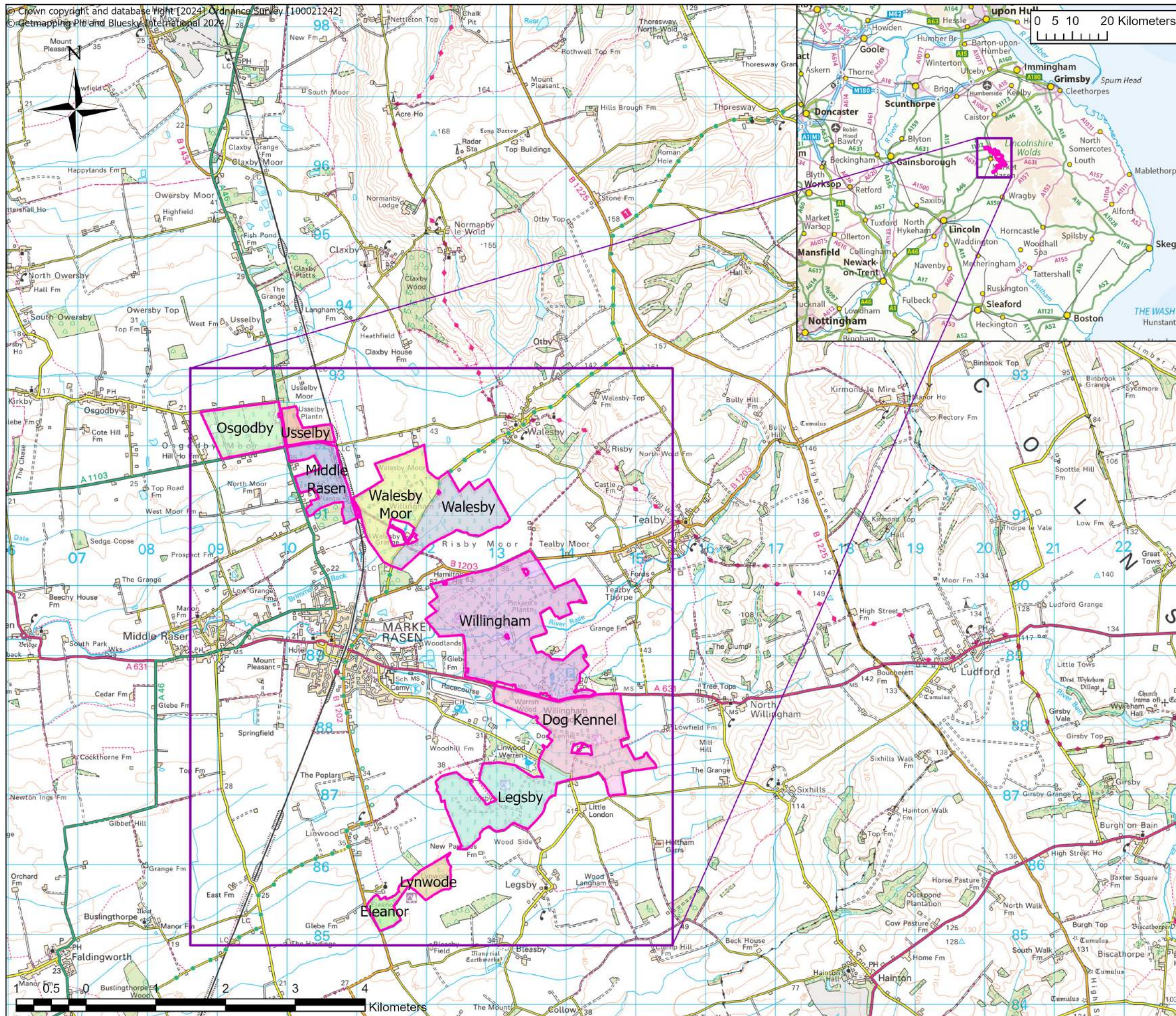
Willingham

Walesby

Middle Rasen

Usselby

The above photos are taken from points along the Viking Way PROW between Walesby and North Willingham, looking west from the elevated western edge of the Lincolnshire Wolds National Landscape (formerly Area of Natural Beauty (AONB)). As illustrated, the Market Rasen Woodlands are prominent in the foreground beyond the mostly-arable fields. The woodlands are highly visible but strongly integrated into the far-reaching flat lowland landscape beyond. Views extend to Lincoln Cathedral on a clear day. Felling coupes on the eastern edge of the FP area are visible from the Wolds, but their scale and shape have been designed to blend with the existing field enclosures, to unify the extensive view and manage visual impact.



Market Rasen Forest Plan 2024

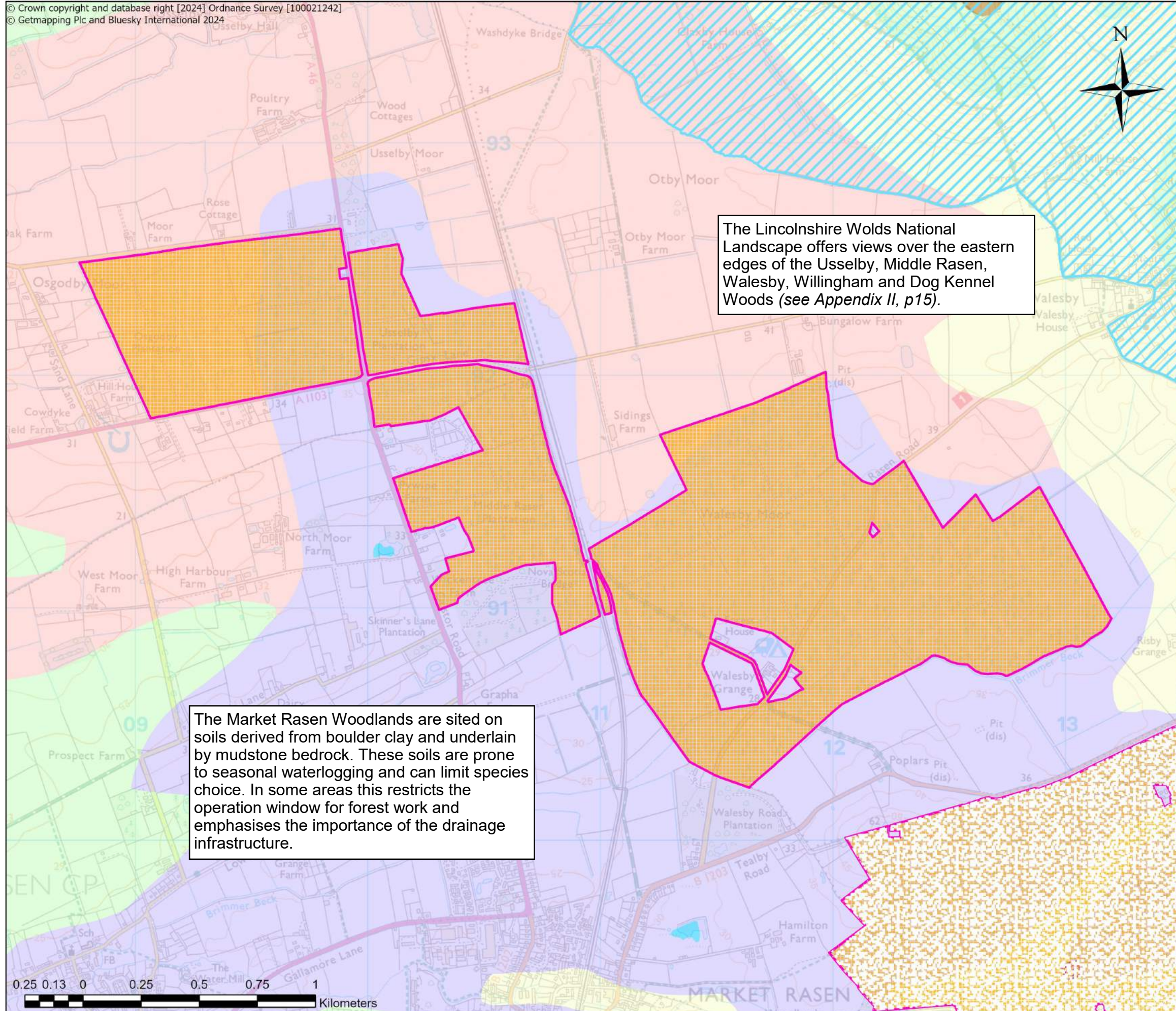
Location Map

Date: March 2024

Main map scale @ A3: 1:50,000

 Market Rasen FP Area

© Crown copyright and database right [2024] Ordnance Survey [100021242]
© Getmapping Plc and Bluesky International 2024



The Lincolnshire Wolds National Landscape offers views over the eastern edges of the Usselby, Middle Rasen, Valesby, Willingham and Dog Kennel Woods (see Appendix II, p15).

The Market Rasen Woodlands are sited on soils derived from boulder clay and underlain by mudstone bedrock. These soils are prone to seasonal waterlogging and can limit species choice. In some areas this restricts the operation window for forest work and emphasises the importance of the drainage infrastructure.

Market Rasen Forest Plan 2024
**Northern Woods
Soils & Designations Map**
Date: March 2024
Scale @ A3: 1:15,000

- Market Rasen FP Area
- Undesignated Secondary Woodland
- National Landscapes (formerly AONB)
- ^ Soil Type Classification
 - Brown redzina (343h) Shallow lime-rich soils over chalk or limestone
 - Typical gley-podzol (641c) Naturally wet very acid sandy and loamy soils
 - Typical stagnogleys (711frs) Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils
 - Pello-stagnogley (712b) Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils
 - Typical sandy gley (821b) Naturally wet very acid sandy and loamy soils
 - Lake

^ Soil data from the National Soil Map and Soil Classification (Copyright Cranfield University, 2018)

Forestry England

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

FSC www.fsc.org FSC® C123214 The mark of responsible forestry

PEFC www.pefc.org PEFC® C123214 Promoting Sustainable Forest Management www.pefc.co.uk

© Crown copyright and database right [2024] Ordnance Survey [100021242]
© Getmapping Plc and Bluesky International 2024

The site at Chapel Hill is believed to be a hermitage, dating back to 1336 when Edward III gave protection for one year for Roger de Staunford and Richard de Burle, who were hermits of the chapel of St Thomas at Tealby. The chapel is referred to in a document of 1638, but by the end of the following century no buildings remained standing.

Management in this area will be in accordance with the latest Scheduled Ancient Monument Management Plan.

The Linwood Warren SSSI is adjacent to the northern edge of Legsby Wood. This site is one of the few remaining areas typical of heathland once found over large areas of Lincolnshire. The mosaic of habitats supports locally scarce species.

Forest operations in the vicinity will be planned and conducted accordingly. Due consideration will also be given when selecting restock species in nearby coupes.

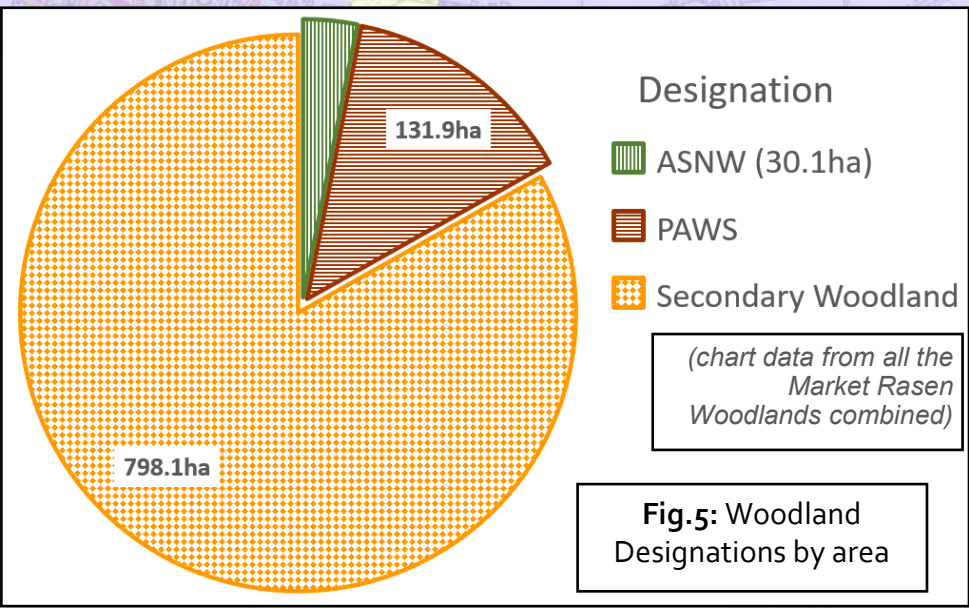
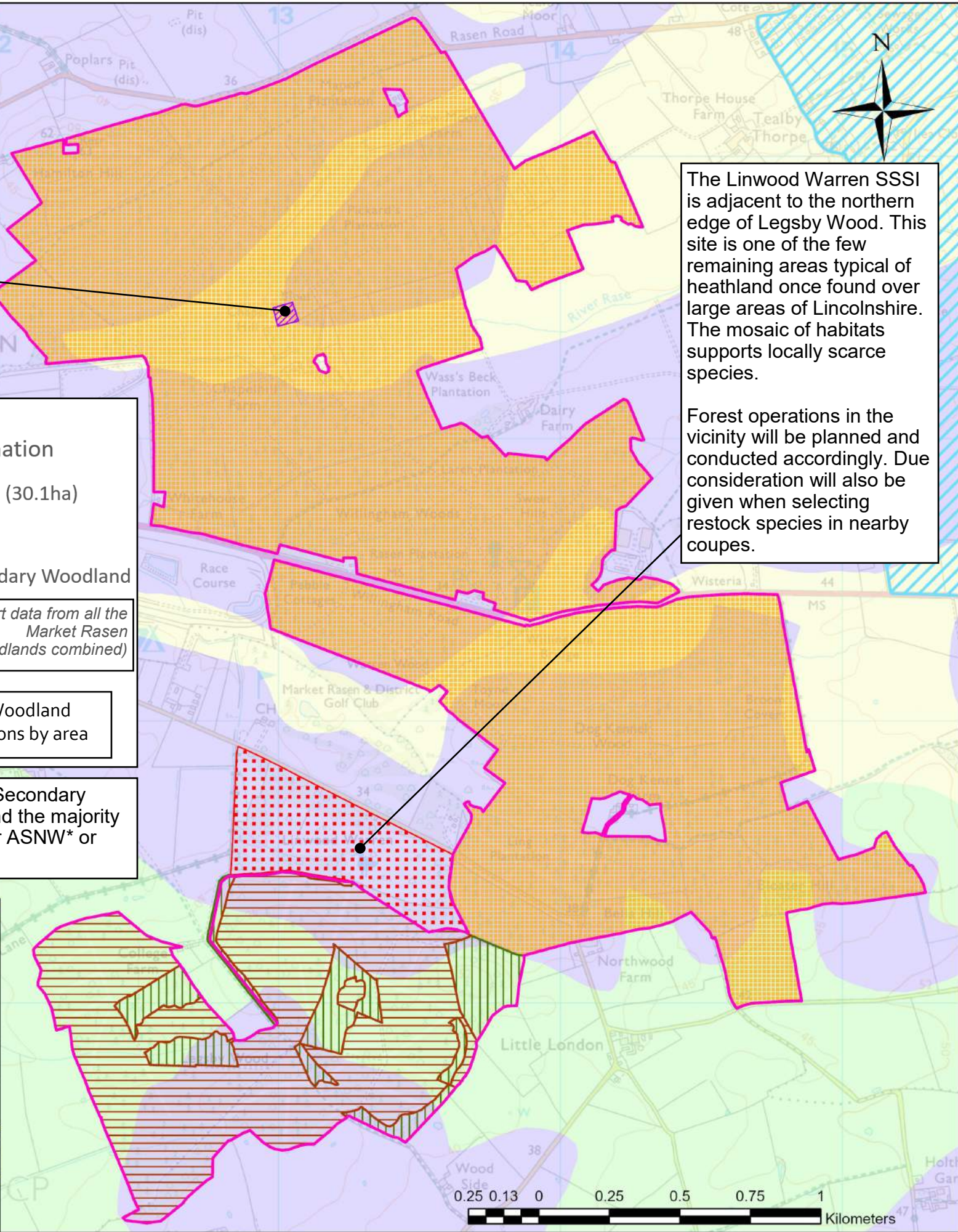
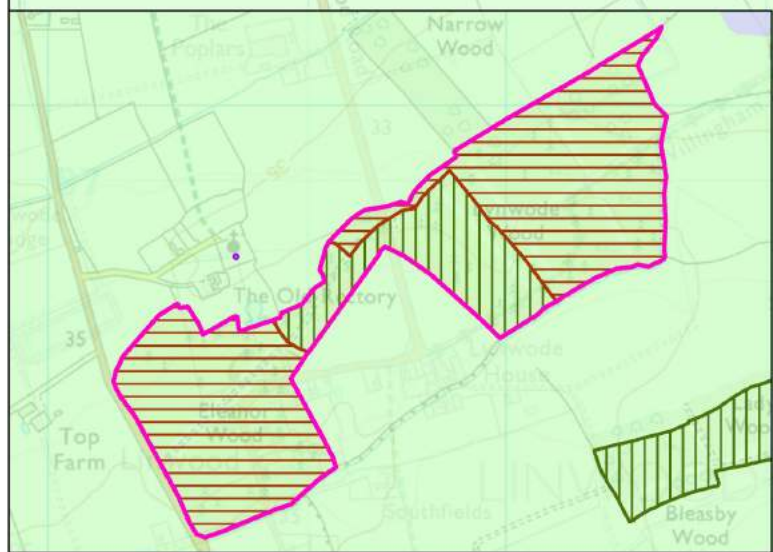


Fig.5: Woodland Designations by area

Over 80% of the Market Rasen Woodlands area is Secondary Woodland* (See Fig.5 above). Eleanor, Lynwode and the majority of Legsby are designated Ancient Woodland*; either ASNW* or PAWS*.

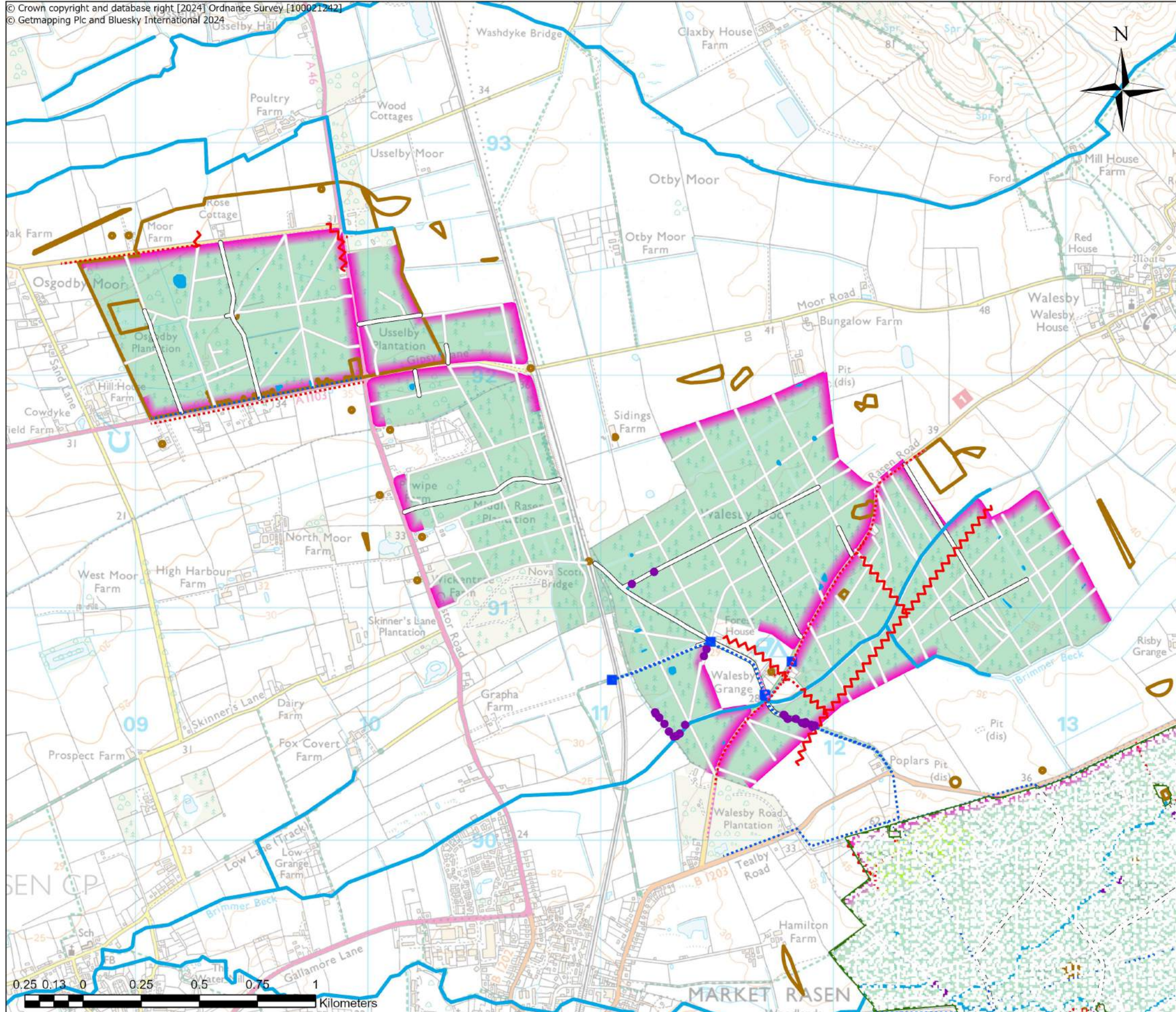


Market Rasen Forest Plan 2024
Southern Woods Soils & Designations Map
Date: March 2024
Scale @ A3: 1:15,000

- Market Rasen FP Area
- Scheduled Monuments
- Sites of Special Scientific Interest (SSSI)
- Ancient Woodland**
 - Ancient & Semi-Natural Woodland
 - Ancient Replanted Woodland
 - Undesignated Secondary Woodland
- National Landscapes (formerly AONB)
- Soil Type Classification**
 - Typical gley-podzol (641c) Naturally wet very acid sandy and loamy soils
 - Typical stagnogleys (711frs) Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils
 - Pelo-stagnogley (712b) Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils
 - Lake

^ Soil data from the National Soil Map and Soil Classification (Copyright Cranfield University, 2018)

© Crown copyright and database right [2024] Ordnance Survey [100021242]
© Getmapping Plc and Bluesky International 2024



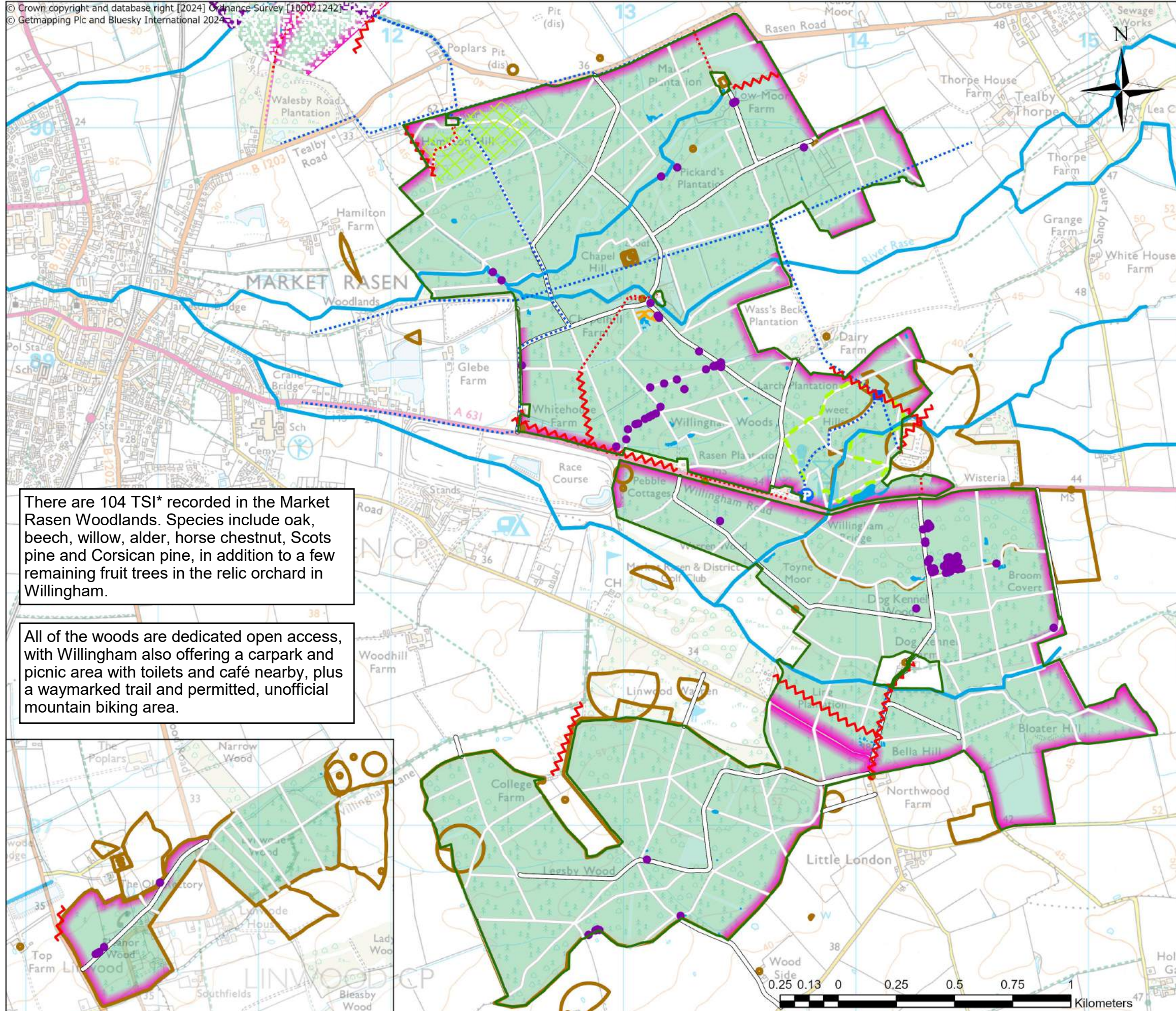
Market Rasen Forest Plan 2024

**Northern Woods
Survey Map**

Date: May 2024

Scale @ A3: 1:15,000

- Market Rasen FP Area
- Visually Sensitive Boundaries
- Heritage Features
- TSI
- Ponds
- Principal Watercourses
- Access**
- Public Rights of Way
- Forest Roads
- Rides
- Utilities**
- Overhead Powerlines
- Underground Powerlines
- Gas Pipelines
- Water Pipelines
- Water Supply Points

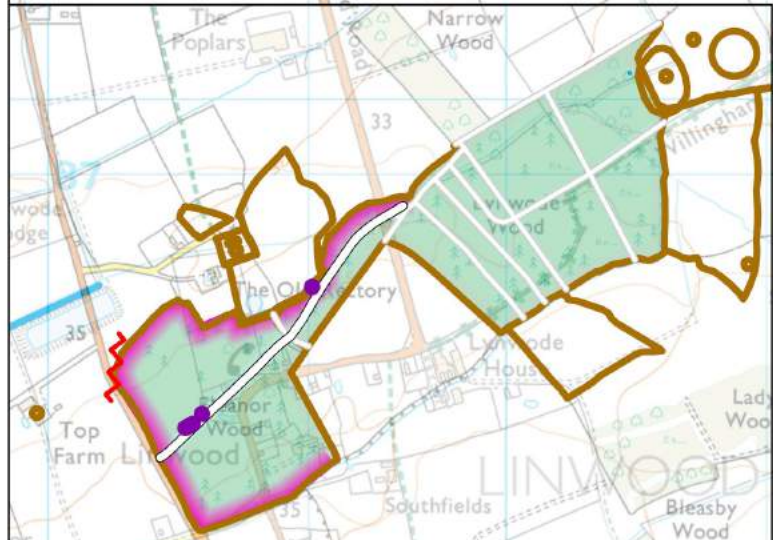


Market Rasen Forest Plan 2024
Southern Woods Survey Map
 Date: May 2024
 Scale @ A3: 1:15,000

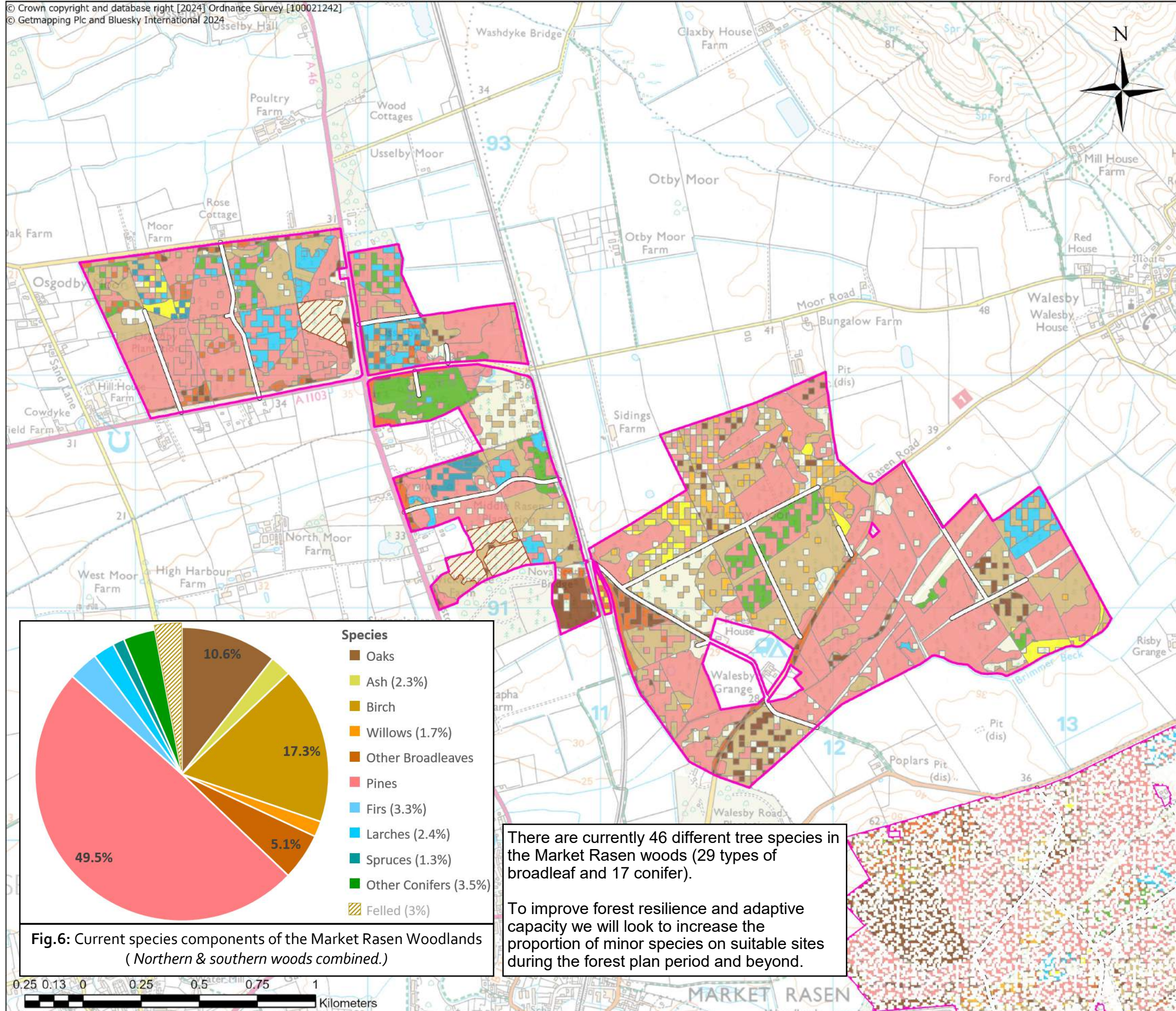
- Market Rasen FP Area
 - Visually Sensitive Boundaries
 - Heritage Features
 - TSI
 - Ponds
 - Principal Watercourses
 - Relic Orchard
- Access
- Carpark and Picnic Area
 - Waymarked Trail
 - Public Rights of Way
 - Forest Roads
 - Rides
 - Unofficial MTB Area
- Utilities
- Overhead Powerlines
 - Underground Powerlines
 - Water Pipelines
 - Water Supply Points

There are 104 TSI* recorded in the Market Rasen Woodlands. Species include oak, beech, willow, alder, horse chestnut, Scots pine and Corsican pine, in addition to a few remaining fruit trees in the relic orchard in Willingham.

All of the woods are dedicated open access, with Willingham also offering a carpark and picnic area with toilets and café nearby, plus a waymarked trail and permitted, unofficial mountain biking area.



© Crown copyright and database right [2024] Ordnance Survey [100021242]
© Getmapping Plc and Bluesky International 2024



Market Rasen Forest Plan 2024
Northern Woods
Current Species Map
Date: March 2024
Scale @ A3: 1:15,000

- Market Rasen FP Area
- Species Group**
- Oaks
- Ash
- Birch
- Willows
- Other Broadleaves
- Pines
- Firs
- Larches
- Spruces
- Other Conifers
- Felled (to be restocked)
- Open
- Forest Roads

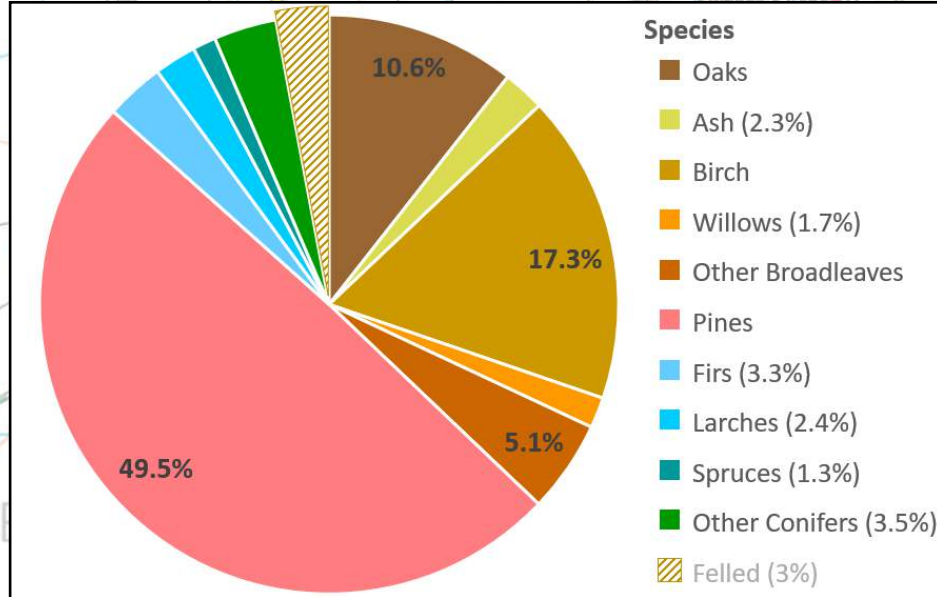


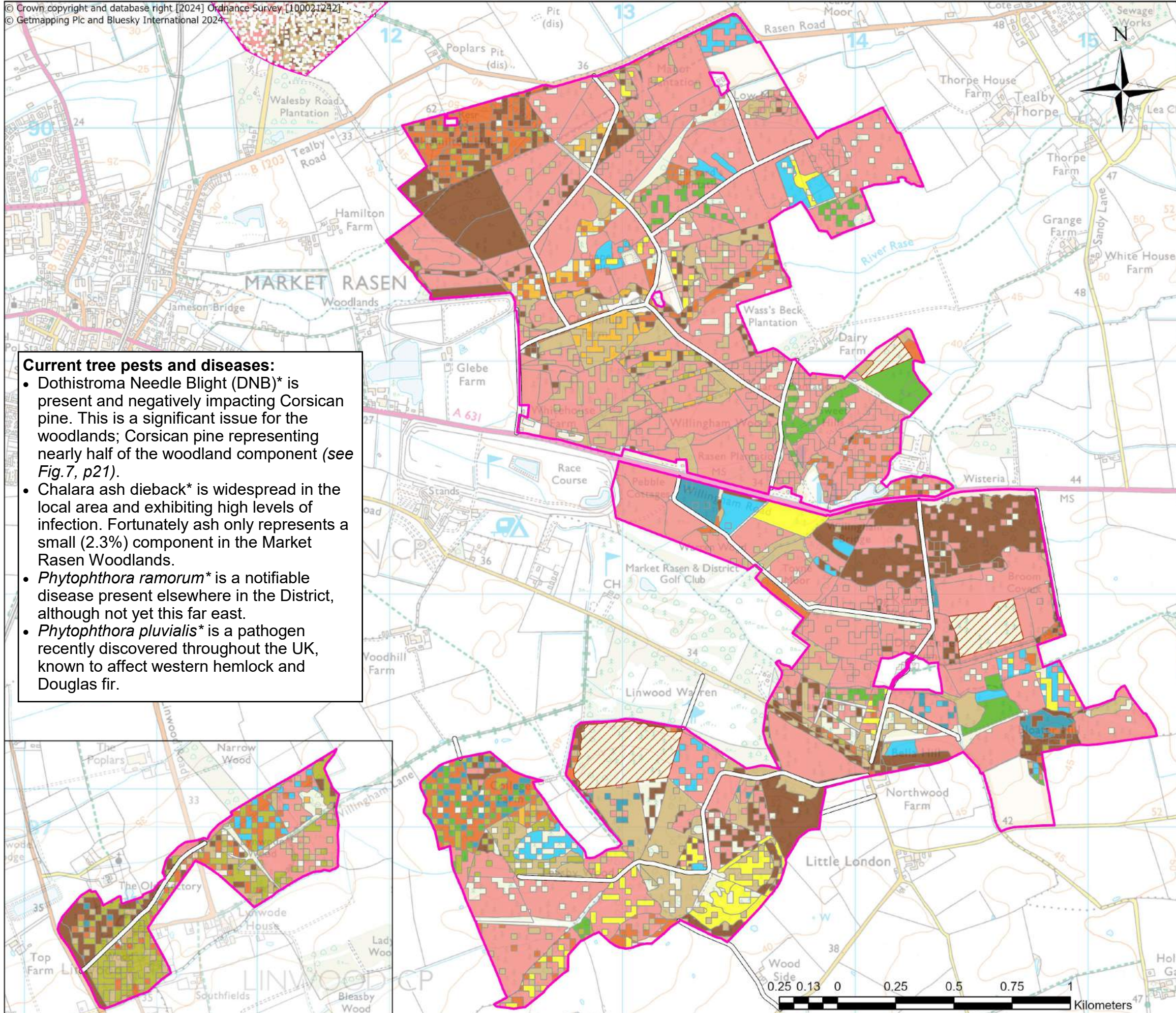
Fig.6: Current species components of the Market Rasen Woodlands (Northern & southern woods combined.)

There are currently 46 different tree species in the Market Rasen woods (29 types of broadleaf and 17 conifer).

To improve forest resilience and adaptive capacity we will look to increase the proportion of minor species on suitable sites during the forest plan period and beyond.

The coloured squares represent the proportion of each species in mixed stands rather than the trees' precise location on the ground.

© Crown copyright and database right [2024] Ordnance Survey [100021242]
© Getmapping Plc and Bluesky International 2024



Market Rasen Forest Plan 2024
Southern Woods
Current Species Map

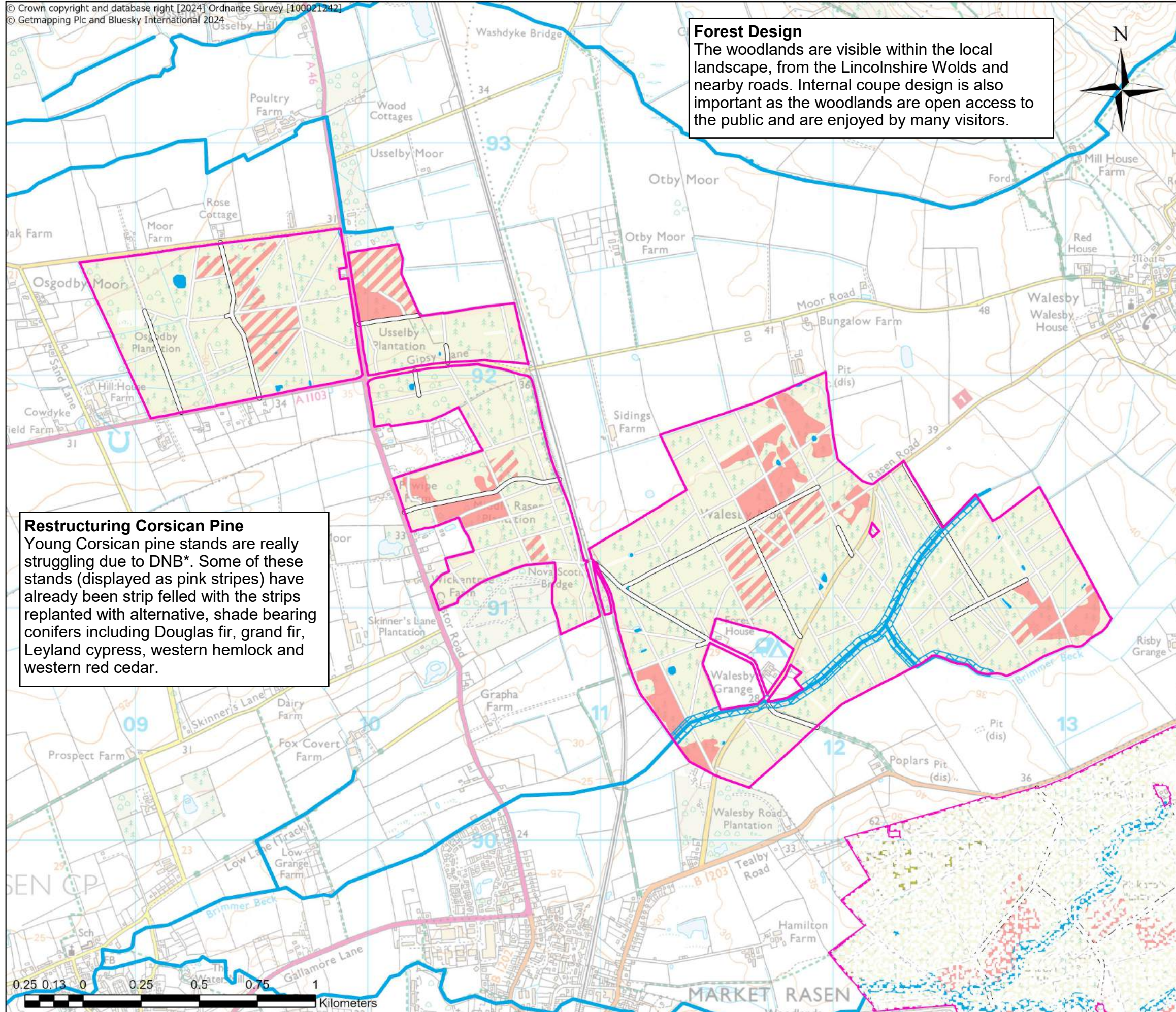
Date: March 2024
Scale @ A3: 1:15,000

- Market Rasen FP Area
- Species Group**
- Oaks
- Ash
- Birch
- Willows
- Other Broadleaves
- Pines
- Firs
- Larches
- Spruces
- Other Conifers
- Felled (to be restocked)
- Open
- Forest Roads

Current tree pests and diseases:

- Dothistroma Needle Blight (DNB)* is present and negatively impacting Corsican pine. This is a significant issue for the woodlands; Corsican pine representing nearly half of the woodland component (see Fig.7, p21).
- Chalara ash dieback* is widespread in the local area and exhibiting high levels of infection. Fortunately ash only represents a small (2.3%) component in the Market Rasen Woodlands.
- *Phytophthora ramorum** is a notifiable disease present elsewhere in the District, although not yet this far east.
- *Phytophthora pluvialis** is a pathogen recently discovered throughout the UK, known to affect western hemlock and Douglas fir.

The coloured squares represent the proportion of each species in mixed stands rather than the trees' precise location on the ground.

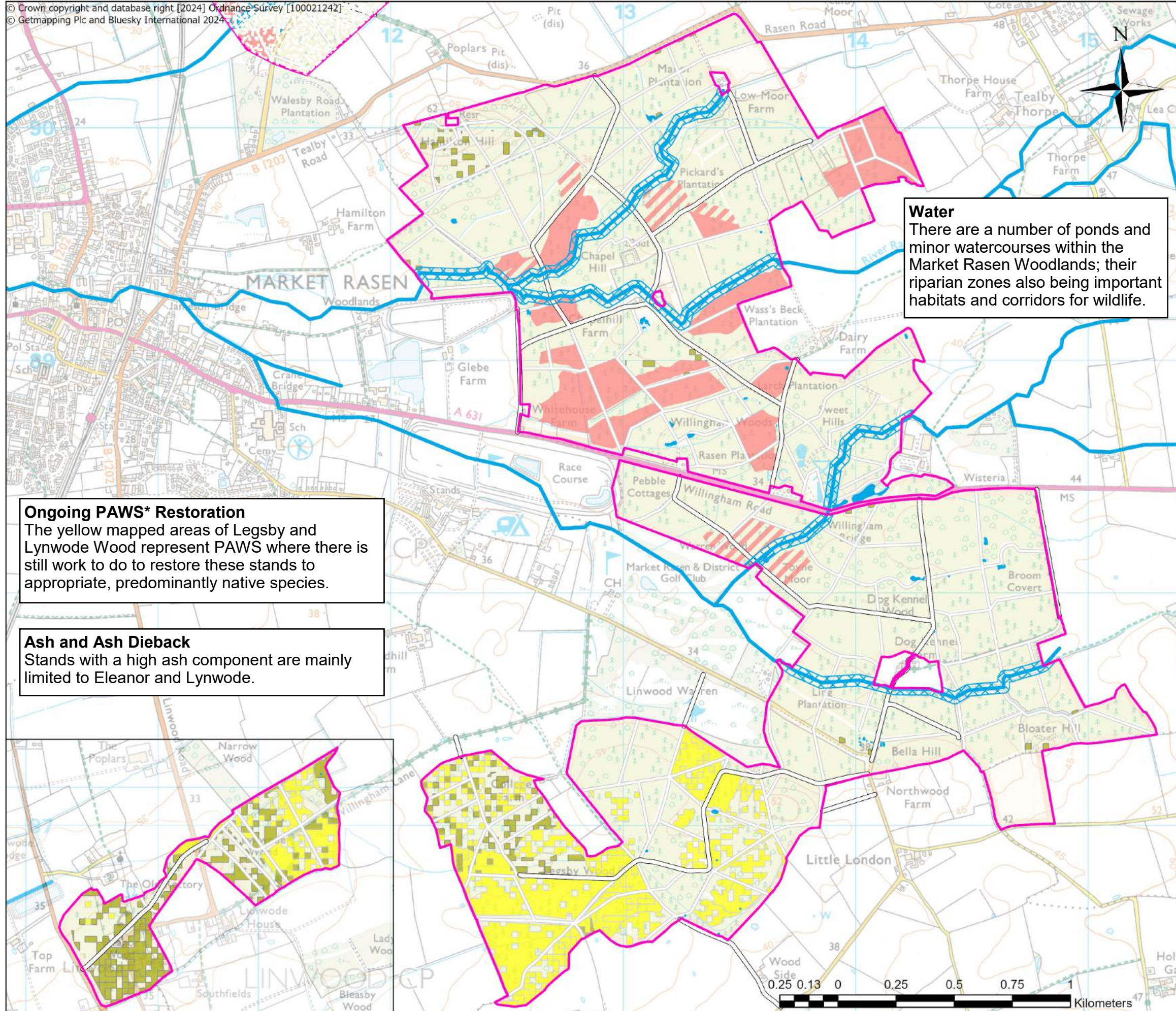


Forest Design
 The woodlands are visible within the local landscape, from the Lincolnshire Wolds and nearby roads. Internal coupe design is also important as the woodlands are open access to the public and are enjoyed by many visitors.

Restructuring Corsican Pine
 Young Corsican pine stands are really struggling due to DNB*. Some of these stands (displayed as pink stripes) have already been strip felled with the strips replanted with alternative, shade bearing conifers including Douglas fir, grand fir, Leyland cypress, western hemlock and western red cedar.

Market Rasen Forest Plan 2024
Northern Woods Analysis Map
 Date: March 2024
 Scale @ A3: 1:15,000

- Market Rasen FP Area
- Forest Roads
- Rides
- Water**
- Ponds
- Principal Watercourses
- Principal Riparian Zones
- Young CP (Age<40yrs)**
- Not Yet Restructured
- Already Restructured



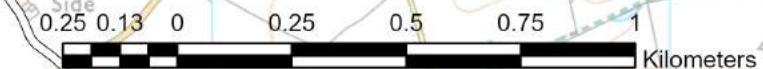
Market Rasen Forest Plan 2024
Southern Woods Analysis Map
 Date: March 2024
 Scale @ A3: 1:15,000

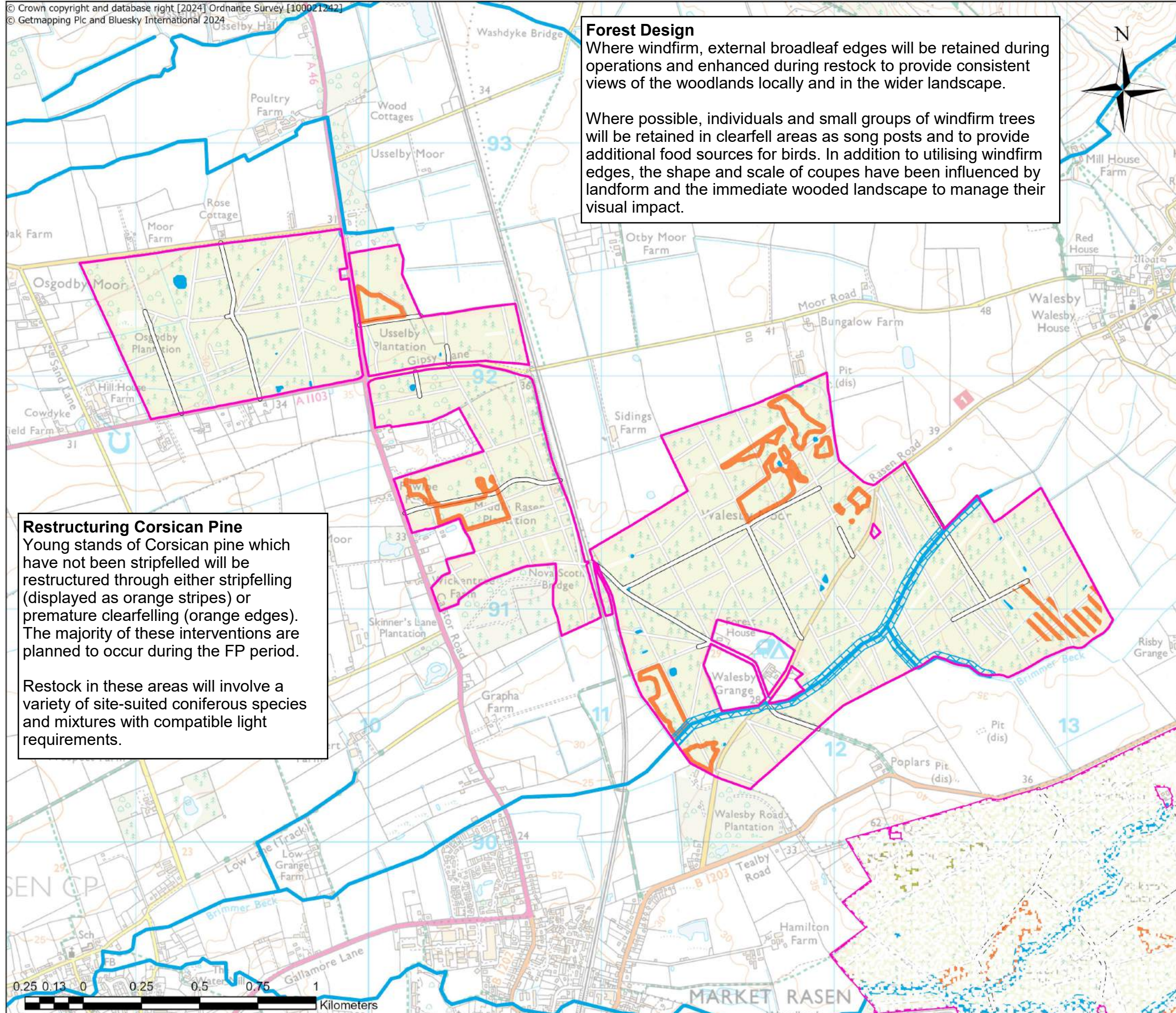
- Market Rasen FP Area
- Forest Roads
- Rides
- Unrestored PAWS
- Ash
- Water**
 - Ponds
 - Principal Watercourses
 - Principal Riparian Zones
- Young CP (Age < 40 yrs)**
 - Not Yet Restructured
 - Already Restructured

Water
 There are a number of ponds and minor watercourses within the Market Rasen Woodlands; their riparian zones also being important habitats and corridors for wildlife.

Ongoing PAWS* Restoration
 The yellow mapped areas of Legsby and Lynwode Wood represent PAWS where there is still work to do to restore these stands to appropriate, predominantly native species.

Ash and Ash Dieback
 Stands with a high ash component are mainly limited to Eleanor and Lynwode.



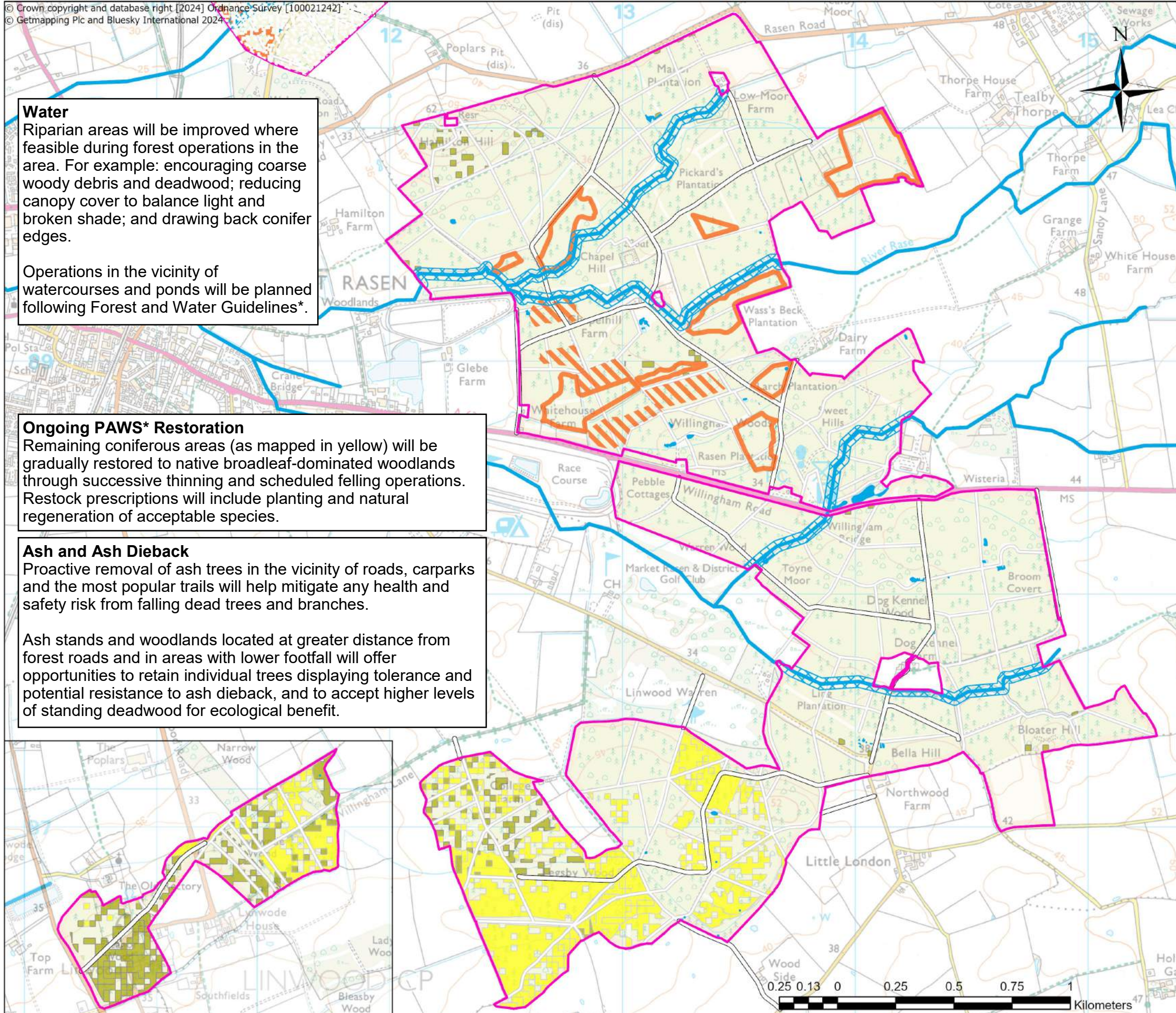


Forest Design
 Where windfirm, external broadleaf edges will be retained during operations and enhanced during restock to provide consistent views of the woodlands locally and in the wider landscape.
 Where possible, individuals and small groups of windfirm trees will be retained in clearfell areas as song posts and to provide additional food sources for birds. In addition to utilising windfirm edges, the shape and scale of coupes have been influenced by landform and the immediate wooded landscape to manage their visual impact.

Restructuring Corsican Pine
 Young stands of Corsican pine which have not been stripfelled will be restructured through either stripfelling (displayed as orange stripes) or premature clearfelling (orange edges). The majority of these interventions are planned to occur during the FP period.
 Restock in these areas will involve a variety of site-suited coniferous species and mixtures with compatible light requirements.

Market Rasen Forest Plan 2024
**Northern Woods
 Concept Map**
 Date: March 2024
 Scale @ A3: 1:15,000

- Market Rasen FP Area
- Forest Roads
- Rides
- Water**
- Ponds
- Principal Watercourses
- Principal Riparian Zones
- Future Restructuring in Young CP stands**
- Premature Clearfell and Restock
- Stripfelling and Restock



Water
Riparian areas will be improved where feasible during forest operations in the area. For example: encouraging coarse woody debris and deadwood; reducing canopy cover to balance light and broken shade; and drawing back conifer edges.

Operations in the vicinity of watercourses and ponds will be planned following Forest and Water Guidelines*.

Ongoing PAWS* Restoration
Remaining coniferous areas (as mapped in yellow) will be gradually restored to native broadleaf-dominated woodlands through successive thinning and scheduled felling operations. Restock prescriptions will include planting and natural regeneration of acceptable species.

Ash and Ash Dieback
Proactive removal of ash trees in the vicinity of roads, carparks and the most popular trails will help mitigate any health and safety risk from falling dead trees and branches.

Ash stands and woodlands located at greater distance from forest roads and in areas with lower footfall will offer opportunities to retain individual trees displaying tolerance and potential resistance to ash dieback, and to accept higher levels of standing deadwood for ecological benefit.

Market Rasen Forest Plan 2024
Southern Woods Concept Map
Date: March 2024
Scale @ A3: 1:15,000

- Market Rasen FP Area
- Forest Roads
- Rides
- Unrestored PAWS
- Ash
- Water**
- Ponds
- Principal Watercourses
- Principal Riparian Zones
- Future Restructuring in Young CP stands**
- Premature Clearfell and Restock
- Stripfell and Restock

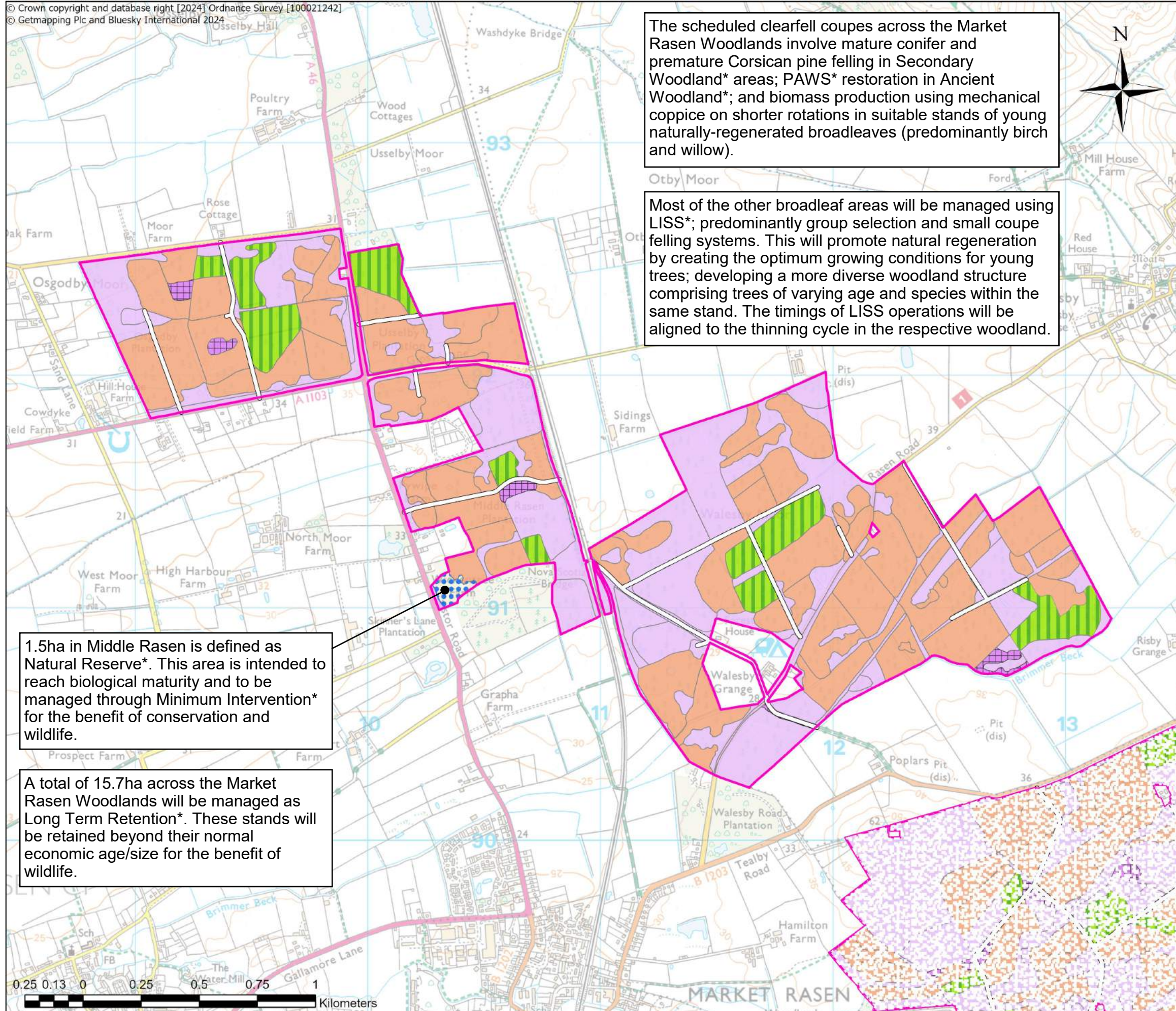
Forestry England

FSC
www.fsc.org
FSC® C123214
The mark of responsible forestry

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

PEFC
www.pefc.org.uk
Promoting Sustainable Forest Management
www.pefc.co.uk

© Crown copyright and database right [2024] Ordnance Survey [100021242]
© Getmapping Plc and Bluesky International 2024



The scheduled clearfell coupes across the Market Rasen Woodlands involve mature conifer and premature Corsican pine felling in Secondary Woodland* areas; PAWS* restoration in Ancient Woodland*; and biomass production using mechanical coppice on shorter rotations in suitable stands of young naturally-regenerated broadleaves (predominantly birch and willow).

Most of the other broadleaf areas will be managed using LISS*; predominantly group selection and small coupe felling systems. This will promote natural regeneration by creating the optimum growing conditions for young trees; developing a more diverse woodland structure comprising trees of varying age and species within the same stand. The timings of LISS operations will be aligned to the thinning cycle in the respective woodland.



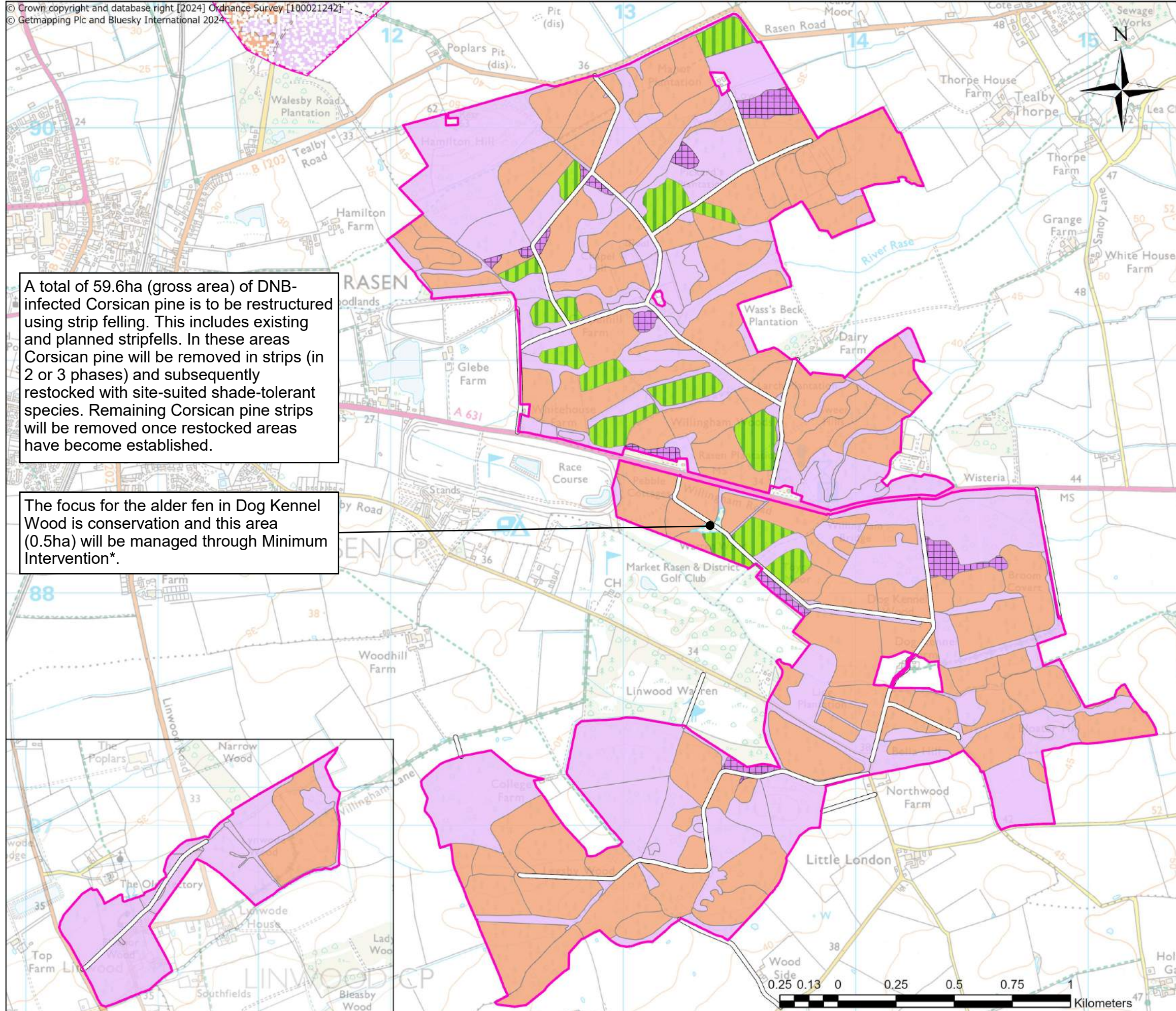
Market Rasen Forest Plan 2024
Northern Woods
Silvicultural Systems Map
Date: March 2024
Scale @ A3: 1:15,000

- Market Rasen FP Area
- Forest Roads
- Silvicultural System**
- Clearfell
- Strip Felling
- LISS / Open
- Long Term Retention
- Natural Reserve

1.5ha in Middle Rasen is defined as Natural Reserve*. This area is intended to reach biological maturity and to be managed through Minimum Intervention* for the benefit of conservation and wildlife.

A total of 15.7ha across the Market Rasen Woodlands will be managed as Long Term Retention*. These stands will be retained beyond their normal economic age/size for the benefit of wildlife.





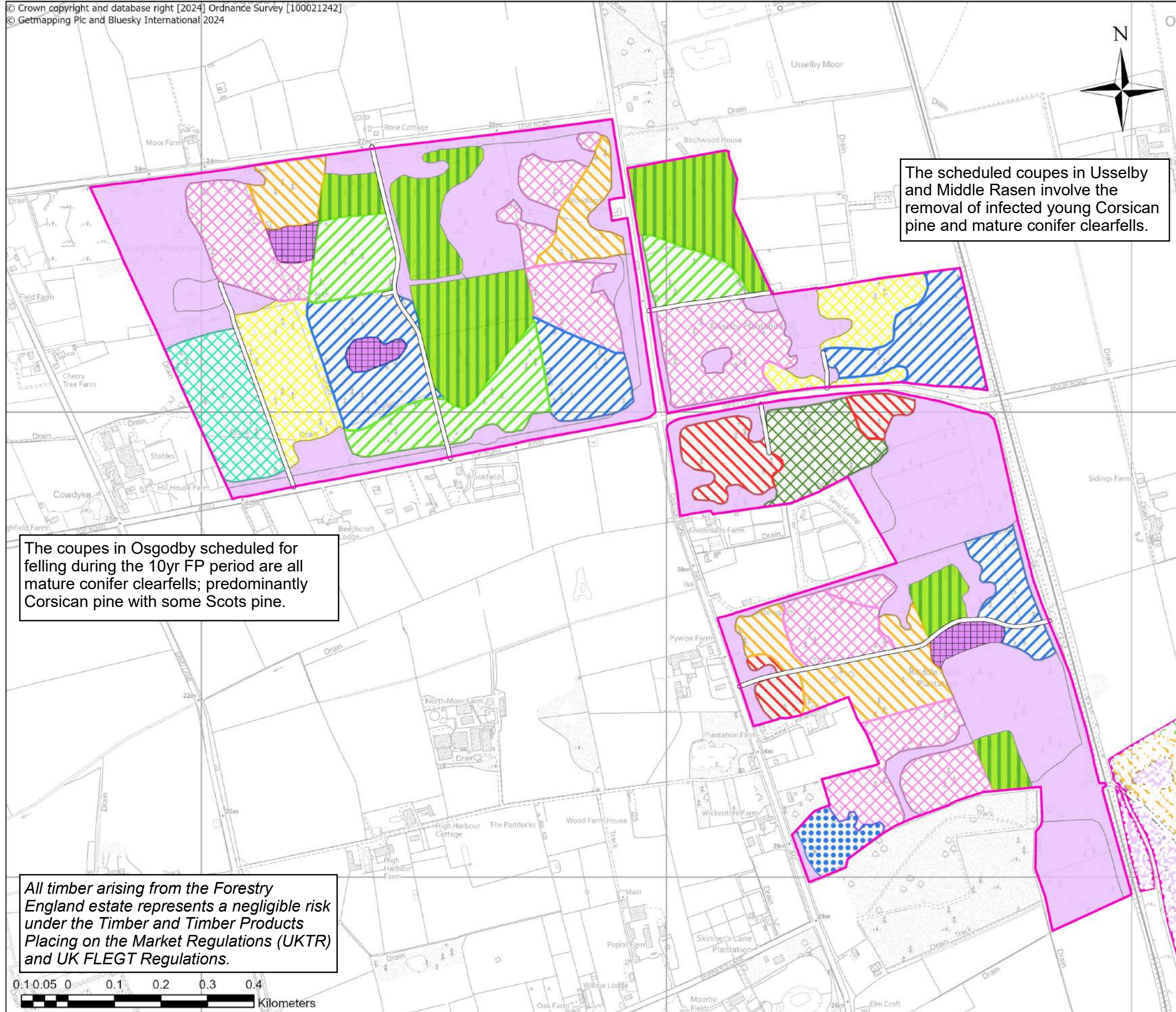
A total of 59.6ha (gross area) of DNB-infected Corsican pine is to be restructured using strip felling. This includes existing and planned stripfells. In these areas Corsican pine will be removed in strips (in 2 or 3 phases) and subsequently restocked with site-suited shade-tolerant species. Remaining Corsican pine strips will be removed once restocked areas have become established.

The focus for the alder fen in Dog Kennel Wood is conservation and this area (0.5ha) will be managed through Minimum Intervention*.

Market Rasen Forest Plan 2024
Southern Woods
Silvicultural Systems Map
 Date: March 2024
 Scale @ A3: 1:15,000

- Market Rasen FP Area
- Forest Roads
- Silvicultural System**
- Clearfell
- Strip Felling
- LISS / Open
- Long Term Retention
- Minimum Intervention

© Crown copyright and database right [2024] Ordnance Survey [100021242]
© Getmapping Plc and Bluesky International 2024



The coupes in Osgodby scheduled for felling during the 10yr FP period are all mature conifer clearfells; predominantly Corsican pine with some Scots pine.

All timber arising from the Forestry England estate represents a negligible risk under the Timber and Timber Products Placing on the Market Regulations (UKTR) and UK FLEGT Regulations.

The scheduled coupes in Usselby and Middle Rasen involve the removal of infected young Corsican pine and mature conifer clearfells.

Market Rasen Forest Plan 2024
Osgodby, Usselby & Middle Rasen Felling Map
Date: March 2024
Scale @ A3: 1:7,500

- Market Rasen FP Area
- Forest Roads
- Clearfell Phase**
 - 2024-2026
 - 2027-2031
 - 2032-2036
 - 2037-2041
 - 2042-2046
 - 2047-2051
 - 2052-2056
 - 2057-2061
 - 2062 & beyond
- Other Silvicultural Systems**
 - Strip Felling
 - LISS / Open
 - Long Term Retention
 - Natural Reserve

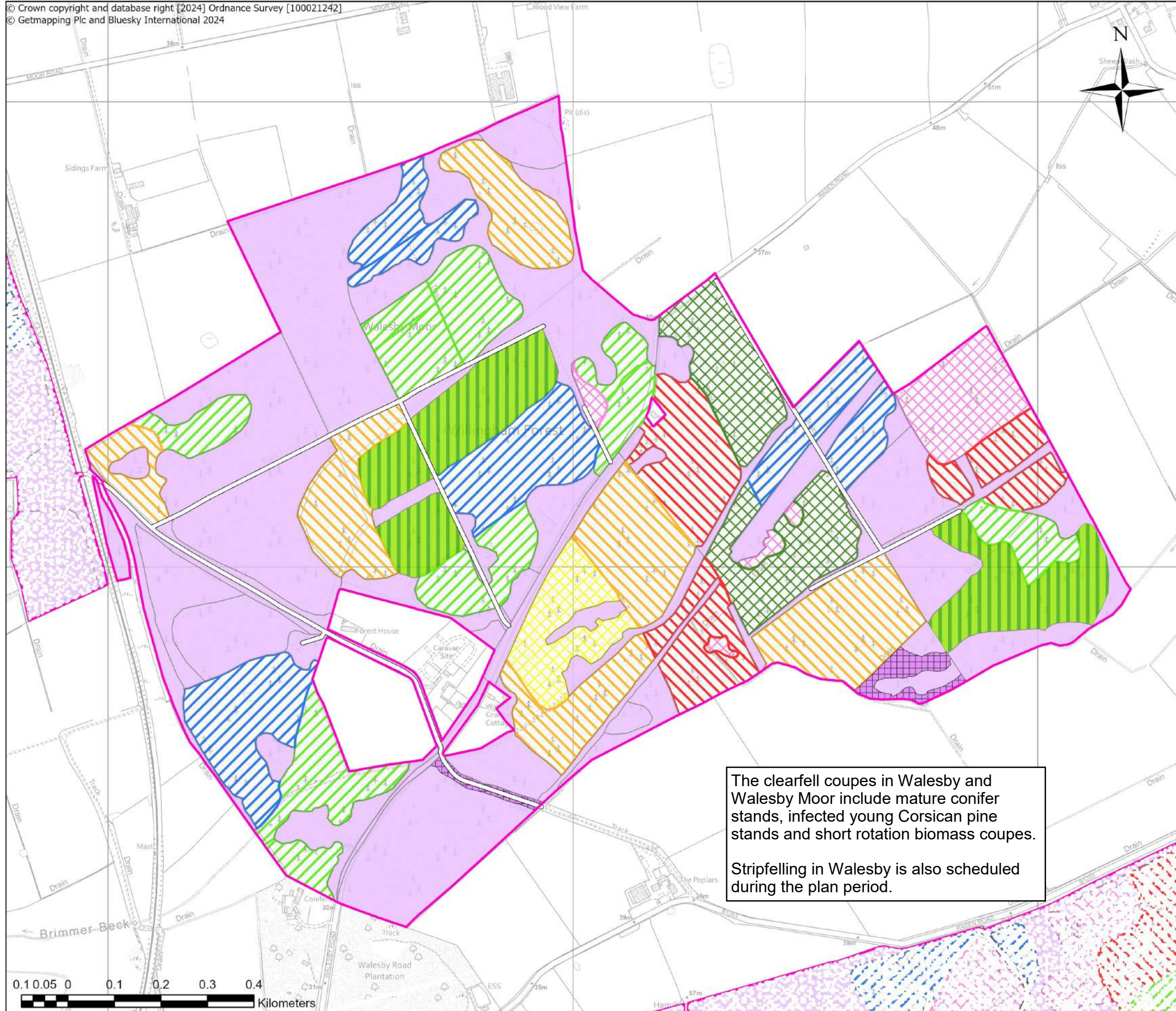
Forestry England

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

FSC www.fsc.org FSC® C123214 The mark of responsible forestry

PEFC www.pefc.org PEFC® C123214 Promoting Sustainable Forest Management www.pefc.co.uk

© Crown copyright and database right [2024] Ordnance Survey [100021242]
© Getmapping Plc and Bluesky International 2024



Market Rasen Forest Plan 2024 Walesby & Walesby Moor Felling Map

Date: March 2024

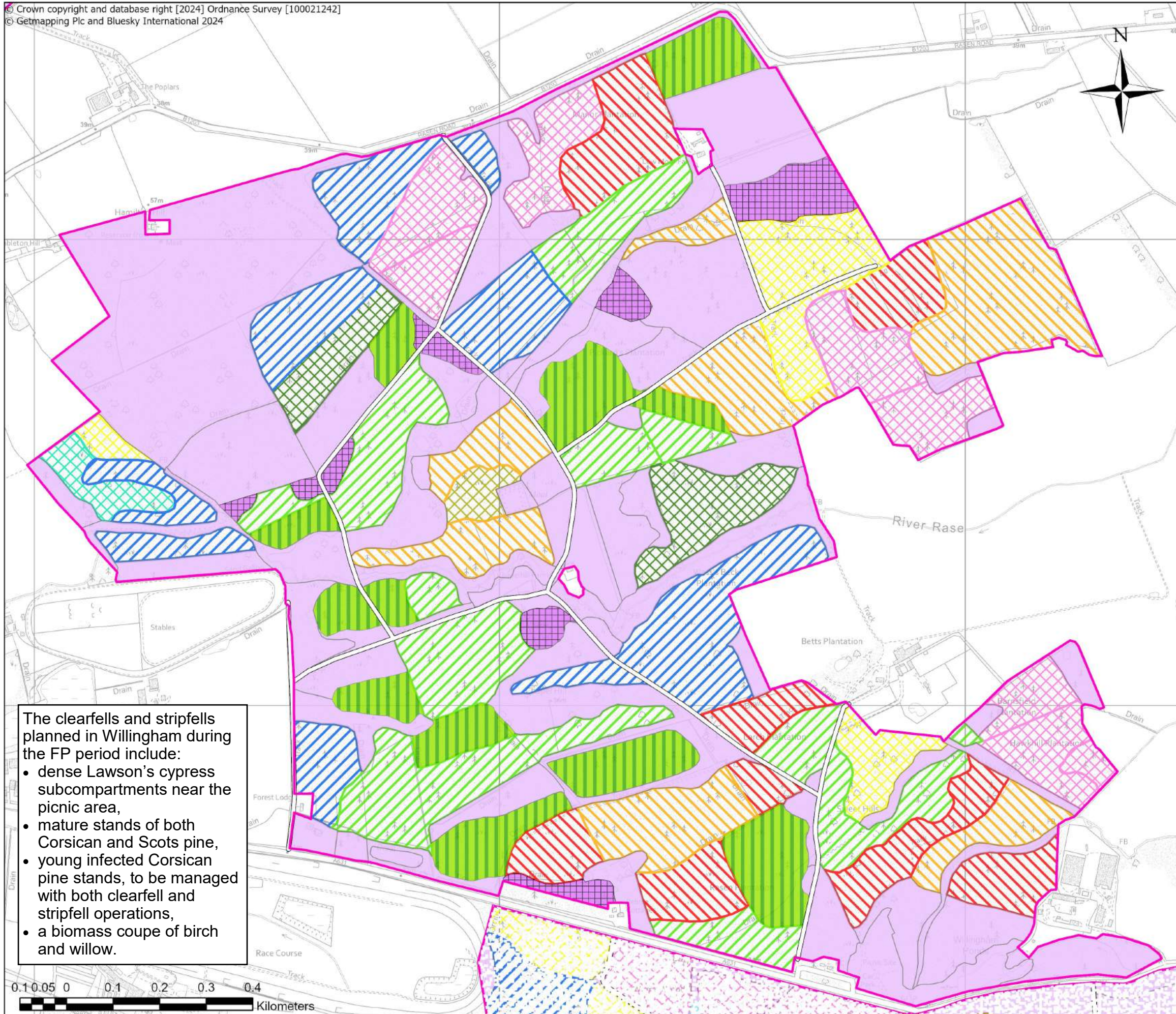
Scale @ A3: 1:7,500

- Market Rasen FP Area
- Forest Roads
- Clearfell Phase**
 - 2024-2026
 - 2027-2031
 - 2032-2036
 - 2037-2041
 - 2042-2046
 - 2047-2051
 - 2052-2056
 - 2057-2061
 - 2062 & beyond
- Other Silvicultural Systems**
 - Strip Felling
 - LISS / Open
 - Long Term Retention

The clearfell coupes in Walesby and Walesby Moor include mature conifer stands, infected young Corsican pine stands and short rotation biomass coupes.

Stripfelling in Walesby is also scheduled during the plan period.

© Crown copyright and database right [2024] Ordnance Survey [100021242]
© Getmapping Plc and Bluesky International 2024



Market Rasen Forest Plan 2024

Willingham Felling Map

Date: March 2024

Scale @ A3: 1:7,500

Market Rasen FP Area

Forest Roads

Clearfell Phase

2024-2026

2027-2031

2032-2036

2037-2041

2042-2046

2047-2051

2052-2056

2057-2061

2062 & beyond

Other Silvicultural Systems

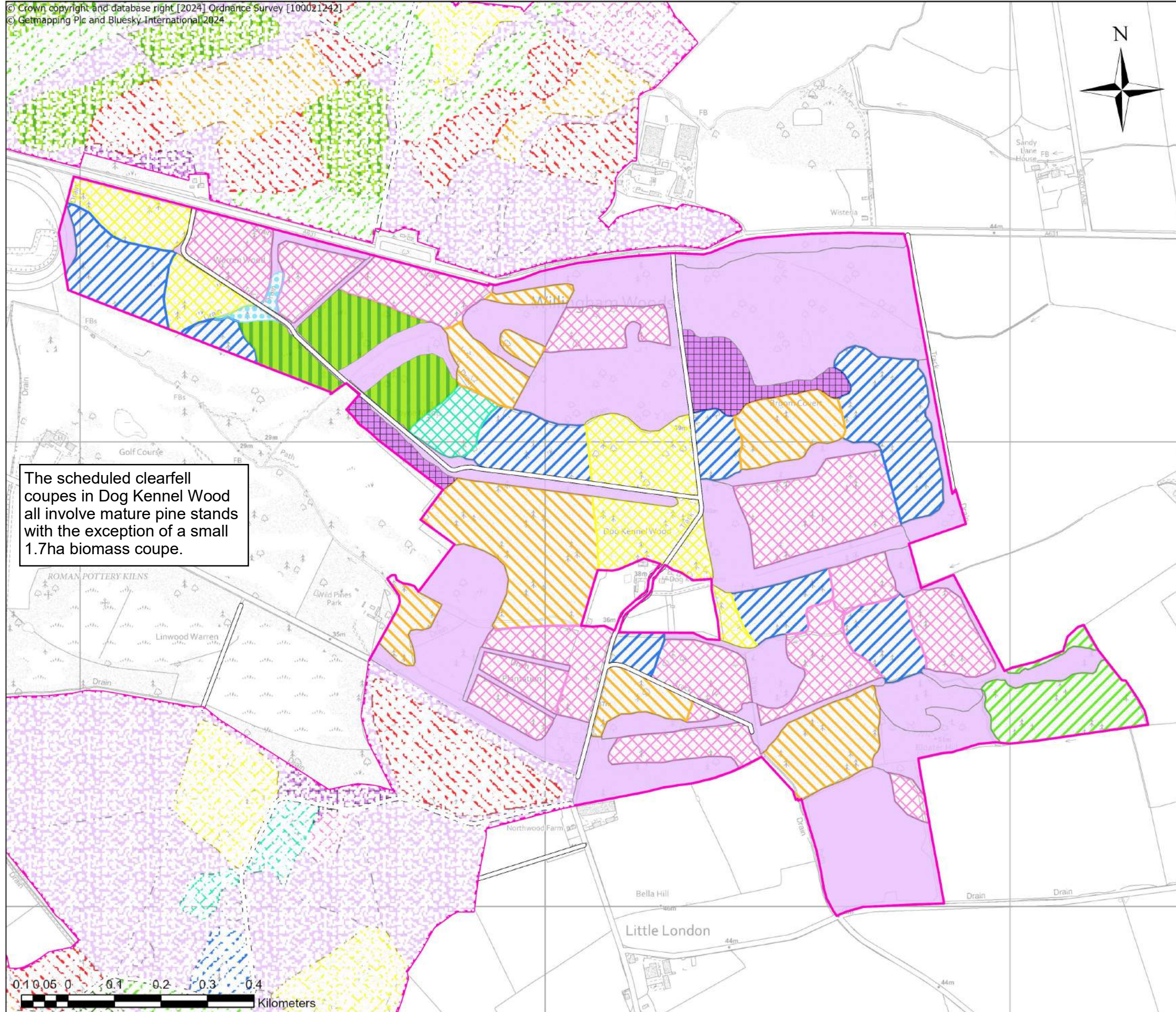
Strip Felling

LISS / Open

Long Term Retention

The clearfells and stripfells planned in Willingham during the FP period include:

- dense Lawson's cypress subcompartments near the picnic area,
- mature stands of both Corsican and Scots pine,
- young infected Corsican pine stands, to be managed with both clearfell and stripfell operations,
- a biomass coupe of birch and willow.



The scheduled clearfell coupes in Dog Kennel Wood all involve mature pine stands with the exception of a small 1.7ha biomass coupe.

Market Rasen Forest Plan 2024
Dog Kennel Felling Map
 Date: March 2024
 Scale @ A3: 1:7,500

- Market Rasen FP Area
- Forest Roads
- Clearfell Phase**
 - 2024-2026
 - 2027-2031
 - 2032-2036
 - 2037-2041
 - 2042-2046
 - 2047-2051
 - 2052-2056
 - 2057-2061
 - 2062 & beyond
- Other Silvicultural Systems**
 - Strip Felling
 - LISS / Open
 - Long Term Retention
 - Minimum Intervention

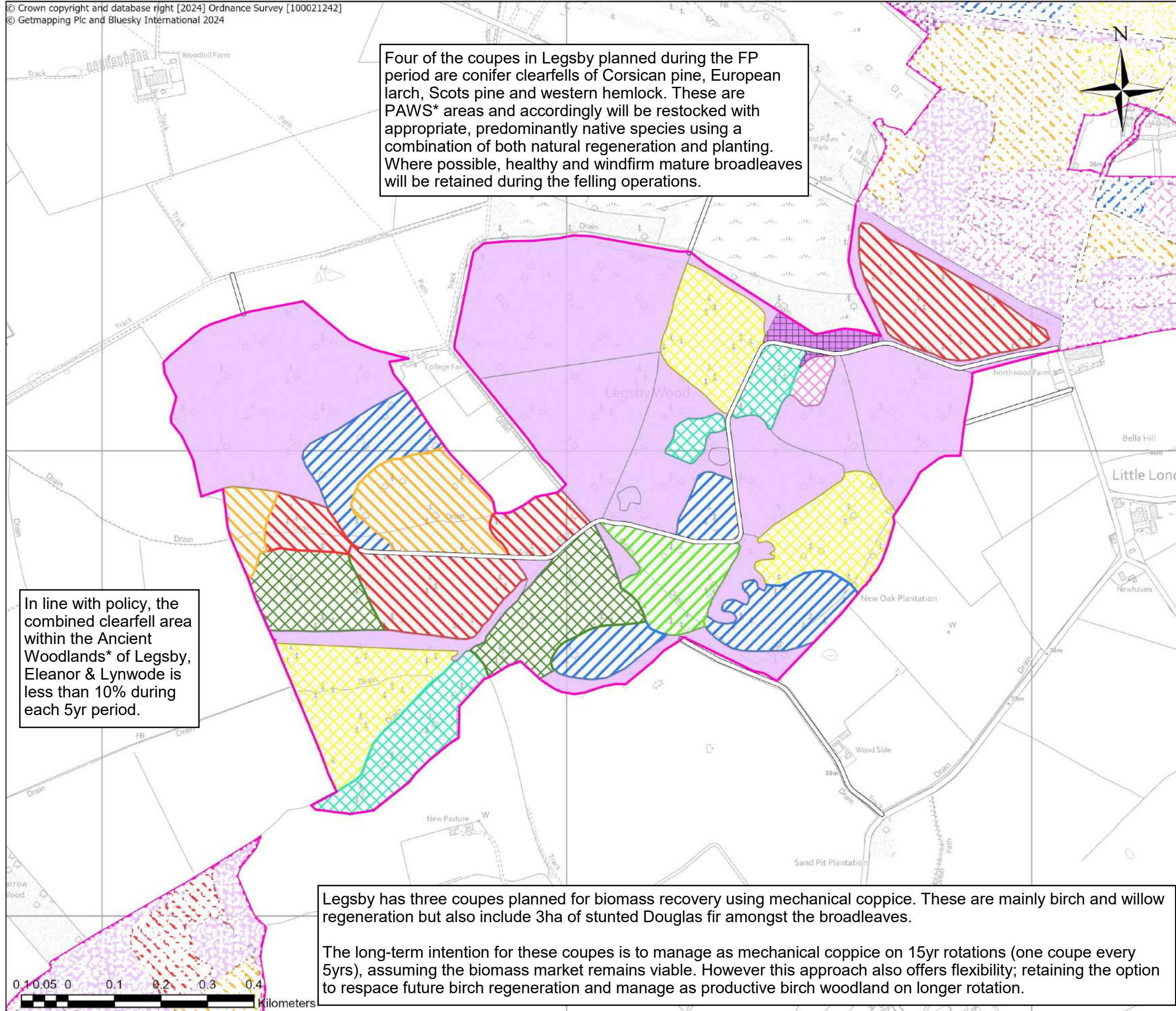
© Crown copyright and database right [2024] Ordnance Survey [100021242]
© Getmapping Plc and Bluesky International 2024

Four of the coupes in Legsby planned during the FP period are conifer clearfells of Corsican pine, European larch, Scots pine and western hemlock. These are PAWS* areas and accordingly will be restocked with appropriate, predominantly native species using a combination of both natural regeneration and planting. Where possible, healthy and windfirm mature broadleaves will be retained during the felling operations.

In line with policy, the combined clearfell area within the Ancient Woodlands* of Legsby, Eleanor & Lynwode is less than 10% during each 5yr period.

Legsby has three coupes planned for biomass recovery using mechanical coppice. These are mainly birch and willow regeneration but also include 3ha of stunted Douglas fir amongst the broadleaves.

The long-term intention for these coupes is to manage as mechanical coppice on 15yr rotations (one coupe every 5yrs), assuming the biomass market remains viable. However this approach also offers flexibility; retaining the option to respaw future birch regeneration and manage as productive birch woodland on longer rotation.



Market Rasen Forest Plan 2024
Legsby Felling Map
Date: March 2024
Scale @ A3: 1:7,500

Market Rasen FP Area

Forest Roads

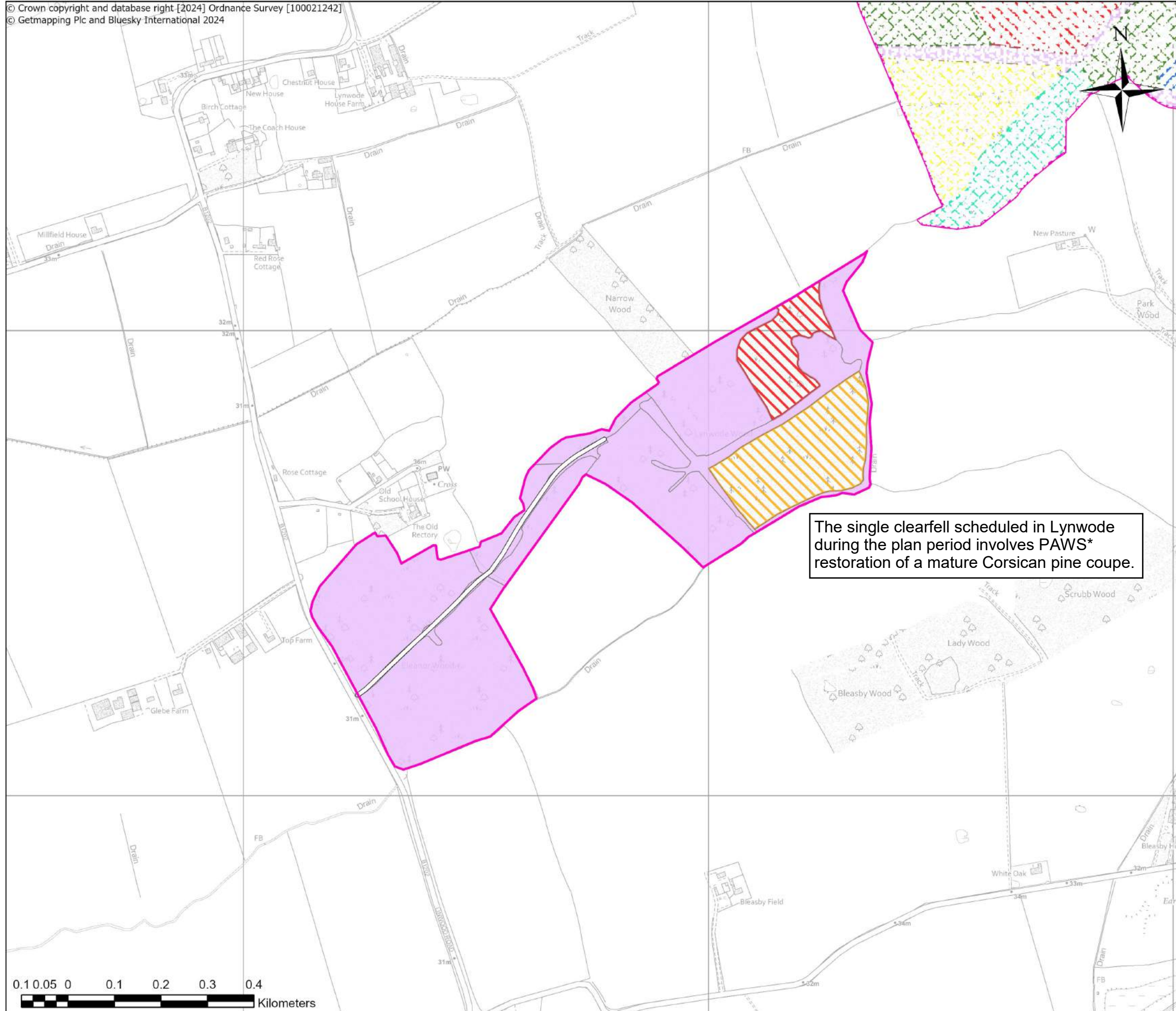
Clearfell Phase

- 2024-2026
- 2027-2031
- 2032-2036
- 2037-2041
- 2042-2046
- 2047-2051
- 2052-2056
- 2057-2061
- 2062 & beyond

Other Silvicultural Systems

- LISS / Open
- Long Term Retention

© Crown copyright and database right [2024] Ordnance Survey [100021242]
© Getmapping Plc and Bluesky International 2024



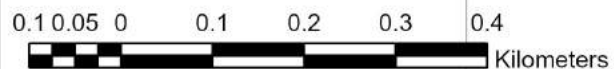
Market Rasen Forest Plan 2024

Eleanor & Lynwoode Felling Map

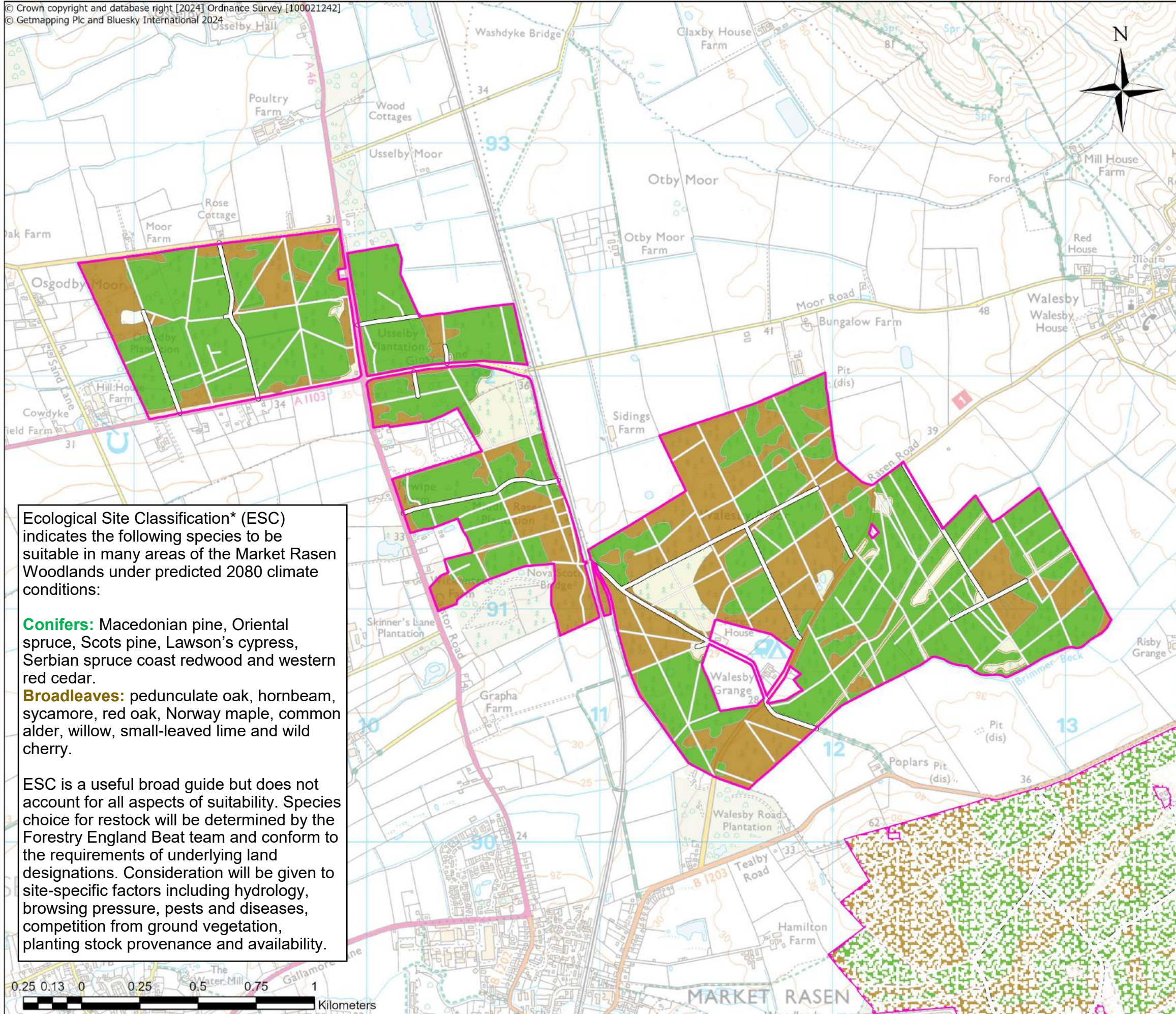
Date: March 2024

Scale @ A3: 1:7,500

-  Market Rasen FP Area
-  Forest Roads
- Clearfell Phase**
 -  2024-2026
 -  2027-2031
 -  2032-2036
 -  2037-2041
 -  2042-2046
 -  2047-2051
 -  2052-2056
 -  2057-2061
 -  2062 & beyond
- Other Silvicultural Systems**
 -  LISS / Open
 -  Long Term Retention



© Crown copyright and database right [2024] Ordnance Survey [100021242]
© Getmapping Plc and Bluesky International 2024



Market Rasen Forest Plan 2024
**Northern Woods
Intended Landuse Map**

Date: March 2024

Scale @ A3: 1:15,000

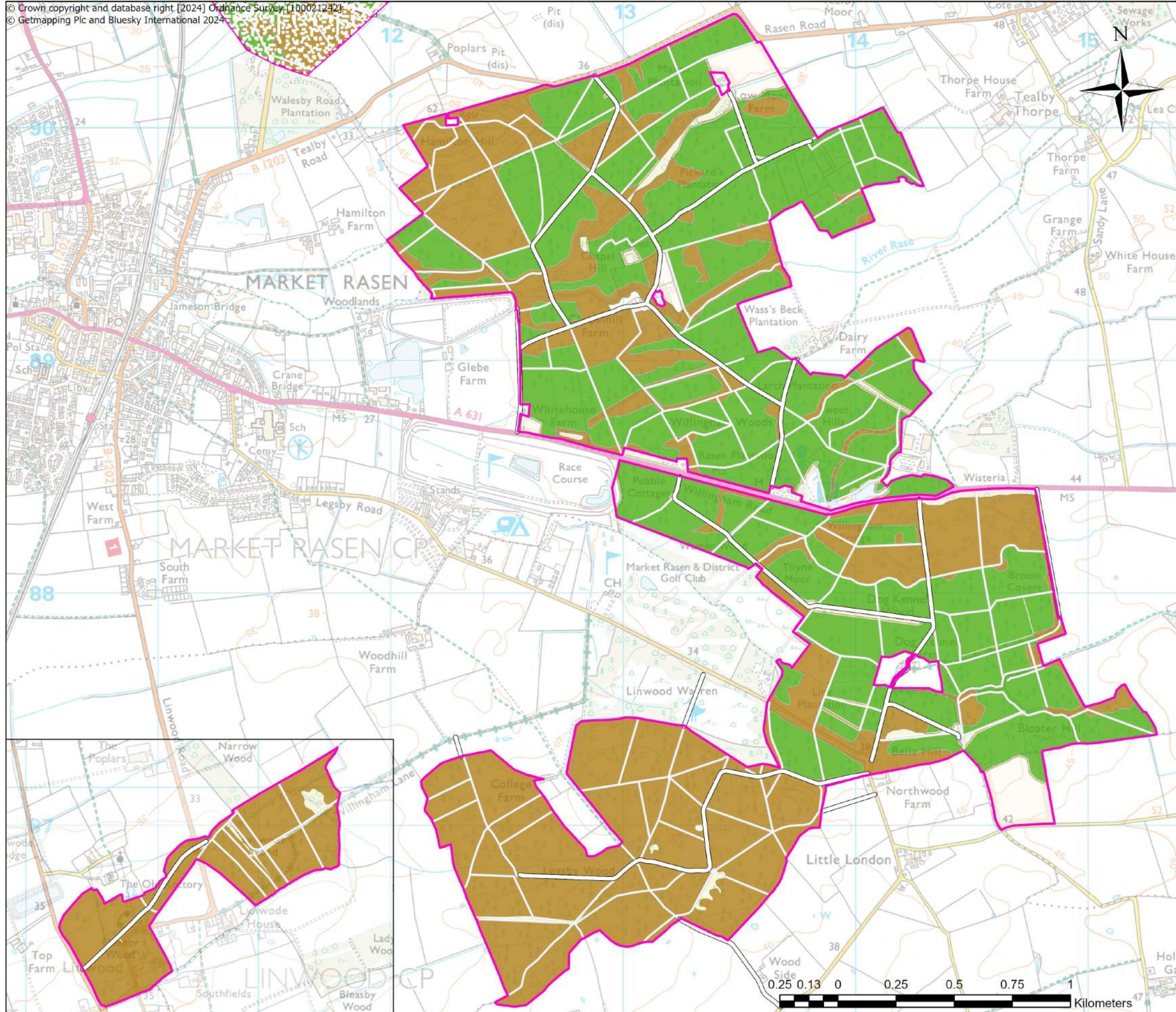
- Market Rasen FP Area
- Forest Roads
- Conifer-dominated woodland
- Broadleaf-dominated woodland
- Open

Ecological Site Classification* (ESC) indicates the following species to be suitable in many areas of the Market Rasen Woodlands under predicted 2080 climate conditions:

Conifers: Macedonian pine, Oriental spruce, Scots pine, Lawson's cypress, Serbian spruce coast redwood and western red cedar.

Broadleaves: pedunculate oak, hornbeam, sycamore, red oak, Norway maple, common alder, willow, small-leaved lime and wild cherry.

ESC is a useful broad guide but does not account for all aspects of suitability. Species choice for restock will be determined by the Forestry England Beat team and conform to the requirements of underlying land designations. Consideration will be given to site-specific factors including hydrology, browsing pressure, pests and diseases, competition from ground vegetation, planting stock provenance and availability.



Market Rasen Forest Plan 2024
Southern Woods
Intended Landuse Map

Date: March 2024

Scale @ A3: 1:15,000

-  Market Rasen FP Area
-  Forest Roads
-  Conifer-dominated woodland
-  Broadleaf-dominated woodland
-  Open