Gibside

Woodland Management Plan July 2017- June 2027

Prepared By Matt Taylor of Forest and Land Ltd. On Behalf of the National Trust

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The aim of this plan is to provide a ten year programme of woodland management that will meet the aims and objectives of the National Trust at Gibside in Gateshead. The detail of the plan focusses on tree thinning and felling works at the site. This plans should be considered in the context of the following additional plans: Gibside Forest Design Plan. Forestry Commission North East Region. Last reviewed 2013 (next review due 2018); Gibside Conservation Management Plan. Simpson and Brown. 2013; Gibside Nature Conservation Plan. National Trust. 2017.

Background to the Woodlands at Gibside

Gibside estate covers 291 hectares. 133.69ha are wooded and farmland covers 139.41ha, the remaining 17.9ha is formal gardens.
Much of the woodland area is the responsibility of the forestry commission, returning to the Trust's management following it's harvest which happens in line with their own 'Forest Design Plan'. This document is available from the Forestry Commission.

This woodland plan covers 45.8ha over 9 compartments that are currently under the control of the National Trust and those areas that the Forestry Commission will harvest during the period covered by this plan.

Gibside is located in the Lower Derwent Valley. It is an area of Gateshead that is populated in villages including Rowlands Gill and Winlaton Mill to the north east, Burnopfield to the south and Sunniside and Whickham to the east. These villages are linked to the mining, iron work and coke work industry of the past.

There are areas of farmland, ancient semi-natural woodland along the river banks and at Thornley Woods, Forestry Commission plantations at Chopwell Wood and Spen Burn Wood. The valley becomes more urban with industrial estates, roads and motorways only 3km downstream of Gibside. Further upstream the valley becomes more rural as it extends up to the Derwent Reservoir.

Much of the site sits within the Gibside Conservation area containing Grade 1 Parks and Gardens of special Historic Interest. More information about these can be seen at appendix 3.

Gibside's habitats form part of the wildlife corridor of the valley, helping to connect woodlands and farmlands. There is evidence that bats, otters, roe deer, birds of prey and smaller birds benefit from the wildlife corridors that link up the landscape. There are areas of SSSI and Local Wildlife Site on the estate.

Areas of recent tree planting in the Hall Dene, Hollow Walk woodland, West Wood and Leap Mill Burn Valley aims to restore PAWS woodland to native broadleaf woodland Where natural regeneration has been allowed in Snipes Dene it has not been as successful as hoped so to reach the stocking density of 1100 trees per hectare we have had to plant trees here too.

Where steep-sided valleys and cliffs could not easily be planted or altered there are remnants of ancient semi-natural woodland, as indicated by the age and species of trees and other woodland flora.
Many of the veteran trees at Gibside grow in the Inner Pleasure Grounds or close to paths and tracks. This means tree safety management work takes place and deadwood and cracked branches are removed. So the few veteran trees that can be left to retrench and dieback naturally are rare.

The property lies on the south-east side of the valley of the River Derwent, a major river draining into the River Tyne a few km further north. The property includes land in the valley bottom and a section of moderately sloping north-west-facing hillside above, the latter dissected by Snipe's Dene, a narrow steep-sided valley towards the north-east end of the property, and by the more shallow valley of the Leapmill Burn at the south-west end.

The estate is underlain by Upper Carboniferous Coal Measures covered by varying depth of glacial drift. Sands and gravels of probable glacial or fluvioglacial origin occur along the edge of the valley bottom. Lower lying parts of the latter are covered in river alluvium.

Soils are mapped by the Soil Survey of England & Wales (1983) as the Brickfield 3 Association. This is widespread throughout Northern England, the north Midlands and North Wales. It comprises mainly loamy and clayey textured soils with impeded drainage (stagnogleys). Other soils occur where the drift thins, for example within the woodland at the north end of the property, where it appears from the vegetation that there are better drained brown earths and brown podzolic soils which have become acidic as the result of leaching.

Section 2: Our Aims and Objectives

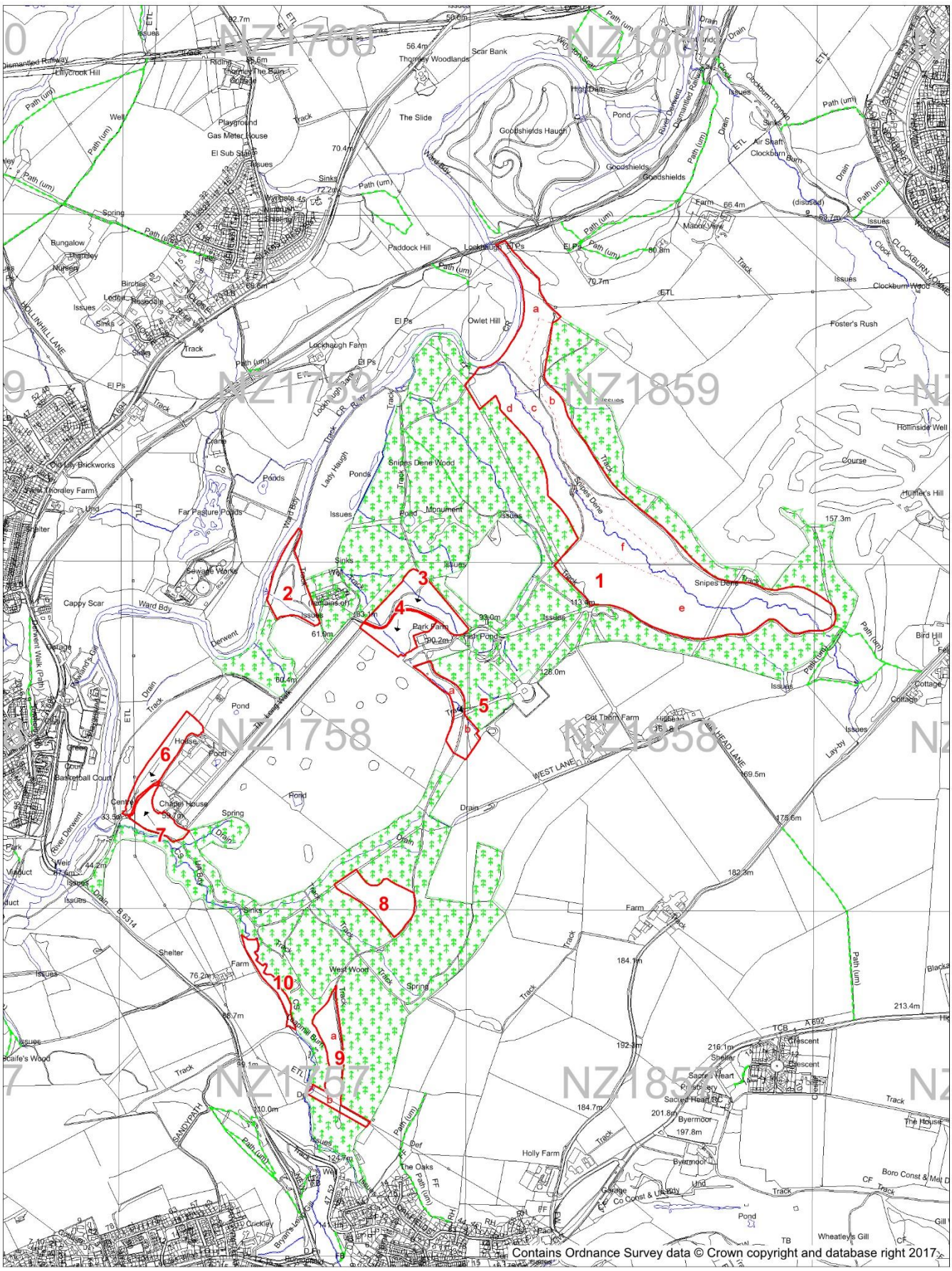
What we want to do	Why we want to do it?	How can we achieve it?
Maximise the value of our woodlands for biodiversity through restoration of Ancient Woodland sites and to conduct management throughout our woodlands that creates a diverse age structure and sustainable, dynamic forest ecosystems. The work we do will aim to protect and enhance biodiversity in all woodlands and open habitats.	Britain's woodland biodiversity is in trouble. Reports show that 60 per cent of our woodland species have decreased and 34 percent have decreased strongly over recent decades. Species decline is attributed to a lack of structural diversity in our woodlands with low management intervention and increased deer numbers resulting in uniform and aging woodlands. We want to do what we can to reverse this trend and help save Britain's natural heritage. We've identified those species listed as being of high conservation importance, these are listed below: Bats: 9 species recorded locally Birds: Red Kite Mammals: Red Squirrel Reptiles: Grass snake, common lizard Fungai: Waxcaps Amphibians: Common toad, common frog, great crested newt, smooth and palmate newt	Phased removal of invasive species from ASNW and PAWS sites including cutting and spraying of rhododendron where is does not form part of the designed landscape. Continue removal of conifer via a programme of selective felling, thinning and clearfell. Where access permits phased, economic, silvicultural operations; the conifer stands will be selectively thinned prior to final felling (conifer removal) at economic maturity or they will be gradual transitioned towards a system of continuous cover forestry. Alternatively, where severe access constraints make thinning operations uneconomic either, selective/clear felling i.e. of conifer stems in the stand or waste felling over many years will be carried out. Both methods will facilitate subsequent regeneration and recolonisation of native broadleaved species. Use a combination of natural regeneration and enrichment planting with native species to regenerate or restock sites to favour red squirrel and reptile habitat. Evaluate the current nature conservation value of the woodlands through stakeholder communications and survey work. Monitor priority species and habitats to help assess improvement and gain a better understanding of current position. Control non-native invasive species including rhododendron and grey squirrel. Manage and control deer populations where possible and appropriate. Encourage the development of greater structural and species diversity through supplementary tree planting where natural regeneration is not apparent or of the desired species. Increase dead wood volumes by ring barking selected trees away from areas of high public access. Identify and conserve veteran trees. Avoid felling large/veteran trees for safety reasons unless absolutely necessary. Protect wildlife and ancient woodland features by marking them on the ground during operations and including them in operational constraints maps. Ensure regeneration is protected from adjacent livestock farming through fence maintenance and when restocking, consider provenance and species in relation to climate change.

What we want to do	Why we want to do it?	How can we achieve it?
To improve access for management and enhance and encourage safe and sympathetic public access, extending opportunities for education, recreation and participation where this does not conflict with the other objectives.	The quality of experience for our visitors is of high importance. This plan aims to maintain the woodlands'' wild feel and to ensure that our woodlands can be enjoyed by generations to come.	Assess the current access situation and map where access can be improved/created. Establish a program of access improvement/ creation. Develop opportunities for the local community to get involved in the site through the volunteer programme. Work with local schools to enable them to use our woodlands to get outdoors and closer to nature. Improve access and facilities throughout the sites to facilitate management programmes and enable people to enjoy and get more from their visit. Use the programme of woodland management as a tool to engage visitors and educate them about the importance of conservation and what our sites can offer.
Reduce our carbon footprint	The Earth's temperature is warming a result of human activities. Global Warming is already having a terrible impact upon the lives of people and nature across the globe. If the global rise in temperature can be kept below 2 degrees Celsius, the negative effects of climate change can be minimised, this however will require a change in all of our carbon outputs. We therefore wish to minimise carbon outputs and sequester as much carbon as possible through natural processes.	To conduct woodland management which promotes the growth of new trees and rapid growth through tree species selection for replanting and silvicultural systems such as coppicing. To undertake silvicultural practices which minimise soil erosion and promote soil formation. Work which allows more light to the woodland floor will facilitate this process.
Improve the capacity of our woodlands for resource protection and flood resilience, slowing the flow of water across our land to improve water quality coming off our land and play a part in protecting downstream communities at risk of flooding	Flooding is becoming an increasing risk to both urban and rural communities. We wish to play our part in the mitigation of the impacts of these storm events.	Undertake management works which increase the structural diversity of the woodland stand and increase the density and diversity of ground flora. Use brash arisings to create small leaky dams in tributaries and feeder streams to slow the flow of water in storm events where appropriate. Undertake best practice during operations to protect soils using brash mats and avoid watercourses.

What we want to do	Why we want to do it?	How can we achieve it?
Contribute to the local economy	We want our land to contribute to the quality of life for local people. One of the ways we seek to achieve this is by contributing to the local economy.	Where possible and appropriate, trees will be harvested when they achieve their optimal economic potential Apply for appropriate woodland/countryside grant schemes and regional funding to achieve stated objectives Where possible generate timber income through harvesting programmes to help fund the ecological restoration process and wider woodland improvement programmes. Work with regional contractors to develop a contractor base adapted to woodlands with access issues.
Ensure the woodland habitats are resilient to climate change and plant diseases	Climate change presents an unprecedented threat to our woodland ecosystems. By creating woodlands diverse in structure and species we will increase the overall resilience of these ecosystems.	Increase structural and species diversity where ever possible through harvesting to allow natural regeneration where possible. Remove species known to increase the likelihood of disease transmission e.g Rhododendron Seek opportunities to increase habitat connectivity Survey HWCG to identify the potential for habitat creation.
To manage health and safety at the site in line with the 'Tree Safety Management in the National Trust' procedure Sep 2015	There are risks of injury to staff, volunteers and the public from falling trees and branches. There are also risks of damage to buildings, property and vehicles. The Trust has a statutory and common law duty to assess and manage these risks. The duty is established in criminal law under the Health and Safety at Work Act, and in civil law under the Occupier's Liability Act. The Trust must take all precautions as far as is reasonably practicable to avoid risks to the safety of members of the public, staff and volunteers. Therefore there is a need to inspect trees in and near public places and adjacent to buildings and working areas, to assess whether they represent a risk to life and/or property, and to take remedial action as appropriate.	By following National Trust Health and Safety procedures.

What we want to do	Why we want to do it?	How can we achieve it?
Conserve the historic and cultural landscape in ways that enhance the Spirit of Place	We recognise our responsibility towards the protection of our historic environment and seek to maintain and enhance it for ongoing enjoyment and education.	Using the Site and Monuments register record the condition of the archaeological features across Gibside. When carrying out woodland work ensure that the historic environment is protected in line with guidance from Historic England. Working with the NT archaeologist discuss the further research recommendations from historic environment report (where applicable) and the potential to achieve them. The historic environment report highlights a certain number of management concerns and recommendations address these as part of the management of the sites. Maintain and protect designed woodland landscape elements across the site.

Section 3: Site Maps



Gibside Forest Plan - Map 1: Compartments

Scale 1:10000 at A3

Forestry under National Trust Managment Control

Forestry under Forest Enterprise Managment Control

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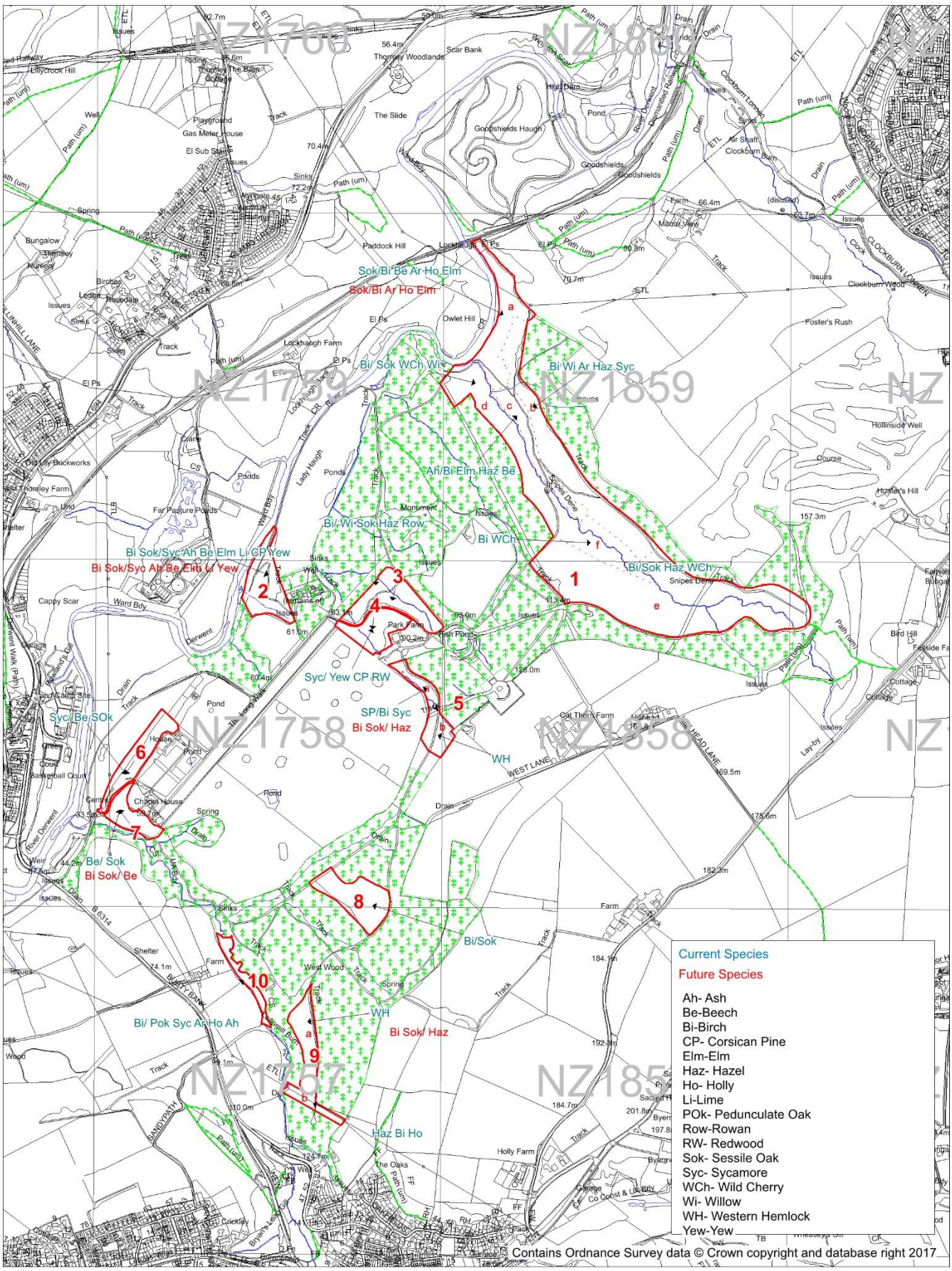

Gibside Forest Plan - Map 2: Species

Scale 1:10000 at A3

Forestry under National Trust Managment Control

Forestry under Forest Enterprise Managment Control

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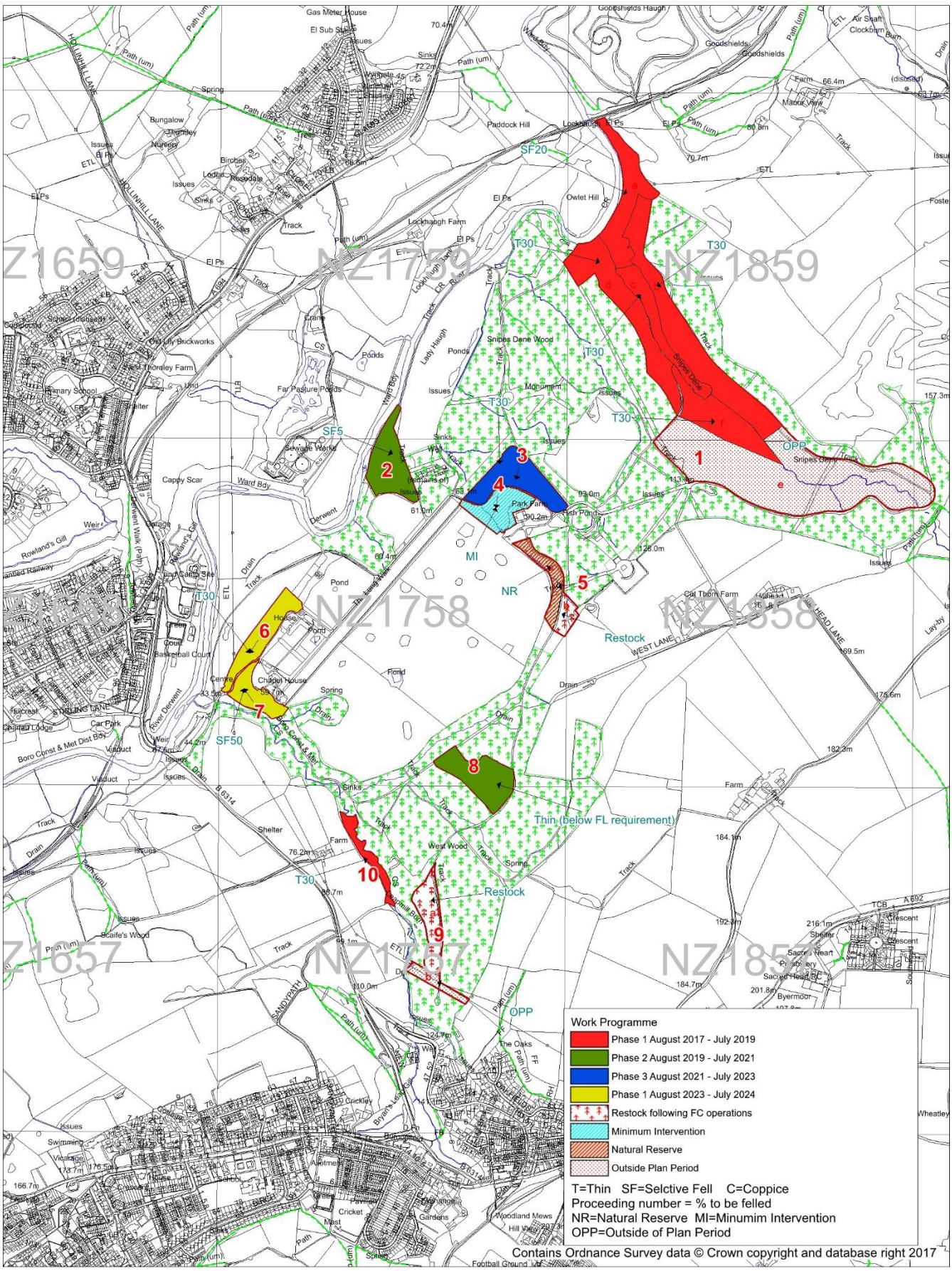

Gibside Forest Plan - Map 3: Work Programme

Scale 1:10000 at A3

Forestry under National Trust Managment Control

Forestry under Forest Enterprise Managment Control

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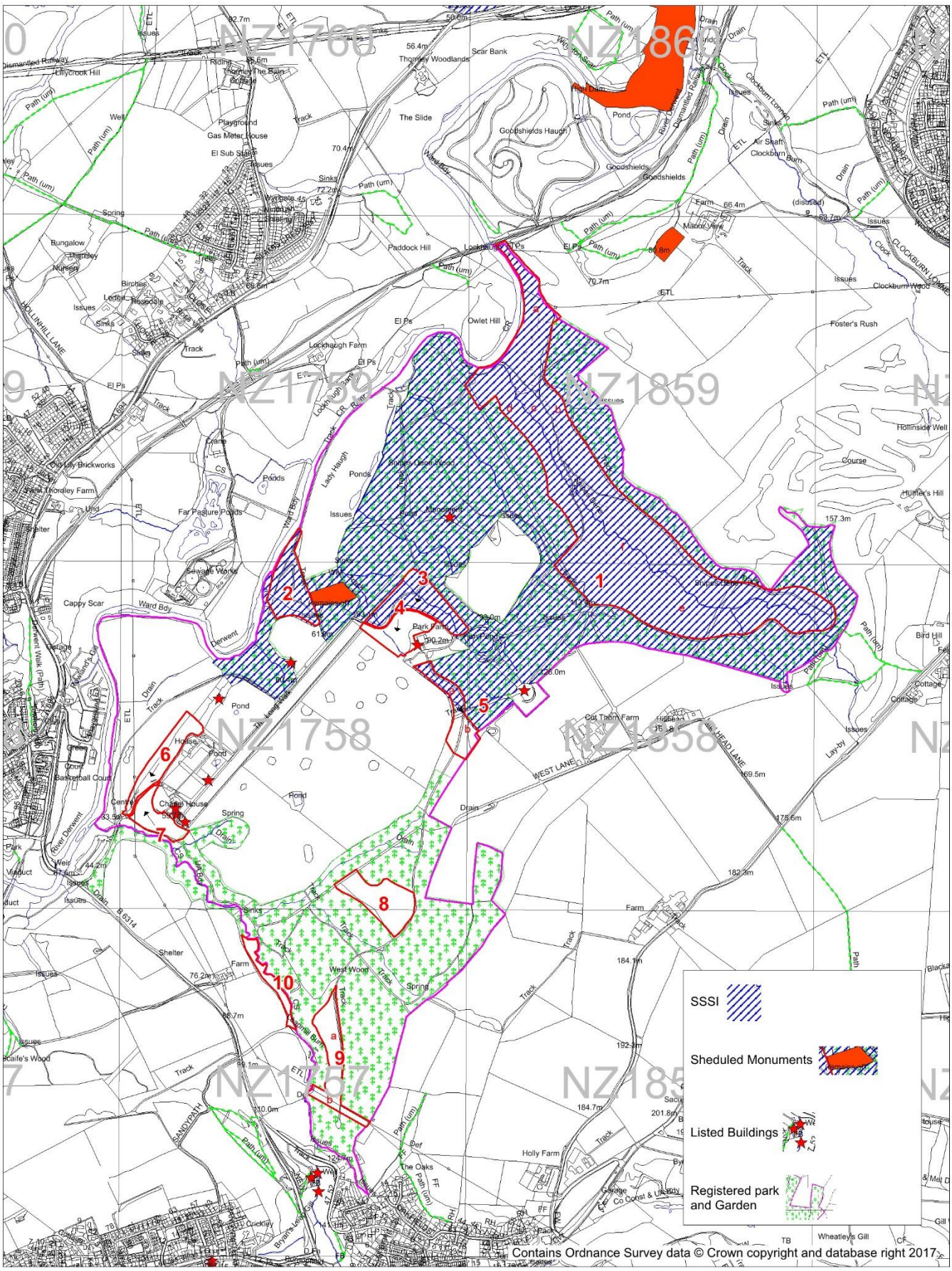

Gibside Forest Plan - Map 4: Statutory Designations

Scale 1:10000 at A3

Forestry under National Trust Managment Control

Forestry under Forest Enterprise Managment Control

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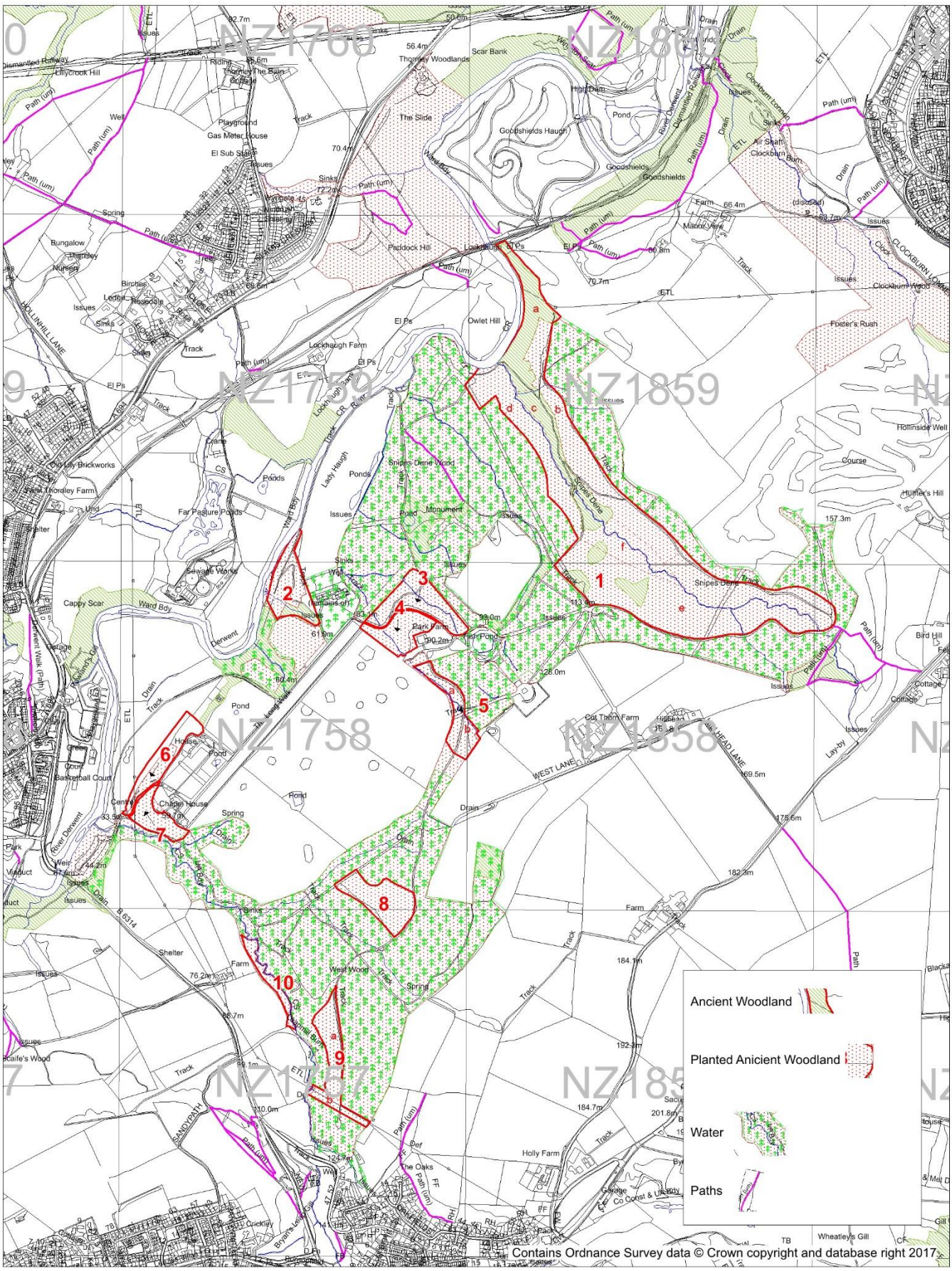

Gibside Forest Plan - Map 5: Ancient Woodlands, Paths, and Water

Scale 1:10000 at A3

Forestry under National Trust Managment Control

Forestry under Forest Enterprise Managment Control

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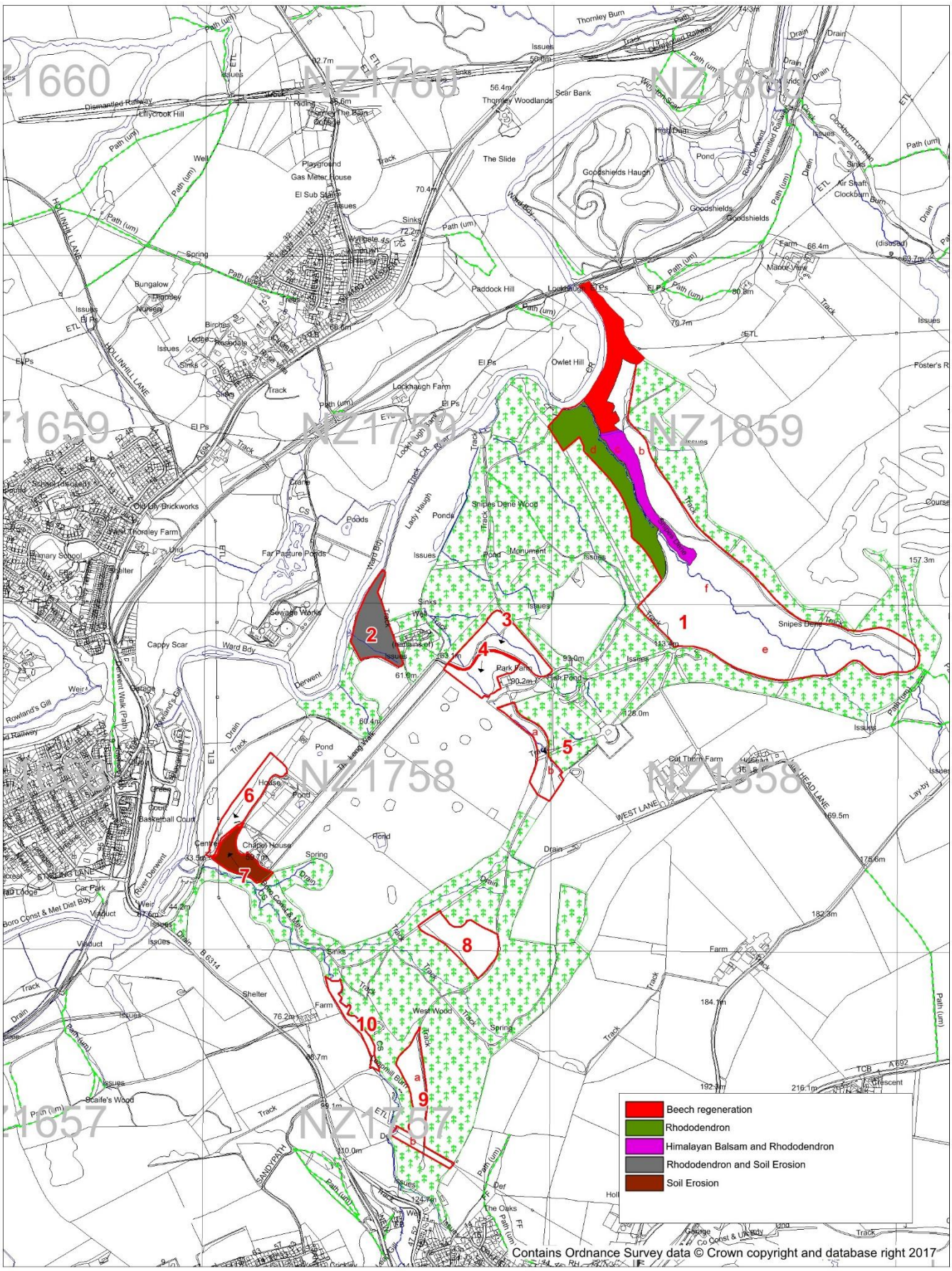

Gibside Forest Plan - Map 6: Issues

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Forestry under National Trust Managment Control

Forestry under Forest Enterprise Managment Control

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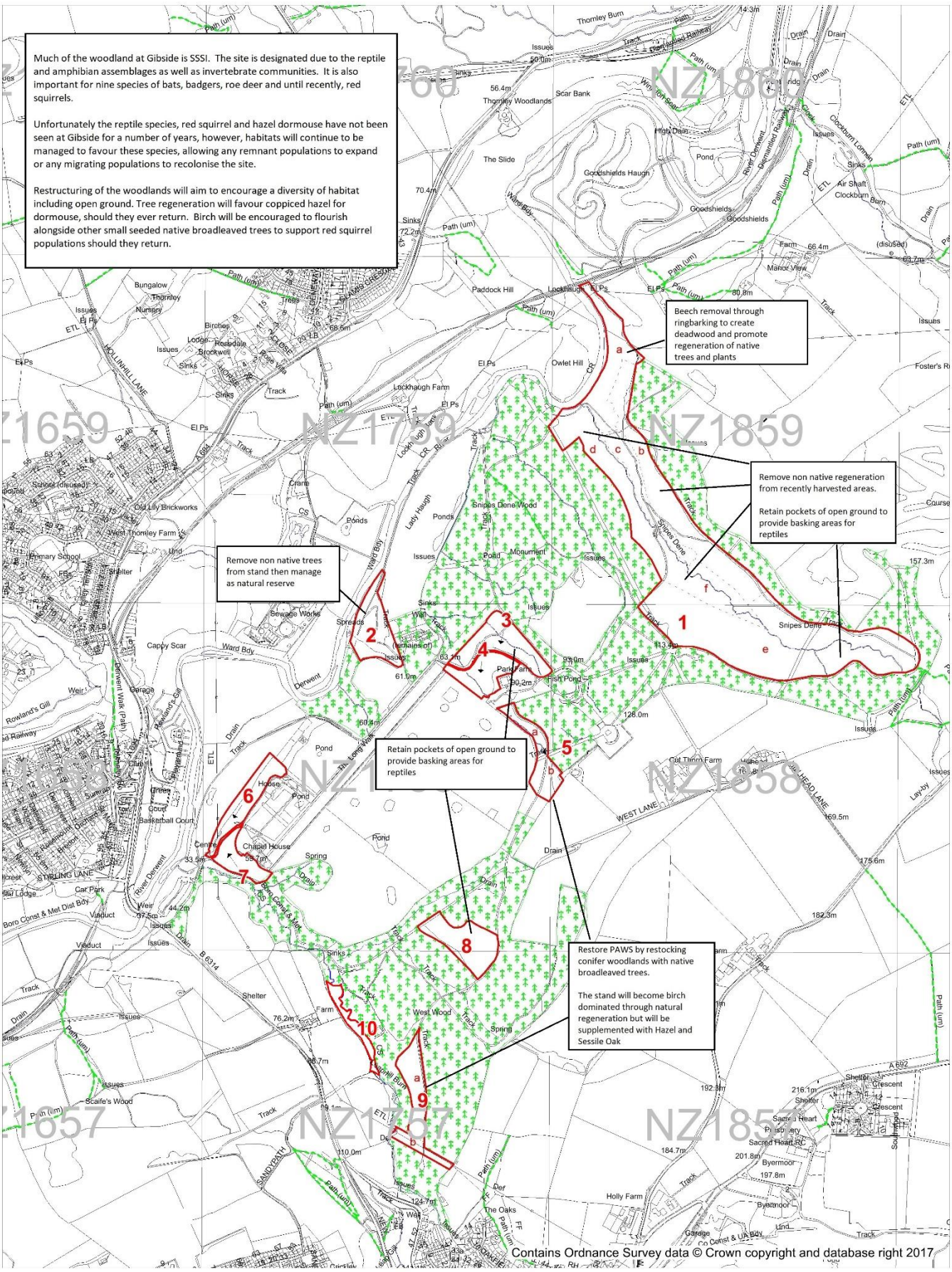


Gibside Forest Plan - Map 7: Biodiversity Strategy

Scale 1:10000 at A3

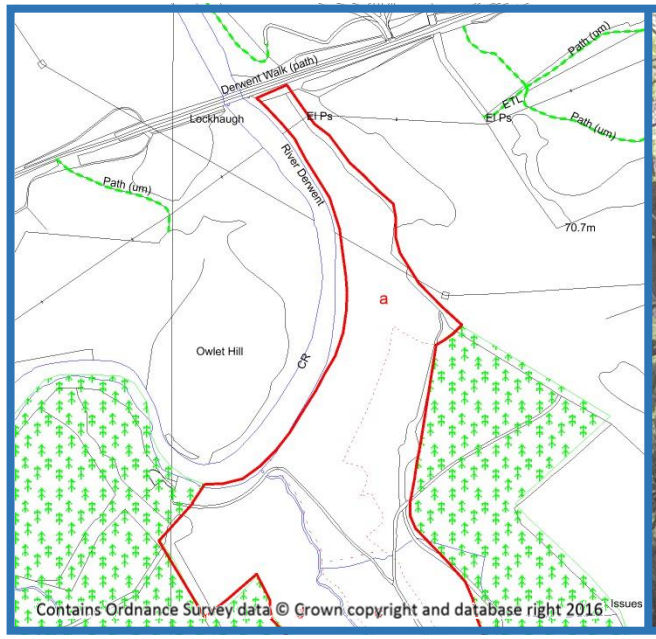
Forestry under National Trust Management Control

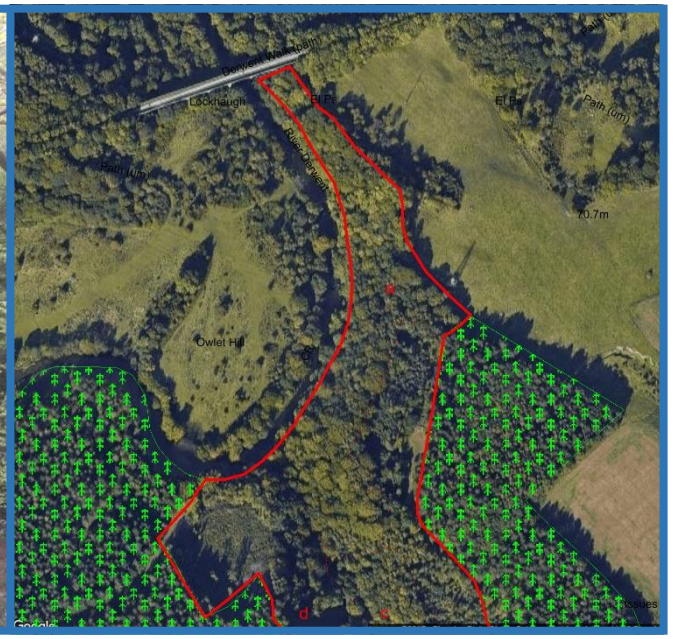
Forestry under Forest Enterprise Management Control

Prepared By Matt Taylor of Forest and Land Ltd. On behalf of the National Trust

Section 4: Compartment Summaries

Compartment 25b:
Credit - Sarah Bennett





Compartment: 1a **Species**: Sessile Oak with Birch, Beech, Elm, Alder, and Holly **Hectares**: 2.43

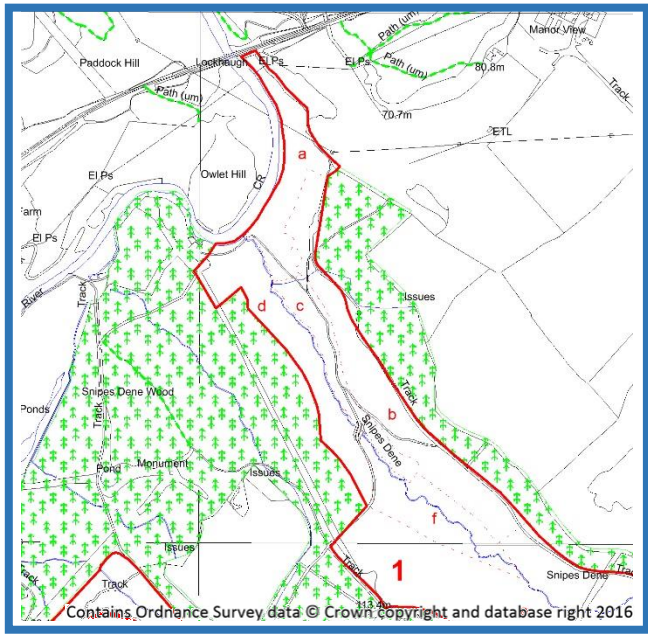
Designations: SSSI, ASNW, RP&G **Issues**: Beech shading out native flora and native tree regeneration.

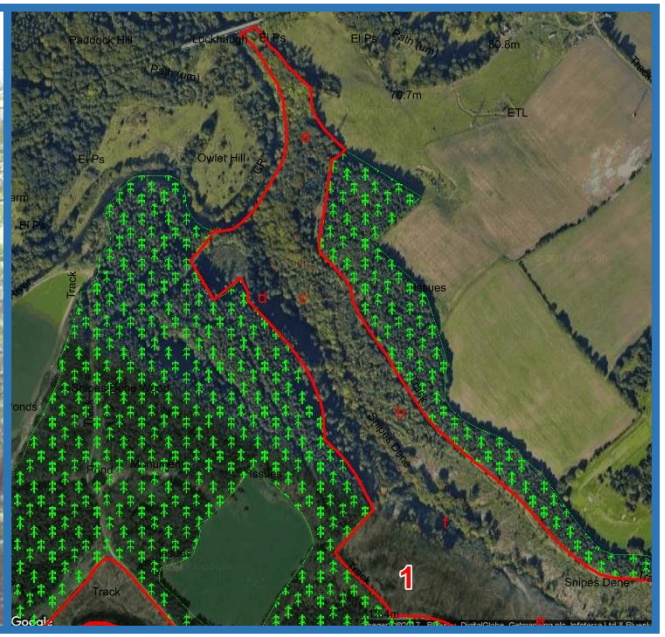
Intervention: 20% Selective felling of beech through ringbarking and restocking with birch and hazel to restore scrub layer

Work Period: August 2017-July 2019

Description: A mature predominantly native woodland with varied age structure.

Aims: To diversify the woodland structure and restore its native composition to benefit biodiversity.





Compartment: **1b** **Species**: Birch, Willow, Alder, Hazel and Sycamore **Hectares**: 3.1

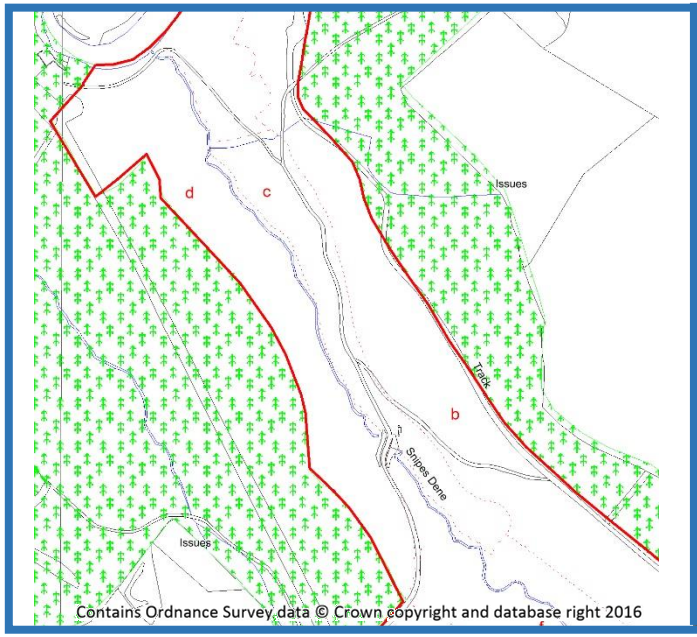
Designations: SSSI, ASNW, PAWS RP&G

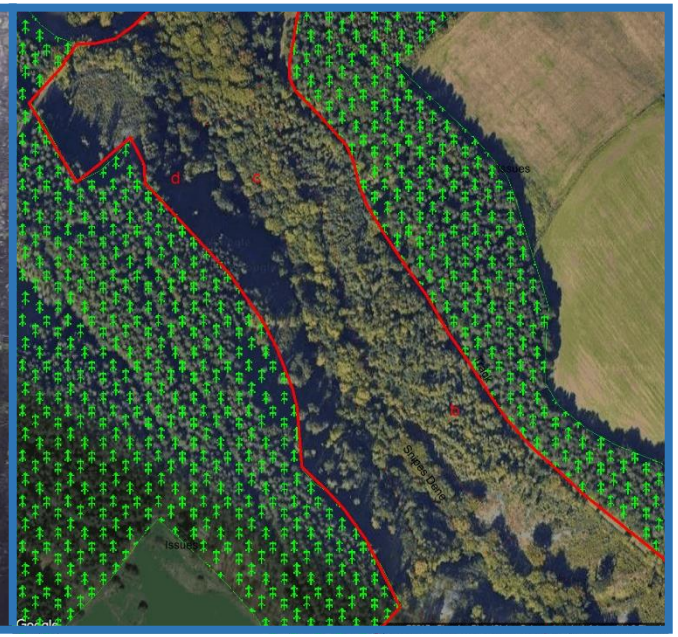
Intervention: 30% thin **Work Period**: August 2017-July 2019

Issues: None

Description: A mature woodland with mixed native species.

Aims: To diversify structure and manage for visual amenity, health and safety, and biodiversity. To create five glades 0.02ha each to open up areas of existing heather to increase habitat for basking reptiles.





Compartment: **1c**

Species: Ash, Birch, Elm, Hazel and Beech

Hectares: 1.63

Designations: SSSI, ASNW, RP&G

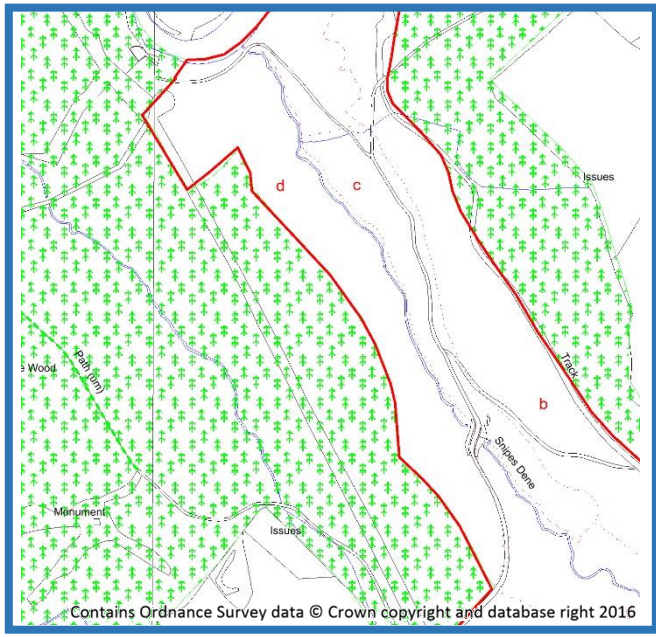
Intervention: 30% Thin

Work Period: August 2017-July 2019

Issues: Rhododendron and Himalayan Balsam

Description: An overstood native coppice woodland.

Aims: To restore the coppice cycle and diversify the woodland structure.



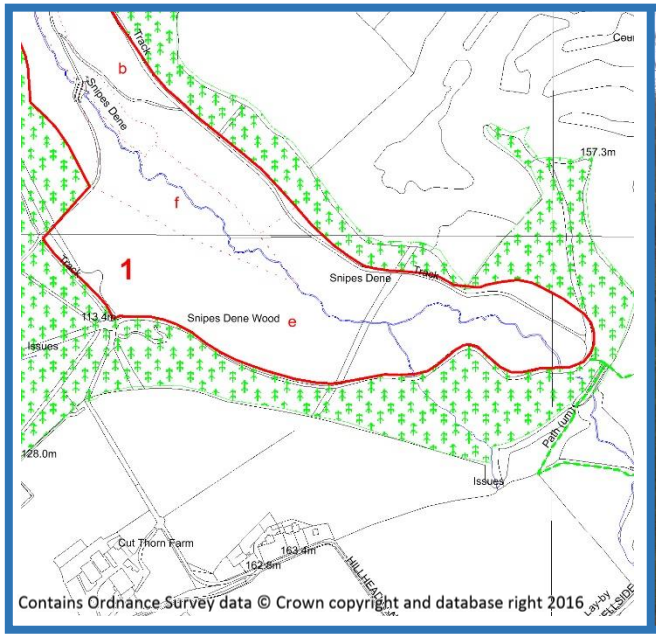
Compartment: 1d **Species**:Birch and Sessile Oak with Wild Cherry and Willow **Hectares**:5.9

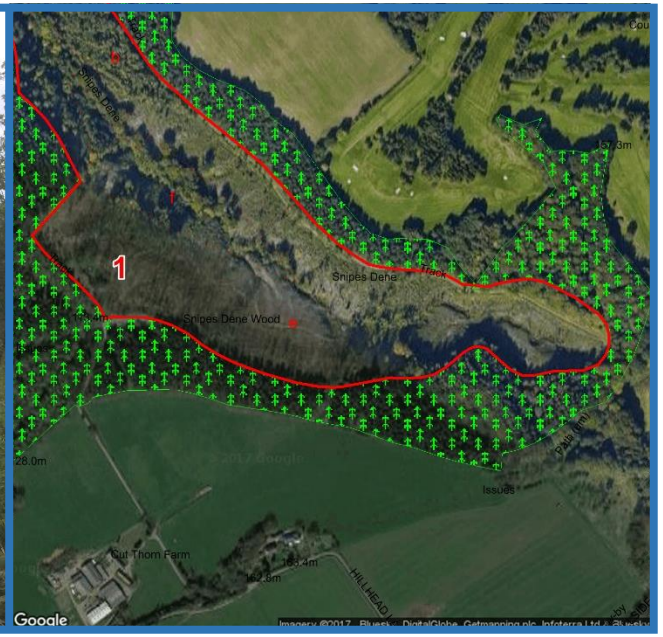
Designations: SSSI, PAWS, RP&G **Intervention**: Light thin/respace (below felling licence requirements)

Work Period: August 2017-July 2019 **Issues**: Rhododendron

Description: A young establishing woodland with mixed native species planted following conifer harvest.

Aims: To promote good establishment and healthy tree growth. On the sunny bank at the northern end of the compartment a heavier concentration of thinning in an area of 0.4ha to create interconnected small glades around areas of existing heather to increase habitat for basking reptiles.





Compartment: 1e **Species**: Birch with Sessile Oak, Wild Cherry and Hazel **Hectares**: 13.01

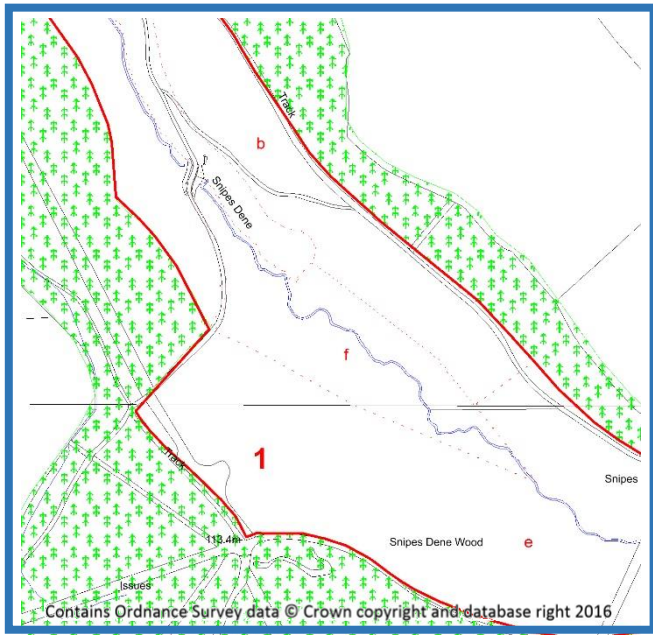
Designations: SSSI, ASNW, PAWS RP&G

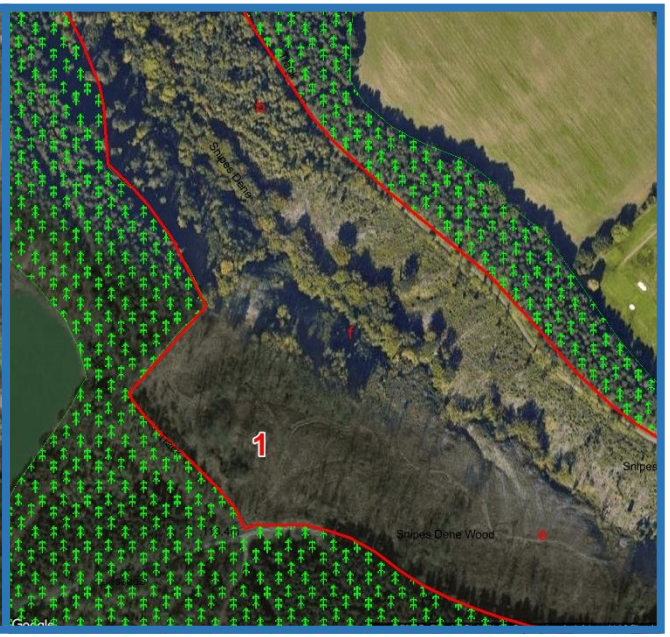
Intervention: control regeneration of non-native species **Work Period**: August 2017-July 2027

Issues: None

Description: A young establishing woodland with mixed native species planted following conifer harvest.

Aims: To promote good establishment and healthy tree growth. To maintain two 0.05ha glades at gas pipe track and quarry grass snake survey site for basking reptiles





Compartment: 1f **Species**: Birch and Wild Cherry **Hectares**: 5.9

Designations: SSSI, ASNW, PAWS RP&G **Intervention**: 30% Thin

Work Period: August 2017-July 2019 **Issues**: None

Description: A mature woodland with native broadleaved tree species and a varied age structure.

Aims: To diversify structure and encourage natural regeneration of native species.

Compartment: 2 **Species**: Birch and Sessile Oak with Sycamore, Ash, Beech, Elm, Lime, Corsican Pine, and Yew

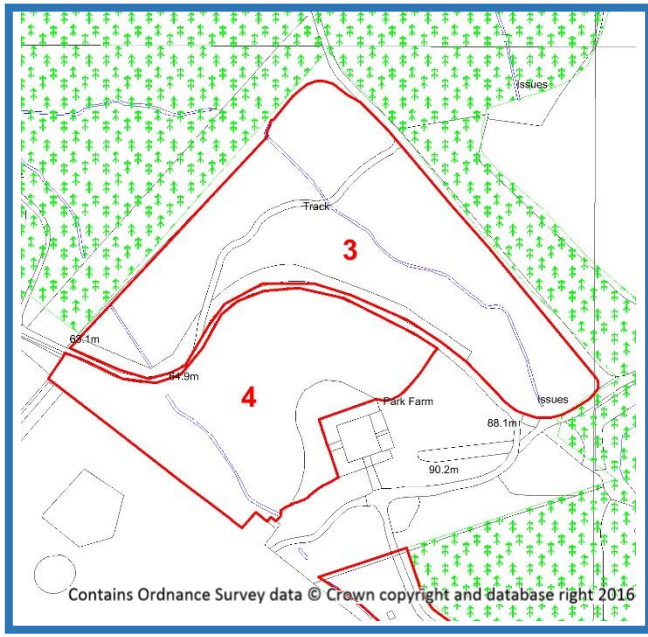
Hectares: 1.99 **Designations**: SSSI, ASNW, PAWS RP&G

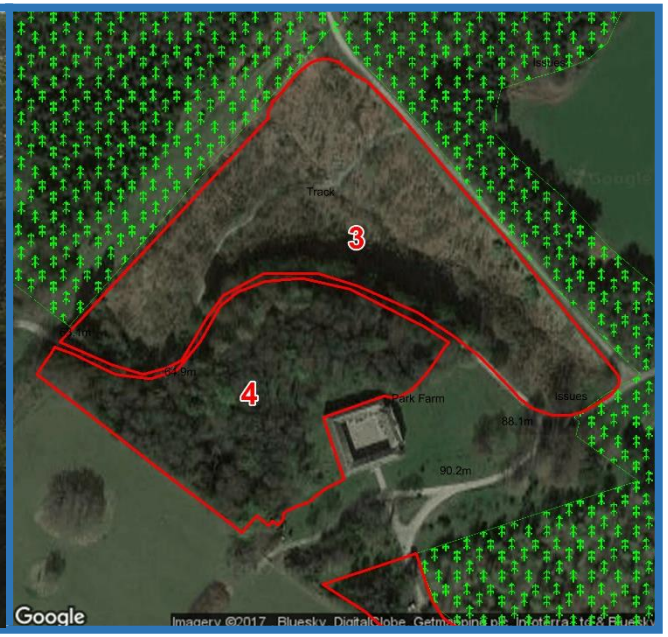
Intervention: Selectively fell Corsican Pine **Work Period**: August 2019-July 2021

Issues: Soil erosion

Description: A mature mixed woodland with a diverse age structure.

Aims: To gradually remove non-native species to encourage regeneration of native trees.





Compartment: **3** **Species**: Birch with Sessile Oak, Willow, Hazel and Rowan **Hectares**: 2.03

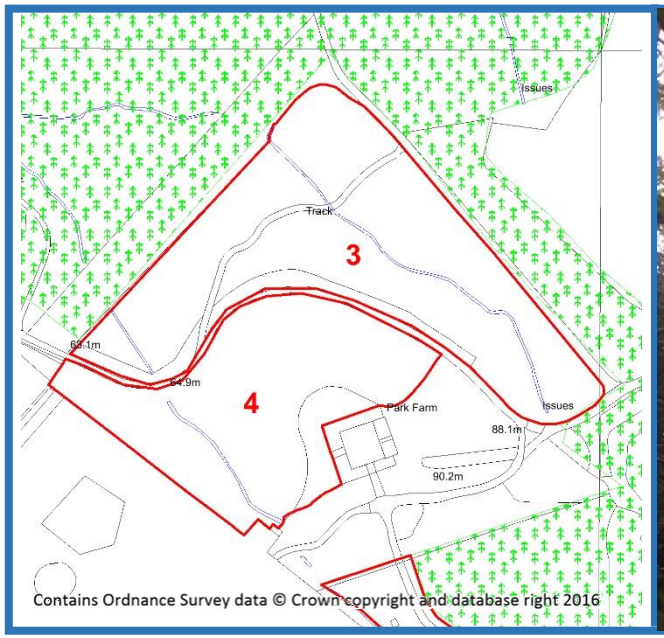
Designations: SSSI, PAWS, RP&G

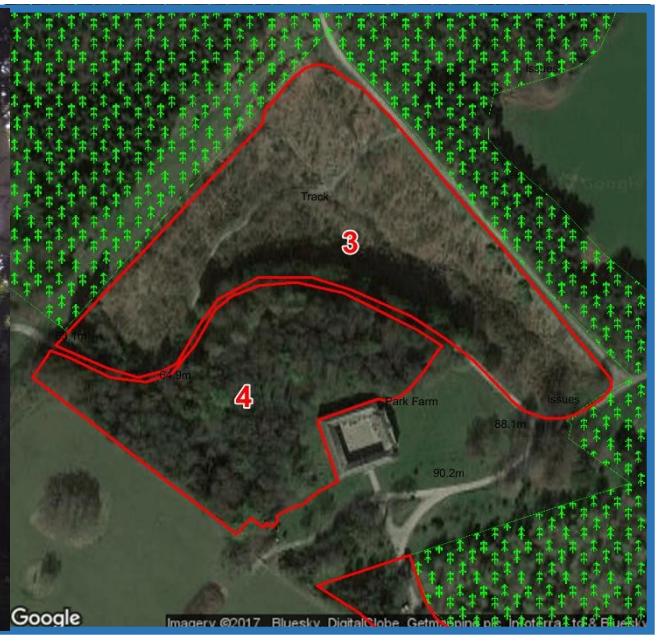
Intervention: 30% Thin **Work Period**: August 2021-July 2023

Issues: None

Description: A young establishing woodland with mixed native species planted following conifer harvest

Aims: To promote good establishment and healthy tree growth. Maintain existing 0.02ha glade created for reptile survey. Create three new glades of 0.01ha each, connected by thinned rides on the sunny banks of this compartment to increase habitat for basking reptiles.





Compartment: 4 **Species**: Sycamore, Yew, Corsican Pine, Sequoia. **Hectares**: 1.7

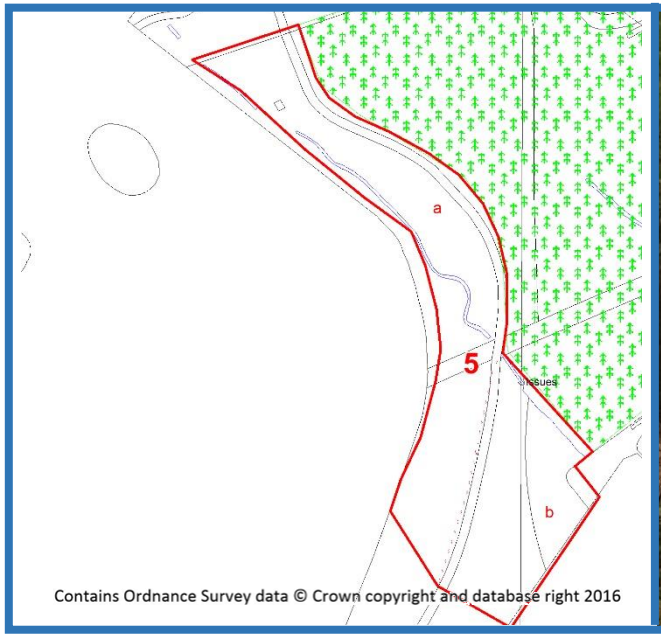
Designations: PAWS, RP&G

Intervention: None

Issues: None

Description: A mature woodland with mixed native and non-native broadleaved species and a varied age structure.

Aims: To manage for visual amenity, health and safety, and biodiversity.

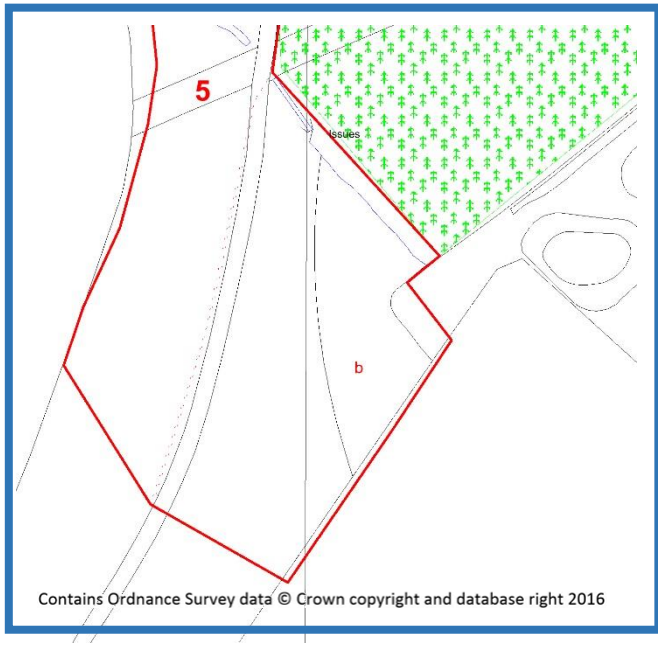


Compartment: 5a **Species**: Scots Pine with Birch and Sycamore **Hectares**: 0.91

Designations: SSSI, PAWS, RP&G **Intervention:** None **Issues**: None

Description: A mature conifer woodland with scattered mixed native and non-native broadleaved species and a relatively uniform age structure.

Aims: To manage for visual amenity, health and safety, and biodiversity.



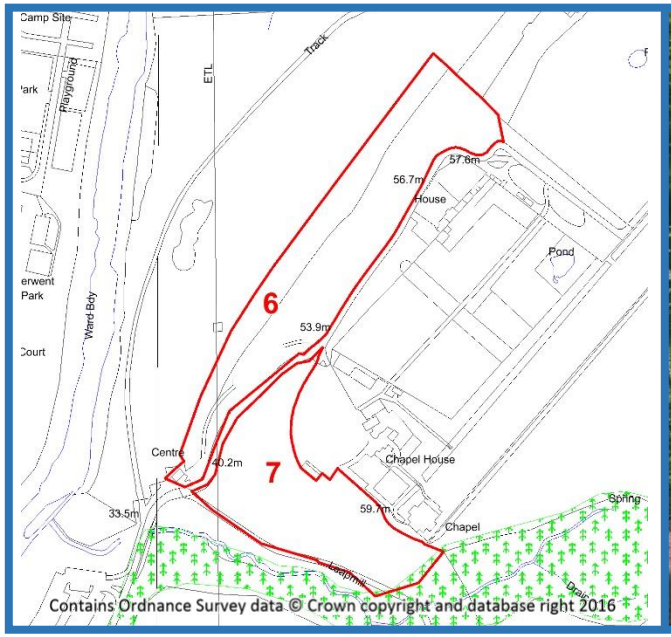
Compartment: **5b** **Species**: Western Hemlock **Hectares**: 0.52

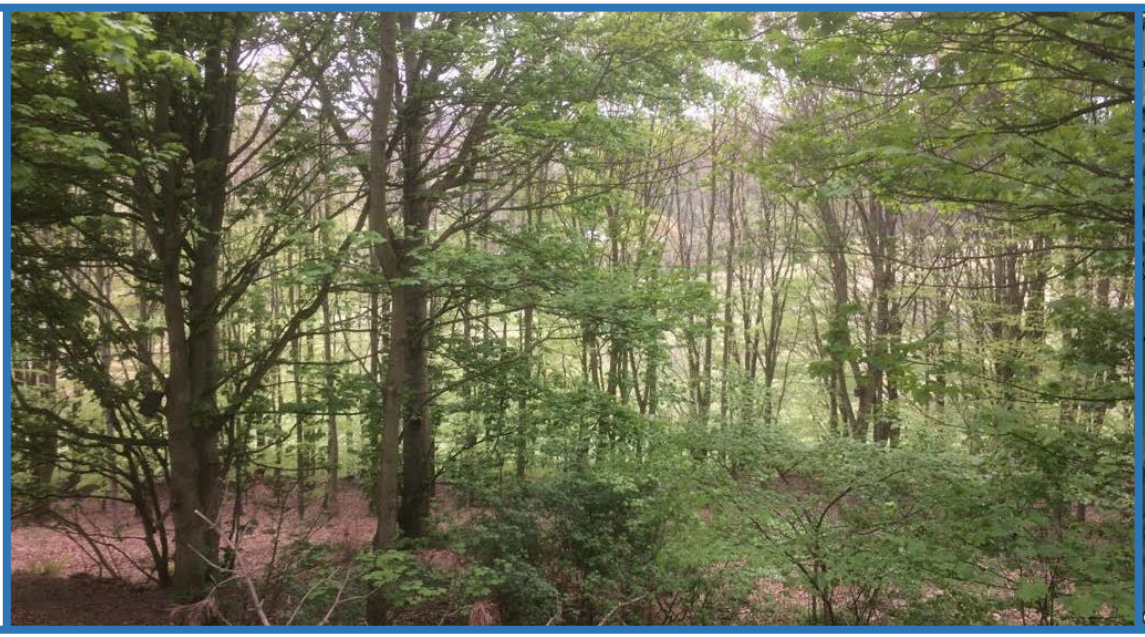
Designations: PAWS & RP&G **Intervention**: Restock with native broadleaved trees following harvest by Forest Enterprise

Issues: None

Description: A mature conifer woodland with a uniform age structure.

Aims: To manage for visual amenity, health and safety, and biodiversity.





Compartment: 6 **Species**: Sycamore with Beech and Sessile Oak **Hectares**: 1.56

Designations: PAWS and RP&G

Intervention: 30% Thin **Work Period**: August 2023-July 2024

Issues: None

Description: A mature woodland with mixed native and non-native species and a uniform age structure

Aims: To diversify structure and encourage regeneration of native tree species and to manage for visual amenity, health and safety, and biodiversity.

Compartment: 7 **Species**: Beech with Sessile Oak **Hectares**: 1.05

Designations: PAWS and RP&G

Intervention: Selectively fell 50% of the beech through tree surgery leaving stems as standing deadwood. Restock with Oak and Hazel

Issues: Soil Erosion

Description: A mature woodland dominated by Beech with scattered non-native species and a uniform age structure

Aims: To increase species and structural diversity and manage for visual amenity, health and safety, and biodiversity.

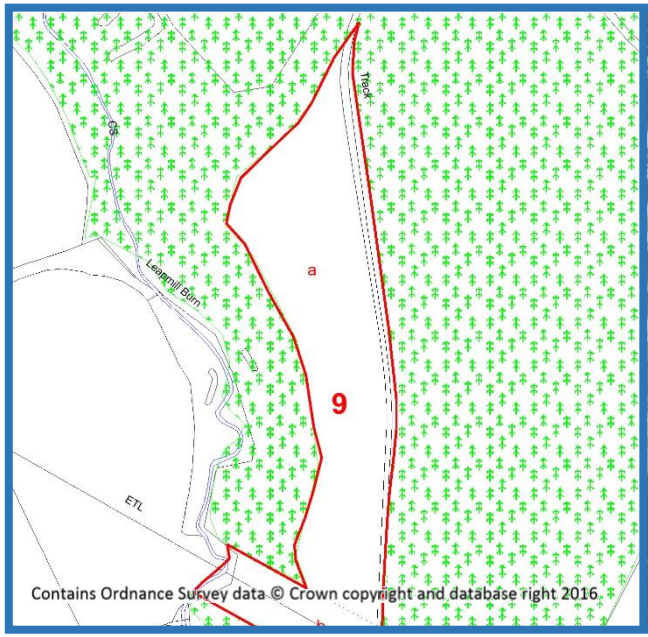
Compartment: 8 **Species**: Birch with Sessile Oak **Hectares**: 2.06

Designations: PAWS and RP&G **Intervention**: Thin/re-space (below felling licence requirements)

Issues: None

Description: A young establishing woodland with mixed native species planted following conifer harvest

Aims: To promote good establishment and healthy tree growth and maintain existing 0.03ha ride and glade created for reptile survey. Extended this area to create four more glades 0.01ha each, connected by open rides to increase habitat for basking reptiles.



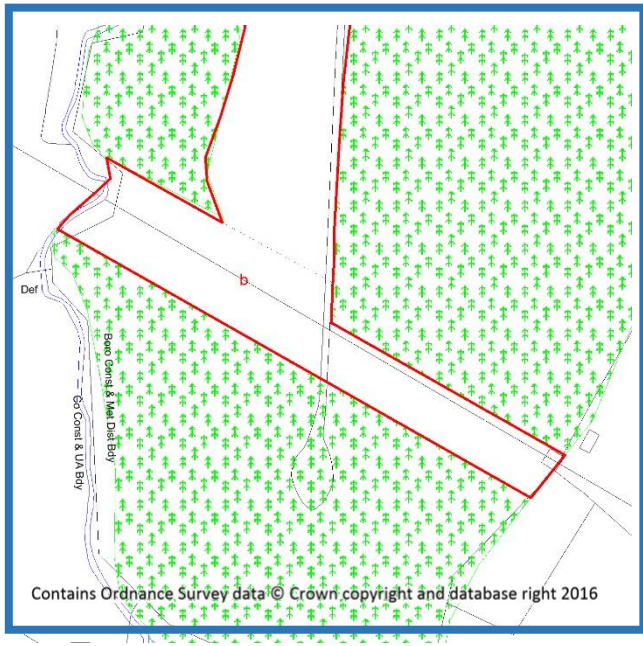
Compartment: 9a **Species**: Western Hemlock **Hectares**: 1.45

Designations: PAWS & RP&G **Intervention**: Restock with native broadleaved trees following harvest by Forest Enterprise

Issues: None

Description: A mature conifer woodland with a uniform age structure.

Aims: To manage for visual amenity, health and safety, and biodiversity.



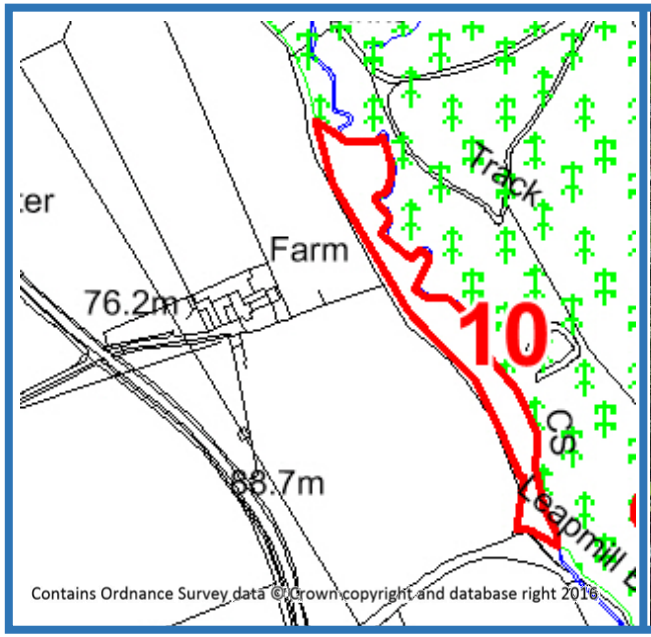
Compartment: **9b** **Species**: Hazel with Birch and Holly **Hectares**: 0.5

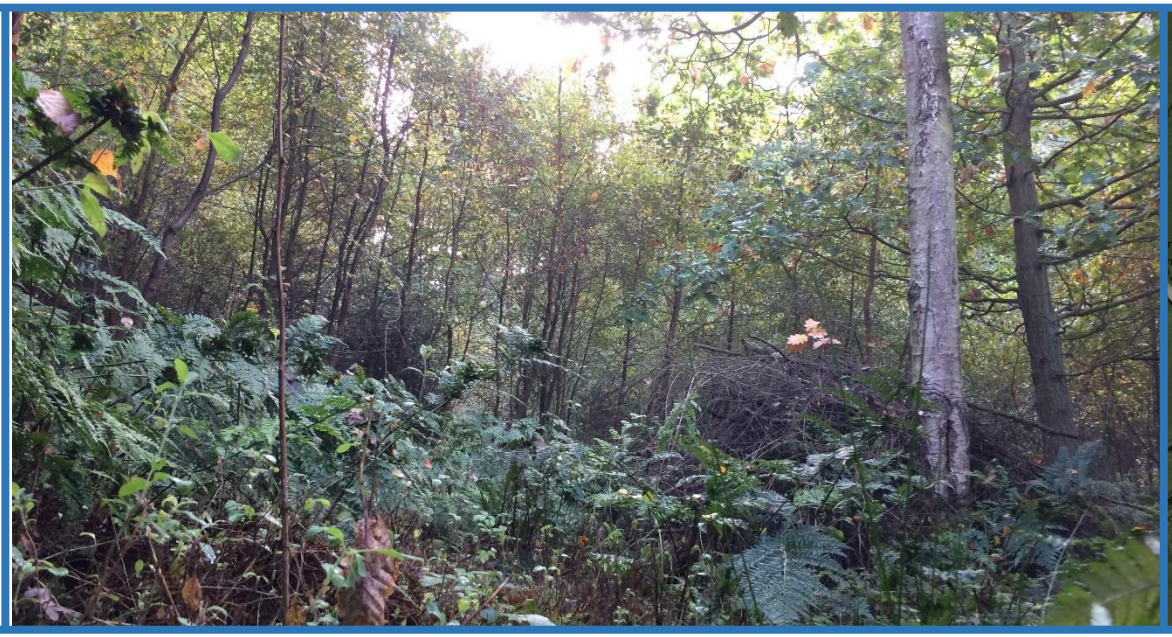
Designations: PAWS and RP&G **Intervention**: None

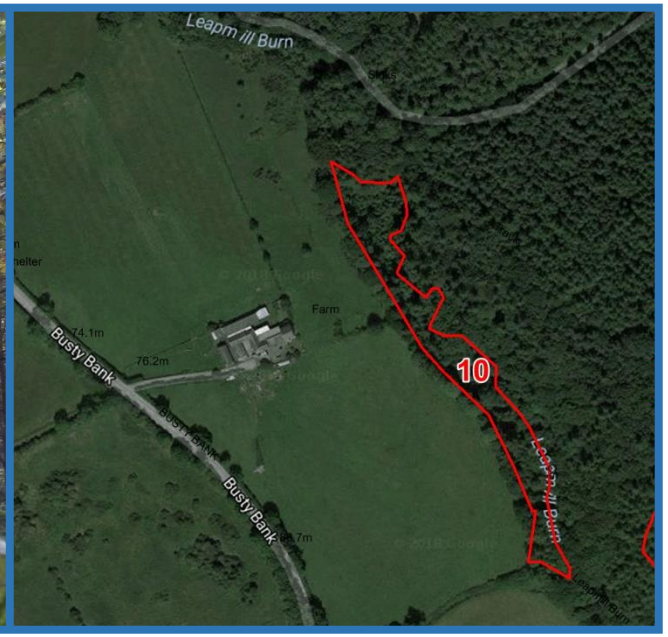
Issues: None

Description: A young establishing woodland with mixed native species planted following powerline clearance.

Aims: To promote good establishment of hazel coppice.







Compartment: 10 **Species**: Birch with Pedunculate Oak, Sycamore, Alder, Holly and Ash **Hectares**: 0.62

Designations: PAWS **Intervention**: 30% Thin

Issues: None

Description: A diverse riparian woodland with mixed native species.

Aims: To diversify structure and encourage regeneration of native tree species and to manage for visual amenity, health and safety, and biodiversity.