



Forestry and
Land Scotland
Coilltearachd agus
Fearann Alba

Sidlaws

Land Management Plan

Duration of plan – 2022-2041

This plan sets out the strategic direction for management over the next 20 years and provides details of the operations proposed in the first 10 years.



Sidlaws

Land Management Plan

We manage Scotland's National Forest Estate to the United Kingdom Woodland Assurance Standard – the standard endorsed in the UK by the international Forest Stewardship Council® and the Programme for the Endorsement of Forest Certification. We are independently audited.

Our land management plans bring together key information, enable us to evaluate options and plan responsibly for the future. We welcome comments on these plans at any time.



The mark of responsible forestry



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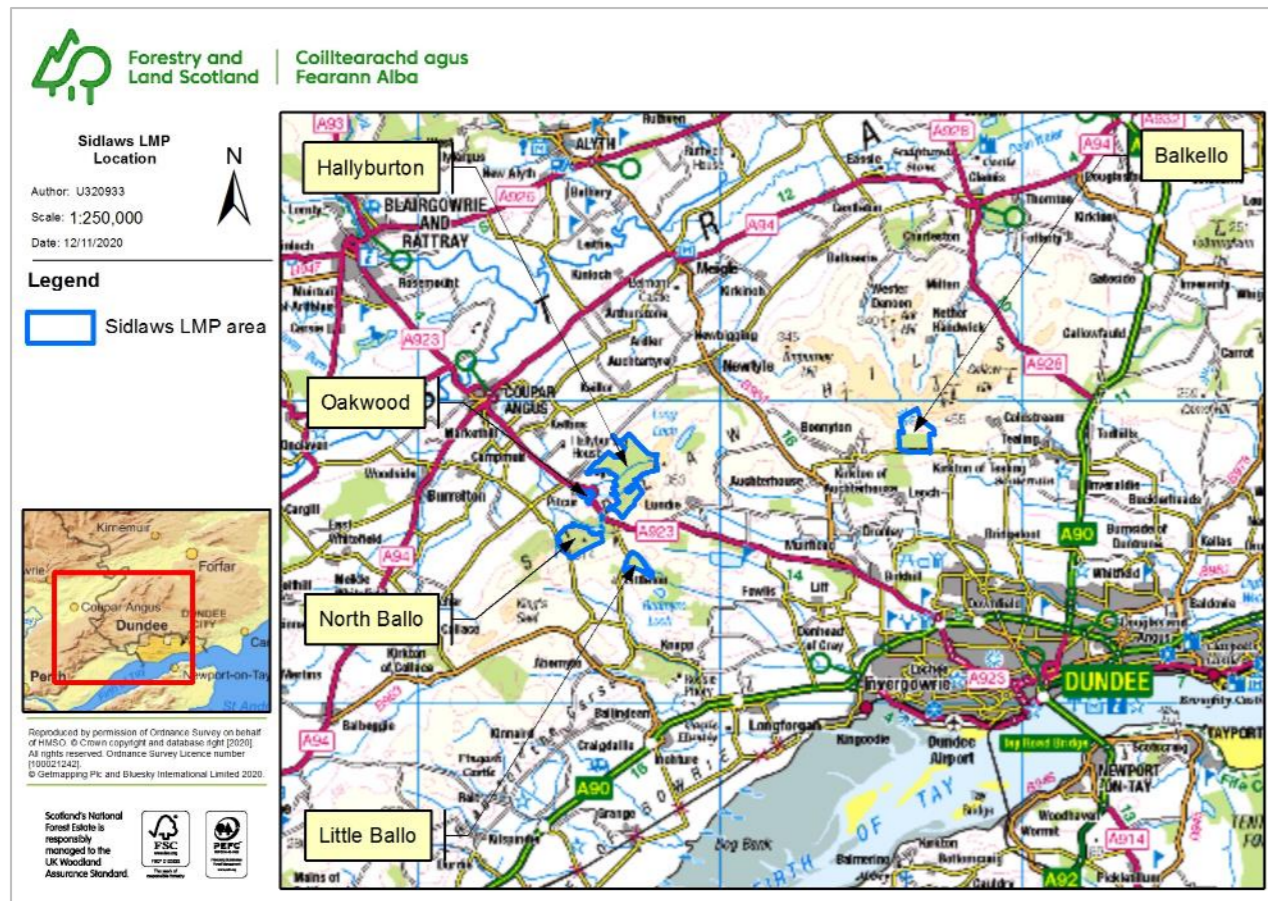
1. Introduction and summary

1.1 Location

The forests making up the Sidlaws Land Management Plan area are located within the Sidlaw hills. The Sidlaws are a low lying range of volcanic protrusions that run in a south west to north east direction from Perth to Forfar.

1.2 The site

The Sidlaws plan comprises a number of dispersed blocks located in the Sidlaw hills between Dundee and Coupar Angus. The forests cover a total area of 504 ha and are comprised predominantly of mature stands of pine, larch, spruce and beech. Balkello is a recent woodland creation project that was planted in the early 1990's. The extent of the plan area and location of blocks is detailed in the location map below.



1.3 Certification

The management of the woodland is certified and at all times we seek to adhere to the UK Woodland Assurance Standard (UKWAS).

1.4 Key Issues

The key issues in this plan are:

- High visitor numbers are causing issues with litter and dog waste.
- Planting in Balkello is overdue for thinning.
- Hallyburton and North Ballo highly visible from Coupar Angus.
- Balkello hill also visible from areas north of Dundee.
- Establishment of planting on Balkello hill hampered by invasive gorse and broom.
- Significant areas of mature larch in Hallyburton and North Ballo.
- Numerous adjacent SSSI's.
- Disused quarries in Hallyburton and Balkello are a potential hazard to visitors.
- Poor drainage and road network in Balkello presents issues for management operations.

1.5 Proposals in Brief

- Fell 62 ha of woodland
- Thin 278 ha of woodland
- Restock 99 ha of woodland
- 19 ha of new woodland creation

1.6 Timing

This plan presents in detail the management, felling, thinning and restocking proposals for the next 10 years (2022-2031). This first ten year period is particularly important because it relates to the part of the land management plan that requires specific approval from Scottish Forestry. Longer term management of the Sidlaws is included in the plan but mainly to provide an indication of the direction of travel and to provide context.

1.7 Consultation and Further Information

During the development of this plan we have consulted with the local community and statutory and other interested stakeholders.

For further information on the plan please contact:

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2. Forestry Scotland Regulatory Requirements

2.1 Summary of Planned Operations

| Proposed Operations | 2022 - 2031 |
|-----------------------|--------------|
| Felling | 61.96 ha |
| Thinning | 277.99 ha |
| Restocking | 98.90 ha |
| New Road Construction | 0.0 metres |
| Road Upgrade | 4,550 metres |

2.1.1 Proposed Felling in Years 2022-2026

| Proposed Phase | Area to be Felled (ha) | Proportion of Woodland Area (%) |
|----------------|------------------------|---------------------------------|
| 2022 - 2026 | 50.26 | 10.0 |
| 2027 - 2031 | 11.70 | 2.3 |

2.1.1.2 Details of Clearfell by Coupe for phase 1

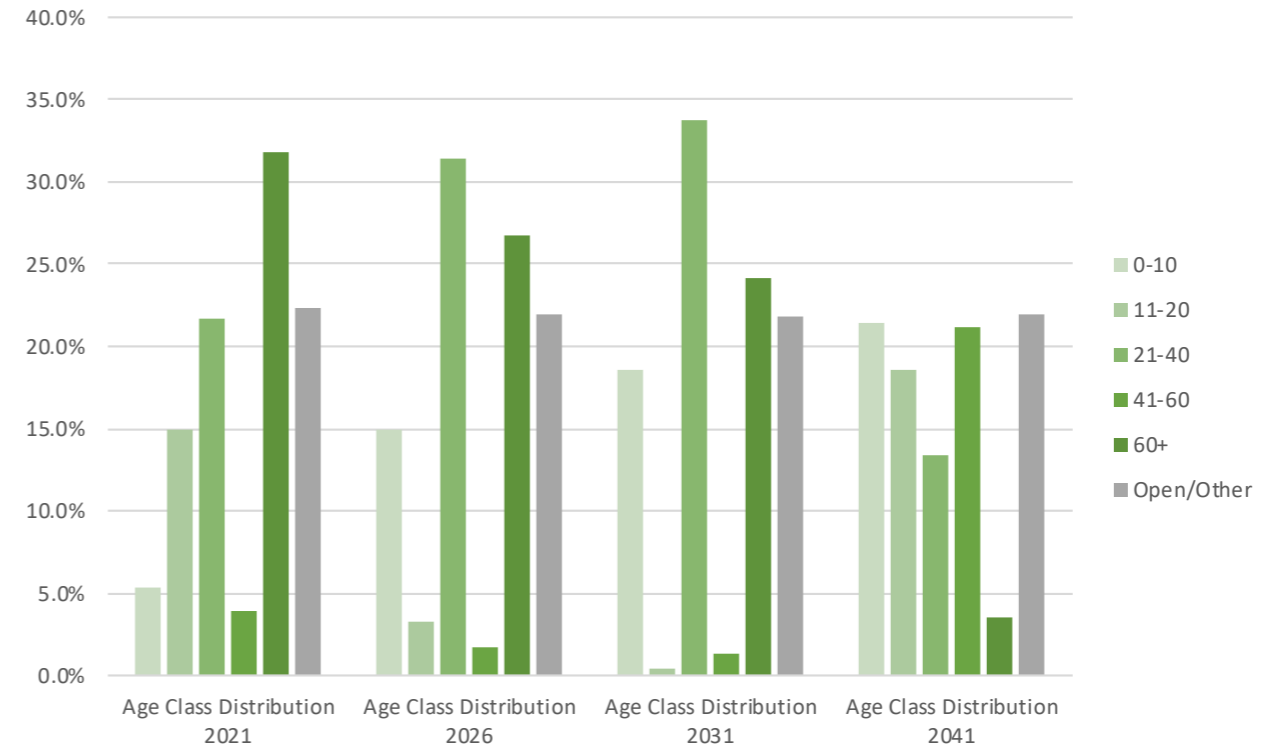
| Coupe Reference | Programme Year | Species 1 | Area (ha) | Species 2 | Area (ha) | Other Species | Area (ha) | Open Area (ha) | Total Area (ha) |
|-----------------|----------------|-----------|-----------|-----------|-----------|----------------|-----------|----------------|-----------------|
| 62002 | 2022/23 | SS | 0.96 | JL | 0.13 | - | - | - | 1.09 |
| 30004 | 2022/23 | SS | 5.13 | JL/EL/HL | 3.27 | NS, SP, MC, MB | 7.84 | 0.65 | 16.89 |
| 30002 | 2023/24 | JL | 13.32 | SP | 6.12 | SS, CP | 1.12 | 1.38 | 21.94 |
| 30025 | 2023/24 | NS | 5.93 | EL | 1.48 | SP | 1.48 | 1.45 | 10.34 |

2.1.1.3 Changes in Age Class over plan period

| Age of Trees | Growth Stage | % 2022 | % 2026 | % 2031 | % 2041 |
|----------------------|----------------------|--------|--------|--------|--------|
| 0-10 | Establishment | 5.3 | 14.9 | 18.6 | 21.4 |
| 11 - 20 | Thicket | 15.0 | 3.3 | 0.4 | 18.6 |
| 21 - 40 | Pole | 21.7 | 31.4 | 33.8 | 13.4 |
| 41 - 60 | Maturing High Forest | 3.9 | 1.7 | 1.3 | 21.2 |
| 61+ | Old High Forest | 31.8 | 26.7 | 24.2 | 3.5 |
| Integral Open Ground | N/A | 6.4 | 6.6 | 6.6 | 6.9 |
| Open Hill Ground* | N/A | 15.9 | 15.4 | 15.2 | 15.0 |

*Includes areas felled awaiting restock.

2.1.1.4 Changes in Age Class over plan period graph



2.1.2 Proposed Thinning in Years 2022-2031

| Proposed Phase | Area to be Thinned (ha) | Proportion of Woodland Area (%) |
|----------------|-------------------------|---------------------------------|
| 2021 - 2025 | 90.43 | 18.0 |
| 2026 - 2030 | 187.56 | 37.2 |

2.1.2.2 Proposed thinning by coupe for phase 1

| Coupe Reference | Programme Year | Species 1 | Area (ha) | Species 2 | Area (ha) | Species 3 | Area (ha) | Open Area (ha) | Total Area (ha) |
|-----------------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|-----------------|
| 30004 | 2022 | DF | 10.45 | SS | 5.3 | MC | 11.92 | 4.87 | 32.54 |
| 62002 | 2025 | MB | 43.96 | SP | 3.4 | MC | 1.89 | 8.64 | 57.89 |

N.B. Thinning coupes use the same numbering protocol as felling coupes but are distinct from them as are managed as a separate programme shapefile. There is no relation to the thinning coupes mentioned here and their identically numbered felling coupes.

Sidlaws

Land Management Plan

2.1.3 Proposed Restocking in Years 2022-2026

| Proposed Phase | Area to be Restocked (ha) | Proportion of Woodland Area (%) |
|----------------|---------------------------|---------------------------------|
| 2022 - 2026 | 51.13 | 9.9 |
| 2027 - 2031 | 47.77 | 9.5 |

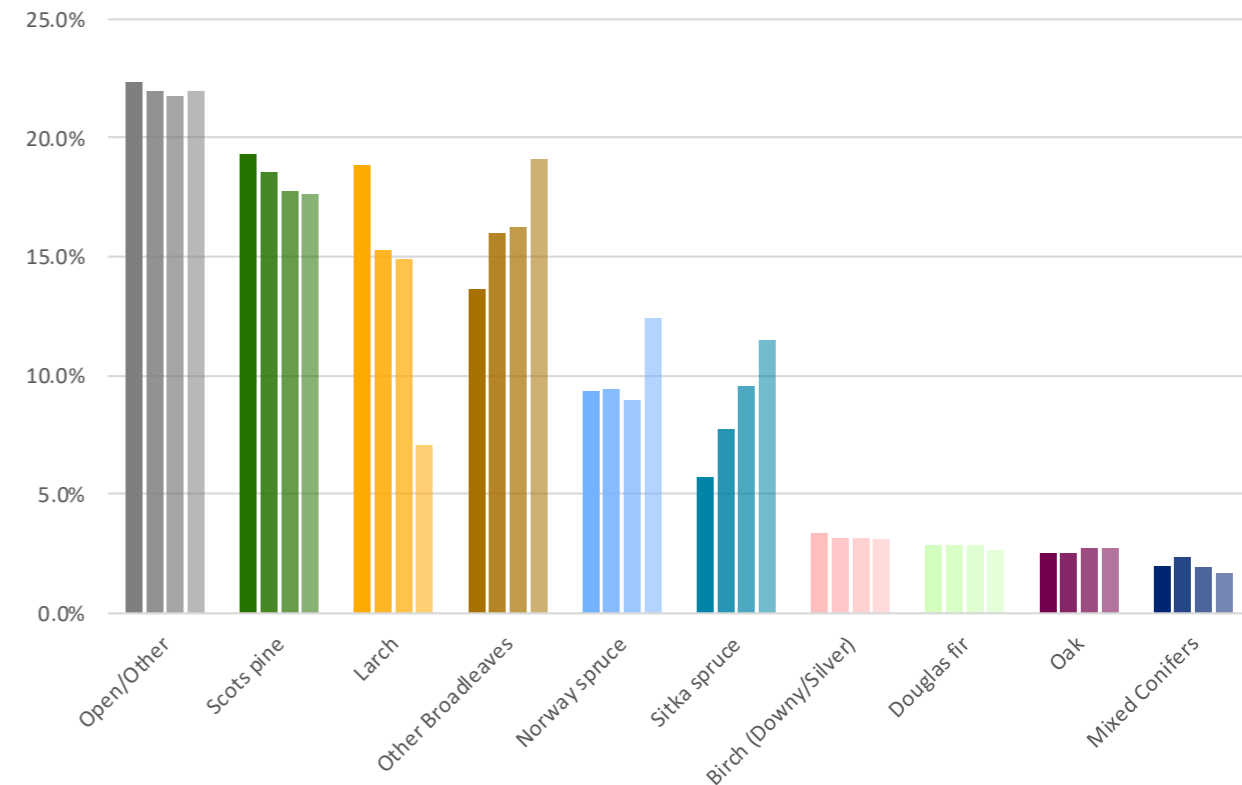
2.1.3.2 Proposed Restocking by Coupe for phase 1

| Coupe Reference | Programme Year | Species 1 | Area (ha) | Species 2 | Area (ha) | Species 3 | Area (ha) | Open Area (ha) | Total Area (ha) |
|-----------------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|-----------------|
| 30021A | 2021/22 | NS | 2.27 | MC | 2.27 | - | - | 0.00 | 4.54 |
| 30021B | 2021/22 | MB | 2.25 | - | - | - | - | 1.50 | 3.75 |
| 30028 | 2024/25 | NS | 3.80 | - | - | - | - | 0.00 | 3.80 |
| 30031A | 2021/22 | NS | 5.10 | SS | 4.35 | SP | 2.35 | 0.97 | 12.77 |
| 30031B | 2021/22 | MB | 5.37 | - | - | - | - | 3.57 | 8.94 |
| 30033 | 2024/25 | MB | 7.04 | NS | 1.84 | SP | 0.92 | 5.61 | 15.41 |
| 30035 | 2023/24 | MB | 0.31 | SS | 0.30 | - | - | 0.23 | 0.84 |
| 62002 | 2024/25 | MB | 0.88 | - | - | - | - | 0.21 | 1.09 |

2.1.3.3 Species Change Over Plan Period

| Species | 2021 Area (ha) | 2021 % | 2026 Area (ha) | 2026 % | 2031 Area (ha) | 2031 % | 2041 Area (ha) | 2041 % |
|----------------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|
| Scots pine | 97.3 | 19.3 | 93.6 | 18.6 | 89.5 | 17.8 | 88.9 | 17.7 |
| Larch | 94.9 | 18.8 | 77.0 | 15.3 | 75.1 | 14.9 | 35.6 | 7.1 |
| Norway Spruce | 47.2 | 9.4 | 47.5 | 9.4 | 45.2 | 9.0 | 62.5 | 12.4 |
| Sitka spruce | 28.9 | 5.7 | 39.1 | 7.8 | 48.2 | 9.6 | 57.9 | 11.5 |
| Douglas fir | 14.4 | 2.9 | 14.4 | 2.9 | 14.4 | 2.9 | 13.5 | 2.7 |
| Mixed Conifers | 9.9 | 2.0 | 12.0 | 2.4 | 9.8 | 1.9 | 8.6 | 1.7 |
| Birch (Downy/Silver) | 17.0 | 3.4 | 16.0 | 3.2 | 16.0 | 3.2 | 15.7 | 3.1 |
| Oak | 12.7 | 2.5 | 12.7 | 2.5 | 13.8 | 2.7 | 13.8 | 2.7 |
| Other Broadleaves | 68.7 | 13.6 | 80.6 | 16.0 | 81.8 | 16.2 | 96.3 | 19.1 |
| Total | 391.0 | 77.6 | 392.9 | 78.0 | 393.8 | 78.2 | 392.8 | 78.0 |

2.1.3.4 Species Change Over Plan Period Graph – 2021, 2026, 2031, 2041



2.1.4 Access and Roding in Years 2022-2026

| Period of Works | Proposed Length for Construction (m) | Proposed Length for Upgrade (m) |
|-----------------|--------------------------------------|---------------------------------|
| 2022 – 2026 | 0.0 | 3,700 |
| 2027 – 2031 | 0.0 | 1,850 |
| Beyond 2031 | 0.0 | 0 |

2.2 Departure from UKFS Guidelines

The Land Management Plan seeks to follow the UKFS in all requirements. No felling will take place until any neighbouring restock areas have achieved two metres in height. If this is not achieved the separation will be agreed with Scottish Forestry.

2.3 Tolerance Tables

Refer to Appendix III.

3. Determination

3.1 Deforestation

There are no plans for deforestation within the scope of this LMP. As indicated in table 2.1.1.3 the proposals aim to deliver a small increase in forest cover amounting to approximately 0.9% of the total plan area over the next 20 years.

3.2 Forest Roding

No new roads construction is proposed for the duration of this LMP. A programme of road upgrades and maintenance will be conducted, as indicated in table 2.1.4, to facilitate ongoing access for management operations, and fire management on Balkello hill. Details of roads to be upgraded are included in the management coupes maps in appendix VII. A new gate is proposed at the entrance to North Ballo, in agreement with the neighbouring landowner, to curb incidents of fly-tipping in the informal carpark at grid reference NO 246 353.

3.3 Quarries

There are no plans for quarry expansion or a new quarry within the plan area for the duration of this LMP.

3.4 Afforestation

It is proposed to plant an area of currently open ground in Hallyburton – coupe reference 30033. The coupe will be stocked with Norway spruce and riparian areas within the coupe will be planted with low density groups of native broadleaves.

3.5 Additional Regulatory Requirements

3.5.1 *Water Framework*

Buffering of commercial crops from water courses and private water supplies will follow current Forestry and Water guidelines. The adjacent SSSI at Laird's loch will receive a significant buffer of native broadleaf planting to act as a barrier to run-off and siltation entering the designated site.

3.5.2 *Prior Notification*

Maintenance of roads will be carried out in line with Timber Transport Forum document "The design and use of the structural pavement of unsealed roads (2014)". As all proposed roading works in the scope of this plan are classed as maintenance of existing infrastructure no prior notification should be required. If the need arises, prior notification will be sought at the time of work planning.

3.5.3 *Planning Consent*

No planning consent should be required during the plan period.

4. Introduction

4.1 Existing Land Holding

The Sidlaws plan comprises a number of dispersed blocks located in the Sidlaw hills between Dundee and Coupar Angus. The forests cover a total area of 504 ha and are comprised predominantly of mature stands of pine, larch, spruce and beech. Balkello is a recent woodland creation project that was planted in the early 1990's as a community woodland.

The forests contain a diverse range of species including large proportions of Scot's pine, larch and broadleaf species. The age structure of the forest contains two significant peaks in the 1950's and 1990's which reflect the acquisition dates of various parts of the plan area. Approximately three fifths of the forest is currently managed under CCF prescriptions, aiming to maintain canopy cover through selective felling and natural regeneration.

4.2 Setting and Context

The forests making up the Sidlaws Land Management Plan area are located within the Sidlaw hills. The Sidlaws are a low lying range of volcanic protrusions that run in a south west to north east direction from Perth to Forfar.

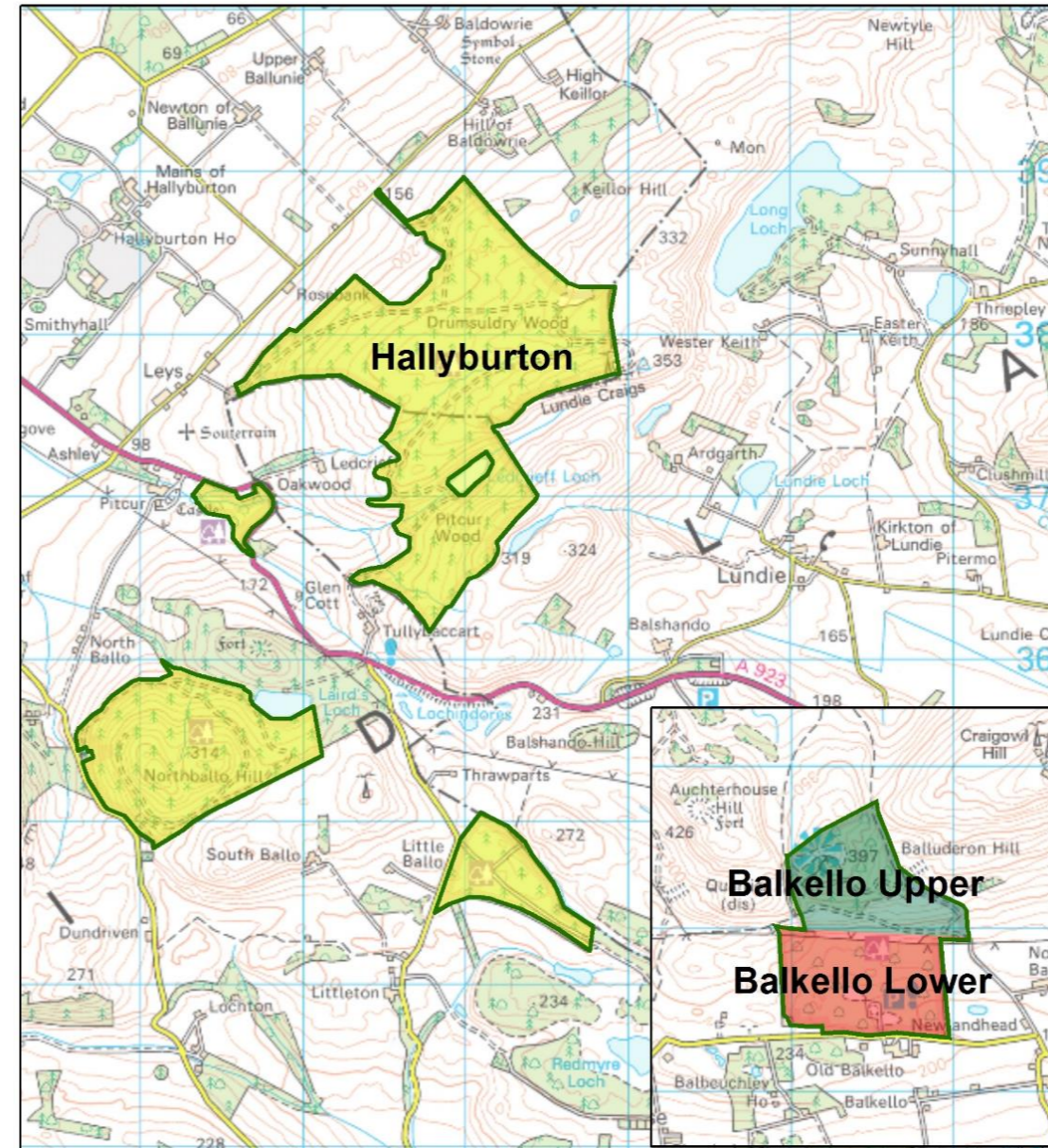
4.3 Land Management Plan Management Objective Zones

Due to the geographical separation and difference in age structure and character it has been decided to divide the plan area into three zones. The zones will be as described below:

1. Hallyburton – Comprising Hallyburton, North Ballo, Little Ballo and Oakwood.
2. Balkello Upper – Comprising the steep face of Balkello hill above the powerline wayleave.
3. Balkello Lower – Comprising the area of recent planting surrounding the carpark, up to the powerline wayleave.

These zones are indicated in the map opposite.

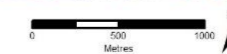
4.4 Zone Map



Sidlaws LMP Zones

Scale @ A1: 1:40,000
Date: 09/12/2019

| Legend | |
|------------|------------------|
| Block Name | Zone |
| | Sidlaws LMP Area |
| | Balkello Lower |
| | Balkello Upper |
| | Hallyburton |



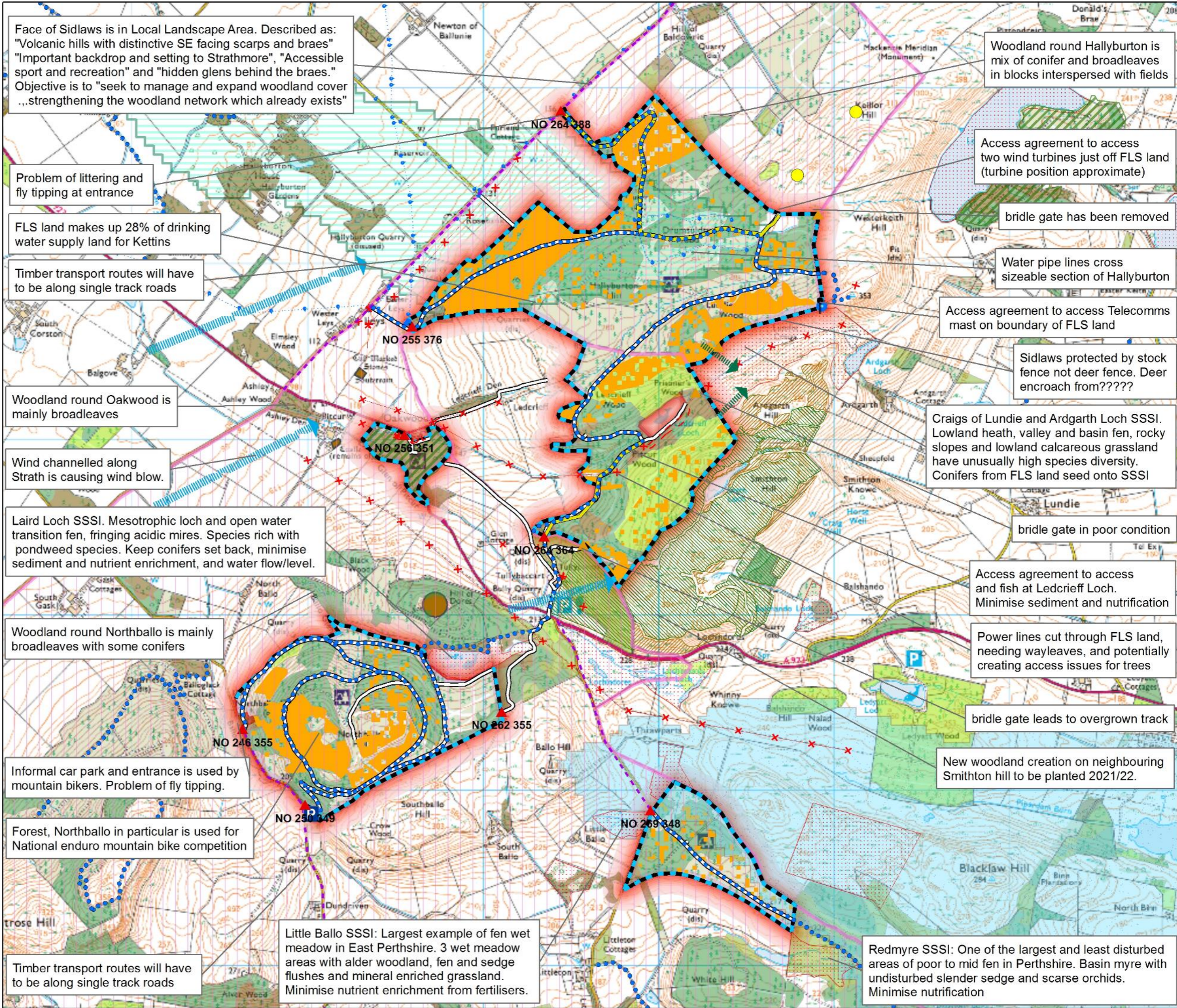
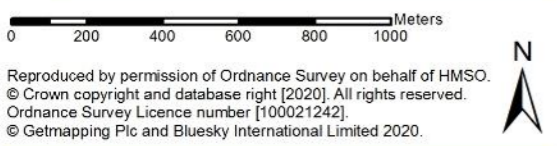
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Sidlaws LMP
Hallyburton et al.
Overall Context

Author: U320933
Scale @ A3: 1:20,000
Date: 19/11/2020

- Legend**
- ▲ Entrances
 - ▲ Path Access
 - P Car Parks
 - Wind Turbines
 - ⊙ Masts/Aerials
 - Forest Roads
 - Core Paths
 - Agreement Access
 - Timber Transport Route
 - × Overhead Powerline
 - - - Underground Powerline
 - Water Pipelines
 - Stock Fence
 - ||||| spread of conifers
 - ||||| wind direction
 - Blocks
 - Agreement access Telecoms
 - Ancient Woodland Sites
 - Sidlaws Local Landscape Area
 - Site of Special Scientific Interest
 - Drinking Water - Vulnerable Areas
 - new small river WB
 - Scheduled Monuments
- Neighbour New Planting**
- Conifer
 - Broadleaf
- National Forest Inventory**
- Broadleaved
 - Conifer
 - Assumed woodland
 - Young trees
 - Larch



Sidlaws East Balkello Overall Context

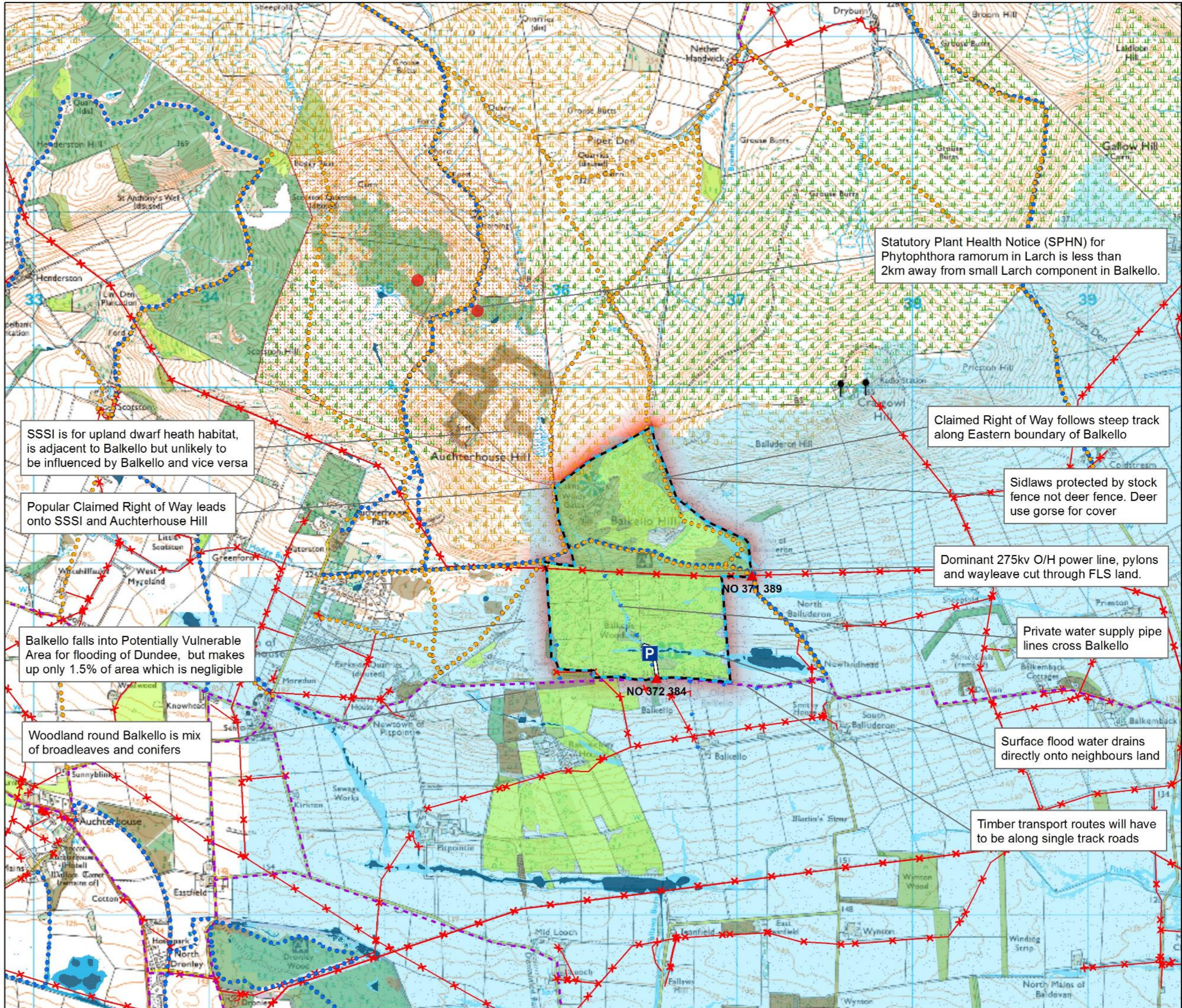
Author: U320933

Scale @ A3: 1:20,000

Date: 24/06/2020

Legend

- ▲ Entrances
- P Car Parks
- ⊙ Masts/Aerials
- Statutory Plant Health Notice
- Forest Roads
- Core Paths
- Claimed Right of Way
- Stock fence
- timber transport routes
- ✕ Overhead Powerline
- ✕ Overhead powerline
- - - Underground powerline
- Water Pipelines
- Blocks
- Sites of Special Scientific Interest
- Drinking Water - Vulnerable Areas
- Dry Heather Moorland
- Undifferentiated Heather Moorland
- Surface Water Flood Probability**
- High
- Medium
- Low
- National Forest Inventory**
- Broadleaved
- Conifer
- Assumed woodland
- Young trees



Statutory Plant Health Notice (SPHN) for Phytophthora ramorum in Larch is less than 2km away from small Larch component in Balkello.

SSSI is for upland dwarf heath habitat, is adjacent to Balkello but unlikely to be influenced by Balkello and vice versa

Claimed Right of Way follows steep track along Eastern boundary of Balkello

Sidlaws protected by stock fence not deer fence. Deer use gorse for cover

Popular Claimed Right of Way leads onto SSSI and Auchterhouse Hill

Dominant 275kv O/H power line, pylons and wayleave cut through FLS land.

Balkello falls into Potentially Vulnerable Area for flooding of Dundee, but makes up only 1.5% of area which is negligible

Private water supply pipe lines cross Balkello

Woodland round Balkello is mix of broadleaves and conifers

Surface flood water drains directly onto neighbours land

Timber transport routes will have to be along single track roads

0 200 400 600 800 1000 Meters
N
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5. Plan Aims & Objectives

5.1 Issues

- High visitor numbers are causing issues with litter and dog waste.
- Planting in Balkello is overdue for thinning.
- Hallyburton and North Ballo highly visible from Coupar Angus.
- Balkello hill also visible from areas north of Dundee.
- Establishment of planting on Balkello hill hampered by invasive gorse and broom.
- Poor drainage and road network in Balkello presents issues for management operations.
- Significant areas of mature larch in Hallyburton and North Ballo.
- Numerous adjacent SSSI's.
- Disused quarries in Hallyburton and Balkello are a potential hazard to visitors.

5.2 Key Challenges

- Maintaining positive public engagement with the sites and minimising antisocial behaviour.
- Gaining access to coupes in Balkello for management operations.
- Creating appropriately shaped and scaled coupes in high visibility areas.
- Ensuring sufficient roading is in place to gain access to current larch coupes in case of *P. ramorum* infection.
- Preventing spread of non-native seed into neighbouring SSSI's.

5.3 Management Aims

5.3.1 Aim 1

Secure carbon sequestration through the growth of high quality timber. – Large areas of the site are well suited to production of high quality timber, including commercial broadleaf species. Good soils, sheltered sites and accessible coupes lend themselves to CCF management.

5.3.2 Aim 2

Improve the wellbeing of the local population through recreational use of the site. – The location of the site makes it easily accessible from Coupar Angus and Dundee. The blocks support a range of recreational activities including walking, cycling, horse riding and climbing. Focus on providing safe and responsible access for all users.

5.3.3 Aim 3

Produce high quality timber crops and support specialist timber markets and local sawmills. – With appropriate management Oakwood has the potential to produce high quality hardwood timber.

5.4 Plan Objectives

- To review viability of all CCF areas.
- Manage sites for the benefit of local wildlife including red squirrel and badger.
- Ensure felling coupes on steep slopes in the Local Landscape Area are designed sensitively.
- Plan operational access for larch coupes to be in place in case of *P. ramorum* infection.
- Plan coupes and restock areas to minimise the effects of future wind blow incidents.
- Consider safety issues relating to quarry sites in Hallyburton and Balkello.
- Plan management operations to promote water quality.
- Ensure the neighbouring SSSI's are maintained or improved as a result of FLS activities.
- Ensure water quality standards emanating from the forests are maintained or improved.

6. Analysis and Concept

6.1 Analysis

Items highlighted in **dark green** are broad aims for the site, driven by national targets and policies.

| Objective | Opportunity | Constraint | Concept |
|--|---|---|--|
| Secure carbon sequestration through growth of high quality timber. | <ul style="list-style-type: none"> > Fertile soils and relatively sheltered sites lend themselves to CCF management. > Potential to manage the Oakwood for productive broadleaf timber. | <ul style="list-style-type: none"> > Windblow presents a risk to the retention of crops as CCF coupes, as evidenced at top Hallyburton hill. | <ul style="list-style-type: none"> > Existing suitable crops will be managed under CCF. > Sites will be identified for planting of alternative conifer and productive broadleaf crops with longer rotations than Sitka spruce, potentially under CCF management if site conditions allow. |
| Ensure the forest is managed in a sustainable way. | <ul style="list-style-type: none"> > Hallyburton blocks have the potential to support significant areas of CCF management. > Road access is generally good in areas where commercial crop management is desirable. | <ul style="list-style-type: none"> > Some areas of steep ground may present issues to future operations on North Ballo hill. | <ul style="list-style-type: none"> > Harvesting and thinning programmes will take account of mean annual increment. > Felling operations will be designed to minimise impact on soils and watercourses for the benefit of future crops. |
| Improve the wellbeing of the local population through recreational use of the site. | <ul style="list-style-type: none"> > Good quality parking facility and trail network established in Balkello. > Blocks are well situated to attract visitors from Dundee, Coupar Angus and surrounding villages. > Local Enduro cycling event helps promote the forests as a destination for mountain biking. | <ul style="list-style-type: none"> > Anti-social behaviour and fly-tipping is an issue in most blocks. > Issues with dog mess caused by large numbers of 'professional' dog walkers in Balkello. > Some waymarked trails in Balkello are un-made surfaces which tend to become wet and muddy. > Issues surrounding safety and liability of rock climbers in Hallyburton quarry. > Proliferation of unauthorised MTB routes conflicts with safety of other forest users. | <ul style="list-style-type: none"> > Current provision of way-marked trails and parking facilities will be maintained. > New fencing and signage will be erected around Hallyburton quarry. > Install lockable gate at entrance to informal carpark in North Ballo to prevent fly-tipping. |
| Produce high quality timber crops and support specialist timber markets and local sawmills. | <ul style="list-style-type: none"> > Potential to produce high quality broadleaf sawlogs in Oakwood for bespoke joinery and other niche markets. > Fertile soils lend themselves to production of alternative conifer species such as Douglas fir. | <ul style="list-style-type: none"> > Disease risk from DNB could reduce potential returns in pine crops. | <ul style="list-style-type: none"> > Oakwood will be assessed for the potential to produce niche hardwood crops in future. > Suitable crops to be retained beyond age of max MAI, suitably thinned to promote high log content. |
| Manage sites for the benefit of local wildlife. | <ul style="list-style-type: none"> > Red squirrel and badger are known to be present. | <ul style="list-style-type: none"> > High recreational use in some areas may be impacting on wildlife populations. | <ul style="list-style-type: none"> > Link areas of broadleaf planting to provide habitat corridors. > Plant areas with native species and species that will provide food source for red squirrel. |
| Plan management operations to promote water quality. | <ul style="list-style-type: none"> > Opportunity to increase riparian habitat and buffering on watercourses through scheduled felling/thinning operations. | <ul style="list-style-type: none"> > Water quality a key issue for neighbouring fishing lochs; especially Lairds Loch which has additional SSSI status. | <ul style="list-style-type: none"> > Current Forestry and Water Guidelines will be adhered to at all times. > Create suitable buffers of broadleaf planting along riparian corridors in restock operations. |
| Ensure private water supplies are protected. | <ul style="list-style-type: none"> > Guidance in place for managing private water supplies. | <ul style="list-style-type: none"> > Likely operations in the vicinity of identified water supplies in Hallyburton during the plan period. | <ul style="list-style-type: none"> > Identify water supplies and follow current guidance to protect them during management operations. |

| Objective | Opportunity | Constraint | Concept |
|--|--|---|--|
| Prevent incursion of dispersed seed into neighbouring SSSI sites. | > Opportunity to increase planting of more diverse species with lower propensity to disperse seed in vicinity of SSSI sites. | > Access may be an issue for felling/restocking in some of these areas. > Decisions to fell certain crops before reaching seed bearing age may affect sequencing throughout the block. | > Crops within the vicinity of SSSI sites that have the propensity to seed vigorously will be identified and scheduled for felling to prevent future seed production. > SSSI buffer zones will be restocked with mixtures of suitable native species. |
| Plan coupes and restock areas to minimise the effects of future windblow incidents. | > Opportunity to redesign the face and SW edge of Hallyburton, and choose species that are robust and windfirm. | > Mature larch and Scot's pine already suffering windblow in Hallyburton. | > Assess felling priorities based on likelihood of failure in the next 5-10 years. > Plan rotation length based on terminal height of crops. > Design in network of rides to provide windfirm options for future felling coupes. |

6.2 Analysis Zone 1 - Hallyburton

6.2.1 Hallyburton zone specific issues

- North West faces of Hallyburton and North Ballo are very visible from A926 Blairgowrie to Alyth road, A94 Coupar Angus to Forfar road and A923 Blairgowrie to Dundee road as well as lots of minor roads.
- Both these faces are predominantly Larch. They are well roaded but N Ballo road is poor.
- North Ballo has steep ground over 35 degrees on that face too
- Hallyburton has a disused quarry that has a rotten fence above the faces. The quarry is well used by climbers.
- There are private water supplies running through the Larch in Hallyburton
- The Larch and pine on the NW face has wind blow working its way through.
- The burn running SW-NE has large areas of open space.
- The SSSI round Ledcreeff Loch has Sitka spruce regenerating in it from FLS land.
- Deer control is hampered by lack of adequate fencing.

6.2.2 Hallyburton zone specific objectives

- Ensure operations take into account site visibility from key viewpoints.
- Plan for possible *P. ramorum* infection in larch.
- Plan operations to account for steep ground in North Ballo.
- Ensure watercourses, lochs and ponds are protected.
- Manage Oakwood as a priority PAWS site.
- Consider safety issues relating to quarry sites.

North Ballo Hill from minor road junction at Tukins Wood



6.2.3 Hallyburton Zone Analysis

| Objective | Opportunity | Constraint | Concept |
|--|--|--|--|
| Ensure operations take into account site visibility from key viewpoints. | > Variety of windfirm edges give options for future coupe shapes. > Use of CCF possible to maintain canopy cover. | > Possibility of <i>P. ramorum</i> in larch on face may dictate unsympathetic felling coupes. | > Plan shape and scale of felling coupes in sympathy with landform. |
| Plan for possible <i>P. ramorum</i> infection in larch. | > Larch coupes are well roaded. | > Road condition is poor in places and will require upgrading. | > Blocks are outside the core <i>P. ramorum</i> control area so pre-emptive felling of larch is not required unless an outbreak occurs. > Current restock proposals containing larch will be substituted with an alternative species. |
| Plan operations to account for steep ground in North Ballo. | > Steep ground areas are well roaded above and below potential coupes. | > Steep ground areas are also highly visually sensitive and popular with recreational users. | > Plan coupe shapes to account for use of winch in felling/thinning operations. |
| Ensure watercourses, lochs and ponds are protected. | > Opportunity for improving riparian habitat. | > Private water supplies run through larch coupes. | > Plan for appropriate buffers around watercourses and the edge of fishing lochs at the point of restock. |
| Manage Oakwood as a priority PAWS site. | > Oak trees are well established and have received past management. | > Ash may be susceptible to dieback. > Soft/wet ground presents challenges to thinning in some areas. > PAWS contains commercial conifers and other non-site native species. | > Last thinned 8 years ago, due next thin 2024. Thin to favour future crop trees with high potential value. > Target non-native species during thinning. > Underplant with NVC W9 site native species. |
| Consider safety issues relating to quarry sites. | > Quarry is a popular climbing spot with numerous fixed routes. | > Fence protecting public at the top of the quarry face needs replaced. | > Ensure adequate signage is in place. > Replace fence around top edge of quarry. |

6.3 Analysis Zone 2 – Balkello Upper

6.3.1 Balkello Upper zone specific Issues

- Overhead power line very dominant across site.
- This zone is visible from A923 Blairgowrie to Dundee road, and B954 from Alyth, Meigle, Newtyle to Dundee.
- Limited maintenance on this area. Covered in gorse and whins. Fire risk. No current management objectives.
- S and W facing slopes predominantly over 35 degrees.
- Limited access. Track along E. Has surface water running across it though, and is quite steep.
- Disused quarry is unfenced, has loose rock and high sides. Also has rare grassland in it.
- There is an adjacent SSSI but any planned forest operations are unlikely to have an impact here.

6.3.2 Balkello Upper Zone Specific Objectives

- Ensure operations take into account site visibility from key viewpoints.
- Plan for future steep ground working in any planting proposals.
- Provide suitable access to carry out operations.
- Consider how the quarry is used by the public and plan accordingly.

Looking up at Balkello Hill



6.3.3 Balkello Upper Zone Analysis

| Objective | Opportunity | Constraint | Concept |
|---|---|--|--|
| Ensure operations take into account site visibility from key viewpoints. | <ul style="list-style-type: none"> > The shape of the site is such that it sits comfortably in the landscape just now. > No felling coupes proposed in next 10 years. | <ul style="list-style-type: none"> > Access and ground conditions in unplanted areas are not conducive to large scale planting in the next 10 years. | <ul style="list-style-type: none"> > No new planting will be undertaken in this zone during the plan period. |
| Plan for future steep ground working in any planting proposals. | <ul style="list-style-type: none"> > Extending native forestry into this area would help meet targets and sit comfortably in the landscape. | <ul style="list-style-type: none"> > Currently covered in invasive gorse and broom. > Fire hazard. > Unsuitable for commercial forestry. | <ul style="list-style-type: none"> > No new planting will be undertaken in this zone during the plan period. |
| Provide suitable access to carry out operations. | <ul style="list-style-type: none"> > There is an established access to the east of the site. > Operational access could double as walking route to hilltop cairn. | <ul style="list-style-type: none"> > Current access requires significant upgrading to be deemed useable for operations. | <ul style="list-style-type: none"> > Reinstate track to west to facilitate access for deer management and stewardship operations. |
| Consider how the quarry is used by the public and plan accordingly. | <ul style="list-style-type: none"> > Quarry contains areas or rare acid grassland. | <ul style="list-style-type: none"> > Quarry has steep sides, loose rock, and is used for wild camping. | <ul style="list-style-type: none"> > Monitor situation with wild camping and if it having a detrimental effect on the grassland areas. |

6.4 Analysis Zone 3 – Balkello Lower

6.4.1 Balkello Lower zone specific issues

- **Planting overdue for thinning.**
- **High visitor numbers: issues with dog mess, and ‘professional’ dog walkers.**
- **Poor surface water drainage especially from field, through car park and East, but generally across the site.**
- **Limited operations access- no formal access. Any operations will have to follow the same route as the paths: will cause damage especially with the wet conditions.**
- **Hard to control deer due to numbers of people. However, dogs drive deer into gorse on high land.**
- **Antisocial behaviour, especially motorbikes.**

6.4.2 Balkello Lower Zone Specific Objectives

- **Maximise the potential of current broadleaf planting.**
- **Control surface water across the site.**
- **Provide any necessary access to carry out forestry operations.**
- **Establish communities of woodland flowering plants to encourage proliferation of pollinator species.**
- **Reduce visual impact of power line across site.**
- **Treat the whole area as an interactive visitor zone, looking for opportunities to create diversity for the visitor experience.**

6.4.3 Balkello Lower Zone Analysis

| Objective | Opportunity | Constraint | Concept |
|---|--|---|--|
| Maximise the potential of current broadleaf planting. | > Planted 1990’s, ready to be thinned. > Woodfuel opportunity close to Dundee for small scale contractor. | > No formal access, ground wet in places, form of BL’s suboptimal for future value. | > Thin the broadleaf coupes to retain a diverse range of species, favouring the best trees for retention. |
| Control surface water across the site. | > Opportunity to create series of wetlands. | > Standing water along lowest part of site. > Wet ground affects public access to waymarked trails. | > Maintain condition of current drainage channels to facilitate movement of water away from the site to the SE. |
| Provide any necessary access to carry out forestry operations. | > Site is small and relatively flat. | > No formal roads. > Wet. > Any operations will have to use path access. | > Anticipate thinning works to be small scale; hand felling with extraction by tractor/trailer. Specify low ground pressure machinery to minimise damage. |
| Establish communities of woodland flowering plants to encourage proliferation of pollinator species. | > Some meadow areas already established. | > High visitor numbers and possible antisocial behaviour may damage seeded areas. | > Identify suitable sites for seeding based on current open space. |
| Reduce visual impact of power line across site. | > Opportunity to plant more native trees and shrubs as landscaping. | > Pylons are very large and dominant. The wayleave is very wide. | > Make use of low-lying flowering shrubs to bring planting closer to power line. |
| Treat the whole area as an interactive visitor zone, looking for opportunities to create diversity for the visitor experience. | > Work has already been done to thin some trees along the path, and open up views at junctions. | > Large mix of same age BL’s tends to have similar character right across this zone. There are few existing features, and many informal paths | > Use thinning contracts to add variety to species by favouring species in different areas, by looking out for unusual forms of trees or groups of trees, by ensuring there is good visibility at junctions and along paths for safety, by keeping views open. |

**Sidlaws LMP
Zone 1 - Hallyburton
Concept**

Author: U320933
Scale @ A3: 1:20,000
Date: 08/07/2021

Legend

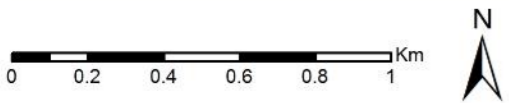
- Watercourses
- Forest Roads

Proposed Coupes

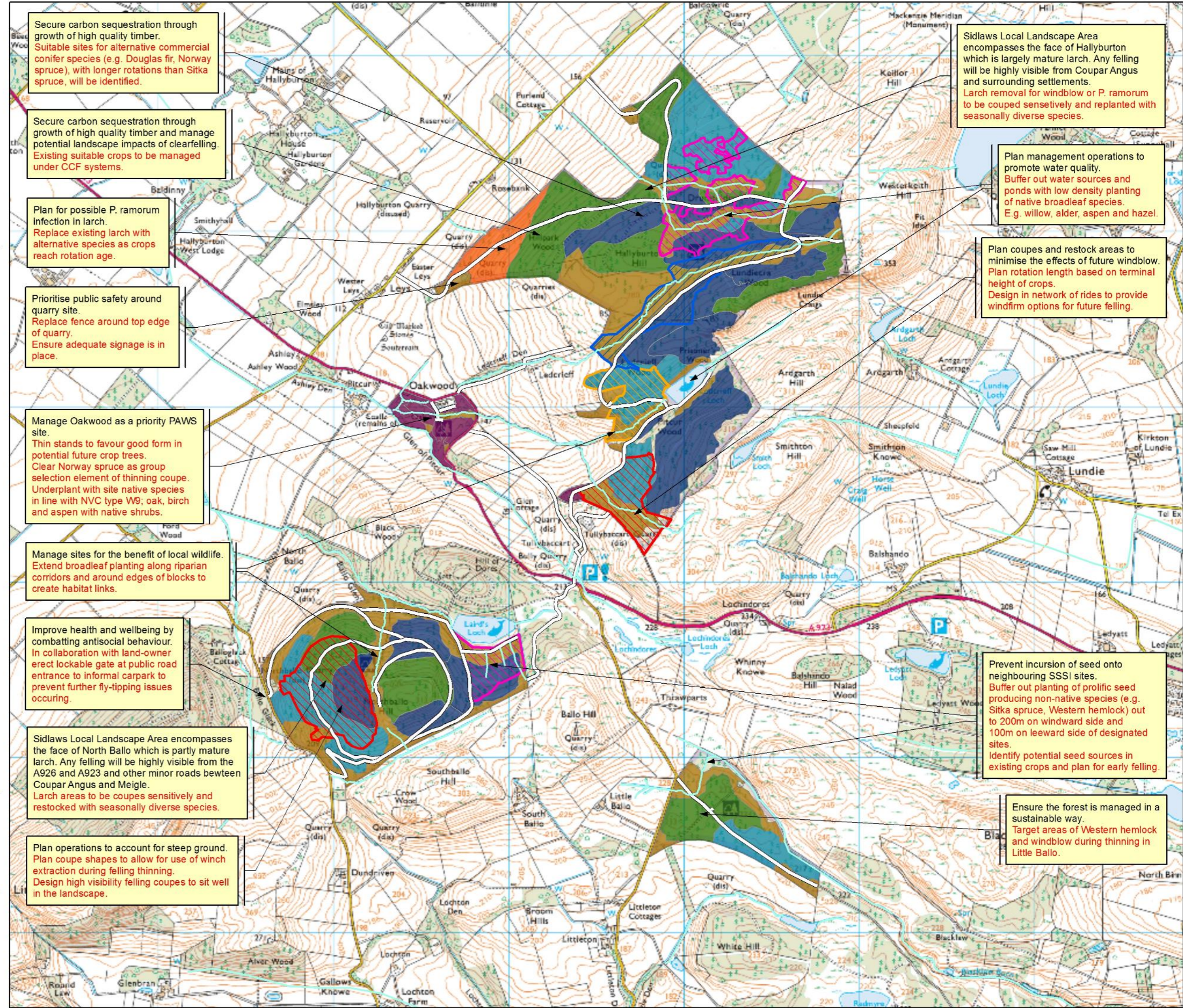
- Felled Awaiting Restock
- Phase 1 Felling (2021-25)
- Phase 2 Felling (2026-30)
- New Woodland Creation

Future Planting

- Sitka spruce
- Scot's pine
- Alternative Conifers
- Mixed Broadleaves
- Oak
- Beech
- Open/Other



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Secure carbon sequestration through growth of high quality timber. Suitable sites for alternative commercial conifer species (e.g. Douglas fir, Norway spruce), with longer rotations than Sitka spruce, will be identified.

Secure carbon sequestration through growth of high quality timber and manage potential landscape impacts of clearfelling. Existing suitable crops to be managed under CCF systems.

Plan for possible *P. ramorum* infection in larch. Replace existing larch with alternative species as crops reach rotation age.

Prioritise public safety around quarry site. Replace fence around top edge of quarry. Ensure adequate signage is in place.

Manage Oakwood as a priority PAWS site. Thin stands to favour good form in potential future crop trees. Clear Norway spruce as group selection element of thinning coupe. Underplant with site native species in line with NVC type W9; oak, birch and aspen with native shrubs.

Manage sites for the benefit of local wildlife. Extend broadleaf planting along riparian corridors and around edges of blocks to create habitat links.

Improve health and wellbeing by combatting antisocial behaviour. In collaboration with land-owner erect lockable gate at public road entrance to informal carpark to prevent further fly-tipping issues occurring.

Sidlaws Local Landscape Area encompasses the face of North Ballo which is partly mature larch. Any felling will be highly visible from the A926 and A923 and other minor roads between Coupar Angus and Meigle. Larch areas to be coupes sensitively and restocked with seasonally diverse species.

Plan operations to account for steep ground. Plan coupe shapes to allow for use of winch extraction during felling thinning. Design high visibility felling coupes to sit well in the landscape.

Sidlaws Local Landscape Area encompasses the face of Hallyburton which is largely mature larch. Any felling will be highly visible from Coupar Angus and surrounding settlements. Larch removal for windblow or *P. ramorum* to be coupes sensitively and replanted with seasonally diverse species.

Plan management operations to promote water quality. Buffer out water sources and ponds with low density planting of native broadleaf species. E.g. willow, alder, aspen and hazel.

Plan coupes and restock areas to minimise the effects of future windblow. Plan rotation length based on terminal height of crops. Design in network of rides to provide windfirm options for future felling.

Prevent incursion of seed onto neighbouring SSSI sites. Buffer out planting of prolific seed producing non-native species (e.g. Sitka spruce, Western hemlock) out to 200m on windward side and 100m on leeward side of designated sites. Identify potential seed sources in existing crops and plan for early felling.

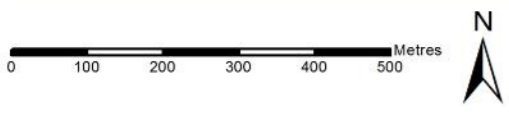
Ensure the forest is managed in a sustainable way. Target areas of Western hemlock and windblow during thinning in Little Ballo.

**Sidlaws LMP
Zones 2 & 3 - Balkello
Concept**

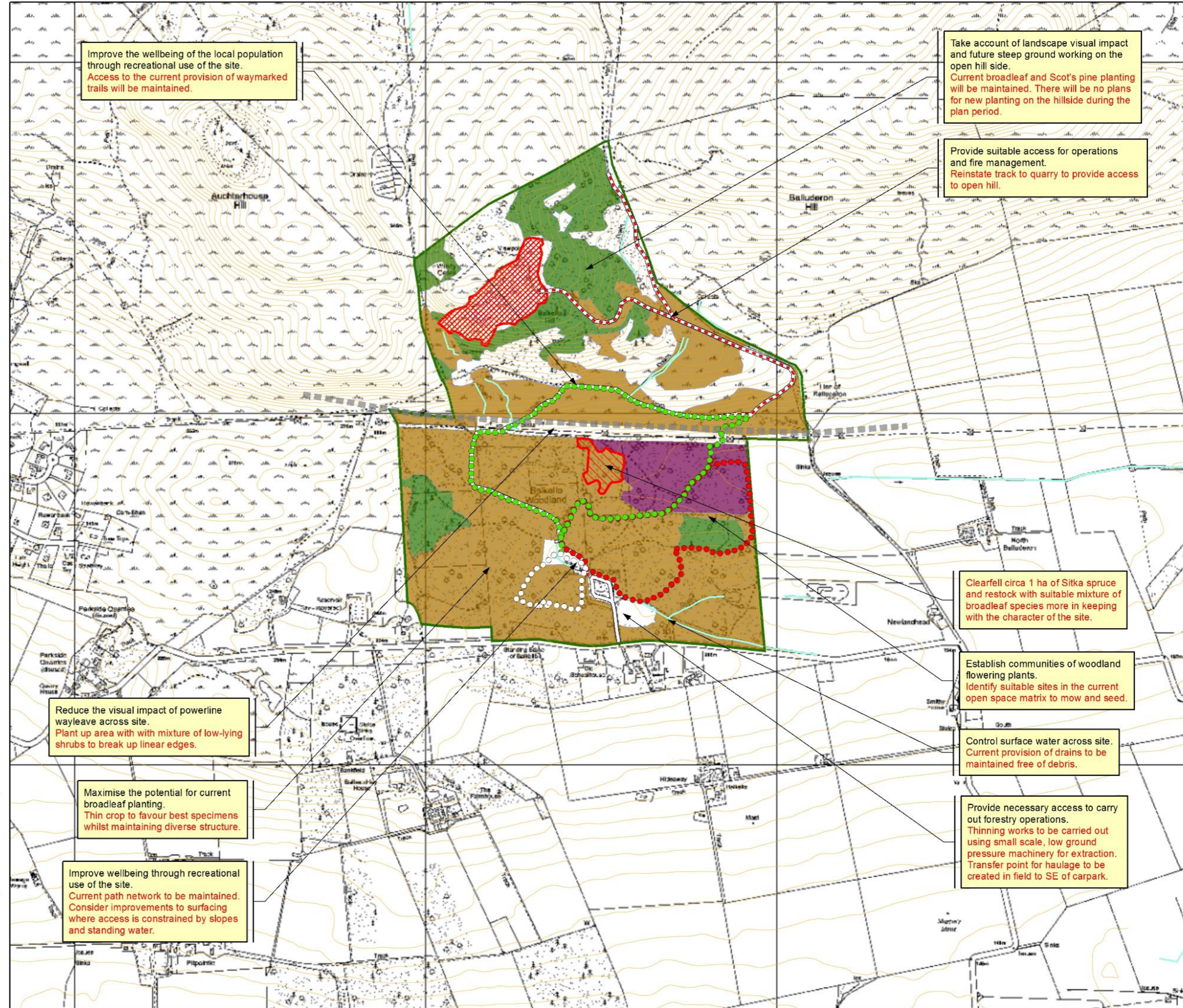
Author: U320933
Scale @ A3: 1:10,000
Date: 04/09/2020

Legend

- Forest Roads
- - - Proposed Access Track
- Watercourses
- Zone boundary
- Waymarked Trails**
- Raven Trail
- Sidlaws View Trail
- Woodland Wander
- Blocks
- ▨ Quarries
- Proposed Coupes**
- ▨ Phase 1 (2021-25)
- Future Species**
- Oak
- Mixed Broadleaves
- Scots Pine
- No Species



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Improve the wellbeing of the local population through recreational use of the site.
Access to the current provision of waymarked trails will be maintained.

Take account of landscape visual impact and future steep ground working on the open hill side.
Current broadleaf and Scot's pine planting will be maintained. There will be no plans for new planting on the hillside during the plan period.

Provide suitable access for operations and fire management.
Reinstate track to quarry to provide access to open hill.

Clearfell circa 1 ha of Sitka spruce and restock with suitable mixture of broadleaf species more in keeping with the character of the site.

Establish communities of woodland flowering plants.
Identify suitable sites in the current open space matrix to mow and seed.

Control surface water across site.
Current provision of drains to be maintained free of debris.

Provide necessary access to carry out forestry operations.
Thinning works to be carried out using small scale, low ground pressure machinery for extraction.
Transfer point for haulage to be created in field to SE of carpark.

Reduce the visual impact of powerline wayleave across site.
Plant up area with with mixture of low-lying shrubs to break up linear edges.

Maximise the potential for current broadleaf planting.
Thin crop to favour best specimens whilst maintaining diverse structure.

Improve wellbeing through recreational use of the site.
Current path network to be maintained.
Consider improvements to surfacing where access is constrained by slopes and standing water.

7. Long Term Land management Plan Proposals

7.1 Management

The Sidlaws Land Management Plan has been designed in accordance with sound silvicultural, legal and environmental principles set out within the UK forestry Standard (UKFS) and UK Woodland Assurance Standard (UKWAS) and in line with the Forestry and Land Scotland National Spatial Overview.

Detail of all operations scheduled for the first phase of this plan can be seen in appendix V.

7.2 Silvicultural Systems

The plan area has been divided into a system of coupes to reflect the varying management strategies being applied. Continuous cover forestry (CCF) practices will be employed on sites where conditions will allow, assuming crops are suitably aged and have received appropriate past management interventions. The precise system of management for each coupe will be tailored to suit the current and subsequent species in the rotation.

Areas not suitable for CCF, by virtue of access constraints or where crops have not received timely thinning interventions, will be managed as clearfell and restock systems. Details of proposed silvicultural systems are included in the management coupes maps in appendix VII.

7.3 Harvesting Proposals

7.3.1 Felling proposals

The plan area contains four phase 1 and two phase 2 coupes scheduled for felling in the period of the LMP. Full details of the individual coupes, including fell year, area and species, can be found in section 2.1.1.

7.3.2 Thinning Proposals

85ha (16.8%) of the plan area is designated as either minimum intervention, long term retention or managed open space and will not receive any thinning during the plan period. The remaining area (419ha) has been divided into thinning coupes based on blocks. Unless stated otherwise thinning will be carried out at marginal intensity with a 6 year return period. As such it will be expected that the entirety of this remaining area will receive at least one thinning intervention during the plan period.

Details of proposed thinning coupes can be found in the thinning coupes maps in appendix VII.

7.3.3 Restock Proposals, Future Habitats and Species

The plan proposes five phase 1 and five phase 2 restock coupes, totalling 99 ha over the next 10 years. Full details of individual coupes, including planting year, area and species, is included in section 2.1.3.

7.3.4 Open Land management

An area of currently open ground in Hallyburton on either side of the Ledcrieff burn will be planted with a low density mixture of native broadleaf species in the vicinity of the water course and Norway spruce on the slopes to either side. The total area is approximately 19 ha. Details of planting prescriptions are included in section 9 – Management Prescriptions.

Although not expected to happen during the period of this LMP, the upper margins of woodland at the south end of Hallyburton will be extended to the boundary fence to create a seamless forest unit with the new planting proposal on the adjacent ground at Smithton Hill.

8. Critical Success Factors

- **No reduction in quality of visitor services offering as a result of management operations.**
- **Timely thinning of all designated coupes based on the stated prescriptions.**
- **Ranger access for wildlife management carried out in a timely fashion.**
- **Wildlife management cull targets met on an annual basis.**
- **Decrease in percentages of non-site native species in Oakwood.**
- **Removal of infected ash in the vicinity of walking routes in Balkello.**
- **Safety precautions around quarry sites replaced.**
- **Minimal visual impacts on the landscape from key viewpoints as a result of management operations.**

9. Management Prescriptions

9.1 Forest Management Types

All operations will be undertaken in line with UKWAS and UKFS requirements and as set out in FLS guidance. Appendix VI includes links to these documents.

9.1.1 Stewardship

Ground Preparation

Choice of ground preparation techniques for restock and new planting will be determined by local site conditions. The aim will always be to minimise ground disturbance while giving the trees the best chance to become established. Techniques will include flat planting, hinge and inverted mounding.

Beat-up

Where necessary restock coupes will be beaten up with appropriate species as indicated in the restock coupes map in appendix VII.

Weed control

Newly established crops will be weeded to reduce competition from ground vegetation until the trees are deemed to be established. Weed control will be carried out in coupe 30030 to promote conditions for natural regeneration.

Respacing

There are currently no coupes at the transition stage of CCF management within the plan area or restock coupes designated for natural re-colonisation. Emerging regen, where desirable, will be respaced when trees reach an appropriate height and will be selected based on species mixtures indicated in the restock coupes map.

9.1.2 Silvicultural System

For the duration of this LMP it is intended to manage 51% of the forest under clearfell rotations. A further 32% (163 ha) will be managed under a variety of continuous cover systems. The precise system will be determined by the current crop and the desired species of regeneration for the next rotation. Some coupes currently designated as clearfell may be suitable for CCF management in the next rotation.

The remaining 17% will be comprised of long term retentions, minimum interventions and managed open space. It should be noted that this figure does not include integral open space within restock coupes.

9.1.3 Restock / Regeneration

Coupes intended for planting will be restocked as soon as appropriate after felling, balancing requirements to protect against expected pine weevil (*Hylobius abietis*) pressure, reduce costs of ground vegetation control and maintain site productive potential. Fallow periods of up to five years may be employed where hot planting is not deemed to be appropriate, with crop fully established five years after that. Planting will aim to achieve 2,700 stems/ha for conifers and 1,600 stems/ha for broadleaves.

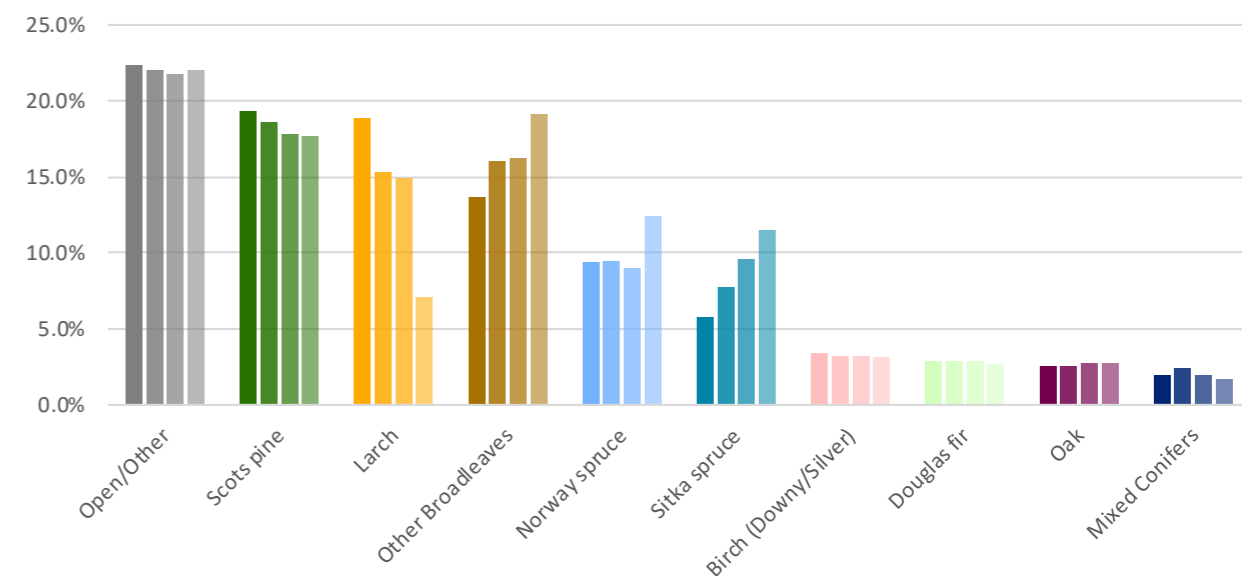
9.2 Future Habitats and Species

During the period covered by this LMP it is the intention to adjust the current species mixture to increase diversity and address potential risks to plant health. Figure 9.2.1 provides full details of species change over the next 20 years. In the period to 2040 it is intended to reduce larch area from 19% to 7% by

bringing mature coupes into the felling programme and removing the species from any proposed restocking. Areas of larch will be replaced with other viable commercial species, namely Norway spruce (increase from 9 to 12%) and Sitka spruce (increase from 6 to 11%) as well as other diverse conifer species such as Pacific silver fir.

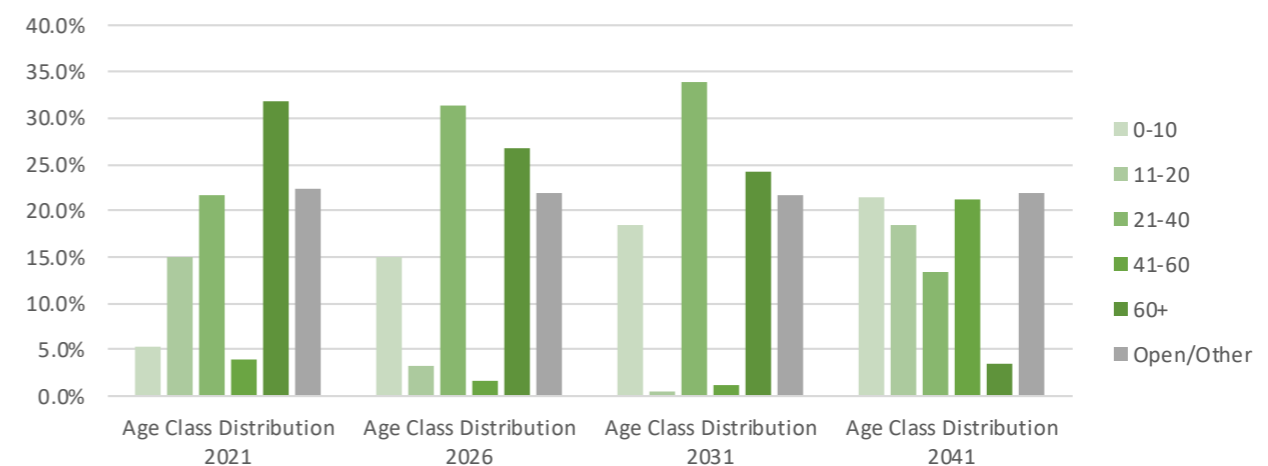
Broadleaf area will also increase due to an expanding programme of riparian planting and additional buffering on neighbouring SSSI sites. When combined, total broadleaf cover will increase from 20% to 25%.

9.2.1 Change in Species Distribution – 2021, 2026, 2031, 2041



The next 20 years will also see a normalisation of age classes across the forest, moving from the current top-heavy age class distribution where 32% of the forest is greater than 60 years old to a more uniform break-down. Change in age class distribution is detailed on figure 9.2.2.

9.2.2 Change in Age Class Distribution



9.3 Operational Access

There will be no requirement for new road construction during the period covered by this LMP. Road upgrades will be required in a timely manner to access thinning and felling coupes totalling approximately 4,550m during the next 10 years. Details of proposed upgrades are included in the management coupes maps in appendix VII.

9.4 Herbivore Management

Deer populations within the blocks will be controlled through culling, currently set at 80 per year. Because there are no plans to erect or maintain fences during the plan period it will be necessary to create shooting opportunities in or near to restock coupes, especially where broadleaves or soft conifer species are being planted. Rides and sightlines will be identified during the work planning stage for restock coupes. There will also be budget available for clearing roadside vegetation to facilitate shooting opportunities and access. Details of proposed rides and deer control infrastructure are included in the herbivore management map in appendix VII.

9.5 Management of Open Ground

See section 7.3.4 for details.

9.6 Public Access

Public access within the blocks will be maintained with the current parking facilities and waymarked trails. Proposed felling works will cause some disruption to wild trails used by mountain bikers in Hallyburton and North Ballo. A further consultation with the mountain biking community is to be held looking at the potential for approved trail construction in the future.

New fencing and warning signage around the two quarry locations in Hallyburton and Balkello will be erected to replace the current fence which is in a poor state of repair.

The track ascending Balkello hill to the quarry and hilltop will have vegetation cleared and some resurfacing works carried out in order to improve access for wildlife rangers and for firefighting on the open hill if required.

Details of visitor zoning and proposed recreation works are included in the recreation maps in appendix VII.

9.7 Heritage Features

There are currently no identified scheduled or unscheduled monuments within the Sidlaws LMP area. The remains of a possible fishing pond associated with nearby Pitcur Castle. Pending further investigation this may be identified as an unscheduled monument. Any operations in the vicinity will need to maintain appropriate safety buffers to protect the remaining features.

9.8 Plant Health

Over the last FDP approval period there was a steady increase in plant health issues which now have to be taken into account for this plan. Currently-known plant health issues for the Sidlaws blocks are *P. ramorum*, *Dothistroma* Needle Blight (*Dothistroma septosporum*), and ash dieback (*Hymenoscyphus fraxineus*).

In addition there are a number of long-standing forest pests and diseases present in the plan area and are dealt with in operational work planning; fomes (*Heterobasidion annosum*), honey fungus (*Armillaria mellea*), great spruce bark beetle (*Dendroctonus micans*), green spruce aphid (*Elatobium abietinum*) and pine weevil (*Hylobius abietis*).

P. ramorum was first found in the UK in 2002, but it was 7 years later when it started to cause large-scale damage, principally in larch crops, and is now widespread in Scotland, England and Wales.

This plan considers the future management of larch in the context of likely *P. ramorum* infection. An exercise in identifying potentially difficult to access larch stands has been undertaken and not highlighted any significant risks. Felling of larch will continue as crops come to rotation age and replanting will look at alternative species.

Dothistroma Needle Blight, first found in the UK in 1954, is the major threat and damaging agent for pine species. Although the disease is quite well researched, and good updated reviews are produced (Bulman *et al.* 2016), it is up to the forest manager to make the final management prescriptions at the forest block and management coupe level through the workplan process prior to management operations. The current research shows that through thinning interventions the likelihood and damage of this particular agent can be limited, and this is something that the manager must take into account when decisions are made in terms of the future of the pine components in these blocks.

Ash dieback was first found in the UK in 2012 and since then the disease has spread over much of the UK. It can kill young trees quickly, while older tree can usually resist the stress for a longer period of time but usually the extended exposure allows another disease agent or ash dieback itself eventually kills the tree.

Ash is not a major component in the Sidlaws LMP as a whole but does form a significant feature of the Oakwood and Balkello blocks. It is native broadleaf so is important to some PAWS areas and contributes to autumn colours. Infected ash in the vicinity of public trails will be managed under the framework for dangerous trees, otherwise infected trees will be left as a deadwood source to benefit the environment. Ash will be excluded from planted stock and replaced with site appropriate broadleaves.

Appendix I – Land Management Plan Consultation record

I/1.0 Record of statutory consultation

| Statutory Consultee | Date Contacted | Date response received | Issues raised | Forest District response |
|-------------------------|----------------|------------------------|---|---|
| SEPA | 15/08/2019 | 16/08/2019 | For all development of this type we ask that UK Forest Standard is adhered to and that proposals ensure compliance with The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR). | All land management plans produced by FLS are required to be compliant with UKFS and Forestry and Water guidelines. |
| HES | 15/08/2019 | 21/08/2019 | We note that there are no scheduled monuments, category A-listed buildings or Inventory gardens and designed landscapes within the boundary of the proposed land management plan and therefore we have no locus regarding this consultation. | No response required. |
| SNH | 15/08/2019 | No response received | | |
| RSPB | 15/08/2019 | 18/08/2019 | RSPB Scotland has no comments to make in relation to any priority species that may be affected by the plan. | No response required. |
| Scottish Water | 15/08/2019 | No response received | | |
| Kettins Comm. Council | 15/08/2019 | No response received | | |
| Neighbour | 21/08/2019 | No response received | | |
| Neighbour | 21/08/2019 | No response received | | |
| Angus Council | 15/08/2019 | 26/09/2019 | Balkello - In addition to the core path route, we have records of two further public rights of way within the landholding. Hallyburton - I am aware of a number of access points into the forest that are currently in use by the public, or where there may be a desire to take access. | Additional claimed public rights of way have been identified on the recreation map in appendix VII. Additional public access points have been identified on the recreation map in appendix VII. Management of public access is described in section 9.6. |
| Perth & Kinross Council | 15/08/2019 | 02/09/2019 | [We] have checked the maps and they recognise all key features and issues in relation to access and biodiversity. The antiquity matches our mapping system and I have no further comments to add. For information, we hold species records of osprey, badger, common frog, palmate newt and red squirrel in Hallyburton Hill. We have records of adder, badger, red squirrel, common toad and frog in North Ballo Hill. No live planning applications are being considered in the vicinity. | Species records have been noted. Checks are routinely carried out prior to any forest operations commencing. |
| Neighbour | 21/08/2019 | No response received | | |
| Neighbour | 21/08/2019 | No response received | | |
| Neighbour | 21/08/2019 | No response received | | |

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| Statutory Consultee | Date Contacted | Date response received | Issues raised | Forest District response |
|---|----------------|------------------------|--|--------------------------|
| Neighbour | 21/08/2019 | No response received | | |
| Auchterhouse Community Council | 21/08/2019 | No response received | | |
| Auchterhouse Community Council | 21/08/2019 | No response received | | |
| Neighbour | 21/08/2019 | 20/09/2019 | <p>Since the summer of 2018, when RL visited us at [home address] and put up the signage for reporting illegal motor bikers and drivers at Hallyburton Wood entrance near our cottage, the problem with motor bikers using the wood has decreased considerably.</p> <p>The large layby at the entrance to Hallyburton Wood near our house tends to collect a fair amount of rubbish - bottles, cans, crisp bags etc. Every few weeks we pick up all the litter from the layby and the nearby verges, and will continue to do so in future.</p> | No response required. |
| Neighbour | 21/08/2019 | No response received | | |
| Gatehouse Nursery | 21/08/2019 | No response received | | |
| Neighbour | 21/08/2019 | No response received | | |
| Neighbour | 21/08/2019 | No response received | | |
| Scottish Endurance Riding Club Tayside Branch | 21/08/2019 | No response received | | |
| Neighbour | 21/08/2019 | No response received | | |
| Neighbour | 21/08/2019 | No response received | | |
| Neighbour | 21/08/2019 | No response received | | |

| Statutory Consultee | Date Contacted | Date response received | Issues raised | Forest District response |
|----------------------------------|----------------|------------------------|--|---|
| Scottish Badgers | 21/08/2019 | 22/08/2019 | We do have a badger interest in the area, and setts have generally been well protected over the past 20 years or so I've been active around here. There were always two setts active, one at Drumsuldry Wood, at approx. NO 272 383, but this seemed to become disused after the coupe was felled some years ago. The other sett, which we name Lundie Craggs, is at NO 271 376, and has grown over years, and was about 150 m. long when I last saw it, with 30-40 open and used entrances. To the west, there was a sett on North Ballo Hill, but this became disused, at about NO 252 355. Not in your land, but nearby, on Hill of Dores, we found several small setts on top of the ridge some 3 years ago or so, before felling. | The locations of setts are recorded in our environmental constraints database and taken into account when planning all management operations. |
| Neighbour | 21/08/2019 | No response received | | |
| Ledcrieff Fishery | 21/08/2019 | No response received | | |
| Neighbour | 21/08/2019 | No response received | | |
| Ledcrieff Loch | 21/08/2019 | No response received | | |
| Hallyburton Estate | 18/08/2019 | No response received | | |
| Coupar Angus Cycle Hub | 18/08/2019 | 18/08/2019 | <p>The MTB race is spread between Hallyburton and Ballo. (More so on Ballo just now but Hally Burton is such a fantastic spot for less experienced riders/racers and kids.</p> <p>The Fly tipping has continuously been cleared up as best possible by the Cycling Hub and its volunteers (Local Mountain bikers).</p> <p>Ballo I would say is more of a national attraction than just a local scene. Every weekend the small bottom carpark seems to be very busy and locals also say how busy it has been through the summer. (Pros and cons but shows how popular it is becoming).</p> <p>From local knowledge all 3 car parks are used by cyclists on a weekly basis.</p> | These points have been taken into account. Use of the forest by local groups is a key consideration in operational planning. |
| Neighbour | 18/08/2019 | No response received | | |
| Auchterhouse Woodland User Group | 21/08/2019 | No response received | | |
| Auchterhouse Woodland User Group | 21/08/2019 | No response received | | |

| Statutory Consultee | Date Contacted | Date response received | Issues raised | Forest District response |
|---|----------------|------------------------|--|---|
| North Balluderon & Balkello Farms | 21/08/2019 | No response received | | |
| Auchterhouse Community Woodland Action Group | 18/08/2019 | No response received | | |
| Glamis Estate | 21/08/2019 | No response received | | |
| Scottish Endurance Riding Club (SERC) | 21/08/2019 | No response received | | |
| Member of Public | | 13/04/2020 | I would just like to be assured that horse rider access is being considered and provided for in the Sidlaw land management plan. | We aim to manage the land in line with the Scottish Outdoor Access Code. Where there is a need for equestrian access, on replacement of infrastructure we will look to make this equestrian accessible. |
| Lundie, Muirhead and Birkhill Community Council | 21/08/2019 | No response received | | |

I/1.1 Record of public drop-in session

No public drop-in session was conducted in the consultation stage of this LMP. Instead, members of the public were encouraged to contribute through the planning pages of the FLS website where details of the current plan and additional information were available. Responses received from members of the public have been included in section I/1.0 – Record of Statutory Consultation.

Appendix II - Supporting Information

II/1.0 The Existing Forestry and Land Holding

II/1.1 History of the Land Holding

Hallyburton, Oakwood and North Ballo were all acquired in 1948 and planted shortly after in the early 1950's. Little Ballo was added to the land holding shortly after in 1956. The majority of the forest cover still consists of these first rotation crops.

Balkello was planted with a diverse variety of broadleaf species in the early 1990's as a community woodland under private ownership. FLS (then FES) acquired the woodland in 2009 for the sum of £1.

The previous plan for the Sidlaws was last approved on 26th March 2003 and was set to expire in 2013. The plan was granted a 5 year extension to allow for completion, extending the approval period to 26th March 2018. During the period since the last approval the land area covered by the plan has undergone some changes; Dronley was sold under a Community Asset Transfer Scheme (CATS) and Balkello was added. Previous plan reference: T/H&D/02-218.



Hallyburton and North Ballo from Lundie Crags

II/2.0 Analysis of the Previous Plan

II/2.0.1 Aims of Previous Plan and Objectives

| Objective | Assessment of objective during plan period |
|--|--|
| Reduce coupe size to increase age and height diversity. | Partial success - Current clearfell coupes range in size up to 27ha, averaging 7.9ha. Some of the proposed coupes would be considered large in the scale of the forest and surrounding landscape. |
| Convert 'core' of forest blocks to CCF management. | Partial success – Currently 55% of the woodland is managed under CCF prescriptions. Ongoing work is required to continue the transformation process. |
| Maintain current diverse species mixture. | Success – Species mix is varied, containing large proportions of Scots pine, larch and broadleaves. The acquisition of Balkello will have played a significant part in diversifying the composition. |
| Protect heritage features. | Unquantifiable – According to FLS and HES databases there are no scheduled or unscheduled monuments within the forest. This may have changed since the last plan was written or the objective may have been a generic goal copied from another plan. |
| Make improvements to path network in North Ballo if budget allows. | Unsuccessful – No path upgrades have been undertaken since the previous plan was written. It is unlikely that this objective will be carried forward in the new LMP. |
| Adhere to forestry and water guidance | Success – No water related incidents noted since the previous plan approval. |
| Maintain safety buffers on powerline wayleaves. | Success – Wayleaves have been maintained, however, there may be opportunities to reduce their impact on the landscape. |
| Thin Oakwood for production of high quality timber. | Partial success – Ongoing objective. |
| Thin Little Ballo for future timber quality and open space. | Partial success – Last thinned 2007. Will require attention early in new plan. |

During the lifespan of the previous plan significant changes have been made to the land holding covered by this LMP; the recently purchased Balkello community woodland was amended into the plan in June 2012, and Dronley wood was successfully transferred into community ownership under a CAT (Community Asset Transfer) scheme in 2019. This means that the ability to quantify the success of some of the objectives has been difficult.

The primary objectives of the previous plan (items 1-3 in the above table) have largely been addressed but require ongoing action for them to be successfully achieved. The objectives of restructuring coupe size and conversion to CCF will be carried forward to the new plan. The aim of maintaining species diversity should be retained as an ongoing concern but does not require to be addressed as a specific objective.

II/2.0.2 How previous plan relates to today's objectives

The majority of objectives laid out in the previous plan still remain relevant. Unsuccessful or partially completed items have been updated and brought forward in the new plan.

II/3.0 Background Information

II/3.0.1 Physical Site Factors

Geology, Soils and Landform

Soils in Hallyburton are predominantly brown earth or upland brown earth with some surface water gleys present in the wetter areas. In Balkello the soils are brown earths up the break of slope with podzols present where the ground is steeper. These podzolic soils are likely to be shallow and there are significant areas of bare rock and scree at higher elevations.

The underlying geology is predominantly sandstone with volcanic basalt intruding beneath parts of Hallyburton, Oakwood and North Ballo.

Hydrology

Three small burns drain to the south west from Hallyburton, one of which has been dammed to form Ledcrieff loch, a popular local fishing pond which is within the confines of the forest but not under FLS ownership. These flow down and through Oakwood, forming a confluence on the west side of the block. A further two small burns run to the north west into a field drain. North Ballo features a single, small watercourse that drains to the north where it meets the outflow of Laird's loch; another fishing pond adjacent to the forest boundary. Little Ballo similarly features a single small watercourse that follows the northern boundary of the block.

Balkello is a former agricultural site which has experienced issues with water-logging in the past. A drain directs water towards the south east of the block where there is a small pond.

Climate

The climate of the site is described in Environmental Site Classification (ESC) terminology as 'cool-wet'. The ESC climate values are derived from a range of factors shown below:

- **Elevation: 150-397m**
- **Accumulated Temperature: 1005°C**
- **Moisture Deficit: 62mm**
- **DAMS Score (a measure of windiness and exposure): 13**

II/3.0.2 The Existing Forest

Age, Structure, Species and Potential Yield

The age structure of the forest is relatively uniform with two predominant age classes in the 1950's and 1990's that reflect the dates of the various acquisitions. Species composition is varied, with large proportions of larch, Scot's pine and broadleaves. A large proportion the forests is currently managed under continuous cover forestry (CCF) practices, aiming to maintain canopy cover through natural regeneration.

Figures 1-3 show the full breakdown of age structure, species and land use respectively.

Good soil conditions and relatively low exposure show the potential of these blocks to produce high yielding crops.

Fig 1. Current Age Structure

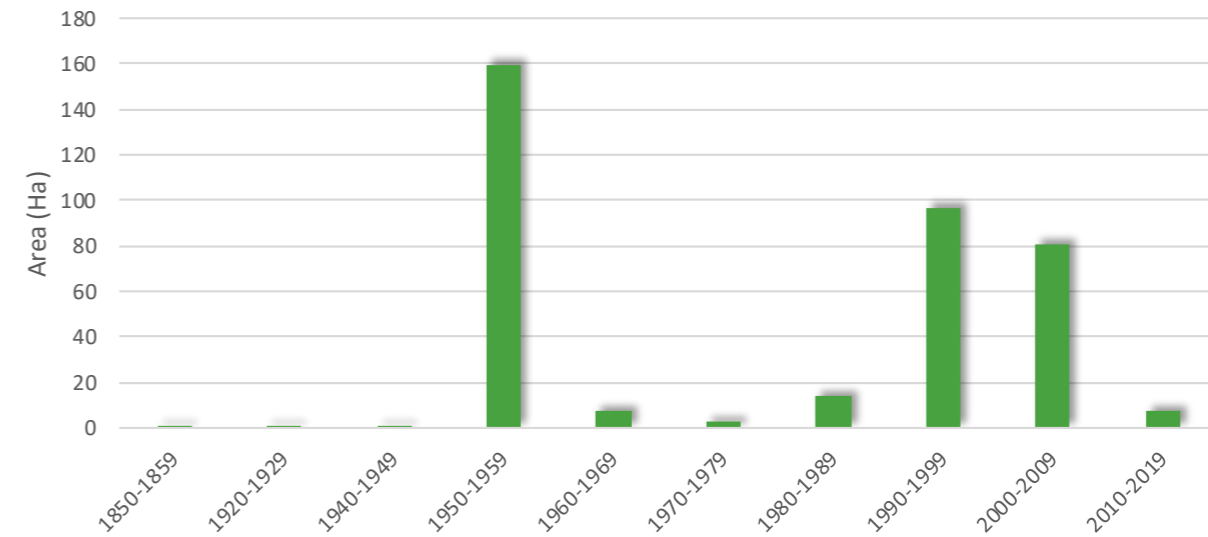


Fig 2. Species Composition

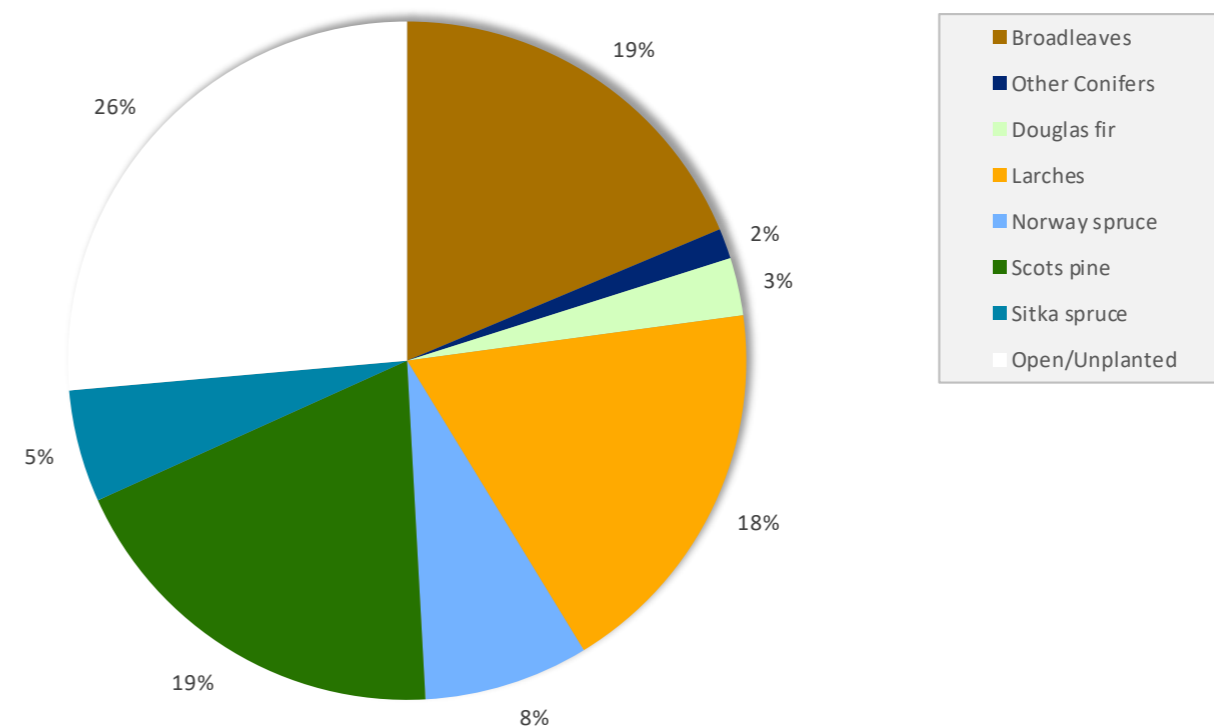
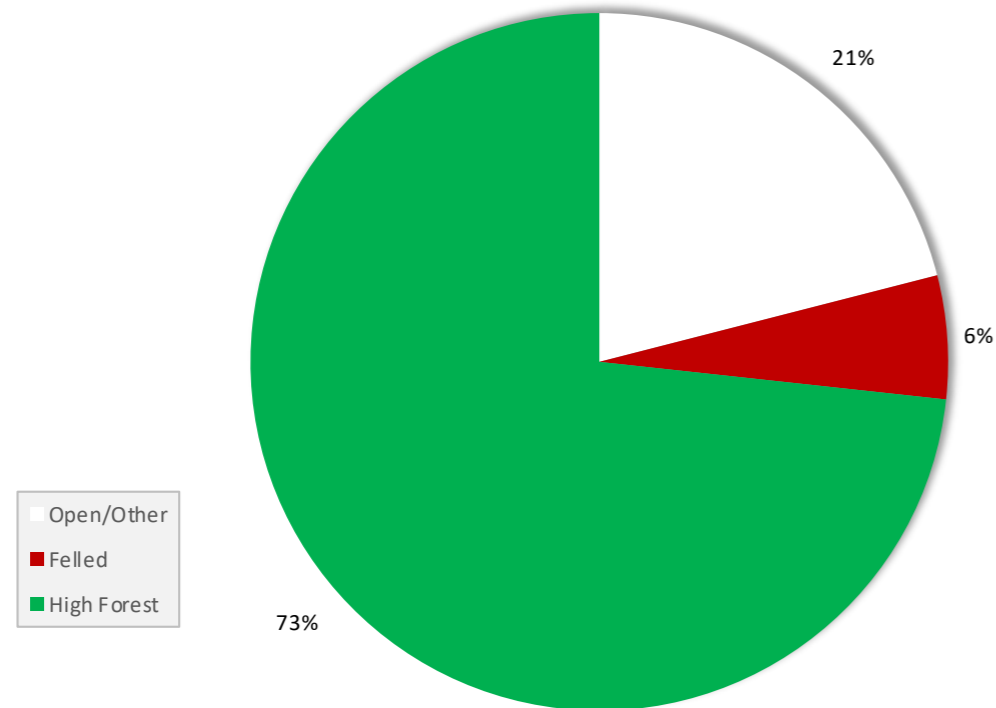


FIG 3. LAND USE



Access

The Hallyburton blocks are well roaded and have a number of potential access points. Upgrades may be required to reach some coupes.

The Timber Transport Forum shows agreed haulage routes serving all the Hallyburton blocks. Balkello sits on a consultation route which may present problems with planned thinning operations.

LISS Potential

LISS is defined as “the use of silvicultural systems whereby the forest canopy is maintained at one or more levels without clearfell of areas over two hectares”.

As mentioned a good proportion of the forest is currently managed under CCF prescriptions and the identified site characteristics are favourable for carrying out repeated thinning interventions and retaining crops beyond their usual rotation length.

Thinning Potential

Much as for the section above, the DAMS score is acceptable for thinning to be undertaken as long as it is commenced at a suitable age.

II/3.0.3 Land Use

The surrounding land use consists of agricultural land, open hill, forestry and dispersed residential properties. There are two commercial fishing ponds adjacent to the land holding.

II/3.0.4 Biodiversity and Environmental Designations

The forests are home to a number of badger setts and populations of red squirrel. There is a large scale box breeding scheme for kestrel underway.

Oakwood is a designated PAWS site.

The forest lies adjacent to 5 Sites of Special Scientific Interest (SSSI):

- **Auchterhouse Hill** – Notified for upland dwarf shrub heath habitat.
- **Craigs of Lundie and Ardgath Loch** – Notified for high biodiversity of basin fen, lowland dry heath and lowland calcareous grassland habitats.
- **Laird’s Loch** – Notified for open water aquatic plant communities and extensive fringing acidic mires.
- **Little Ballo** – The largest example of fen meadow in east Perth & Kinross.
- **Redmyre** – One of the largest and least disturbed areas of poor to mid fen in Perth & Kinross.

II/3.0.5 Landscape

The forest blocks sit amidst the rolling landscape of the Sidlaw hills, typified by numerous small scale peaks. Elevation ranges from 150m up to 397m at the top of Balkello hill. The landform would be described as small to medium scale and complex. Parts of the forest are visible from long distances away; Hallyburton and North Ballo are prominent features to the south east of Coupar Angus and Balkello hill is clearly visible from the outskirts of Dundee.

II/3.0.6 Social Factors

Hallyburton, North Ballo and Balkello are all popular destinations for recreational users who travel from nearby Coupar Angus and Dundee. Popular past-times in the forests include walking, cycling, horse riding and rock climbing. The Lundie crags in Hallyburton and Sydney Scroogie’s cairn atop Balkello hill are both well frequented destinations.

- **Walking** – There are formal parking facilities at Balkello, Hallyburton and North Ballo. Balkello also features three waymarked trails.
- **Dog walking** – Balkello is frequented by a number of commercial dog walkers which created problems with litter and dog mess. There have also been instances of dogs worrying sheep on neighbouring land.
- **Mountain biking** – Hallyburton, North Ballo and Balkello have a number of informal mountain bike trails which are popular with users locally and from further afield. The Coupar Angus Cycling Hub also organises the Ballo Enduro cycling event which runs on trails throughout the forest each June.
- **Rock climbing** – Disused quarries in Hallyburton and Balkello are popular destinations for climbers with a number of permanent bolted routes. Climbing in these quarries is not encouraged by FLS and participants do so at their own risk.
- **Fishing** – Ledcrieff loch in the centre of Hallyburton is a popular fishing spot. The loch is not under FLS ownership, users have access rights through the block to reach it.
- **Antisocial behaviour** – There have been issues in the past with motorcycle and quad bike activity in the blocks. A local awareness campaign has recently helped to reduce this.

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II/3.0.7 Statutory Requirements and Key External Policies

Oakwood, North Ballo, Little Ballo and parts of Hallyburton are within the Sidlaws Local Landscape Area designation. Operations within this area will need to be planned in respect of key local viewpoints.

Appendix III - Tolerance Tables

| | Adjustment to Felling Coupe Boundaries | Timing of Restocking | Change to Species | Windthrow Response |
|--|--|---|--|--|
| FC Approval Not Normally Required | 0.5ha or 5% of coupe – whichever is less | Planting up to 5 seasons after felling (allowing for fallow periods for Hylobius). For natural regeneration up to 10 planting seasons after felling. | Change within species group, e.g. conifers: native broadleaves | |
| Approval by Exchange of Email and Map | 0.5ha to 2.0ha or 10% of coupe – which ever is first | | Greater than 15% species change | Up to 5.0ha – if mainly windblown trees between 5.0ha to 10ha in areas of low sensitivity. |
| Approval by Formal Plan Amendment | Greater than 2.0ha or 10% of coupe | Delay in excess of that described above. | Increased native woodland component. Increase in native broadleaves and open/bog restoration. | Greater than 5.0ha |
| Tree Felling in Exceptional Circumstances | <p>FLS will normally seek to map and identify all planned tree felling in advance through the LMP Process. However there are some circumstances requiring small scale tree felling where this may not be possible and where it may be impractical to apply for separate felling permission due to the risks or impacts of delaying felling.</p> <p>Felling permission is therefore sought for the LMP approval period to cover the following circumstances: Individual, rows or small groups of trees that are impacting on important infrastructure (ie Forest roads, footpaths, access routes (vehicular, cycle, equestrian or pedestrian), Buildings, Utilities and services and drains) either because they are now encroaching on or have been destabilised or made unsafe by wind, physical damage or impede drainage.</p> <p>The maximum volume of felling in exceptional circumstances covered by this approval is 40 cubic metres per Land Management Plan per calendar year.</p> <p>A record of the volume felled in this manner will be maintained and will be considered during the five year LMP review.</p> | | | |

Appendix IV - Land Management Plan Brief

IV/1.0 Previous plan objectives

See appendix II/2.0 – Analysis of previous plan.

IV/1.1 Strategic Influence

The management of National Forest Estate is guided by The Forest Enterprise Scotland Corporate Plan (2017 - 2019), which identifies six key aspirations for the publicly owned forests:

- **Healthy:** achieving good environmental and silvicultural condition in a changing climate;
- **Productive:** providing sustainable economic benefits from the land;
- **Treasured:** as a multi-purpose resource that sustains livelihoods, improves quality of life and offers involvement and enjoyment;
- **Accessible:** local woodlands and national treasures that are well promoted, welcoming and open for all;
- **Cared for:** working with nature, respecting landscape, natural and cultural heritage;
- **Good value:** exemplary, efficient and effective delivery of public benefits.

IV/1.2 Key Issues and Constraints

- High visitor numbers are causing issues with litter and dog waste.
- Planting in Balkello is overdue for thinning.
- Hallyburton and North Ballo highly visible from Coupar Angus.
- Balkello hill also visible from areas north of Dundee.
- Establishment of planting on Balkello hill hampered by invasive gorse and broom.
- Significant areas of mature larch in Hallyburton and North Ballo.
- Numerous adjacent SSSI's.
- Disused quarries in Hallyburton and Balkello are a potential hazard to visitors.
- Poor drainage and road network in Balkello presents issues for management operations.

Appendix V – Schedule of Works 2020-2024

| Coupe ref | Next Intervention Type | Next Intervention Year | Management Description | Feature Length (m) | Area (ha) | Species 1 | Species 1 Area (ha) | Species 1 Area % | Yield Class 1 | Species 2 | Species 2 Area (ha) | Species 2 Area % | Yield Class 2 | Species 3 | Species 3 Area (ha) | Species 3 Area % | Yield Class 3 | Other/ Open Area (ha) | Open Area % |
|-----------|------------------------|------------------------|---|--------------------|-----------|-----------|---------------------|------------------|---------------|-----------|---------------------|------------------|---------------|-----------|---------------------|------------------|---------------|-----------------------|-------------|
| - | Deer Cull | 2020/21 | Contract deer cull - 80/year | | | | | | | | | | | | | | | | |
| - | Ranger Access | 2020/21 | Vegetation clearance of rides for ranger access. | | | | | | | | | | | | | | | | |
| 30021 | Restock | 2020/21 | NS/PSF int. mix with large riparian buffer of native BL adjacent to Lairds loch SSSI. | | 8.28 | NS | 2.27 | 27% | 20 | PSF | 2.27 | 27% | 20 | MB | 2.25 | 27% | 6 | 1.5 | 18% |
| 30031A | Restock | 2020/21 | NS/SS blocky mix with 2:1 int. mix of NS/SP on drier soils. | | 12.77 | NS | 5.1 | 40% | 18 | SS | 4.35 | 34% | 20 | SP | 2.35 | 18% | 10 | 0.97 | 8% |
| 30031B | Restock | 2020/21 | Buffer of native broadleaf sp. Adjacent to water courses and water supplies. | | 8.94 | MB | 5.37 | 60% | 4 | - | - | - | - | - | - | - | - | 3.57 | 40% |
| - | Recreation | 2020/21 | Annual maintenance of rides, Carparks, signage etc. | | | | | | | | | | | | | | | | |
| - | Deer Cull | 2021/22 | Contract deer cull - 80/year | | | | | | | | | | | | | | | | |
| - | Ranger Access | 2021/22 | Vegetation clearance of rides for ranger access. | | | | | | | | | | | | | | | | |
| 30011 | Thinning | 2021/22 | 1st thin expected late P1/early P2 | | 13.38 | HL | 7.06 | 53% | 12 | SP | 1.4 | 10% | 10 | MC | 1.04 | 8% | 14 | 3.88 | 29% |
| 30012 | Thinning | 2021/22 | 1st thinned 2017? next thin due late P1 | | 18.01 | DF | 11.86 | 66% | 18 | EL | 3.6 | 20% | 12 | MC | 2.11 | 12% | 14 | 0.44 | 2% |
| 30014 | Thinning | 2021/22 | 1st thin 2017? next intervention late P1 | | 2.91 | SS | 2.91 | 100% | 20 | - | - | - | - | - | - | - | - | - | - |
| 30015 | Thinning | 2021/22 | Expect 1st thin P1 | | 2.97 | EL | 1.69 | 57% | 12 | NS | 0.85 | 29% | 14 | - | - | - | - | 0.43 | 14% |
| 30017 | Thinning | 2021/22 | Might sneak into the end of P2. Entrance from carpark, potential for CCF? | | 5.81 | CP | 2.4 | 41% | 12 | SP | 1.3 | 22% | 6 | MC | 1.53 | 26% | 18 | 0.58 | 10% |
| 30019 | Thinning | 2021/22 | Next intervention? Potential for CCF? | | 2.23 | JL | 0.90 | 40% | 10 | NS | 0.72 | 32% | 16 | SP | 0.61 | 27% | 6 | - | - |
| 30022 | Thinning | 2021/22 | Thinned 2017? Expect next intervention in P1 | | 2.98 | SS | 1.67 | 56% | 16 | NS | 0.37 | 12% | 12 | MB | 0.62 | 21% | 2 | 0.32 | 11% |
| 30035 | Restock | 2021/22 | Small area to S of Ballo hill marked as felled on SCDB. | | 0.84 | MB | 0.31 | 37% | 6 | SS | 0.3 | 36% | 20 | - | - | - | - | 0.23 | 27% |
| 62002 | Felling | 2021/22 | Combine operation with conifer thinning in coupe 62003 and 62004 | | 1.1 | SS | 0.96 | 87% | 24 | JL | 0.13 | 12% | 12 | - | - | - | - | - | - |

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| Coupe ref | Next Intervention Type | Next Intervention Year | Management Description | Feature Length (m) | Area (ha) | Species 1 | Species 1 Area (ha) | Species 1 Area % | Yield Class 1 | Species 2 | Species 2 Area (ha) | Species 2 Area % | Yield Class 2 | Species 3 | Species 3 Area (ha) | Species 3 Area % | Yield Class 3 | Other/ Open Area (ha) | Open Area % |
|-----------|------------------------|------------------------|--|--------------------|-----------|-----------|---------------------|------------------|---------------|-----------|---------------------|------------------|---------------|-----------|---------------------|------------------|---------------|-----------------------|-------------|
| - | Recreation | 2021/22 | Annual maintenance of rides, Carparks, signage etc. | | | | | | | | | | | | | | | | |
| 30004 | Road Upgrade | 2021/22 | Upgrade access to Hallyburton from public road at NO 2636 3601 to provide access to felling coupe 30004. | 800 | | | | | | | | | | | | | | | |
| 30004 | Felling | 2022/23 | Phase 1 if windblow significant. Otherwise 2/3? | | 16.89 | SS | 5.13 | 31% | 22 | EL/JL/HL | 3.27 | 19% | 10 | MC | 7.84 | 46% | 14 | 0.65 | 4% |
| - | Deer Cull | 2022/23 | Contract deer cull - 80/year | | | | | | | | | | | | | | | | |
| - | Ranger Access | 2022/23 | Vegetation clearance of rides for ranger access. | | | | | | | | | | | | | | | | |
| 30032 | Fencing | 2022/23 | Replace safety fence around quarry in Hallyburton. | 400 | | | | | | | | | | | | | | | |
| 62006 | Fencing | 2022/23 | Replace safety fence around quarry in Balkello. | 1000 | | | | | | | | | | | | | | | |
| - | Recreation | 2022/23 | Annual maintenance of rides, Carparks, signage etc. | | | | | | | | | | | | | | | | |
| - | Deer Cull | 2023/24 | Contract deer cull - 80/year | | | | | | | | | | | | | | | | |
| - | Ranger Access | 2023/24 | Vegetation clearance of rides for ranger access. | | | | | | | | | | | | | | | | |
| 62002 | Restock | 2023/24 | Replant coupe with native BL mixture in line with surrounding vegetation. | | 1.1 | MB | 0.88 | 80% | - | - | - | - | - | - | - | - | - | 0.22 | 20% |
| 30002 | Road Upgrade | 2022/23 | Upgrade access to Ballo Hill from public road at NO 2462 3536 to provide access to felling coupe 30002. | 2900 | | | | | | | | | | | | | | | |
| 30002 | Felling | 2023/24 | Phase 1 hilltop coupe | | 21.94 | JL | 13.32 | 61% | 14 | SP | 6.12 | 28% | 6 | MC | 1.12 | 5% | 16 | 1.38 | 6% |
| 30028 | Restock | 2023/24 | Plant with alternative conifers. | | 3.8 | NS | 3.8 | 100% | 18 | - | - | - | - | - | - | - | - | - | - |
| - | Recreation | 2023/24 | Annual maintenance of rides, Carparks, signage etc. | | | | | | | | | | | | | | | | |
| - | Deer Cull | 2024/25 | Contract deer cull - 80/year | | | | | | | | | | | | | | | | |

Sidlaws

Land Management Plan

| Coupe ref | Next Intervention Type | Next Intervention Year | Management Description | Feature Length (m) | Area (ha) | Species 1 | Species 1 Area (ha) | Species 1 Area % | Yield Class 1 | Species 2 | Species 2 Area (ha) | Species 2 Area % | Yield Class 2 | Species 3 | Species 3 Area (ha) | Species 3 Area % | Yield Class 3 | Other/ Open Area (ha) | Open Area % |
|-----------|------------------------|------------------------|---|--------------------|-----------|-----------|---------------------|------------------|---------------|-----------|---------------------|------------------|---------------|-----------|---------------------|------------------|---------------|-----------------------|-------------|
| - | Ranger Access | 2024/25 | Vegetation clearance of rides for ranger access. | | | | | | | | | | | | | | | | |
| 30033 | Restock | 2024/25 | To be planted with riparian BL. | | 15.41 | MB | 7.04 | 46% | 4 | NS | 1.84 | 12% | 18 | SP | 0.92 | 6% | 10 | 5.61 | 36% |
| 62003 | Thinning | 2024/25 | Scots pine ready for 1st thin. | | 4.03 | SP | 3.34 | 83% | 10 | MB | 0.57 | 14% | 4 | - | - | - | - | 0.12 | 3% |
| 62004 | Thinning | 2024/25 | Mixed conifer/broadleaf stand. | | 1.83 | SS | 0.37 | 20% | 12 | MC | 0.72 | 39% | 16 | MB | 0.33 | 18% | 4 | 0.42 | 23% |
| 62006 | Thinning | 2024/25 | Thin to favour good quality specimens of a diverse range of species and develop views/sightlines from path network. | | 15.76 | SY | 3.82 | 24% | 4 | SS | 0.78 | 5% | 10 | MB | 8.61 | 55% | 4 | 2.55 | 16% |
| 62007 | Thinning | 2024/25 | Thin to favour good quality specimens of a diverse range of species and develop views/sightlines from path network. | | 26.12 | SY | 8.05 | 31% | 8 | AH | 4 | 15% | 6 | MB | 12.37 | 47% | 4 | 1.7 | 7% |
| - | Recreation | 2024/25 | Annual maintenance of rides, Carparks, signage etc. | | | | | | | | | | | | | | | | |

Appendix VI – Links to Policy and Guidance Documents

For further information and documents relating to Scottish forestry policies and guidance please follow the link below:

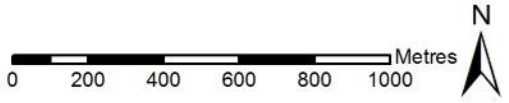
<https://forestryandland.gov.scot/what-we-do/planning/links>

**Sidlaws LMP
Zone 1
Management Coupes**

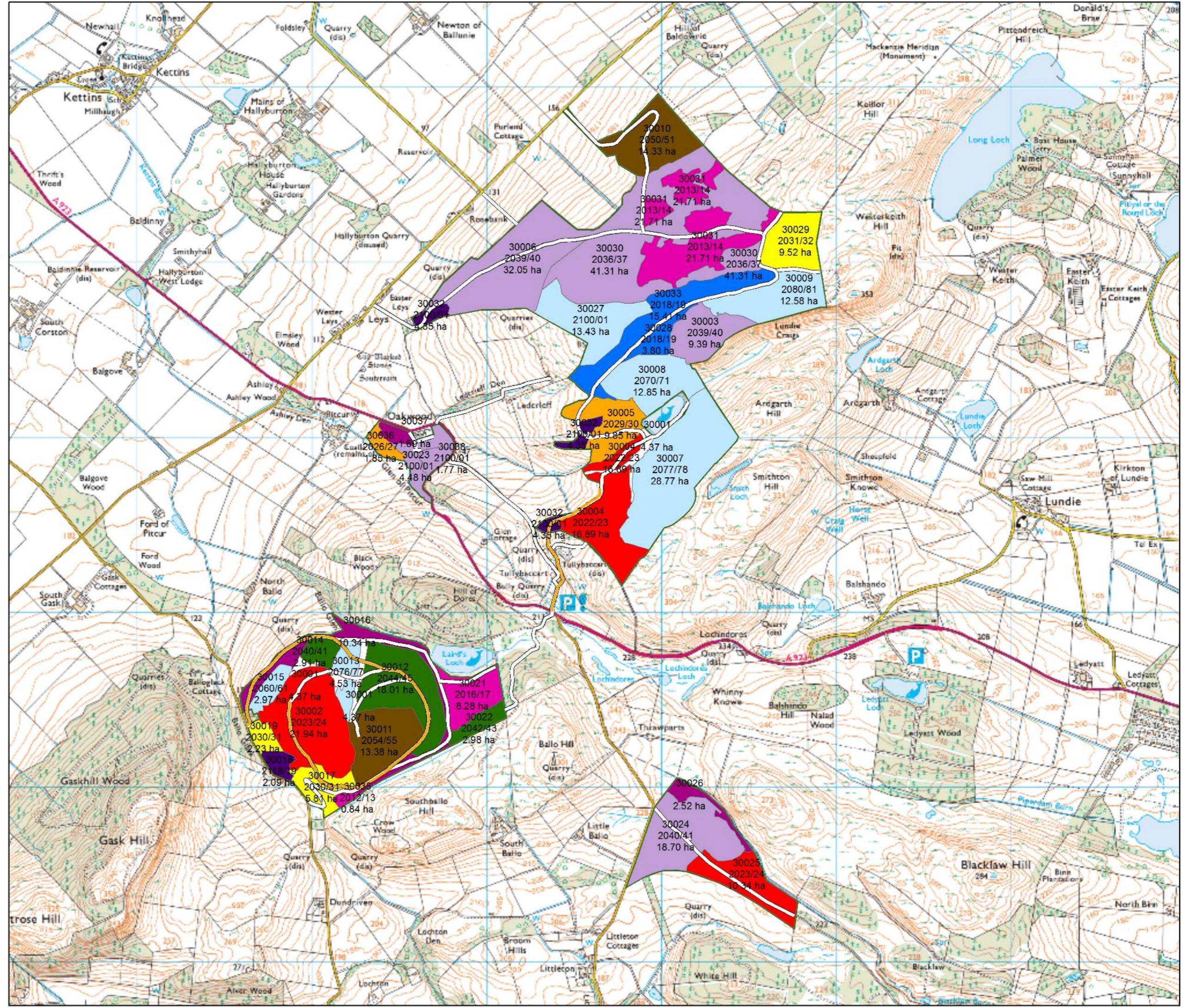
Author: U320933
Scale @ A3: 1:20,000
Date: 08/07/2021

Legend

-  Forest Roads
-  Road upgrade 2021-25
-  Blocks
-  New Woodland Creation
-  Felled or fell year requires review (2011 - 2020)
-  Phase 1 felling (2021 - 2025)
-  Phase 2 felling (2026 - 2030)
-  Phase 3 felling (2031 - 2035)
-  Phase 4 felling (2036 - 2040)
-  Phase 5 felling (2041 - 2045)
-  Phase 6 felling (2046 - 2050)
-  Phase 7 felling (2051 - 2055)
-  After 2055
-  Long Term Retention (Fell after Phase 3)
-  Natural Reserve
-  Minimum Intervention
-  Coppice
-  Low Impact Silviculture
-  Open
-  Missing Data



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Sidlaws LMP
Zone 2 and 3
Management Coupes

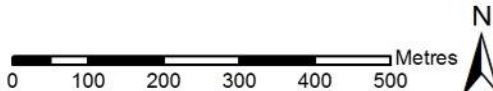
Author: U320933

Scale @ A3: 1:10,000

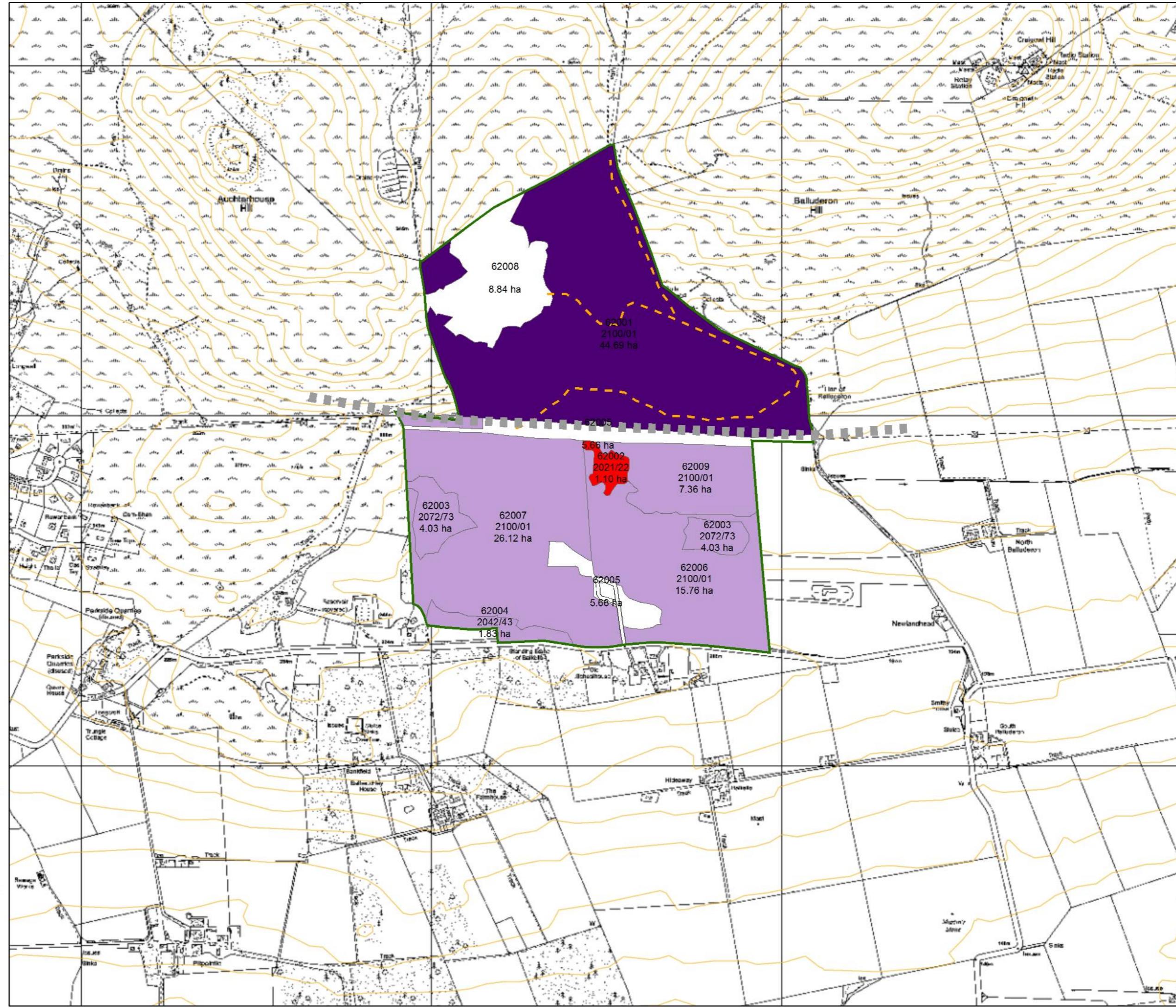
Date: 16/11/2020

Legend

-  Forest Roads
-  Track upgrade 2021-25
-  Zone boundary
-  Blocks
-  Felled or fell year requires review (2011 - 2020)
-  Phase 1 felling (2021 - 2025)
-  Phase 2 felling (2026 - 2030)
-  Phase 3 felling (2031 - 2035)
-  Phase 4 felling (2036 - 2040)
-  Phase 5 felling (2041 - 2045)
-  Phase 6 felling (2046 - 2050)
-  Phase 7 felling (2051 - 2055)
-  After 2055
-  Long Term Retention (Fell after Phase 3)
-  Natural Reserve
-  Minimum Intervention
-  Coppice
-  Low Impact Silviculture
-  Open
-  Missing Data



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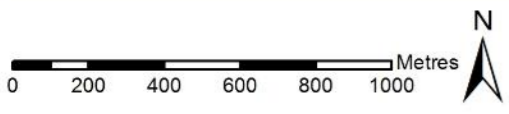
**Sidlaws LMP
Zone 1
Thinning Coupes**

Author: U320933
Scale @ A3: 1:20,000
Date: 12/11/2020

- Legend**
-  Forest Roads
 -  Blocks
 -  Thinning Area

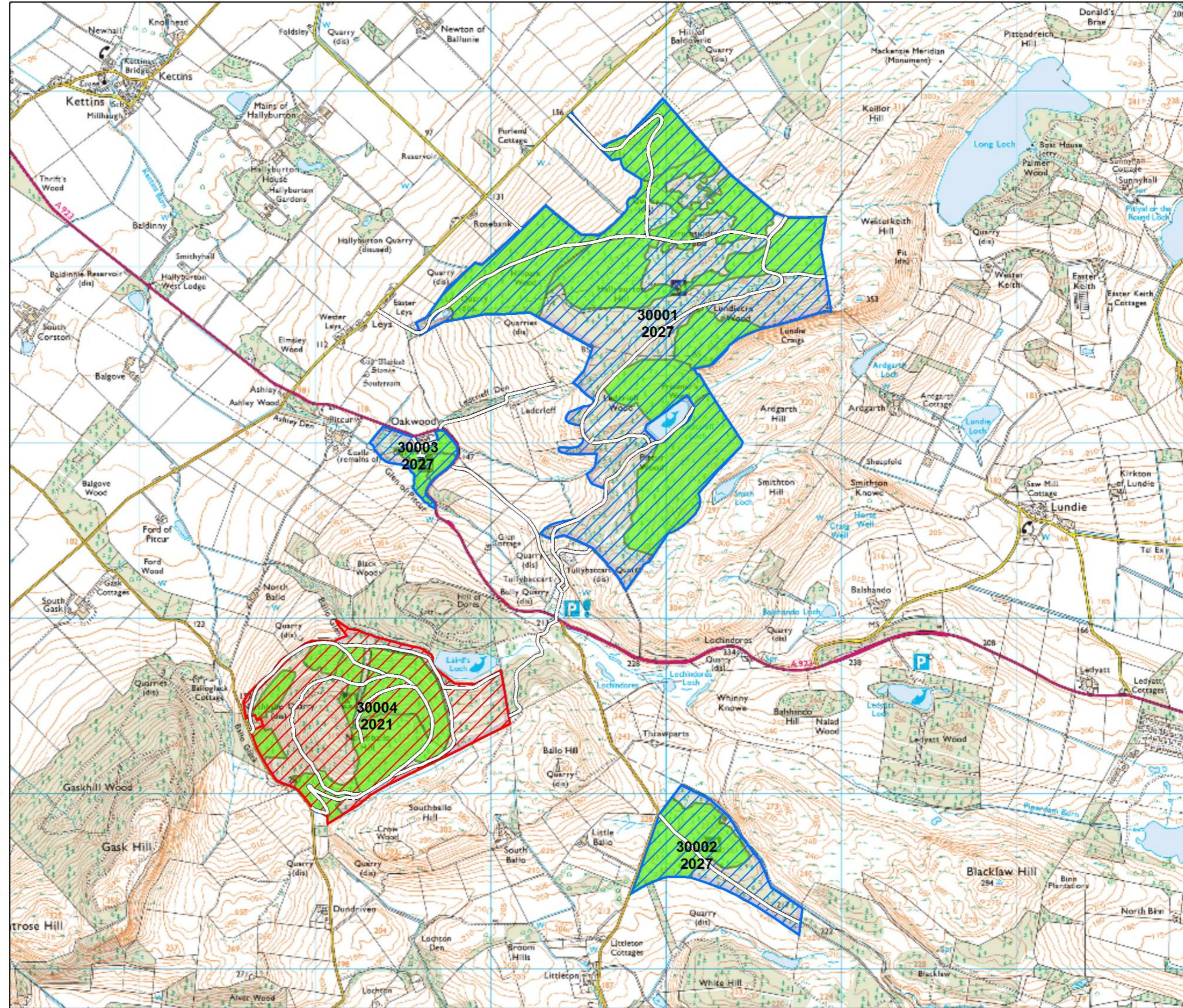
Operational Thinning Coupes

- Next Thin Date**
-  No Thin
 -  2021
 -  2025
 -  2027



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Scotland's National Forest Estate is responsibly managed to the UK Woodland Assurance Standard.



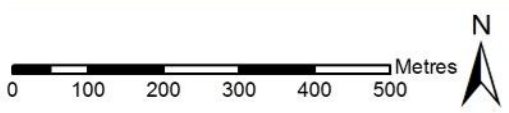
**Sidlaws LMP
Zone 2 and 3
Thinning Coupes**

Author: U320933
Scale @ A3: 1:10,000
Date: 12/11/2020

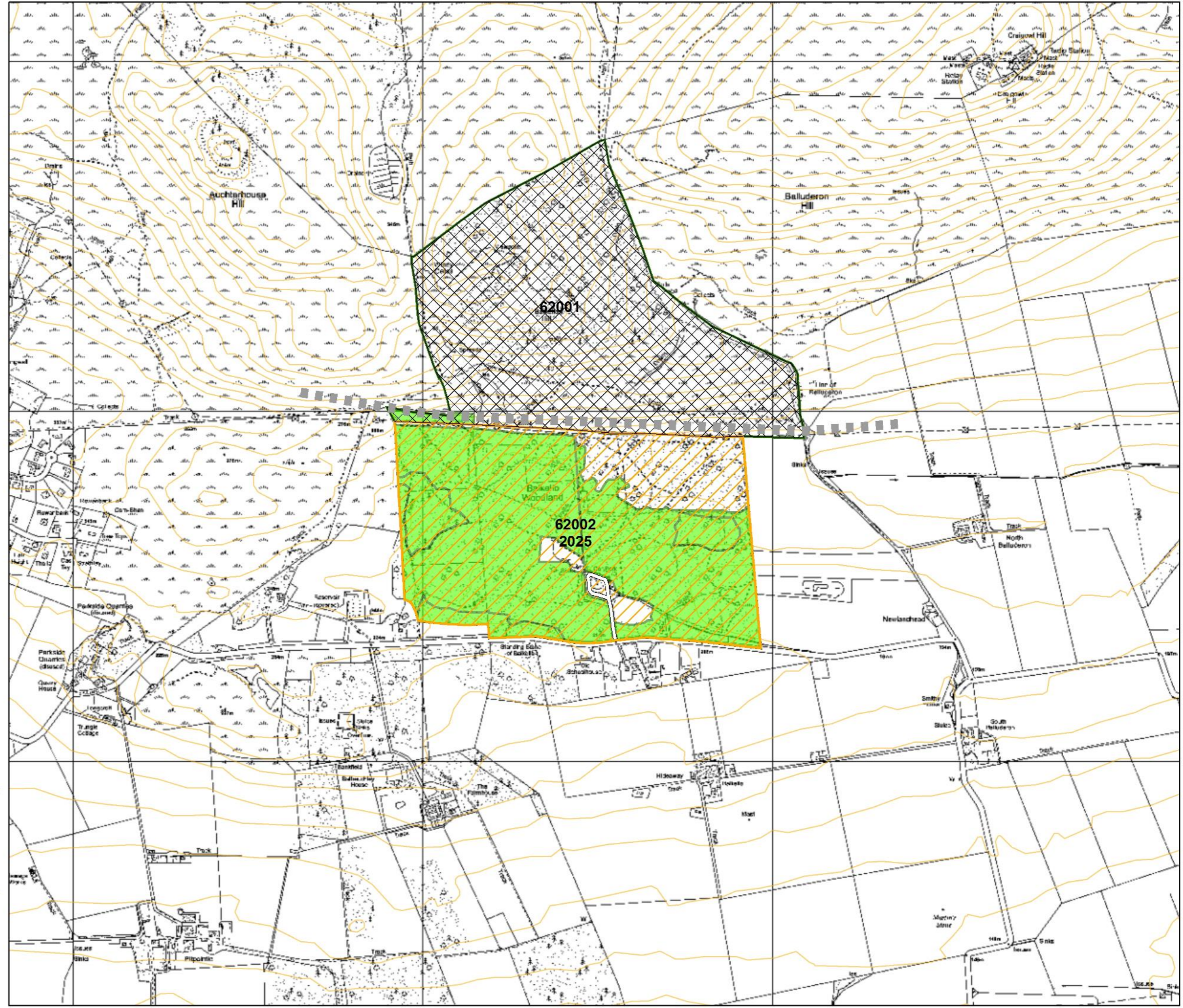
- Legend**
-  Forest Roads
 -  Zone boundary
 -  Blocks
 -  Thinning Area

Operational Thinning Coupes

- Next Thin Date**
-  No Thin
 -  2021
 -  2025
 -  2027



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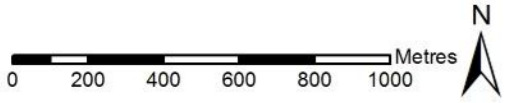


Sidlaws LMP
Zone 1
Future Habitats and Species

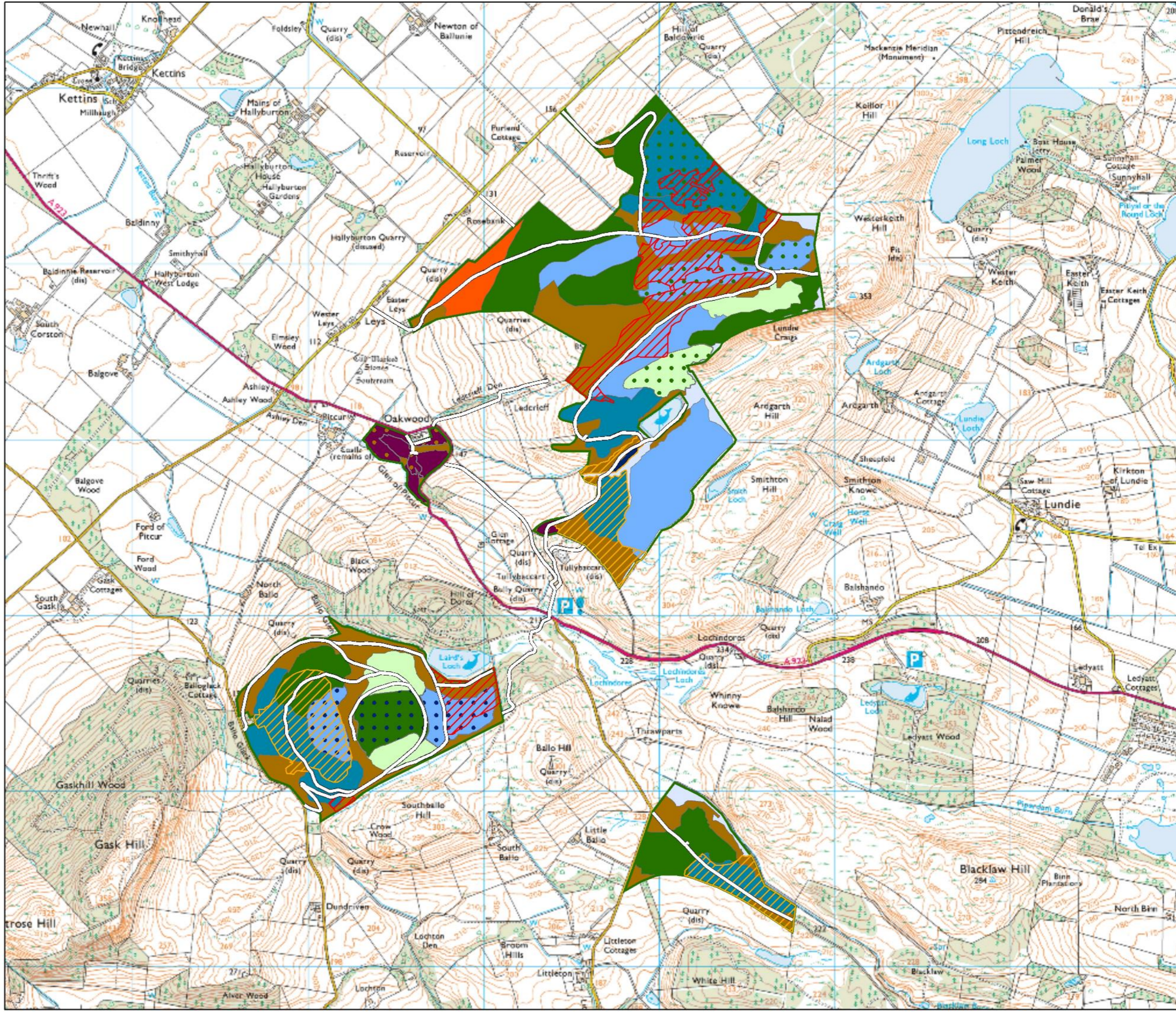
Author: U320933
 Scale @ A3: 1:20,000
 Date: 02/03/2021

Legend

- Forest Roads
- Blocks
- Phase 1 Restock (2021-25)
- Phase 2 Restock (2026-30)
- Sitka spruce (SS)
- Norway spruce (NS)
- Lodgepole pine (LP)
- Scots pine (SP)
- Larch sp (EL/HL/JL)
- Beech (BE)
- Douglas fir (DF)
- Mixed/ other conifers (MC/XC)
- Birch (BI)
- Oak (OK)
- Ash (AH)
- Mixed/ other broadleaves (MB/XB)
- Open land
- Species Mixture: Main colour = Dominant species
 Dots = Secondary species
 Sitka spruce with Birch shown here



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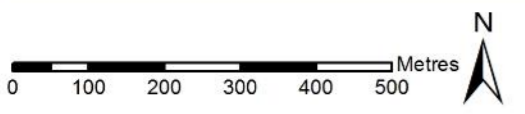


**Sidlaws LMP
Zone 2 and 3
Future Habitats and Species**

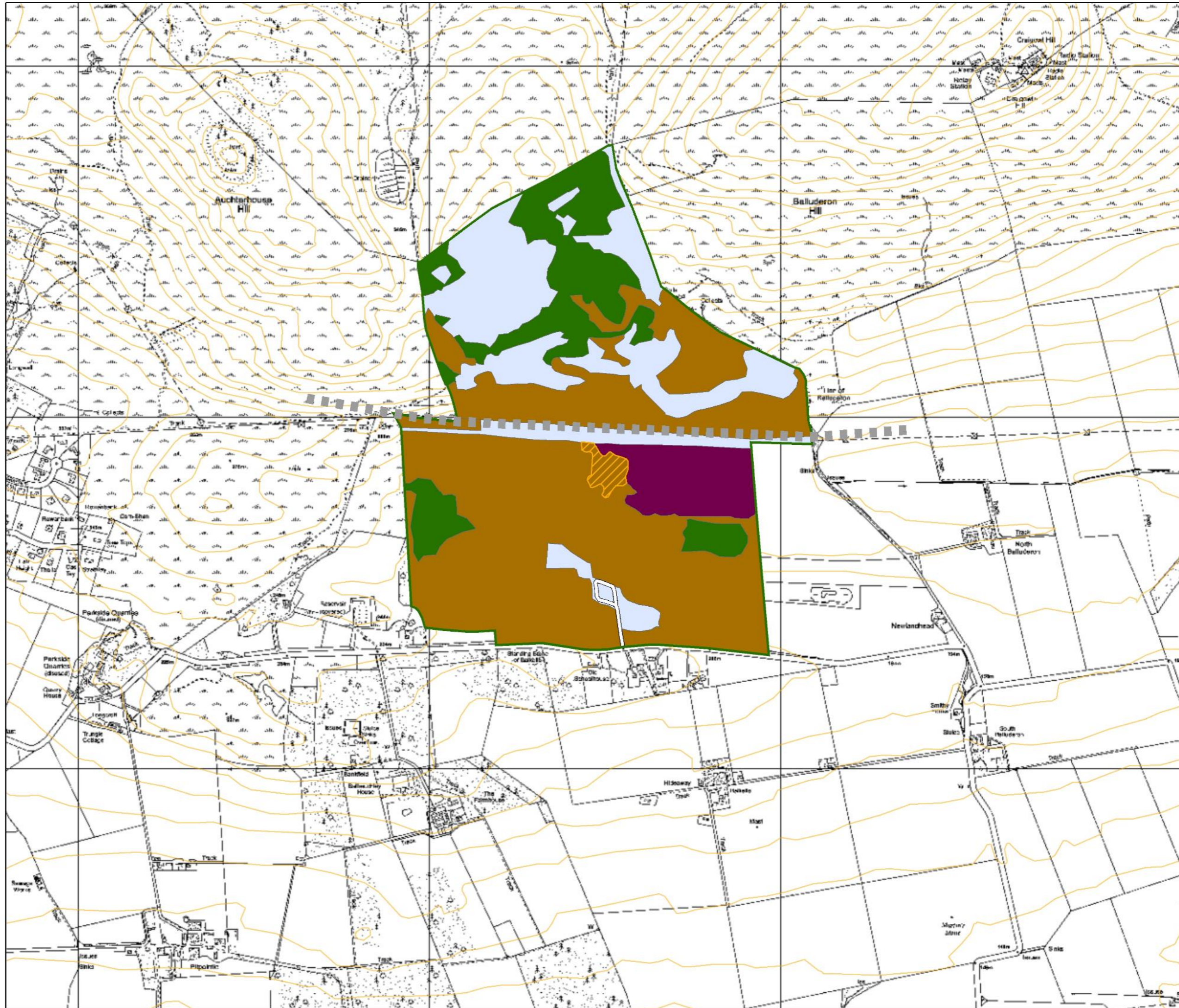
Author: U320933
Scale @ A3: 1:10,000
Date: 12/11/2020

Legend

-  Forest Roads
-  Zone boundary
-  Blocks
-  Phase 1 Restock (2021-25)
-  Phase 2 Restock (2026-30)
-  Sitka spruce (SS)
-  Norway spruce (NS)
-  Lodgepole pine (LP)
-  Scots pine (SP)
-  Larch sp (EL/HL/JL)
-  Beech (BE)
-  Douglas fir (DF)
-  Mixed/ other conifers (MC/XC)
-  Birch (BI)
-  Oak (OK)
-  Ash (AH)
-  Mixed/ other broadleaves (MB/XB)
-  Open land
-  Species Mixture: Main colour = Dominant species
Dots = Secondary species
Sitka spruce with Birch shown here










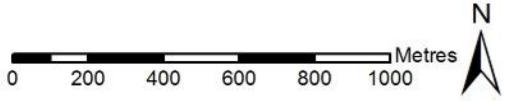
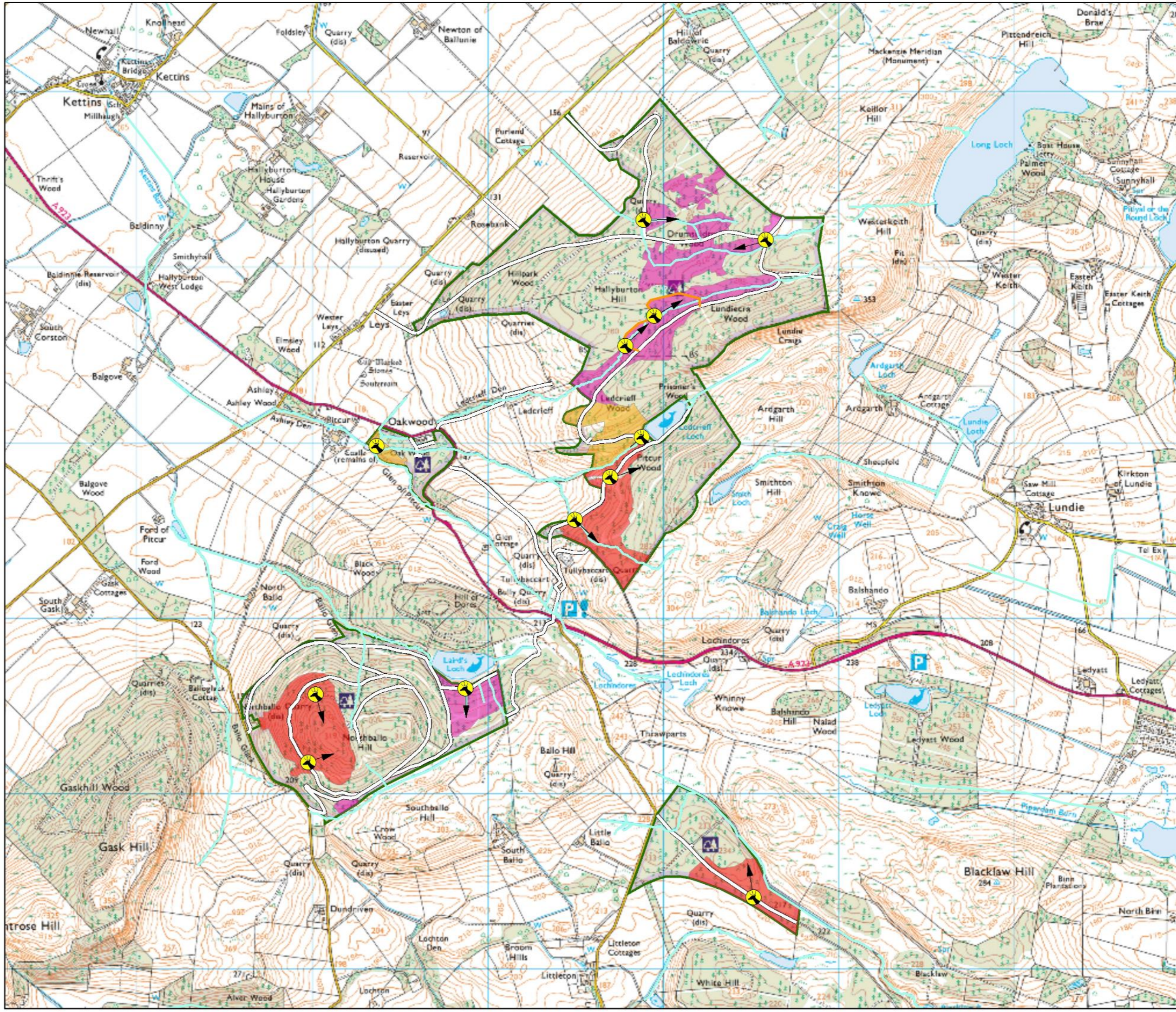
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**Sidlaws LMP
Zone 1
Wildlife Management**

Author: U320933
Scale @ A3: 1:20,000
Date: 02/03/2021

- Legend**
-  Deer Lawn
 -  Watercourses
 -  Forest Roads
 -  Ranger Access
 -  Felled or fell year requires review (2011 - 2021)
 -  Phase 1 felling (2022 - 2026)
 -  Phase 2 felling (2027 - 2031)
 -  Blocks



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**Sidlaws LMP
Zone 1
Recreation**

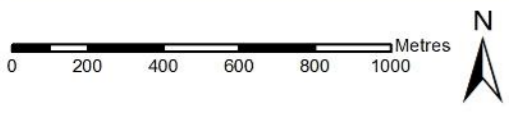
Author: U320933
Scale @ A3: 1:20,000
Date: 23/08/2021

Legend

-  Carpark
-  Public Access
-  Forest Roads
-  Core Paths

Visitor Zone

-  Interactive
-  Passive
-  Welcome
-  Blocks

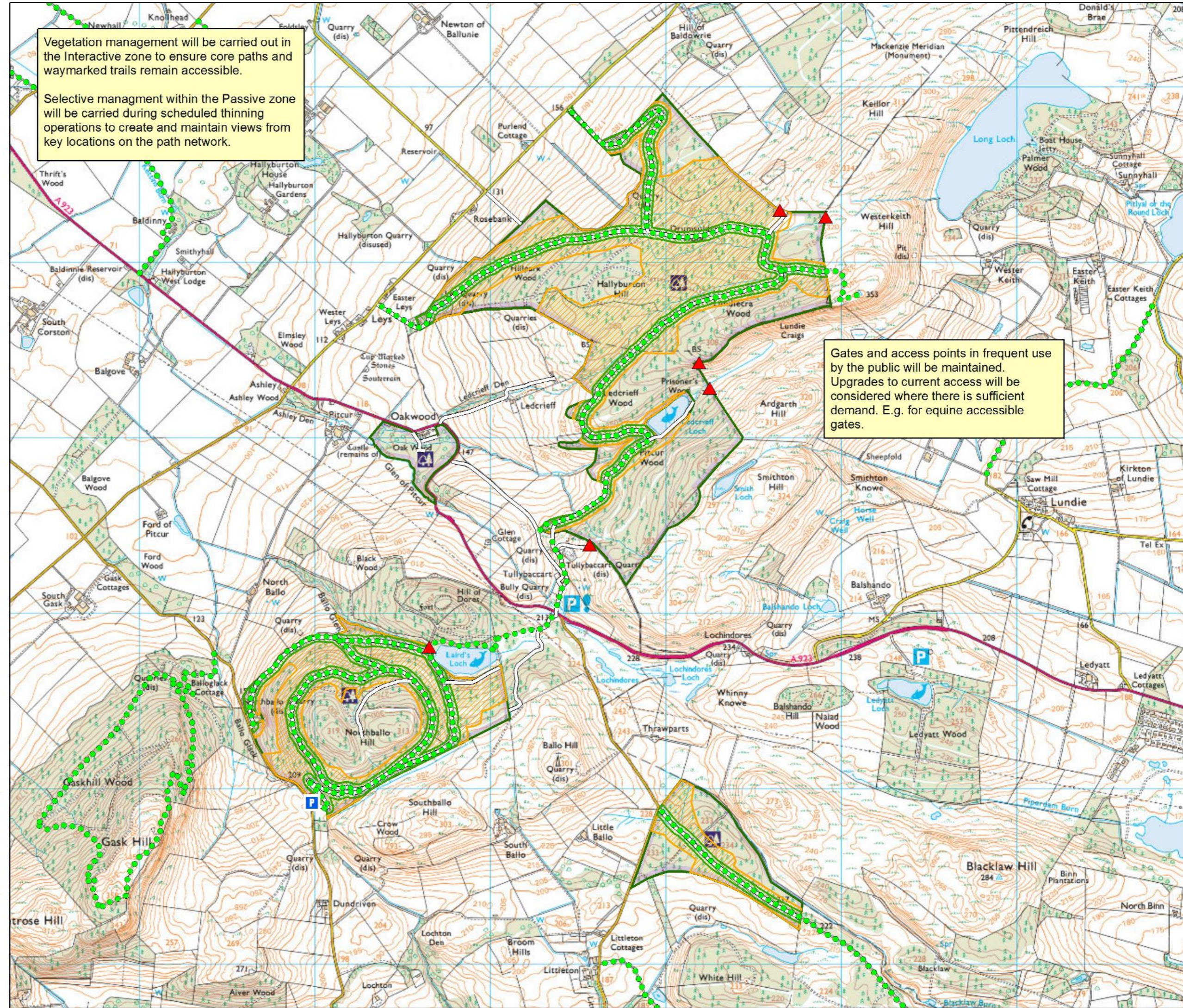


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Vegetation management will be carried out in the Interactive zone to ensure core paths and waymarked trails remain accessible.

Selective management within the Passive zone will be carried during scheduled thinning operations to create and maintain views from key locations on the path network.

Gates and access points in frequent use by the public will be maintained. Upgrades to current access will be considered where there is sufficient demand. E.g. for equine accessible gates.







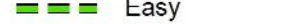
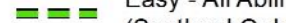







**Sidlaws LMP
Zones 2 and 3
Recreation**

Author: U320933

Scale @ A3: 1:10,000

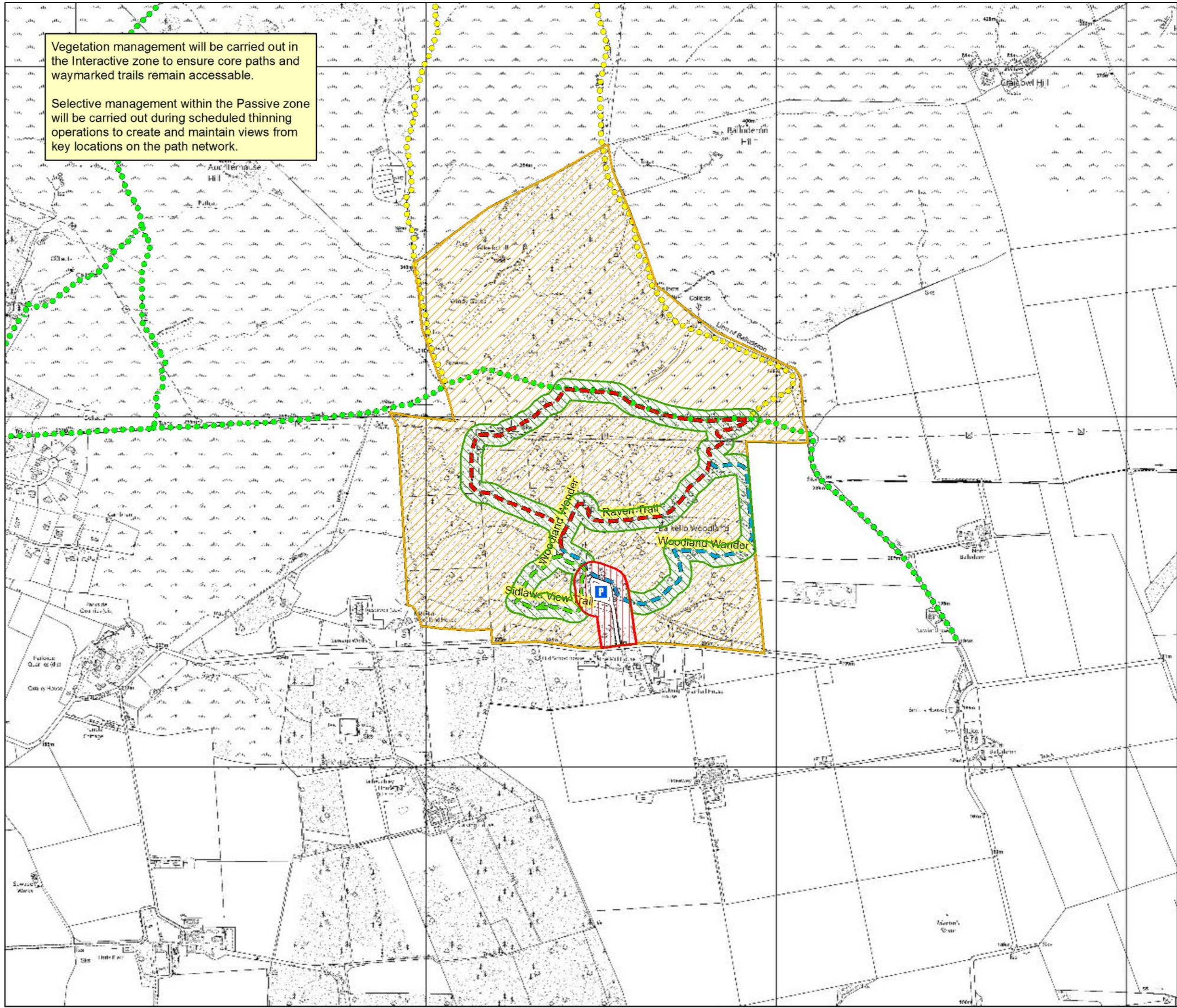
Date: 23/08/2021

Legend

-  Carpark
-  Forest Roads
-  Core Paths
-  Claimed RoW
- Rec - Multi User Trails**
- Route Grade**
-  Easy
-  Easy - All Ability (Scotland Only)
-  Moderate
-  Difficult
-  Strenuous (Scotland Only)
- Visitor Zone**
-  Welcome
-  Interactive
-  Passive
-  Blocks

Vegetation management will be carried out in the Interactive zone to ensure core paths and waymarked trails remain accessible.

Selective management within the Passive zone will be carried out during scheduled thinning operations to create and maintain views from key locations on the path network.



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East Region Sidlaws

View N Ballo from B Rd jctn
Grid Ref: NO228373
Date: March 2021




Visualisation of Felling proposals

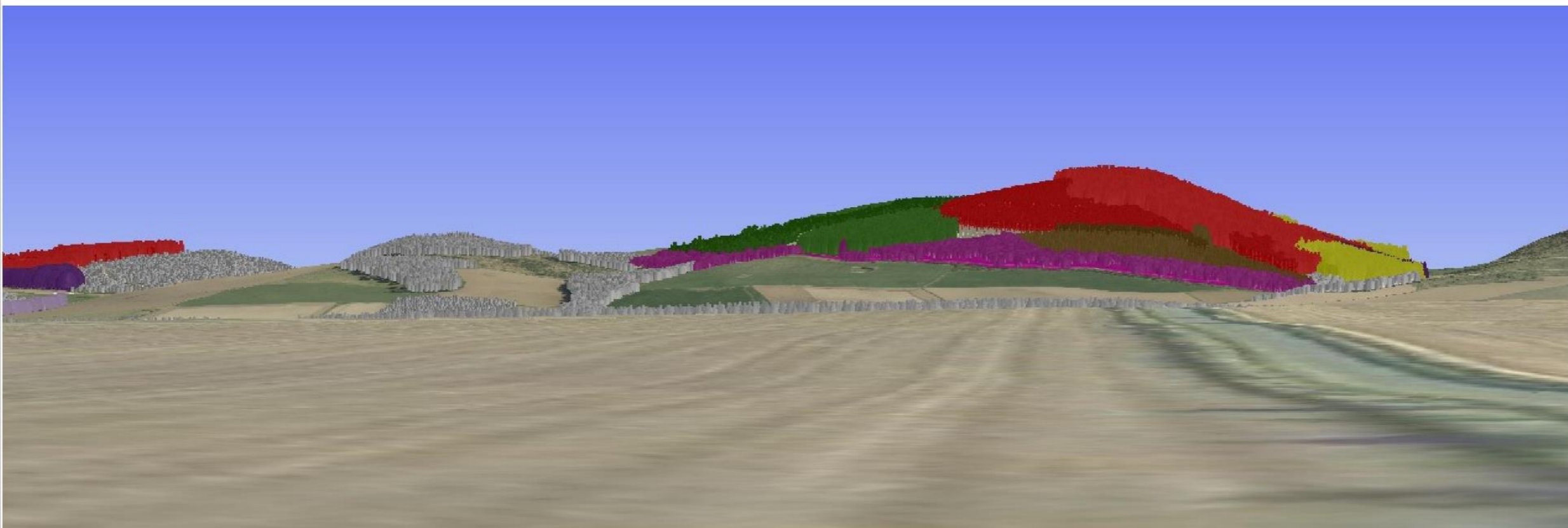
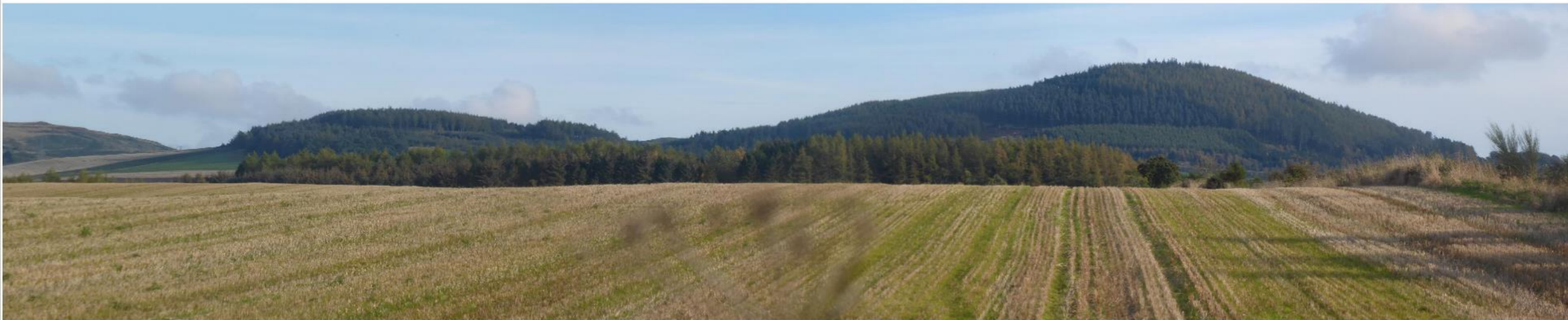
Visualisation year

Photograph 2021

Felling Phases 2021

Felling Phases have a rolling 5 year period and
for visualisations start on the date shown above.

-  Felled or fell year requires review
-  Phase 1: < 5 years
-  Phase 2: between 5 and 9 years
-  Phase 3: between 10 and 14 years
-  Phase 4: between 15 and 19 years
-  Phase 5: between 20 and 24 years
-  Phase 6: between 25 and 29 years
-  Phase 7: 30 years and greater
-  Low Impact Silviculture
-  Minimum Intervention
-  Natural Reserve
-  Long Term Retention
-  Other/Open land
-  Neighbouring woodland





East Region Sidlaws

View N Ballo from B Rd jctn
Grid Ref: NO228373
Date: March 2021







Visualisation of Future Habitat and Species

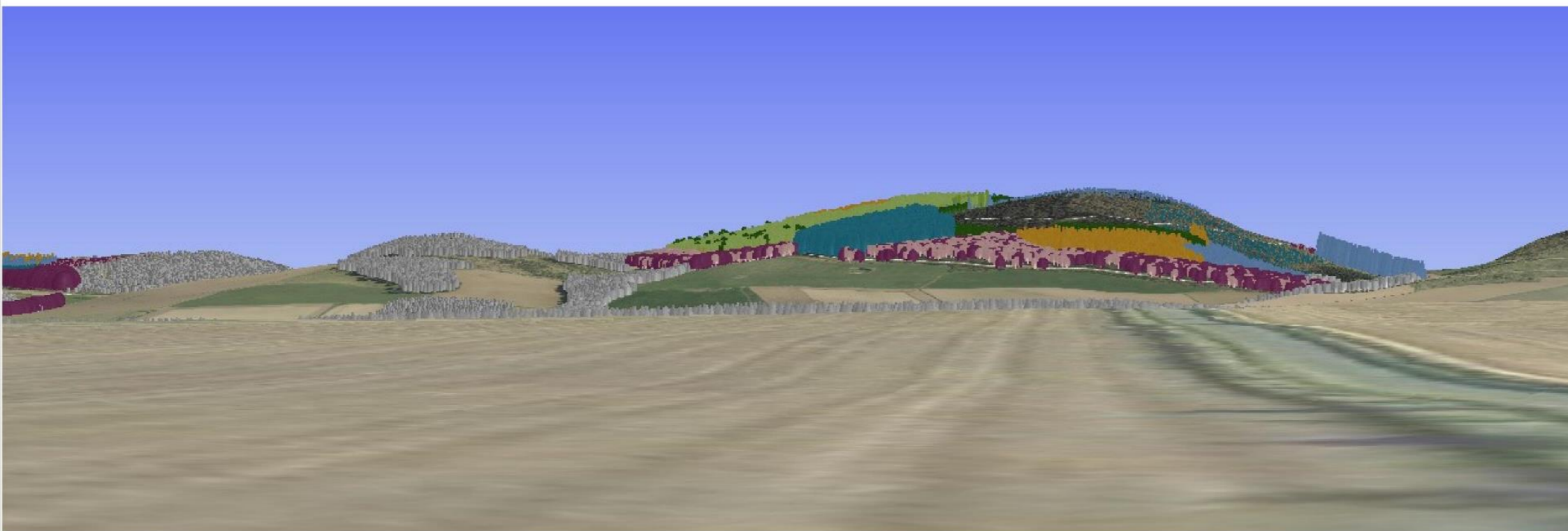
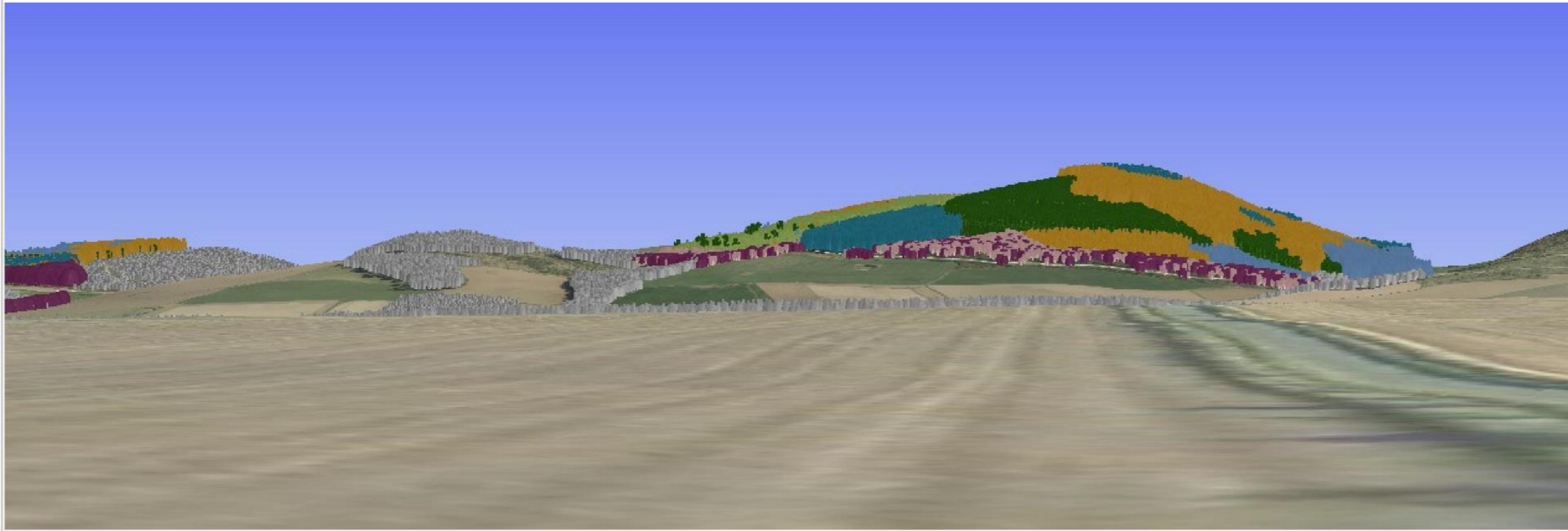
Visualisation year

Species 2021

Species 2031

Felling Phases have a rolling 5 year period and
for visualisations start on the date shown above.

-  Sitka spruce
-  Norway spruce
-  Scots pine
-  Lodgepole pine
-  Larch
-  Douglas fir
-  Mixed conifers
-  Ash
-  Oak
-  Beech
-  Birch
-  Mixed broadleaves
-  Neighbouring woodland





East Region Sidlaws

View N Ballo from B Rd jctn
Grid Ref: NO228373
Date: March 2021

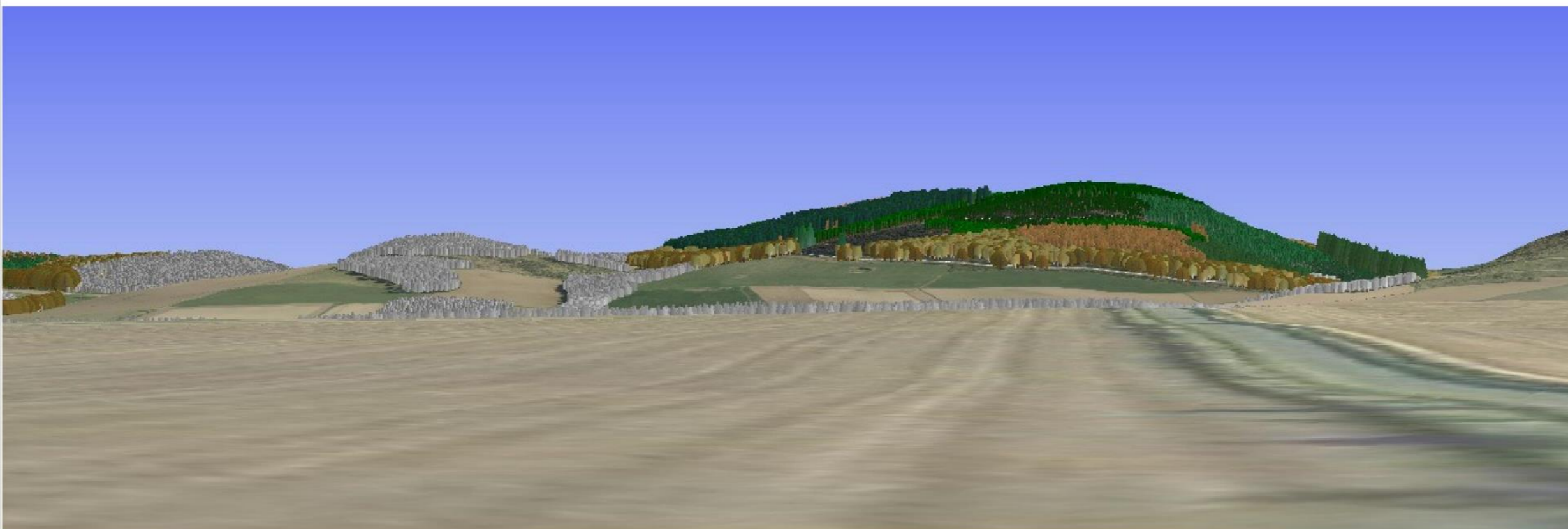
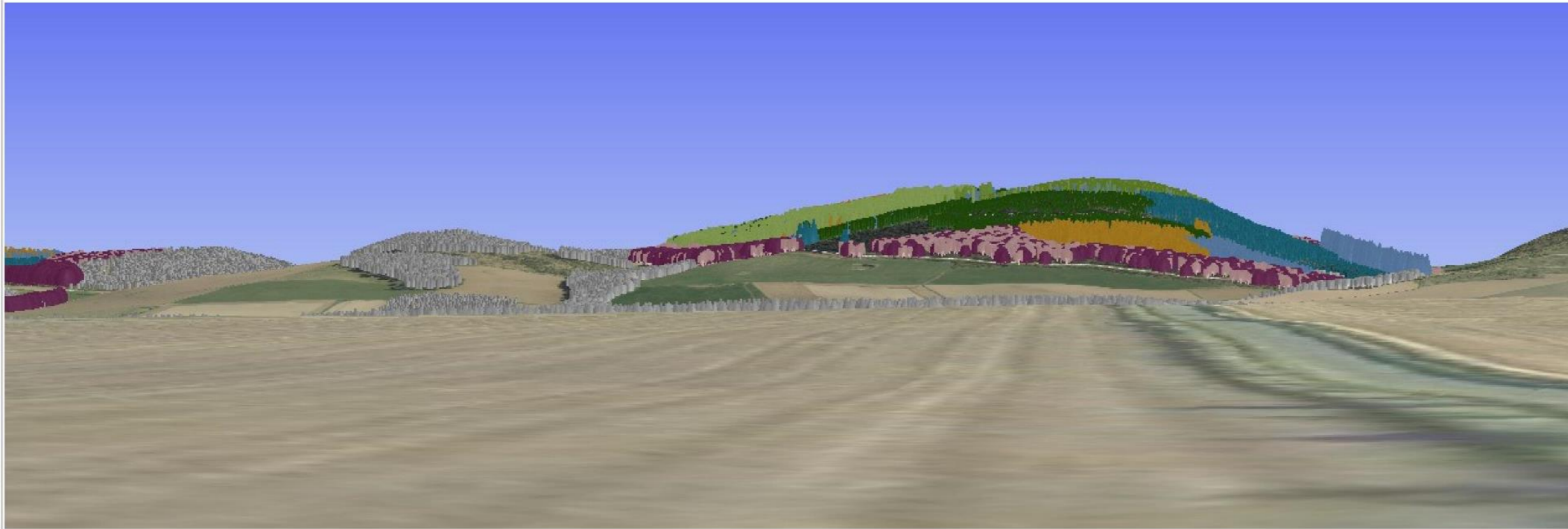
Visualisation of Future Habitat and Species














Visualisation year

Species 2041

Autumn 2041

Felling Phases have a rolling 5 year period and
for visualisations start on the date shown above.



-  Sitka spruce
-  Norway spruce
-  Scots pine
-  Lodgepole pine
-  Larch
-  Douglas fir
-  Mixed conifers
-  Ash
-  Oak
-  Beech
-  Birch
-  Mixed broadleaves
-  Neighbouring woodland



East Region Sidlaws

View Hallyburton from B Rd jnt
Grid Ref: NO228373
Date: March 2021

Visualisation of Felling proposals





Visualisation year

Photograph 2021

Felling Phases 2021

Felling Phases have a rolling 5 year period and
for visualisations start on the date shown above.



-  Felled or fell year requires review
-  Phase 1: < 5 years
-  Phase 2: between 5 and 9 years
-  Phase 3: between 10 and 14 years
-  Phase 4: between 15 and 19 years
-  Phase 5: between 20 and 24 years
-  Phase 6: between 25 and 29 years
-  Phase 7: 30 years and greater
-  Low Impact Silviculture
-  Minimum Intervention
-  Natural Reserve
-  Long Term Retention
-  Other/Open land
-  Neighbouring woodland



East Region Sidlaws

View Hallyburton from B Rd jcnctn
Grid Ref: NO228373
Date: March 2021

Visualisation of Future Habitat and Species

Visualisation year

Species 2021

Species 2031

Felling Phases have a rolling 5 year period and
for visualisations start on the date shown above.



-  Sitka spruce
-  Norway spruce
-  Scots pine
-  Lodgepole pine
-  Larch
-  Douglas fir
-  Mixed conifers
-  Ash
-  Oak
-  Beech
-  Birch
-  Mixed broadleaves
-  Neighbouring woodland



East Region Sidlaws

View Hallyburton from B Rd jcnctn
Grid Ref: NO228373
Date: March 2021

Visualisation of Future Habitat and Species

Visualisation year

Species 2041

Autumn 2041

Felling Phases have a rolling 5 year period and
for visualisations start on the date shown above.



-  Sitka spruce
-  Norway spruce
-  Scots pine
-  Lodgepole pine
-  Larch
-  Douglas fir
-  Mixed conifers
-  Ash
-  Oak
-  Beech
-  Birch
-  Mixed broadleaves
-  Neighbouring woodland



East Region Sidlaws

View Hallyburton pano from CA
Grid Ref: NO224401
Date: March 2021





Visualisation of Felling proposals

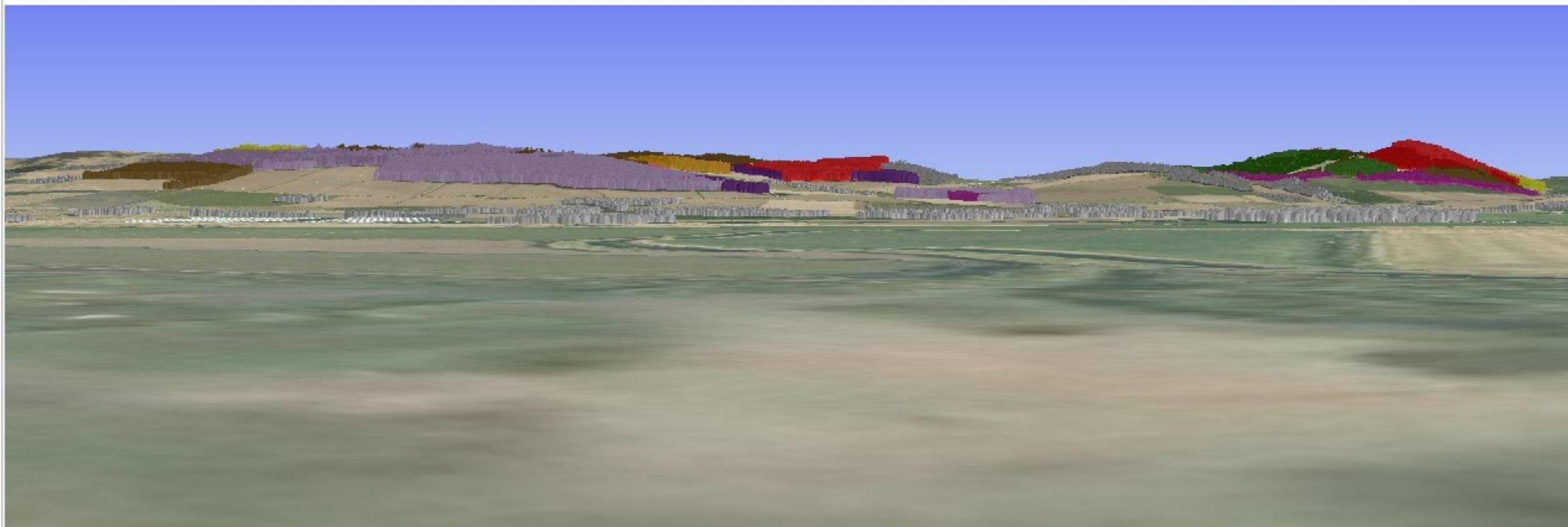
Visualisation year

Photograph 2021

Felling Phases 2021

Felling Phases have a rolling 5 year period and
for visualisations start on the date shown above.

-  Felled or fell year requires review
-  Phase 1: < 5 years
-  Phase 2: between 5 and 9 years
-  Phase 3: between 10 and 14 years
-  Phase 4: between 15 and 19 years
-  Phase 5: between 20 and 24 years
-  Phase 6: between 25 and 29 years
-  Phase 7: 30 years and greater
-  Low Impact Silviculture
-  Minimum Intervention
-  Natural Reserve
-  Long Term Retention
-  Other/Open land
-  Neighbouring woodland





East Region Sidlaws

View Hallyburton pano from CA
Grid Ref: NO224401
Date: March 2021

Visualisation of Future Habitat and Species

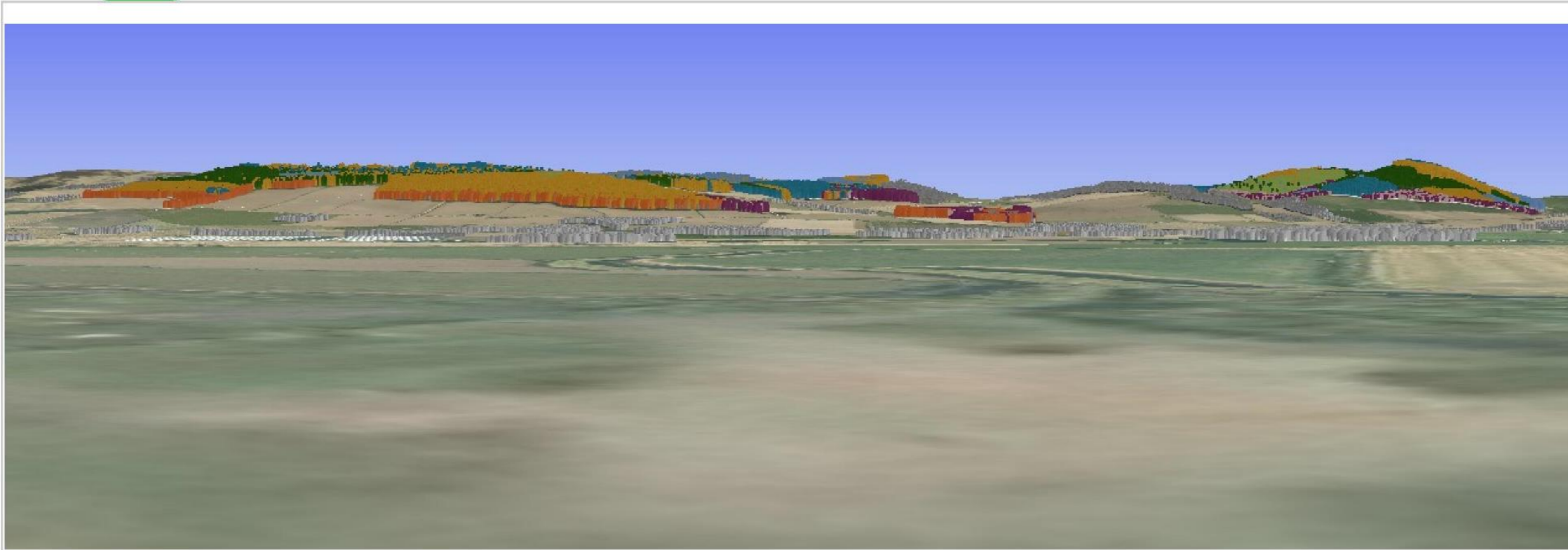
Visualisation year

Species 2021

Species 2031

Felling Phases have a rolling 5 year period and
for visualisations start on the date shown above.

-  Sitka spruce
-  Norway spruce
-  Scots pine
-  Lodgepole pine
-  Larch
-  Douglas fir
-  Mixed conifers
-  Ash
-  Oak
-  Beech
-  Birch
-  Mixed broadleaves
-  Neighbouring woodland





East Region Sidlaws

View Hallyburton pano from CA
Grid Ref: NO224401
Date: March 2021

Visualisation of Future Habitat and Species

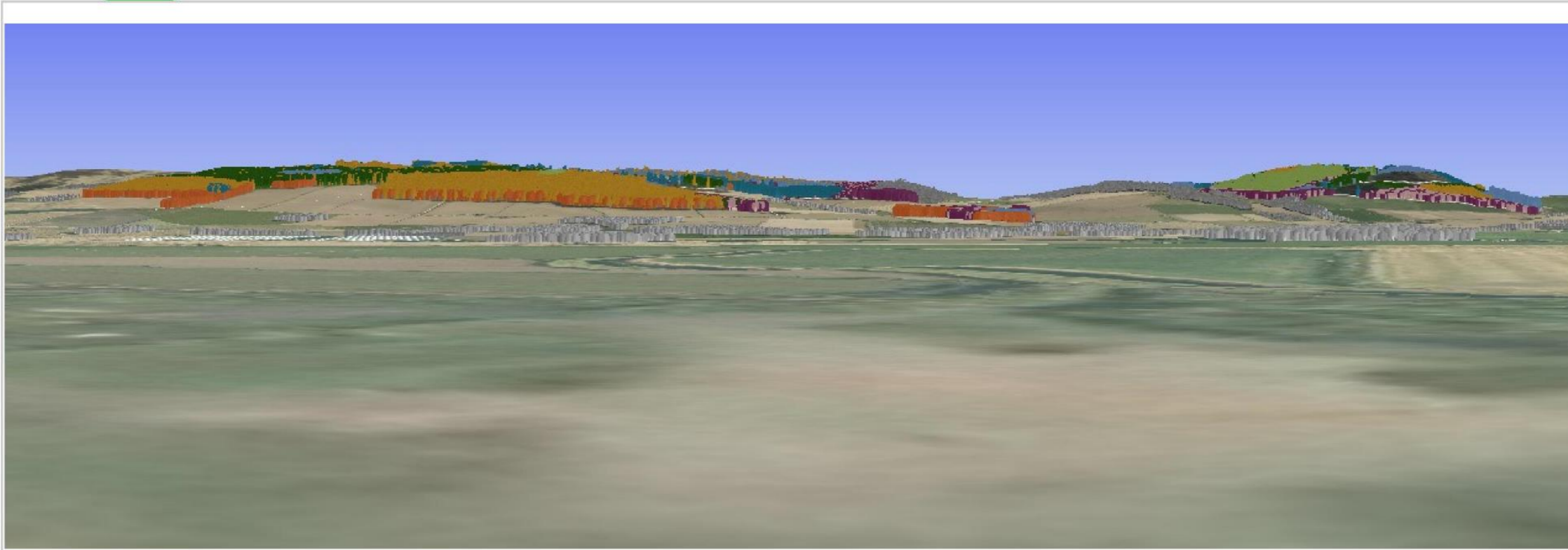
Visualisation year

Species 2041

Autumn 2041

Felling Phases have a rolling 5 year period and
for visualisations start on the date shown above.

-  Sitka spruce
-  Norway spruce
-  Scots pine
-  Lodgepole pine
-  Larch
-  Douglas fir
-  Mixed conifers
-  Ash
-  Oak
-  Beech
-  Birch
-  Mixed broadleaves
-  Neighbouring woodland





East Region Sidlaws

View Lundie Craigs panorama
Grid Ref: NO279378
Date: March 2021

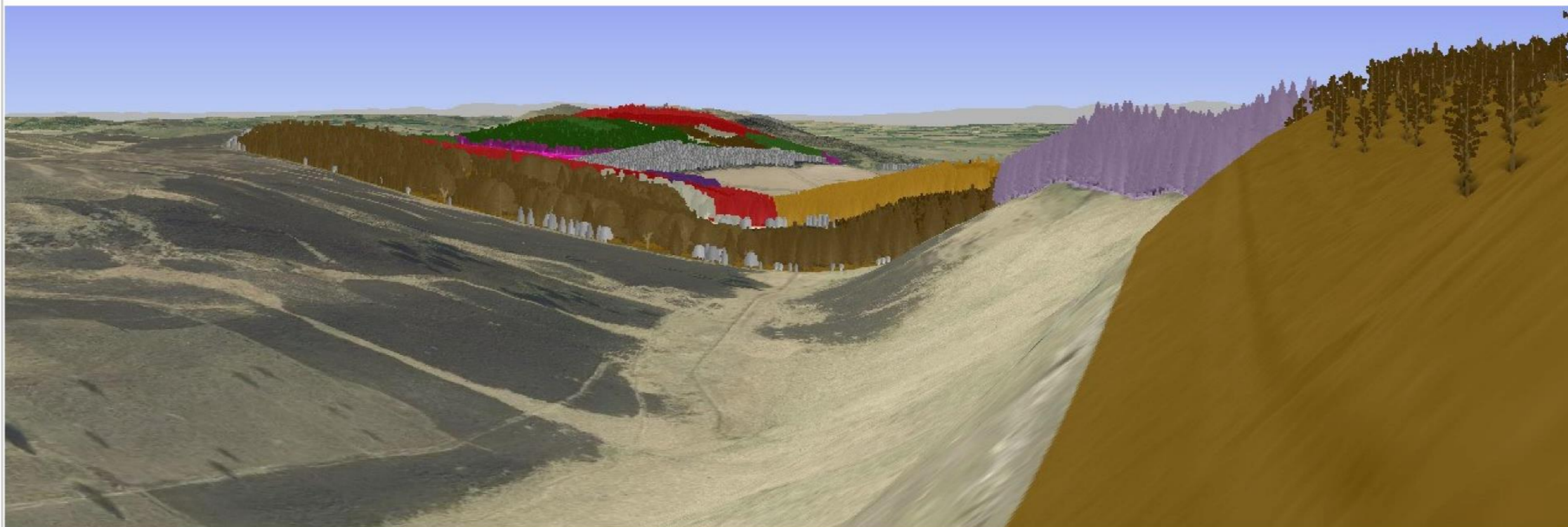
Visualisation of Felling proposals

Visualisation year
Photograph 2021

Felling Phases 2021

Felling Phases have a rolling 5 year period and for visualisations start on the date shown above.

- Felled or fell year requires review
- Phase 1: < 5 years
- Phase 2: between 5 and 9 years
- Phase 3: between 10 and 14 years
- Phase 4: between 15 and 19 years
- Phase 5: between 20 and 24 years
- Phase 6: between 25 and 29 years
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- Low Impact Silviculture
- Minimum Intervention
- Natural Reserve
- Long Term Retention
- Other/Open land
- Neighbouring woodland





East Region Sidlaws

View Lundie Craigs panorama
Grid Ref: NO279378
Date: March 2021

Visualisation of Future Habitat and Species

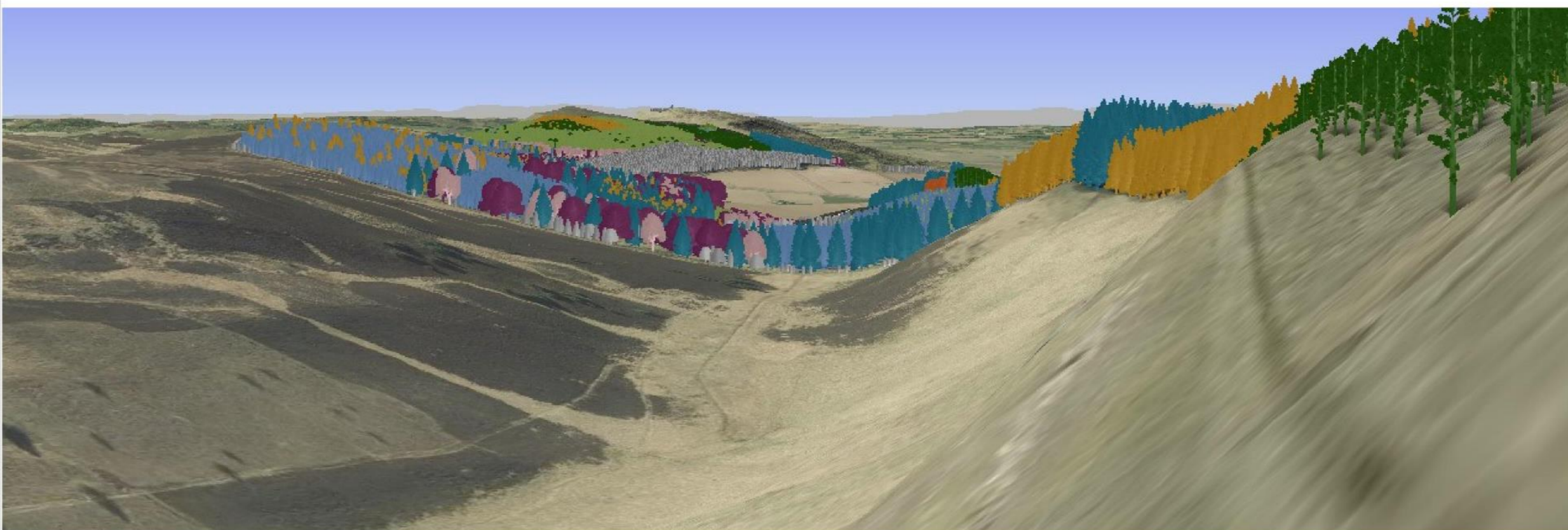
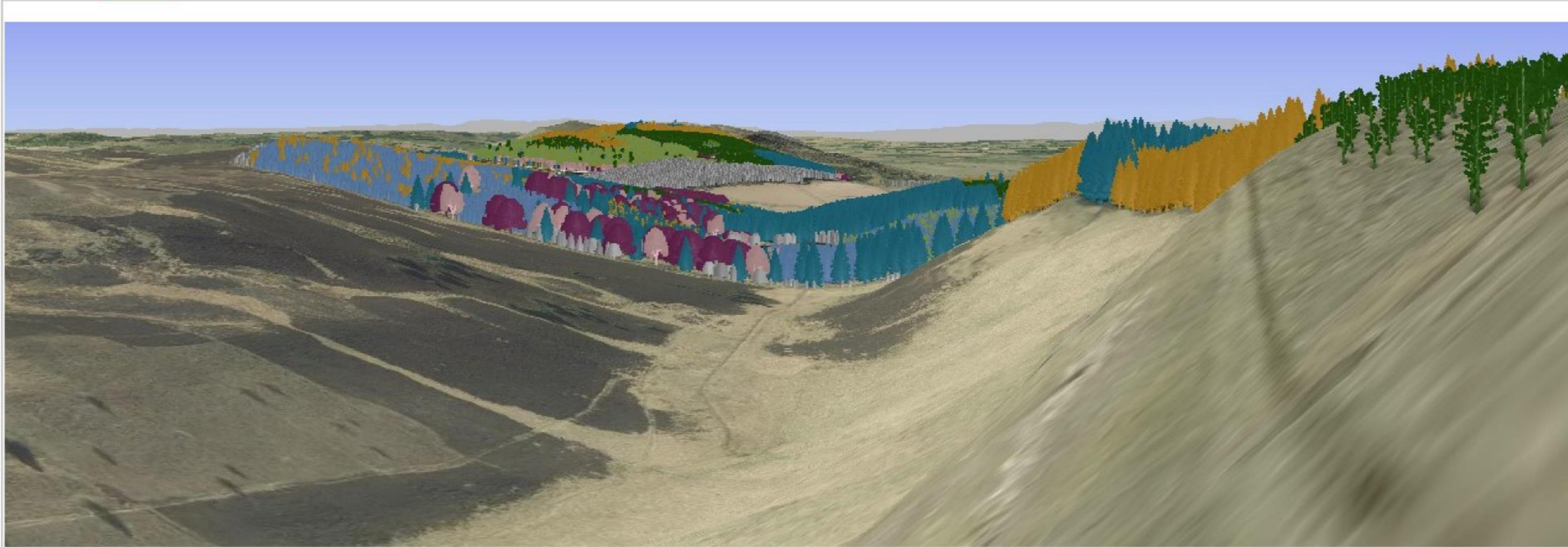
Visualisation year

Species 2021

Species 2031

Felling Phases have a rolling 5 year period and
for visualisations start on the date shown above.

-  Sitka spruce
-  Norway spruce
-  Scots pine
-  Lodgepole pine
-  Larch
-  Douglas fir
-  Mixed conifers
-  Ash
-  Oak
-  Beech
-  Birch
-  Mixed broadleaves
-  Neighbouring woodland





East Region Sidlaws

View Lundie Craigs panorama
Grid Ref: NO279378
Date: March 2021

Visualisation of Future Habitat and Species

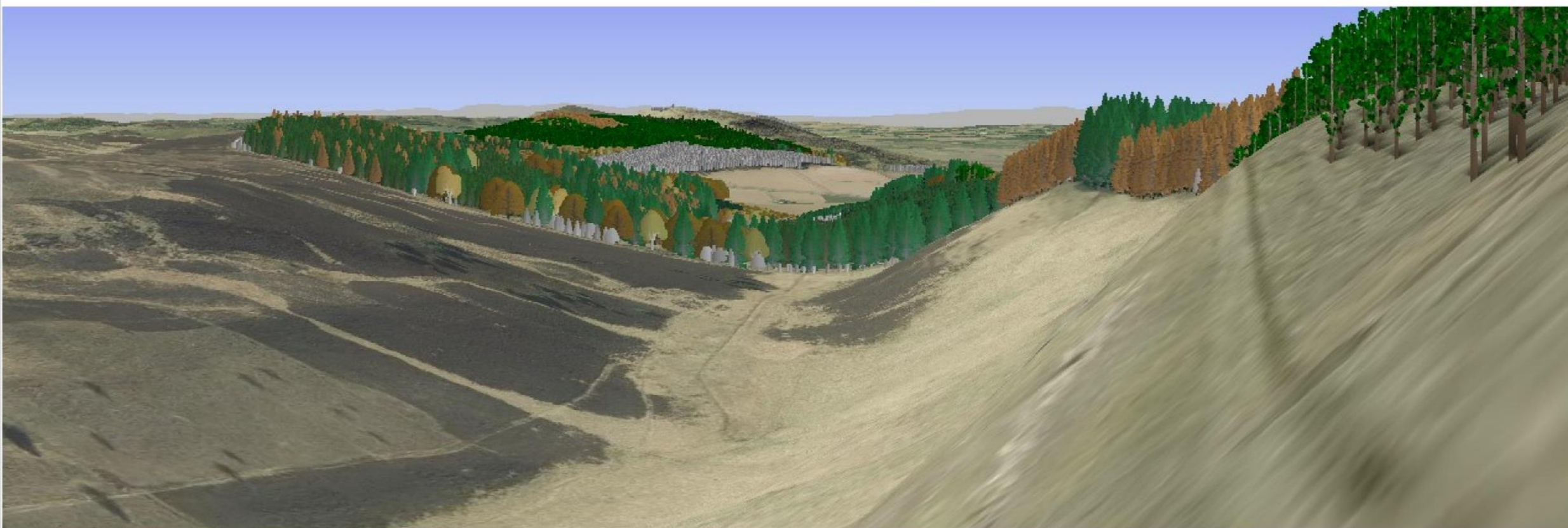
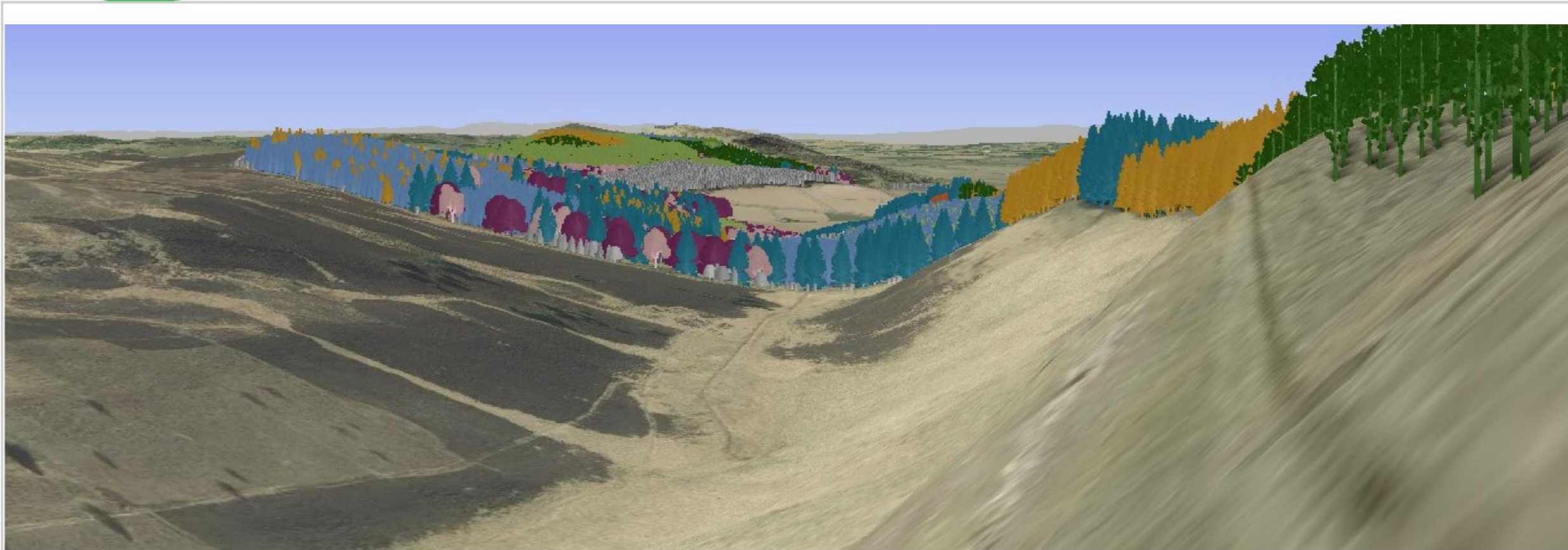
Visualisation year

Species 2041

Autumn 2041

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-  Birch
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-  Neighbouring woodland





East Region Sidlaws






View Balkello Hill
Grid Ref: NO364386
Date: March 2021

Visualisation of Felling proposals

Visualisation year
Photograph 2021

Felling Phases 2021

Felling Phases have a rolling 5 year period and for visualisations start on the date shown above.

-  Felled or fell year requires review
-  Phase 1: < 5 years
-  Phase 2: between 5 and 9 years
-  Phase 3: between 10 and 14 years
-  Phase 4: between 15 and 19 years
-  Phase 5: between 20 and 24 years
-  Phase 6: between 25 and 29 years
-  Phase 7: 30 years and greater
-  Low Impact Silviculture
-  Minimum Intervention
-  Natural Reserve
-  Long Term Retention
-  Other/Open land
-  Neighbouring woodland





East Region Sidlaws

View Balkello Hill
Grid Ref: NO364386
Date: March 2021

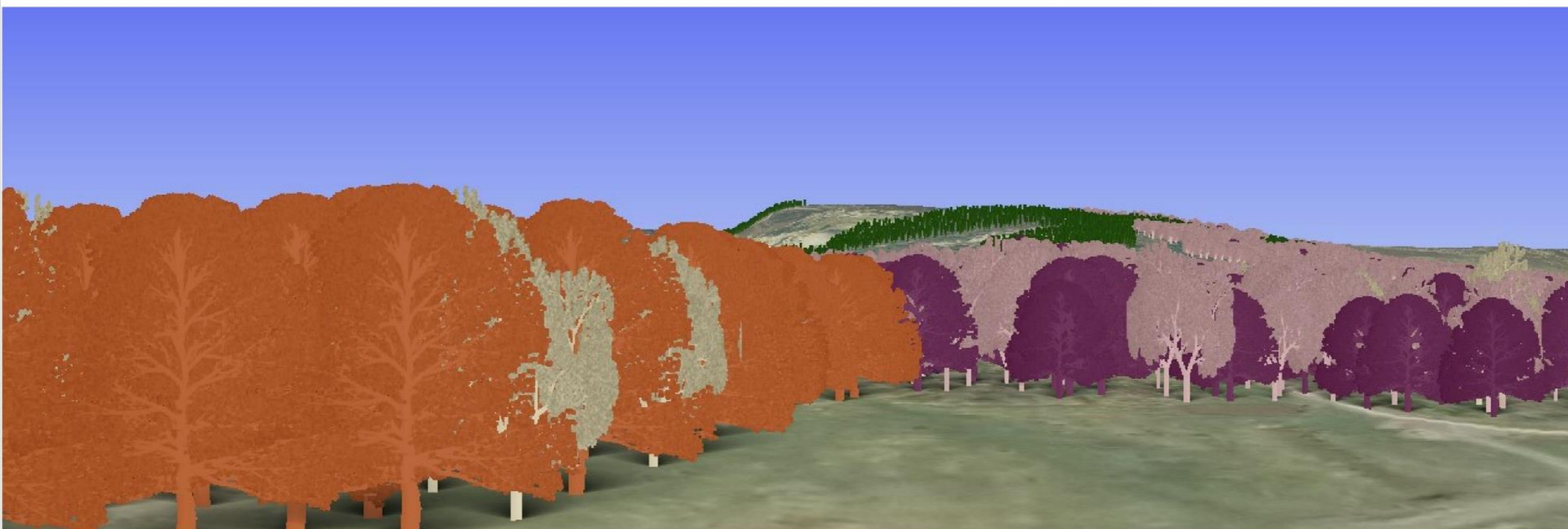
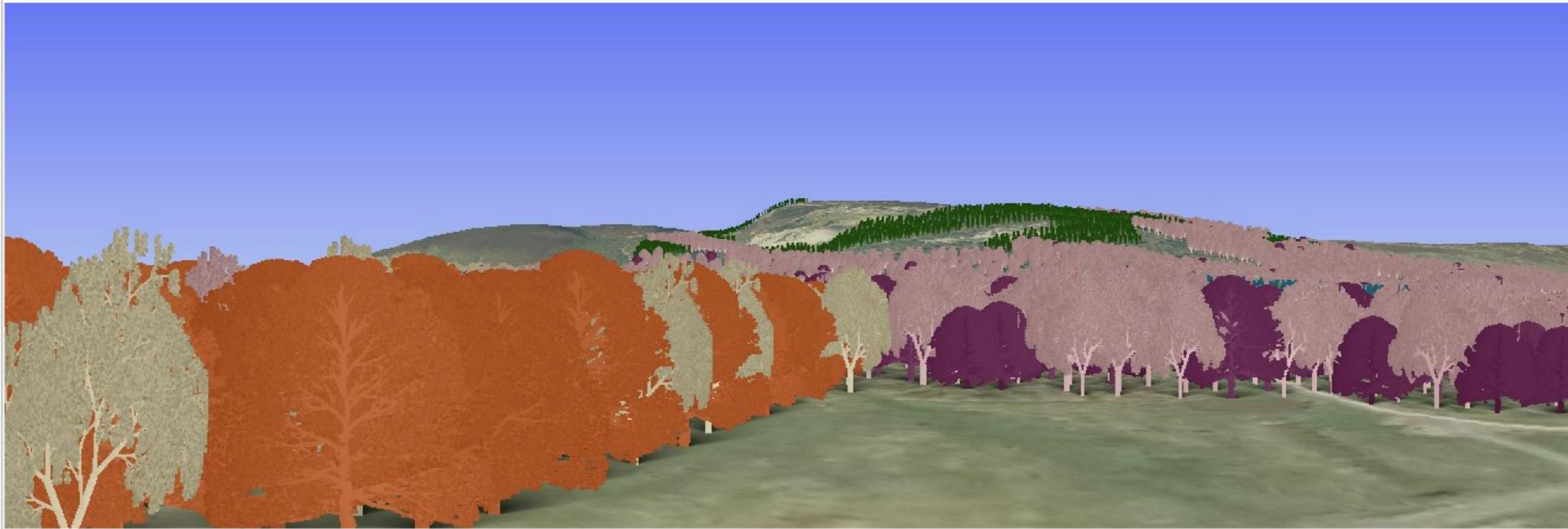
Visualisation of Future Habitat and Species

Visualisation year

Species 2021

Species 2031

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Scotland's National
Forest Estate is
responsibly
managed to the
UK Woodland
Assurance Standard.





East Region Sidlaws

View Balkello Hill
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Date: March 2021

Visualisation of Future Habitat and Species

Visualisation year

Species 2041

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