

**Coilhallan Wood, Callander - Community Buy-out
Management Plan 2021 – 2031**

**Henry Lima
Callander Community Woodland Group
Part of Callander Community Development Trust
6 March 2020**

Table of Contents

1. Summary of the proposal	
2. Introduction	
2.1 Site location	
2.2 Ownership	
2.3 Current site description	
2.4 Protected sites and species	
2.5 Woodland health – diseases and INNS	
2.6 Deer management	
2.7 Geology and soils	
2.8 Public access	
2.9 Compartment descriptions	
2.10 Species and age structure	
3. Future Plan	
3.1 Vision and objective	
3.2 Management options	
4 Stakeholder Engagement	
5 Analysis and Management Strategy	
5.1 Constraints and Opportunities	
5.2 Management strategy	
6 Management Proposals	
6.1 Wetland creation	
6.2 Changes to the area for felling	
6.3 Thinning	
6.4 Restocking with Native Broad Leaves	
6.5 Management of windblow	
6.6 Deer Management	
6.7 Access	
6.8 Control of INNS	
References	
Annex 1: Timber data from FLS 2016	
Map1: <i>Location map with protected sites</i>	
Map 2: <i>Ancient woodland inventory</i>	
Map 3: <i>British Geological Society map of soils</i>	
Map 4: <i>Public access and core paths</i>	
Map 5: <i>Woodland compartments</i>	
Map 6: <i>Restocking – west</i>	
Map 7: <i>Restocking – east</i>	
Map 8: <i>Windblow – aerial image</i>	
Map 9: <i>New tracks and foot paths</i>	
Map 10: <i>Thinning</i>	
Map 11: <i>Felling</i>	
Annex 2: <i>Felling – aerial image – west</i>	
Annex 3: <i>Felling – aerial image – east</i>	
Annex 4: <i>advice from FLS</i>	
Annex 5: <i>advice from SF</i>	

1. Summary of the Proposal

This management plan sets out a series of management tasks to redesign the land use for public access, promoting biodiversity and recreation, and also clearing the Coilhallan Woodland of most of the non-native plantation forestry for profit generation. The Callander Community Trust (CCDT) are in the process of updating supporting documents associated with the application for community buy out in accordance with the Land Reform (Scotland) Act 2003.

This current plan supersedes the plan created in 2017 which was presented with the original application for the community buy out.

The current plan sets out proposals for managing the final felling of conifer plantation, such as clear felling, thinning, and handling of windblow. The woodland design sets out the future land use and works required to manage the site for both people and nature.

The plan is in line with aspirations outlined in the Callander Land Management Plan 2015 – 2024. However this proposal has some changes in which non-native conifers will be felled sooner in this plan. Alternative habitats to woodland are proposed, such as wetland creation through slowing the flow of water off site. This increase in habitat variety will benefit biodiversity, help with flood abatement and increase the amenity quality.

The initial phase of clear felling will be to clear most of approximately 8ha of larch and 6.5ha of Sitka spruce. This will provide funds to implement other biodiversity, recreational and educational objectives. Further felling and thinning on a small scale can be used for teaching forestry practices. Phased felling and thinning will increase diversity by providing a more varied age structure.

A small part of the site is fenced and there is extensive native woodland regeneration alongside long term retention of some conifers and ancient woodland. Once the cash crop is removed, the current plan is for:

- increased cover by native woodland
- improving the quality of existing native woodland
- retention of some non-native conifers to support biodiversity
- creation of wetland for biodiversity and flood abatement
- creation of bike trails and all abilities trails
- clearance of INNS
- small scale projects that both benefit wildlife and the education of people.

The intention is to create an enjoyable outdoor environment that is attractive, educational and safe for local people and tourists as well as for wildlife.

2.0 Introduction

A new management plan for Coilhallan Wood was requested with a very short deadline. This revised plan has been created with limited access to a recent analysis of the timber on site and its value. An updated analysis of the timber stock and its current value is required to make a fully informed assessment of how these changes will affect the income from felling, compared to what was suggested in the Callander Long Term Forest Plan (LTFP). The Callander Community Development Trust (CCDT) intend to use this plan as a draft, with amendments made once a full assessment is made of the current timber value.

The success of this plan will depend upon the financial implications of the changes in felling and the potential changes to funding mechanisms.

We have been advised by Scottish Forestry (SF) and Forest and Land Scotland (FLS) in the preparation of this plan. We intend to revise this plan in the event that we apply for management funds from Scottish Rural Development Programme Forest Grant Scheme (FGS) and the next source for access funding that replaces Improving Public Access (IPA).

We want to point out that the maps provided are roughly at 1:25 scale for detail and are not 1:50,000 scale as required in templates for FLS Management plans. This will be amended as required in the next draft.

2.1 Site Location

Coilhallan Wood is located near Callander, north of Mollands in the east (NN62844 07348) and over to the west it ends just before the Gartchonzie Bridge (NN60813 07157), roughly following the Eas Gobhain branch of the River Teith Special Area of Conservation (SAC) see map 1. There are several burns running through the wood which lead to the Eas Gobhain.

Coilhallan Wood is within the Loch Lomond and the Trossachs National Park.

The total area is 83ha. There are ancient woodlands of plantation origin that have been identified on site since at least 1750. *See map 2.*

2.2 Ownership

The Coilhallan Wood is publicly owned and currently managed by Forest and Land Scotland (FLS).

2.3 Current Site Description

The Coilhallan Wood is 2km long and no more than 0.7km wide at the widest point, see map 4. The site is bisected lengthwise by a forest track that is suitable for use for extraction. It is a core path used for recreational purposes and forms part of the Rob Roy Way. Another core path passes from the east end south west and leads to Ben Gullipen. There is a network of paths through the woods connecting to the surrounding land.

The wood is sited next to the Callander Holiday Park, so that any developments have an impact on the holiday park. It is also next to residences and businesses.

There is no protected archaeology on this site. There are archaeological features at the western end of the site, but these are not protected. There may also be other archaeological sites.

2.4 Protected Sites and Species

Protected sites

Compartment 1 is adjacent to and partially within the River Teith Special Area of Conservation (SAC), see map 1. No management activities are proposed here. There are burns running through **compartments 6, 7 and 8**, which lead into the SAC, but the distance and land use are unlikely to have an effect on the SAC. In the Environmental Impact Assessment (EIA) consultation to SNH for the Callander Long Term Management Plan, SNH determined that there is no likely significant effect on the qualifying interests of the SAC by this proposal.

Protected species

Protected species are abundant on this site and include otter, red squirrel, pine martens, crossbills, several species of bats and badgers. Several raptors use the site, especially the Tawny Owls. There is a heronry in **compartment 14** located at NN61893 06813. The heron nesting season runs from the beginning of February to end of August. All felling will take place outside the bird breeding season.

2.5 Woodland health – diseases and INNS

Ash dieback disease (*Hymenoscyphus fraxineus*) is widespread in the site, mostly affecting saplings to the point of killing them. No management can rectify this, but a percentage of resistant plants will likely emerge.

There are no known sites with *Phytophthora ramorum* or *kernoviae* here. Early removal of Japanese larch is proposed in order to make the woodland more resilient to disease.

There are several species of non-native plants on site, which is what you would expect, since the site is of plantation origin. Some species came from a more recent effort to make an arboretum. Tree species include Japanese larch, grand fir, Sitka spruce, Norway spruce, Western hemlock, beech, lime/linden, sycamore, horse chestnut, eucalyptus, monkey puzzle and Turkish oak.

Other INNS include piri piri burr *Aceana novae-zelandiae* all along the forestry track. There are some clumps of toe toe grass in **compartment 12**. Cotoneaster is widespread, but few in number, since the deer graze it. Rhododendrons are particularly prevalent around the caravan park.

There are few if any non-native mammals such as grey squirrels using the site.

2.6 Deer Management

Deer management is undertaken by stalkers from Cambusmore Estate and FLS to the south of the site. In recent years, increased culling has reduced the number of red deer significantly. Roe deer continue to use the site and adjacent gardens and farm land.

2.7 Geology and soils

According to the British Geological Society the superficial geology in the wood is peat, and the bedrock is Ruchill Flagston formation sandstone and siltstone in the west, Gartartan Conglomerate sedimentary alluvial in the centre, and Malling conglomerate alluvial fan in the east end, see *map 3*.

The site slopes down to the north.

2.8 Public Access

Access to the site is currently achieved from 3 established routes; from the car park in the western end, from Callander in the eastern end and from the hill ground in the eastern end. See *map 4*.

2.9 Compartment descriptions and history of management

This plan uses the same compartment numbers as the 2017 plan to prevent confusion, see *map 5*. FLS use different coupe identifiers. The table below lists how they correspond to each other:

FLS coupe number	Compartment number
85018 group 1 JL P52	14 – Japanese larch in 2 small areas
85018 windblow	14 – ½ the area to clear
85019 group 1 SS P52	14 – Sitka spruce
85019 group 2 JL P52	14 – Japanese larch in 2 areas
85020 group 1 RC P56	7a – 2 areas of Western red cedar
85020 group 2 GF NS RC DF P56	7a – Grand fir, Norway spruce, W red cedar, Douglas fir but also W hemlock and NBLs
85020 windblow	7a – to clear
85020 MB	7a – mixed broad leaves
85021 group 1 JL P53	6b – Japanese larch
85021 windblow	6b south side – already cleared

Compartment 1 – 3.4ha

This area of woodland is between the Invertrossachs road and the Eas Gobhain tributary of the River Teith SAC. This woodland is long established and of plantation origin. It resembles W11 *Quercus petraea* – *Betula pubescens* – *Oxalis acetosella* woodland because the ground flora is similar and there are quite a few oaks. Near to the shore is riparian habitat with W7 *Alnus glutinosa*-*Fraginus excelsior*-*Lysimachia nemorum* woodland remnants. Honeysuckle is common on the high ground.

The site is browsed by roe and red deer and there is limited regeneration. Dense birch regeneration from the past has been thinned here.

No intervention is planned here.

Compartment 2 – 0.2ha

This is the car park and main access area for visitors.

Compartment 3 – 3.27ha

Uphill from compartment 2, this area is long established woodland of plantation origin. The centre of this compartment is wetland with regenerating birch and willow and open habitat. Some mature oak, *Q. petraea* and *robur*, are mixed with one old tree of Turkish oak *Q. cerris*, Scots Pine, downy birch, silver birch and willow.

The west end is disturbed and re-establishing post felling with no clear habitat type. The east and south is drier and has a mix of mature oak, ash, elder and larch. The ground flora in the east corresponds to W10 *Quercus robur*- *Pteridium aquilinum*-*Rubus fruticosus* woodland.

Compartment 5 - 4.36ha

Further uphill are 2 ha of remnant woodland which was clear felled. There is Japanese larch, along with 2.3ha of regrowth. The area was felled in 2005 and is regenerating naturally, mostly with birch and larch, but on some wet areas it is mostly willow or open space. Thinning and removal of non-native larch will be required.

Compartment 6 – 6.4ha

Further up hill and on the edge of the woodland, this area is dominated by Japanese Larch and there is also a small amount of beech and conifers. Regeneration of non-native conifers is extensive and the ground flora is outcompeted. There is a bit of windblow which is evident from aerial images from 2005. The edges of this compartment show affinity to W17 *Quercus petraea*-*Betula pubescens*- *Dicranium majus* woodland.

Several flushes flow through this compartment.

We disagree on the amenity value of this compartment as described in the previous plan. It is not seen throughout the glen, and is discrete. Felling would not impact visually in comparison to some other areas of woodland on site.

Compartment 6b – 5.71ha

To the east of compartment 6, this area of dense Japanese larch has suffered a significant amount of wind blow before 2005 on the south boundary and it has not been cleared. There is a significant amount of non-native conifer regeneration on the east end of this compartment.

This area was scheduled to be clear felled by FCS.

Compartment 6c – 2.83ha

This area has extensive non-native conifer regeneration on it and some windblow on the south side was cleared. There is probably little value in the timber at this stage except in the north west corner. It would be good if it was clear felled and restocked with native broad leaves.

A prominent burn runs through the east side of this compartment in compartment 7.

Compartment 7 – 11.46ha

The remnant ground flora here is a mosaic of open ground and W10 and W11 oak woodland ground flora, with greater wood rush, bluebells and wood sorrel. The tree canopy is a mix of mature native and non-natives. Some clearance of larch here would allow the native flora back in. There are many mature oaks and some non-native beech and sycamore which have amenity value. There is some windblow on the east end which is evident from aerial images from 2005.

Compartment 7a – 9.32ha

This compartment is to the east of the caravan park and contains a high proportion of landscape value trees that can be seen throughout the area, mostly noble fir. This area was scheduled to be felled by FCS in 2017 however now we consider that it should be for long term retention for landscape and biodiversity value. The grand fir and Western red cedar are useful forage trees for crossbills and red squirrels. There is windblow on the south side of this area that is filled with mostly non-native regenerating conifers and birch. There, windblow can be seen on aerial images from 2005.

The ground flora is disturbed and the habitat does not correspond to any NVC classification.

There is a burn through the windblow which may be partially dammed to raise water levels and create a wetland area of pond.

Compartment 8 – 8.41ha

This area was clear felled by 2005 and it is regenerating with an even dense stand of birch. An informal path runs through the middle.

On the west end there is potential habitat for wetland creation in low lying areas that already have cotton grass and other wetland species. To the south of the path is evidence of neutral soil which would support an ash and oak woodland.

Compartment 9 – 3.38ha

The eastern end of this area is ancient woodland of plantation origin with small numbers of fir, Western hemlock, Norway spruce but mostly consisting of native woodland with beech. The ground flora here corresponds in places to W11 with ash and also W17 *Quercus petraea*- *Betula pubescens*-*Dicranium majus* woodland. To the west, the area was cleared and is regenerating with dense even birch woodland. Some areas are fenced and planted with non-native tree species as part of an educational project from the High School. To the east, there are dense stands of beech seedlings and sapling that should be thinned to allow ground flora to develop.

Compartment 10 – 1.26ha

This small area of ancient woodland of plantation origin is composed of modified W11 ash, birch and oak woodland with a lot of beech and a row of planted lime/linden trees along the A81. Beech regeneration should be limited here. Hand pulling of seedlings and cutting and spraying of beech that are smaller than pole stage would help the ground flora develop.

Tawny owls are known to frequent this area.

Compartment 11 – 2.96ha

This area was also clear felled by 2005 and is regenerating with a uniform pulse of birch along with some non-native conifers and broom.

Compartment 12 – 7.54ha

This is the only compartment which is deer fenced, left over from when it was replanted after being clear felled. There is a uniform cover with birch and some aspen. Gorse, broom and non-native Toetoe grass are prevalent.

There is a small pond within the enclosure which is surrounded by an acid mire. There may be scope to develop this further into wetland.

Compartment 14 – 5.67ha

There is considerable windblow to this coupe of mature Sitka spruce on both ends of the compartment. There is a heronry in the area. There is almost no ground flora

2.10 Species and Age structure

Coilhallan wood is ancient woodland of plantation origin in the far eastern **compartments 9 and 10**. Less than half of this wood is made up of native species, with parts of the area dominated by beech, lime / linden and non-native conifers. Some of these trees are at least 270 years old. Most of the woodland here has the ground flora of W11 woodland but there are small areas on wet soil with W4 *Betula pubescens*-*Molinia caerulea* woodland.

compartment	FLS coupe	Age class	Approximate percentage	Tree species	Habitat type
1		11-20 60+ 60+	60 30 10	Birch Oak alder	W11, W7
2			n/a		
3		0-10 60+ 60+ 0-10	50 25 5 20	Birch Oak Alder willow	W10
4			n/a		
5		0-10 60+ 60+ 11-20 0-10	60 5 2 20 13	Birch Oak Alder Willow larch	regrowth
6		60+ 60+ 60+ 60+	10 75 10 5	Oak Larch Beech Spruce sp	W17
6b	85021	0-10 0-10, 60+ 0-10	60 30 10	Birch Larch willow	regrowth
6c		0-10 0-10 0-10	60 30 10	Birch larch willow	regrowth
7		60+ 60+ 60+ 60+ 60+ 60+ 60+ 11-20 41-60	10 34 35 5 2 5 5 2 2	Birch Oak Larch Spruce sp Noble fir beech Sycamore Willow hazel	W10, W11
7a	85020	60+ 0-10 60+ 60+	20 20 10 10	Noble fir Larch W red cedar W hemlock	Plantation and regrowth

		0-10 60+ 0-10	20 10 10	birch Beech willow	
8		0-10 0-10	90 10	Birch Willow	regrowth
9		21-40 60+ 21-40 60+ 60+ 60+ 21-40 21-40 21-40 60+ 60+ 0-10	50 10 5 10 5 5 2 6 2 2 2 2	Birch oak Willow Beech Grand fir Spruce sp Hawthorn Hazel Black thorn W hemlock ash	Regrowth and W17
10		60+ 60+ 60+ 60+ 60+ 21-40 60+	25 40 15 5 5 5 5	Oak Beech Lime/linden Ash Holly Blackthorn Spruce sp	W11
11		0-10 0-10 0-10	80 15 5	Birch Willow larch	regrowth
12		0-10 0-10 0-10	80 10 10	Birch Aspen willow	regrowth
13			n/a		
14	85018 and 85019	60+ 60+	80 10	Sitka spruce larch	plantation

3 Future Plan

3.1 Vision and objective

The Callander Community Development Trust (CCDT) vision for the future of the woodland is for Coilhallan Wood to be managed sustainably by local people in order to increase amenity access and opportunities for both the community and visitors alike, alongside benefits for the environment and local species.

Aims

- Own and manage Coilhallan Wood in a sustainable manner.
- Increase the number of people enjoying from the woodland.
- Deliver the Woodland Management Plan (WMP) effectively.

- Make the wood more enjoyable, accessible and safer for both neighbouring residents and visitors.

Objectives

- Increase local engagement and involvement in the wood.
- Increase and develop confidence and relevant skills within the local community.
- Run a wide range of accessible events and activities annually.
- Establish improved facilities, including better access for the less able.
- Generate an earned income to contribute to the maintenance and running costs.
- Encourage greater bio-diversity by addressing invasive species and favouring native species of both flora and fauna.
- Develop partnerships and collaborative projects.

The woodland function will shift from production woodland to recreation, amenity and biodiversity supporting habitats. The condition of the woodland will be improved by the following:

- removing most of the larch and Sitka spruce and regenerating conifers while retaining some non-native conifers with landscape and biodiversity value;
- improving access;
- removing windblow that has some value, while retaining the balance as deadwood to support biodiversity;
- diversifying habitats within the wood to support biodiversity through wetland creation;
- keeping water on site to help with flooding attenuation;
- softening edges of the conifer plantings further uphill by planting broad leaves in compartments 6b and 14;
- reducing dense shading of the canopy to allow a natural ground flora to develop;
- controlling INNS;
- creating wetland habitat from the existing wet area;
- creating new wetland areas by partially damming burns;
- creating a place for outdoor education and involvement for the school, as well as for building up forestry techniques;
- improving the Wood visitor experience by all of the above, so that the habitats will be a draw to both local residents and to visitors from near and far.

3.2 Management Objectives

1. Clear fell **compartments 6, 6b**, what is left in **6c and 14** and selectively fell most of the larch in **compartment 7** to provide an income to support many of the other objectives of this plan. The mature broad leaved trees will be retained in **compartments 6, 6b and 7**. These compartments will be restocked with Native broad leaves where appropriate, *see maps 6 and 7*.
2. Do not restock sites where wetland creation will take place in compartments 6, 7 and 8, *see map 7*.

3. Hand pull, cut or spray regenerating conifer and beech regeneration throughout the area. Compartments 9 and 10 need to focus on beech seedling and sapling removal.
4. Remove as much of the windblow that is of any value, leaving the remainder to rot in place. Windblow is in **compartments 6b, 7, 7a and 14**, see *map 8*.
5. Restock **compartments 6, 6b, 6c and 14** with native broad leaves.
6. Keep clear felled areas in **compartment 7** to allow natural regrowth of local oaks.
7. Create new wetland areas by partially blocking and diverting water from the burns in **compartments 6, 7 and 8**. Enlarge and enhance the open water in **compartment 12**.
8. Upgrade the surface of the forestry track once extraction is completed.
9. Build new paths as shown in *map 9*.
10. Control INNS by hand pulling and herbicide spray.
11. Thin dense area of birch regrowth especially in **compartments 8, part of 9, 11 and 12**, see *map 10*.
12. Continue deer management to allow regrowth, monitor using the HIA tool box for woodland assessment.
13. All woodland management will comply with the **UK Forestry Standards (UKFS)**, the **UK Woodland Assurance Standards (UKWAS)**, in accordance with the **UK Forestry Standard Guidelines, Forests and Water (5th edition)** and fit within the **Callander Land Management Plan 2015 – 2024**.

4. Stakeholder Engagement

Extensive public engagement has taken place throughout the development of the project, please see this link for examples of the ongoing engagement:

https://incallander.co.uk/ccdt_coilhallanwoods

5. Analysis and Management Strategy

5.1 Constraints and Opportunities

Feature/Issue	Constraint	Opportunity
Resources for the delivery of the management plan	Capital is required to implement the plan	Option to use funds from timber sales from site to fund the balance of the management plan Opportunity to apply for FGS funds Option for teaching woodland management
Wet terrain with a north slope	Time of work to consider impact on flooding,	Clear communication and time put in to getting the

	sediment and point source pollution	right contractor for the job.
Designations	Limitations to timing and level of work affecting the riparian corridor	Working towards increasing the quality of habitats and the SAC
Mammals including European protected species	Tree work or thinning could disturb otters, pine martens, red squirrels, badgers, bats or other species	Survey and apply for a license to disturb if required, Create new bat boxes, hibernating locations in the windblow
Deer browsing	May limit rate of natural regeneration and may reduce diversity of woodland species	Deer will provide browsing in wetland areas to keep them open, and a small revenue for stalkers
Invasive Non-native species	Destruction of natural habitat associations	Clearance of Piri Piri burr, regenerating conifers, rhododendron and other INNS
Priority breeding bird species	Prevention of disturbance to breeding birds will limit management season.	Provide opportunities to increase extent and quality of habitat for protected species including herons and tawny owl
Important wetland open habitats	Will create management burden to maintain open habitats.	Adds structure to the woodland and provides important habitat for species dependent on open habitats such as invertebrates.
Public access	Causes some level of disturbance to breeding birds and mammals Creates necessary maintenance burden Areas of windblow are a hazard in current state	Provides access to public into native woodland providing views of special wildlife and habitats. Maintains access for site monitoring and management work. Harvest any timber with worth and clear areas of windblow where there is public access
Clashing objectives for woodland and wetland features on site	Difficulties in making the most effective ecological decisions on site	Consultation carried out with various colleagues and experts.
Improving ecology while improving the site for visitor access and recreation	Damaging the biodiversity of the site by felling, creation of cycle and more footpaths	Planning for new paths to go through areas of recent felling, avoid wetlands and water crossings

5.2 Management Strategy

The revised Management Plan for Coilhallan sets out proposals for managing the final felling of conifer plantation, such as clear felling, thinning, and the handling of windblow, restocking or natural regeneration. The woodland design sets out the future land use and works required to manage the site for both people and nature, rather than for timber production. Recreation, amenity use and promotion of biodiversity are at the heart of this plan.

The plan has been set up to provide a future income from the initial felling and scavenging of any valuable windblow. The intention is to use the funds for the implementation of most of the management proposals. Another source of income may come from Low Impact Silvicultural Systems (LISS) in the near future through the selective felling of more non-native conifers. We have also considered the need to apply for a Forest Grant Scheme (FGS) if required and a felling licence.

It is important for this project to balance the overlapping requirements of nature and the use for amenity and recreation.

6 Management Proposals

6.1 Wetland creation

We intend to increase the area of wetland on site for amenity and biodiversity. **Compartments 6 and 7** have a burn flowing through them at NN 61177 06896. Once these areas are thinned or felled, some of the water in this burn can be diverted to create wetland areas, by either bunding or damming. This will create a diversity of habitats and will also increase the species richness and amenity value of the site.

Some wetland creation can be used to connect people with nature. In **compartment 8**, the trees are felled and there is much birch regeneration. However, there are some areas here that appear to have alkaline or neutral nutrient input where it would be interesting to create a wetland area primarily for educational purposes, since the ground is level and there is less issue with health and safety. The creation of a wetland here can be achieved through scrapping and shallow digging.

In **compartment 12**, there is a small existing pond. This is already surrounded by wetland vegetation, which cannot expand because it is surrounded by regenerating saplings. If some of the regrowth was sacrificed, then shallow digging and scrapping the higher ground around the existing wetland vegetation would enlarge and enhance this wetland.

We intend to increase the wetland area in **compartment 10**, which is already a natural wetland.

6.2 Felling – Changes to the Callander LTMP proposal, justification and financial implications

Recent changes to the compartments planned to fell have taken into consideration the impacts on the landscape and woodland resilience. The justification for these changes to the Callander LTM Plan proposal are described here. See *map 11 and Annexes 2 and 3* Aerial images to be felled.

Long term retention of **compartment 7a** will maintain the landscape value of Coilhallan Wood as it is seen from the surrounding area. Very tall sky line grand fir are outstanding landmarks and give the site the appearance of age and history. This is despite being only 75 or so years old, so this element will only increase over time.

The retention of **compartment 7a** will help to keep water on site and reduce input into flooding waters. There is one burn and some smaller culverted burns running through **7a**. These burns will be important for the creation of wetland habitats on site. Water from these burns will be diverted or slowed to create wetlands, which will also help to reduce flooding and run off downstream.

Biodiversity and local ecology will also benefit from the long term retention of **compartment 7a**. The retention of Western red cedar and grand fir will benefit the local populations of red squirrels and crossbills. Wetland creation will further support a more varied set of vegetation, insects, amphibians, birds and mammals.

Woodland resilience will be increased through a significant reduction in the cover by Japanese larch. By clear felling Japanese larch in **compartments 6 and 6b** with selective coup felling in **7a**, we will also greatly reduce the threat of infection on this site by *Phytophthora* species and harvest the timber while there is still value in it.

A felling licence will be applied for.

The financial implications of the changes in this plan have been considered but the answer is inconclusive without further survey and estimation of the value of the timber. We have been working with data from FES from 2016 for the survey and estimate of timber on site, see *Annex 1*. This data may need updating depending on FLS's opinion of the circumstances. Also, the data obtained does not cover **compartments 6 and 7**, so we do not currently know the value of the timber here in comparison with what is estimated for **compartments 6 and 7a**, which were included in the data analysis.

We have sought advice from former FES staff on the value of **compartments 6 and 7a**, based on the data provided. They estimate conservatively using the average standing rate the following values:

Compartment 6b / 85021 = 554 cubic metre = between £14,000 to £20,000

Compartment 7a / 85020 = 2823 cubic metre = £37,000

Compartment 6 *we do currently not have data*

Compartment 7 *we do not currently have data*

In order not to lose any value, **compartments 6** clear fell and **compartment 7** selective felling of only the Japanese larch will need to be worth at least £37,000.

6.3 Thinning

According to the data provided from FLS in 2016, we know that **compartments 6b, 7a and 14** have been thinned.

The plan is to thin dense areas of birch regrowth in the future. This is especially important in **compartments 8, part of 9, 11 and 12**, see *map 10*. **Compartment 5** needs birch and larch to be thinned out.

If management of seedlings and saplings is not achieved through a FGS, this may be able to be achieved by volunteers, as the scale of thinning is small.

6.4 Restocking with Native Broad Leaves

The intention is to allow natural regeneration of native broad leaves and some selected non-native species that are in the right location. In **compartments 7 to 12**, there is no need for planting at this time as the reduced deer pressure is allowing natural regeneration of ash, rowan, oak, blackthorn, alder alongside a proliferation of mixed birch, some beech and non-native conifers.

The removal of most of the regenerating non-native conifers is planned. Some regeneration of grand fir may be retained in **compartment 7a**. Most of the larch regeneration should be removed and possibly used for biomass fuel.

The regeneration will need to be managed by thinning. If management of seedlings and saplings is not achieved through a FGS, it may be achieved by volunteers as the scale of thinning is small.

In **compartments 6 and 6b**, restocking with native broad leaves is proposed. See *aerial maps 6 and 7*.

6.5 Management of Windblow

The windblow on site has been down for years and would only be valuable for firewood where it has not begun to rot. We plan to remove as much of the windblow as possible, leaving the remainder to rot. Windblow is in **compartments 6b, 7, 7a and 14**, see *map 8*.

Windblow with no value can be left on site to rot, and will be made safe when it is near to access points. Deadwood is a valuable resource for ground beetles and many other invertebrates, fungi and plants.

6.6 Deer Management

Red and roe deer use this site, especially in winter. Experienced volunteers are in place to conduct Herbivore Impact Assessments using the Scottish Forestry Woodland Grazing toolbox guidance, available at this link:

<https://forestry.gov.scot/woodland-grazing-toolbox>

Results of the HIA will feed back to the management plan and an increase in culling may be required.

6.7 Access

The Callander Landscape Partnership (which includes Loch Lomond & Trossachs National Park, FLS, CCDT, Stirling Council and several other partners) is currently progressing a new All Ability Trail in the north west of the wood. This comprises a loop running eastwards from the car park, together with a short link running westwards from the car park connecting into the adjacent lands owned by Wheels Cycle Centre and FABB (a charity helping disabled individuals). This will be completed before July 2021. The Callander Woodlands Group is very supportive of this development.

Although it is outside the wood, we should also mention a path being developed close to its north eastern boundary, alongside Invertrossachs Road. This is being progressed by the National Park, in conjunction with the landowner and CCDT and is intended to open in late 2020. Its effect will be to provide an off road route from the town to the entrance of the caravan park, where there is also an abandoned entrance to Coilhallan Wood.

We plan to reinstate a north south link across the wood from that abandoned entrance, which will link to path networks on both ends. This path was well used until the 1990s but has been allowed to fall into disrepair and disuse. We have consulted the national park, who have indicated informally that they would assist us in applying to whatever public fund replaces the IPA fund, plus any other Scottish Government access funds. We shall contribute our own funds from the profits from felling timber and may additionally apply to CCDT's community hydro fund.

See *map 9*, which shows the existing paths in blue and those planned in red.

We are also considering longer term developments. In the south eastern corner of the wood, alongside the A81 road, we envisage improved water management and the development of paths to reduce flooding and improve the safety of the entrance from the road. In the far south western corner, we envisage the creation of tracks for mountain biking. The plans for these are not yet finalised.

6.8 Control of INNS

Regenerating non-native conifers will be hand pulled by volunteers or sprayed with herbicide by licensed contractors. There is significant coverage by regenerating conifers which could be used for biomass fuel.

The plan is to pull, cut or spray regenerating beech seedlings and small saplings throughout the area. **Compartments 9 and 10** need to focus on beech seedling and sapling removal.

Piri piri burr and rhododendrons will be sprayed with herbicide by licensed contractors. The volume is low.

References:

HIA <https://forestry.gov.scot/woodland-grazing-toolbox>

River Teith SAC <https://sitelink.nature.scot/site/8367>

Protected species information <https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/protected-species/your-responsibilities/woodland-managers>

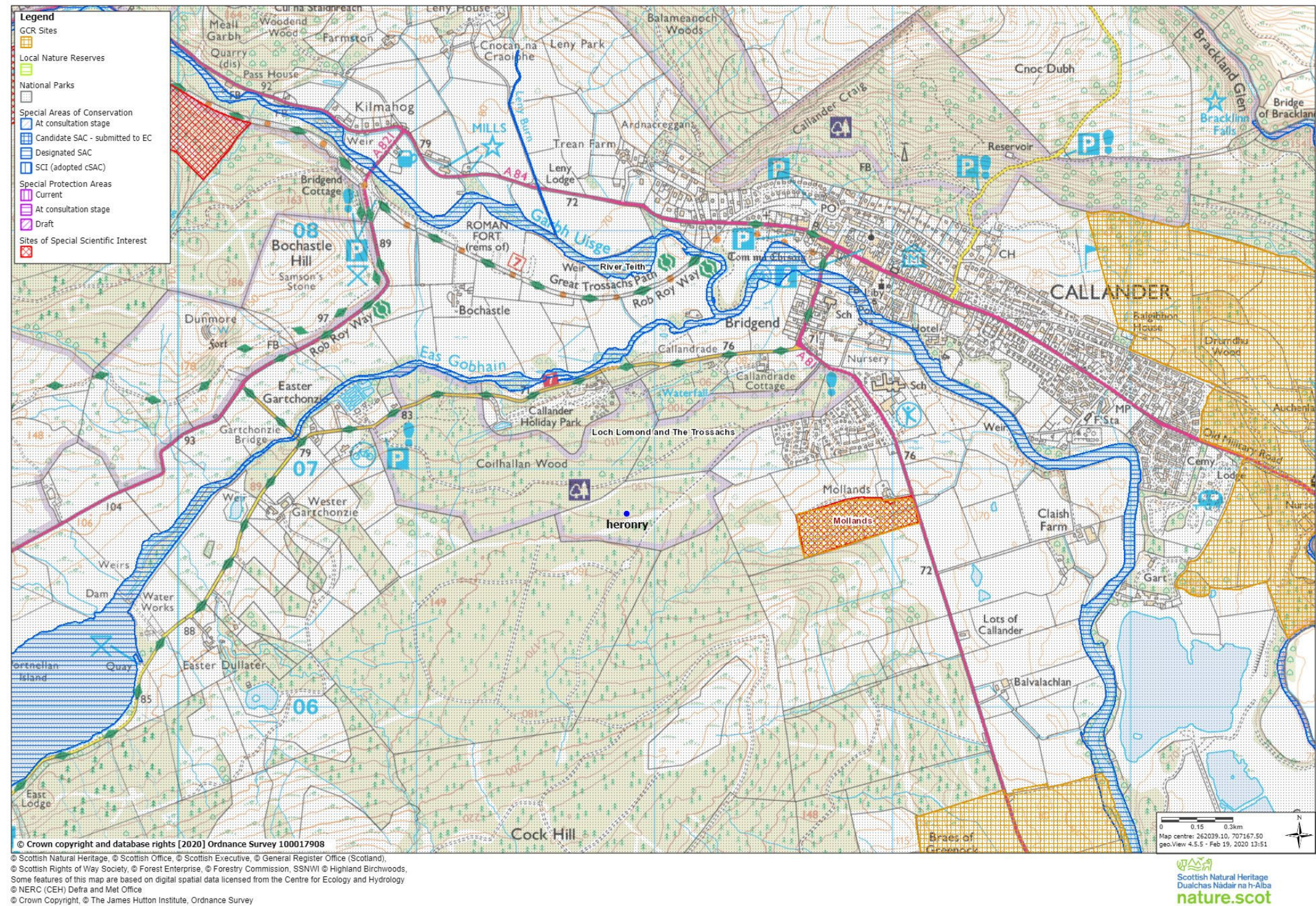
Annex 1: Timber data - FES 2016

[illegible]

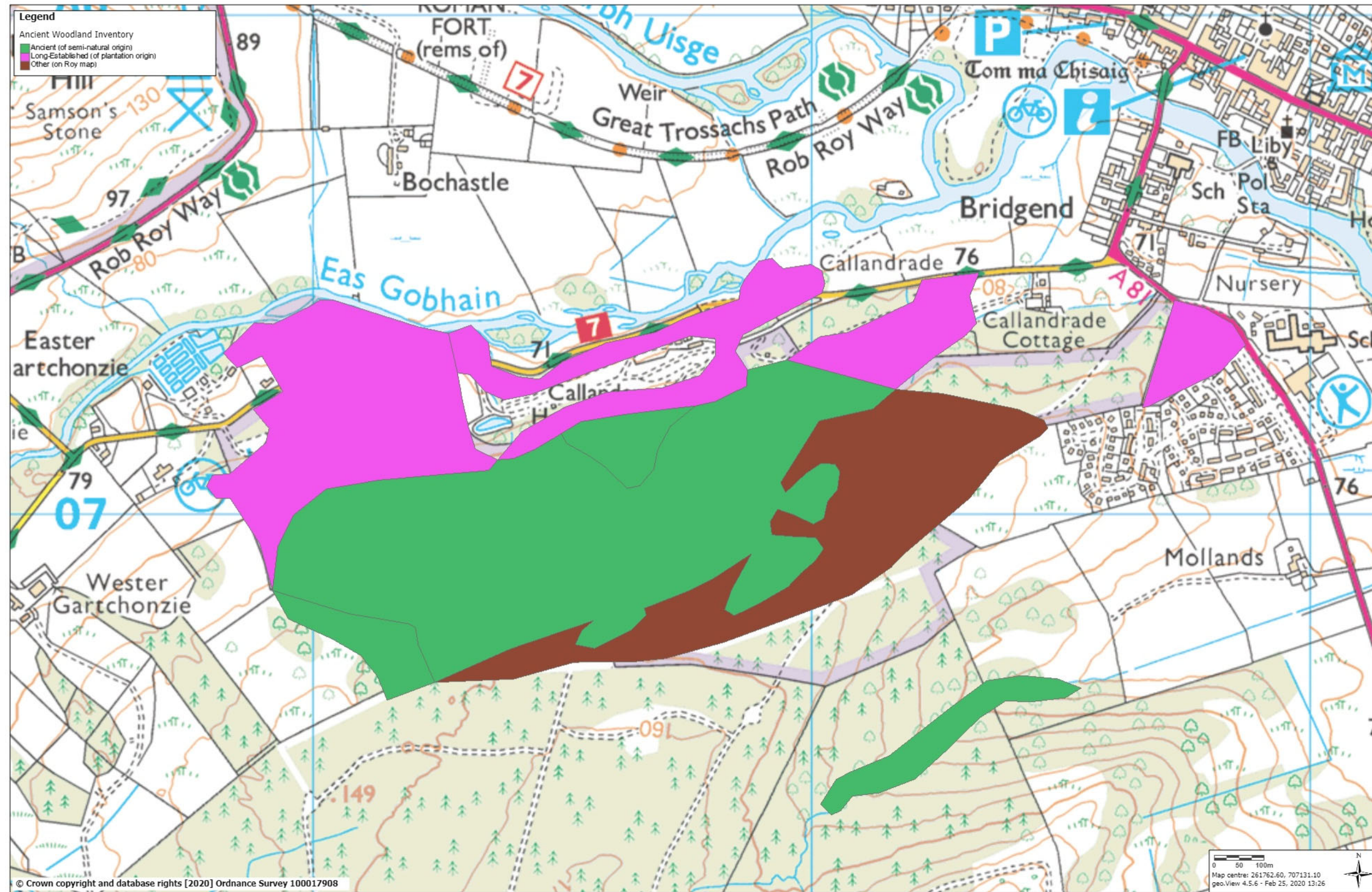
Windblow mostly dead apart from the JL in coupe 85018					
85018		JL	2.2	0.5	
85019			0.5	0	
85020			1	0	
85021			2.2	0	
			5.9		

Map 1: site location map and protected sites

geo.View map



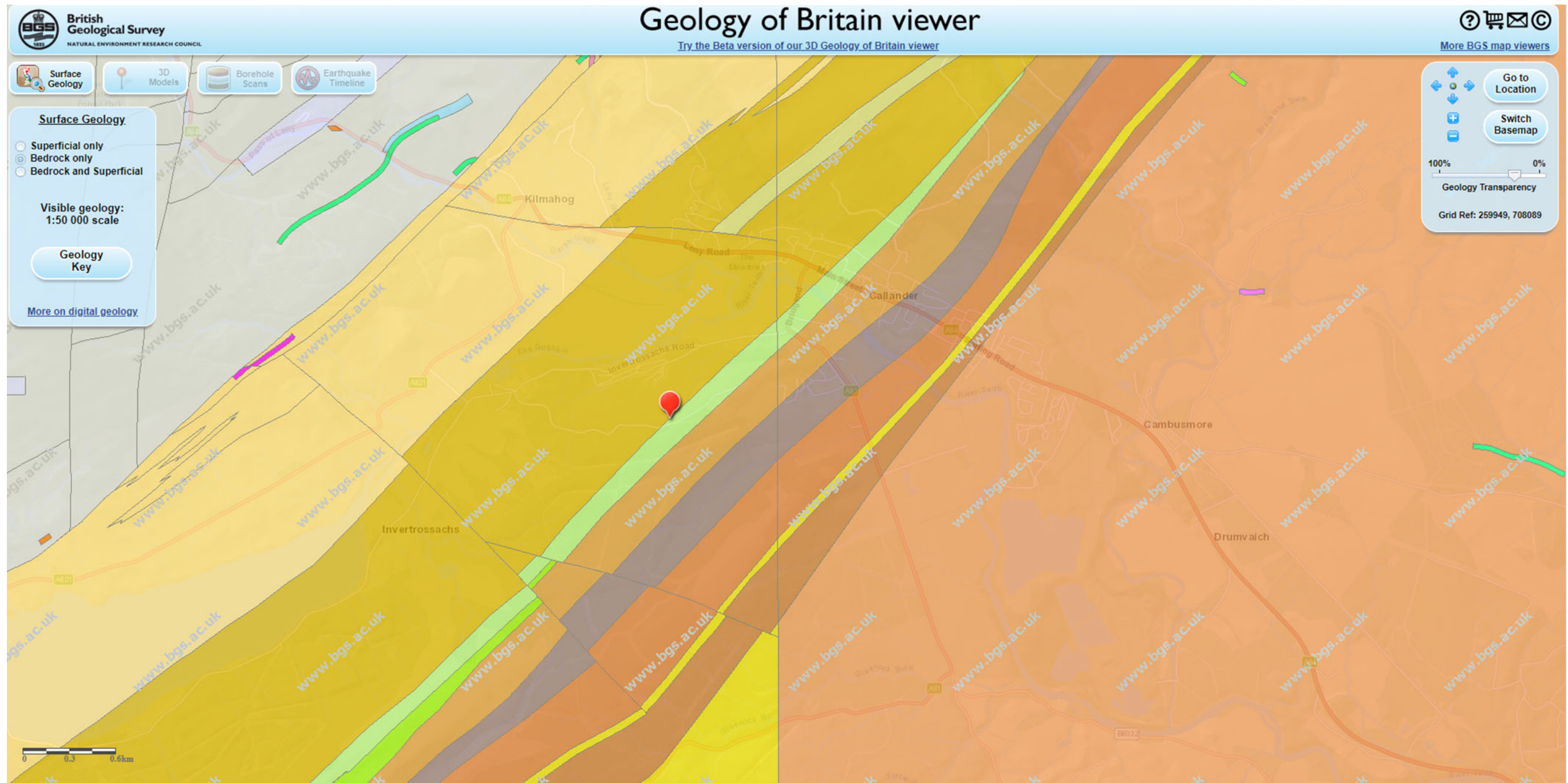
geo.View map



© Crown copyright and database rights [2020] Ordnance Survey 100017908

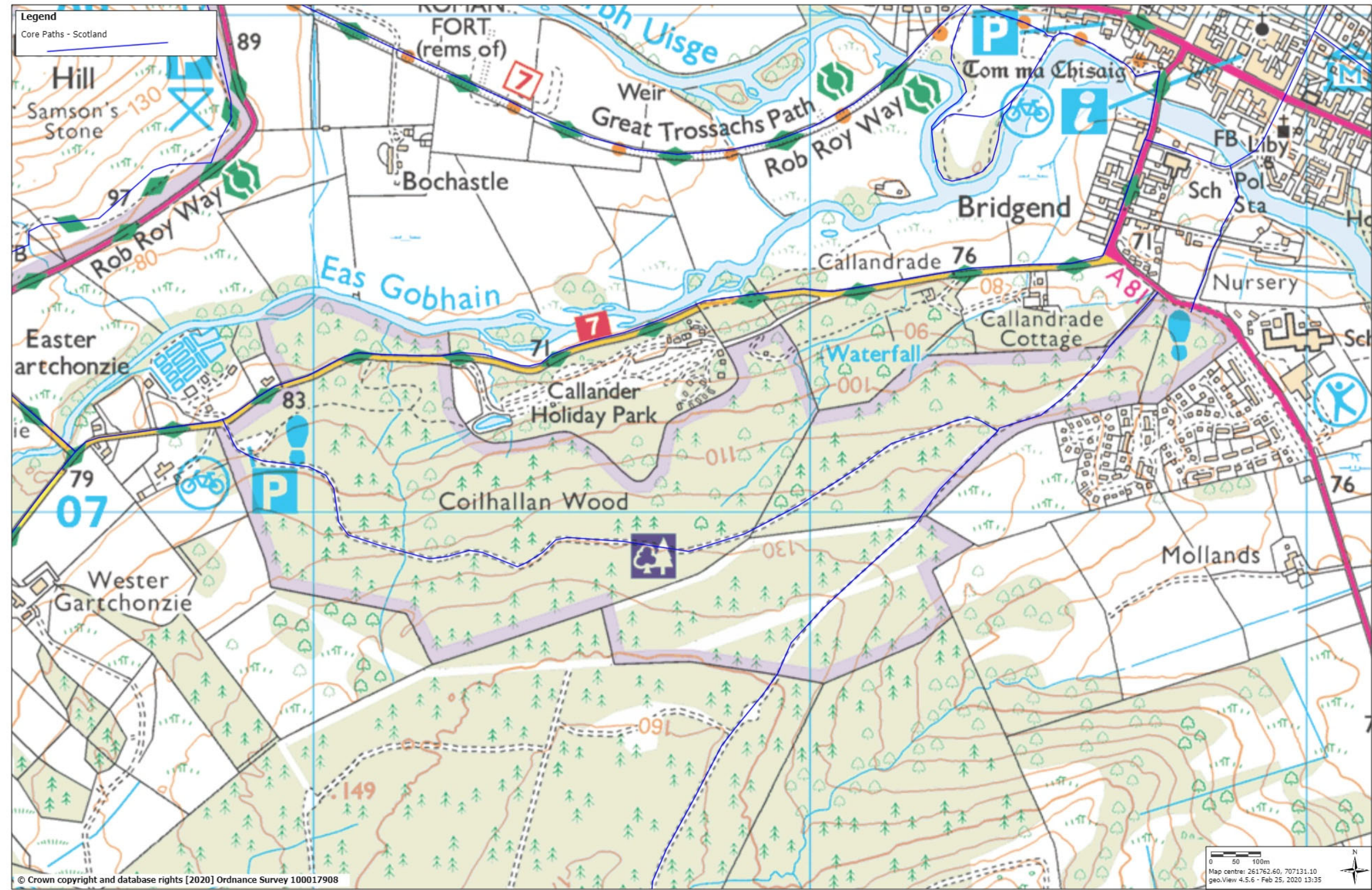
© Scottish Natural Heritage, © Scottish Office, © Scottish Executive, © General Register Office (Scotland),
© Scottish Rights of Way Society, © Forest Enterprise, © Forestry Commission, SSNIW © Highland Birchwoods,
Some features of this map are based on digital spatial data licensed from the Centre for Ecology and Hydrology
© NERC (CEH) Defra and Met Office
© Crown Copyright, © The James Hutton Institute, Ordnance Survey

Map 3: British Geological Survey soils map



Map 4: Public access and core paths

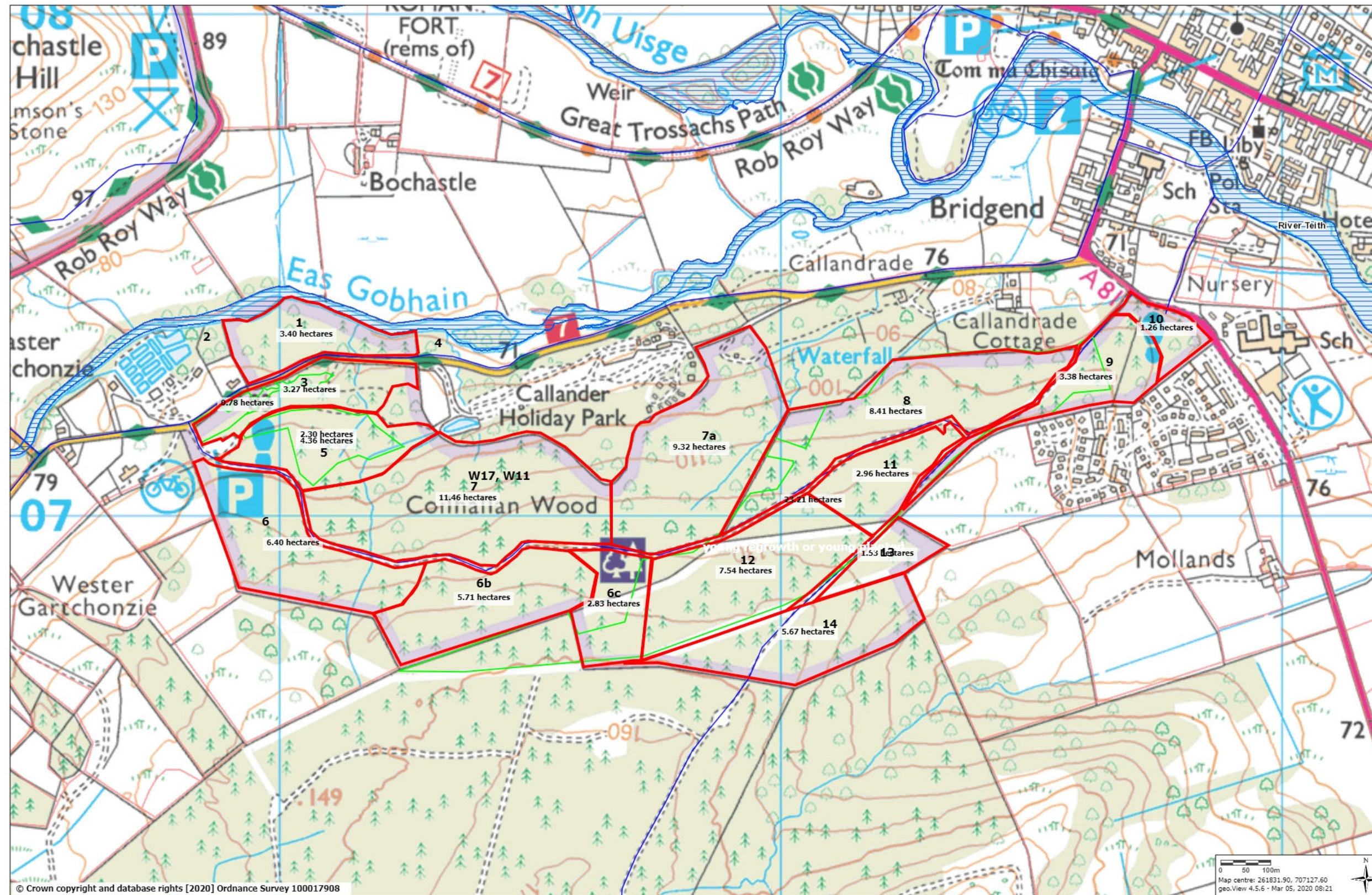
geo.View map



© Crown copyright and database rights [2020] Ordnance Survey 100017908
© Scottish Natural Heritage, © Scottish Office, © Scottish Executive, © General Register Office (Scotland),
© Scottish Rights of Way Society, © Forest Enterprise, © Forestry Commission, SSNW1 © Highland Birchwoods,
Some features of this map are based on digital spatial data licensed from the Centre for Ecology and Hydrology
© NERC (CEH) Defra and Met Office
© Crown Copyright, © The James Hutton Institute, Ordnance Survey

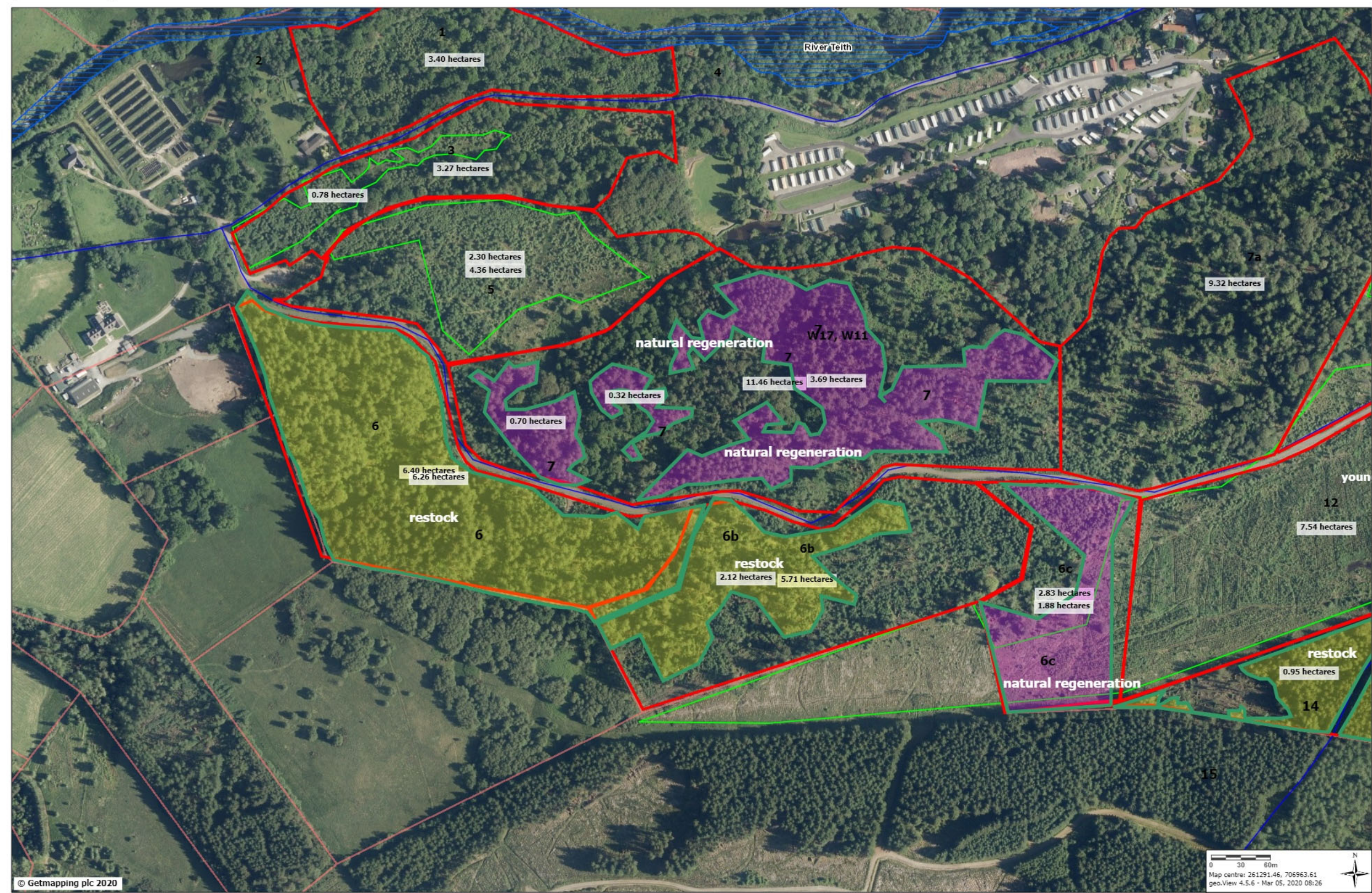


geo.View map



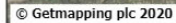
Map 6: Restocking west – aerial image

geo.View map



© Getmapping plc 2020
© Scottish Natural Heritage, © Scottish Office, © Scottish Executive, © General Register Office (Scotland),
© Scottish Rights of Way Society, © Forest Enterprise, © Forestry Commission, SSNWI © Highland Birchwoods,
Some features of this map are based on digital spatial data licensed from the Centre for Ecology and Hydrology
© NERC (CEH) Defra and Met Office
© Crown Copyright, © The James Hutton Institute, Ordnance Survey

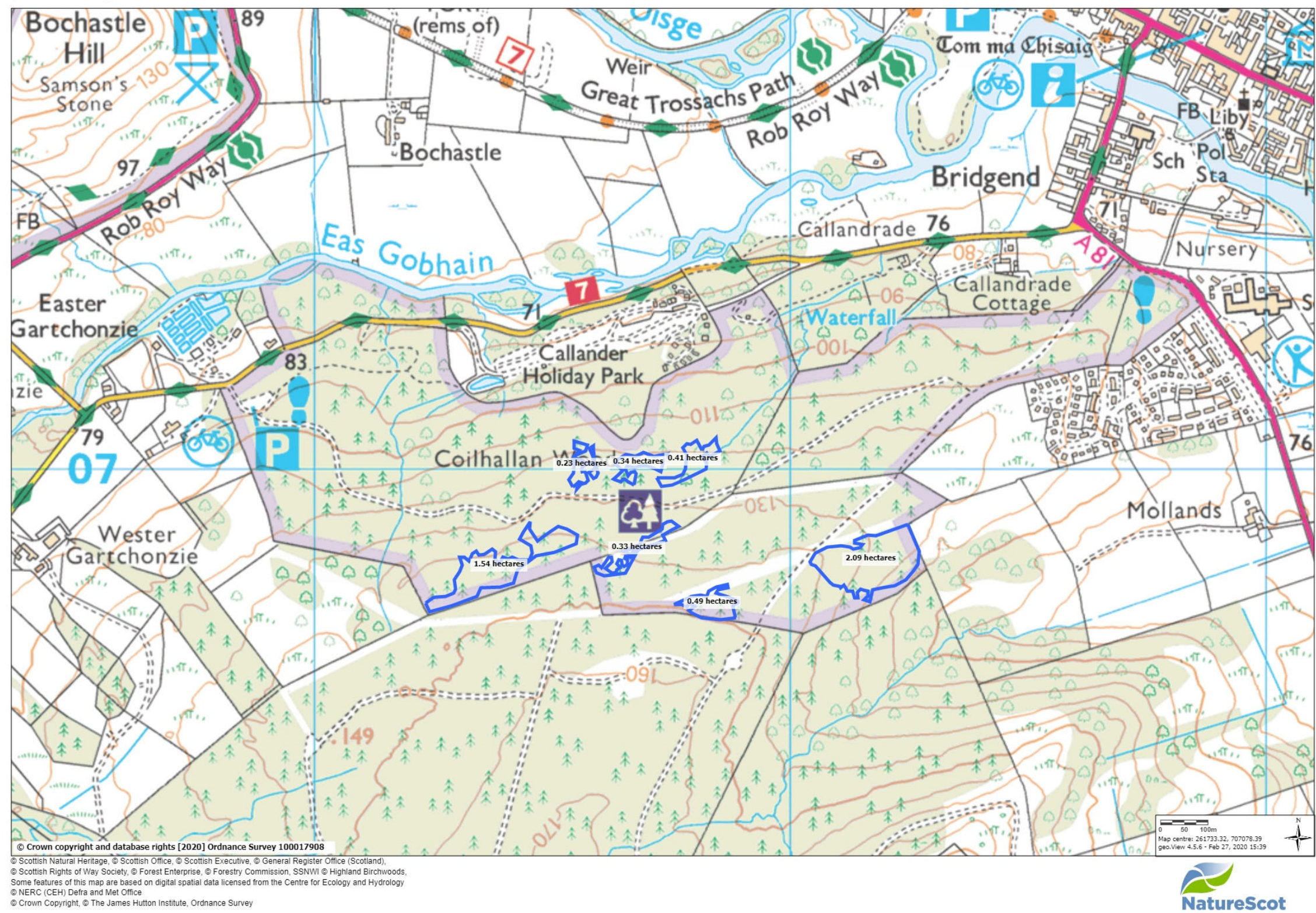
geo.View map



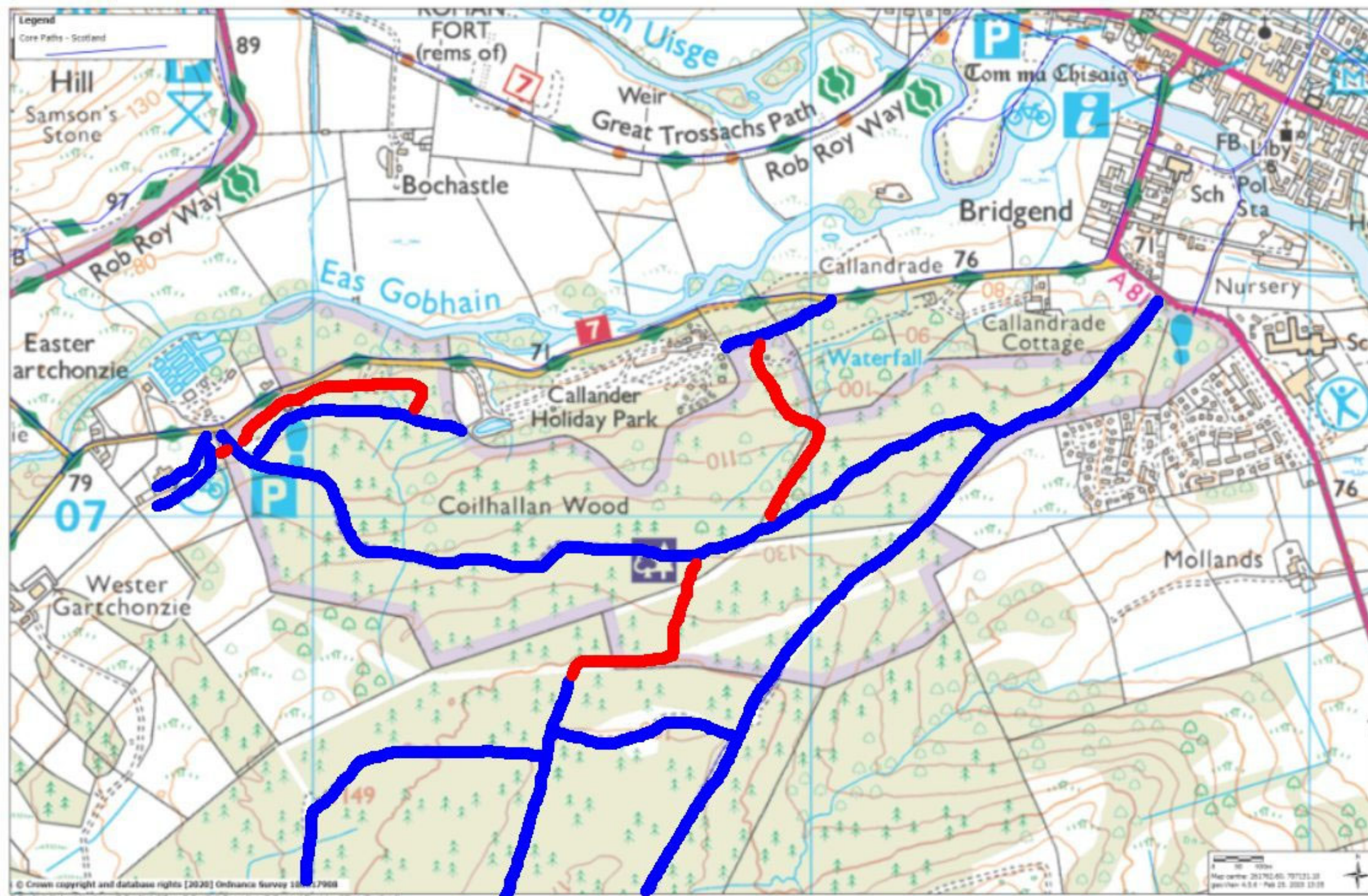
© Scottish Natural Heritage, Scottish Office, © Scottish Executive, © General Register Office (Scotland),
© Scottish Rights of Way Society, © Forest Enterprise, © Forestry Commission, SSNWI © Highland Birchwoods,
Some features of this map are based on digital spatial data licensed from the Centre for Ecology and Hydrology
© NERC (CEH) Defra and Met Office
© Crown Copyright, © The James Hutton Institute, Ordnance Survey

Map 8: Windblow areas

geo.View map

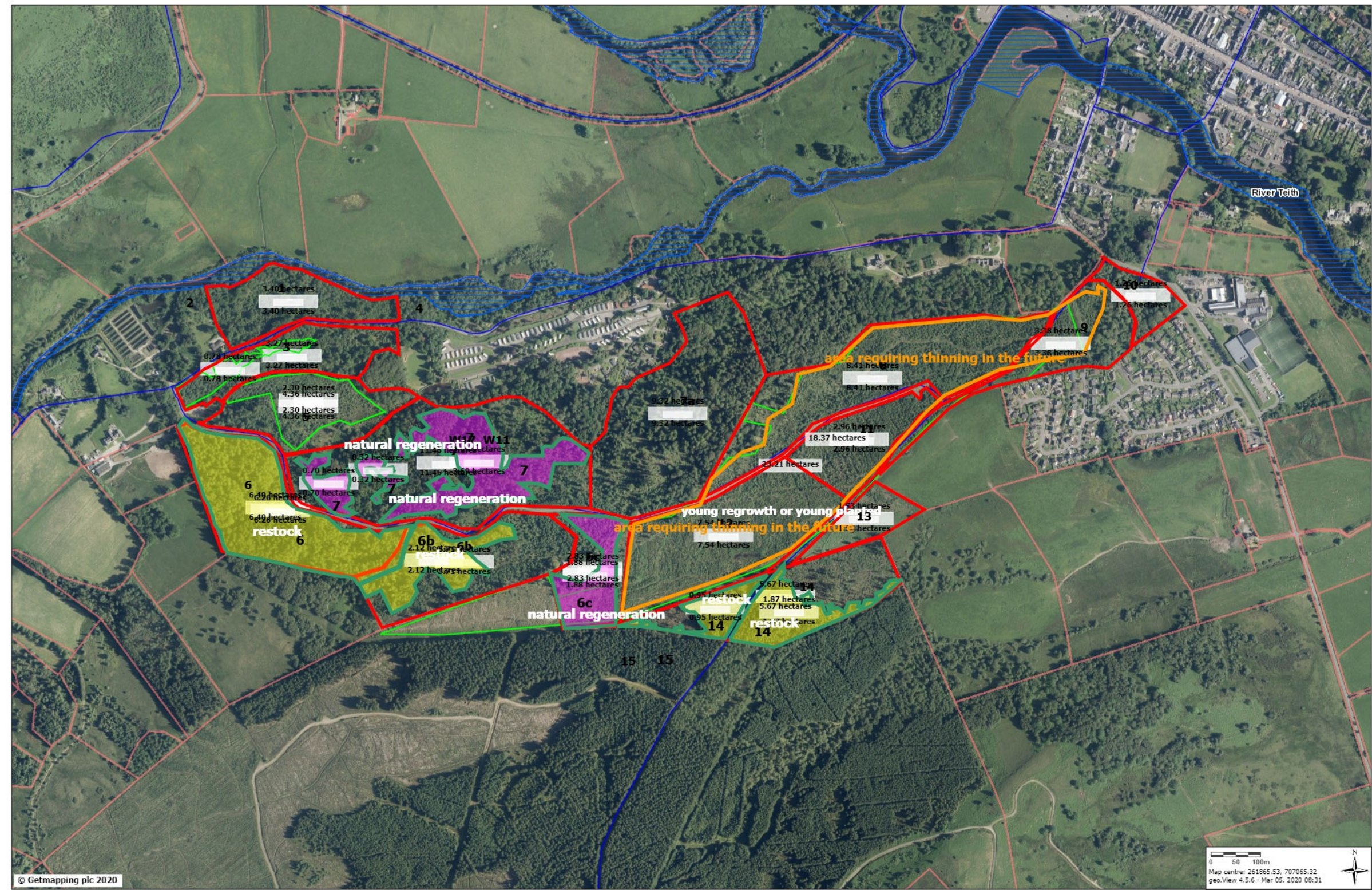


Map 9: New Tracks and pathways – Taken from the Callander Mountain Bike Trails Project, Coilhallan woods Feasibility Study



Map 10: proposed thinning – aerial image – area to thin shown in orange

geo.View map

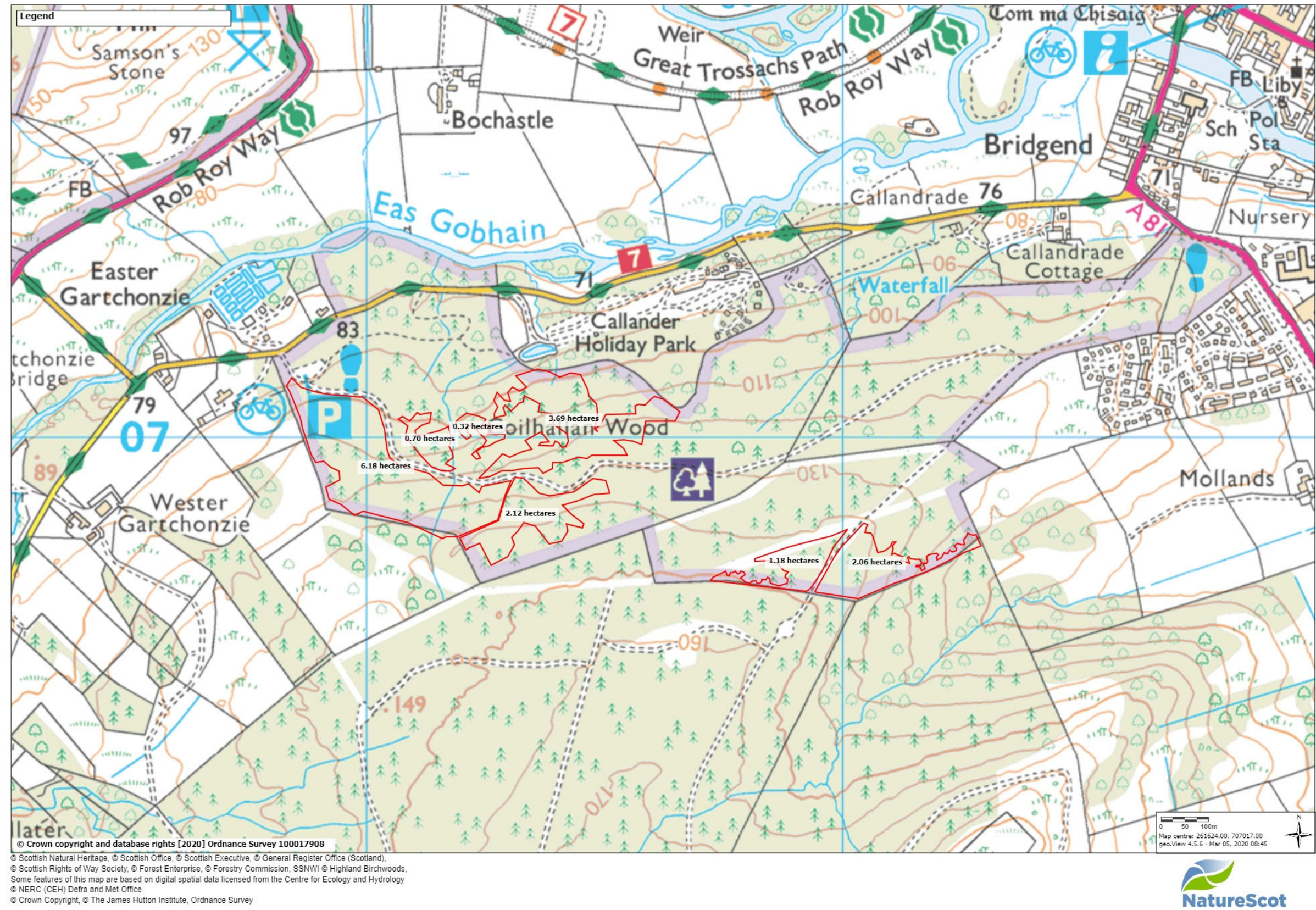


© Getmapping plc 2020
© Scottish Natural Heritage, © Scottish Office, © Scottish Executive, © General Register Office (Scotland),
© Scottish Rights of Way Society, © Forest Enterprise, © Forestry Commission, SSNW1 © Highland Birchwoods,
Some features of this map are based on digital spatial data licensed from the Centre for Ecology and Hydrology
© NERC (CEH) Defra and Met Office
© Crown Copyright, © The James Hutton Institute, Ordnance Survey



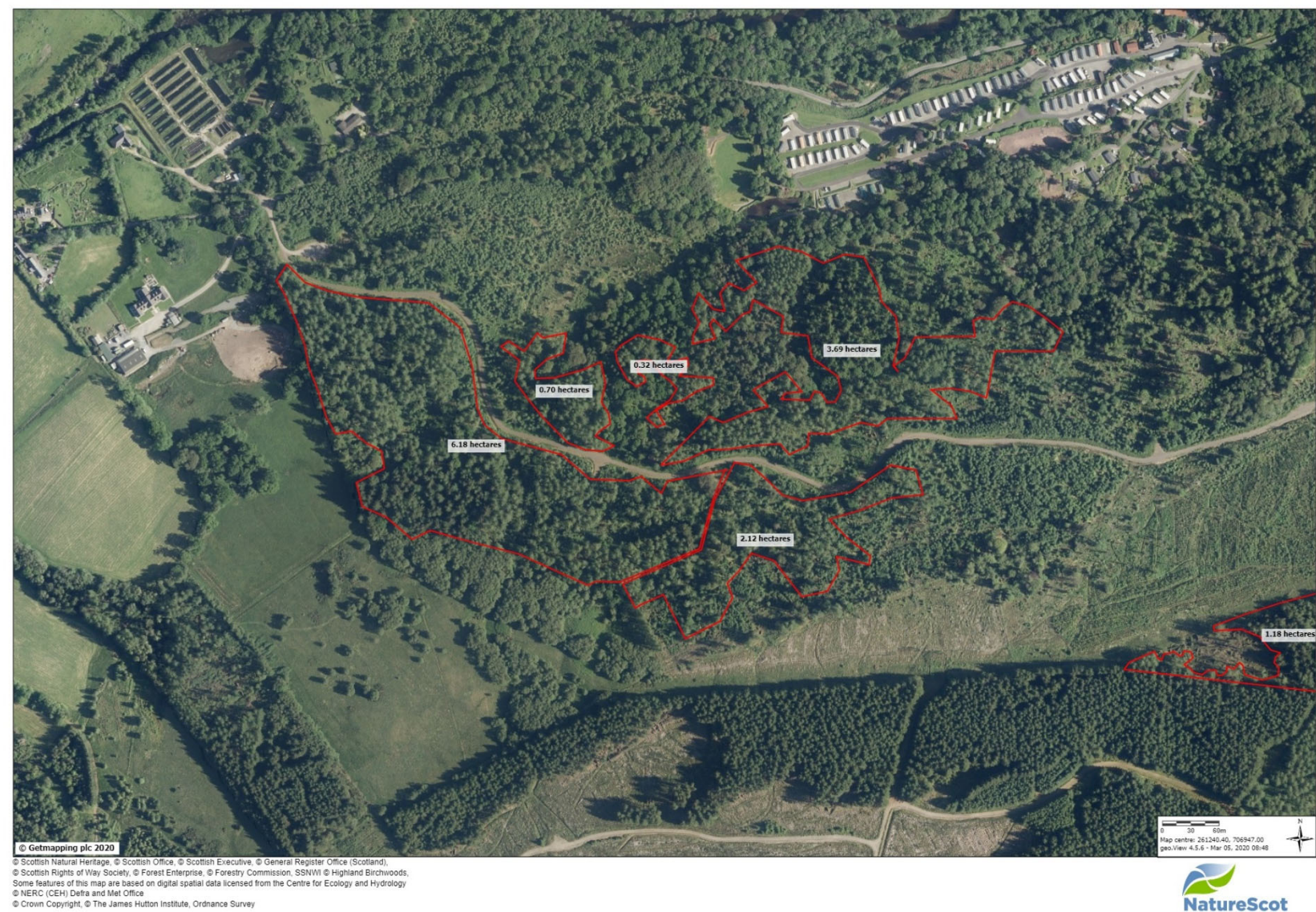
Map 11: Felling

Felling



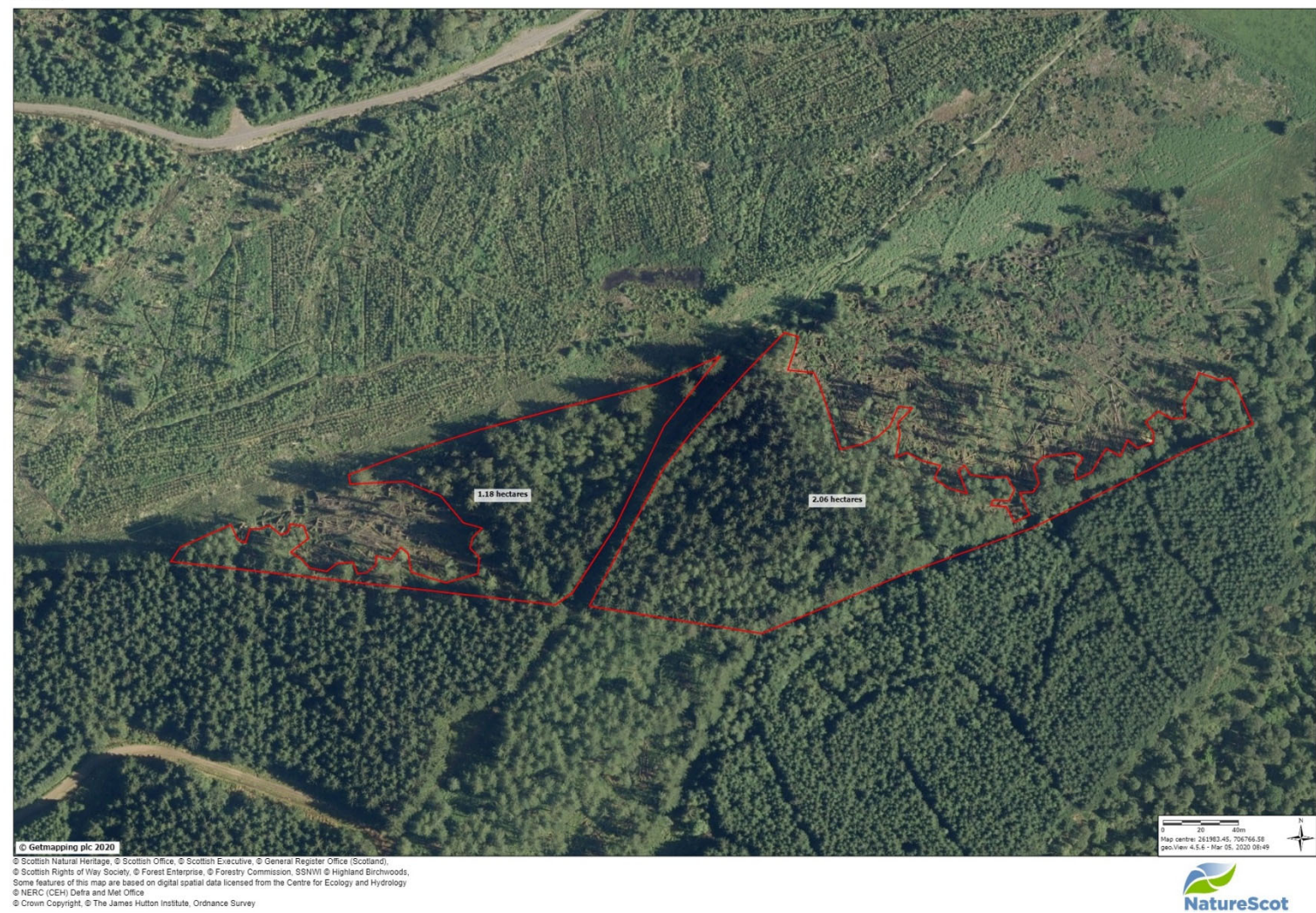
Annex 2: Aerial image of felling locations in detail - west end

Felling



Annex 3: Felling – east – aerial image

Felling



Annex 4: advice from FLS

From: John.Hair@forestryandland.gov.scot <John.Hair@forestryandland.gov.scot>
Sent: 14 February 2020 14:36
To: Henry Lima <Henry.Lima@nature.scot>
Subject: RE: Coilhallan Wood community buy out - request advice from FLS

Hi Henry

If the group want to fell the larch, an amendment to the current plan will be required.

Generally, spruce is the most valuable timber.

Advice has been given to the group (on several occasions) to speak to the local woodland officer in SF, and I recommend this should be your next step, before any more proposals are suggested.

Regards

John

From: John.Hair@forestryandland.gov.scot <John.Hair@forestryandland.gov.scot>
Sent: 13 February 2020 14:34
To: Henry Lima <Henry.Lima@nature.scot>
Cc: swan227@btinternet.com; paulgprescott@googlemail.com
Subject: RE: Coilhallan Wood community buy out - request advice from FLS

Hi Henry

Happy to help out with any factual information you might need on the woodland, but wouldn't be able to advise or make recommendations.

I can run a "production forecast", which would give an indication of the amount of timber in the woodland, however it would be for the Trust to decide what is worth felling. The forest plan process (as I'm sure you know) needs to consider structural diversity and how much of the mature forest to retain for that purpose.

Value is a difficult one - the price we might realise for the timber could easily be different to what the Trust might get, so I would be reluctant to give an estimate. The timber market is notoriously volatile, any estimate would quickly become outdated.

I will speak to my deer management colleagues and obtain cull numbers and any population figures, although given the land cover around Coilhallan the population will be relatively mobile.

Let me know if there's anything else you need.

Regards

John

Annex 5: advice from SF

Hi Henry,

I have managed to discuss this with an operation manager today, and we have the following comments to your queries.

Before answering your questions, I just wanted to clarify the difference between Scottish Forestry and Forestry & Land Scotland, as it appears there might be some confusion between the two organisations. Our organisation, formerly Forestry Commission Scotland (FCS) included Forest Enterprise Scotland (FES). We as FCS and covered grants and regulations, whilst FES managed the government owned forest estate. In April last year we split from the Forestry Commission, and FCS became Scottish Forestry (SF) and FES became Forest & Land Scotland (FLS).

We (SF) cover grants and regulations, whilst FLS manage the government owned forestry estate. Apologies for all of the acronyms here, but thought I would just explain that before using some of them in my feedback below.

1. Is it ok to change what is felled?

Yes, it can be through an amendment to a forest plan, though this needs to be justified.

2. Is the value of red cedar and fir much greater than the value of the J Larch?

This depends on the quality of the trees. I advise you to seek an independent assessment of the value of the timber here, as unfortunately this is not a service that we (SF) can provide.

3. Please advise.

As we did not write the plan I am a little confused here and not too sure what the FLS coupe numbers refer to. I can see the Land Management Plan written by FES approved in 2016, which are the FLS coupe numbers you are referring to? When writing your plan, if you are not happy with the numbering of management units then you can re do them to suit the community needs.

4. Is total tonnes the important parameter to figure out value? I can't tell the total tonnes of Japanese Larch in compartments 6, 6b and 7a from this sheet, can you provide this? Can you also provide total tonnes for W red cedar (673?) and grand fir (looks like 1039)?

Total tonnage is an important parameter when working out value of a stand of trees, this or m³. With regards to providing total tonnes, I would recommend seeking the advice of forestry agent as (similar to point 2.) this is not something that we (SF) can do.

5. I suspect you can't tell me what the value would be, but maybe you can tell me if J larch generally is of equal or higher value than W red cedar and grand fir, all about 70 years old.

This all depends on the quality of the trees, I refer you back to points 2 and 4.

6. The LTP on page 21 section 5.1.1 states the plan for LISS and I think this could be done in compartment 7a instead of 6, 6a and 7a. Does that seem reasonable to you?

Refer back to point 1, this absolutely might be possible, but it will need to be justified. From our initial discussions then this could sound reasonable, but it will need to be assessed and approved either as part of a plan assessment or a plan amendment.

Earlier you had asked for advice on the format of such plans, the following link has information regarding templates: <https://forestry.gov.scot/support-regulations/forestry-grants/forest-plan-resources>. If the woodland is under 100 ha then it will be a management plan, if over 100 ha then it is a Long Term Forest Plan.

Kind regards,

Charlie