



Offshore Wind Power Limited

# West of Orkney Windfarm Onshore EIA Report

## Supporting Study 10: Forestry and Woodland Survey Report

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## **WOW Forestry and Woodland Survey and Report**

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## Summary

Fountains Forestry Ltd was commissioned by Xodus Group to carry out a forestry and woodland baseline survey on three woodland/forest sites within a project area which were outlined in maps provided. The purpose of this survey was to support the Onshore Environmental Impact Assessment (EIA) chapter 12: Land Use and Other Users (including forestry) which assess the potential effects from the onshore Project on the forestry resourcing. Fountains Forestry Ltd were commissioned to carry out a walk over survey of all the other woodland falling within the project area on maps provided. (Woodland in the north Grid ref ND 0299 6940 to woodland in the south of the survey area Grid ref ND 1551 5472).

The survey work included:

- A desk-based study.
- A more in-depth data gathering survey of Achanarras (Spittal substation), Sibster Forest, Hill of Howe.
- A walk over survey of all woodlands within the planning application area.

The desk-based study highlighted three sites which appear on the Native Woodland Survey of Scotland map/data set. These woodlands are as follows:

- Hill of Howe; comprising a total area of 0.93Ha.
- Achanarras Farm Woods has two areas of woodland classed as Nearly Native Woodland, one of 12.09Ha and one of 5.99Ha.

The three woodlands are all part of a larger woodland area but not all the woodlands fall within the onshore Project area.

The following recommendations are made:

### Woodland Removal

- The impact on the woodlands using the 100m wide corridor for tree and scrub removal would be minimal overall. This is especially the case in the woodland strips at Hill of Howe and Spittal substation. The woodlands are very narrow at this point so the overall removal of woodland area would be very small. The woodlands at these locations are only young/small in height so have not had time to develop into a mature woodland ecosystem. There would be a slightly larger impact on Sibster Forest due to the overall size of the woodland area that would need to be removed. There is already a lot of open habitats within Sibster Forest and an existing wayleave of this size so removal of trees/scrub would not impact greatly on the woodland ecosystems due to the overall size of the forest area. The removal of trees to facilitate installation and maintenance of the onshore Project is equal to the size of a small clearfell<sup>1</sup> in normal forest management system.
- It is thought that the removal of trees of this size and scale would be best carried out with a mulching machine and motor manual felling (chainsaws) for any larger trees. This would mean that there would be no need for additional infrastructure to be put in place to facilitate operations.

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<sup>1</sup> The removal/felling of mature woodland or forest through mechanical means.

- Before any woodland operation were carried out a walk-through survey would need to be undertaken by a trained ecologist to ensure no flora or fauna is damaged or disturbed. Bird breeding season (March to August inclusive) should also be avoided due to the age and size of the trees that would need to be removed.
- If tree removal is required then compensatory planting will have to be carried out to offset any loss of woodland area as set out later in the report.

## 1 Introduction

Fountains Forestry was commissioned by Xodus Group to carry out a forestry assessment, including a baseline survey and an impact assessment to support the impact assessment provided in chapter 12: Land Use and Other Users, Including Forestry, of the Onshore Project EIA. An in-depth survey of three of the woodland areas within the Onshore Project area and a walk-through survey of other woodlands was undertaken (Figure 1). The study area used for this report is defined as the Red Line Boundary, illustrated in Figure 1.

The survey areas comprised of three Sites/woodlands: Woodland strip located at Hill of Howe; Woodland strip located at Achanarras (Spittal substation); and Sibster Forest (Forestry and Land Scotland). Walk through survey of all other woodlands was carried out.

The woodland areas were compartmentalised as is common practice within the forestry industry to make data gathering more effective. In total there are 27 compartments which were then divided into separate sub-compartments within the survey area which were mapped. (Appendix 1)

The survey work included:

- A desk top study;
- Baseline survey of three highlighted areas; and
- Walk through survey of all woodlands within the area provided.

The forestry assessment included:

- Baseline survey of woodlands/forest highlighted areas; and
- Impact assessment and proposed mitigation measures.



## 2 Legislation

The following section summarises relevant legislation and other relevant conservation status categories.

### 2.1 Forestry and Land Management (Scotland) Act 2018

The Bill for this Act of the Scottish Parliament was passed by the Parliament on 20th March 2018 and received Royal Assent on 1st May 2018

An Act of the Scottish Parliament to make provision about Scottish Ministers' functions in relation to forestry; to make provision about Scottish Ministers' functions in relation to the management of forested land and other land; and for connected purposes.

### 2.2 The Forestry Act 1967 (Amended)

Is the basis for the regulation of felling through the felling license system. Other statutory powers apply to sites designated for their special interest and to development. Woodland removal (under the title of 'Deforestation') comes within the scope of the Environmental Impact Assessment (Forestry) (Scotland) Regulations 1999 and The Scottish Government's Policy on Control of Woodland Removal (Scottish Government, 2009).

### 2.3 Highland Forestry and Woodland Strategy (2018)

The Highland Forest and Woodland Strategy (HFWS) is one of a series of Supplementary Guidance documents prepared by The Highland Council to support its Highland-wide Local Development Plan (2012)

### 2.4 The United Kingdom Forestry Standards

The United Kingdom Forestry Standard (UKFS) is the reference standard for sustainable forest management in the UK. It outlines the context for forestry, sets out the approach of the UK governments to sustainable forest management, defines standards and requirements, and provides a basis for regulation and monitoring – including national and international reporting.

### 2.5 Non-native species

For species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended in Scotland by the Wildlife and Natural Environment (Scotland) Act 2012), it is an offence to:

- plant, or otherwise cause to grow, a plant in the wild at a location outside its native range.

### 2.6 Sites of Special Scientific Interest

Under section 3 of the Nature Conservation (Scotland) Act 2004, areas of land with recognised special interest for their flora, fauna, geology, or geomorphology can be established as Sites of Special Scientific Interest (SSSI). This statutory designation protects these sites from intentional or reckless damage and the site's natural features must be managed appropriately.

### 3 Survey Methods

Different survey methods are employed depending on the type of woodland/forest that is being surveyed. This is due to the variable nature of this type of survey. The differing methodologies are as follows and are broken into the different woodland types we that are encountered as part of the survey work.

All survey work is recorded via GPS/Handheld Device, Standardised recording sheet and georeferenced photograph. The surveys/methods are all non-intrusive surveys and any equipment used is removed after photography and forestry areas left as encountered. The study area used for this report is defined as the Red Line Boundary, illustrated in Figure 1.

The surveys follow standard forestry methodologies which can be seen in Table 1 and Table 2 below.

#### 3.1 Commercial Forests

Commercial forests are broken into the following categories.

##### 3.1.1 Establishing Forests

Ranges from newly planted saplings that could be newly planted on new sites or as part of a restocking of a felled area through to trees which still have vigorous height growth at 2 meters.

##### 3.1.2 Survey Method

- Ground truth mapping and compartmentalization using geo-rectified maps on handheld devices.
- Ground truth species composition through walking the woodland to verify. Make any adjustments that are needed on handheld device or GPS unit.
- Survey for stocking density of crop (trees per hectare) by putting in sample plots across the site. Plot locations will be logged on GPS, geo-referenced photo taken facing north and then location added to a map.
- Identify any insect or herbivore damage to crops.

#### 3.2 Pole Stage Forests

Ranges from when young trees start to shed lower branches to when height growth is beginning to slow down, and crowns expand.

##### 3.2.1 Survey Method

- Ground truth mapping and compartmentalization using geo-rectified maps on handheld devices.
- Ground truth species composition through walking the woodland to verify. Make any adjustments that are needed on handheld device or GPS unit.
- Measure height and density of crops and estimate volume of timber on site if applicable. This is carried out through sample plots. Plot locations are logged on GPS, geo-referenced photo taken facing north and then location added to a map.

#### 3.3 Mature/Commercially Viable (30 years + for this geographic location)

Trees that have grown beyond pole stage and rate of growth has begun to slow and crown expansion is marked. This is when crops can and will be felled as they have reached economic maturity.

##### 3.3.1 Survey Method

- Ground truth mapping and compartmentalization using geo-rectified maps on handheld devices.



- Ground truth species composition through walking the woodland to verify. Make any adjustments that are needed on handheld device or GPS unit.
- Measure height and density of crop and estimate volume of timber on site if applicable. This is carried out through sample plots (Table 1 and 2) Plot locations will be logged on GPS and then location added to a map.

### 3.4 Native Woodland

Native tree species are those that became established in the British Isles after the most recent glacial period, around 11,000 years ago. Native woodland is descended directly from these trees.

#### 3.4.1 Newly Establishing Native Woodland

Native woodland that has been planted on new site or planted as part of a restocking programme after harvesting has occurred. Could also be restocking through natural regeneration after harvesting of a site. This is as long as the seed source of the native trees are local to that area and within the seed zone.

#### 3.4.2 Survey Method

- Survey for stocking density of trees (trees per hectare) by putting in sample plots across the site. Plot locations will be logged on GPS, geo-referenced photo taken facing north and then located added to a map.
- Identify any insect or herbivore damage to crops.

### 3.5 Established Native Woodland

Native woodland that has been established for a number of years and most likely naturally occurring.

#### 3.5.1 Survey Method

- Walk through survey of the woodlands to establish habitat type, species composition, canopy cover, age range, herbivore damage/pressure presence of any non-native exotics.

**Table 1 Alternative plot size and area**

<b>Planting density (plants/ha)</b>	≥3967	2000-3966	1006-1999	399-1005	200-398
<b>Spacing (m)</b>	≤1.59	1.60-2.24	2.25-3.15	3.16-5.01	5.02-7.07
<b>Plot area (ha) which gives at least 20 locations / plot</b>	<b>.005</b>	<b>.01</b>	<b>.02</b>	<b>.05</b>	<b>.10</b>
<b>Circular Plot Radius (m) which gives at least 20 locations / plot</b>	4.0	5.6	8.0	12.6	17.8
<b>Square Plot Length (m) which gives at least 20 locations / plot</b>	7.1	10.0	14.1	22.4	31.6

**Table 2 Indicates the minimum number of sample plots for uniform and variable strata, based upon the size of each stratum and whether or not open ground is clearly mapped**

<b>Net area of stratum</b>	<b>Uniform Stratum</b>	<b>Variable Stratum – OG Mapped</b>	<b>Variable stratum – OG is less than 20% and not mapped</b>	<b>Variable stratum – OG is over 20% and not mapped</b>
<b>&lt;0.5ha</b>	2	3	4	5
<b>0.5-2.0ha</b>	3	4	5	6
<b>2.0-10.0ha</b>	4	6	7	8
<b>Over 10.0ha</b>	8	9	11	12



## 4 Results

### 4.1 Desk-based Study

A search of digital datasets and open online information was carried out ahead of the land-based survey being carried out. This was to better understand what is already recorded in the field.

### 4.2 Ancient Woodland Inventory of Scotland (AWI)

Only one of the woodland sites within the survey area is listed on the AWI. The area in question is associated with the woodlands surrounding the Forss House hotel. The woodlands in this area are classed as Long-established woodlands of plantation origin (LEPO). These areas of woodland have been interpreted from maps and have been continuously wooded since 1860. These woodlands have developed semi-natural characteristics.

### 4.3 Other Notable or Protected Sites

No other notable or protected sites were highlighted in the desk-based study carried out. There are no woodland SSSIs, SACs or other notable/protected sites within the study area or adjacent to the study area.

### 4.4 Field Baseline Survey

An in-depth field-based survey was carried out using the above methodology in three of the woodland areas within the onshore Project area. These are further detailed in sections 4.5, 4.6 and 4.7. These areas and sub-compartments can be seen on the maps. (Appendix 1). In addition, a walk-over survey was undertaken of all other woodlands and details are provided in Appendix 1 (Figures 3, 5, 6, 7, 9, 10, 11, 12, 13, 14).

## 4.5 Woodland strip located at Achanarras (Spittal substation)

Property Location:	ND151556		
Survey and Species Figure	Appendix 1, Figure 2		
Total Area:	0.934ha		
Landowner:	Scottish Hydro Electric Transmission PLC		
Date:	14.02.2023		
Compartment No	5		
Sub Compartment No	5a1		
Area	0.937ha		
Species	Common Alder Rowan Goat Willow Norway Spruce		
Age (approx.)	9 years		
Form (Good/Fair/Poor)	Relatively good form and vigour.		
Height (Average)	1.5 - 5m		
Soil Type	Mixed soil bund in places (man-made)		
Stems Per Ha	1600-1900		
Protection	Deer fence, rabbit netting and 0.6m tree shelters		
Ground Preparation	Earth bund (man-made) in places		
Volume Per Ha	N/A Young trees		
Herbivore Damage	No	Description	N/A
Weevil Damage	No	Description	N/A
General Comments			
<p>This woodland site did not appear in the desk-based assessment carried out prior to the site survey and was only discovered while site surveys were being carried out. This woodland has been planted as a shelterbelt/screen to block out the view of the substation at this location. Larger trees were used in place to help aid with the quick establishment of this screen.</p> <p>The woodland has been deer fenced and rabbit netted to keep out domestic livestock, exclude Red Deer and Roe Deer. 0.6m tree shelters have been used to prevent damage from Brown Hares on the site. The protection measure has allowed this woodland to establish without the impact/damage herbivores can cause.</p>			

Property Location:	ND151556		
Survey and Species Figure	Appendix 1, Figure 2		
Total Area:	0.223ha		
Landowner:	Scottish Hydro Electric Transmission PLC		
Date:	14.02.2023		
Compartment No	5		
Sub Compartment No	5a2		
Area	0.223ha		
Species	Open Ground no tree species present in this area		
Age (approx.)			
Form (Good/Fair/Poor)			
Height (Average)			
Soil Type	Man made through excavation		
Stems Per Ha	1600		
Protection	Deer Fence. Rabbit Netting and 0.6 m tree shelters		
Ground Preparation			
Volume Per Ha			
Herbivore Damage	No	Description	N/A
Weevil Damage	No	Description	N/A
General Comments			
This area of woodland is open ground due to a wayleave (electrical) running through it.			

Property Location:	ND151556		
Survey and Species Figure	Appendix 1, Figure 2		
Total Area:	0.934ha		
Landowner:	Scottish Hydro Electric Transmission PLC		
Date:	14.02.2023		
Compartment No	5		
Sub Compartment No	5a3		
Area	0.437Ha		
Species	Common Alder Goat Willow Norway Spruce		
Age (approx.)	9 years		
Form (Good/Fair/Poor)	Relatively good form and vigour.		
Height (Average)	1.5m – 5m		
Soil Type	Man made through excavation		
Stems Per Ha	1600		
Protection	Deer Fence. Rabbit Netting and 0.6 m tree shelters		
Ground Preparation	None		
Volume Per Ha	N/A		
Herbivore Damage	No	Description	N/A
Weevil Damage	No	Description	N/A
General Comments			
<p>This woodland site did not appear in the desk-based assessment carried out prior to the site survey and was only discovered while site surveys were being carried out. This woodland has been planted as a shelterbelt/screen to block out the view of the substation at this location. Larger trees were used in place to help aid with the quick establishment of this screen.</p> <p>The woodland has been deer fenced and rabbit netted to keep out domestic livestock, exclude Red Deer and Roe Deer. 0.6m tree shelters have been used to prevent damage from Brown Hares on the site. The protection measure has allowed this woodland to establish without the impact/damage herbivores can cause.</p>			

Property Location:	ND151556		
Survey and Species Figure	Appendix 1, Figure 2		
Total Area:	0.465ha		
Landowner:	Scottish Hydro Electric Transmission PLC		
Date:	14.02.2023		
Compartment No	5		
Sub Compartment No	5a4		
Area	0.465ha		
Species	Common Alder Goat Willow Norway Spruce		
Age (approx.)	9 years		
Form (Good/Fair/Poor)	Relatively good form and vigour.		
Height (Average)	1.5 - 5m		
Soil Type	Mixed soil bund (man-made)		
Stems Per Ha	1600-1900		
Protection	Deer fence, rabbit netting and 0.6m tree shelters		
Ground Preparation	Earth bund (man-made) in places		
Volume Per Ha	N/A Young trees		
Herbivore Damage	No	Description	N/A
Weevil Damage	No	Description	N/A

General Comments	
<p>This woodland site did not appear in the desk-based assessment carried out prior to the site survey and was only discovered while site surveys were being carried out. This woodland has been planted as a shelterbelt/screen to block out the view of the substation at this location. Larger trees were used in place to help aid with the quick establishment of this screen.</p> <p>The woodland has been deer fenced and rabbit netted to keep out domestic livestock, exclude Red Deer and Roe Deer. 0.6m tree shelters have been used to prevent damage from Brown Hares on the site. The protection measure has allowed this woodland to establish without the impact/damage herbivores can cause.</p>	

Property Location:	ND151556		
Survey and Species Figure	Appendix 1, Figure 2		
Total Area:	1.00ha		
Landowner:	Scottish Hydro Electric Transmission PLC		
Date:	14.02.2023		
Compartment No	5		
Sub Compartment No	5a5		
Area	1.00ha		
Species	Common Alder, Goat Willow, Norway Spruce, and Hybrid Larch		
Age (approx.)	9 years		
Form (Good/Fair/Poor)	Relatively good form and vigour.		
Height (Average)	1.5 - 5m		
Soil Type	Mixed soil bund (man-made)		
Stems Per Ha	1600		
Protection	Deer fence, rabbit netting and 0.6m tree shelters		
Ground Preparation	Earth bund (man-made) in places		
Volume Per Ha	N/A Young trees		
Herbivore Damage	No	Description	N/A
Weevil Damage	No	Description	N/A
General Comments			
<p>This woodland site did not appear in the desk-based assessment carried out prior to the site survey and was only discovered while site surveys were being carried out. This woodland has been planted as a shelterbelt/screen to block out the view of the substation at this location. Larger trees were used in place to help aid with the quick establishment of this screen.</p> <p>The woodland has been deer fenced and rabbit netted to keep out domestic livestock, exclude Red Deer and Roe Deer. 0.6m tree shelters have been used to prevent damage from Brown Hares on the site. The protection measure has allowed this woodland to establish without the impact/damage herbivores can cause.</p>			

Property Location:	ND151556		
Survey and Species Figure	Appendix 1, Figure 2		
Total Area:	0.296ha		
Landowner:	Scottish Hydro Electric Transmission PLC		
Date:	14.02.2023		
Compartment No	5		
Sub Compartment No	5a6		
Area	0.296ha		
Species	Common Alder, Goat Willow, and Norway Spruce		
Age (approx.)	9 years		
Form (Good/Fair/Poor)	Relatively good form and vigour.		
Height (Average)	1.5 - 5m		

Soil Type	Mixed soil bund (man-made)		
Stems Per Ha	1200		
Protection	Deer fence, rabbit netting and 0.6m tree shelters		
Ground Preparation	Earth bund (man-made) in places (Gley Soil)		
Volume Per Ha	N/A Young trees		
Herbivore Damage	No	Description	N/A
Weevil Damage	No	Description	N/A
General Comments			
<p>This woodland site did not appear in the desk-based assessment carried out prior to the site survey and was only discovered while site surveys were being carried out. This woodland has been planted as a shelterbelt/screen to block out the view of the substation at this location. Larger trees were used in place to help aid with the quick establishment of this screen.</p> <p>The woodland has been deer fenced and rabbit netted to keep out domestic livestock, exclude Red Deer and Roe Deer. 0.6m tree shelters have been used to prevent damage from Brown Hares on the site. The protection measure has allowed this woodland to establish without the impact/damage herbivores can cause.</p>			

Property Location:	ND151556		
Survey and Species Figure	Appendix 1, Figure 2		
Total Area:	1.00ha		
Landowner:	Scottish Hydro Electric Transmission PLC		
Date:	14.02.2023		
Compartment No	6		
Sub Compartment No	6a2		
Area	1.481ha		
Species	Clear felled conifer woodland		
Age (approx.)	0		
Form (Good/Fair/Poor)			
Height (Average)			
Soil Type	Gley Soil		
Stems Per Ha	0		
Protection	Deer fence, rabbit netting		
Ground Preparation	Ground has been mulched		
Volume Per Ha			
Herbivore Damage	No	Description	N/A
Weevil Damage	No	Description	N/A
General Comments			
<p>This woodland site did appear in the desk-based assessment carried out prior to the site survey but it was only discovered that it had been recently felled while site surveys were being carried out. This woodland has been clear felled and mulched and all the timber had been removed when the survey was carried out.</p> <p>The woodland has been deer fenced and rabbit netted to keep out domestic livestock, exclude Red Deer and Roe Deer. This operation was being carried out at the time of the survey.</p> <p>No ground preparation had been carried out, but the assumption is that this area will be replanted under the conditions set out in the felling permission.</p>			

Property Location:	ND151556		
Survey and Species Figure	Appendix 1, Figure 2		
Total Area:	1.00ha		
Landowner:	Scottish Hydro Electric Transmission PLC		

Date:	14.02.2023		
Compartment No	6		
Sub Compartment No	6a1		
Area	0.962ha		
Species	Clear felled conifer woodland		
Age (approx.)	0		
Form (Good/Fair/Poor)	N/A - Felled		
Height (Average)	N/A		
Soil Type	Gley Soil		
Stems Per Ha	0		
Protection	Deer fence, rabbit netting		
Ground Preparation	Ground has been mulched		
Volume Per Ha			
Herbivore Damage	No	Description	N/A
Weevil Damage	No	Description	N/A
<b>General Comments</b>			
<p>This woodland site did appear in the desk-based assessment carried out prior to the site survey but it was only discovered that it had been recently felled while site surveys were being carried out. This woodland has been clear felled and mulched and all the timber had been removed when the survey was carried out.</p> <p>The woodland has been deer fenced and rabbit netted to keep out domestic livestock, exclude Red Deer and Roe Deer. This operation was being carried out at the time of the survey.</p> <p>No ground preparation had been carried out, but the assumption is that this area will be replanted under the conditions set out in the felling permission.</p>			

## 4.6 Sibster Forest (Forestry and Land Scotland)

## Compartment 8

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Total Area:	0.467ha		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	8		
Sub Compartment No	8a1		
Area	0.467ha		
Species	Open Ground		
Age (approx.)	N/A		
Form (Good/Fair/Poor)	N/A		
Height (Average)	N/A		
Soil Type	Gley Soil/Peaty Gley		
Stems Per Ha	N/A		
Protection	Deer fence, rabbit netting		
Ground Preparation	N/A		
Volume Per Ha	N/A		
Herbivore Damage	No	Description	N/A
Weevil Damage	No	Description	N/A
General Comments			
Open ground which is part of the design features of the forest.			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	8		
Sub Compartment No	8a2		
Area	1.841ha		
Species	Japanese Larch, Common Alder, Hawthorn, and Beech		
Age (approx.)	12		
Form (Good/Fair/Poor)	N/A		
Height (Average)	5.5m (Thorn smaller)		
Soil Type	Gley Soil/Peaty Gley		
Stems Per Ha	1966		
Protection	Deer fence, rabbit netting		
Ground Preparation	N/A		
Volume Per Ha	N/A		
Herbivore Damage	No	Description	N/A
Weevil Damage	No	Description	N/A
General Comments			
Very varied species choice for this sub-compartment. Area of mixed conifer and mixed broadleaves unsure on what the correct stocking density would be on a crop/mix of its type. Tree heights vary but this will be due to slower establishment of species and will be due to herbivore pressure on the site and species choice. Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Total Area:	5.365ha		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	8		
Sub Compartment No	8a3		
Area	5.365ha		
Species	Hybrid Larch, Norway Spruce, and Scots Pine		
Age (approx.)	12		
Form (Good/Fair/Poor)	Generally good form.		
Height (Average)	4.5m - 6m (5.25m Average height)		
Soil Type	Gley Soil/Peaty Gley		
Stems Per Ha	2500 Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Fraying by deer is evident on smaller stems
Weevil Damage	No	Description	N/A
General Comments			
<p>Area of mixed conifer that is achieving the correct stocking density for a commercial crop of its type. Tree heights vary but this will be due to slower establishment of species and will be due to herbivore pressure on the site. Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.</p>			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	8		
Sub Compartment No	8a4		
Area	1.373ha		
Species	Hybrid Larch, Norway Spruce, and Scots Pine		
Age (approx.)	12		
Form (Good/Fair/Poor)	Generally good form and vigour.		
Height (Average)	3m - 5m (4m Average height)		
Soil Type	Gley Soil/Peaty Gley		
Stems Per Ha	2500 Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Fraying by deer is evident on smaller stems
Weevil Damage	No	Description	N/A



General Comments			
Area of mixed conifer that is achieving the correct stocking density for a commercial crop of its type. Tree heights vary but this will be due to slower establishment of species and will be due to herbivore pressure on the site. Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Total Area:	0.467ha		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	8		
Sub Compartment No	8a5		
Area	1.248ha		
Species	Open Ground		
Age (approx.)	N/A		
Form (Good/Fair/Poor)	N/A		
Height (Average)	N/A		
Soil Type	Gley Soil/Peaty Gley		
Stems Per Ha	N/A		
Protection	Deer fence, rabbit netting		
Ground Preparation	N/A		
Volume Per Ha	N/A		
Herbivore Damage	No	Description	N/A
Weevil Damage	No	Description	N/A
General Comments			
Open ground which is part of the design features of the forest.			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	8		
Sub Compartment No	8a6		
Area	0.528ha		
Species	Downy Birch, Juniper		
Age (approx.)	12		
Form (Good/Fair/Poor)	Very Variable form		
Height (Average)	30cm – 2m (1.25m Average height)		
Soil Type	Gley Soil/Peaty Gley		
Stems Per Ha	200 Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Mounding		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Fraying and browsing by deer is evident on smaller stems
Weevil Damage	No	Description	N/A

General Comments	
<p>The area within this sub-compartment is understocked compared to the neighboring sub-compartment of the same species. Tree heights vary but this will be due to slower establishment of species such as juniper and will be due to herbivore pressure on the site.</p> <p>Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.</p>	

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	8		
Sub Compartment No	8a7		
Area	0.38ha		
Species	Japanese Larch, Norway Spruce, Beech, Sycamore		
Age (approx.)	12		
Form (Good/Fair/Poor)	Form is variable depending on species.		
Height (Average)	4m		
Soil Type	Gley Soil/Peaty Gley		
Stems Per Ha	2000 Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Fraying by deer is evident on smaller stems
Weevil Damage	No	Description	N/A
General Comments			
<p>Area of mixed conifer that is achieving the under the correct stocking density for a commercial crop of its type. Tree heights vary but this will be due to slower establishment of species and will be due to herbivore pressure on the site.</p> <p>Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.</p>			

### Compartment 9

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a1		
Area	7.684ha		
Species	Open Ground		
Age (approx.)	N/A		
Form (Good/Fair/Poor)	N/A		
Height (Average)	N/A		
Soil Type	Podzol		
Stems Per Ha	N/A		
Protection	Deer fence, rabbit netting		
Ground Preparation	N/A		
Volume Per Ha	N/A		

Herbivore Damage	No	Description	N/A
Weevil Damage	No	Description	N/A
General Comments			
Open ground which is part of the design features of the forest.			

Property Location:	ND147594		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a2		
Area	1.129ha		
Species	Oak and Beech		
Age (approx.)	12		
Form (Good/Fair/Poor)	Form is variable depending on species. Blackthorn is small and shaded in some areas by larger tree species		
Height (Average)	4m		
Soil Type	Podzol		
Stems Per Ha	2000 Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Fraying by deer is evident on smaller stems
Weevil Damage	No	Description	N/A
General Comments			
<p>Very varied species choice for this sub-compartment.</p> <p>Area of mixed conifer and mixed broadleaves unsure on what the correct stocking density would be on a crop/mix of its type. Tree heights vary but this will be due to slower establishment of species and will be due to herbivore pressure on the site and species choice.</p> <p>Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.</p>			

Property Location:	ND147594		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a3		
Area	6.793ha		
Species	Oak Sycamore Silver Birch and Beech		
Age (approx.)	12		
Form (Good/Fair/Poor)	Form is variable depending on species. Blackthorn is small and shaded in some areas by larger tree species		
Height (Average)	1.25m		
Soil Type	Podzol and Gley		
Stems Per Ha	2000 Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying by deer is evident on smaller stems

Weevil Damage	No	Description	N/A
General Comments			
<p>Very varied species choice for this sub-compartment.  Area of mixed conifer and mixed broadleaves unsure on what the correct stocking density would be on a crop/mix of its type. Tree heights vary but this will be due to slower establishment of species and will be due to herbivore pressure on the site and species choice.  Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.</p>			

Property Location:	ND147594		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a3		
Area	6.793ha		
Species	Sycamore, Ash, Beech, Oak and Silver Birch		
Age (approx.)	12		
Form (Good/Fair/Poor)	Fair		
Height (Average)	1 – 1.5m		
Soil Type	Podzols and Gley Soils		
Stems Per Ha	3200 Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Fraying by deer is evident on smaller stems
Weevil Damage	No	Description	N/A
General Comments			
<p>Tree heights vary but this will be due to slower establishment of species and will be due to herbivore pressure on the site and species choice.  Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.</p>			

Property Location:	ND147594		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a4		
Area	3.681ha		
Species	Oak, Sycamore and Beech		
Age (approx.)	12		
Form (Good/Fair/Poor)	Form is variable depending on species.		
Height (Average)	2m		
Soil Type	Gley Soil		
Stems Per Ha	3100 Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Fraying by deer is evident on smaller stems
Weevil Damage	No	Description	N/A

General Comments
Tree heights vary but this will be due to slower establishment of species and will be due to herbivore pressure on the site and species choice. Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.

Property Location:	ND147594		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a5		
Area	4.1ha		
Species	Oak, Sycamore and Beech		
Age (approx.)	12		
Form (Good/Fair/Poor)	Form is variable depending on species.		
Height (Average)	2m		
Soil Type	Gley Soil		
Stems Per Ha	3000 Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Fraying by deer is evident on smaller stems
Weevil Damage	No	Description	N/A
General Comments			
Tree heights vary but this will be due to slower establishment of species and will be due to herbivore pressure on the site, weed suppression and species choice. Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.			

Property Location:	ND147594		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a6		
Area	1.316ha		
Species	Silver Birch and Beech		
Age (approx.)	12		
Form (Good/Fair/Poor)	Form is variable depending on species.		
Height (Average)	1.5m		
Soil Type	Gley Soil		
Stems Per Ha	2100 Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying by deer is evident on smaller stems
Weevil Damage	No	Description	

General Comments
Tree heights vary but this will be due to slower establishment of species and will be due to herbivore pressure on the site, weed suppression and species choice. Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.

Property Location:	ND147594		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a7		
Area	8.858ha		
Species	Sycamore, Ash and Beech		
Age (approx.)	12		
Form (Good/Fair/Poor)	Form is variable depending on species.		
Height (Average)	1m		
Soil Type	Gley Soil/Podzol		
Stems Per Ha	2200 Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying by deer is evident on smaller stems
Weevil Damage	No	Description	N/A
General Comments			
Area of mixed broadleaves Tree heights vary but this will be due to slower establishment of species and will be due to herbivore pressure on the site and species choice. Weed competition is also a factor in slower establishment. Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.			

Property Location:	ND147594		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a9		
Area	1.443ha		
Species	Silver Birch Common Alder and Aspen		
Age (approx.)	12		
Form (Good/Fair/Poor)	Form is variable depending on species.		
Height (Average)	1.5m		
Soil Type	Podzol		
Stems Per Ha	2500 Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying by deer is evident on smaller stems
Weevil Damage	No	Description	N/A

General Comments
<p>Mixed broadleaf woodland that is struggling to establish probably due to varying factors such as weeds and herbivore pressure.</p> <p>Tree heights vary but this will be due to slower establishment of species and will be due to herbivore pressure on the site and species choice.</p> <p>Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.</p>

Property Location:	ND147594		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a10		
Area	1.187ha		
Species	Silver Birch Common Alder Ash and Oak		
Age (approx.)	12		
Form (Good/Fair/Poor)	Form is variable depending on species.		
Height (Average)	3m		
Soil Type	Podzol		
Stems Per Ha	2800 Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Mounding		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying by deer is evident on smaller stems
Weevil Damage	No	Description	N/A
General Comments			
<p>Mixed broadleaf woodland that is establish slightly better than surrounding crops in that its average height is higher.</p> <p>Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.</p>			

Property Location:	ND147594		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a11		
Area	0.514ha		
Species	Common Alder and Oak		
Age (approx.)	12		
Form (Good/Fair/Poor)	Form is variable depending on species.		
Height (Average)	1.5m		
Soil Type	Gley Soil/Peaty Gley		
Stems Per Ha	1500Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Mounding		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying by deer is evident on smaller stems

Weevil Damage	No	Description	N/A
General Comments			
Mixed broadleaf edge sub compartment which is slightly below stocking density by 100 trees per Ha. Tree heights vary but this will be due to slower establishment of species and will be due to herbivore pressure on the site and species choice. Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.			

Property Location:	ND147594		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a12		
Area	0.633ha		
Species	Common Alder, Aspen and Silver Birch		
Age (approx.)	12		
Form (Good/Fair/Poor)	Form is variable depending on species.		
Height (Average)	4m		
Soil Type	Gley Soil/Peaty Gley		
Stems Per Ha	2600Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Mounding		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying by deer is evident on smaller stems
Weevil Damage	No	Description	N/A
General Comments			
Mixed broadleaf edge sub compartment which is slightly below stocking density by 100 trees per Ha. Tree heights vary but this will be due to slower establishment of species and will be due to herbivore pressure on the site and species choice. Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.			

Property Location:	ND147594		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a13		
Area	0.334ha		
Species	Goat Willow		
Age (approx.)	12		
Form (Good/Fair/Poor)	Good		
Height (Average)	4m		
Soil Type	Gley Soil/Peaty Gley		
Stems Per Ha	40000 Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Fraying by deer is evident on smaller stems



Weevil Damage	No	Description	N/A
General Comments			
Single species stand planted at very tight spacings. Might be an experimental sub-compartment to monitor growth rates. Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.			

Property Location:	ND147594		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a14		
Area	0.04ha		
Species	Sitka Spruce		
Age (approx.)	12		
Form (Good/Fair/Poor)	Fair		
Height (Average)	3m		
Soil Type	Gley Soil/Peaty Gley		
Stems Per Ha	3400 Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	None		
Volume Per Ha	N/A		
Herbivore Damage	No	Description	N/A
Weevil Damage	No	Description	N/A
General Comments			
Area of Sitka Spruce conifer planted at a very high density for the species. Again, this might be an experimental plot of trees like the willow in sub compartment 9a13. Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.			

Property Location:	ND147594		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a15		
Area	4.012ha		
Species	Sycamore		
Age (approx.)	12		
Form (Good/Fair/Poor)	Form is variable depending on species.		
Height (Average)	1m		
Soil Type	Podzol		
Stems Per Ha	3000 Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Nill		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Fraying by deer is evident on smaller stems
Weevil Damage	No	Description	N/A

General Comments
Broadleaf stand which is struggling to get away as majority of tree height sampled is just 1m average. Tree heights vary but this will be due to herbivore pressure on the site and species choice. Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.

Property Location:	ND147594		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a16		
Area	1.162ha		
Species	Beech, Noble Fir, Japanese Larch and Sycamore		
Age (approx.)	12		
Form (Good/Fair/Poor)	Form is variable depending on species.		
Height (Average)	4m		
Soil Type	Gley Soil/Peaty Gley		
Stems Per Ha	2000 Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Fraying by deer is evident on smaller stems
Weevil Damage	No	Description	N/A
General Comments			
Very varied species choice for this sub-compartment. Area of mixed conifer and mixed broadleaves unsure on what the correct stocking density would be on a crop/mix of its type. Tree heights vary but this will be due to slower establishment of species and will be due to herbivore pressure on the site and species choice. Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a17		
Area	0.584ha		
Species	Open Ground		
Age (approx.)	N/A		
Form (Good/Fair/Poor)	N/A		
Height (Average)	N/A		
Soil Type	Podzol		
Stems Per Ha	N/A		
Protection	Deer fence, rabbit netting		
Ground Preparation	N/A		
Volume Per Ha	N/A		
Herbivore Damage	No	Description	N/A
Weevil Damage	No	Description	N/A

General Comments
Open ground which is part of the design features of the forest.

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a18		
Area	4.24ha		
Species	Open Ground		
Age (approx.)	N/A		
Form (Good/Fair/Poor)	N/A		
Height (Average)	N/A		
Soil Type	Podzol		
Stems Per Ha	N/A		
Protection	Deer fence, rabbit netting		
Ground Preparation	N/A		
Volume Per Ha	N/A		
Herbivore Damage	No	Description	N/A
Weevil Damage	No	Description	N/A
General Comments	Open ground which is part of the design features of the forest.		

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a19		
Area	0.442ha		
Species	Common Alder		
Age (approx.)	4		
Form (Good/Fair/Poor)	Poor due to damage		
Height (Average)	1m		
Soil Type	Podzol		
Stems Per Ha	2500		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Vole damage to numerous stems
Weevil Damage	No	Description	N/A
General Comments	Young crop of Common Alder which is struggling to get away. Vole damage to trees will have a bearing on the establishment of the trees.		

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		

Compartment No	9		
Sub Compartment No	9a20		
Area	0.735ha		
Species	Common Alder		
Age (approx.)	4		
Form (Good/Fair/Poor)	Poor due to damage		
Height (Average)	0.6m		
Soil Type	Podzol		
Stems Per Ha	2500		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Vole damage to numerous stems
Weevil Damage	No	Description	N/A
General Comments			
Young crop of Common Alder which is struggling to get away. Vole damage to trees will have a bearing on the establishment of the trees.			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a21		
Area	0.235ha		
Species	Common Alder		
Age (approx.)	4		
Form (Good/Fair/Poor)	Poor due to damage		
Height (Average)	1.2m		
Soil Type	Podzol		
Stems Per Ha	2500		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Vole damage to numerous stems
Weevil Damage	No	Description	N/A
General Comments			
This sub-compartment is establishing better than neighboring sub-compartments of the same species and age.			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a22		
Area	0.333ha		
Species	Mixed Broadleaves		
Age (approx.)	4		
Form (Good/Fair/Poor)	Poor due to damage		
Height (Average)	1m		
Soil Type	Podzol		

Stems Per Ha	1600		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Vole damage to numerous stems
Weevil Damage	No	Description	N/A
General Comments			
Slightly older sub-compartment than surrounding crop. Area of mixed broadleaves next to watercourse. Trees are sustaining and have sustained vole damage in past years. This will continue to be a problem until trees are larger.			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a23		
Area	0.155ha		
Species	Common Alder		
Age (approx.)	4		
Form (Good/Fair/Poor)	Poor due to damage		
Height (Average)	1m		
Soil Type	Podzol		
Stems Per Ha	600		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Vole damage to numerous stems and Deer damage is also present
Weevil Damage	No	Description	N/A
General Comments			
Young crop of Common Alder which is struggling to get away. Vole damage to trees will have a bearing on the establishment of the trees as does the browsing and fraying damage by deer. This is mostly due to this area of woodland being on the edge of the forest and fraying damage will be higher.			

Property Location:	ND147594		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a24		
Area	1.129ha		
Species	Hybrid Larch, Noble Fir, Beech, Common Alder, Sycamore and Blackthorn		
Age (approx.)	12		
Form (Good/Fair/Poor)	Form is variable depending on species. Blackthorn is small and shaded in some areas by larger tree species		
Height (Average)	4m		
Soil Type	Gley Soil/Peaty Gley		
Stems Per Ha	2000 Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		

Herbivore Damage	Yes	Description	Fraying by deer is evident on smaller stems
Weevil Damage	No	Description	N/A
General Comments			
<p>Very varied species choice for this sub-compartment.</p> <p>Area of mixed conifer and mixed broadleaves unsure on what the correct stocking density would be on a crop/mix of its type. Tree heights vary but this will be due to slower establishment of species and will be due to herbivore pressure on the site and species choice.</p> <p>Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.</p>			

Property Location:	ND147594		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a25		
Area	0.075ha		
Species	Hybrid Larch, Noble Fir, Beech, Common Alder, Sycamore and Blackthorn		
Age (approx.)	12		
Form (Good/Fair/Poor)	Form is variable depending on species. Blackthorn is small and shaded in some areas by larger tree species		
Height (Average)	4m		
Soil Type	Gley Soil/Peaty Gley		
Stems Per Ha	2000 Ha Average		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing damage is heavy on young replacement trees such as beech and thorn which are in 0.6m tree shelters.
Weevil Damage	No	Description	N/A
General Comments			
<p>Very varied species choice for this sub-compartment.</p> <p>Area of mixed conifer and mixed broadleaves unsure on what the correct stocking density would be on a crop/mix of its type. Tree heights vary but this will be due to slower establishment of species and will be due to herbivore pressure on the site and species choice.</p> <p>Even though this site has an exterior deer fence this is not deer proof. Roe deer and their signs were noted throughout the woodland compartment.</p>			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a26		
Area	0.649ha		
Species	Grey Willow, and Sycamore		
Age (approx.)	4		
Form (Good/Fair/Poor)	Poor due to damage		
Height (Average)	0.5m - 1m		
Soil Type	Gley		
Stems Per Ha	2400		

Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Vole damage and deer damage to numerous stems
Weevil Damage	No	Description	N/A
General Comments			
Most of the trees planted are Sycamore and to a lesser extent Grey Willow Young crop of mixed broadleaves which is struggling to get away. Vole damage and deer browsing to trees will have a bearing on the establishment of the trees.			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a27		
Area	0.478ha		
Species	Grey Willow, and Sycamore		
Age (approx.)	4		
Form (Good/Fair/Poor)	Poor due to damage		
Height (Average)	0.5m - 1m		
Soil Type	Gley		
Stems Per Ha	2400		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Vole damage and deer damage to numerous stems
Weevil Damage	No	Description	N/A
General Comments			
Most of the trees planted are Sycamore and to a lesser extent Grey Willow Young crop of mixed broadleaves which is struggling to get away. Vole damage and deer browsing to trees will have a bearing on the establishment of the trees.			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a28		
Area	0.606ha		
Species	Sycamore		
Age (approx.)	4		
Form (Good/Fair/Poor)	Poor due to damage		
Height (Average)	0.3m		
Soil Type	Gley		
Stems Per Ha	3300		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		

Herbivore Damage	Yes	Description	Vole damage and deer damage to numerous stems
Weevil Damage	No	Description	N/A
General Comments			
The trees planted in this sub-compartment are Sycamore and are struggling to get away. Vole damage and deer browsing to trees will have a bearing on the establishment of the trees. Weed competition will also have a bearing on how quickly the trees get away as they are very small.			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a29		
Area	0.443ha		
Species	Common Alder, Grey Willow, and Blackthorn		
Age (approx.)	4		
Form (Good/Fair/Poor)	Poor due to damage		
Height (Average)	1.5m		
Soil Type	Podzol		
Stems Per Ha	2300		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying damage present on trees
Weevil Damage	No	Description	N/A
General Comments			
The sub-compartment is slightly under stocked, but trees are some of the species are getting away and beyond the browsing of the Roe Deer.			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a30		
Area	0.226ha		
Species	Common Alder, Grey Willow, and Blackthorn		
Age (approx.)	4		
Form (Good/Fair/Poor)	Poor due to damage		
Height (Average)	1.5m		
Soil Type	Gley		
Stems Per Ha	2300		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying damage present on trees
Weevil Damage	No	Description	N/A
General Comments			
The sub-compartment is slightly under stocked, but trees are getting away and beyond the browsing of the Roe Deer.			



Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a31		
Area	0.192ha		
Species	Norway Spruce, Scots Pine, and Japanese Larch		
Age (approx.)	12		
Form (Good/Fair/Poor)	Poor due to damage		
Height (Average)	3.5m		
Soil Type	Gley		
Stems Per Ha	1800		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying damage present on trees
Weevil Damage	No	Description	N/A
General Comments			
The sub-compartment is slightly under stocked, but trees are getting away and beyond the browsing of the Roe Deer. This does not stop the fraying damage as trees are on the edge of the compartment			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9a32		
Area	0.192ha		
Species	Sycamore, Beech and Wild Cherry		
Age (approx.)	12		
Form (Good/Fair/Poor)	Fair		
Height (Average)	2m		
Soil Type	Podzol/Gley		
Stems Per Ha	2300		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying damage present on trees
Weevil Damage	No	Description	N/A
General Comments			
The sub-compartment is slightly under stocked, but trees are getting away and beyond the browsing of the Roe Deer. This does not stop the fraying damage as trees are on the edge of the compartment			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		

Sub Compartment No	9b1		
Area	0.101ha		
Species	Common Alder and Grey Willow		
Age (approx.)	4		
Form (Good/Fair/Poor)	Poor due to damage		
Height (Average)	0.3m		
Soil Type	Gley		
Stems Per Ha	2700		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying damage present on trees
Weevil Damage	No	Description	N/A
General Comments			
The sub-compartment is slightly understocked as it was stocked at 1.6m centers, but stocking as at acceptable levels. Trees are struggling to grow and get above the height that browsing Roe Deer can reach.			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9b2		
Area	0.2ha		
Species	Sycamore, Beech, and Birch		
Age (approx.)	4		
Form (Good/Fair/Poor)	Poor due to damage		
Height (Average)	0.3m		
Soil Type	Gley		
Stems Per Ha	2700		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying damage present on trees
Weevil Damage	No	Description	N/A
General Comments			
Trees are generally small in this sub-compartment. This will be due to a few factors but primarily herbivore damage/pressure, weed competition and exposure. Trees are small for their age and should be larger and better established.			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9b3		
Area	0.201ha		
Species	Common Alder and Grey Willow		
Age (approx.)	4		
Form (Good/Fair/Poor)	Poor due to damage		
Height (Average)	0.3m		

Soil Type	Gley		
Stems Per Ha	1800		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying damage present on trees
Weevil Damage	No	Description	N/A
General Comments			
Trees are generally small in this sub-compartment. This will be due to a few factors but primarily herbivore damage/pressure, weed competition and exposure. Trees are small for their age and should be larger and better established.			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9b4		
Area	4.22ha		
Species	Norway Spruce, Scot Pine and Japanese Larch		
Age (approx.)	12		
Form (Good/Fair/Poor)	Poor due to damage from fraying. Larch showing signs of but sweep on most stems		
Height (Average)	5m (Smaller trees of 1.2m also present)		
Soil Type	Gley		
Stems Per Ha	2600		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Historic fraying damage present on trees
Weevil Damage	No	Description	N/A
General Comments			
Trees are generally doing well and establishing. There are smaller trees through the larger crop which will have been replacement trees for trees that have died.			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9b5		
Area	2.691ha		
Species	Designed open ground		
Age (approx.)	N/A		
Form (Good/Fair/Poor)	N/A		
Height (Average)	N.A		
Soil Type	Gley		
Stems Per Ha	N/A		
Protection	Deer fence, rabbit netting		
Ground Preparation	Ploughing in places		
Volume Per Ha	N/A		
Herbivore Damage	No	Description	N/A
Weevil Damage	No	Description	N/A

General Comments
Area of designed open ground as part of the wayleave that runs through the site. There has been some ploughing in places but does not seem to have been planted.

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9b6		
Area	0.201ha		
Species	Common Alder, Japanese Larch, Beech, and Hawthorn		
Age (approx.)	12		
Form (Good/Fair/Poor)	Poor due to damage		
Height (Average)	4m (Thorn and beech 0.6m)		
Soil Type	Gley		
Stems Per Ha	1750		
Protection	Deer fence, rabbit netting		
Ground Preparation	Plough		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying damage present on trees
Weevil Damage	No	Description	N/A
General Comments			
A very mixed compartment with larch and alder planted on the edges with thorn and beech planted in a line in the center. Thorn and beech in 0.6m tree shelters and are being badly browsed by deer. Alder and larch establishing well			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9b7		
Area	0.215ha		
Species	Designed Open Ground		
Age (approx.)	N/A		
Form (Good/Fair/Poor)	N/A		
Height (Average)	N/A		
Soil Type	Gley		
Stems Per Ha	N/A		
Protection	Deer fence, rabbit netting		
Ground Preparation	N.A		
Volume Per Ha	N/A		
Herbivore Damage	No	Description	N/A
Weevil Damage	No	Description	N/A
General Comments			
Designed open ground between sub-compartments.			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9b8		
Area	1.928ha		
Species	Common Alder, Grey Willow, and Silver Birch		
Age (approx.)	12		
Form (Good/Fair/Poor)	Poor due to damage		
Height (Average)	4m		
Soil Type	Gley		
Stems Per Ha	1550		
Protection	Deer fence, rabbit netting		
Ground Preparation	Mounding		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying damage present on trees
Weevil Damage	No	Description	N/A
General Comments			
The trees that are established are doing relatively well. There are empty planting positions which would benefit from trees, but this will depend on the management objectives of the site and the design. Deer browsing and fraying has impacted on the establishment of the sub compartment			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9b10		
Area	1.213ha		
Species	Common Alder, Grey Willow, Aspen, and Hazel		
Age (approx.)	12		
Form (Good/Fair/Poor)	Fair		
Height (Average)	4m		
Soil Type	Gley		
Stems Per Ha	1400		
Protection	Deer fence, rabbit netting		
Ground Preparation	Mounding		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying damage present on trees
Weevil Damage	No	Description	
General Comments			
The trees that are established are doing relatively well. There are empty planting positions which would benefit from trees, but this will depend on the management objectives of the site and the design. Deer browsing and fraying has impacted on the establishment of the sub compartment			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		

Compartment No	9		
Sub Compartment No	9b11		
Area	0.256ha		
Species	Mixed Broadleaves		
Age (approx.)	12		
Form (Good/Fair/Poor)	Fair		
Height (Average)	4m		
Soil Type	Gley		
Stems Per Ha	1400		
Protection	Deer fence, rabbit netting		
Ground Preparation	Mounding		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying damage present on trees
Weevil Damage	No	Description	
General Comments			
The trees that are established are doing relatively well. There are empty planting positions which would benefit from trees, but this will depend on the management objectives of the site and the design. Deer browsing and fraying has impacted on the establishment of the sub compartment			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9b12		
Area	0.406ha		
Species	Designed Open Ground		
Age (approx.)	N/A		
Form (Good/Fair/Poor)	N/A		
Height (Average)	N/A		
Soil Type	Gley		
Stems Per Ha	N/A		
Protection	Deer fence, rabbit netting		
Ground Preparation	N/A		
Volume Per Ha	N/A		
Herbivore Damage	No	Description	N/A
Weevil Damage	No	Description	N/A
General Comments			
Designed open ground between sub-compartments.			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9b13		
Area	0.362ha		
Species	Designed Open Ground		
Age (approx.)	N/A		
Form (Good/Fair/Poor)	N/A		
Height (Average)	N/A		

Soil Type	Gley		
Stems Per Ha	N/A		
Protection	Deer fence, rabbit netting		
Ground Preparation	N/A		
Volume Per Ha	N/A		
Herbivore Damage	No	Description	N/A
Weevil Damage	No	Description	N/A
General Comments			
Designed open ground between sub-compartments.			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9b14		
Area	0.469ha		
Species	Mixed Broadleaves		
Age (approx.)	12		
Form (Good/Fair/Poor)	Fair		
Height (Average)	4m		
Soil Type	Gley		
Stems Per Ha	1400		
Protection	Deer fence, rabbit netting		
Ground Preparation	Mounding		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying damage present on trees
Weevil Damage	No	Description	
General Comments			
The trees that are established are doing relatively well. There are empty planting positions which would benefit from trees, but this will depend on the management objectives of the site and the design. Deer browsing and fraying has impacted on the establishment of the sub compartment			

Property Location:	ND142585		
Survey and Species Figure	Appendix 1, Figure 4		
Landowner:	Forestry and Land Scotland		
Date:	15.02.2023		
Compartment No	9		
Sub Compartment No	9b15		
Area	0.515ha		
Species	Japanese Larch, Common Alder, Sycamore, and Blackthorn.		
Age (approx.)	12		
Form (Good/Fair/Poor)	Fair		
Height (Average)	5.5m (Thorn 1.5m)		
Soil Type	Gley		
Stems Per Ha	1400		
Protection	Deer fence, rabbit netting		
Ground Preparation	Mounding		
Volume Per Ha	N/A		
Herbivore Damage	Yes	Description	Browsing and fraying damage present on trees
Weevil Damage	No	Description	
General Comments			

A very mixed compartment with larch and alder planted on the edges with thorn and sycamore planted in a line in the center. Thorn in 0.6m tree shelters and are being badly browsed by deer. Alder and larch establishing well. Deer browsing and fraying has impacted on the establishment of the sub compartment



#### 4.7 Woodland strip located at Hill of Howe

Property Location:	ND098629,		
Survey and Species Figure	Appendix 1, Figure 8		
Total Area:	0.937ha		
Landowner:	Private		
Date:	13.02.2023		
Compartment No	14		
Sub Compartment No	14a1		
Area	0.937ha		
Species	Common Alder Lodgepole Pine		
Age (approx.)	7 years		
Form (Good/Fair/Poor)	Poor form and poor vigour.		
Height (Average)	1.75m		
Soil Type	Peaty Gley		
Stems Per Ha	500-1000		
Volume Per Ha	N/A Young trees		
Herbivore Damage	Yes	Description	There is a large amount of herbivore damage within this compartment.
Weevil Damage	No	Description	N/A
General Comments			
<p>This woodland site is classed as a W4 Upland Birch woodland on the Native Woodland Survey of Scotland. This was highlighted in the desk-based assessment carried out prior to the site survey. This woodland shelterbelt / strip is not a W4 woodland and has non-native species associated with it.</p> <p>The woodland has been stock fenced to keep out domestic livestock, but this will not exclude red deer, Roe deer and brown hares from the site. All the wild herbivores have had an impact on this woodland through browsing (eating of leaves, needles and branches), fraying (sent marking of tree stem which damages the bark through stripping and can kill tree if all the bark is removed).</p> <p>The damage from herbivore pressure and lack of maintenance has left this woodland in a very poor state. This woodland is struggling to establish and has very little value ecologically or economically in its current state. A significant amount of work and maintenance would need to be carried out to ensure that this woodland establishes satisfactorily.</p>			

## 5 Impact Assessment and Proposed Mitigation Measures

The impact assessment must be based on the worst-case scenario of the maximum tree removal width of a 100m corridor, and the maximum total length of the forest/woodland based on the study area. Within these areas there will be land that is already open as part of the woodland/forest design and this area will have to be discounted.

The impact assessment will take each individual woodland/forest on its own due to the dissipated nature of the woodlands/forests within the study area.

### 5.1 Woodland strip located at Hill of Howe

The overall wooded area at this location is 7.22Ha in total, of which 0.937Ha fall within the onshore Project area. The worst-case scenario is that 0.28Ha of woodland would need to be removed to facilitate future infrastructure associated with this project. The overall woodland removal would equate to 3.8% of the total wooded area. This would have very little impact on the integrity of the woodland and very little impact on the ecology of the woodland due to the very narrow nature of the woodland at this point.

This woodland was classed as a W4 woodland on the native woodland inventory but on survey this was found to be inaccurate. The type of woodland present is a very poor Common Alder (*Alnus glutinosa*) Lodgepole Pine (*Pinus contorta* var. *latifolia*) woodland which has suffered from lack of management and lack of herbivore control through fencing or culling. This has led to low stocking and poor-quality trees with very little to no timber value.

The strip through the woodland that would have to be cleared to facilitate the installation of cables would either have to be felled to waste or mulched, which would be the preferred option due to the small size of the trees that would need to be removed. This process would have to be managed through permission from Scottish Forestry.

### 5.2 Woodland strip located at Achanarras (Spittal substation)

The overall wooded area at this location is 4.735Ha in total, all of which falls within the Onshore Project area. The worst-case scenario is that 0.758Ha of woodland would need to be removed to facilitate cable infrastructure associated with this project. The overall woodland removal would equate to 16% of the total wooded area.

The woodland strips at this location have been planted as screens in the landscape to block out the view of the existing SHET-L Spittal substation.

Two of the woodland shelterbelts south of the access road have been felled at this location very recently and will have been done under a felling permission. The area was being deer fenced at the time of the survey, which would indicate that these areas were to be restocked with trees. From this we need to surmise that these yet to be planted trees may need to be removed to facilitate the onshore Project. Since felling has been carried out already and trees have yet to be established then there would be very little impact from the removal of newly planted trees.

The shelterbelts / screens to the north of the road are 9 years old and still relatively small in height and stature. The clearance area through the woodland to facilitate the project would either have to be felled to waste or mulched, which would be the preferred option due to the size of the trees that would need to be removed. This process would have to be managed through permission from Scottish Forestry.

### 5.3 Sibster Forest (Forestry and Land Scotland)

The overall wooded area at this location is in excess of 130Ha, of which 78.86 Ha falls within the onshore Project area. The worst-case scenario is that 9.30 Ha of woodland would need to be removed to facilitate cable infrastructure associated with this project. The overall woodland removal would equate to 7.15% of the total wooded area. This would have a relatively small impact on the integrity of the woodland and very little impact on the ecology of the woodland due to the proximity of these woodland to much larger woodlands in the landscape.

The forest at this location has been planted in two phases. Phase one was planted in 2011 and phase two was planted in 2019 as a forest for recreation and conservation benefits.

The forest is a complex mosaic of mixed broadleaf, mixed conifer and native woodland divided into sub compartments. There are wide areas of designed open ground for conservation purposes and recreation with woodland walks running through the site.

The trees within the forest are still relatively young, small in height and stature. The strip through the woodland to facilitate the project would either need to be felled to waste or mulched, which would be the preferred option due to the size of the trees that would need to be removed. This process would have to be managed through permission from Scottish Forestry.

Due to the level of public use in this forest there would be an impact on the site's recreation routes while any clearance work was carried out. This might require a "Section 11" under the "Scottish Land Reform Act 2003" to be applied for to close off the walking/recreation routes while operations take place. Section 11 of the Act provides a mechanism for local authorities, whether on application from third parties or at their own initiative, to exempt a particular area of land from access rights for a particular purpose.

### 5.4 Proposed Mitigation Measures

All felled woodland will be replaced by an appropriately designed compensatory planting scheme on a substitute site to satisfy the requirements of the Control of Woodland Removal Policy. Planting will be undertaken in a specified timeline and as agreed in consultation with Scottish Forestry and Forestry and Land Scotland (if appropriate).

In this case the area within the wayleave/project area will have to be sanitised and remain tree free to protect the infrastructure. Due to this stipulation a new area equal to the size of the felled area will have to be planted with suitable woodland within the same council area. This would have to be agreed with Scottish Forestry prior to works being carried out. This would mean that there was no net loss of woodland or forestry as part of the construction of the onshore project within the Highland Council area.

The new woodland creation area that would need to be planted to mitigate against the felling of existing woodlands will have to go through the same consultation and screening process as any new woodland creation. A suitable site will have to be found where woodland creation is appropriate and will not compromise any other habitat or species.

Felling or mulching would have to be programmed outside the breeding bird season or after a qualified ecologist has carried out a survey of the site if it is to be carried out within the breeding season.

There would be the need to close off public footpaths for longer than four days to facilitate operations so an application will need to be made to Highland Council before the time to close off walking/recreation routes under the Section 11 land reform act as stated above.

Access management and engagement will have to take place before and during any forestry operations that may need to be carried out to facilitate the project. Advanced warning signage and press releases will need to be put in place to provide the public with information about closures or diversions. Depending on the route taken by the project not all routes will need to be closed but signage will be important.

Between the woodland strip at Hill of Howe (up to 0.28 ha), Achanarras (Spittal substation) (up to 0.758 ha) Sibster Forest (up to 9.30 ha), a total of up to 10.34 ha of woodland may be required to be removed. This reflects the maximum area of felling required for the operation of the onshore Project.

## 5.5 Summary

Table 3 provides a summary of the impact assessment for each woodland area surveyed.

**Table 3 Summary of Woodland Impact Assessment**

<b>Woodland Area</b>	<b>Hill of Howe</b>	<b>Achanarras</b>	<b>Sibster Forest</b>	<b>Total</b>
<b>Overall woodland in area (ha)</b>	7.22	4.74	>130	141.95
<b>Overall woodland within study area (ha)</b>	0.94	4.74	78.86	84.53
<b>Woodland required to be felled (ha)</b>	0.28	0.758	9.30	10.34
<b>% of overall woodland to be removed</b>	3.8%	16%	7.15%	26.95%



# Appendix 1 Survey Area and Species Maps

**Figure 2 Survey and Species Map 1 (Spittal Sub Station)**

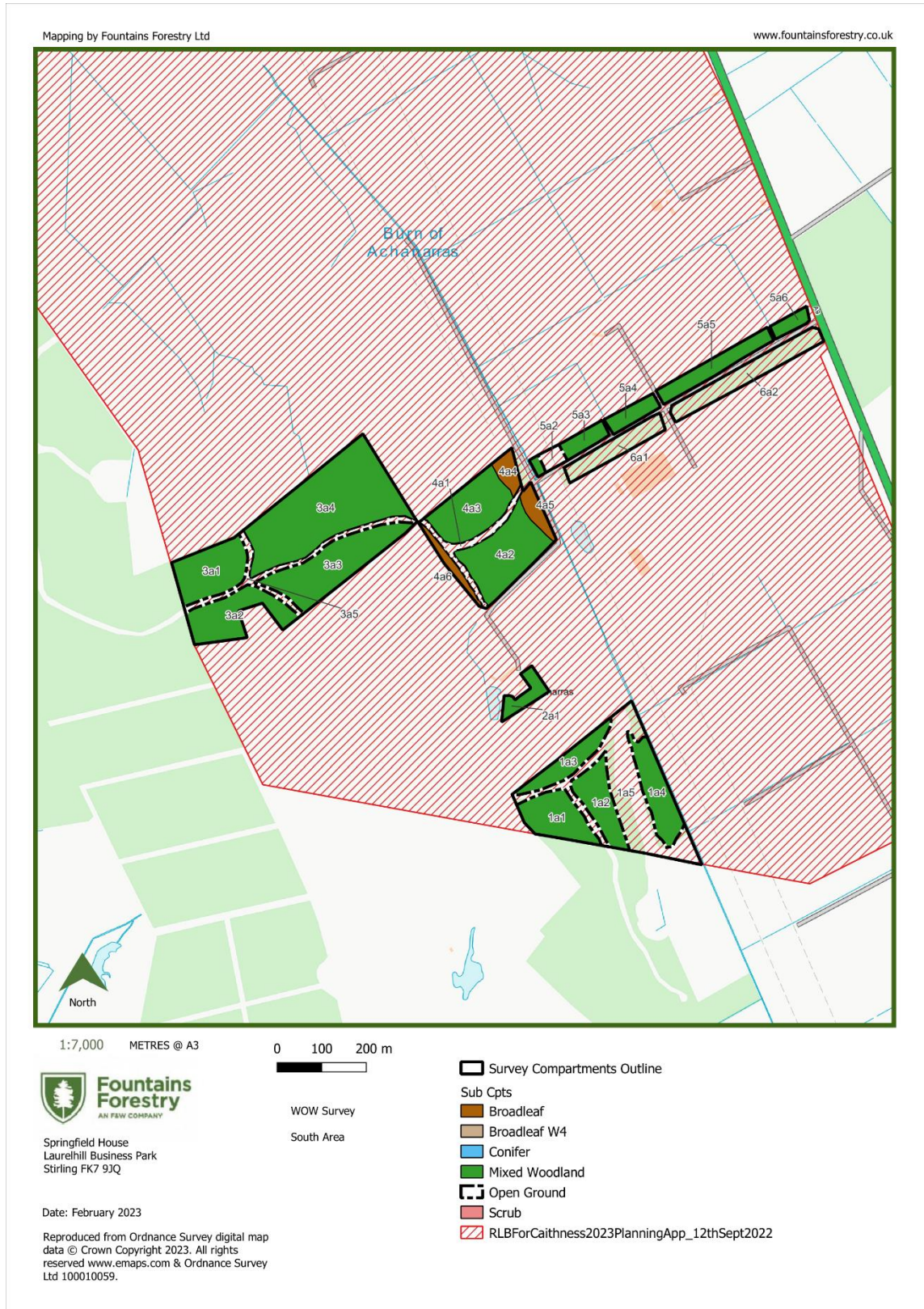




Figure 3 Survey Area and Species Map 2

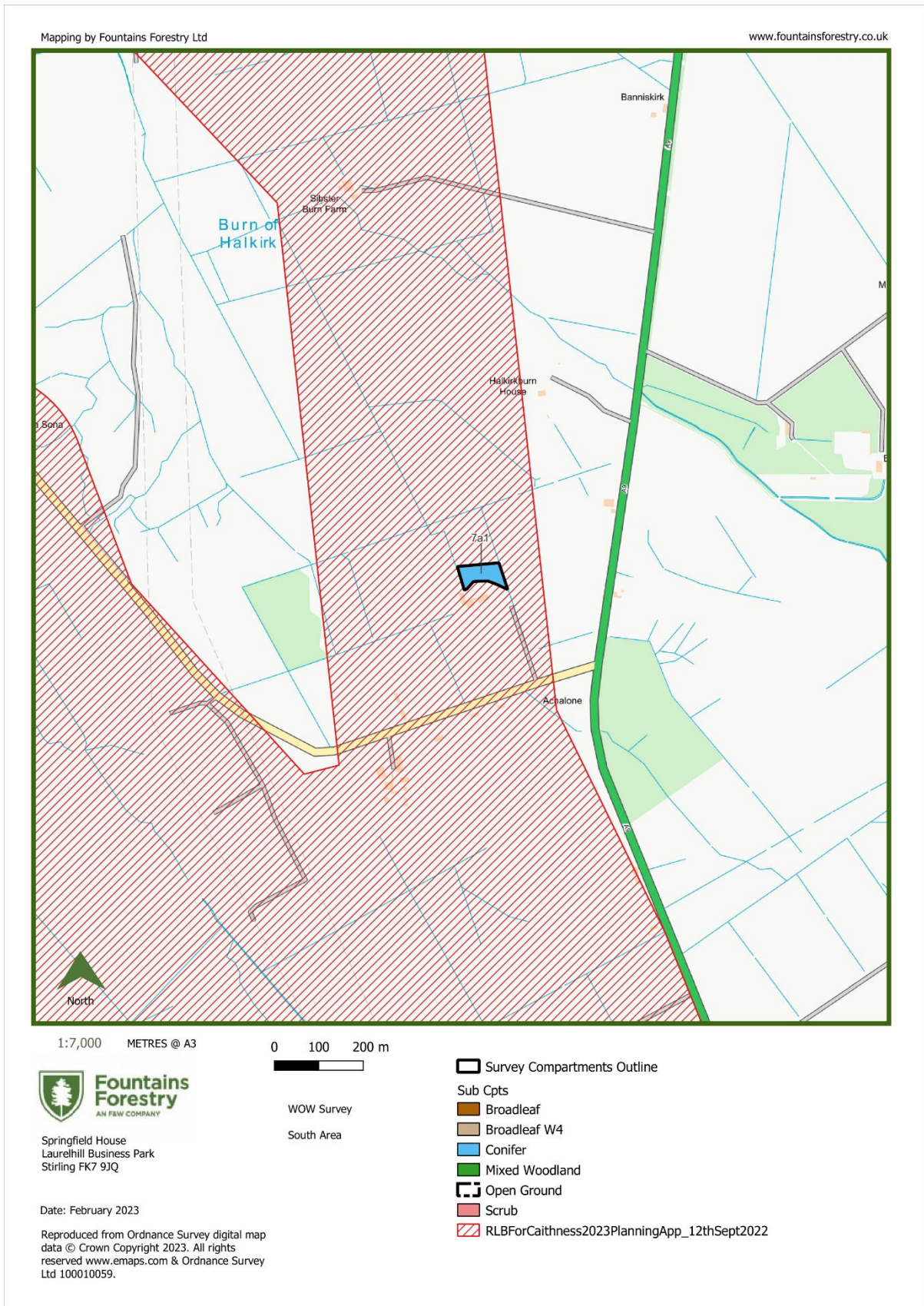




Figure 4 Survey and Species Map 3 (Sibster Forest)

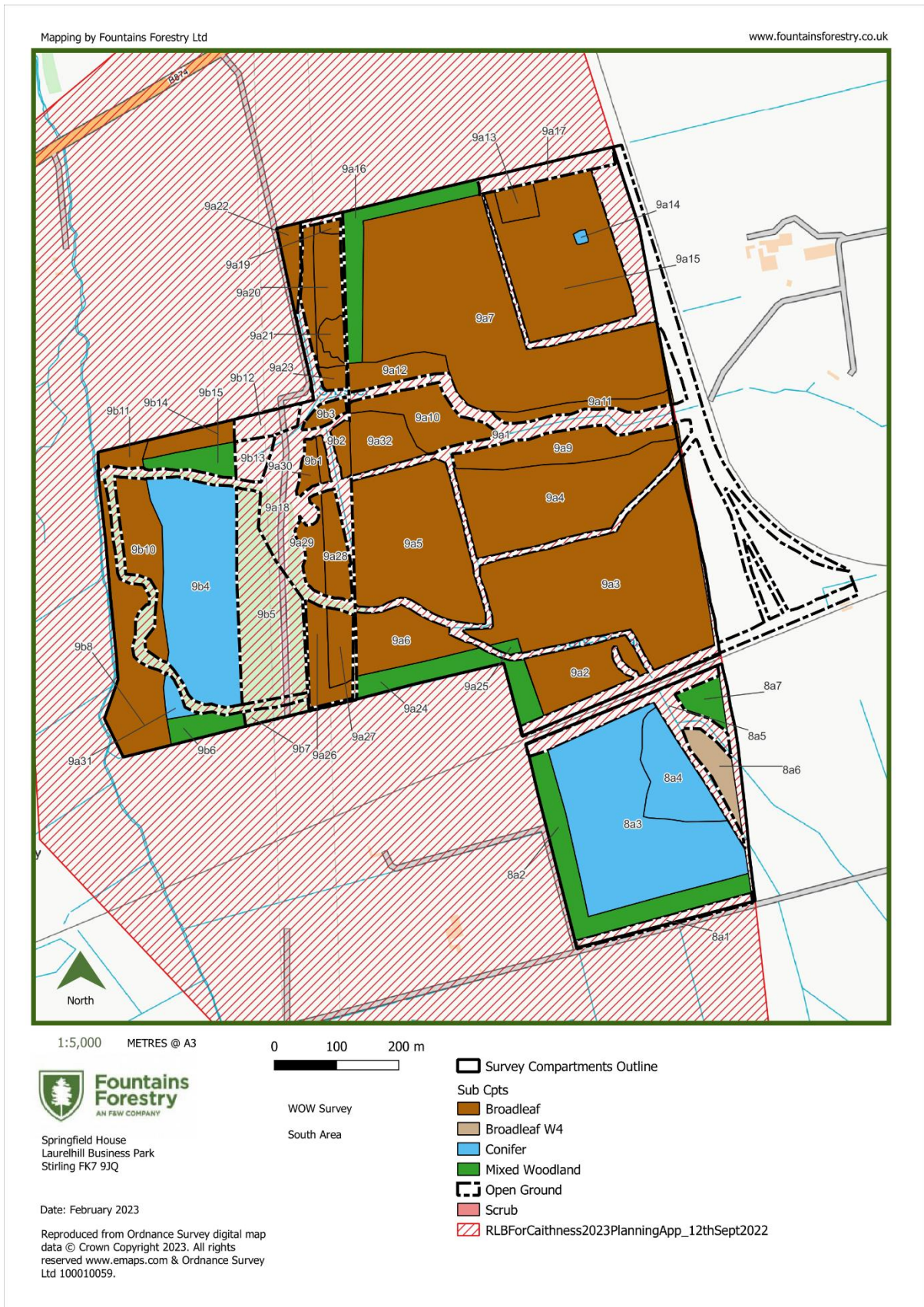




Figure 5 Survey and Species Map 4 (Water treatment area)

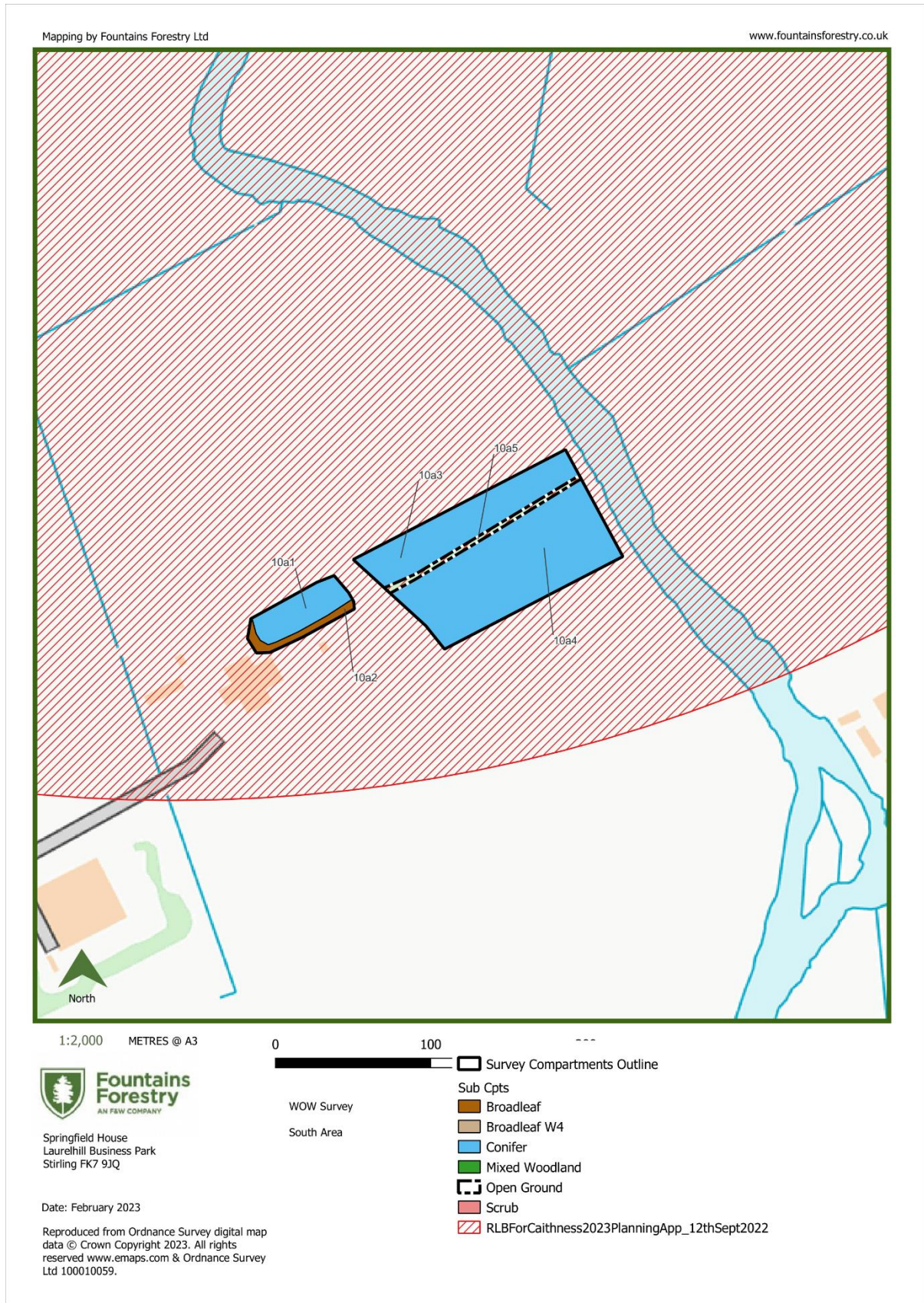




Figure 6 Survey and Species Map 5

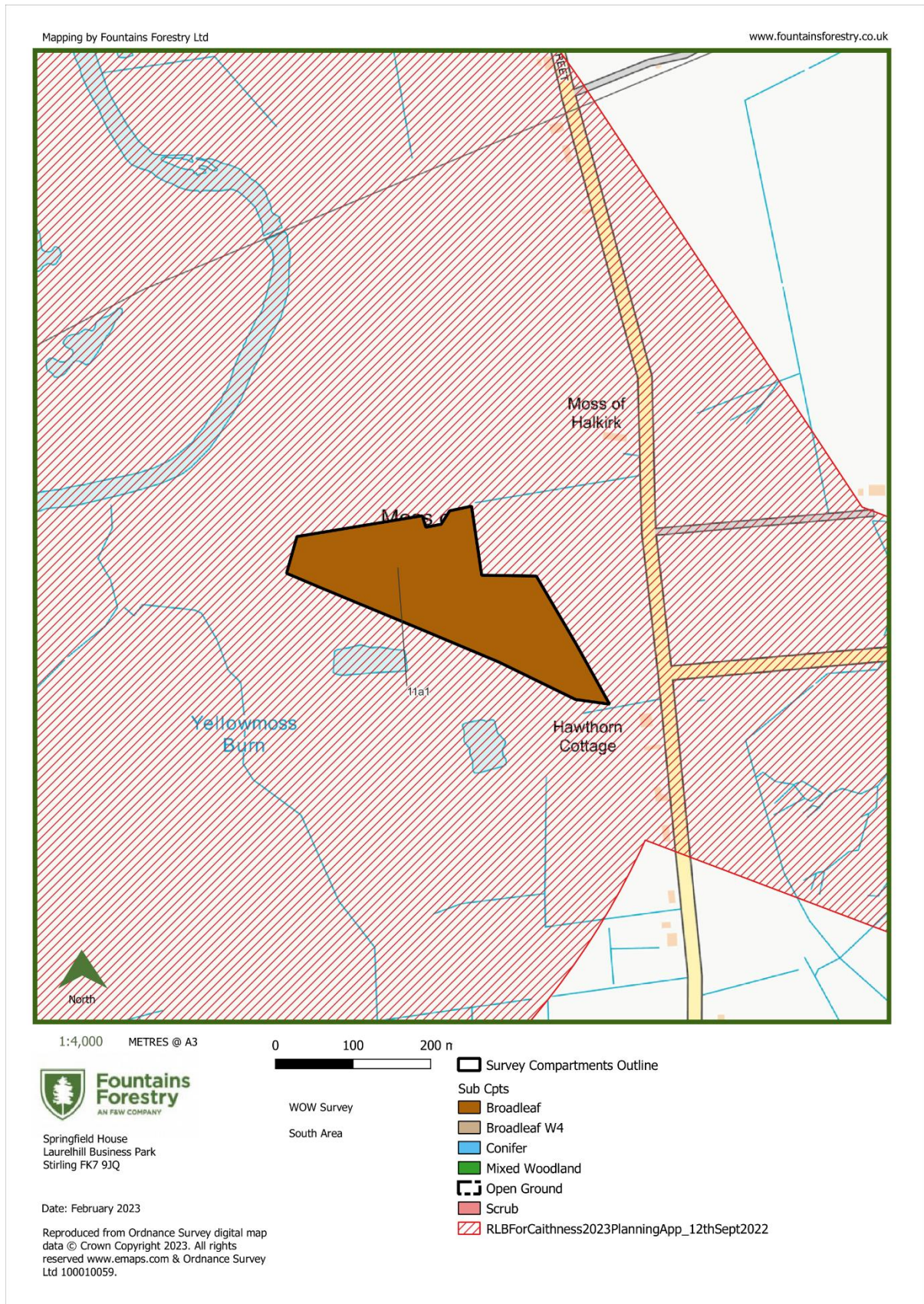




Figure 7 Survey and Species Map 6

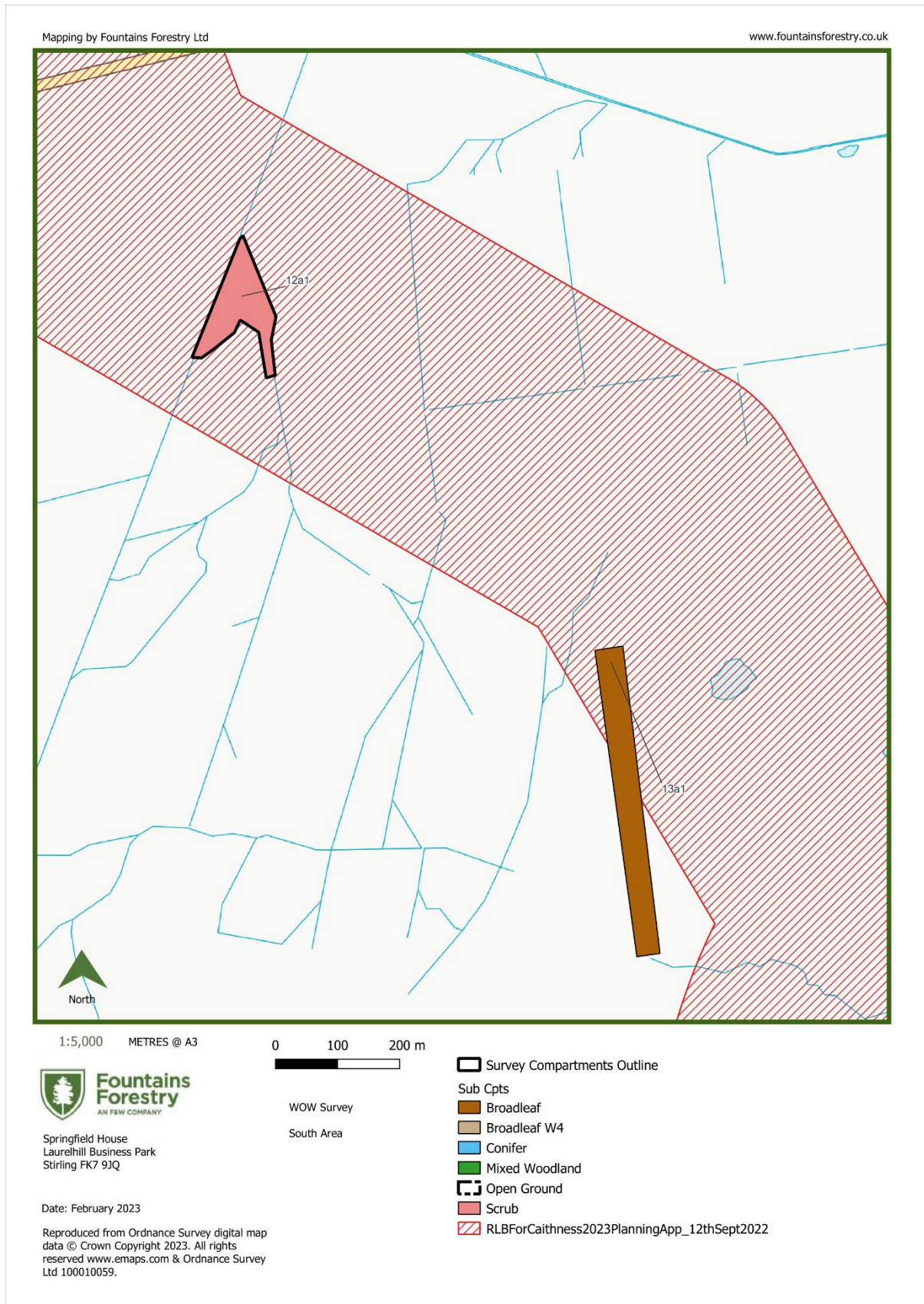




Figure 8 Survey and Species Map 7 (Hill of Howe Woodland Strip)

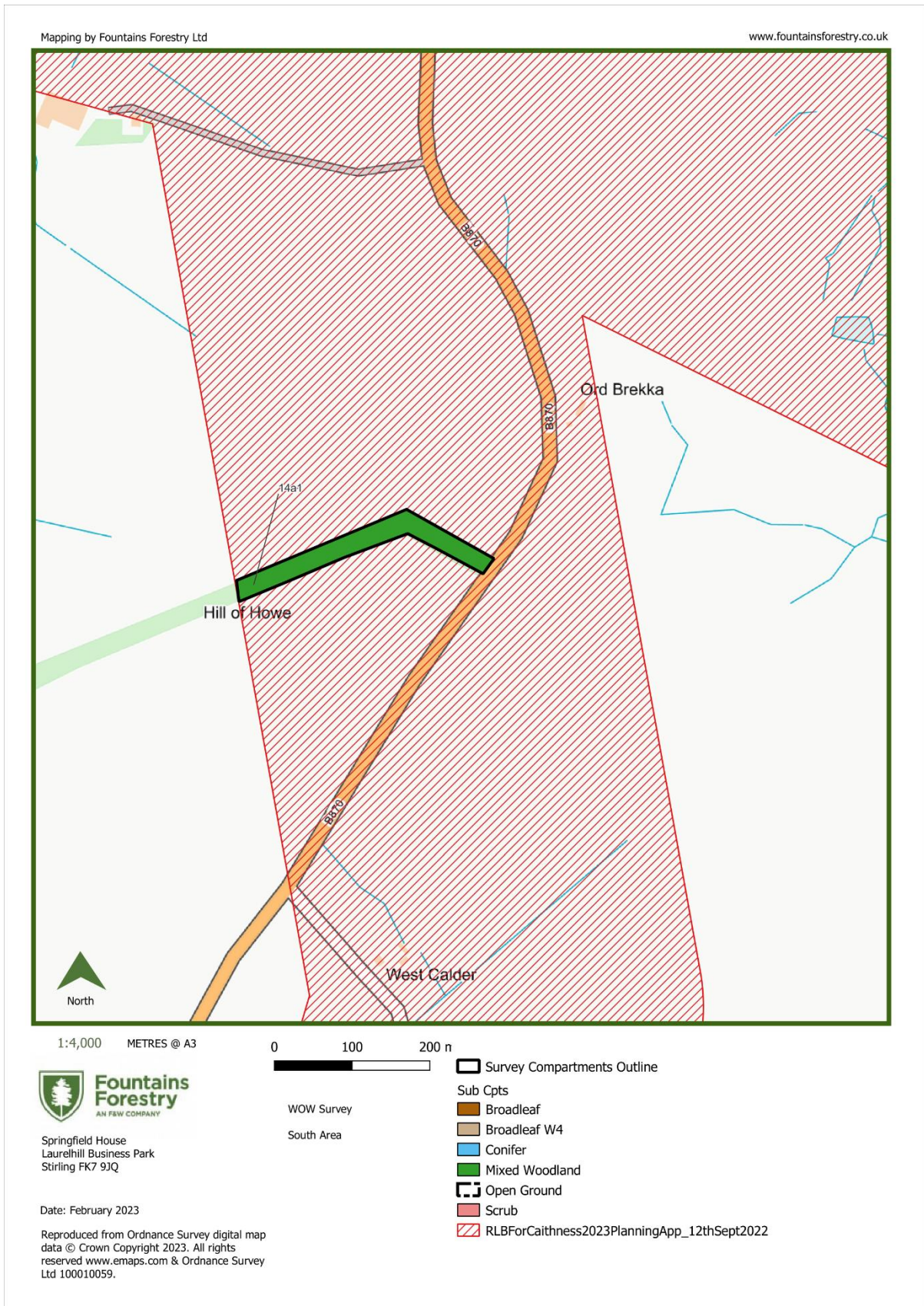




Figure 9 Survey and Species Map 8

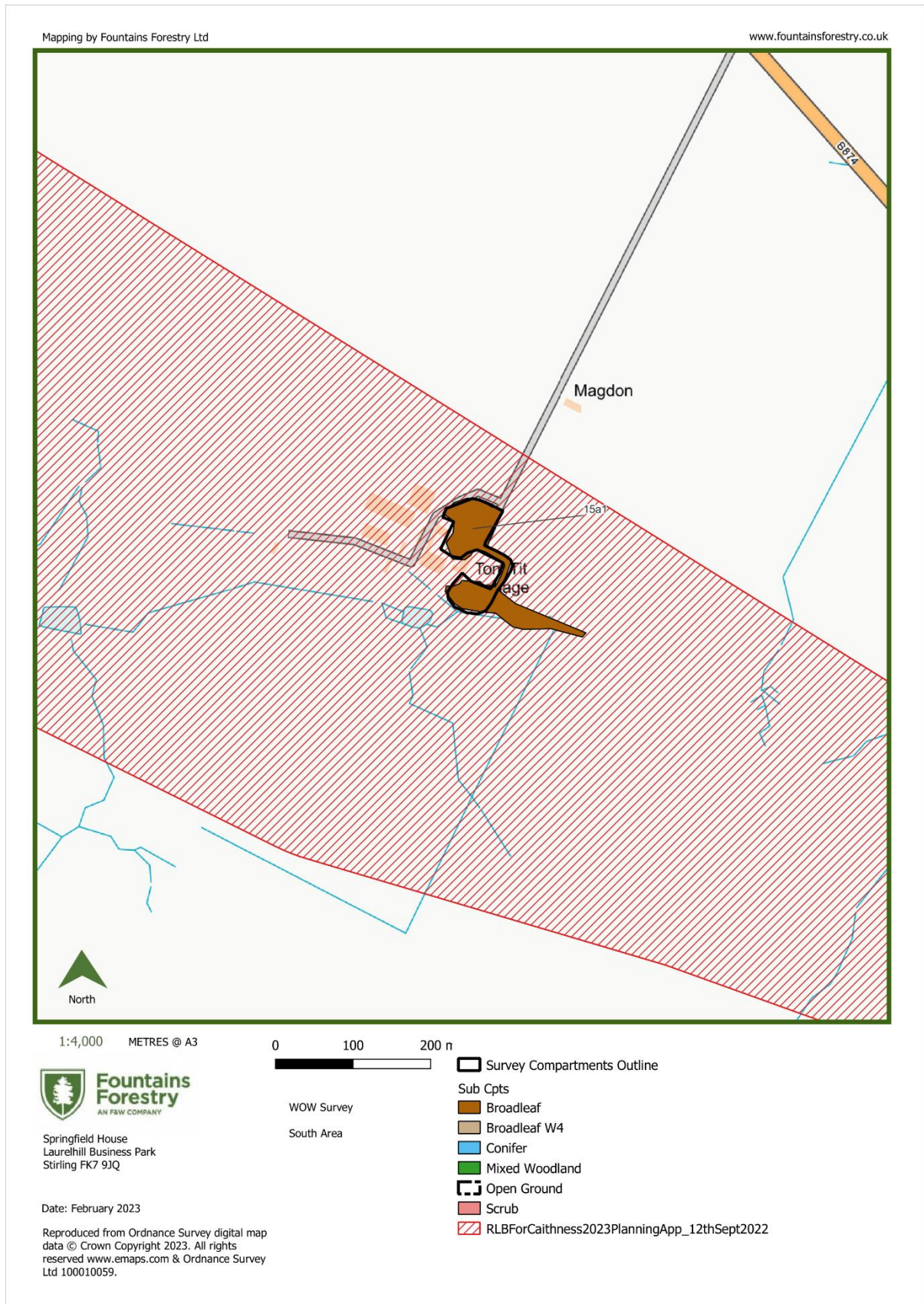




Figure 10 Survey and Species Map 9

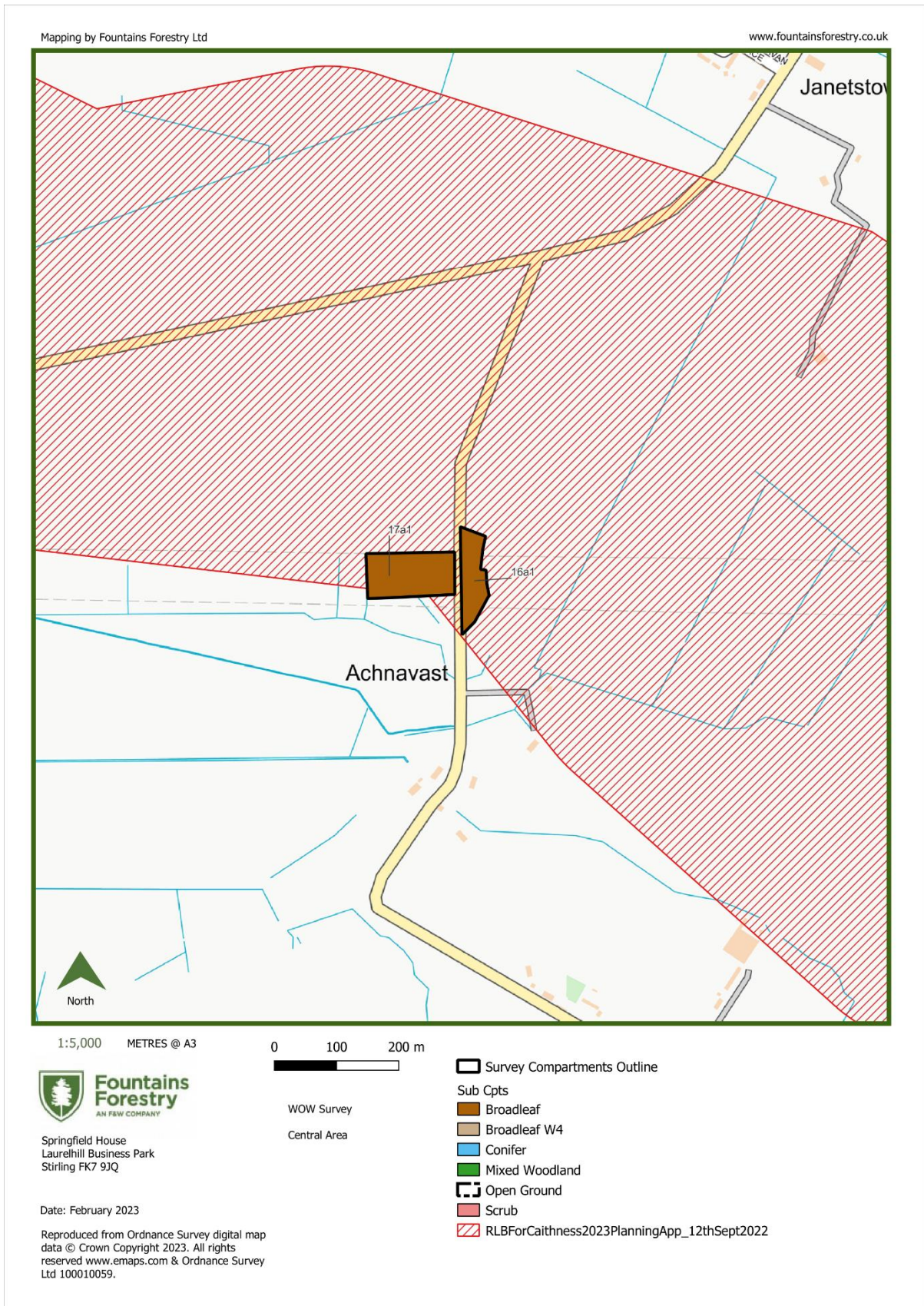




Figure 11 Survey and Species Map 10

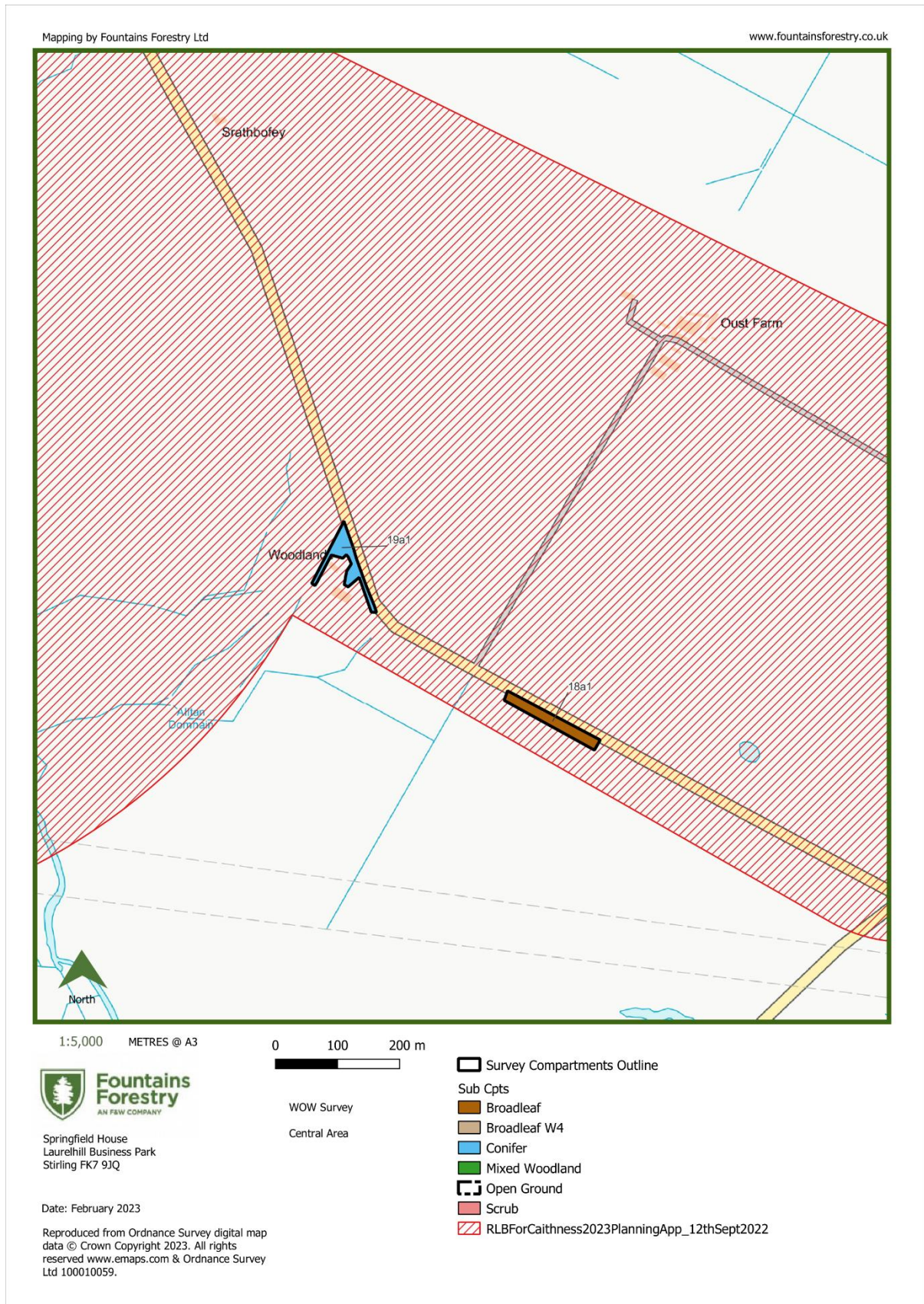




Figure 12 Survey and Species Map 11

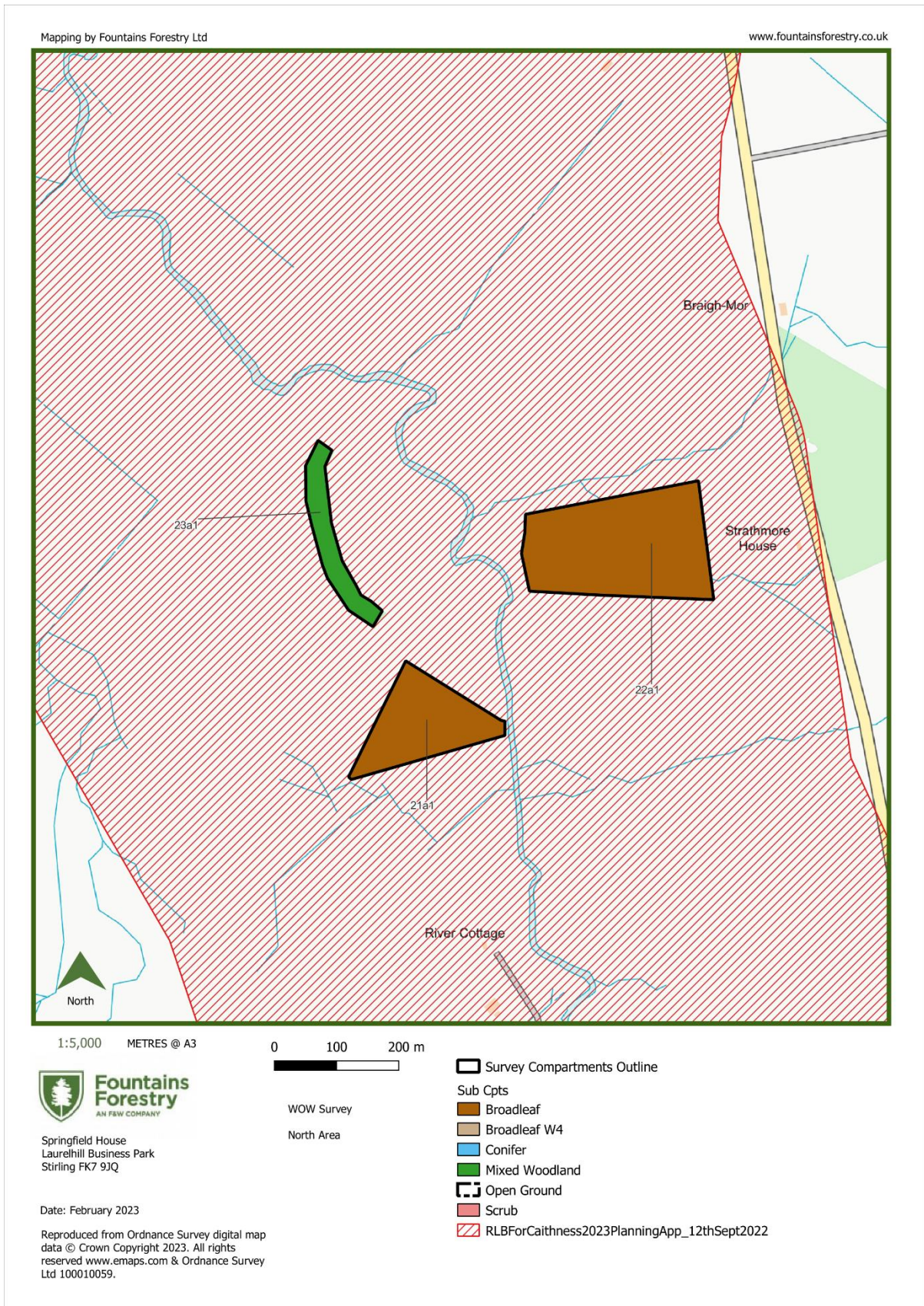




Figure 13 Survey and Species Map 12 (Forss area)

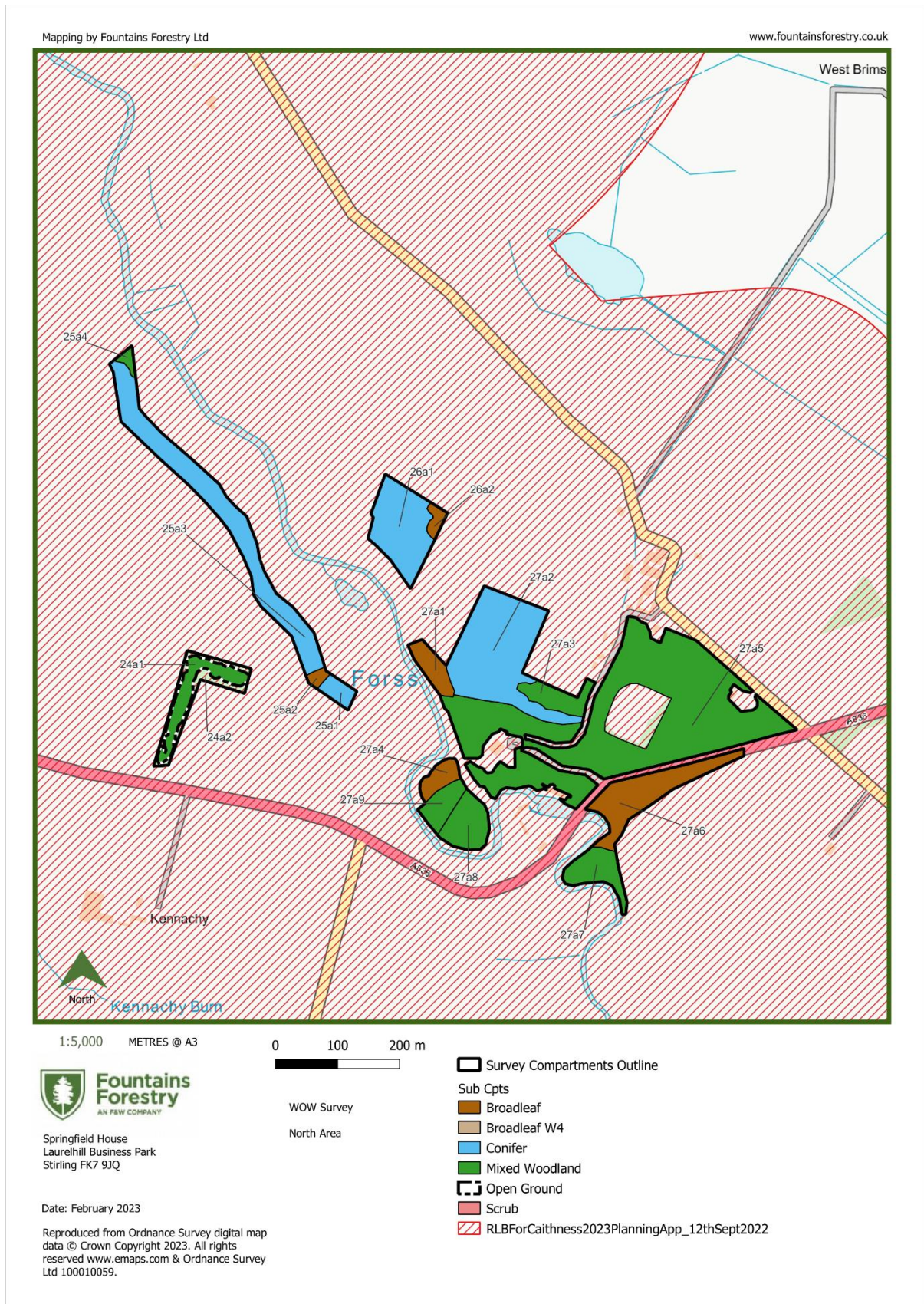
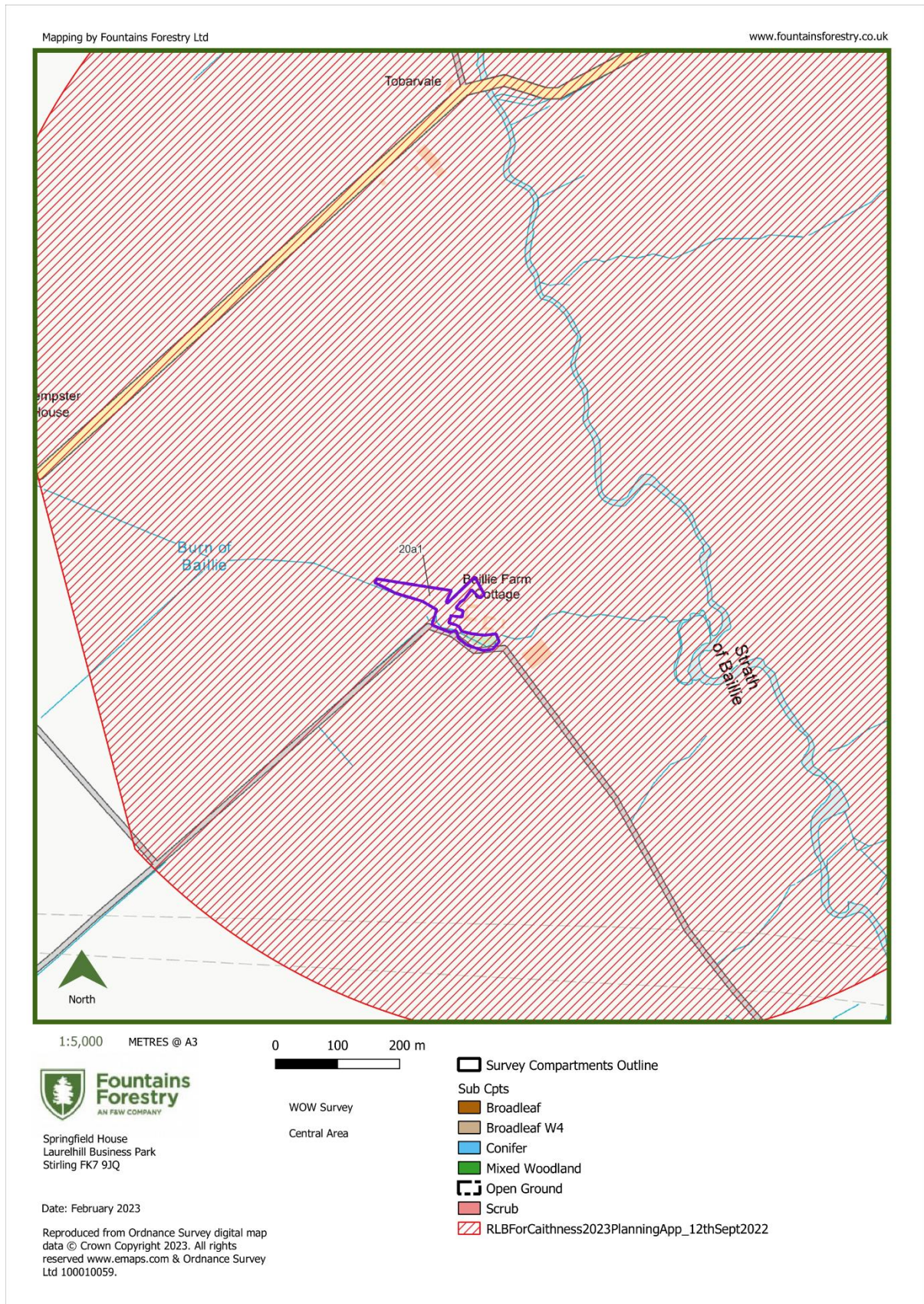




Figure 14 Survey and Species Map 13 (No survey data)





## Appendix 2

### 5.6 Survey Points Maps

Figure 15 Survey Points Map 1 (Spittal Sub Station)

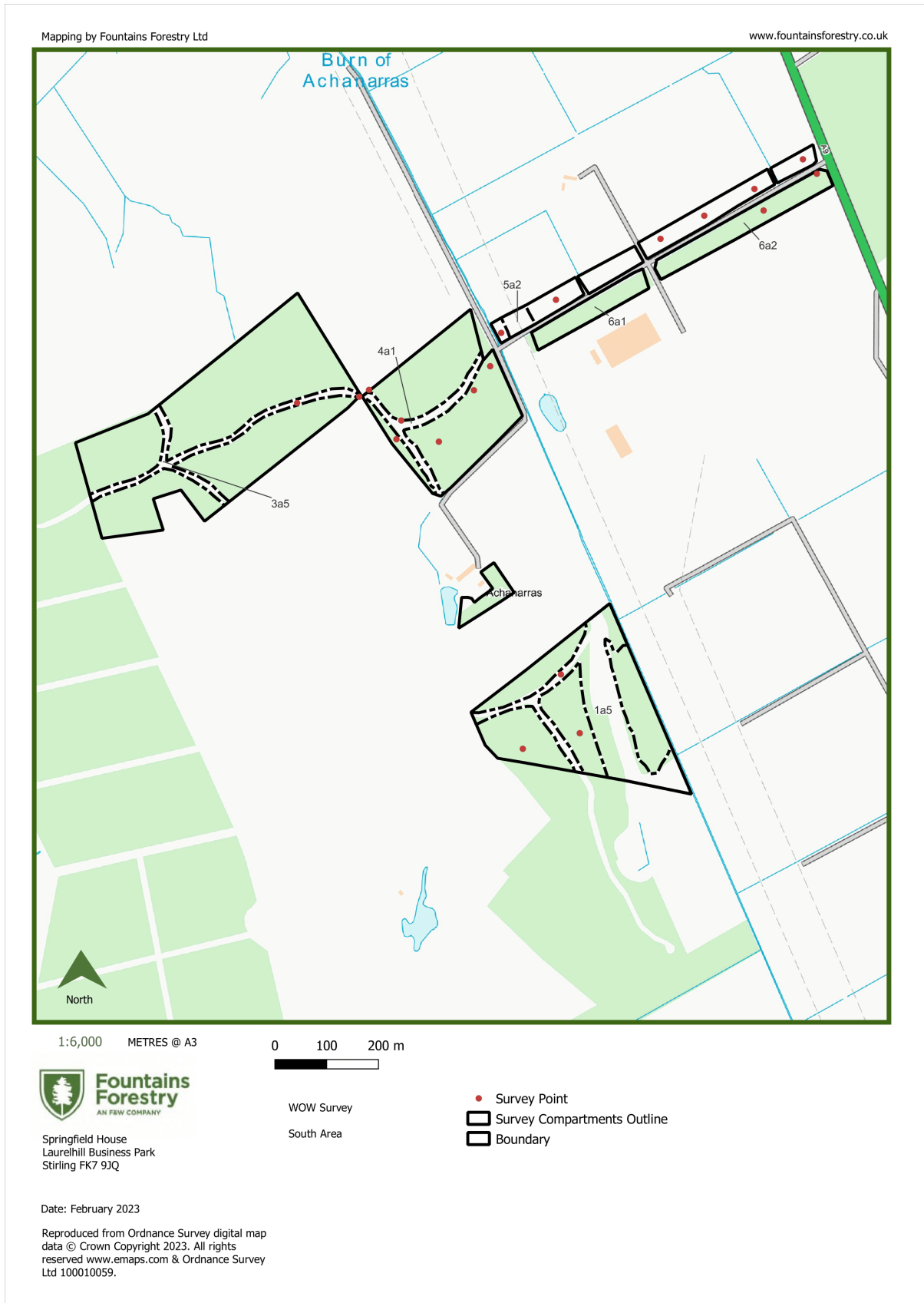


Figure 16 Survey Points Map 2

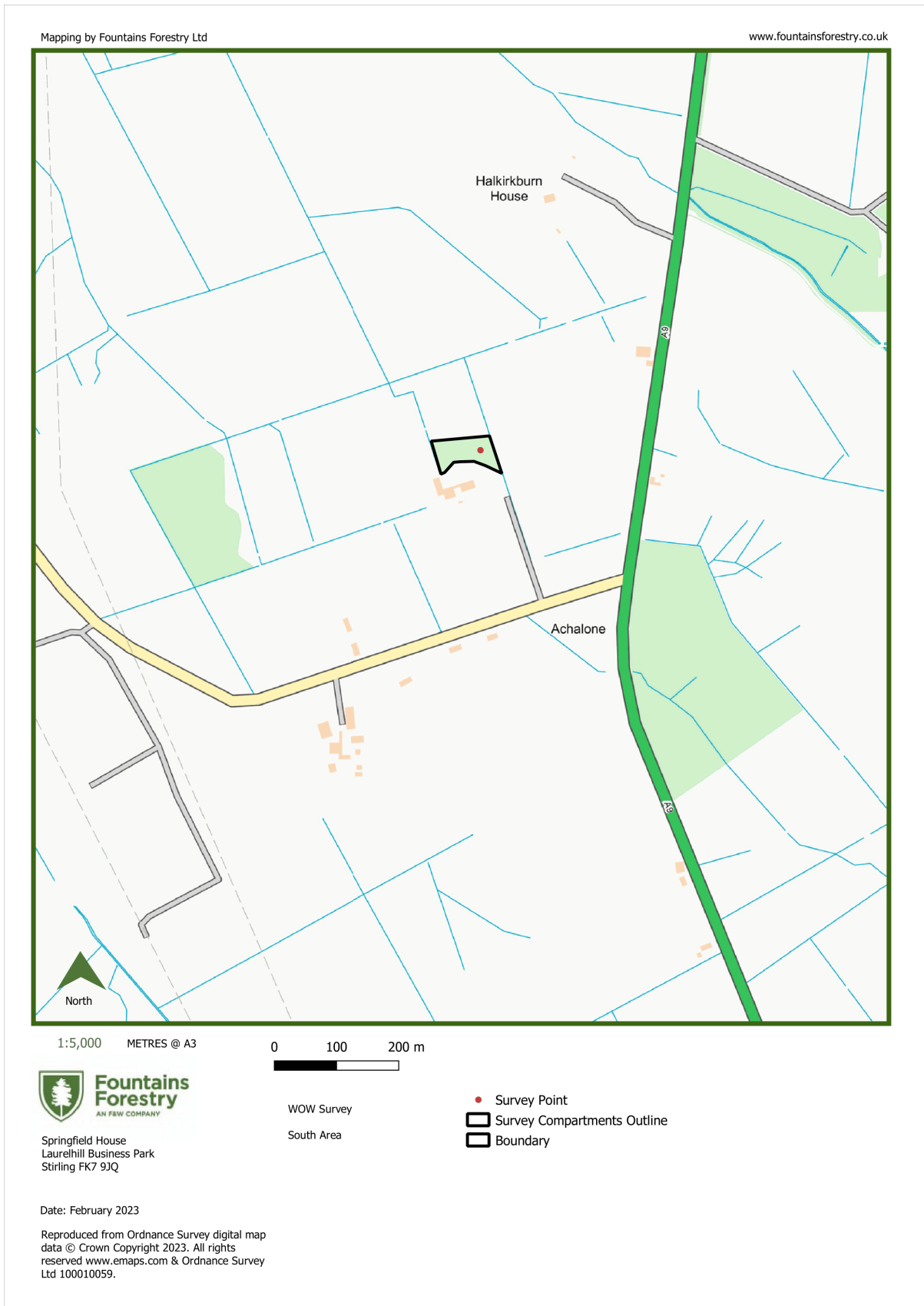


Figure 17 Survey Points Map 3

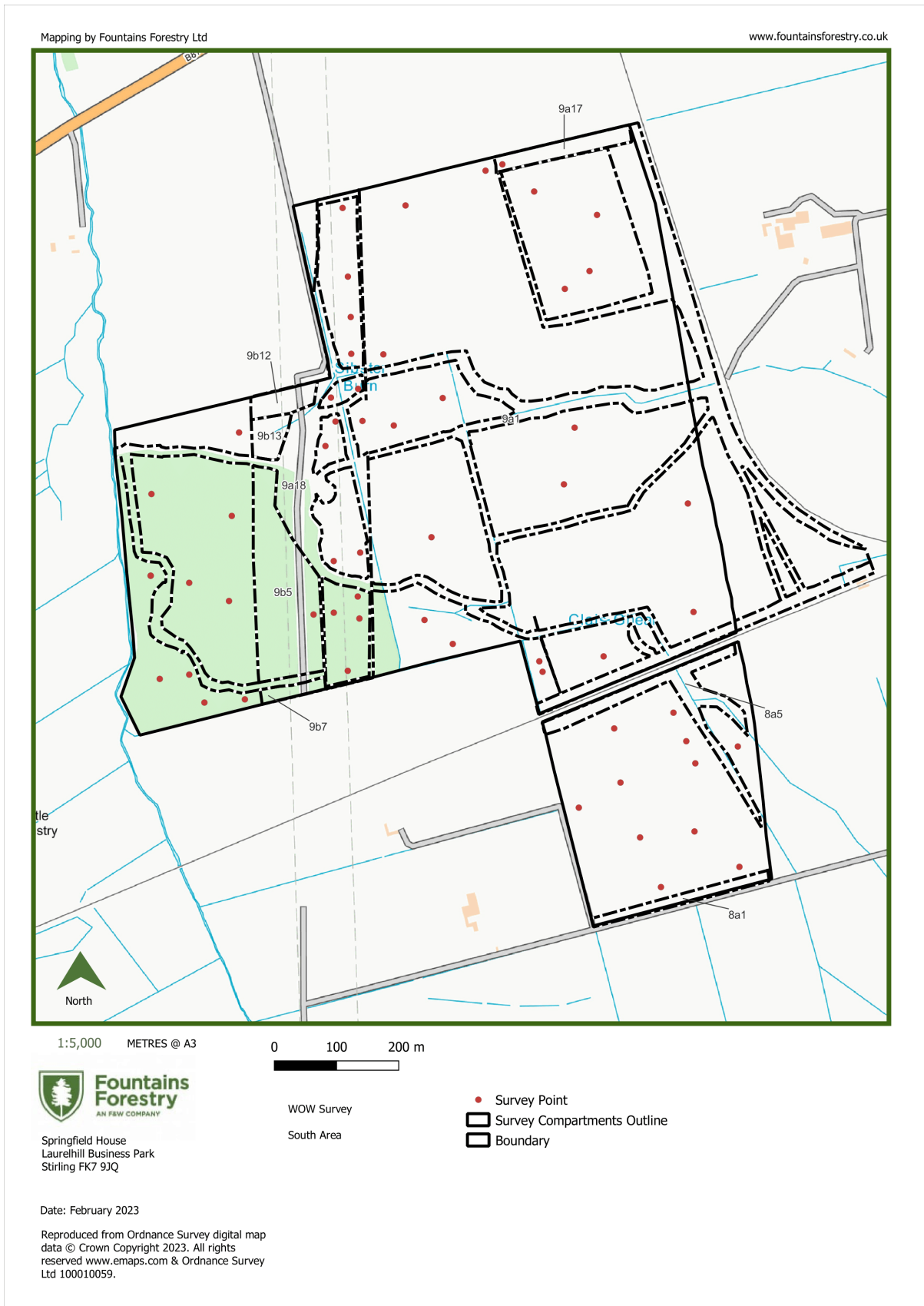


Figure 18 Survey Points Map 4

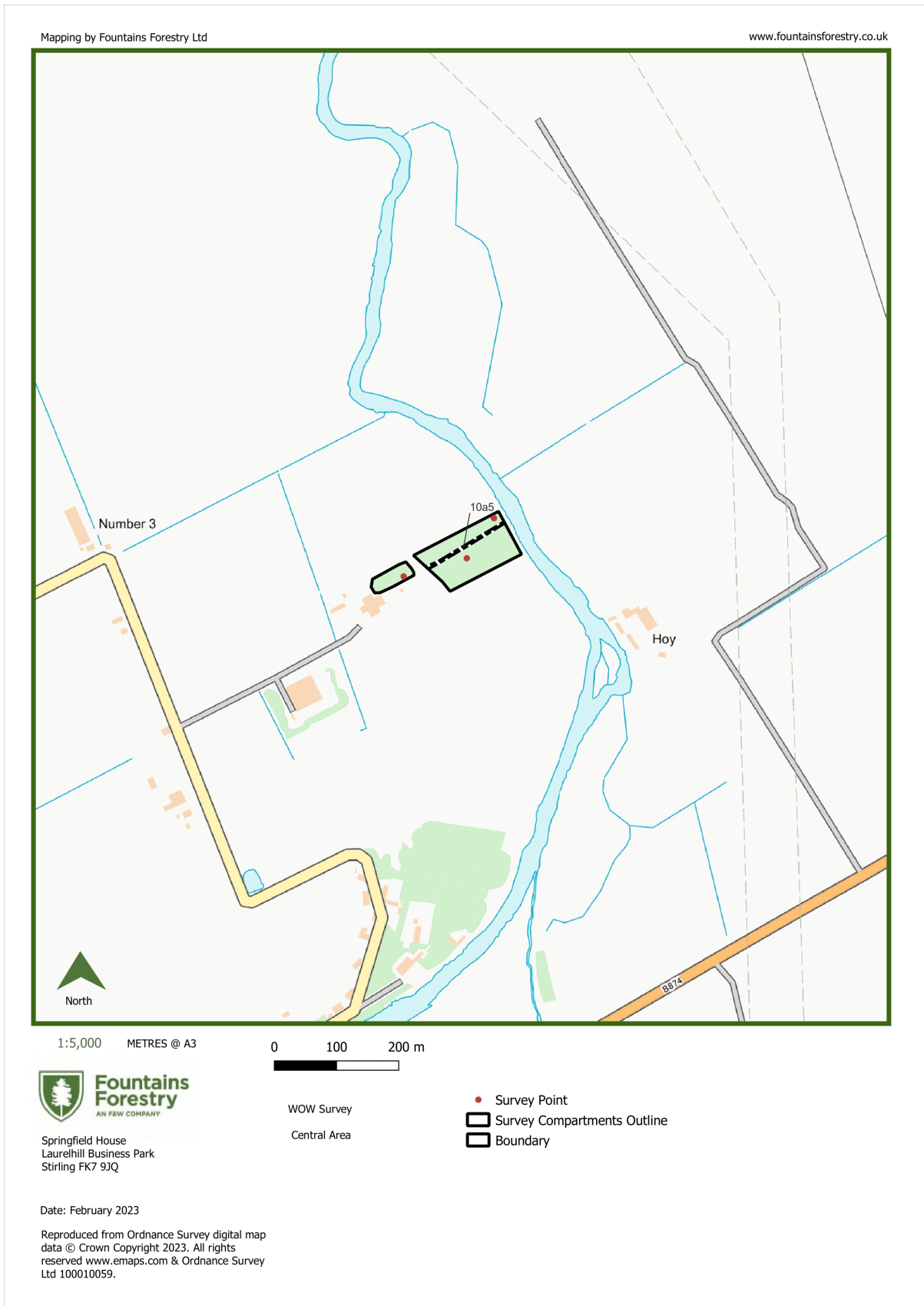


Figure 19 Survey Points Map 5

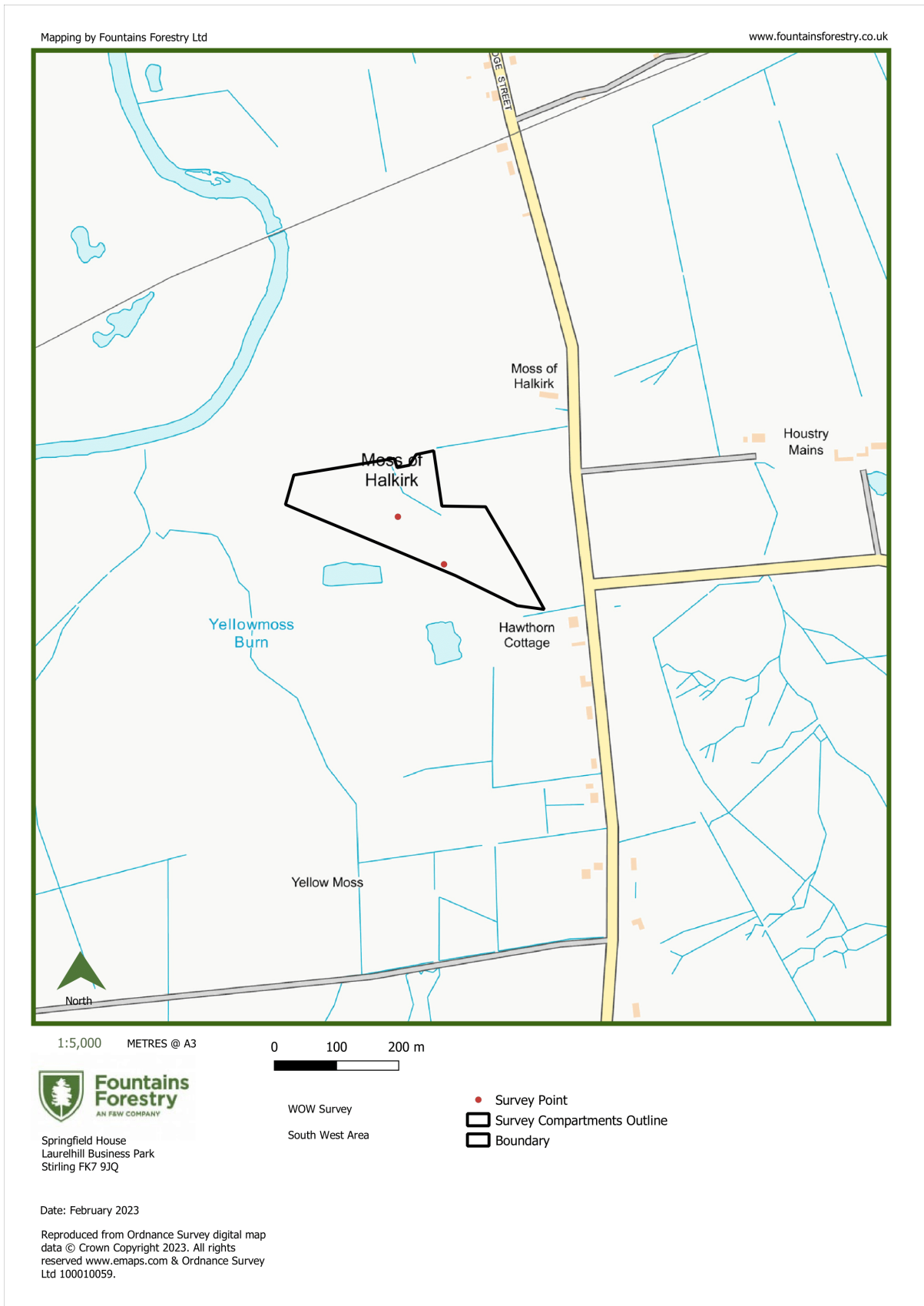


Figure 20 Survey Points Map 6

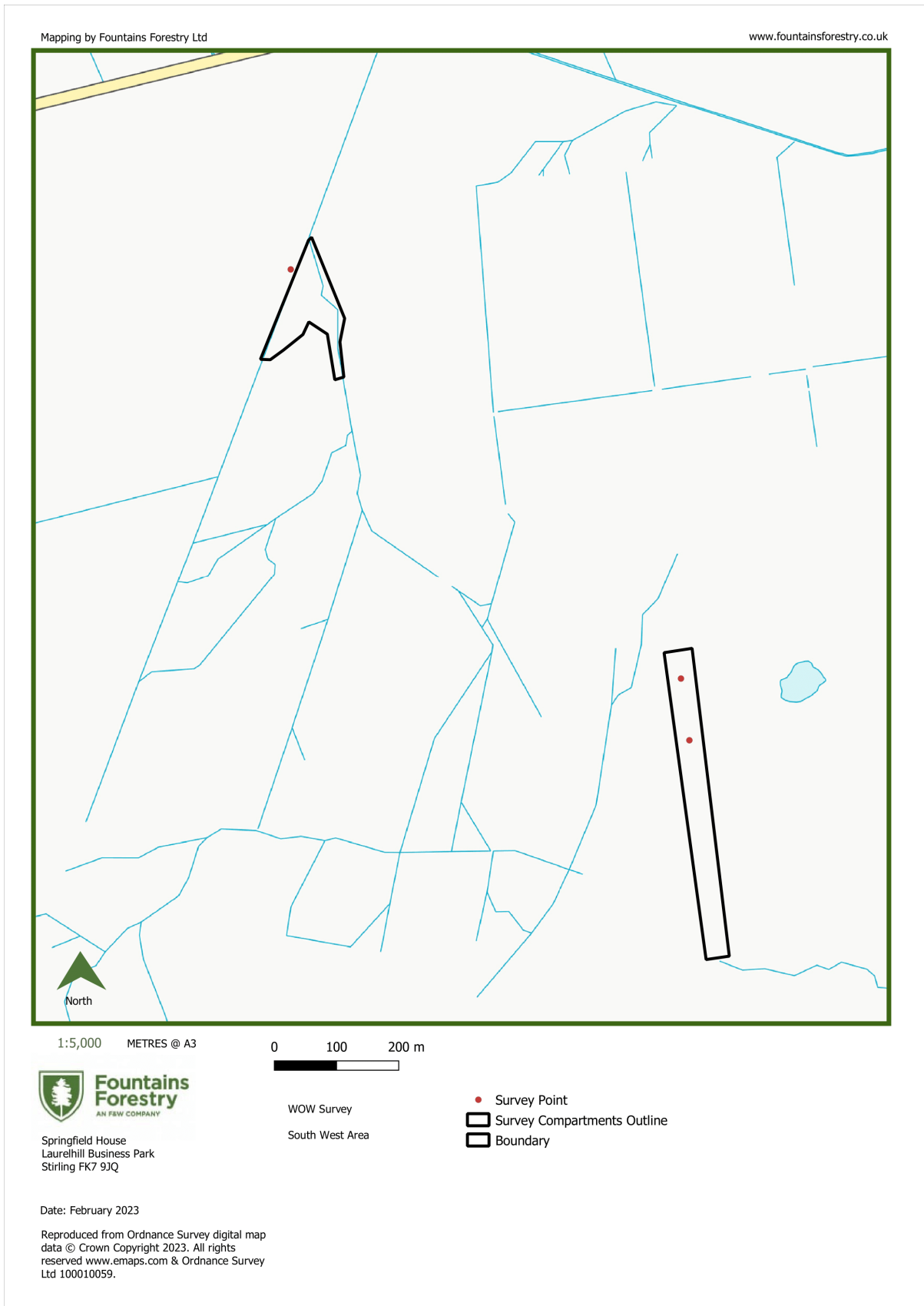


Figure 21 Survey Points Map 7

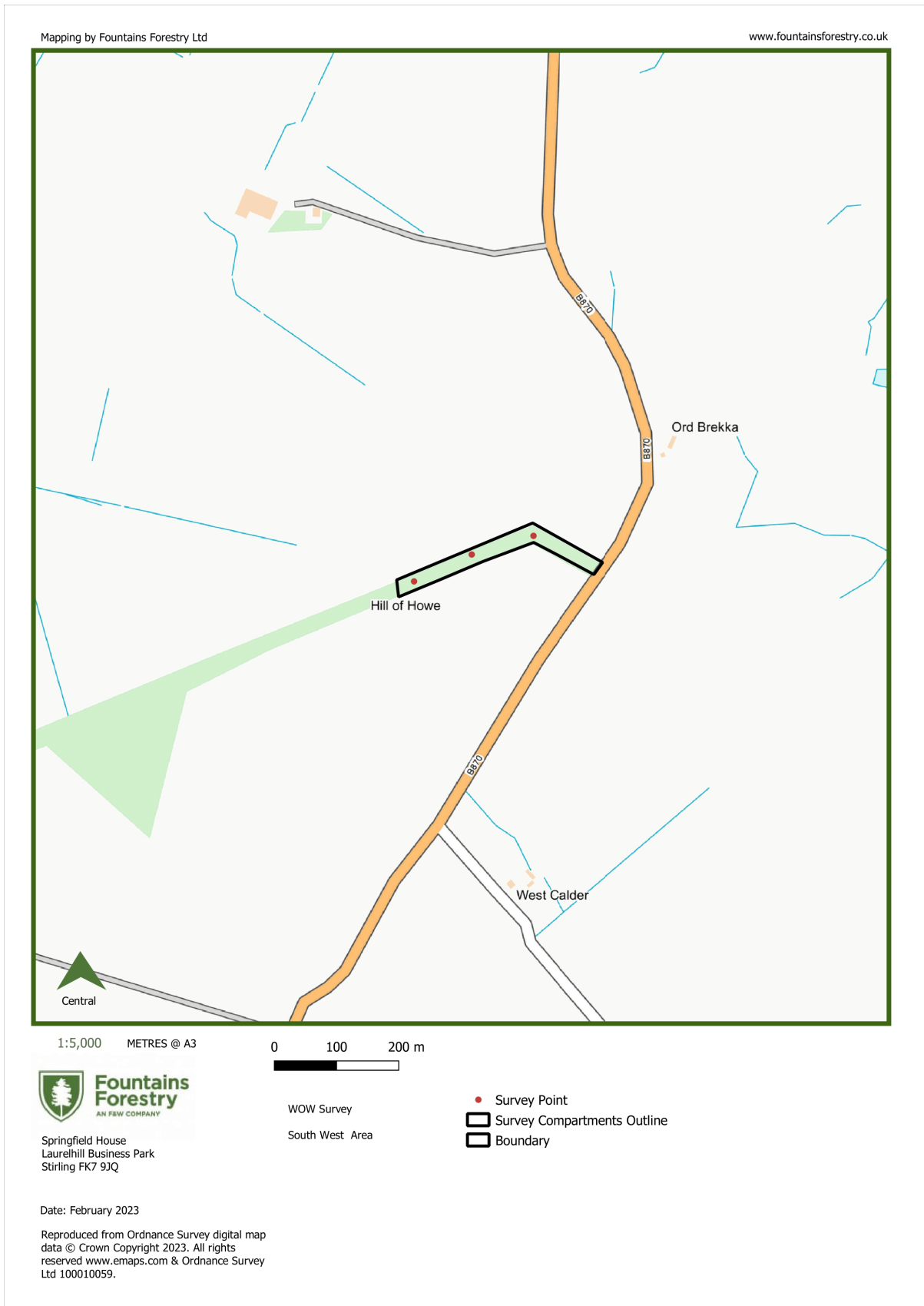




Figure 22 Survey Points Map 8

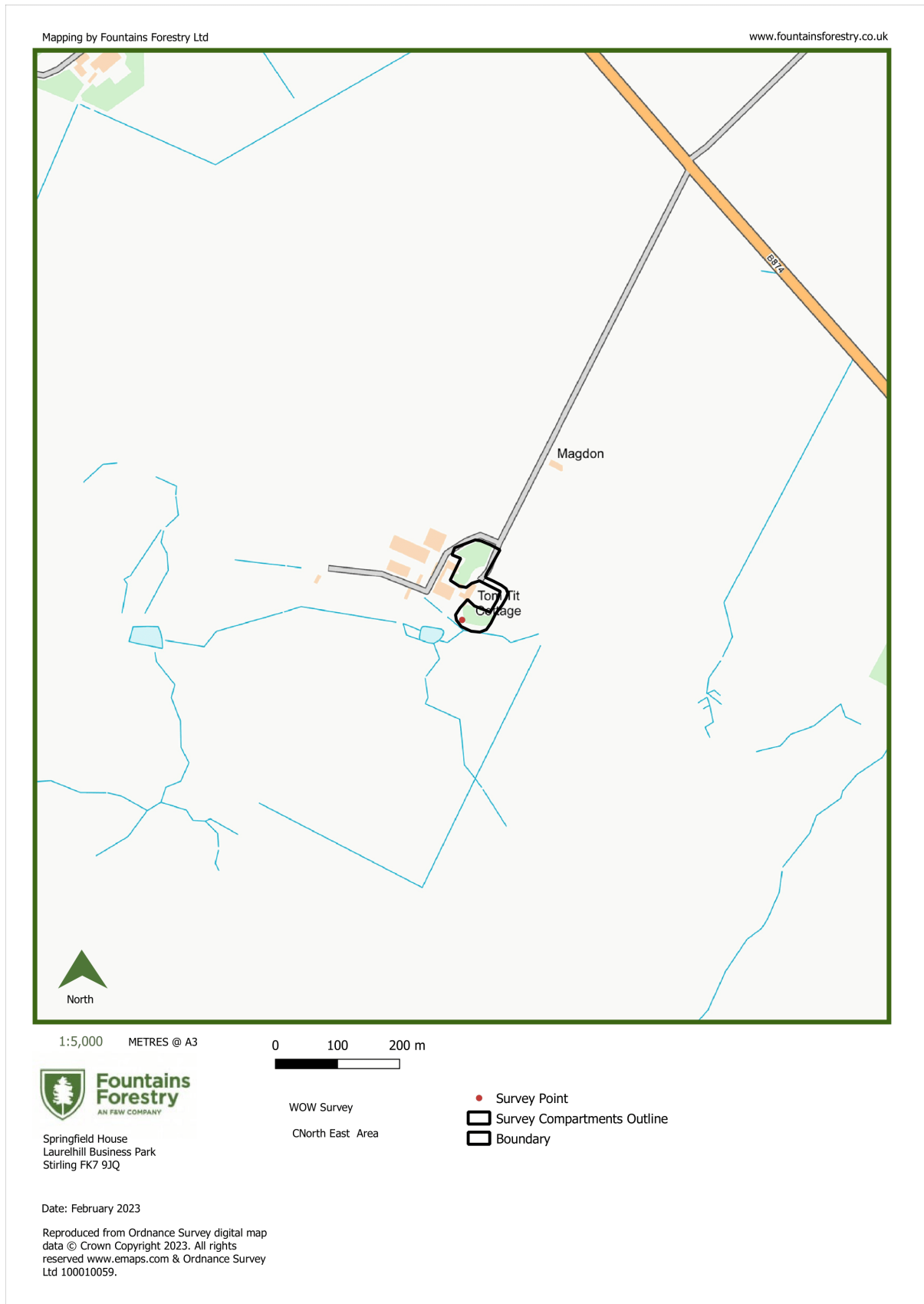


Figure 23 Survey Points Map 9

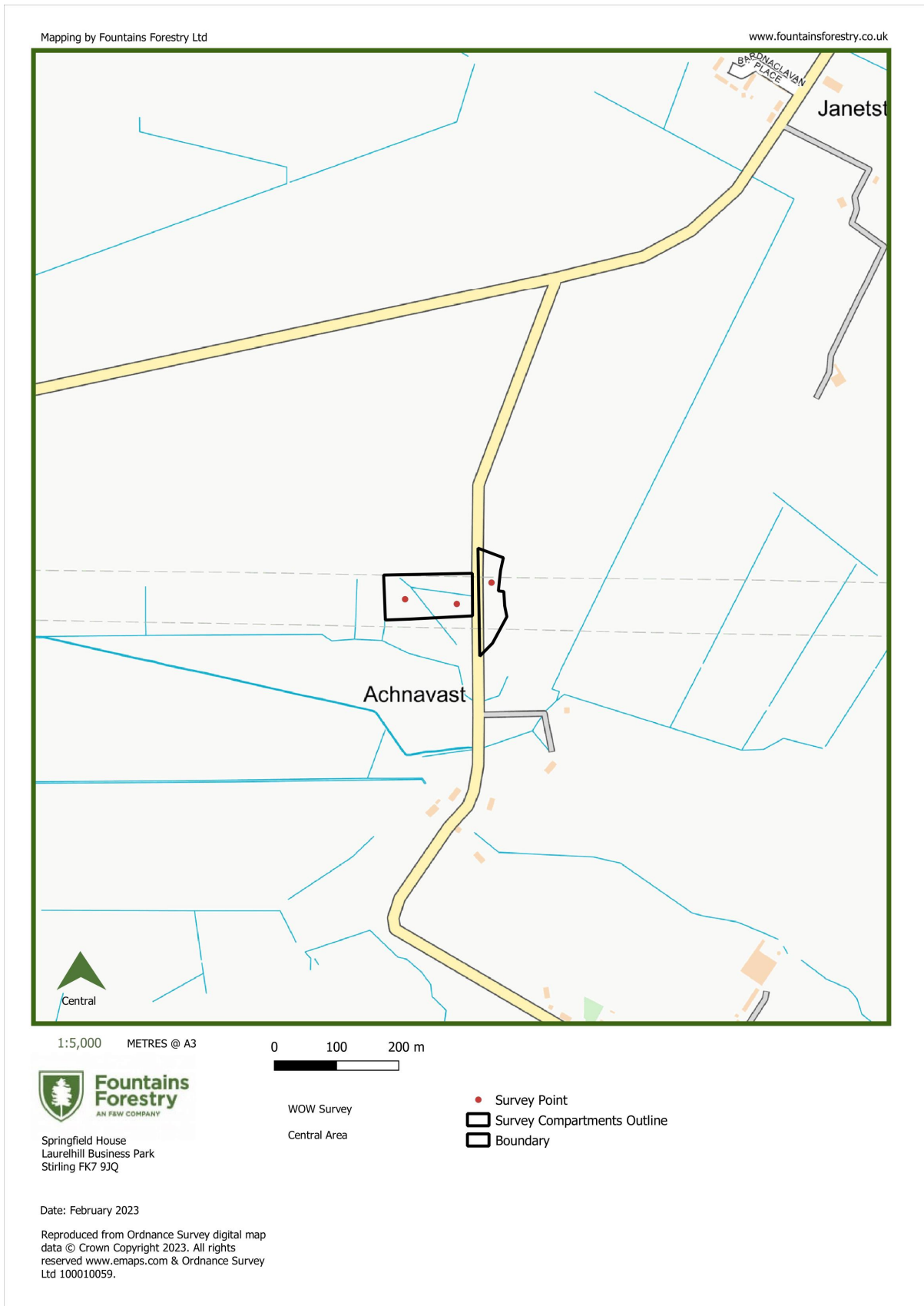


Figure 24 Survey Points Map 10

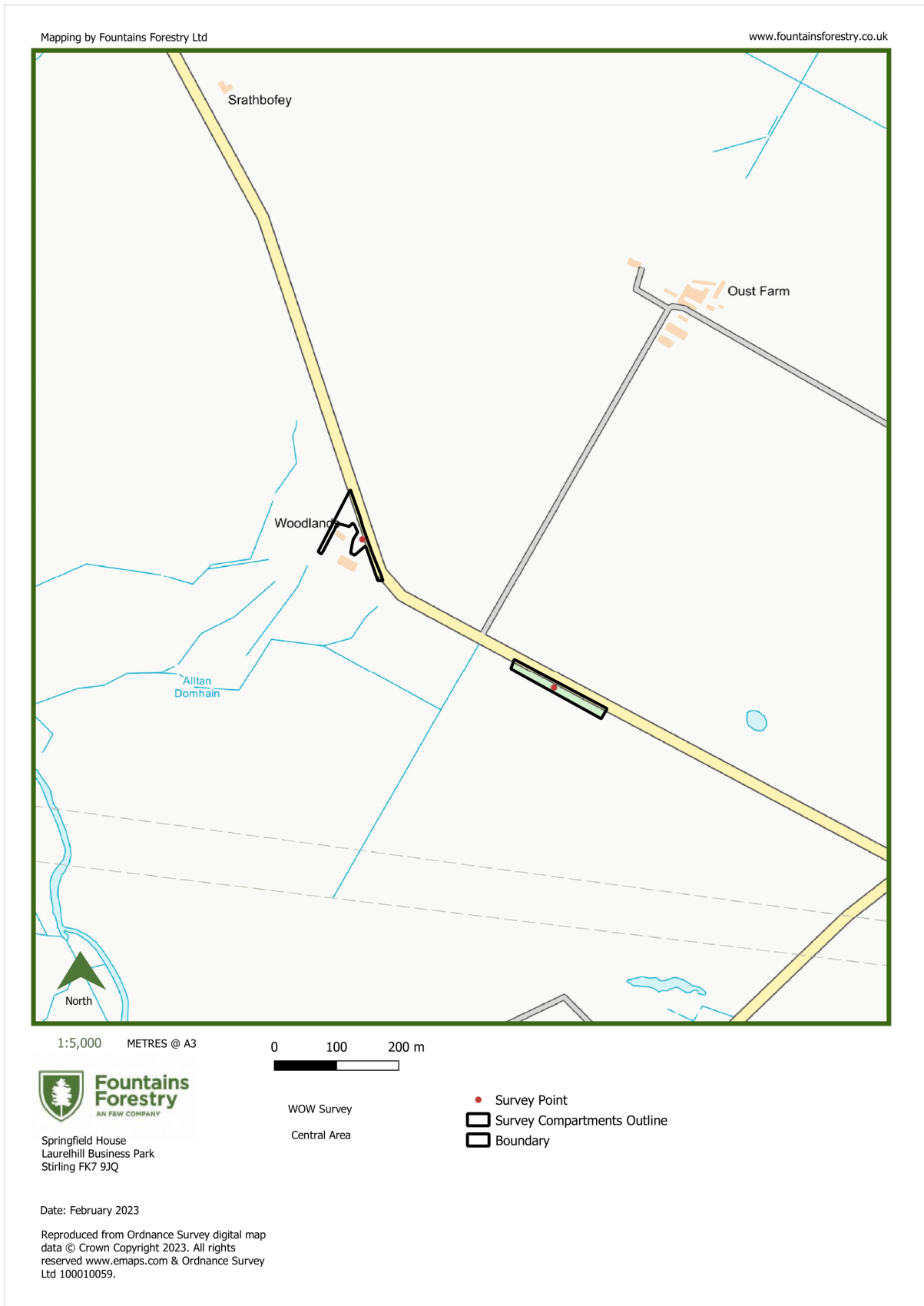


Figure 25 Survey Points Map 11

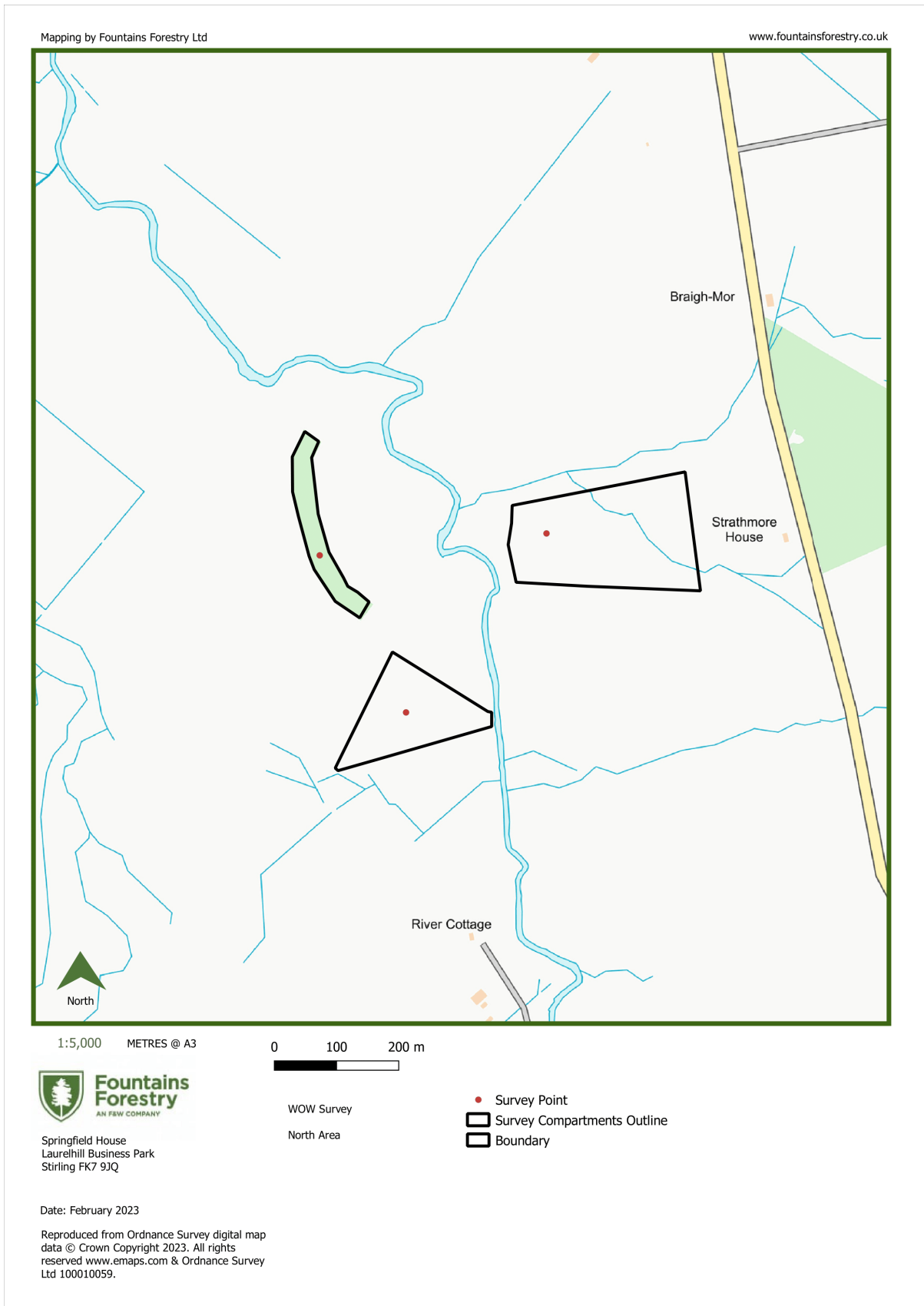
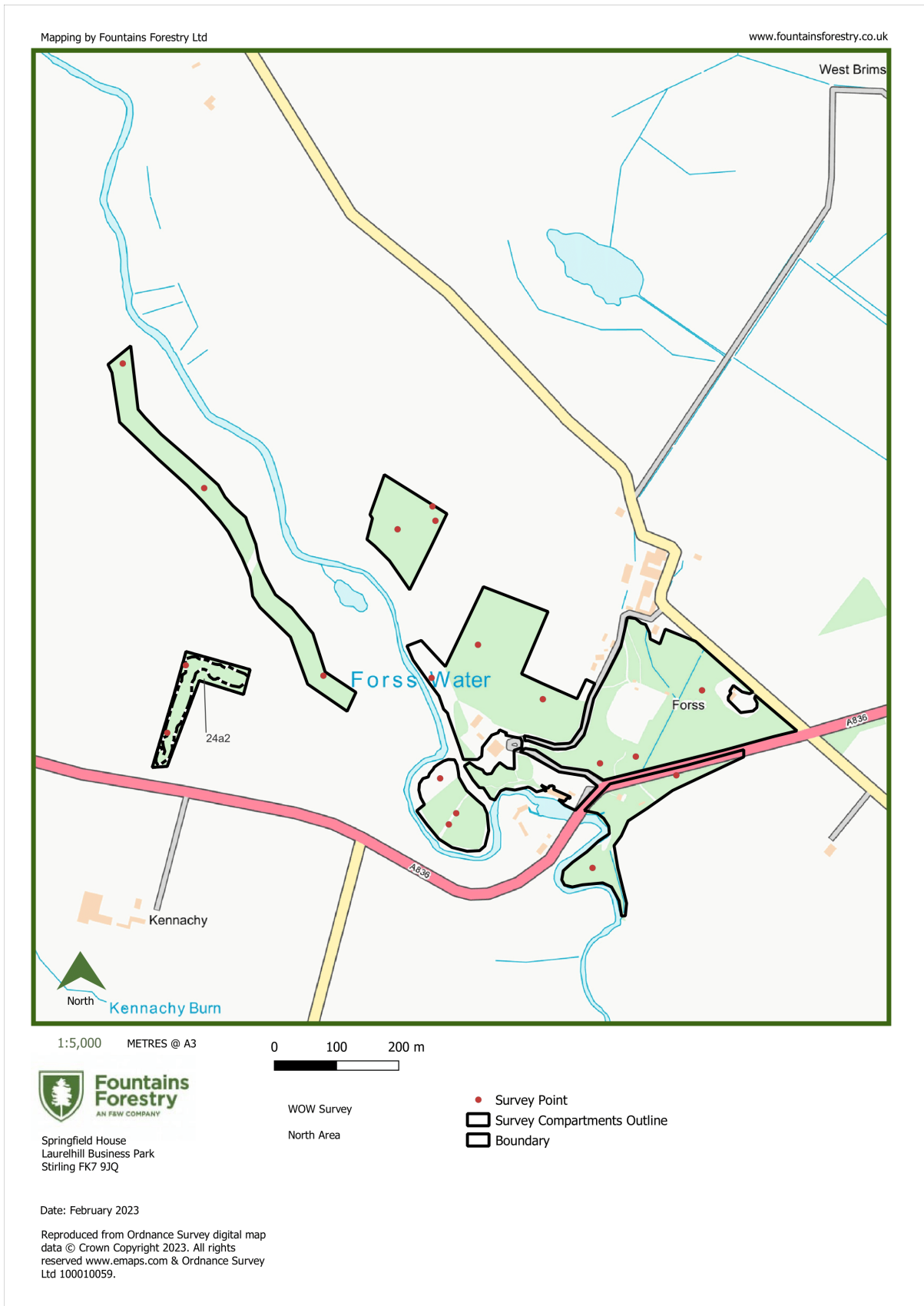


Figure 26 Survey Points Map 12



### Appendix 3

#### 5.7 Potential Tree Removal Areas

**Figure 27 Spittal Sub Station Potential Tree Removal Areas**

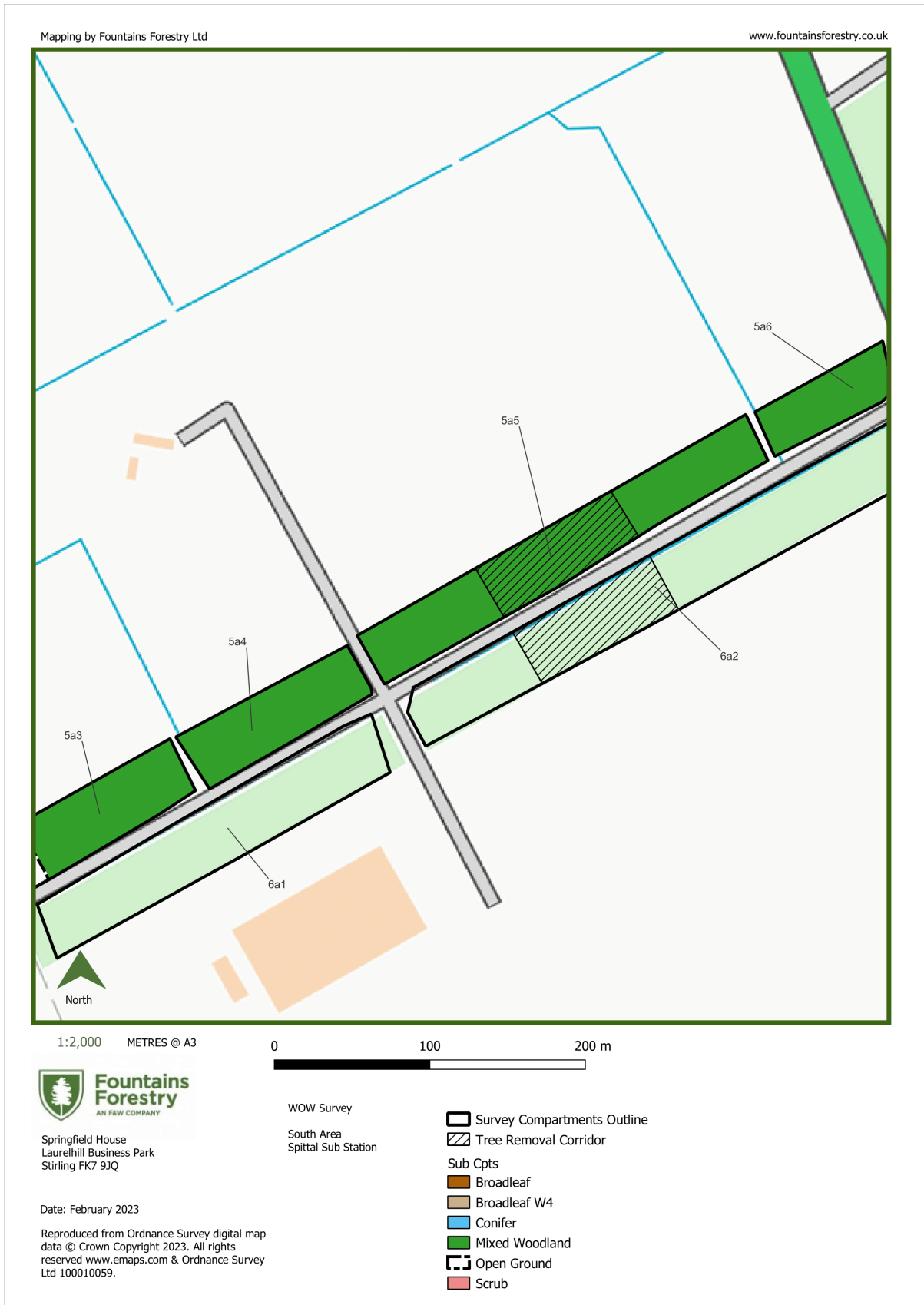




Figure 28 Sibster Forest Potential Tree Removal Areas

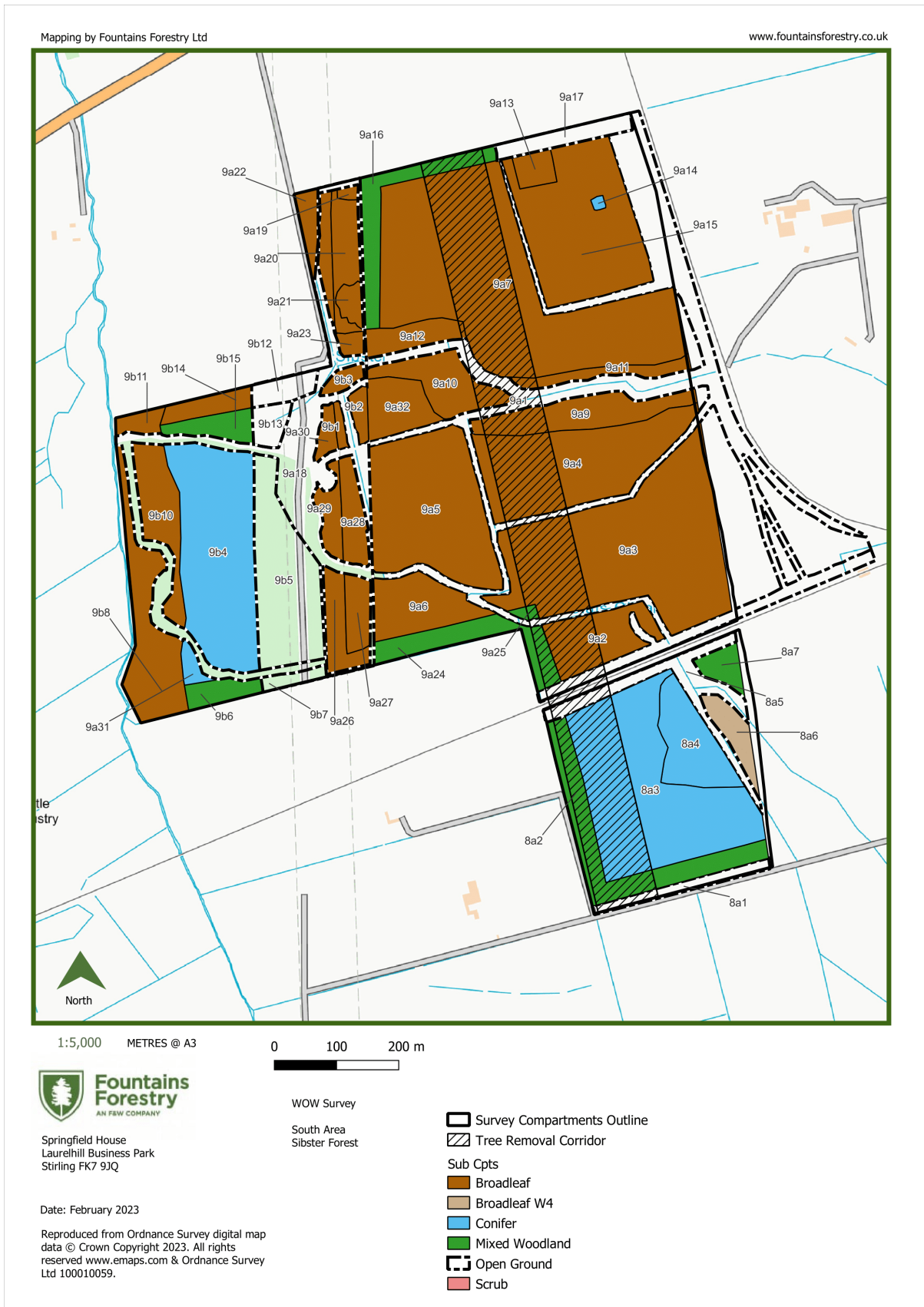
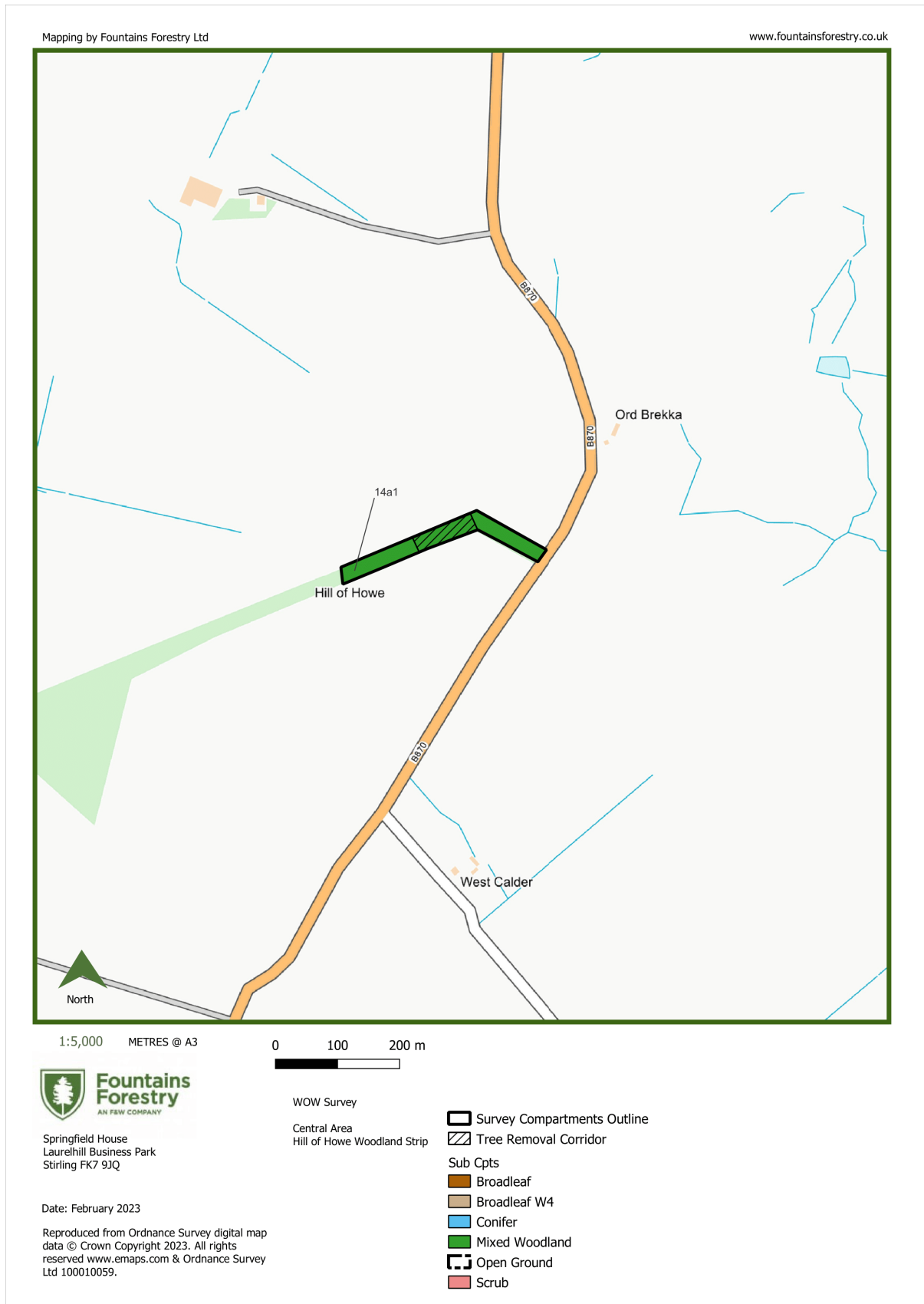




Figure 29 Hill of Howe Woodland Strip Potential Tree Removal Areas



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## Footnotes/Glossary

Clearfell	The removal/felling of mature woodland or forest through mechanical means.
Restocking	The replanting of a previously felled woodland or forest
Fraying	Damage bark removal caused to the stem of a tree by deer species.
Browsing	Branches of trees being eaten by herbivores.
Ha	Hectare
SAC	Special Area of Conservation
SSSI	Site of Special Scientific Interest
W4	Type of birch woodland community associated with the highlands and uplands of Scotland.
LEPO	Long-established woodlands of plantation origin.
ASNW	Ancient Semi Natural Woodland
AWI	Ancient Woodland Inventory (Scotland)
Mound	Tree planting position created by a mechanical machine. Can be referred to as hinge, inverted or continuous mounds.
Plough	Tree planting position created by a mechanical machine pulling a plough. Can be deep or shallow. (Deep ploughing technique is not used anymore).
Mulching	Mechanical removal of trees and debris with mechanical machine and mulching head.
Felling Permission	License granted to landowner for the removal of trees. Issued and administered by Scottish Forestry (legally binding)
Ash Die-Back	Ash dieback is a fungal disease affecting the common ash tree ( <i>Fraxinus excelsior</i> ). It is caused by a fungus called <i>Hymenoscyphus fraxineus</i> .
Critical Height	The height a tree can grow to in its environment dictated by exposure, elevation, soil type, rooting depth and rainfall. After reaching critical height trees/forests are prone to wind throw events.
Shelterbelts	Small and relatively narrow woodland planted as wind/weather breaks around houses or fields.
Selective pruning	The practice of pruning side branches and double leaders in trees to improve growth and form.
Policy Woodland	Designed landscape woodland found around stately homes and on estates in the UK. Often containing non-native species tree which are allowed to grow on to be specimen trees. Woodlands normally very species diverse.