

# Appendix A12.6: Woodland Strategy

## 1.1 Introduction

### Background

- 1.1.1 The purpose of this appendix is to present the approach to woodland loss and creation as part of the proposed scheme. This appendix details the development of an updated verified Ancient Woodland Inventory (AWI) layer for the project and how this has been applied in the assessment. Furthermore, the approach to woodland creation, for compensation and enhancement, is outlined within this appendix.

### Ancient Woodland Inventory

- 1.1.2 The NatureScot (formerly Scottish Natural Heritage) [Ancient Woodland Inventory \(AWI\)](#) was first published in 1987 and captured digitally in 1994. The inventory has three categories of woodland:
- Ancient woodland (1a and 2a)<sup>1</sup>;
  - Long-established woodlands of plantation origin (LEPO) (1b and 2b)<sup>2</sup>; and,
  - Other woodland on 'Roy' woodland sites (3)<sup>3</sup>.
- 1.1.3 Details of each woodland category and further information on the development of the AWI is provided in NatureScot Advisory Note Number 95 (SNH, 1997). The advisory note highlights that the AWI is not definitive and should be used with care (NatureScot, 2023). When evaluating woodlands, it is important to examine sites for indicators of antiquity and current biodiversity value, examine old maps, and seek specialist advice.

### A9 Dualling Woodland Strategy

- 1.1.4 The proposed scheme design was refined to avoid loss of woodland, where possible. However, where loss could not be avoided, it was minimised to the smallest area required to facilitate the construction of the proposed scheme, (see Chapter 6 (Iterative Design Development) for details).
- 1.1.5 To assist the assessment of impacts on non-ancient woodland, the [Statutory Biodiversity Net Gain \(BNG\) metric](#) (version 1.0.3), developed by Defra for use in England, was used to assess the losses and gains in biodiversity from the proposed scheme and inform the mitigation and compensation required (Defra, 2024a). This is discussed in detail in Appendix A12.8 (Positive Effects for Biodiversity and Biodiversity Net Gain) and in paragraph 1.3.1 of this appendix.
- 1.1.6 The impact assessment, mitigation, and compensation, for ancient woodland used a bespoke approach, as outlined below.

<sup>1</sup> 1a – interpreted as semi-natural woodland from maps from 1750. 2a – interpreted as semi-natural woodland from maps from 1860

<sup>2</sup> 1b – interpreted as plantation from maps from 1750. 2b – interpreted as plantation from maps from 1860

<sup>3</sup> 3 – shown as unwooded on the 1st edition maps but as woodland on the Roy maps.

### Ancient Woodland Compensation Strategy

- 1.1.7 The Woodland Connectivity – Ancient Woodland Compensation Strategy (Transport Scotland, 2016) provided an approach to identifying ancient woodland loss and compensation opportunities; this strategy was agreed across the A9 dualling programme in 2016.
- 1.1.8 A ‘verified’ AWI layer was produced in 2015 using the Forestry Commissions National Forest Inventory (NFI), Native Woodland Survey of Scotland (NWSS), and aerial imagery. The verified AWI removed areas from the AWI which were considered ‘lost’ as they were no longer wooded and were unlikely to retain ancient woodland characteristics.
- 1.1.9 The 2016 compensation strategy approach required the verified AWI layer to be overlain on the design of each of the A9 dualling projects to quantify ancient woodland losses which would require compensation where impacts could not be avoided through design. The approach then required compensation to be developed by first considering opportunities to utilise areas of ‘lost’ AWI in proximity to those areas of ancient woodland affected by the proposed scheme.
- 1.1.10 It is recognised that compensation planting cannot mitigate for the permanent loss of ancient woodland but can be designed to mitigate for the loss of ecological functionality and maximise the benefit of retained woodland in respect to habitat connectivity and carrying capacity for a variety of fauna and flora.
- 1.1.11 This appendix provides further detail on how the verified AWI was updated for the proposed scheme, utilising more recent resources including project specific habitat survey data to improve the accuracy of the impact assessment for ancient woodland (see Section 1.2: Verified Ancient Woodland). Note, that the updated verified AWI layer does not include ‘offsite’ areas; for these areas the 2015 verified AWI layer has been used. This is not considered to be a limitation to the assessment.
- 1.1.12 The approach to compensatory planting is intended to ensure no net loss of woodland (ancient woodland and non-ancient woodland), to maximise biodiversity benefit, maintain or reconnect existing AWI sites, and provide the best chance to maintain ecological functionality of local ancient woodland communities. The approach to compensation for the proposed scheme is further outlined in Section 1.3.

## **1.2 Verified Ancient Woodland**

- 1.2.1 This section outlines the approach undertaken for updating the verified AWI dataset for the proposed scheme.

### **Stage One**

- 1.2.2 Stage one removed hard infrastructure and water from the original AWI using the Ordnance Survey Master Map (OSMM) dataset.
- 1.2.3 Hard infrastructure included roads, railways, and buildings. Areas of road, rail and buildings were only removed from the AWI where it could be confirmed using up-to-date aerial imagery

(P02 BlueSky Imagery, 2020) that these areas were now hard infrastructure and no longer woodland habitat.

- 1.2.4 Areas of water were only removed from the AWI where aerial imagery showed the watercourse having no overhanging tree canopy cover. Where it was not possible to distinguish the extent of the watercourse banks, these areas remained part of the AWI, adopting a precautionary approach.

### **Stage Two**

- 1.2.5 Stage two reviewed the remaining AWI (with hard infrastructure and water removed) using the UK Habitat Classification (UKHab) data collected in 2019, 2021 and 2022 (Appendix A12.3: Detailed Survey Methods and Baseline Data; Figure 12.3). The minimum mapping unit (MMU) used was 400m<sup>2</sup> due to the large survey area.
- 1.2.6 All UKHab polygons were reviewed using survey notes and aerial imagery to determine whether they should be retained within the AWI dataset.
- 1.2.7 The following ecosystems (as defined by UKHab) were found to overlap with remaining AWI areas:
- woodland and forest;
  - grassland;
  - heathland and scrub ;
  - cropland;
  - sparsely vegetated land;
  - urban; and
  - rivers and lakes.
- 1.2.8 The justification for removing or keeping polygons of cropland, sparsely vegetated land, urban and rivers/lakes polygons is provided below for each habitat type. Justification for keeping or removing polygons of woodland/forest, grassland and heath/scrub from the AWI required further investigation (see paragraphs 1.2.14-1.2.19: Stage Three).

#### Cropland

- 1.2.9 All cropland polygons were removed from the AWI as aerial imagery confirmed they were intensively used farmland. As these areas are no longer wooded and have been intensively managed for many years, they will not have the ground flora or soil composition characteristic of ancient woodland.

#### Sparsely vegetated land

- 1.2.10 Two polygons of sparsely vegetated land overlap with the AWI. The first is a large inactive quarry and the other area is within the highway boundary in an area of rock cutting. Both polygons were removed from the AWI as they are no longer wooded and will not comprise the ground flora or soil composition characteristic of ancient woodland due to disturbance and removal of soil.

### Urban

- 1.2.11 The majority of hard infrastructure was removed using the OSMM (see paragraphs 1.2.2-1.2.4: Stage One); however, a number of very small urban polygons overlap with the AWI. A review of the UKHab survey notes indicates these are mostly associated with railway or road. However, aerial imagery indicates these areas have overlapping tree canopy cover. The presence of tree canopy cover makes it difficult to determine the extent of the hard infrastructure therefore, on a precautionary basis, and considering the size of the polygons, they remain part of the AWI.
- 1.2.12 A large area associated with the A9, and an area associated with a railway bridge, were removed from the AWI following verification by aerial imagery. Car park areas, gardens, tracks and areas of hardstanding, where the extent of these can be easily determined using aerial imagery (i.e., no tree canopy cover or shadow), have also been removed from the AWI.

### River and lakes

- 1.2.13 Areas of water (where no tree canopy was present on aerial imagery) were removed from the AWI at stage one (see paragraphs 1.2.2-1.2.4: Stage One). A review of all rivers and lakes UKHab polygons confirmed they were canopy covered on aerial imagery, therefore, as the location of the watercourse banks is difficult to determine, they have remained part of the AWI dataset.

### **Stage Three**

- 1.2.14 All woodland/forest, grassland and scrub/heath polygons which overlapped with the AWI outwith Scottish Ministers land remained part of the AWI on a precautionary basis. These polygons are less likely to have been impacted by construction of the existing A9. Therefore, even if no longer wooded or consisting of young or semi-mature trees, they may still have the ground flora or soil composition characteristic of ancient woodland therefore remain part of the AWI. However, it should be noted that some areas comprise non-native coniferous plantation woodland and rhododendron (*Rhododendron ponticum*), therefore the soils and ground flora are likely to be at least partly compromised and reduced in quality compared with native woodland AWI areas.
- 1.2.15 At stage three, all polygons of woodland/forest, grassland and scrub/heath which overlap with the remaining AWI within Scottish Ministers land were investigated further. These areas are likely to have been cleared during construction of the A9 with soils heavily disturbed or removed and potentially covered or replaced with imported topsoil.
- 1.2.16 Polygons were reviewed using desk based and survey data, including aerial imagery and historic maps, to determine whether they should be kept or removed from the AWI.
- 1.2.17 The justification for removing or retaining polygons of each habitat type from the AWI layer is provided below.

### Woodland and forest

1.2.18 The following criteria was used to keep or remove woodland/forest polygons from the AWI where they are within Scottish Ministers land:

- Polygons on an A9 embankment or cutting were removed from the AWI. Woodland in these locations would have been felled during construction of the A9 with the ground regraded and soils heavily disturbed and covered with topsoil. Whilst these polygons are currently wooded (planted as part of the A9 or naturally regenerated), this woodland is of recent origin and will not have the ground flora or soil composition characteristic of ancient woodland.
- Polygons on Highland Mainline Railway (HML) embankment remain part of the AWI. The HML was built in 1863 therefore, naturally regenerated woodland on railway embankments could be considered ancient (Category 2a/2b). It should be noted that railway embankments are subject to regular maintenance (e.g. tree felling), therefore, whilst these polygons are currently wooded, they may not contain mature trees. However, assuming the soils have remained undisturbed since construction of the railway they may still have the ground flora or soil composition characteristic of ancient woodland, therefore, remain part of the AWI on a precautionary basis.
- Polygons within the Scottish Ministers land but not on A9 embankment or cuttings were reviewed to determine if the polygons had been impacted by the construction of the A9 or other nearby infrastructure (e.g., other roads or tracks). Polygons determined as being impacted by infrastructure (i.e. clear evidence that trees were felled and soils disturbed or removed) were removed from the AWI. Polygons unlikely to have been impacted by infrastructure remain part of the AWI.

### Grassland and heath/scrub

1.2.19 The following criteria was used to keep or remove polygons of grassland and heath/scrub from the verified AWI layer:

- Grassland polygons within Scottish Ministers land recorded as verge grassland were removed from the AWI as these areas are likely to have been covered with topsoil, planted with low maintenance seed mixes and regularly cut for visibility reasons, therefore will no longer have the ground flora or soil characteristics of ancient woodland.
- Polygons within HML embankment remain part of the AWI. The HML was built in 1863; therefore, whilst these polygons are no longer wooded, it is assumed the soils have remained undisturbed since construction of the railway and may still retain the ground flora or soil characteristics of ancient woodland. These areas were retained as verified AWI on a precautionary basis.
- Grassland and heath/scrub polygons within Scottish Ministers land on an A9 embankment or cutting were removed from the layer as soils would have been heavily disturbed and covered with topsoil during the construction of the A9 and will not retain the ground flora or soil characteristic of ancient woodland.
- Grassland and heath/scrub polygons within the Scottish Ministers land but not on A9 embankment or cutting area were reviewed to determine if the polygons had been impacted by the construction of the A9 or other nearby infrastructure (e.g., other

roads or tracks). Polygons determined as being impacted by infrastructure (i.e., clear evidence soils have been disturbed or removed) were removed from the AWI.

Polygons unlikely to have been impacted by infrastructure remained part of the AWI.

#### **Verified AWI layer**

- 1.2.20 Following the steps outlined above, the updated verified AWI layer no longer comprises:
- areas of hard infrastructure, open water, urban, cropland and sparsely vegetated land habitats; and
  - grassland, heath/ scrub and woodland and forest habitats that have clearly been impacted by the construction of the A9 or other infrastructure.
- 1.2.21 The updated verified AWI layer has been used to calculate the area of ancient woodland lost as a result of the proposed scheme and inform compensation measures.
- 1.2.22 The updated AWI layer is shown on Figure 12.4.

## **1.3 Woodland Compensation and Management**

#### **Woodland (excluding ancient woodland)**

- 1.3.1 As discussed in Appendix A12.8 (Positive Effects for Biodiversity and Biodiversity Net Gain), the Statutory BNG metric has been used to inform the design, mitigation requirements (particularly avoidance of irreplaceable and/or high quality habitat where possible, underpinned by the Scottish Government’s policy on the control of woodland removal (Scottish Government, 2019)) and to identify the extent of habitat restoration and creation required to achieve a net gain in biodiversity value.
- 1.3.2 A total of 13.76ha of woodland (non-ancient woodland) will be lost as a result of the construction of the proposed scheme. Woodland planting will be undertaken along the proposed scheme to mitigate for the loss of woodland and the locations of this woodland planting are shown on Figure 10.6. A total of 16.61ha of woodland planting has been identified to mitigate for woodland loss (Table A12.6-1) .

**Table A12.6-1: Woodland (excluding ancient woodland) creation for the proposed scheme**

<b>Woodland type</b>	<b>Habitat Created (ha)</b>
Broadleaved woodland	8.30
Mixed woodland	8.31
Coniferous woodland	-
<b>Totals</b>	<b>16.61</b>

#### **Ancient Woodland**

- 1.3.3 Ancient woodland is considered an irreplaceable habitat and is not included within the BNG calculations (Defra, 2024b) as discussed in Appendix A12.8 (Positive Effects for Biodiversity



and Biodiversity Net Gain). Ancient woodland compensation is therefore considered separately from the metric and a bespoke approach is required.

- 1.3.4 The primary aim of compensatory planting for loss of ancient woodland is to ensure no net loss of woodland and to utilise areas that maximise opportunities for biodiversity benefits associated with ancient woodland. This is achieved through targeting lost AWI or similar areas that reconnect and improve the resilience of existing AWI sites thereby maintaining or improving their functionality. This approach is underpinned by the Scottish Government's policy on the control of woodland removal (Scottish Government, 2019) and on the Lawton Review (Lawton et al., 2010) which highlights the importance of ecological networks and delivering bigger, better and more joined up areas.
- 1.3.5 Table A12.6-2 below details the ancient woodland loss for the proposed scheme.

**Table A12.6-2: Ancient woodland losses for the proposed scheme**

Code	Woodland Type	Total Loss (Ha)
3	Other (on Roy map)	0.08
2b	Long-Established (of plantation origin)	11.11
2a	Ancient (of semi-natural origin)	6.73
1a	Ancient (of semi-natural origin)	11.10
	<b>Total</b>	<b>29.02ha</b>

- 1.3.6 Whilst included in the verified AWI, much of the ancient woodland within the extent of the proposed scheme is comprised of non-native species such as cypress, Douglas fir, Norway spruce and rhododendron. Furthermore, beech is present in many of the woodland parcels and the native status of this species is still open to question (FLS, 2024). The majority of the ancient woodland, including that listed as Category 1a and 2a of the AWI, within and adjacent to the boundary of the proposed scheme, is considered to be of plantation origin (see Photographs 1 and 2 below).
- 1.3.7 Where possible, woodland compensation sites have been selected within or adjacent to the proposed scheme boundary (see Figure 12.4); however, non-wooded land available within or adjacent to the proposed scheme is limited. For this reason, two areas approximately 2.5km south of the proposed scheme have been included within the boundary of the proposed scheme for woodland creation, as shown on Figure 10.6.
- 1.3.8 A total of 34.58ha of ancient woodland compensation will be delivered within the boundary of the proposed scheme, including in the 'off-site' mitigation area within the CPO. In line with the woodland compensation strategy, these areas have been selected to improve existing woodland connectivity, reduce edge effects of existing woodland, and improve the resilience of woodland networks to further deterioration.
- 1.3.9 Further details regarding the locations of compensatory planting and the approach to site selection are provided below in Table A12.6-3. The locations of ancient woodland compensation planting are shown on Figure 12.4 and Figure 10.6.



- 1.3.10 Where suitable, soils from ancient woodland or good quality native non-ancient woodland areas lost under the footprint of the proposed scheme will be re-used to maximise the recovery of soil biodiversity and understory species. A pilot study using soil DNA metabarcoding was undertaken using sites within A9 dualling projects Pitlochry to Killiecrankie and Killiecrankie to Glen Garry (Jacobs, 2021). This study indicated soil biodiversity appeared to be relatively high and similar between areas of native ancient woodland and mature or semi-mature native non-ancient woodland. Plantation woodland (including plantation on ancient woodland sites) and non-woodland sites were found to have relatively poor soil biodiversity. It is anticipated that detailed investigation of the quality and suitability of soil donor sites would be undertaken at pre-construction stage. Many areas of woodland may not be suitable due to the presence of invasive non-native species (INNS) or poor soil biodiversity. If appropriate, other methods for soil enhancement will be considered in the ancient woodland compensation sites, such as soil core translocation from ancient woodlands and inoculation with mycorrhizal fungi (e.g. Forestry England, 2024).
- 1.3.11 An Ancient Woodland Habitat Management Plan provided as part of the Construction Environmental Management Plan (CEMP) (Mitigation Item SMC-S1) will be prepared and implemented prior to construction. The plan will detail the following:
- methods to be used to investigate the suitability of soils for translocation with respect to improving fungal and invertebrate biodiversity, providing a seed bank to promote the re-establishment of ancient woodland ground flora, and avoiding the spread of INNS;
  - methods to be used for the retrieval, storage and re-use of soil from those areas deemed appropriate for soil translocation;
  - methods and a programme for monitoring of re-used woodland soils (such as using invertebrate sampling and DNA metabarcoding) to demonstrate the success of re-use;
  - details of tree and understory species planting mixes which reflect native woodland mixes appropriate to this area of Scotland;
  - monitoring and management strategies during the operation of the proposed scheme, including the maintenance and replacement of any trees missing, damaged or failing to make satisfactory growth (see Mitigation Item SMC-LV5 for more details); and
  - interventions and strategies to be implemented within areas of ancient woodland within or adjacent to the proposed scheme identified as suitable for long-term management for biodiversity benefits. This will include a programme of interventions to be undertaken during the course of construction (including the maintenance and establishment period) and operation of the proposed scheme. Strategies will include the retention of dead and fallen wood, thinning/coppicing as appropriate, and removal of INNS.

**Table A12.6-3: Ancient woodland compensation areas**

Location	Area (ha)	Description	Figure references
ch-350 to ch-130	0.53	Mixed woodland to compensate for loss of AWI woodland, screen earthworks, replace woodland edge and reinforce sense of enclosure to enhance the 'gateway to the Highlands' experience	<ul style="list-style-type: none"> <li>Figure 10.6a</li> <li>Figure 12.4b</li> </ul>
ch-100 to ch580	0.72	Mixed woodland to compensate for loss of AWI woodland, screen earthworks, replace woodland edge and reinforce sense of enclosure to enhance the 'gateway to the Highlands' experience	<ul style="list-style-type: none"> <li>Figure 10.6a</li> <li>Figure 12.4b</li> </ul>
ch1590 to ch1770	0.67	Mosaic of broadleaved woodland, riparian woodland and species rich grassland to provide reptile habitat, compensate for loss of AWI woodland and enhance landscape setting of SuDS.	<ul style="list-style-type: none"> <li>Figure 10.6b</li> <li>Figure 12.4b and 12.14c</li> </ul>
ch1700 to ch1810	0.29	Mosaic of broadleaved woodland, riparian woodland and species rich grassland to provide reptile habitat, compensate for loss of AWI woodland and enhance landscape setting of SuDS.	<ul style="list-style-type: none"> <li>Figure 10.6b</li> <li>Figure 12.4b and 12.4v</li> </ul>
ch1760 to ch1900	0.38	Mosaic of broadleaved woodland, riparian woodland and species rich grassland to provide reptile habitat, compensate for loss of AWI woodland and enhance landscape setting of SuDS.	<ul style="list-style-type: none"> <li>Figure 10.6b</li> <li>Figure 12.4b and 12.4c</li> </ul>
ch1720 to ch2050	0.54	Mixed woodland planting to compensate for loss of AWI woodland, provide foraging and commuting habitat for bats, screen views of the A9 from the east and help integrate new junction into the landscape.	<ul style="list-style-type: none"> <li>Figure 10.6b</li> <li>Figure 12.4b and 12.14c</li> </ul>
ch2100 to ch2450	0.49	Mixed woodland planting to compensate for loss of AWI woodland, provide foraging and commuting habitat for bats, screen views of the A9 from the east and help integrate new junction into the landscape.	<ul style="list-style-type: none"> <li>Figure 10.6b</li> <li>Figure 12.4c</li> </ul>
ch3950 to ch4500	7.05	Broadleaved woodland to compensate for AWI habitat loss.	<ul style="list-style-type: none"> <li>Figure 10.6c and 10.6d</li> <li>Figure 12.4c</li> </ul>

Location	Area (ha)	Description	Figure references
ch5100 to ch5400	1.93	Broadleaved woodland to compensate for AWI habitat loss.	<ul style="list-style-type: none"> <li>Figure 10.6d</li> <li>Figure 12.4c and 12.4d</li> </ul>
ch5050 to ch5270	0.60	Mixed woodland to compensate for AWI habitat loss.	<ul style="list-style-type: none"> <li>Figure 10.6d</li> <li>Figure 12.4c and 12.4d</li> </ul>
ch5050 to ch5730	1.18	Mixed woodland to compensate for AWI woodland loss, help integrate SuDS into the landscape and provide foraging and commuting habitat for bats.	<ul style="list-style-type: none"> <li>Figure 10.6d</li> <li>Figure 12.4c and 12.4d</li> </ul>
ch5980 to ch6500	0.72	Woodland planting to compensate for AWI woodland loss, replace bat foraging and commuting habitat and replace woodland edge.	<ul style="list-style-type: none"> <li>Figure 10.6d and 10.5e</li> <li>Figure 12.4d</li> </ul>
ch6600 to ch7400	2.93	Mixed woodland planting to compensate for AWI woodland loss, replace bat foraging and commuting habitat, replace woodland edge and integrate junction into the landscape.	<ul style="list-style-type: none"> <li>Figure 10.6e</li> <li>Figure 12.4d</li> </ul>
ch7010 to ch7150	0.34	Broadleaved woodland to compensate for AWI loss	<ul style="list-style-type: none"> <li>Figure 10.6e</li> <li>Figure 12.4d</li> </ul>
ch7150 to ch7400	0.89	Mixed woodland to compensate for AWI habitat loss.	<ul style="list-style-type: none"> <li>Figure 10.6e</li> <li>Figure 12.4d</li> </ul>
ch7400 to ch7460	0.09	Mixed woodland to compensate for AWI habitat loss.	<ul style="list-style-type: none"> <li>Figure 10.6e</li> <li>Figure 12.4d and 12.4e</li> </ul>
ch7550 to ch8120	1.84	Broadleaved woodland planting to compensate for AWI woodland loss, replace bat foraging and commuting habitat and replace woodland edge (temporary land-take area required for launching new bridge).	<ul style="list-style-type: none"> <li>Figure 10.6f</li> <li>Figure 12.4e</li> </ul>

Location	Area (ha)	Description	Figure references
Muir of Thorn and Gelly Wood ('off-site' mitigation areas)	13.39	Broadleaved woodland planting to compensate for AWI woodland loss	<ul style="list-style-type: none"> <li>▪ Figure 12.4a</li> <li>▪ Figure 10.6g</li> </ul>

### **Ancient Woodland Management**

- 1.3.12 The removal of INNS from retained ancient woodland parcels will allow for the establishment of a more diverse ground flora, leading to an increase in biodiversity and species richness. Furthermore, the selective felling of non-native trees can provide and promote heterogeneity within a woodland, providing benefits for a range of species.
- 1.3.13 A number of woodland parcels along the proposed scheme will be subject to management practices to enhance the woodland for biodiversity. Details of ancient woodland management will be included within the Habitat Management Plan (HMP), as part of the CEMP, for the proposed scheme. Additional areas of management may be identified following preconstruction surveys (see Chapter 22: Schedule of Environmental Commitments) to provide further enhancement to woodland along the proposed scheme extent.
- 1.3.14 The areas selected for ancient woodland management are shown on Figure 10.6, and the management will support the delivery of positive effects for biodiversity (Appendix A12.8: Positive Effects for Biodiversity and Biodiversity Net Gain).

#### Murthly Estate Bridge

- 1.3.15 Management of the woodland to the south west of the Murthly Estate Bridge, between ch400 and ch700 will be undertaken to involve the removal of INNS, particularly rhododendron, and selective felling of non-native conifers to promote heterogeneity in species composition and structure. The area is approximately 1.18ha in size.
- 1.3.16 This area comprises AWI (category 1a) and is classed as Plantations on Ancient Woodland Sites (PAWS) on the Native Woodland Survey of Scotland (NWSS) (100% non-native). Towards the southern extent of this area, the woodland is characterised as a larch plantation with rare mature sycamore (*Acer pseudoplatanus*), with an understory dominated by dense rhododendron (*Rhododendron sp.*), with some good ground flora cover in between. To the more northern extent of this area of woodland, the tree species mainly include western hemlock-spruce (*Tsuga heterophylla*), grand fir (*Abies grandis*) and Douglas fir (*Pseudotsuga menziesii*) with a poor understory and ground flora. A single oak (*Quercus sp.*) tree was recorded in this area.

#### Dalpowie Plantation

- 1.3.17 Management of woodland within the Dalpowie Plantation, between approximately ch0900 and ch1200 will be undertaken. The area selected is approximately 6.38ha in size.
- 1.3.18 This area comprises AWI (category 1a) and is classed as Plantations on Ancient Woodland Sites (PAWS) on the Native Woodland Survey of Scotland (NWSS) (100% non-native). The area is currently subject to clear-felling, but will be replanted, under the current felling regime, with mixed broadleaves and mixed conifers, with areas of open ground retained. This will be achieved through natural regeneration and supplementary planting. The area will then be managed to restore a biodiverse native woodland on this site, including the removal of INNS



which establish during the woodland regeneration, and management/control the species composition and structure.

River Tay (upstream of Neil Gow's Oak)

- 1.3.19 Management of ancient woodland between the existing A9 and the River Tay between approximately ch5500-5800 will be undertaken. The primary management of the area will involve the removal of INNS such as rhododendron, and the selective thinning of non-native conifers to promote heterogeneity in species composition and structure. Other management inputs may also be appropriate but would require further investigation. The area selected is 6.53ha in size and is also proposed for red squirrel (*Sciurus vulgaris*) and pine marten (*Martes martes*) mitigation (Figure 10.6)
- 1.3.20 This area comprises mostly AWI (category 2a) and is a mix of semi-natural and plantation, broad-leaved and coniferous woodland, including Douglas fir, beech and oak. The ground flora is generally poor and sparse and includes INNS.



**Photograph 2a and b: Woodland adjacent to River Tay, upstream of Neil Gow's Oak**

Inver Wood

- 1.3.21 Management of ancient woodland within Inver Wood, to the south west of the Tay Crossing will be undertaken. The primary management of the area will involve the selective thinning of non-native conifers to promote heterogeneity in species composition and structure. Other management inputs may also be appropriate but would require further investigation. The area selected is 3.92ha in size and is also proposed for red squirrel and pine marten mitigation (Figure 10.6).
- 1.3.22 This area comprises mostly AWI (category 2a) and is predominately Douglas fir dominated plantation woodland with some larch, beech (*Fagus sylvatica*) and Norway spruce (*Picea abies*). The ground flora is generally poor and sparse and includes INNS.

## 1.4 References

BlueSky Imagery (2020). Aerial Photography. Bluesky International Limited.

Defra (2024a). Statutory Biodiversity Metric calculation Tool. Online. Available at: [https://assets.publishing.service.gov.uk/media/669e4670ab418ab055592a23/The\\_Statutory\\_Biodiversity\\_Metric\\_Calculation\\_Tool\\_-\\_Macro\\_enabled\\_tool\\_23.07.2024.xlsm](https://assets.publishing.service.gov.uk/media/669e4670ab418ab055592a23/The_Statutory_Biodiversity_Metric_Calculation_Tool_-_Macro_enabled_tool_23.07.2024.xlsm). (Accessed October 2024).

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