

13 WOODLAND



Plate 10: Woodland

Key Historic Landscape Characteristics

- Historic landscape types: 20th century woodland, scrub, late 19th century woodland, pre-1860 woodland, ancient replanted woodland, and ancient semi-natural woodland
- 20th century plantations dominate the county's woodland
- Tree cover has been cut back and regenerated to varying degrees over thousands of years in response to climate change and population pressure
- Main period of woodland clearance probably took place in the first millennium BC
- Woodland has been an important resource for fuel, building and tools since the earliest times

In the 21st century Northumberland is one of the most wooded counties in England. This is almost entirely due to the vast plantations created in the western uplands in the 20th century, which have greatly changed the character of these places. Although the 20th century may have made one of the most rapid and extensive changes to woodland cover it is only the most recent episode in the changing pattern of tree cover over thousands of years. Various factors have influenced the spread of woodland, including climate and population pressure, and one way of tracing these changes is by studying pollen. Pollen analysis is a relatively young science and some of the first pollen diagrams from the 1930s were for sites in the North East. As increasing numbers of samples are taken and analysed a more detailed picture of the county's vegetational history will emerge, but several dozen pollen diagrams have now been published (Lunn 2004, 81).

Pollen analysis suggests that the main clearance of woodland to make agricultural land occurred in the first millennium BC and that woodland cover may have been reduced by half by the pre-Roman Iron Age (Aalen 2006, 30). Immediately after the Roman withdrawal in the fifth century AD pollen from bogs along Hadrian's Wall suggests there was widespread regeneration of woodland here, but the landscape must have remained at least partly open for the remaining population to continue farming. Further forest clearance may have occurred in the seventh and eighth centuries and, as population grew in the medieval period, woodland clearance probably reached its height in the 13th century by which time the amount of woodland left in the lowlands was probably similar to that at the beginning of the 20th century (Lunn 2004, 27-8). Historical evidence also confirms the loss of woodland in the medieval period and by 1546 Leland described the great wood of Cheviot as spoiled with only crooked trees and scrub remaining (Aalen 2006, 133). However, between the late 17th and mid 19th century the large landed estates of the county were responsible for planting millions of trees in estate woodland, mostly for timber production. Northumberland has a strong forestry tradition which has been fostered by these large estates and the formation of the Royal Forestry Society in Hexham in 1882.

Woodland has always provided an important source for fuel, building, fencing and various tools and utensils from the earliest times. To this end woodland has been managed as a crop for hundreds of years; for example, the underwood of medieval woods was coppiced to provide poles for fuel and light construction, whilst the woodland trees were allowed to grow as standards for heavy timber used for houses, bridges and boat-building. Coppicing and other traditional woodland practices died out in the 19th century when cheap softwood became available from abroad and landowners switched to similar fast-growing species for a quicker return on investments. In the uplands most estate woodland was planted to provide shelter for stock, and in the North Pennines the lead mining companies planted trees for mine timber (Lunn 2004, 154). This has left today's woods as stands of mainly fast-maturing softwoods managed for recreation, shooting and nature conservation.

The woodland mapped by HLC includes only those examples which are greater than one hectare in area but does not include woodland within landscape parkland (see Ornamental types). These cover over 16% of the county, which is double the national average for England (8.4%). The types of woodland which have been identified in the HLC are: **20th century**, **ancient replanted**, **late 19th century**, **pre-1860**, **ancient semi-natural** (pre-1600), and **scrub**. These types occupy a total area of 82,246.48ha (16.19% of the county) and comprise 4064 polygons (26.20% of the total).

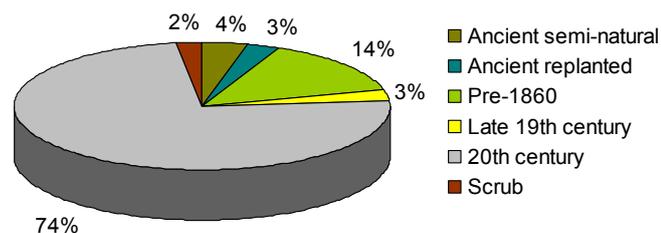


Figure 37: Proportions of Woodland HLC types

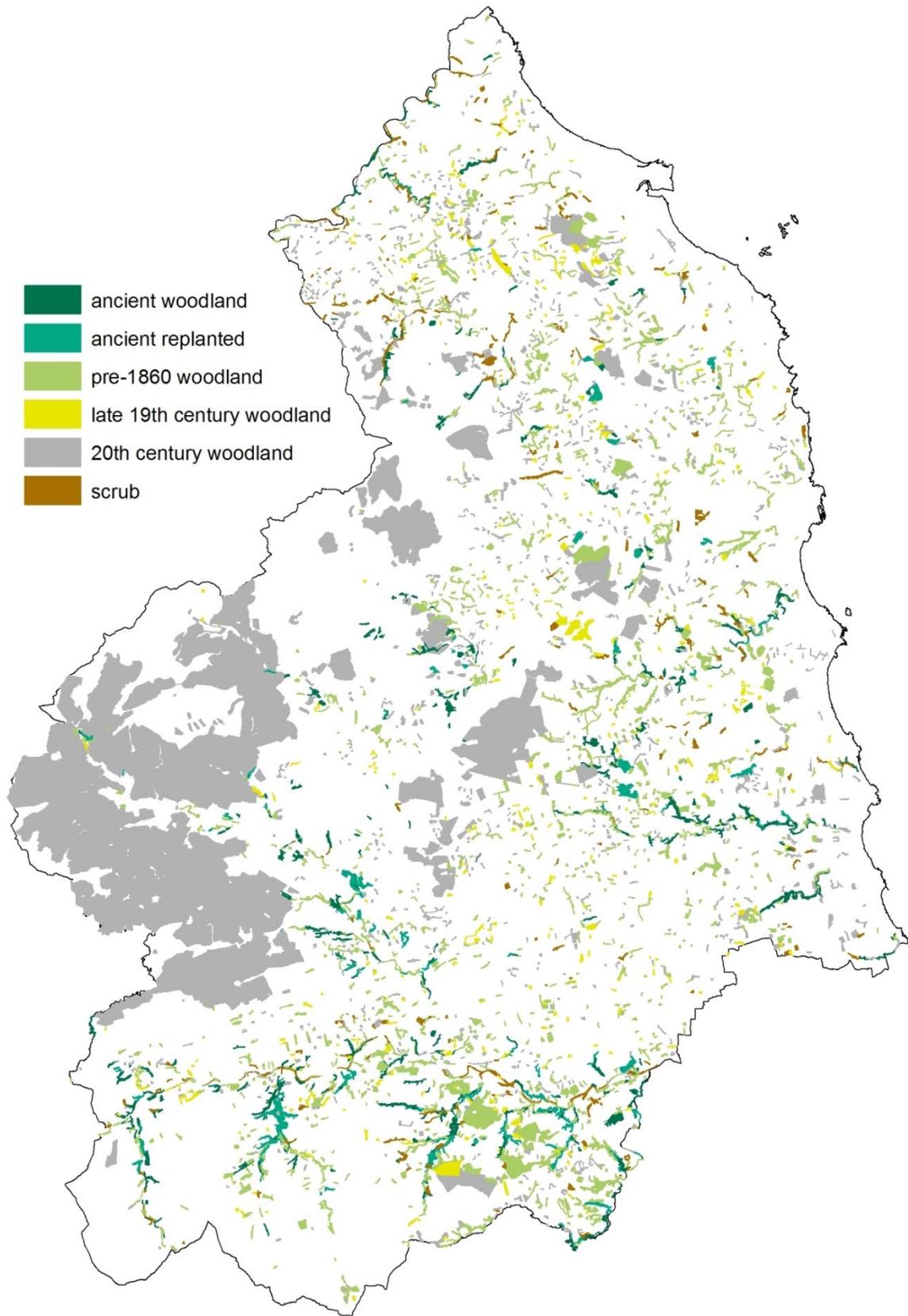
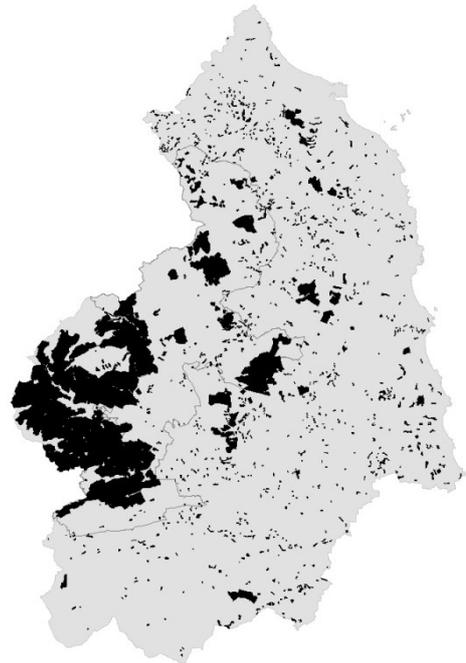
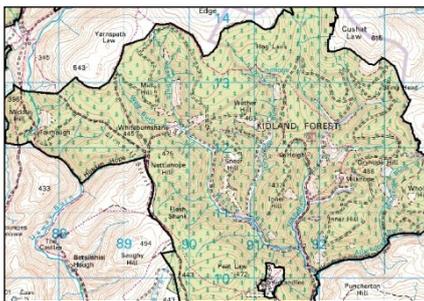


Figure 38: Woodland HLC types.

13.1 20th century woodland

Key Features:

- 20th century plantations account for nearly ¾ of Northumberland's woodland
- Dominated by coniferous species
- Older pattern of landownership sometimes preserved in boundaries
- Archaeological sites of all periods
- Total area = 60,973.86ha
- % of County = 12.00%
- Number of polygons = 1324



Nearly three-quarters of the woodland in Northumberland was planted in the 20th century and nearly all of it was planted on moorland (95%); only 5% was planted on former fields and less than 1% was planted on other categories of land. The vast tracts of moorland in the western uplands were planted by the Forestry Commission between the 1930s and 1960s, for example Kielder (nearly 5000ha), Kidland (nearly 2000ha), and Threestoneburn (nearly 700ha); but plantations were also created in other parts of the county at Harwood (nearly 3000ha), Slaley (over 500ha), Kyloe (over 400ha), and Thrunton (over 800ha). Small plantations, shelterbelts and coverts less than 50ha in size make up less than 3% of modern woodland in the county. Conifers dominate 20th century woodland with only 3% of containing mixed deciduous and coniferous species, and only 1% just deciduous.

Although the larger plantations cover extensive tracts of former moorland, the boundaries between crops of different ages and fire breaks sometimes preserve an older pattern of land ownership and division as well as reflecting the order in which the Forestry Commission acquired land holdings (Lunn 2004, 164); in

Kielder Forest there are a few boundaries which still follow the line of ancient parish boundaries, for example at Falstone and Hawkhope.

Archaeological sites of all periods are found in this HLC type with some known from map evidence and others surviving as earthworks built structures recorded prior to planting or discovered in the course of felling. The few modern monuments include Second World War pillboxes, a training camp, and commemorative monument, as well as a few early 20th century industrial sites, such as a tileworks and colliery. However, most date to the post-medieval period or earlier and are relics from an earlier, open moorland landscape, with hundreds of sheepfolds, many boundary stones of former estates and townships, and abandoned farmsteads and shielings. Likewise the medieval remains are of shielings and deserted villages and farmsteads. The Roman remains are mainly native settlements and farmsteads, with only two military sites of a milecastle and temporary camp. Prehistoric remains are present from the Mesolithic to Iron Age and range from flint tools and cup and ring marked rocks to settlements and burial cairns.

Rarity: common

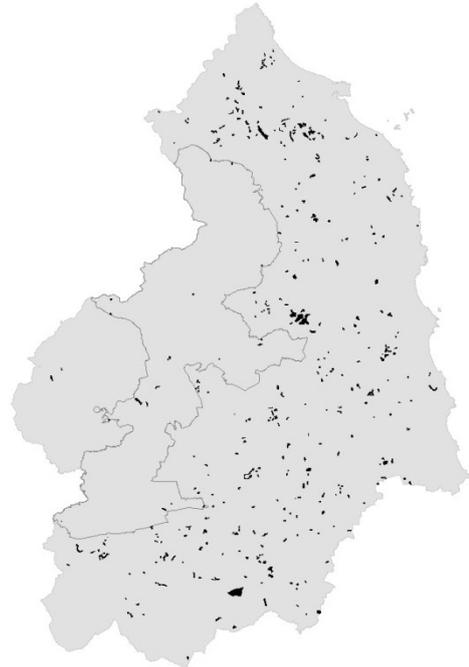
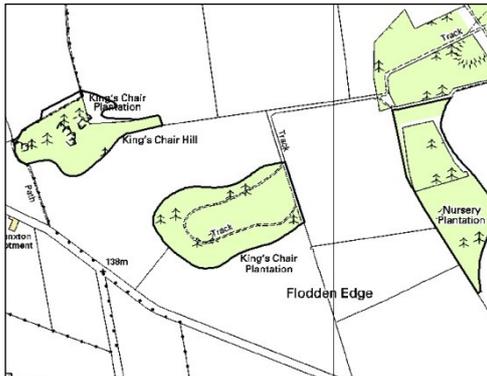
Trajectory of change: new

Susceptibility: low

13.2 Late 19th century woodland

Key Features:

- Mainly shelterbelts, small plantations and coverts
- Mainly lowland distribution
- Total area = 2397.71ha
- % of County = 0.47%
- Number of polygons = 407



Late 19th century plantations represent only a small fraction (3%) of Northumberland's woodland and they are mainly small commercial plantations, shelterbelts and coverts in the lowland parts of the county. A few larger plantations occur and concentrations of woodland at Rothbury, Cambo, Eshott, Fenton and Ford (which may be associated with large estates at Craggside, Wallington, etc), Hallington reservoir, and the first part of Slaley Forest was planted at this time.

Almost half the woodland is coniferous, 41% is mixed (deciduous and coniferous species), and only 10% is deciduous. The dominance of coniferous species and plantations reflects the adoption of German forestry practices in Victorian times, when foresters replanted existing woods as well as claiming farmland and moorland (Rackham 2004, 101); nearly all of this type of woodland in Northumberland is

on lowland and was planted on former moorland (49%) or farmland (44%). Late 19th century woodland is easily identified by its presence on the second edition Ordnance Survey map and its absence from the first edition.

Nearly half of all archaeological sites known from areas of late 19th century woodland are post-medieval in date. They include a number of industrial sites, a few garden-related features and a country house, as well as farmsteads and related buildings. Medieval remains are largely settlement and farming-related; and the Roman remains number a few finds, a vicus and temple as well as a native farmstead. Several prehistoric finds have been discovered ranging from the Neolithic to Iron Age in date, as well as a range of monuments such as burial cairns, settlements and a standing stone.

Rarity: occasional

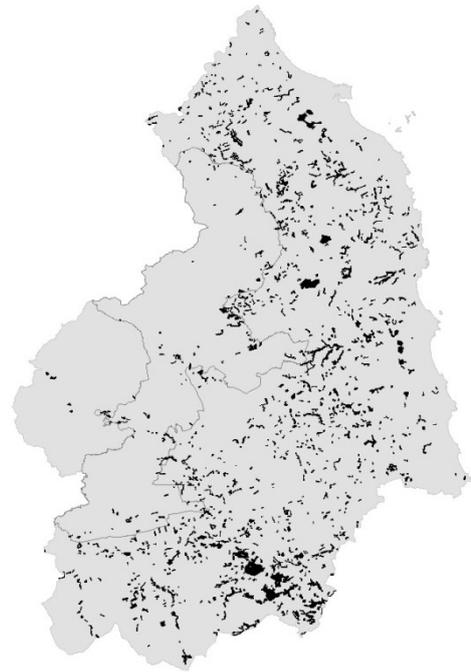
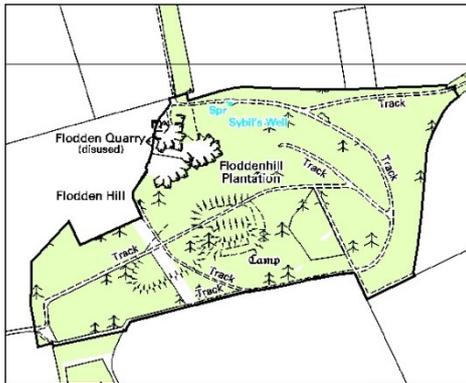
Trajectory of change: stable

Susceptibility: medium

13.3 Pre-1860 woodland

Key Features:

- Only a few large plantations established by this time
- Mostly small plantations, coverts and shelterbelts
- Mainly lowland distribution
- Total area = 11,462.04ha
- % of County = 2.25%
- Number of polygons = 1569



Woodland that is shown on the 1860s first edition 6-inch Ordnance Survey, and which is not classified as 'ancient' or 'ancient replanted', accounts for 14% of woodland in Northumberland. Only a few large plantations had been established by this time, the largest being Dilston (over 400ha), Thrunton and Broomleyfell (each over 300ha), and Kellas Plantation (over 150ha). The majority of woodland recorded at this time was small plantations, coverts and shelterbelts less than 10ha in size and they are predominantly in lowland areas.

Almost half the woodland is mixed (deciduous and coniferous species), one third is coniferous and the remainder is deciduous. The presence of coniferous trees reflects the beginning of the Victorian trend to adopt German forestry practices – which meant plantations and conifers, with foresters replanting existing woods as well as planting on farmland and

moorland (Rackham 2004, 101). The proportion of coniferous plantations increases through the 19th century (see late 19th century woodland above).

More than half the archaeological sites known in this character type are post-medieval in date. They include a wide range of buildings and structures (from bridges and country houses, to houses and dovecotes) as well as a range of former industries (quarries, collieries, and brickworks). Earlier remains include a medieval monastery, deserted settlements, mills and ridge and furrow field systems; an early medieval burial and associated finds; Roman finds and sites such as a temporary camp and fort, roads, bridges and native settlements; and prehistoric finds and remains from the Mesolithic to the Iron Age including cup and ring marked stones, burial cists and cairns, and hillforts.

Rarity: frequent

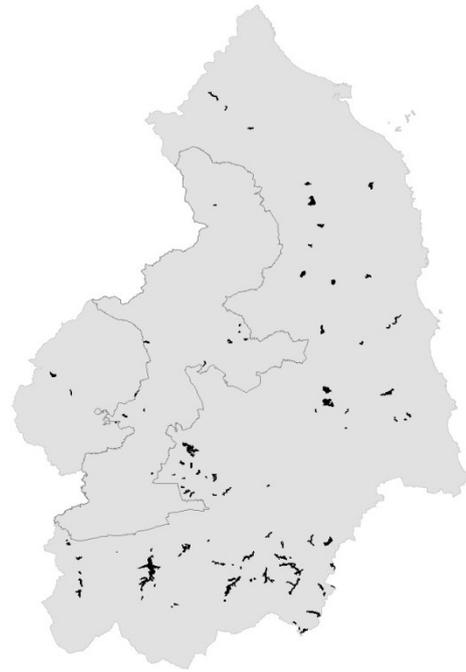
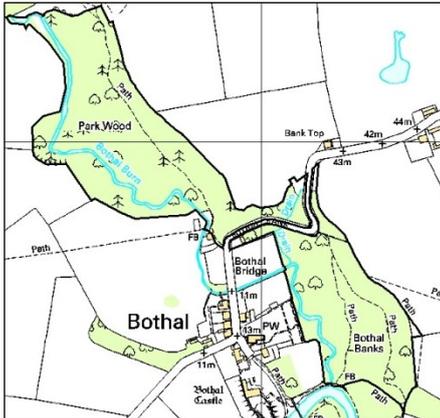
Trajectory of change: decreasing slowly

Susceptibility: medium

13.4 Ancient replanted woodland

Key Features:

- Native tree cover has been felled and regenerated or replanted
- Often retains characteristics of ancient woodland
- Total area = 2267.67ha
- % of County = 0.44%
- Number of polygons = 131



Replanted ancient woodland is land that has had continuous woodland cover since at least AD1600 but the original native tree cover has been felled and either regenerated naturally or been replaced by planting. Some ancient woodland will have been replanted in the 19th century when, in Victorian times, German forestry practices were adopted and conifers became predominant; but most has occurred in the 20th century and most is now coniferous.

However, in spite of this, these woods often still retain characteristics of ancient woodland such as curving boundaries and sometimes the physical evidence of wood banks or walls (Aalen 2006, 133). Identification of ancient replanted woodland is from Natural England's

inventory (see http://www.english-nature.org.uk/pubs/gis/tech_aw.htm).

More than half of archaeological sites in this HLC type are post-medieval in date and include a range of boundary and communication-related features, such as bridges, fords and boundary stones, as well as a variety of industries like coal workings, quarries, lead works, smelt mill and lime kilns. Medieval sites include a castle, tower houses, a manor house and chapel; there are no early medieval remains in this type. Earlier remains include a few Roman settlements and finds; and prehistoric weapons and tools together with a promontory fort, burial and cup and ring marked stone.

Rarity: occasional

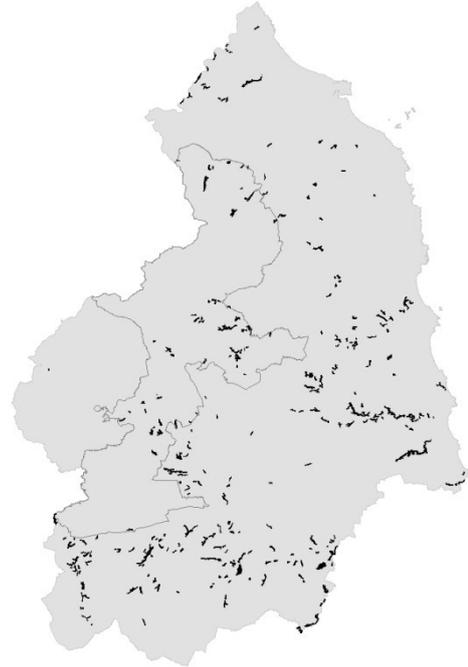
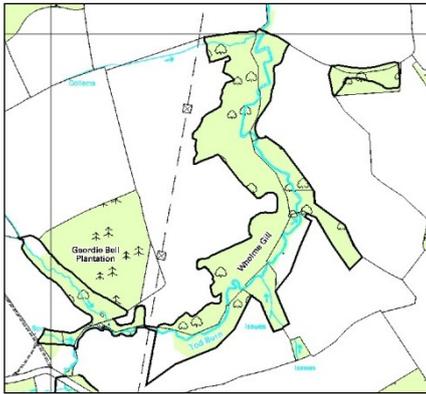
Trajectory of change: increasing slowly

Susceptibility: medium

13.5 Ancient semi-natural woodland

Key Features:

- Primary woodland continuously tree-covered since at least AD1600
- Very little ancient woodland in North East England
- Mostly survives in marginal places, eg boundaries and river valleys
- Total area = 3303.46ha
- % of County = 0.65%
- Number of polygons = 343



Ancient semi-natural woodland is primary woodland which has had continuous woodland cover since at least AD1600 and retained native tree and shrub cover that has not been planted. Identification of most of the ancient woodland has come from Natural England's inventory (see http://www.english-nature.org.uk/pubs/gis/tech_aw.htm). The North East region as a whole has very little ancient woodland and it accounts for only 1% of the land area (BBC 2007); the figure for Northumberland is even less at 0.6%.

the River Blyth near Bedlington, the River Allen, and tributaries of the Rivers Tyne and South Tyne. It also tends to survive in remote places, such as parish boundaries and in the farthest reaches of a parish (Rackham 2004, 112). Civil Parish boundaries have changed over the 19th and 20th centuries but most were created between 1845 and 1860. By using ancient parish boundaries, however, the coincidence of ancient woodland (including ancient replanted) can be seen more clearly and over half of this woodland type lies on the margins of such parishes.

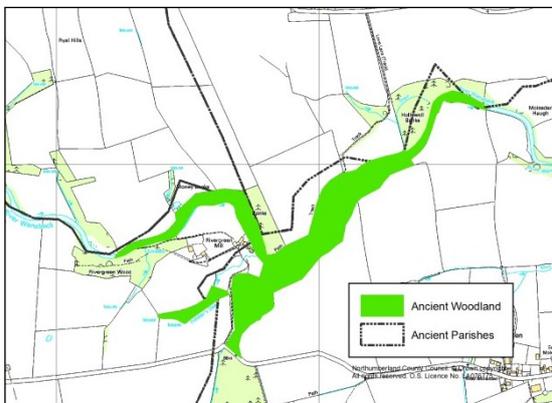


Figure 39: Ancient woodland at Rivergreen, near Molesden (Ancient Parish Boundaries after Burton et al 2004)

These small survivals of primary woodland represent only a tiny proportion of the former extent of woodland in the county. However, it is possible to try and expand the probable extent by including areas of replanted ancient woodland as well as place names. Several place name elements are related to woodland, such as 'spring', 'fall', 'hag' and 'hagg' which relate to coppiced wood; 'shaw' and 'wood'; and 'hollins', a medieval holly grove (Aalen 2004, 133). If these categories are added to the mapped ancient woodland this gives an idea of the possible greater extent that primary woodland once had and its coverage of the county rises from 0.6% to 8.2%. Recreating the former extent of woodland any further needs further research but the amount of woodland

Ancient woodland survives mainly on the steep valley sides of rivers and streams, such as the banks of the River Wansbeck near Morpeth,

left in the lowlands by the end of the 13th century has been likened to that at the beginning of the 20th century (Lunn 2004, 28).

The archaeological sites that lie in ancient woodland are mainly post-medieval in date. They range from industrial remains such as quarries, bell pits, mills and lime kilns to footbridges and fords. Medieval remains are

few and include several deserted settlements, shielings and ridge and furrow; and no early medieval sites are known. Few earlier sites have been discovered, with only a handful of Roman finds and native settlements, and a small number of prehistoric sites ranging from flints and stone tools to an Iron Age promontory fort.

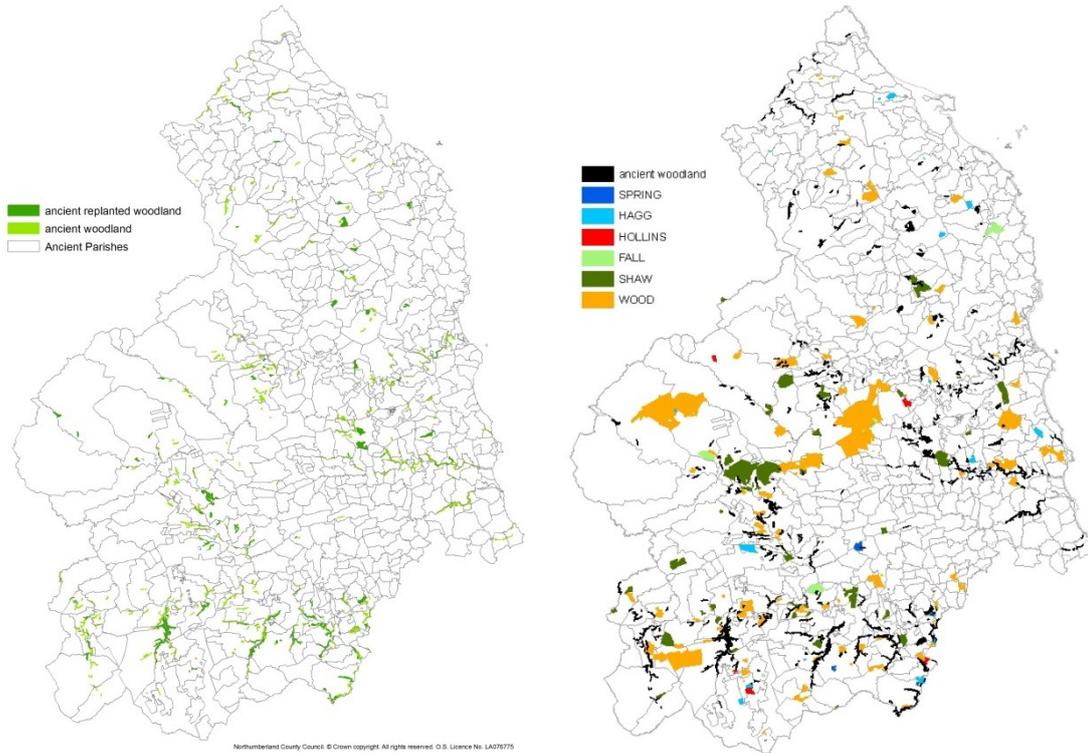


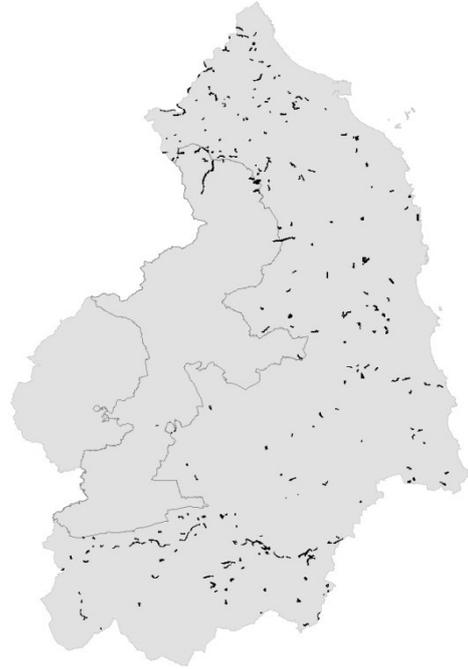
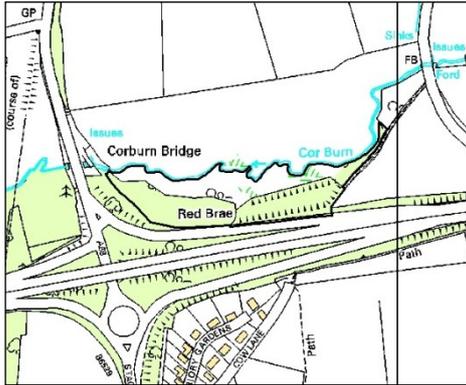
Figure 40: Map of ancient parish boundaries showing distribution of ancient woodland and replanted ancient woodland (left); and (right) with the addition of wood-related place names to show possible previous extent of woodland (Ancient parishes after Burton *et al* 2004).

Rarity: occasional
Trajectory of change: decreasing slowly
Susceptibility: medium

13.6 Scrub

Key Features:

- Young woodland and probably 20th century in date
- Mostly on isolated parcels of ground
- Total area = 1835.83ha
- % of County = 0.36%
- Number of polygons = 292
- Occurrence = occasional



Scrub is young woodland and represents the smallest category of woodland in Northumberland (0.3%). This has been attributed to the scarcity of unmanaged lowland sites and the amount of sheep-grazing in the un-forested uplands. Most scrub seems to occur on river banks and on parcels of land isolated by roads and railways, with some on craggy outcrops in the north-east of the county, for example the Kyloe Hills. Isolated patches also occur on disused industrial or commercial sites and quarries but are generally too small to have been recorded by HLC (under 1ha). Most scrub probably dates to the 20th century. It is variously dominated by hazel, birches, willow, bird cherry, hawthorn, blackthorn or gorse, with much bramble, raspberry, rose and

some juniper (Lunn 2004, 150-1).

Most archaeological sites in this HLC type are post-medieval in date and include a range of built structures like bridges and watermills as well as remains of a small number of industries such as a colliery and coal workings, brick and tile works, lead mine and iron foundry. The medieval remains are largely settlement-related with a tower, chapel and deserted settlements; the early medieval is represented by a single find. Romans remains are few and include native settlement remains, finds and a bridge. Prehistoric remains are more numerous and range in date from Mesolithic and Neolithic flints to Bronze Age burials and Iron Age hillfort.

Rarity: occasional

Trajectory of change: increasing slowly

Susceptibility: medium