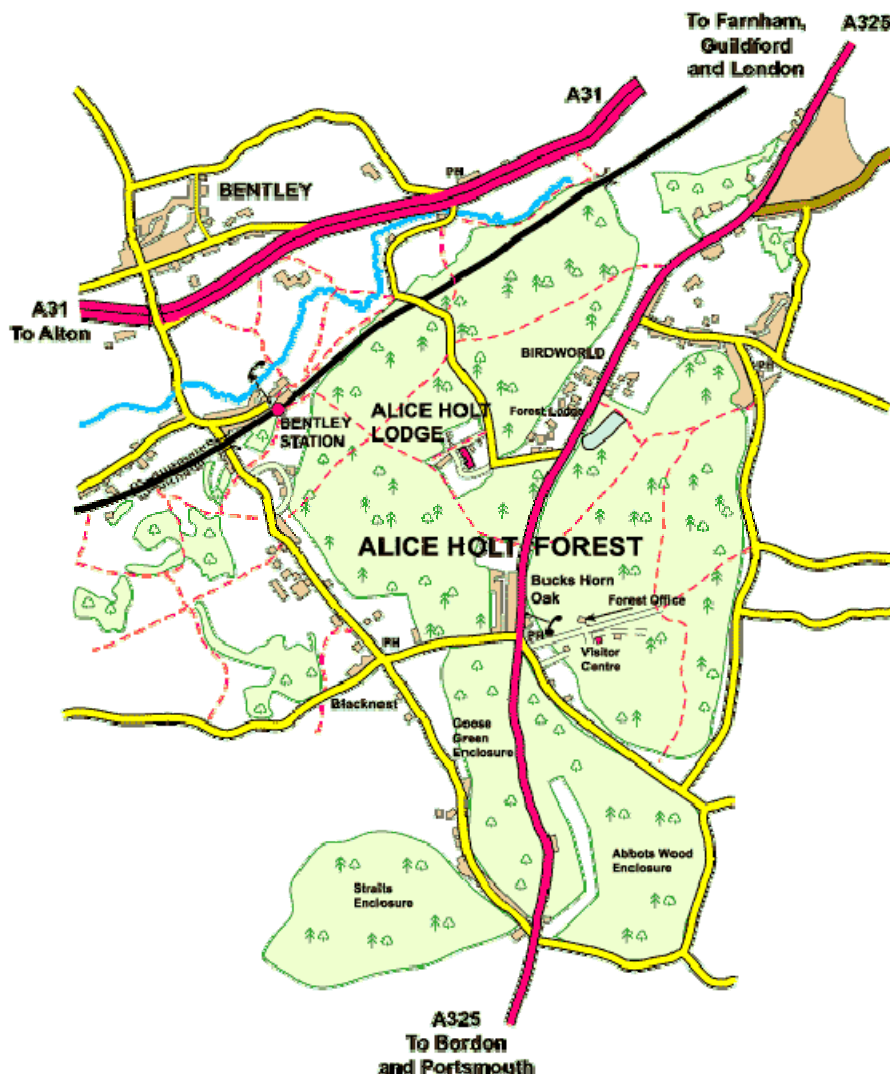


Location

The Forest Research Alice Holt Research Station is located in the centre of the Forest (National Grid reference SU 813427). The Forest of some 850 hectares straddles the Hampshire/Surrey county boundary.



Situation, relief and drainage

Alice Holt Forest lies at the north western corner of the Weald where the bounding rim of Chalk swings round from a south-north trending outcrop to the west-east alignment of the Hog's Back anticline. A subsidiary more gentle fold to the south of this anticline raises the Gault Clay to form high ground some 100 – 125 m OD. River terrace gravels have protected this clay from erosion during the Quaternary, so that it forms the main physiographic feature of the locality. The River Wey runs in a wide valley just outside the northern boundary of the forest, flowing north-east towards Farnham. Around the edge of the plateau, the ground falls steeply to north and west south west with convex slopes around 7 – 11 degrees. Stream incision has caused local minor landslips where slopes are 12 – 18 degrees.

Climate

The climate is characteristic of south-east England, with an annual temperature range and a rainfall typical of inland south-central Britain. Monthly averages of maximum, minimum

and mean air temperature show an annual range of 16.7, 12.2 and 14.3 degrees C respectively. Mean annual rainfall (1961-1990) is 779 mm with a distinct July minimum, although February can be the driest month.

Geology and soils

The bulk of the Forest is underlain by Gault Clay (Cretaceous) but two detached compartments to the west include the escarpment of the Cretaceous Upper Greensand, and the Research nursery at Headley is on Lower Greensand. Gravel deposits, mapped by the British Geological Survey as Plateau or High-Level Terrace Gravels mantle the high ground. Low-Level Terrace Gravels occur at lower elevations in parts of the Forest. Alluvium occurs along streams draining the Forest.

The soil types represented across Alice Holt forest include brown soils, podzolic soil soils, surface-water gley soils and groundwater gley soils according to the Soil Survey of England and Wales classification of major soil groups. According to the FAO/UNESCO scheme, Major Groups of Fluvisols, Gleysols, Cambisols, Luvisols, Podzols and Planosols are represented.

See also soil survey map on page 4.

Tree species

The range of conifer species represented across Alice Holt forest is shown in Table 1, although for broadleaf species, the list is restricted to oak and mixed broadleaves. The value of Alice Holt to research into broadleaf woodland is the large old-growth component (~200 years old), complemented by a range of younger stands planted between 1930 and 1995.

See also land cover map on page 5.

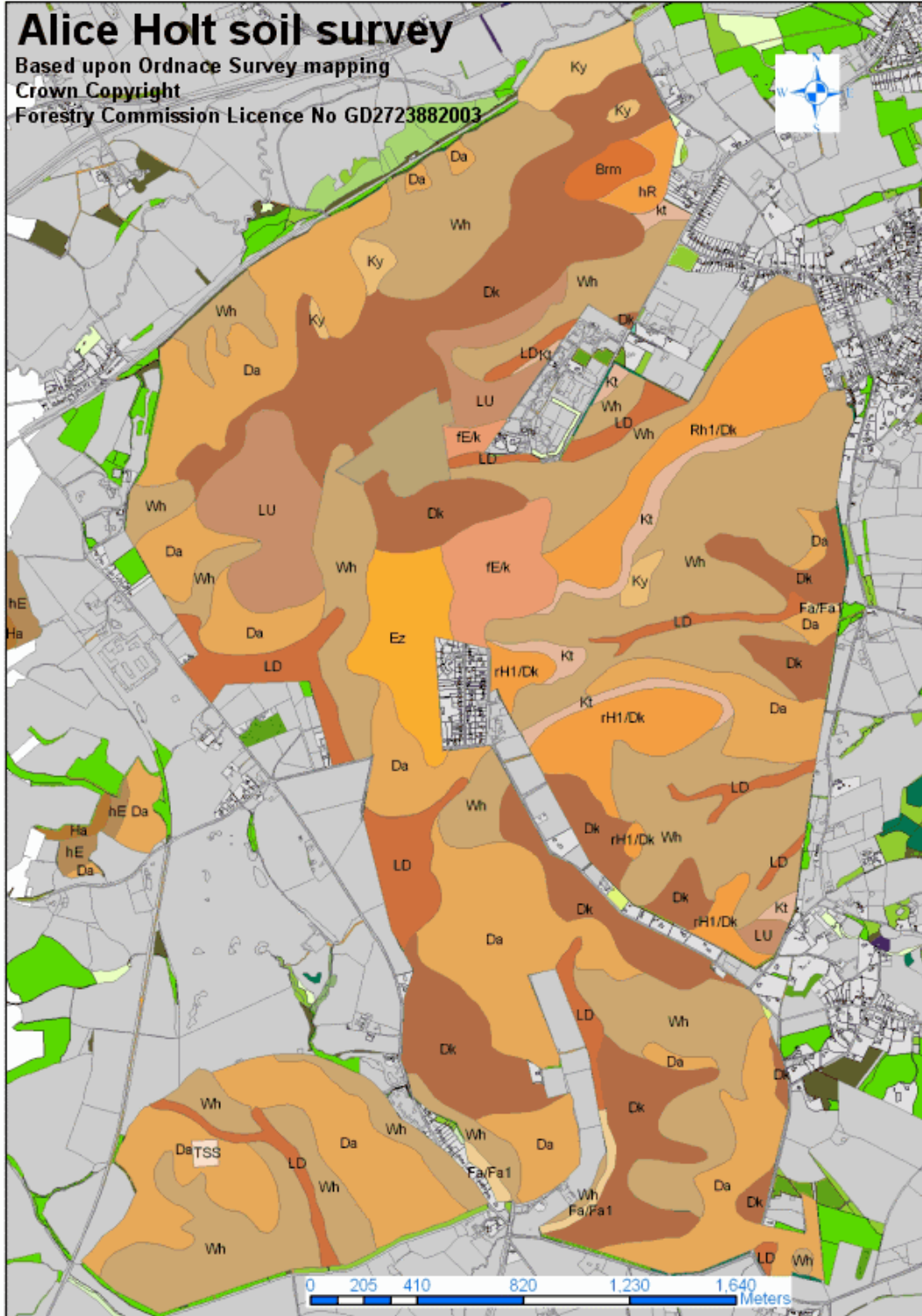
Table 1. Species represented in Alice Holt forest in 2002. Based on records held in the sub-compartment database. Where cover is less than 1 ha for individual species (hornbeam, wild cherry, Norway maple, sycamore, poplar, grand fir, Sitka spruce), these are accounted for as mixed/others.














BROADLEAF	Scientific name	Area (ha)
Oak	<i>Quercus robur</i> , <i>Q. petraea</i>	286
Beech	<i>Fagus sylvatica</i>	14
Birch	<i>Betula pendula</i>	15
Ash	<i>Fraxinus excelsior</i>	6
Sweet chestnut	<i>Castanea sativa</i>	3
Mixed/others		68
Total broadleaved		391
CONIFER		
Corsican pine	<i>Pinus nigra</i> var. <i>maritima</i>	184
Scots pine	<i>Pinus sylvestris</i>	51
Norway spruce	<i>Picea abies</i>	28
Western hemlock	<i>Tsuga heterophylla</i>	38
Larch	<i>Larix</i> spp.	26
Douglas fir	<i>Pseudotsuga menziesii</i>	11
Cypress	<i>Cupressus</i> spp.	8
Western Red cedar	<i>Thuja plicata</i>	7
Mixed/others		24
Total conifer		376
TOTAL		767

History of Alice Holt Forest

Alice Holt Forest probably originated in the Atlantic Period (5500 B.C. – 2600 B.C.) with pedunculate oak emerging as the main tree species. Man has dwelt in the forest precincts from Lower Palaeolithic times. The Gault Clay of the Forest, and the oak woods upon them were used by the Romans for the making of pottery. During the Anglo Saxon period, the forest was stated owned, but in Saxon times, some of the woodland was felled, resulting in remaining woodland becoming sanctuary for deer and other wildlife. Gradually, these became favoured for game and were acquired by powerful individuals. However, after the Norman conquest, the remaining forest area reverted to the Crown, but was valued as a Royal hunting ground or “chase”. Alice Holt and nearby Woolmer forests are relics of the original royal chase forests. The others in Hampshire being the New Forest and Bere Forest.

History records considerable exploitation of oak timber in the 18th Century to support the British navy. The Forest was enclosed in 1812 and replanting took place. Conifers were introduced to the Forest in the latter part of the 19th Century, and the proportion of conifers increased during the 20th Century. Alice Holt Forest was acquired by the Forestry Commission in 1924, and a Research Station set up there in 1946.



	Breamore		Hurst
	Denchworth		Kings Newton
	Dunkeswick		Lawford
	ECN Target Sampling Site		Loquiers
	Essendon		Reasenheath gravelly variant/Dunkeswick
	Fladbury/Fladbury gravelly variant		Shirrel Heath cultivated deep phase
	Freni/Kielder		Shirrel Heath cultivated eroded phase
	Harwell		Wickham
	Hendred		kearby

