Hainault Forest is situated on high ground which is a miniature version of the Epping Forest ridge with a very varied geology. This has an effect on the diversity of trees and plants present, creating a number of different habitats. The geology is also similar to that of the high point of Havering-atte-Bower to the east (Bedfords Park, GLA 45), and Hampstead Heath to the west (GLA 42). The foundation of the area is London Clay and this passes up into sandy clay called the Claygate Beds, a result of the shallowing of the London Clay Sea some 50 million years ago. Dog Kennel Hill to the south of the forest is capped by Claygate Beds but on the highest ground – Cabin Hill – the Claygate Beds are overlain by Bagshot Sand, a fine yellow sand laid down as the sea became even shallower. The latter is restricted to the Essex side of the hill.

Ice Age environment
During the earliest part of the Ice Age, perhaps as much as a million years ago, it is thought that a river was flowing north across this area to join the early Thames which was then flowing across north Essex and through East Anglia. We have almost no idea what the landscape of Essex was like then but geologists think that some of the gravel deposited by these ancient Thames tributaries has survived. A patch of this gravel, shown as Stanmore Gravel on the geological map exists on the summit of Cabin Hill within Essex, and if you come across rounded pebbles of flint on the paths here or in the roots of fallen trees, give a thought to the fact that this spot may once have been the floor of an ancient river valley! On the top of Shooters Hill in Kent, visible from Cabin Hill, is another patch of this gravel which could have been deposited by the same river. Other outcrops of pebble gravel, which may be from other northward-flowing tributaries of the Thames, exist on other high points such as Havering-atte-Bower, High Beach and the Langdon Hills. An alternative view is the Stanmore Gravel may be a marine deposit related to the Crags of East Anglia (see BGS Special Memoir, p. 52). Later in the Ice Age, about 450,000 years ago, the Anglian ice sheet spread into Essex and laid down a distinctive clay known as boulder clay or till. Remnants of this material is present on the north-west slopes of Cabin Hill and results in the ground here remaining wet and sticky, even in summer. Beneath the boulder clay there is glacial sand which may have been deposited by melt water in front of the advancing ice sheet. A small area of this sand occurs near Chigwell Row Church where it supports a heathland flora.

Springs
There are several springs in the area, most of them the result of groundwater flowing from the Claygate Beds where it meets the impervious London Clay beneath. The most famous of these is Lambourne Well, the water from which drains into the River Rom on the Essex side of the hill and is worth visiting to see the meanders.

There is a café, farm and Visitor Centre close to the car park (paying) by the lake.
Hills topped with Claygate Member, London Clay Formation
Source: London’s foundations, page 146

Site Map
Source: London’s foundations, page 144