

Oak Forestry and Sustainability

The oak forest

An oak forest can be found anywhere in Europe from the Ural mountains of Russia in the east of its range, to western Spain. It prefers clay or loam soil. In ideal growing conditions it can reach a very large size, occasionally up to 45 metres tall. More typically it will be around 25 - 30 metres. It can live at least 1000 years of age, and probably more.



A stand of exceptionally large oaks in Northern France.

The oak forest has one of the most diverse ecosystems in Europe. The oak will often share the forest with other larger trees, typically ash, and also with some smaller trees, including birch and rowan.

The relatively open canopy and leaves allow a reasonable amount of light through to the forest floor, allowing the development of shrubs such as hazel and elder, important food sources for smaller mammals and birds.

The ecosystem would normally be a stable process in which elderly or diseased trees would fall, to be broken down by insects and fungi. These fallen trees would leave gaps in the forest canopy allowing natural regeneration in the space. This would result in a forest of differing ages, and sizes.

The fauna would originally have been dominated by the major predators, including wolves, bears and European lynx. The oak forests were also important territory for raptors such as the goshawk and most owl species. The major herbivores were the wisent (European bison) deer and wild boar.

Generally today, there are very few of the original large predators remaining, mainly due to fragmentation of the forest, which means that large predators which need huge territories have conflict with human neighbours. There is hope that reforestation may help restore some of the original ranges of these animals.

Throughout most of Europe, populations of major predators are tending to increase, especially since the Bern convention. (Source carnivorescience.org)

(Below) An area of replanted young hardwood trees.



Throughout Europe the forests are seen as an important resource, and are generally subject to careful oversight. Organisations such as the FSC and PEFC ensure that afforestation is maintained and that correct forestry procedures are followed. The forest net growth in France is 0.5 % annually. In the 15 years up to 2007, Europe's forest cover increased by 13 million hectares – an area about the size of Greece. (Statistic from Forest Europe Organisation 2007)

There is no doubt that as a construction material resource, a forest is much more amenable than competitive materials, such as steel or concrete, which mean unsightly quarries or ore mines. Forests also have other uses such as for leisure activities.

Forestry Practice

In forest care, a balance between economic, practical and ecological pressures has to be found. The passage of large extraction vehicles and sawing etc. can have a negative impact on the soil and the forest area, so this should ideally be kept to a minimum.

The forest is looked after by professional foresters, who will conduct maintenance by removing damaged or badly shaped trees, to let in light and allow young trees to grow. They may also remove some branches from standing trees. A selected section of the forest area will then be cut down when the trees are a reasonable size, and a new generation starts the process again.



Forest thinned to allow new growth. The stack of thinned logs can be seen to the far right of the picture

In some forests, the trees are only removed selectively to ensure there are different ages of tree providing a constant supply. This involves more work, and the extraction is comparatively more expensive and difficult.





Once felled, the trees are resized for practical transportation.

It should always be remembered that trees are a crop, even though it has a harvesting cycle much greater than most crops. Forestry is unique in comparison to the sourcing of most construction materials in that it is low impact and beneficial to the environment, and so long as it is carefully undertaken, is an area in which wildlife and commerce can both exist.



Finally the trees are removed from the forest to sawmill