



*Edolph's Copse (image credit: WTML/Pam Page)*

# Ancient Woodland

**Irreplaceable habitats and trees  
of special national importance**

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## Irreplaceable habitats and trees of special national importance



*The infamous Harlington Yew, estimated to be at least 1,000 years old and a tangible link to the original Saxon church which once stood on the same site. (credit: WTML)*

### Abstract

The impact on the environment of airport expansion is particularly significant at a local level with acknowledged effects on health and welfare as well as climate change.<sup>1</sup> Any new runway at either Heathrow or Gatwick airport will lead to the permanent loss of irreplaceable ancient woodland habitats – including irreplaceable ancient semi-natural woodland and trees of special national importance – as well as valuable semi-natural woodland and treescapes.

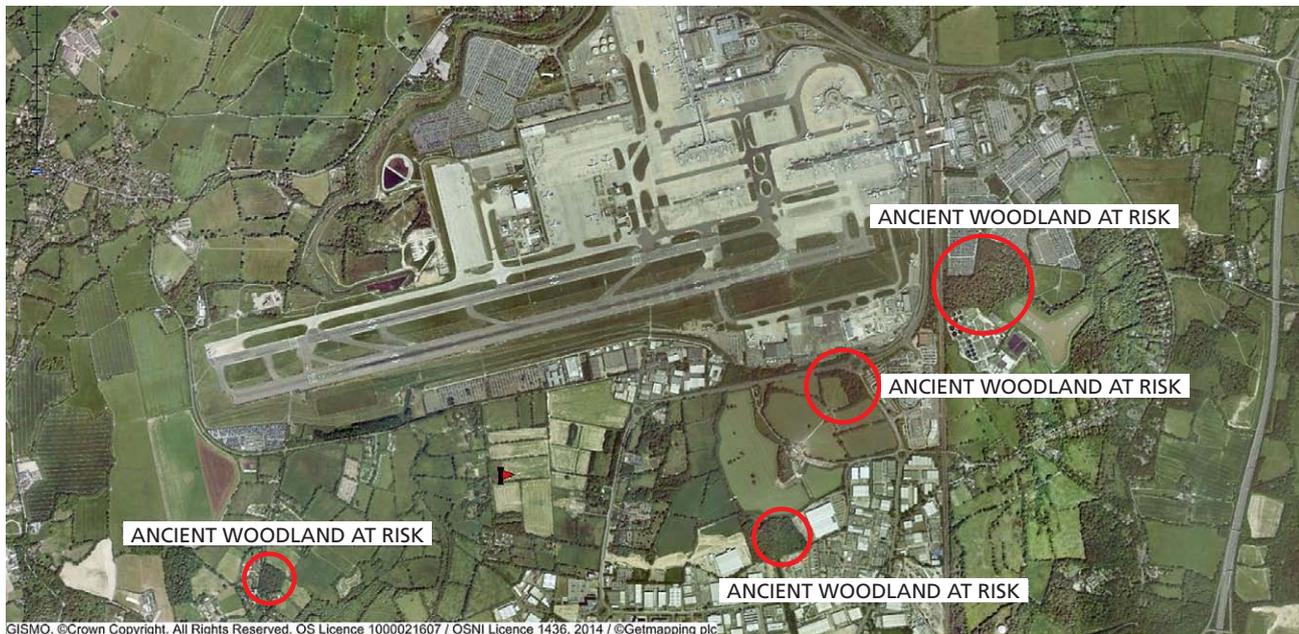
During the airport expansion debate the use of the term ‘environment’ has, however, been mainly used to discuss the impacts of noise and air quality.

Plans for a second runway at **Gatwick** could affect more than 77 hectares of ancient semi-natural woodland and at least 7 ancient and veteran trees<sup>2</sup> that exist within a two mile radius of the airport, including trees of special national importance.

Plans for a third runway at **Heathrow** will affect at least 5 existing notable and veteran trees<sup>3</sup> - some of which are designated protected. Woodland is also at risk including “areas of semi-natural habitat occur within the area of proposed development, including a few small blocks of mixed deciduous woodland that is a habitat of principal importance for biodiversity.

Within this area are several small areas of traditional orchard, which is also a habitat of principal importance for biodiversity”.<sup>4</sup>

The potential level of land-take and subsequent habitat loss is significant and the impact on the local community, and the wider landscape, must be taken into account as an ‘environmental impact’ of expansion proposals.



Some of the ancient woodland that would be lost at Gatwick.

## Objective of the paper

The objective of this paper is to identify the potential amount of irreplaceable ancient woodland habitat and special trees at risk from runway expansion at Gatwick and Heathrow, to define these habitats and to set out the likely impact of expansion.

## What is ancient woodland?

Ancient woodland is the country's richest terrestrial wildlife habitat, home to 256 'species of conservation concern' as listed on the UK Biodiversity Action Plan. Each ancient wood is unique with its own local soil, environment, wildlife and cultural history. The varied climate and geology of the UK, combined with varied management by man, has led to a diversity of ancient woodland forms and species associated with them. Over hundreds and sometimes thousands of years, the intact soils in ancient woods have evolved into inimitable habitats. These are host to complex communities of trees, plants, fungi, microorganisms and insects which rely on these unique, undisturbed ecosystems.

Often carrying cultural and historical interest and value, the social associations of ancient woodland habitats additionally make them an important element of developing a stronger cultural bond between people and trees and woodland. Ancient woodland habitats (in particular, ancient and veteran trees) are also iconic elements of many UK landscapes: their sheer stature and beauty fascinates and attracts people, providing ways for people to engage with and understand the natural world. Ancient woodlands are also an important, but under-researched, area for biological and scientific study.

The lengthy timeframes involved in the formation of these woodland habitats means that they can never be recreated, making them one of the few landscapes in the UK that are **acknowledged to be irreplaceable**.

The government adviser for the natural environment, Natural England (NE), defines ancient woodland "as an area that has been continuously wooded since at least 1600 AD", and states that it is:

*"an irreplaceable resource of great importance for its wildlife, soils, recreation, cultural value, history and the contribution it makes to our diverse landscapes."*<sup>5</sup>

The Government's forestry policy, Keepers of Time,<sup>5</sup> states:

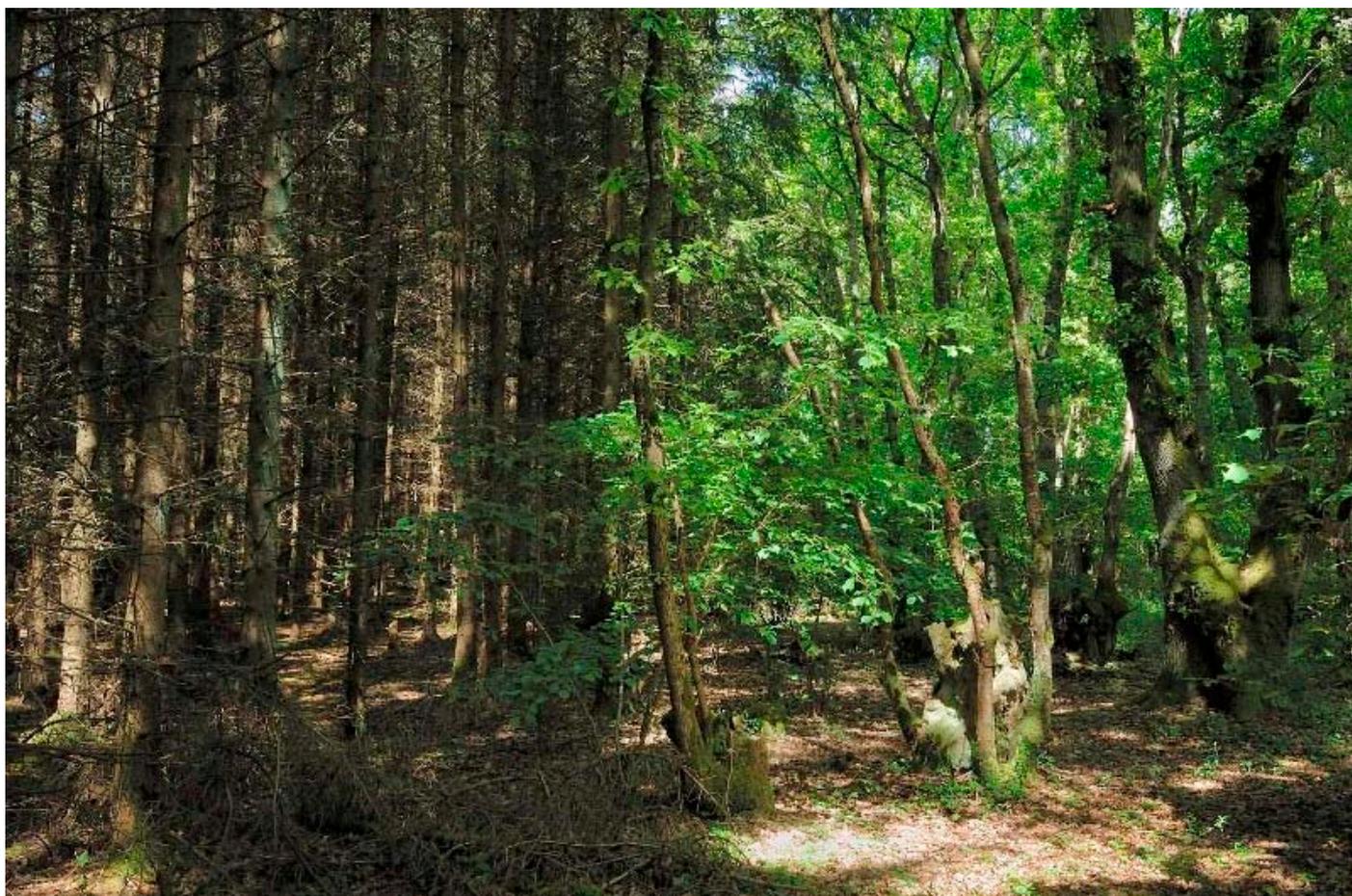
*"England's ancient woodlands and trees represent a living cultural heritage, a natural equivalent to our great churches and castles".*<sup>7</sup>

Keepers of Time also states:

*“the existing area of ancient woodland should be maintained and there should be a net increase in the area of native woodland.”*

Ancient woods are also historical treasure troves full of archaeological and cultural features that give an insight into past land use. These woods may also preserve archaeological features from earlier times, before the wood established. For example, Bronze or Iron Age earthworks, or evidence of old field systems can sometimes be found. Such remains might have been lost in the wider landscape, through ploughing or development, but within an ancient wood they may have lain undisturbed for centuries.<sup>8</sup> Furthermore, ancient woodland also holds a unique, immeasurable value for all those who visit or have an association with it, a feature of ancient woodland that is difficult to quantify.

The majority of ancient woods over 2 hectares in size are recorded on the Ancient Woodland Inventory in each country; each Inventory can be updated as and when new data becomes available. In England the Inventory is held by Natural England.



Planted Ancient Woodland Sites (PAWS) can be restored to their former glory - restoration in practice, Clangar Wood (credit: WTML/Erik Johansson)

## Ecosystem services

The value of our forest resource – of which ancient woodland and ancient and veteran trees are core components - has been increasingly recognised for its ecosystem service benefits.

The notion of ecosystem services brings together the range of benefits which trees and forestry provide:

*“In our highly populated and industrialised country, individual scattered trees, small groups and belts of trees, and more open wooded landscapes such as wood pastures, are as much a part of the potential network of wildlife habitat as are larger woods and forests, and play an important role in delivery of ecosystem services. The urban forest, including parks, gardens, and street trees, is as important as rural woods.”<sup>9</sup>*



## What are ancient, veteran and notable trees and trees of special national importance?

The UK is thought to contain the highest proportion of ancient trees in Northern Europe.<sup>10</sup> An ancient or veteran tree can be defined as: *'a tree that is of interest biologically, culturally or aesthetically because of its age, size or condition'* and each has its own characteristic biodiversity. Some trees are instantly recognisable as veterans but many are less obvious.<sup>11</sup> The veteran or ancient stage is the final one in the life of a tree when the cross-sectional areas of successive annual rings in the main stem begin to decrease progressively. These trees often referred to by ancient tree specialists as Trees of Special National Importance (TSNIs).

In addition to providing all the ecosystem benefits of younger trees, TSNIs have special qualities such as size, age, rarity or condition that contribute additional biodiversity, cultural, historic or aesthetic values to the landscape. Historic landscapes containing collections of TSNIs can provide valuable tourism benefits<sup>12</sup> associated with old growth habitats and, like ancient woodland, can possess unique heritage and cultural significance locally, nationally and internationally.



TSNIs can often be in significant clusters or concentrations in priority habitats such as wood pasture and parkland, woodland, commons, traditional orchards, historic hedges, old pollards on river banks and in historic landscapes.

Notable trees are usually magnificent mature trees which stand out in their local environment because they are large by comparison with other trees around them. They are often taller than ancient trees and they may be fatter than many veteran trees but do not have any obvious veteran characteristics. In parts of the UK where trees are less common, a tree that is relatively small may be notable because it is significant in its local environment. Most notable trees will be worthy of recognition regionally or locally.<sup>13</sup>

## Loss of ancient woodland habitats

NE states:

*“the irreplaceable nature of ancient woodland and veteran trees means that loss or damage cannot simply be rectified by mitigation and compensation measures.”<sup>14</sup>*

NE also states:

*“Compensation measures are always a last resort because ancient woodland and veteran trees are irreplaceable. These measures can only partially compensate for damage.”*

If considering a ‘no net loss’ approach, it should be noted that the Defra draft biodiversity offsetting methodology<sup>15</sup> states:

*“some habitats are impossible to recreate on a meaningful timetable. Ancient woodland and limestone pavement fall into this category. Any development which damages these habitats effectively leads to an irreversible loss.”*

The guidance on metrics for biodiversity offsetting<sup>16</sup> states:

*“some very valuable habitats are either very rare, difficult/impossible to recreate, or both. Whilst development on these habitats would be unlikely, if a local planning authority did decide that a development should go ahead on this type of habitat, any compensation would have to be bespoke, and managed on a case by case basis.”*

In some cases translocation - defined as the transfer by human agency of any organism(s) from one place to another<sup>17</sup> – is in some circumstances considered as an option which could support the development of an ecosystem which contains some of the plants and fungi of the former ancient woodland.



*Ancient Tree Forum measuring ancient trees at Newnham Park  
(credit: Hannah Solloway, Ancient Tree Forum)*

There is no evidence available to show that ancient woodland translocation is a process that provides a better quality habitat than planting of new woodland on non-translocated soils.<sup>18</sup> Natural England’s view that an ancient woodland ecosystem cannot be moved, is supported by the Joint Nature Conservation Committee policy on translocation provided in its ‘A Habitats Translocation Policy for Britain’.<sup>19</sup> The policy states that the uncertainty of habitat translocation means that it should be viewed **only as a measure of last resort** in partial compensation for damaging developments.



Public demonstration against the loss of ancient Edolph’s Copse, 2003

Ancient woodland is irreplaceable habitat and as such its **loss can never be mitigated**. Indeed, given the timescales for the creation of ancient woodland, the loss of this habitat cannot be compensated for. Using DEFRA-led pilot studies<sup>20</sup> as a baseline, the Trust considers that in incidences where ancient woodland loss is permitted through the planning system - which should be in wholly exceptional circumstances - an appropriate, minimum, ratio for compensation would be 30:1.

Today only around 2% of the UK’s land mass is home to ancient woodland. Approximately half of what remains today is classified as Planted Ancient Woodland Sites (PAWS), an equally valuable habitat which has been replanted or under-planted with non-native species in the past. The Lawton Review suggests that ancient woodland sites (greater than 2hectare (ha)) cover only 2.7% of England. Nearly 50% of ancient woods are less than 5ha<sup>21</sup> in area.

## Ancient woodland and ancient and veteran trees around Gatwick and Heathrow

Without detailed plans or full environmental assessments, it is impossible to determine the exact level of loss and damage proposed expansion could bring to ancient woodland habitats around Gatwick or Heathrow. But the available details show a worrying picture, made more severe when considered alongside the impact of loss and damage on a landscape scale.

### Ancient woodland (AW) identified within 1 mile and 2 miles around Gatwick:<sup>22</sup>

Airport	Grid Ref	Within 2 miles: total	AW 1 mile (hectares)	AW 2 miles (hectares)
London Gatwick Airport	TQ2740	77.59	4.86	72.73

### Ancient woodland (AW) identified within 2 miles around Gatwick and Heathrow:<sup>23</sup>

Airport	Grid Ref	Within 2 miles: total	Ancient tree	Notable tree	Veteran tree
London Gatwick Airport	TQ2740	7	2	3	2
London Heathrow Airport	TQ0775	5		1	4

Over and above the impact of the loss of individual trees or wooded areas, the ensuing loss of the wildlife corridors those trees and woods provided within the locale effects the both the extent, and the resilience of the habitat network itself.

The debate about expansion in the south east of England does not currently include Stansted airport. However, should Stansted ever be brought back into consideration the potential impact on ancient woodland habitats could be huge. Nearly 500 ancient, notable and veteran trees have been identified within 2 miles of the existing airport boundary. A second runway could destroy at least 6 ancient woods, across more than 200 hectares of ancient woodland including ancient Epping Forest, most of which is designated a Site of Special Scientific Interest (SSSI).

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## Concluding thoughts

The impact of airport expansion on the environment is acknowledged as significant, yet the use of the term 'environment' within the debate has focused on noise and air quality. The **effect of land take and ensuing habitat loss** on the local community, and on the wider landscape, **must be taken equally seriously** in all aviation expansion and related airport infrastructure proposals.



A new runway in England would be subject to a national infrastructure process. This overrides the National Planning Policy Framework (NPPF). In addition to the spatial requirements of airports, further infrastructure requirements (for example road and rail connections, car parking, retail, hotel and leisure facilities, associated

housing) invariably accompany expansion. The scope and scale of these are yet unknown and will be subject to the NPPF. Ancient woodland and veteran trees are afforded specific protection within the NPPF, however these protection measures do not exempt ancient woodland or ancient and veteran trees from development, and they have been criticised for failing ancient habitats; over 600 ancient woods land are currently under threat from development proposals across the UK, according to the Woodland Trust's 'woods under threat' database. Further pressure is put on rare and irreplaceable woodland habitats at a local and landscape scale by the current narrative promoting a 'need' to increase aviation capacity, and a Government-led drive for economic growth. Under these circumstances, it is extremely likely that any new runway would negatively impact the UK's woodland heritage.

Concerns remain therefore for those habitats which may be impacted by further development, and in particular for the ancient woods, hedgerows and trees and important wildlife corridors that surround Gatwick, and for the valued woodland, ancient and veteran trees, hedgerows and heritage orchards in the areas around Heathrow.

Increasingly, what remains of our ancient resource is under chronic (slowly happening over long periods) or acute (dramatic and rapid) threat - from development, climate change, tree pests and diseases, intensive land use and poor management.

The **irreplaceable** nature of ancient woodland, the **value** of these habitats and the connectivity they provide to an already fragmented landscape, and the **impacts** of long-term damage and permanent loss that expansion could cause must be given proper consideration.



## The Authors

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Kaye has been an environmental campaigner at a local and national level for 15 years, the last 8 of these with the Woodland Trust, the UK's leading woodland conservation charity.

She has worked in organisational and local government advocacy since she joined the community and voluntary sector in 1999.



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Luci has been an ecologist for 20 years focusing mainly on compliance with environmental legislation. For the last 4 years she has been working in the Campaigns team at the Woodland Trust as a technical advisor on the impacts of development on ancient woodland. Prior to the Trust, Luci was the head of the Consents Management department at Wellington Regional Council, New Zealand.

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A series of research papers on a second Gatwick runway