



# WOODLAND TRUST

**Town and Country Planning Act 1990**

**Appeal by Q Hotels Group Limited against the decision of North Lincolnshire Council to refuse planning permission to change the use of woodland to a golf course and make alterations to an existing golf course on land at and north of Forest Pines Golf Club, Ermine Street, Broughton, North Lincolnshire.**

**Planning Inspectorate Ref:  
APP/Y2003/A/09/2101852/NWF**

**North Lincolnshire Council Ref: PA/2007/1172**

**PROOF OF EVIDENCE**

**OF**

**FRANCES WINDER**

## 1. Introduction

- 1.1.1 The Woodland Trust is the UK's leading woodland conservation charity. We have four main aims: no further loss of ancient woodland, restoring and improving woodland biodiversity, increasing new native woodland and increasing people's understanding and enjoyment of woodland. We own over 1,000 sites across the UK, covering around 20,000 hectares (50,000 acres) and we have 300,000 members and supporters.
- 1.1.2 My name is Frances Winder. I have a degree in Zoology and a Masters in Environmental Policy. I have twenty years experience of working on environmental conservation issues in the UK and EU. I am employed by the Woodland Trust to work on ecological aspects of threats to ancient woodland.

## 2. The Site

- 2.1.1 Gadbury and Lundimore woods, at just over 80 hectares, are part of the complex of woods known locally as Broughton Woods. Approximately half of this woodland area is listed on Natural England's Ancient Woodland Inventory including the contiguous wood, West Wood, which is directly north of Gadbury and Lundimore.
- 2.1.2 Ancient woodland (land that has been continually wooded since at least AD1600) is our richest habitat for wildlife and home to more species of conservation concern than any other habitat supporting at least 232 species. Ancient woods form a unique link to the primeval wildwood habitat that covered most of lowland Britain following the last Ice Age. Ancient woodland sites are irreplaceable - the interactions between plants, animals, soils, climate and people are unique and have developed over hundreds of years. These eco-systems cannot be re-created and with only just over 2% of the land area in Great Britain covered by ancient woodland we cannot afford any more of this finite resource to be lost forever. It is therefore essential that this habitat be protected from development.
- 2.1.3 In 2008 Keith Kirby, Natural England's Principal Specialist, Forest and Woodlands, was asked to give an opinion on whether Gadbury and Lundimore were of ancient origin. In the conclusion to his report (Kirby 2008 , Appendix C in the Supplement to the Environmental Statement) he states:-

*"Based on the evidence available to me, as interpreted above, I consider that there is good evidence from the maps, supported by the ground flora data, that there has been continuity of woodland cover across much of the woodland."*

and

*"Therefore I consider that the majority of the woods are likely to be ancient, with the exception of small enclaves, eg around Rose Cottage which have a longer history of openness"*

- 2.1.4 Following the investigation by Natural England Gadbury and Lundimore woods have been added to the ancient woodland inventory as Plantation on Ancient Woodland Sites (PAWS).
- 2.1.5 PAWS sites are largely the result of Government incentives. Between the 1930s and 1980s, thousands of hectares of Britain's irreplaceable ancient woodland were felled and replanted, mostly with commercial conifers, or a mixture of conifers and broadleaved trees. This well-intentioned Government strategy to make Britain more self-sufficient in timber had dire consequences for landscape and wildlife. Whole fragile ecosystems were devastated, and the unique communities of plants, animals and fungi that depend on ancient woodland were damaged and diminished to varying degrees; sometimes so severely that they have survived only in isolated pockets within dense plantations.
- 2.1.6 PAWs restoration is recognised under the UK Biodiversity Action Plan and the Forestry Commission have responsibilities for delivery of the various woodland habitat action plans as lead partner. Restoration of PAWS is listed as a priority in the Forestry Commission's Keepers of Time – a statement of policy for England's ancient and native woodland (Defra/Forestry Commission 2005 – Appendix FW1).
- 2.1.7 My colleague Mr Hodge will deal with the process and practice of PAWS restoration.

### **3. Legislation and policy relating to ancient woodland**

#### 3.1.1 Planning Policy Statement 9 (Appendix FW2) states

*“Ancient woodland is a valuable biodiversity resource both for the diversity of species and for its longevity as woodland. Once lost it cannot be recreated. Local planning authorities should identify any areas of ancient woodland in their areas that do not have statutory protection (e.g. as an SSSI). They should not grant planning permission for any developments that would result in its loss or deterioration unless the need for, and benefits of, the development in that location outweigh the loss of the woodland habitat.”*

#### 3.1.2 The Good Practice Guide for PPS9 (Appendix FW3) states in the glossary

*“Ancient Woodland – in England defined as an area which has been wooded continuously since at least 1600 AD. Divided into ancient semi-natural woodland and plantations on ancient woodland sites. Both types of stand are classed as ancient woods.”*

- 3.1.3 Gadbury and Lundimore Woods are designated as a Site of Importance for Nature Conservation or County Wildlife Site and are thus affected by Policy LC4 of the North Lincolnshire Local Plan which states:

*Any development or land use change which is likely to have an adverse impact on a local nature reserve, a site of importance for nature conservation...will not be approved unless it can be clearly demonstrated that there are reasons for the proposal which outweigh the need to safeguard the intrinsic nature conservation value of the site...'*

- 3.1.4 The operation of these and similar policies is illustrated in the following planning appeal decisions, namely Broom and Burney Wood (21/11/06 – Appendix FW4), Bolnore Village (24/1/08 – extracts from decision letter and Inspector's Report provided as Appendix FW5) and Roundabout Wood (27/11/08 – Appendix FW6). The Bolnore Village decision is referred to as an important landmark case in Natural England's current Ancient woodland standing advice (Appendix FW7)

## **4. The proposal**

### **4.1 The application and appeal**

- 4.1.1 The application is for the creation of nine new golf holes to add to the existing 27 holes, this would result in the direct loss of 33.4 hectares of the 81.2 ha of ancient woodland with the remaining 47.8ha being fragmented, much of it being used as narrow shelter belts between the newly formed holes. The amount of woodland loss equates to 10% of the remaining ancient woodland in North Lincolnshire.
- 4.1.2 The applicant has claimed that whilst the woodland is ancient and there would be a loss this would be compensated for by better "management" of the remaining woodland. The Woodland Trust believes that there are two misconceptions here that need to be tackled, firstly that you can "compensate" for the loss of ancient woodland and secondly that management or the lack of is a key factor in the life cycle of ancient woodland.
- 4.1.3 The appellant has also noted in their grounds for appeal that they believe that the proposal would be ecologically beneficial. The Woodland Trust disputes this and believes that there are nationally recognised best practice guidelines on how to restore PAWS woodland and that this application goes against these guidelines. The proposed development would be ecologically unsound and have long term negative implications on the biodiversity of the area.

### **4.2 Compensation and management**

- 4.2.1 As stated above ancient woods form a unique link to the primeval wildwood habitat that covered most of lowland Britain following the last Ice Age. Ancient woodland sites are irreplaceable - the interactions between plants, animals, soils, climate and people are unique and have developed over hundreds of years. The loss of an

irreplaceable habitat cannot be compensated for. Ancient woodland is the UK equivalent of the Amazon rainforest, once it has gone we can never get it back, hence the importance placed on the habitat by Government policy as seen under PPS9.

- 4.2.2 Ancient woodland is our most valuable wildlife habitat. Restoration of PAWS represents the only opportunity to increase the area of ancient woodland with semi-natural characteristics. Given the area of ancient woodland that has been converted to plantation, it has the potential to reverse fragmentation of semi-natural habitats significantly and thereby place woodland biodiversity on a more sustainable footing.
- 4.2.3 Peterken (1993 – Appendix FW8) describes the characteristics of virgin forests in northern Europe, the closest thing to a naturally occurring woodland, where the average tree will live for 300 years and the lifecycle of the woodland will be on a similar scale. Fuller and Peterken (in Sutherland and Hill 1995 – appendix FW9) talk about the need to look at management aims for woodland over centuries rather than years to take account of the complex interactions that go to make up a woodland ecosystem.
- 4.2.4 Recent research for DEFRA into the future for conservation banking in the UK has identified ancient woodland as a habitat for which habitat mitigation cannot take place as ancient woodland is not substitutable, ie you cannot recreate a habitat as complex as ancient woodland within a reasonable timeframe (in the case of ancient woodland, at all) (Treweek et al 2009 – Appendix 10)
- 4.2.5 Natural succession leads to species diversity and abundance increasing over time, its course and speed are dictated primarily by factors such as climate, soils, the degree to which a site is functionally connected to other semi-natural habitats and size of site.
- 4.2.6 Intervention may inadvertently arrest succession and accentuate the impact of other drivers of change. For example, shade dampens the response of ruderal and competitive species to nutrient-rich soils, so any management that maintains or increases light levels may simply inhibit the establishment of more characteristic woodland species.

### **4.3 Biodiversity implications**

- 4.3.1 The applicants have also claimed that the proposal would improve the biodiversity of the site and used the results of the EIA to support this declaration.
- 4.3.2 The Woodland Trust was concerned enough about the quality of the ecological aspects of the environment statement to commission an independent critique of the document. (Just Ecology 2008, lodged by the appellants as Appeal documents)
- 4.3.3 The overall conclusions from the report were:-

1. *We have found this EclA to be deficient in several ways. The document lacks transparency, such that it is not possible to independently assess the survey results or the impact assessment methods, and therefore not possible to gauge whether the correct conclusions have been drawn.*
2. *Some survey information is missing; that which is present is inadequately presented; valuation methods are unclear and appear not to have been adhered to; pre-mitigation impact assessments are not provided; and there is virtually no consideration of cumulative impacts, either within site or in combination with other developments impacting on woodland in the region.*
3. *We have found deficiencies in the scope and spatial and temporal coverage of baseline ecological surveys, and also noted instances where best practice has not been adhered to.*
4. *The value of ancient woodland on site has been underestimated, and so too has the value for many of the other receptors that will be impacted upon. For birds, bats and flora, we consider it misleading to have relied on comparisons between the woodland and the golf course habitats to derive a value for the woodland, and consider that the woodland should have been evaluated in its own right.*
5. *Very significantly, we have found the assessment of the impact on the ancient woodland present to be too simplistic and inadequate, meaning that the full impacts of the development are understated.*
6. *We found the impact assessment to lack rigour, and we remain uncertain about whether impacts have been minimised in the design of the scheme.*
7. *Some aspects of the mitigation proposed are clearly open to challenge, such as the benefit of producing new woodland edge from core area within ancient woodland and the desirability of creating grassland from patches than could be restored to ancient woodland.*
8. *Finally, development which makes the restoration of a planted ancient woodland site impossible should be seen as a major ecological 'cost' and could not be viewed as biodiversity 'gain'.*

## **5. Impacts of the development**

- 5.1.1 The existing golf course was created out of what would now be recognised as ancient woodland. The southern section of Gadbury and Lundimore Woods are currently exposed to impacts from the running of the golf course. The proposed

design of the new course would extend these impacts to approximately 80% of the remaining 48ha of ancient woodland with the implications for loss of biodiversity that that implies.

## **5.2 Direct Impacts**

5.2.1 The Environmental Statement (8.4.6 Botany) suggests that the most significant impact during the construction phase will be during the removal of the trees to create fairways, greens and roughs.

*“The removal of tall or sizeable rooted structures creates enormous disturbance to the soil profile, including what, in effect amounts to rotavation fo the surface and sub-surface layers”*

5.2.2 The same document identifies that this will release potential weed species and so the use of mechanical or chemical means will be necessary to control these plants.

5.2.3 Despite these intensely invasive techniques the ES later goes on to say (8.7.6 Botany) that the construction phase will have an overall minor negative impact on some woodland species and would be fully reversible. This statement shows a complete misunderstanding of the nature of ancient woodland. Any trees planted, or regenerating, on the areas of the golf course which had been subject to the actions described may, ultimately, be an interestingly biodiverse habitat, but they will not form ancient woodland with its complex ecosystem.

## **5.3 Birds**

5.3.1 The ES reports an interesting mix of bird species on the golf course and compares this unfavourably with the species to be found in the woodland. The conclusion is therefore drawn that an extension of the golf course, with an extension of woodland edge habitat, would increase the avian biodiversity of the site.

5.3.2 The Just Ecology critique of the Ecological Impact Assessment points out that this thinking is flawed and a more informative comparison would be made by looking at the respective densities by which it can be seen that the woodland supports greater density of species, greater density of breeding pairs and greater density of red listed species. Only the amber listed species are found in greater densities on the golf course than within the woodland.

5.3.3 An assessment of those species of birds which are found in higher densities on the golf course shows that these are principally generalist species which are using the woodland as nesting and cover and making use of feeding opportunities on the golf course. The species which are rarer are the woodland specialists which would be expected to be found in the core areas of woodland for example lesser spotted woodpecker, woodcock and tawny owl.

- 5.3.4 Woodland birds are already the species in the UK which nationally are suffering some of the greatest declines (BTO 2008 – Appendix FW11) and for which the destruction of a core area of woodland and its replacement with several kilometres of woodland edge, with the disturbance impacts that such changes bring, will be the most disadvantageous.
- 5.3.5 Land take for golf courses in the UK has expanded rapidly in recent years but little is known about associated effects on woodland wildlife (Dale 2004 see Appendix FW12). Remnant patches of semi-natural habitat, including woodland, may survive on golf courses and benefit some generalist species. However, courses have been found to maintain neither the original species composition nor the abundance of some groups of woodland species, such as butterflies (Blair & Launer 1997). Golf courses in less-developed landscapes may support woodland breeding birds but in more altered landscapes they tend to harbour species associated with urban areas (Jones *et al.* 2005).
- 5.3.6 Golf courses are often heavily used by people with much vehicle movement and associated noise. Potential impacts on woodland species are exemplified by a study of the breeding success of the endangered Ortolan bunting *Emberiza hortulana* on a wooded golf course in Norway. Throughout the study period, male Ortolan buntings that maintained territories in the golf course interior were unable to attract females. Less than half of the males located in the golf course periphery did so. By comparison, most males in a control woodland area were able to attract females. Critically for this endangered species, all male birds emigrated an average of 13km from the golf course interior in order to breed. As a result, buntings disappeared from the golf course during the study period, despite the wooded setting and provision of natural habitat patches (Dale 2004).
- 5.3.7 Hinsley *et al.* (1994) looked at the incidence of bird species in a lowland arable landscape in England over a three year period and showed that for many woodland species the probability of breeding was positively related to woodland area. Small woods appeared to be poor habitat for specialist woodland species.
- 5.3.8 The fragmentation impacts were demonstrated by adverse weather impacts, for example. Specialist woodland species were more likely to disappear from small woods after severe winter weather than generalists and could take more than a year to re-colonise.

## **5.4 Indirect impacts**

- 5.4.1 Golf courses use a wide range of fertilisers and pesticides, principally herbicides. These may be applied using a variety of techniques, including knapsack sprayers for spot-treatment, irrigation systems or tractor-mounted boom-sprays for coverage of large areas. Toxic chemicals may, therefore, enter adjacent woodland in several ways (e.g. direct overspread, airborne drift, surface water run-off or after entering watercourses).

- 5.4.2 There have been a number of studies of pesticide drift and fertiliser overspread in an agricultural context that are equally relevant to leisure and sports facilities. Chemicals from a boom-spray can drift at least 10m into woodland at wind speeds of 4-9.6km/hr (Gove *et al.* 2004b; Gove *et al.* 2007). The distance penetrated is affected by factors including wind strength, operator use, weather conditions (Williams *et al.* 1987) and structure of the woodland edge (Gove *et al.* 2004b; Gove *et al.* 2007).
- 5.4.3 The potential vulnerability of ancient woodland plant species exposed to herbicide (glyphosate) and fertiliser drift can range from minor damage to complete mortality. The threshold of sensitivity to glyphosate can be as low as one per cent of the median field application rate. Differences among species in sub-lethal responses to herbicide drift and fertiliser overspread may lead to changes in plant community composition (Gove *et al.* 2007; Gove *et al.* 2004b). Other studies have detected edge effects believed to be caused by fertiliser drift from adjacent fields into ancient woodland extending 10 – 20m (potassium, magnesium), 20–30m (soil pH) (Bateman *et al.* 2004) and 20 –100m (nitrogen) (Willi *et al.* 2005).
- 5.4.4 Following concerns raised about the narrowness of the lines of trees being formed after the creation of new holes the applicants stated that all new areas of trees would be a minimum of 25m wide. This width is completely inadequate in relation to published research that shows that the impacts of chemicals and other forms of disturbance which will occur on a golf course penetrate much further into woodland.
- 5.4.5 Tidying of woodland edges, including pruning of trees and shrubs for visibility and safety, or to avoid subsidence caused by tree roots, affects woodland adjacent to golf courses. This may lead to removal of deadwood habitat and the exposure of the woodland interior to increased sunlight and rainfall, reducing the quality of the internal woodland habitat for specialist organisms (Roovers *et al.* 2004).

## 6 Conclusions

- 6.1.1 The golf course would permanently remove 33ha of ancient woodland, 10% of the remaining ancient woodland within North Lincolnshire. This is against both national and local planning policy.
- 6.1.2 The remaining 48ha, 14% of the ancient woodland within North Lincolnshire, will be severely fragmented and result in the deterioration of the condition of the remaining ancient woodland. This is against both national and local planning policy.
- 6.1.3 The presence of a commercially run golf course in such intimate proximity to the woodland would expose the woodland to damage from chemical incursions and disturbance (light, noise etc) amongst others, severely compromising any ability to restore it to ancient semi-natural woodland and damaging the existing on-site biodiversity.