The Town and Country Planning Act 1990

Appeal Reference: APP/C1435/W/23/3321978

**Planning Appeal by Gleeson Land**

# LAND AT DOWNLANDS FARM, UCKFIELD

Proof of Evidence


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on Behalf of the Downlands Action Group




# Ecological Impacts on a Mosaic of Ancient Habitats

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**Qualifications and Experience**

I hold a Higher National Diploma in Applied Biology, specialising in Applied Ecology and Microbiology (Brighton College of Technology, gained 1976). I gained my Master of Philosophy degree in 1984 (University of Sussex) and my Doctor of Philosophy degree in 1995 (University of Sussex). Both of these higher degree theses concern ecological subjects. Research for the latter was conducted in Lake Wood, immediately adjacent to Downlands Farm.

I am a Chartered Scientist and have been researching and teaching ecology continuously up to the present time. I have authored and co-authored a number of publications in the international scientific press (see reference list for relevant selection) including a book (The Blue Tit) researched largely at Lake Wood and Fir Tree Grove and published in 2018. I frequently give ecological seminars to the scientific and non-scientific community both within the UK and abroad.

I have also been working in the adjacent site known as Lake Wood for about 36 years in various capacities as a Voluntary Warden, helping with the woodland management, monitoring the dormouse population for the Woodland Trust and the National Dormouse Monitoring Programme, training potential dormouse handlers, and conducting ecological research and teaching there on behalf of the University of Sussex.

**Summary**

I am submitting this proof of evidence on behalf of the Downlands Action Group, which seeks to represent the views of a large proportion of the population of Uckfield who wish to oppose the proposed scheme at Downlands Farm on ecological grounds. A similar proposal for the same site was decisively refused following an earlier Public Inquiry concluding in 2009. The quality and diversity of the environments and habitats within and surrounding the site were a major factor in that decision, and they have not changed significantly since then.

The whole of the area concerned forms part of a Biodiversity Opportunity Area (BOA) and is capable of playing a major role in the development of Local Nature Recovery Strategies – a policy that is becoming increasingly important, in line with the latest Government initiatives. The land immediately surrounding the site contains many statutory and non-statutory ecological designations, including substantial areas of inter-connected irreplaceable habitats such as Ancient Woodland. Together, they support a wide range of protected species, including a thriving population of dormice within the woodlands. The proposed development site itself has also been shown (at the previous Inquiry) to be worthy of being designated as a Site of Special Scientific Interest on herpetological grounds.

These habitats are complex and sensitive, such that protected species and others form complex trophic networks that can be disrupted and unbalanced if subjected to the imposition of a large-scale new development, such as is being proposed. Despite the assertions of the Appellant to the contrary, the introduction of a new settlement of over 1,000 people and their predatory pets in adjacent fields can only increase the pressure on these areas. This would be compounded by the additional visitor pressures associated with the use of the proposed SANGS by dog walkers. The proposed development would also impose direct impacts on areas of woodland where access roads or boardwalks are planned, causing a permanent loss of or damage to irreplaceable habitats in these areas and fragmentation of an existing continuous woodland corridor.

Some of these potential impacts may be uncertain – they cannot be predicted with any precision, but neither can they be proved unlikely to occur. Equally, no proof is available regarding the efficacy of proposed mitigation solutions. In the absence of certainty, I believe that the Precautionary Principle should be applied for areas such as this where the environmental stakes are so high. On behalf of the Downlands Action Group, and of a large proportion of the local population who have signed a petition to this effect, I would therefore urge you, please, to dismiss this Appeal.

**Introduction**

1. I am submitting this proof of evidence on behalf of the Downlands Action Group which seeks to represent the views of a large proportion of the population of Uckfield who wish to oppose the proposed development at Downlands Farm on ecological grounds. The evidence seeks to explain and defend the ecosystems of Lake Wood, Downlands Farm (**Image 1**), Budletts Common, the Shortbridge Stream and other adjacent areas. These ecosystems include a patchwork of ancient natural and semi-natural habitats including woodland of many different types and conditions. They include substantial areas of protected and irreplaceable habitat such as ancient woodland (AW); ancient semi-natural woodland (ASNW – as illustrated on the front cover); planted ancient Woodland Sites (PAWS); restored planted ancient woodland Sites (RPAWS); naturally regenerating ancient woodland, ancient woodland soils and ancient historic parkland.

2. In addition, there are areas of restorable lowland heath (**image 18**); rocky ghyll valleys sustaining a rare North Atlantic micro-climate and associated flora (**images 3, 12, 13, 15, 16**); old pasture (**image 1**); amphibian ponds (**image 17**); and bat refuges including rock outcrops which also support rare assemblages of lower plants and lichens (i**mages 12, 13, 15, 16**). All the above have some level of protection under the law.

3. Together, these various, inter-connected habitats actively support a wide range of protected species, including a thriving population of dormice (*Muscardinus avellanarius)* within the woodlands (**image 2**), Barbastelle bats (*Barbastella barbastellus)*, probable Bechstein's bats (*Myotis bechsteinii*), great crested newts (*Triturus cristatus*), badgers (*Meles meles*) and many different birds, including possible breeding nightjars (*Caprimulgus europaeus*), migrating curlews (*Numenius arquata*), wood warblers (*Phylloscopus sibilatrix*) and honey buzzards (*Pernis apivorus*).

4. Humans are an inevitable factor affecting global habitats (e.g. Vaugoyeau *et al*. 2016), but when human influence is minimal, other organisms can live alongside. Currently, the human impact on the above sites, whilst apparent (e.g. as seen in **image 3** below) is still minimal. Despite the assertions of the Appellant, however, the introduction of a human settlement of over 1,000 people and their predatory pets in adjacent fields can only increase the pressure on these sensitive environments and features. This would be compounded by the additional visitor pressures associated with the use of the proposed SANGS by dog walkers.

5. As you will know, a similar proposal was decisively refused by a Planning Inspector and by the Secretary of State for Communities and Local Government in 2009. This followed a detailed forensic Public Inquiry that stretched over several months. The environments concerned have not changed significantly since then and their qualities were a major factor in that decision. **It is my contention, therefore, that this proposal should also be refused, and the Appeal dismissed, not least as part of the global, national and local initiatives to preserve biodiverse habitats, such as this, and to promote Nature Recovery.** This imperative is even greater now than it was in 2009, as we learn about new species extinctions happening almost daily (e.g. Pimm *et al*. 2014). We also know a great deal more about Downlands Farm and its environs.

**Ecological Baseline**

6. My starting point is that the scheme is an inappropriate intrusion on an ancient and biodiverse landscape that is eminently worthy of preservation.

7. I refer the Inspector to my species list as an index of the biodiversity under threat. I recorded all organisms identified during visits to the site over many years. As you will recall, this was submitted to the inquiry during the CMC online meeting. Additional lists are held by the Sussex Biodiversity Record Centre with additional species and more recent observations. A request for information from the record centre by a member of the DAG, in September 2023, yielded comprehensive details, which we hold. These, however, cannot be presented in evidence due to the restriction placed on such reports by the Record Centre.

8. The whole of the area concerned forms part of a Biodiversity Opportunity Area (BOA), extending from north Uckfield up to Ashdown Forest, whilst the immediately surrounding areas contain many statutory and non-statutory ecological designations, from West Park Local Nature Reserve in the south-west to Buxted Park SSSI in the north-east. The proposed development site itself has been shown to be worthy of being designated as a Site of Special Scientific Interest (Prof. Beebee's evidence, 2007 – see Appendix 1) using data collected by past employees of the developer. This is supported by other evidence, including my own research, which has been conducted in Lake Wood since 1978 (please see reference list for publication output).

9. There have recently been multiple sightings of honey buzzard *(Pernis apivorus)* over Downlands Farm (**Image 24**). Honey buzzards are on the amber list of birds of conservation concern and are found in open countryside. They are also an indication of the presence of plentiful hymenoptera (ants, bees and wasps) in the area. This is a factor (with other invertebrates) played down by Aspect Ecology (2022a, paragraph 5. 12. 4.) who say that *"the site has few microhabitats that would typically indicate elevated potential for invertebrates"*. The presence of copious insectivorous animals and abundant ground flora (**Images 1, 10, 11, 18**) which are all pollinated by insects, also suggests otherwise. My moth survey and additional insect species also refutes their claim and is supported by the presence of nightjars recorded on Downlands Farm that feed predominantly on moths. In considering these points, it is important to include the areas immediately adjoining the site, such as Lake Wood, noted for its dragonflies and breeding spotted flycatchers (*Muscicapa striata*). Lake Wood is also home to regularly breeding insectivorous grey wagtails (*Motacilla cinerea*). All sites of this matrx function together, at present, as interlocking ecosystems. It is a well known ecological fact that habitat diversity and woodland margins tend to carry the greatest biodiversity as open fields will provide additional foraging options.

10. Abundant insects, and other invertebrates, are a major trophic level of any well functioning ecosystem. Lake wood supports more blue tit breeding pairs (a mainly

insectivorous species) per hectare than any other study of the species that I knew of in Europe. Please see table below from my D.Phil. thesis (1995):

**Relationship between habitat type and breeding densities of blue tits in Europe**

| Habitat | Density - pairs $ha^{-1}$ | Country | Author |
|---|---|---|---|
| Mixed deciduous | 0.85 | England | Lack 1964 |
| Oak | 2.05 | England | Lack 1964 |
| Oak | 0.08 | England | Lack 1964 |
| Scots pine | 0.12 | England | Lack 1964 |
| Corsican pine | 0.06 | England | Lack 1964 |
| Mixed deciduous | 0.47 | England | Flegg & Cox 1975 |
| Suburban gardens | 0.65 | England | Bland 1979 |
| Urban parks | 0.84 | Belgium | Dhondt & Eyckerman 1980b |
| Mixed deciduous | 1.56 | England | Minot 1981 |
| City park | 0.47 | Germany | Berressem *et al.* 1983 |
| Suburban deciduous | 2.53 | Germany | Berressem *et al.* 1983 |
| Mixed deciduous | 1.68 | Germany | Berressem *et al.* 1983 |
| Beech & conifer | 0.23 | Germany | Berressem *et al.* 1983 |
| Oak | 0.70 | Denmark | Bejer & Rudemo 1985 |
| Birch | 0.43 | Denmark | " |
| Beech | 0.42 | Denmark | " |
| Conifers | 0.13 | Denmark | " |
| Mixed deciduous | 2.19 | England | Minot & Perrins 1986 |
| Suburban gardens | 1.30* | Wales | Cowie & Hinsley 1987b |
| Park land | 2.40 | Belgium | Dhondt 1988 |
| Lake Wood | 3.05 | England | This study |

*average of three areas

**Understanding Ancient Woodland.**

11. An absolutely essential aspect of the ecological baseline in this area is the presence of Ancient Woodlands, both within and directly adjoining the site.

12. The UK government's online planning guidance[1] notes that Ancient Woodland is: "*any area that's been wooded continuously since at least 1600 AD. It includes: ancient semi-natural woodland mainly made up of trees and shrubs native to the site, usually arising from natural regeneration plantations on ancient woodland sites - replanted with conifer or broadleaved trees that retain ancient woodland features, such as undisturbed soil, ground flora and fungi. They have equal protection in the National Planning Policy Framework (NPPF). Other distinct forms of ancient woodland are: wood pastures identified as ancient and historic parkland, which is protected as a heritage asset in the NPPF*". The guidance further notes that *"wooded continuously does not mean that there's been continuous tree cover across the whole site. Not all trees in the woodland have to be old. Open ground, both temporary and permanent, is an important component of ancient woodlands*".

13. I will come on to discuss the extent of these areas later in my proof but first, I would like to explain something about how they work and why they are important.

[1] https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions

14. Ancient Woodland, along with Ancient and Veteran Trees are included in the NPPF definition of "**irreplaceable habitats**". This is not least because of their complexity. There is clearly much more to a woodland than just trees. Ancient woodland and veteran trees are part of a larger irreplaceable complex ecosystem community consisting of multi-taxonomic hereditary genotypes adapted to each ecosystem that has persisted for centuries. All ancient woodlands contain unique genotypes, at all taxonomic levels, that are constantly evolving locally by natural selection. The shock of such an intrusion such as this scheme would cause irreversible damage and disruption to them. Those that disperse of their own accord will find themselves in alien situations that would be deleterious to their survivability. Likewise, any attempt at translocation of organisms, particularly animals, by the scheme authors would lead to stress, competition and density dependant mortality among both the transported individuals and the recipient populations, (please see Stenning 1984, 1988, Myers, J. H. 2018). Among the plants, it is very difficult to translocate understory plants, such as wood anemone (**image 10)**, of ancient woodland habitats to new soils (Wittig 2008). Any attempt to do so would devalue the natural character of both the source and receptor sites.

15. I would like to illustrate the complexity of Ancient Woodland ecosystems with an example from my research on blue tits In Lake Wood. There is a species of moth (*Operophtera brumata*) the winter moth, that has evolved wingless females that have to climb the nearest oak tree from where they emerge from their pupal case in leaf-litter (please see **images 4, 5, 6, 7, 8 & 9**). Winglessness has evolved via the natural selection of moths that produce the most offspring. During their climb, the moths release a pheromone that attracts a winged male from afar which fertilizes their eggs, thus also avoiding inbreeding depression, moth egg hatching date is clearly carried through the female gene line. This evolved because the tree nearest to where the female emerged from pupation is usually the tree that the individual fed on when she was a caterpillar. The fact that the female moth survived meant that the time she hatched from an egg coincided with leaf bud-burst on the host tree. Therefore, she fed sufficiently to survive to pupation by eating the young oak leaves, as they burst from a leaf-bud. There is an arms race happening between the moths, (which in extreme cases can completely defoliate an oak in their thousands during April and May), and the oak population. The oaks have responded by being able to differentiate between wind-blown pollen based on locality (please see Schneider 2021). They can favour pollen (genes) from distant trees, inducing outbreeding vigour over many ancient generations, and induce leaf bud-burst timing diversity into an oak population such that there can be 30 days between the first oaks in a wood (such as found in Lake Wood LWS and LGS) breaking bud and the last ones. This confounds the moths if they climb the wrong tree, such that their caterpillars may hatch when either there are no leaves to eat or the leaves have grown too large and developed antifeedant toxins (like tannin) that kill the caterpillars. Thus these gene lines are discarded. The timing is critical. Blue tits (**image 25**), in turn depend on the short-term seasonal abundance of mainly moth caterpillars, but also spiders to feed their nestlings over 18 days during May. They practice family planning by adjusting their incubation time (sometimes

resulting in hatching asynchrony) to roughly coincide with caterpillar hatch such that the caterpillars are large and juicy enough at exactly the right time for maximising the blue tit breeding success. Each nestling has to eat between 70 and 100 caterpillars each day for 18 days. Therefore, on average from a sample of 6 years, there were 27 hatched broods per year just in nest-boxes. Therefore, around 243 blue tit chicks eating up to 100 caterpillars on any one day each year for about 18 days each. This would make 24,300 food items (mostly insect larvae) per day. They sometimes have to sacrifice late hatchlings if they get it wrong. In this way blue tits making the best decisions, and with the best genes have the greatest breeding success and are positively selected for that habitat. This is just one species of bird among many harvesting insects in the spring to feed their young. There are clearly very many insects in the woodlands and fields in and around Downlands Farm.

16. The above is minutiae, I know, but all ancient woodland micro-organisms, fungi, plants, insects, spiders, birds, mammals etc will be functioning with similar complexity. Ancient Woodlands are very complex ecosystems that have evolved over millenia. If one factor is destroyed, say by felling trees and replanting, or relocating parts of the ecosystem, or undue disturbance, the whole unique system could collapse, and diversity and synchrony between species is reduced. It would be like nuclear bombing London or experiencing a devastating internet catastrophy and expecting the UK economy to just carry on. That is why ancient woodlands are irreplaceable. It takes many centuries to establish a balanced ecosystem containing the best genotypes for that location. Additionally, even if patches of woodland are not considered ancient, the organisms will still use it from time to time as it will still contain useable components that, if removed, will reduce their resource base. The <u>non-ancient patches should quite quicky become populated by the adjacent genetic biome</u>.

17. Having seen my species list you will no doubt see that it is compiled over more than 3 decades. I assert that this is not out of date. I would contend that if a species has been recorded there it means that the ecosystem is suitable to sustain it, either temporarily, intermittently or permanently. We cannot judge that a species will never use the ecosystem again or when it is likely to reappear if temporary. For example, a curlew (*Numenius arquata*) is only likely to visit Downlands Farm during migration to and from its breeding and wintering sites. Likewise, a firecrest (*Regulus ignicapillus*) is only likely to be there taking refuge during the winter, or a turtle dove (*Streptopelia turtur*) or nightjar (*Caprimulgus europaeus* **Image 23.**) is only likely to be in the woodland, heath or fields during the summer to breed. The ecosystem is a dynamic community, always changing, and will not be confined to the ancient woodland or any other habitat, but most of the motile organisms (those that can move of their own accord), will also use the non-ancient woodland, fields and all successional stages from grassland to high forest.

18. It is important to recognise that there are areas of ancient woodland soils where trees no longer exist but where the ground flora and seed bank does and will regenerate, if left and allowed, into recovered ancient woodland over time. This woodland would be different and superior to one planted using non-local tree stock in what has

historically been an open field. In other words, many genotypes from the ancient woodland will still be there in the former and tree regeneration would be from naturally selected and dispersed seeds.

19. As well as the Ancient Woodlands the proposed development site and its surroundings are also characterised by a variety of other important habitats, including the ghyll valleys, low pH ponds, restorable lowland heath, old field systems, and local streams, recognised for their importance for migratory trout (*Salmo trutta*) moving to and fro from English Channel to headwaters (to spawn) and back to the sea to grow, and eels (*Anguilla anguilla*) from the Sargasso Sea using the headwaters to grow and develop, before returning to their origin to spawn. Indeed, the ghylls of Downlands Farm are key tributaries of the EU-designated Salmonid and Cyprinid Shortbridge Stream. As demonstrated by the evidence submitted by Dr Thompson (2023), much of this water originates as surface runoff and/or as groundwater flows from within the proposed development site. Dr. Thompson's evidence demonstrates that these hydrological and hydrogeological processes provide definite links between Downlands Farm and the adjoining areas, including Lake Wood – something that had been denied by the Appellant's consultants, on the basis of inadequate evidence.

**The Extent of Ancient Woodlands around Downlands Farm**

20. A very important aspect to consider, in terms of the ecological baseline, is that the mapped extent of Ancient Woodlands in the areas directly adjacent to Downlands Farm, as currently shown on the Government's 'Magic' website, is incomplete. Some areas of Ancient Woodlands that were previously included in the register appear to have been removed, for no obvious reason. Moreover, when consideration is given to the true definitions of Ancient Woodland (see paragraph 11 above) and of 'irreplaceable habitats' (see paragraph 13), it becomes very clear that the current inventory does not provide a full picture.

21. In order to remedy this, I would like to present three maps (Figures 1 to 3, below[2]). The first of these shows the extent of land that was mapped by the Ordnance Survey in their large-scale ('25-inch') County Series maps, surveyed in 1897 and 1898. Those outlines, edged in purple on Figure 1, have been digitised from the original maps and carefully aligned with the field boundaries which still remain on the Ordnance Survey's current digital mapping. The outline of the Downlands Farm proposal, edged in red, is also shown, for reference. Included as an inset at the base of the map is a small reproduction of an earlier estate map, dating from 1829 in which the woodland areas appear to be identical to those shown on the OS 25-inch maps. We can deduce from this that the areas shown have been woodland since at least 1829. In all probability, it will have been wooded for a much longer period than this.

[2] Please note: these maps have deliberately been created at a larger scale than the rest of the document and are designed to be viewed and printed at A3 size. When viewing on screen, the zoom function can be used to fit these to the width of the page or to zoom in to more detail, as required. I will provide A3 printouts of all three maps at the Inquiry.

22. Figure 2 then shows the areas of Ancient and Semi-Natural Woodland as currently shown on the Magic website, together with other areas of woodland from the National Forest Inventory and from Natural England's Priority Habitat maps. Figure 3 then overlays these areas on the former extent of woodland, from Figure 1. Several things are apparent when looking at the compsarisons shown on Figure 3:

    - Firstly, the overall extent of woodland has significantly diminished, since 1898, with several large areas having been felled and (for the most part) converted into permanent, good quality, semi-improved grassland;

    - Secondly, the vast majority of the woodland which has survived is confirmed to be AW or ASNW;

    - Thirdly, the woodland which currently survives along the eastern side of the A22 Uckfield bypass forms a continuous corridor, irrespective of its degree of 'ancientness', which has been there since at least 1829. This includes the south-eastern part of the compartment at the southern end of this strip, which links to the confirmed Ancient Woodland of Lake Wood.

23. Aspect Ecology (2022a) carried out a detailed woodland survey, as described in paragraphs 4.4.4 to 4.4.41 of their report. This confirms the 'ancientness' of the known areas of Ancient Woodland, but does not recognise such attributes within other woodland areas, notably within the woodland compartments labelled as **W5b**, **W6b**, **W8a**, **W8b**, **W8c**, **W8d** and **Sc2**. These areas are annotated on Figure 3, for ease of reference and all of them (including part of **Sc2**) can be seen, from that map, as being areas of at least long-established (if not truly 'ancient') woodland. The Aspect report describes compartment **Sc2** as being "*composed of hawthorn, blackthorn and bramble, with some pockets of grassy understory including Bugle, Ground Ivy, Enchanters nightshade, Ragwort, Germander Speedwell and Common Mouse-ear*". My own observations, however, indicate that there are also some young oak trees at that location, planted by the owners within the last 20 years or so (as the stakes and tree shelters were visible until recenly). This ties-in with the description of this compartment in the National Forest Inventory as being an area of young trees (see Figures 2 and 3, below). The area now has the character of recovering ASNW, with noticeable ancient woodland ground flora (see **Image 19**).

24. In regard to all of these areas, it is pertinent to note that the Government's Standing Advice on Ancient Woodlands states, quite specifically, that "*you should use this guidance for all ancient woodlands and ancient and veteran trees, <u>whether they're on the inventories or not</u>. New data can be added to the AWI and ATI at any time. A review of the AWI is ongoing*".

25. Whilst the specific quality of these woodland areas is in dispute, one thing is abundantly clear: there remains a continuous woodland corridor along the eastern side of the A22 Uckfield bypass, which has an inter-connected canopy of mature trees. This is essential for wildlife to continue to thrive in these areas and, if left undisturbed, would soon become populated with dispersing AW genotypes.

26. In their separate Technical Note TN06, Aspect Ecology (2022b) assert that water courses and woodlands "*are fully retained under the proposals*". This cannot be so, however, given that access points to the proposed development would sever the woodland corridor between Lake Wood and Budletts Common. The argument that there have been gaps in the past does not wash because small patches of woodland that may have had short-term reductions of trees will have retained protected ancient woodland soils and indicator species such as *Anemone nemorosa*, *Hyasinthoides non-scripta* and others which have clearly subsequently regenerated and which are ancient woodland indicator species.

**Potential Ecological Impacts**

27. As demonstrated above, the proposed development site includes and is surrounded by a mosaic of important natural habitats and functioning ecosystems. Hitherto, these have suffered only minimal impacts from human activity, such as low intensity management of woodlands, pastoral farming and limited recreational use of informal footpaths around Lake Wood. Very few of these impacts have had a major, lasting effect on the habitats concerned. Coppicing, for example, has maintained rather than destroyed the character of the semi-natural woodlands over centuries and, to this day, the ancient soils and ground flora are preserved in those areas. More generally, a very wide range of species has been shown to be thriving throughout the area.

28. Humans are known to have lived in the area since at least 9,000 years ago, when rock shelters (**Image 3** below) were created by Mesolithic people living in Lake Wood and elsewhere within the area (Hemmingway 1880). These are currently used by wild animals such as insects and other invertebrates as refugia, especially for hibernation during the winter. Further tunnels were created by the Streatfeild family during the last 240 years. These are also used by hibernating animals recorded there such as bats (*Chiroptera*), and also nesting wrens (*Troglodytes troglodytes*). These tunnels also allow animals that cannot fly to move between the grounds of West Park LNR, Buckswood Grange and Lake Wood/Downlands Farm. Disturbance by humans in these places is currently minimal.

29. The proposed development, however, would introduce a large new population of humans, and their pet animals, into very close proximity to all of these areas. It seems inconceivable that this dramatic change would not result in greatly increased pressure upon these fragile environments and ecosystems. Disturbance from increased footfall as well as the predatory actions of domestic cats and dogs would inevitably have adverse effects upon the sustainability of these roosts and microhabitats and (more generally) on the diversity of natural species. For example, despite Aspect Ecology denying that cats will be a problem, the Bat Conservation Trust say that *"Cat attacks are one of the most common causes of bat casualties"*.

30. The law states that it is illegal to "*Damage or destroy a place used by bats for breeding or resting (roosts) even if bats are not occupying the roost at the time*". It seems inconceivable that the huge increase in local human population resulting from the

proposed scheme will not increase the likelihood of that happening. Certainly, the Appellant has offered no Proof or certainty that there would be no such impacts.

31. The Appellant mentions putting up fences to limit access by humans and their pets, but fails to realise that these will also restrict the movement of wild animals, including deer, foxes, badgers, rabbits and others. Moreover, fences tend to be temporary structures and are unlikely to be sustainable in perpetuity. As such, some of the impacts may be delayed, but not prevented, as would be the case if the Appeal were dismissed.

32. With specific regard to Dormice, the Ecological Baseline Survey report by Aspect Ecology (2022a), produced on behalf of the Appellant, notes (at paragraph 5.5.5) that: "*Nest tube surveys undertaken at the site in 2019 and 2020 confirmed that Dormouse is widespread throughout the site, with evidence in the form of nests and individual Dormice. The majority of individuals animals were found along the south-western boundary within secondary woodland forming compartment W8 and with further evidence on the boundary of Lake Wood, in woodland areas W4c (Budletts Wood) and in woodland areas W6 and W6a (Longwood Gill). The second set of surveys undertaken in 2020 confirmed the continued presence of Dormouse, with occasional evidence in the form of nests, recorded in Hedgerow H1, woodland section W4d and in the south-western corner of the site.*" All of this confirms my past experience. In addition, I can confirm that dormice are present within Lake Wood, directly adjacent to the southern boundary of the site, and are part of the National Dormouse Monitoring Programme (NDMP).

33. The Appellant therefore recognises that dormice are widespread throughout the site, mostly in woodland W8, which they describe as secondary woodland. In view of this, combined with my observations that these areas (W8a to W8d and Sc2, as discussed above) are effectively irreplaceable habitats in their own right, with a continuous canopy of mature trees connecting the Ancient Woodlands of Lake Wood, Thirty Acre Wood and Budletts Common, **it is clear that the proposals for creating access to the site through this area in two places (main and emergency access) would contitute major ecological impacts**. It would fragment the existing woodland corridor, and directly impact both protected species and irreplaceable habitats. **This, on its own, is surely an argument for dismissing the Appeal**.

34. Additional impacts on irreplaceable habitat would occur through the creation of pedestrian access through Fir Tree Grove in the southeastern cormer of the site. A boardwalk is proposed in this area which would directly affect the ground flora. I maintain that the proposed translocation of ground flora from any of these locations would be futile, ineffective and would compromise the status of both the donor and recipient sites.

35. More generally, as you will know from the Government's standing advice on Ancient Woodlands, compensation measures should not be considered when assessing the merits of a development proposal in such areas.

36. Finally, in addition to these direct impacts, Dr. Thompson's evidence has shown that there are hydrological and hydrogeological 'pathways' between the development site and the adjoining areas, including Lake Wood. Given the sensitivity of the habitats and features in these areas, and their dependency on the existing hydrological conditions, any changes to those conditions broght about by the proposed development could have further ecological impacts.

## Conclusions

37. It is clear to me that the Appellant's ecological consultants (Aspect Ecology 2022a, b) have opted to downplay the conservation value of the proposed development site and adjoining areas and to underestimate the potential ecological impacts of the scheme.

38. They conclude that "*this report provides details of the ecological baseline position of the site…which can be utilized to inform any future proposals relating to the site*." It seems to me that the authors have conveniently ignored factors that could qualify the use of the site for anything other than building construction. Aspect Ecology ignore the qualifications of Professor Beebee and his letter of 18.12.2007 (included here as Appendix 1). Professor Beebee actually used data collected by an ecological consultancy engaged by the previous development proposers in 2007, then analysed them using a Natural England model. He concluded that Downlands Farm is eligible to be designated SSSI status on herpetological grounds. Professor Beebee was a high ranking officer with the British Herpitological Society and Herpitological Conservation Trust and an eminent professor of Molecular Ecology at the University of Sussex with no connection to Uckfield. He had nothing to gain or lose by writing that letter and was truly independent. His sole motivation was the conservation of endangered fauna. A qualification not enjoyed by Aspect Ecology. It seems that Aspect Ecology missed finding some of the species that were found by their predecessors (and which have been confirmed by my own species list and those held by the Sussex Biodiversity Records Centre).

39. It is, of course, impossible to be certain about what will happen to various aspects of our natural environment when faced with the pressures of a growing human population. Potential impacts cannot be predicted with any precision, but neither can they be proved unlikely to occur. Equally, no proof is available regarding the efficacy of proposed mitigation solutions. It seems reasonably inevitable, however, that juxtaposing hundreds of new homes, with their human occupants and domesticated predatory animals, in close proximity to such an assemblage of high quality and sensitive habitats will not be beneficial to the natural world which ultimately supports the global human population.

40. Notwithstanding the understandable pressure for new housing (in general – though not specifically in Uckfield), this flies in the face of the Government's emphasis on promoting Nature Recovery Strategies and 'sustainable' development. This, surely, is NOT sustainable. It is clear to me that the habitats of Downlands Farm have an astonishing potential for conserving biodiversity and contributing to nature recovery.

41. In the absence of certainty, the Precautionary Principle should be applied. The most common definition of this, from the Rio de Janerio Earth Summit in 1992, is that *"where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation"*. In the context of the proposed development at Downlands Farm, and the suggested likelihood of serious adverse effects, as demonstrated above, our contention is that such caution should equate with preventing the devopment from going ahead. On behalf of the Downlands Action Group, and of a large proportion of the local population who have signed a petition to this effect, I would therefore urge you, please, to dismiss this Appeal.

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# Images



**Image 1.** This is a view over Downlands Farm looking North from Lake Wood during the summer, showing what would have once been grazing meadow, now annually harvested for silage and hay by a local organic farmer. There is evidence that these fields have been "improved" for farming by the addition of organic compost, but not artificial fertilizer. This will have increased the forage harvest but reduced plant diversity. The scheme intends that this view will be replaced by the proposed housing estate. The hills in the distance are Ashdown Forest (AONB, SPA, SAC, and SSSI).



**Image 2.** Sleeping (hibernating) Dormouse in its nest - Budletts Wood, curtilage of Downlands Farm.  Picture B. Reed.

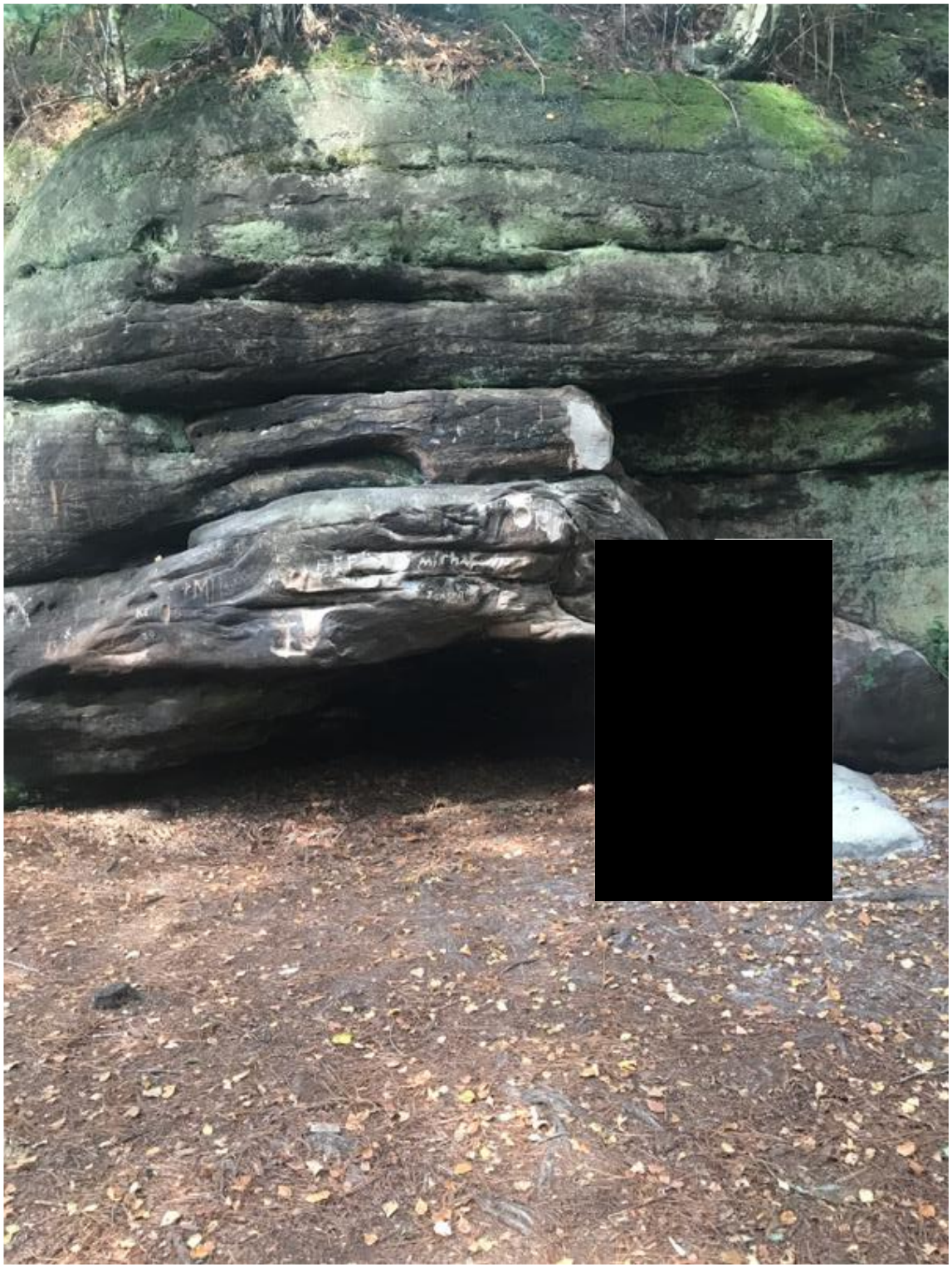


**Image 3.** Probable silted up Mesolithic rock shelter in Lake Wood where flint tools have been found. These cavities now provide hibernation sites for animals such as bats and drone flies during the winter. The image also shows how the rock outcrops can sometimes be abused with damage and graffiti, even at the low visitor pressure we currently experience. How much more would this abuse and wildlife disturbance be when many hundreds of new people arrive from the proposed scheme directly adjacent to Lake Wood?

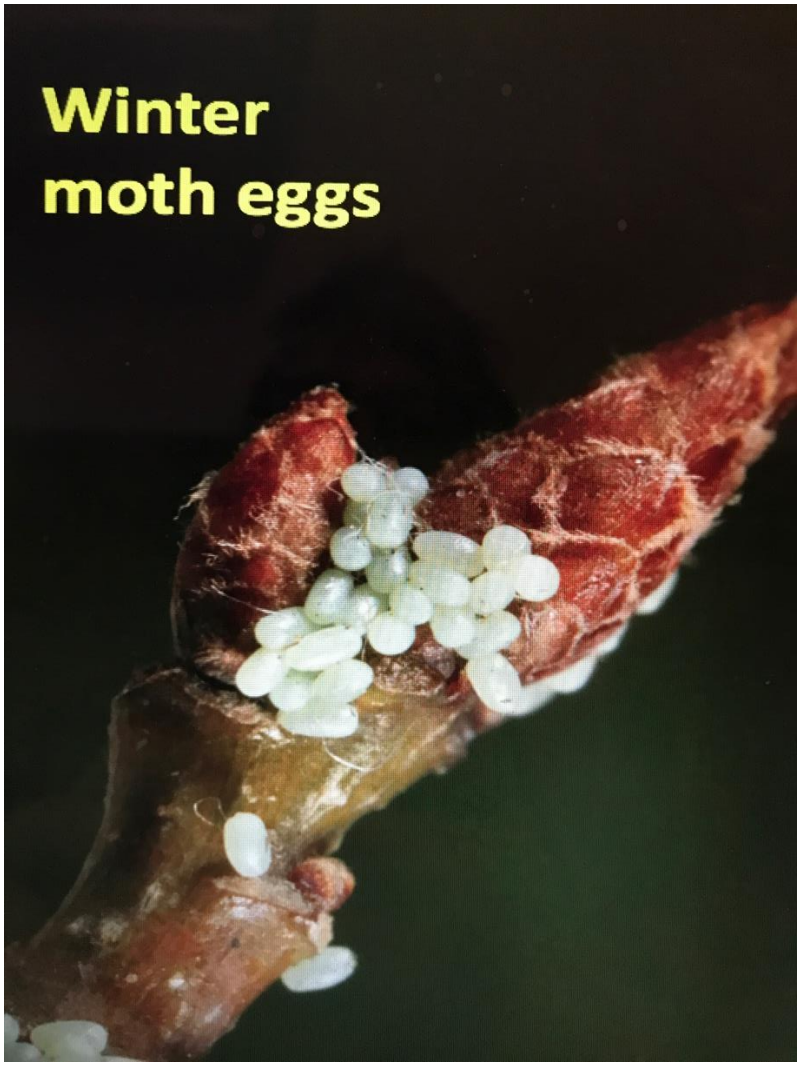



**Image 4** Winter moth eggs on an oak leaf bud.




**Image 5** winter moth caterpillar on bursting oak bud.




**Image 6.** Winter moth caterpillar ready to be fed to nestlings.




**Image 7.** Winter moth pupa below oak tree.

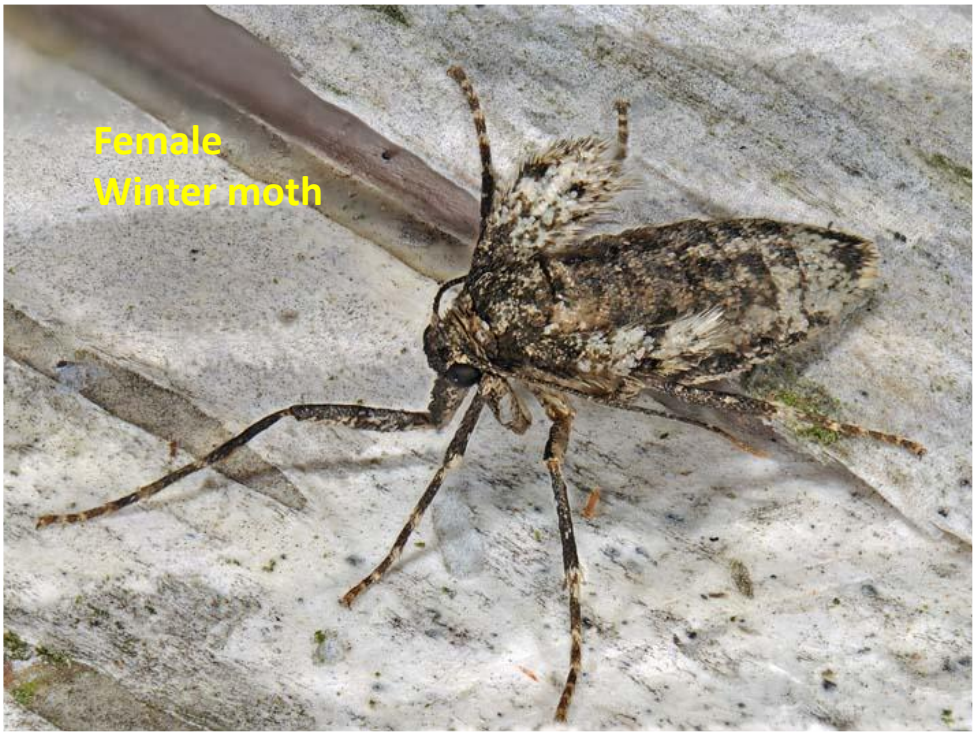



**Image 8**. Wingless winter moth female.




**Image 9.** Male winter moth.



**Image 10.** This is the typical ground flora of much of the ancient woodland in and around Downlands farm, and is dominated by wood anemones (*Anemone nemorosa*). This image was taken on 6th April 2023.



**Image 11.** This is how much of the ancient woodland looks like as April moves to May, and is dominated by bluebells (*Hyacinthoides non-scripta*) which gradually take over from the wood anemones. This image was taken on 26th April 2023.



**Image 12.** This image is of *Pellia epiphylla* a moisture-loving liverwort that clings to the dampest rocks. This picture was taken in Lake Wood during the September 2023 heat wave when there had not been rain for some weeks, yet the water is clearly seen seeping from the sand rock substrate into the ghyll valley from its northern rim below the incline of Downlands Farm.



**Image 13.** Swan's-neck thyme-moss *Mnium hornum* growing on a northern rim ghyll rock outcrop in Lake Wood. This species is typical of a North Atlantic climate within Europe and eastern North America. It is commonly found in damp woodland conditions, especially in acidic soil, such as oak-birch, beech and pine woodlands. It is found on the ground, logs, rocks, tree bases and along streams.



**Image 14.** *Sphagnum recurvum* peat bog upstream from Lake Wood lake. This grows on a deep peat mire that colours the water of the lake like brewed tea. The UK National Vegetation Classification classifies this habitat as M2 *Sphagnum cuspidatum/recurvum* that is especially good for dragonflies which is verified by the Sussex Wildlife Trust and my own species list.



**Image 15.** Moss and lichen covered lower Cretaceous rock on the Southern ghyll rim in Lake Wood.



**Image 16.** *Cladonia cristatella* one of the many vulnerable but notable lichen populations growing among rocks in Lake Wood and Downlands Farm.



**Image 17**. Lake Wood from rock outcrop adjacent to *Sphagnum* mire looking West to deepest part, showing water lilies and the dark hue of the peat-fed lake water.



**Image 18.** *Calluna vulgaris* heath in Lake Wood. A plant more typical of nearby Ashdown Forest, a rare and protected lowland heath. This plant is present at various locations between Lake Wood, Downlands Farm and Budletts Common. Although patches of heath are currently small, they still represent lowland heath of which the global area within the British Isles is 20%. This alone should confer statutory protection.



**Image 19.** This picture was taken 25th April 2023 at the site of the proposed entrance from the A22. Shown on the map as SC2 It clearly shows wood anemone (*Anemone nemorosa*) an indication of ancient woodland soils below regenerating woodland.



**Image 20.** This image shows Longwood Ghyll woodland from Downlands Farm field in the foreground, please note Friends Clump clearly visible on Ashdown Forest above.



**Image 21.** This image is looking South from Downlands Farm, over Lake Wood to see the South Downs National Park showing through the trees.



**Image 22.** Fallen timber in Lake Wood and the woods of Downlands Farm can be a rich source of biodiversity, host to mosses, fungi, and a plethora of invertebrates. Once decayed, it feeds the living trees and ground flora nearby. Behind the log there is hazel (*Corylus avellana*) coppice coming into leaf in February, the practice of coppicing hazel goes back many centuries. Understory plants leaf and flower before the canopy to catch early spring sunlight energy. It has been calculated that sustainable ancient woodland requires about 100 tons of dead wood per hectare. Management policy should be to retain as much as possible.



**Image 23.** 1st image is a verified nightjar wing found at Downlands farm in 2023, from a bird that was apparently killed by a tractor. They nest on the ground. The second image shows the wing of a live nightjar (from elsewhere) for comparison.



**Image 24.** Honey buzzard Photographed over Budletts Wood, Downlands Farm (2023). Picture B. Reed.




**Image 25.** Male blue tit in Fir Tree Grove with nest-box.

# Figure 1. Historical Woodlands in North Uckfield

Map produced by Cuesta Consulting Ltd on behalf of the Downlands Action Group, 2023.

N

0 100 metres 500

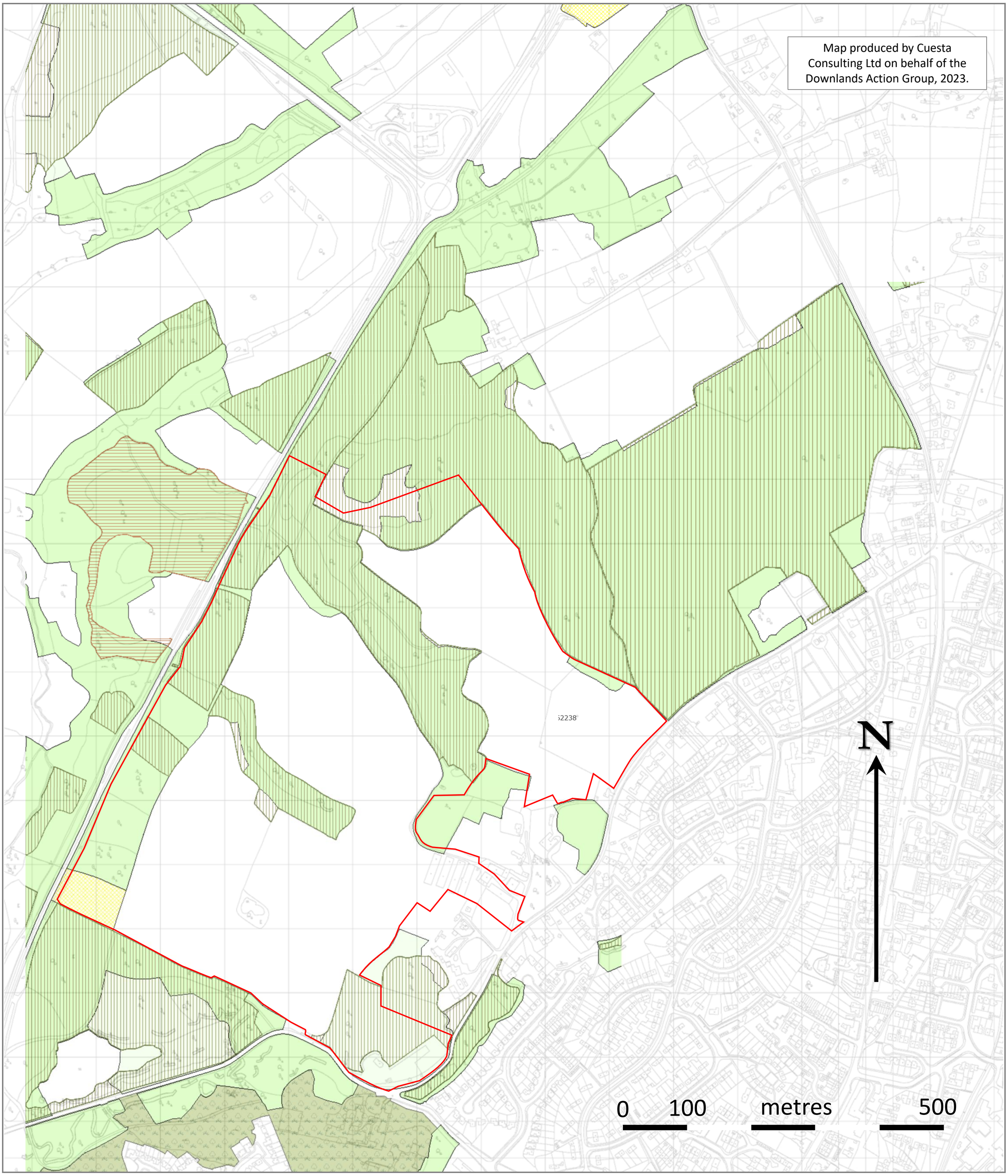
Woodland as mapped by the Ordnance Survey in 1897/98

Downlands Farm
– proposed development site




Streatfeilds Estate Map (FIGG 1829)

# **Figure 2. Woodlands as shown on the 'Magic' Website** (September 2023)




## Ancient & Semi-Natural Woodlands

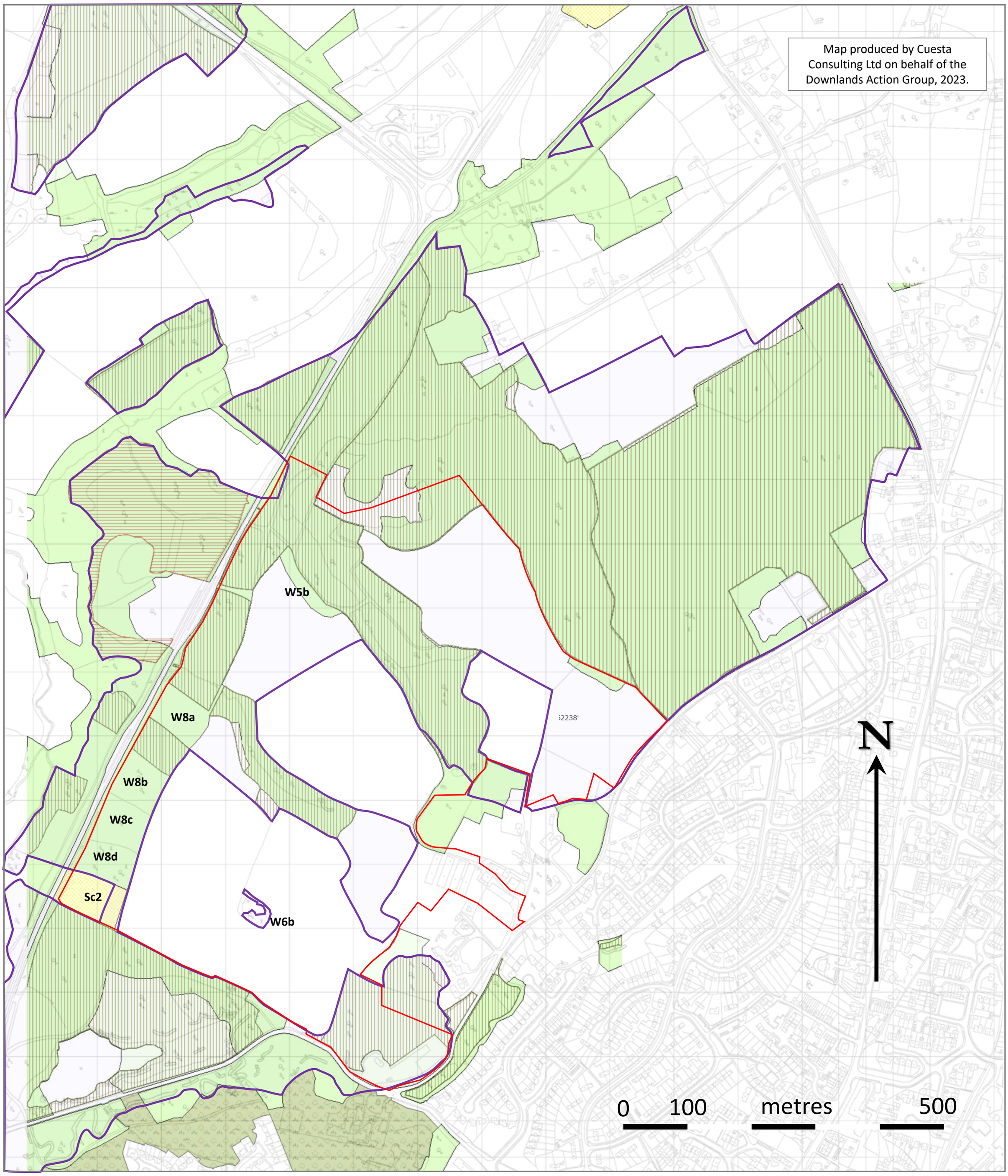
- And NFI Broadleaf Woodland
- And NFI Conifer Woodland
- Not on National Forest Inventory
- Ancient Replanted Woodland (& NFI Broadleaf)

## National Forest Inventory and Woodland Priority Habitats

- NFI Broadleaved Woodland (almost all is Deciduous Woodland Priority Habitat)
- NFI Conifer Woodland
- NFI Young Trees
- Wood Pasture & Parkland (BAP Priority Habitat)

SOURCE: https://magic.defra.gov.uk/MagicMap (accessed 16/09/2023)

# Figure 3. Comparison of Figures 1 and 2




## Ancient & Semi-Natural Woodlands

- And NFI Broadleaf Woodland
- And NFI Conifer Woodland
- Not on National Forest Inventory
- Ancient Replanted Woodland (& NFI Broadleaf)

SOURCE: https://magic.defra.gov.uk/MagicMap (accessed 16/09/2023)

## NFI and Woodland Priority Habitats

- NFI Broadleaved Woodland (almost all is Deciduous Woodland Priority Habitat)
- NFI Conifer Woodland
- NFI Young Trees
- Wood Pasture & Parkland (BAP Priority Habitat)

W8b — Woodland compartments as described by Aspect Ecology

Woodland as mapped by the Ordnance Survey in 1897/98

# Appendix 1

University of Sussex

18.12.07

[redacted]
The Planning Inspectorate,
4/04 Kite Wing,
Temple Quay House,
2 The Square,
Temple Quay
BRISTOL BS1 6PN

Dear Mr [redacted]

**PLANNING INSPECTORATE REF: APP/C1435/A/07/2046982/NWF**
**PLANNING APPLICATION WD/2006/2855/MEA, DOWNLANDS FARM UCKFIELD**

I wish to register an objection to the proposed housing development (as above) at Downlands, near Uckfield. The basis of my objection is the irreversible damage that the development will cause to a site of outstanding importance to amphibians and reptiles, a group of species widely recognised as being of great risk in Britain today. Survey by the developer's consultants clearly demonstrates that this an astonishingly good site, as summarised in the table below. The data are taken from the document ES6, which includes surveys in 2003 and 2007. Minimum numbers (amphibians) are based on the lowest numbers in the ranges defined by the consultants (e.g. 11 for an "M" rating, which was defined for numbers between 11-100), and therefore will in some cases be underestimates.

| **Species** | **Occurrence at Downlands** | **Abundance at Downlands** | **Abundance "score" (see below)** |
|---|---|---|---|
| *Reptiles* | No. compartments where present (/9) | Average no. sightings per compartment | |
| Common lizard | 9 | 6.0 | Not relevant to reptiles |
| Slow-worm | 9 | 8.7 | |
| Grass snake | 9 | 2.5 | |
| Adder | 5 | 0.8 | |
| *Amphibians* | No. ponds occupied (/6) | Minimum number of animals seen (total across all ponds) | |
| Common frog | 5 | 55 | 1 |
| Common toad | 3 | 47 | 1 |
| Smooth newt | 6 | 46 | 2 |
| Palmate newt | 6 | 135 | 3 |
| Great crested newt | 6 | 94 | 2 |

This site qualifies for SSSI status under Natural England's criteria specifically for amphibians and reptiles, which require a minimum abundance score of 10. The score is calculated by adding numbers for individual species of amphibians (summing at 9 in the

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table above), and adding 2 points for an assemblage with all five species (as here), thus giving Downlands a score of 11. On top of this, SSSI status is appropriate for "the best reptile locality in a survey area, with at least three reptile species". I have been involved with amphibian and reptile ecology and conservation for more than 35 years, and published many scientific papers (and several books) on the British species, including the *New Naturalist* volume on "Amphibians and Reptiles" in 2000. I know of no better sites for reptiles in the Uckfield area, and Downlands has good numbers of all four species. The combination of all five amphibians and the four reptiles together, each set of which alone would qualify for SSSI status, is remarkable and quite possibly unique in the region.

I should add that the damaging effects of a housing development will not be restricted to the obvious consequences of habitat destruction. Increased predation from pet cats on reptiles, especially common lizards and slow worms, is likely to be intense in the surrounding areas even where these are not physically destroyed (as has been shown on heathlands surrounding Bournemouth). Adders, a species of increasing conservation concern nationally, are very likely to suffer increased persecution by humans so close to an urban development, irrespective of the law that nominally protects them. Great crested newts, a priority species under the EU habitats directive for conservation throughout Europe, are highly vulnerable to the introduction of fish into their breeding ponds. Experience has shown that this is very probable where housing extends close to such ponds. Exactly this problem occurred at Peacehaven in the 1980s, when a pond created near a new housing estate in mitigation for destroying a crested newt site was rendered useless within a few years by the release of pet fish.

All the reptiles found at Downlands, and two species of the amphibians (common toads and great crested newts) are the subjects of UK Biodiversity Action Plans on account of their threatened or declining status. In my view, and the official views of two key organisations involved in amphibian and reptile conservation in Britain (the British Herpetological Society and The Herpetological Conservation Trust), it would be grossly irresponsible to permit the development to go ahead at Downlands. None of the proposed ameliorations are likely to safeguard the amphibians and reptiles there. "Green bridges", for example, are unproven concepts that are essentially evidence-free when considering their value for amphibians and reptiles. Their likely desiccation in summer may well deter amphibians from using them, while shade from dense vegetation (with or without trees) is equally likely to deter use by reptiles. Improved pond management, even if maintained, is unlikely to counter the threat from fish introductions (which only has to happen once). Fences to protect areas from cats are extremely unlikely to work for such an agile and determined predator.

I therefore urge, on behalf of the British Herpetological Society and the Herpetological Conservation Trust as well as myself, that the inquiry rejects the development proposal at Downlands and thus safeguards the future of this important and attractive piece of countryside.

British Herpetological Society

Herpetological Conservation Trust

Yours sincerely,

[redacted]