

**Application Ref: 6/2022/1097/OUTLINE**

**Response to the Woodland Trust**

**Addendum to Ecological Appraisal Report (Liz Lake Associates,  
March 2022)**

**LAND TO THE NORTH OF BRADMORE WAY, THE BROOKMANS PARK  
ESTATE, BROOKMANS PARK, HERTFORDSHIRE (BRP12A)**

**POTENTIAL IMPACTS ON ANCIENT WOODLAND**

**LIZ LAKE ASSOCIATES**

**ON BEHALF OF AURORA PROPERTIES (UK) LIMITED**

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## ***Introduction***

In their response letter of 15.6.2022 (6/2022/1097), the Woodland Trust (WT) sets out concerns regarding the potential for the development to impact indirectly on the adjacent ancient woodland, Peplins Wood, which mainly relate to:

1. Intensification of the recreational activity of humans and their pets resulting in disturbance to breeding birds, vegetation damage, trampling, litter, and fire damage
2. Noise, light and dust pollution occurring from the development, during both construction and operational phases.
3. Adverse hydrological impacts occurring from the introduction of hard standing areas, water runoffs and operation of the attenuation pond, which is proposed to discharge directly into a water course within the ancient woodland.

These points are addressed below by means of mitigation proposals and avoidance of adverse impacts on the irreplaceable ancient woodland habitat:

### ***Recreational Disturbance***

At present there is no authorised public access to Peplins Wood, but there is clear evidence of regular unauthorised access and use. Furthermore, the woods are used by the farmer by organised pheasant shooting parties.

It is acknowledged that there is potential for the adjacent ancient woodland to be subject to increased recreational activity, disturbance and damage caused by the proposed development. However, the proposed development also creates the opportunity for management and control of the woods.

In earlier discussions with the Hertfordshire and Middlesex Wildlife Trust (HMWT) and the LPA, there were proposals to allow public access to part of the wood by means of a footpath route and also managed use by scouts / educational visits etc. Due to concerns raised by the Project Ecologist and in the light of increased protection afforded to ancient

woodland, set out in the most recent NPPF, the decision was made to exclude such proposals, except for educational purposes in cooperation with the local schools.

The scheme proposals now actively discourage / prohibit public access to the ancient woodland and encompass a robust fencing strategy, to ensure that the woodland and its 15-30m buffer are effectively fenced (fencing design to be agreed with the LPA) to ensure that any unauthorised ingress by residents and their pets is minimised. It is also proposed that this fencing is extended along the southern edge of the woodland where the woodland boundary abuts existing residential development on Peplin's Way. This would be beneficial in that it would prevent the existing unofficial human ingress, dog walking, fly-tipping of garden waste etc. directly into the woodland that is currently degrading and disturbing the ancient woodland habitat in this south-western end of the woodland and also reducing more general unauthorised access into the woodland from residents of Brookmans Park.

In order to further deter public access and reduce the potential for inadvertent access to the woodland by dogs and cats, the buffer zone would be densely planted with a 'tried and tested' mix of defensive native woodland edge tree and shrub species, suitable for the location, including holly, blackthorn, hawthorn, dog rose and strategic planting of other native species including fast growing willows, elder and wild cherry. These would be managed during the initial establishment period as 'nurse' plants to encourage rapid development of a dense woodland edge habitat. Natural ingress of bramble and other species present in the existing woodland edge, would also be encouraged. The buffer zone would be subject to a rigorous regime of conservation management to ensure that habitat development matched the design and biodiversity aims and objectives.

The fencing and buffer zone planting would be installed at an early stage, in order to ensure that 'advanced planting' had matured sufficiently prior to scheme completion, to provide a degree of visual screening and woodland edge protection prior to new residents moving into the new development.

### ***Noise, Light and Dust Pollution***

The 15-30m buffer zone proposed is compliant with the current Natural England / Forestry Commission guidance and has not been questioned by Natural England nor the

HMWT. The buffer zone will be strictly 'out of bounds' both during the construction and ongoing operational phases of the development.

During the construction phase the buffer will either be protected by temporary BS approved HERAS fencing or by advanced installation of the permanent buffer exclusion fencing. In either scenario the protective fencing will be fitted with acoustic and dust screening measures, which will also provide a visual screen to further aid protection of the woodland and the inhabiting wildlife. This protective fencing will ensure that there is no encroachment of construction vehicles, stockpiling of materials or equipment in this critical zone and it will limit the effects of other indirect impacts. Working hours limitations will strictly restrict any need for lighting during the construction period and thus lighting impacts are not expected to be significant.

In addition, it should be noted that for the major part of the ancient woodland boundary, there will be a further, secondary outer 'buffer' of width up to 50m, between the edge of the fenced ancient woodland buffer and the built edge of the development, known as the 'landscape buffer'. This will, in the main be subject to wildflower meadow habitat creation but will also be used for purposes not permitted within the 15-30m buffer including the attenuation pond, mown and surfaced paths and a play area. During the construction period there will be limited works in this area and there will thus be further distance between the ancient woodland and the dust, noise and visual disturbance associated with the construction.

The above measures will also protect the ancient woodland from the potential edge effects of noise, lighting, vehicular pollutants and visual disturbance once the dwellings are occupied. The closest lighting sources will be at least 20m and in the most part between 30-60m+ away from the ancient woodland boundary and will be installed in accordance with a sympathetic lighting scheme directed away from the woodland and its buffer. As noted above, advanced planting of the buffer will help to create an outer woodland fringe that screens the woodland during occupation of the houses and also helps dissipate noise, aerial pollutants, lighting and visual disturbance. The scheme has been specifically designed so that there will be no houses backing onto the woodland, which minimises the scope for tipping of garden waste and other unofficial access / disturbance that might otherwise occur. The outer 'landscape buffer' will also help in

'policing' of the area by residents to deter any attempts to access the woodland buffer / other abuse.

### ***Hydrological Impacts***

The scheme proposals make allowance for surface water drainage from the proposed development to be received by a SuDS attenuation pond (ref. *Land to the North of Bradmore Way, The Brookmans Park Estate, Brookmans Park, Hertfordshire Flood Risk Assessment*, April 2022, Wallingford HydroSolutions), located in the SW part of the Site.

The attenuation pond incorporated into the drainage design will provide treatment for the surface run off before it is discharged into a new channel running through the buffer zone and into an existing watercourse within the adjacent Peplins Wood. This small watercourse flows in a north-westerly direction through the woodland for a distance of approximately 100m to the adjacent mainline railway embankment, through a piped culvert under the railway and from thence in a westerly direction away from the railway line. It should be noted that this south-western extremity of the relatively extensive (11ha) ancient woodland, has a somewhat reduced ecological value compared to much of the remainder of the woodland due to disturbance on its southern edge caused by adjacent housing / recreational use and on its western side due to noise and visual disturbance caused by the mainline railway and localised dominance of bramble and bracken.

At this outline stage, as is usual, design of the attenuation pond remains subject to final detailed design and additional information will be specified at the reserved matters stage. Notwithstanding this, the Wallingford HydroSolutions report demonstrates that the proposed attenuation pond meets the required criteria in the index approach set out in the CIRIA SuDS guidance. The Site uses are associated with a low pollution hazard level and the proposed drainage strategy provides adequate treatment for surface water discharge ie the SuDS provide a total pollution mitigation index that exceeds the pollution hazard index, in respect of total suspended solids, metals and also hydro-carbons.

The design and specification detail provided at this outline planning application should therefore provide sufficient confirmation that the attenuation pond can be fully delivered to the satisfaction of the Lead Local Flood Authority (LLFA).

However, in this respect, and in order to ensure that the proposals will also satisfy the Woodland Trust, a package of the mitigation measures that would be added to the drainage strategy (formulated in liaison with Wallingford Hydro Solutions) and implemented at the detailed design stage, are set out below. It is submitted that in combination these measures provide sufficient assurance that the design of the attenuation pond and other associated features will provide an appropriate level of monitoring, containment and treatment for surface water runoff (including fuels, dissolved hydrocarbons, contaminated sediment and other pollutants) from the proposed roads and other hard surfaces within the residential scheme, before it is discharged into the water course:

- The pond will be designed to include **reed bed habitat to provide effective filtration of potential pollutants** that might enter the pond. The reed bed will be located between the inflow and outfall to maximise the extent of filtration as water flows through the pond.
- There is scope to install an **additional swale feature in the wildflower meadow leading into the pond**, to effectively extend the surface area of reed bed habitat available for filtration.
- There is also scope to create **a further shallow scrape within the 15m+ buffer zone** beyond the outfall, between the attenuation pond and the woodland, planted with willow and other high water demanding species, to absorb any overtopping of the pond (only predicted when a 1 in 100 year + 40% climate change allowance is exceeded).
- The engineering design of the pond construction, in combination with the provision of the undisturbed ancient woodland buffer between the pond and the woodland boundary, will incorporate an impermeable geosynthetic liner to ensure that there are **no changes to the water table /ground water flow pattern** etc. potentially affecting the existing hydrological conditions in the woodland.
- The pond will include **a quiescent zone** (ie normally non-moving) which enables the inflowing water to be retained as still water, allowing finer sediments and dissolved

pollutants to settle as silt in the bottom of the pond, preventing their discharge via the outfall into the receiving water course.

- The drainage system will incorporate **pre-discharge oil and petrol interceptor tanks** and other additional and appropriate treatment components, sufficient to accommodate an unexpected pollution / spill event (to be specified at the detailed design stage).
- Water levels within the pond will be designed (in association **with 2 proposed underground attenuation tanks via a silt trap chamber**) to provide an appropriate level of dilution during a pollution accident and allow for oil separation and retention. In the event of a significant pollution event, there is scope for the flow control mechanism to contain the surface water within the attenuation tanks, treat / remove the polluted water in-situ and prevent inflow to the attenuation basin.
- The attenuation pond will be fitted with a **Vortex Flow Control Device at the outfall**, this will regulate discharge into the receiving watercourse. The use of **additional structures / chemical pollution control / oil spill containment measures** including permanent and/or temporary floating absorbent booms for oil spills, will also be implemented if necessary and agreed with the LLFA and LPA.
- If required, there is scope to provide additional mitigation at the regulatory position associated with the culvert of elsewhere, by means of **installation of monitoring and trigger devices**, including penstock gate and flap valves to secure spills and prevent pollution passing further downstream, thus preventing water quality impacts on the ancient woodland.
- The pond will be designed specifically to optimise its ecological potential through the creation of a series of micro-habitat / edge features and a diversity of marginal and other aquatic planting. It will form useful **complementary habitat to the nearby ancient woodland**.



Any scope for hydrological change in the nearby ancient woodland as a result of construction of the attenuation basin, will be minimised due to the distance afforded by the 15m+ buffer zone and also the generally impermeable nature of the underlying substrate. There will be no damage or disruption to the rooting zone of trees or other vegetation within the peripheral sector of the ancient woodland, as the rooting zone of peripheral vegetation does not exceed 15m. The impermeable nature of the substrate within the woodland also reduces any risk of changes to the quality and quantity of ground water within the woodland in the restricted SW sector of the wood that is crossed by the water course. It is not expected that pond excavation will result in any ground water changes / draw down. During construction the proposed bed level of the pond is above the bed level of the drainage ditch that runs along the outer perimeter of the woodland (along the Site boundary). Therefore, the excavation and any need for dewatering would not have any affects on ground water levels beyond the drainage ditch. Once construction is completed, the impermeable pond liner would ensure that there are no changes to the groundwater conditions in the woodland.

It is acknowledged that in order for the surface water drainage scheme associated with the proposed Brookmans Park development to be considered viable, it is necessary to demonstrate that neither the construction of the attenuation pond nor the effects of surface water derived from the Site lead to a deterioration in habitat quality / hydrological conditions in the nearby ancient woodland.

In terms of alternative sustainable solutions to ensure that the quality of surface water discharge from the residential scheme is maintained free of contamination and as noted by Hertfordshire County Council (HCC) (letter of 8.4.2022, Francisco Aguilar) additional measures over and above the existing proposed, can be implemented at the detailed design stage and these would further protect the adjacent woodland from the risk of site derived pollutants adversely affecting water quality deterioration in the stream. For example, HCC noted that *'a SuDS management train formed by bio-retention systems, permeable pavements and a detention basin is being proposed to manage water runoff'* and makes recommendation that *'we would encourage you to maximise the storage volume provided in permeable pavements at the detailed design phase, in order to manage runoff throughout the site rather than just with the pond'*. Whilst it is unlikely to be viable to implement a scheme of infiltration on any significant scale (due to low

permeability of the substrate and as the site is in ground water protection zone III), there are other alternative options.

The applicant has a significantly wider land ownership which extends to the west and the north of the application site, such that additional surface water control and management could be achieved if necessary. For example, if the LPA stipulates that an additional treatment component (ie over and above that required for standard discharge) is required, similar to discharge into surface waters designated for drinking water abstraction.

### ***Potential for Woodland Improvement***

In addition to the mitigation measures outlined above which aim to ensure that the adjacent ancient woodland is protected from deterioration, as set out in the Ecological Assessment, there is also substantial opportunity to improve the biodiversity potential of Peplins Wood and the adjacent wood, The Legg, through instigating a programme of conservation management, if agreed with the LPA. This has been discussed in outline with Hertfordshire Ecology and HMWT and it offers potential long term benefits to the woodland habitat and the inhabiting wildlife. It could, for example, include reinstatement of existing and creation of new ponds and water courses within the woodland and implementing an agreed, phased woodland management regime, including the creation of rides and glades, sycamore, horse chestnut, laurel and poplar clearance, thinning and coppicing of unmanaged compartments. This would accord with recommendations set out by HMWT in their Wildlife Survey Reports for Peplin's Wood and The Legg in 2016, in order to enhance the floral quality and diversity of the woodland habitat and provide benefits to wildlife.

We hope that this additional information is sufficient to satisfy the concerns of the Woodland Trust regarding the potential for adverse effects on Peplins Wood ancient woodland, but we would be happy to enter into further discussions if this would be helpful.

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