



ECOLOGICAL APPRAISAL REPORT:

WHITE LODGE,
OCKLEY LANE
HASOCKS
RH15 0BP

For: **NTA Planning**

www.njatownplanningltd.co.uk

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EXECUTIVE SUMMARY

Proposed development

- Development proposals include the erection of detached dwelling and garage, associated parking and new access from Ockley Lane. This is a revision to application DM/23/2741

Impacts

- The proposed development has the potential to impact foraging and commuting bats.
- The proposed development has the potential to impact breeding birds.
- The proposed development has the potential to impact ancient woodland on and close to the site.
- The tree-lines on the eastern and southern boundaries are recorded as ancient woodland habitat and as such are assessed as having at least medium ecological value. The other habitats contained within the site are of low ecological value.

Further recommended surveys

- No other surveys are recommended.

Proposed mitigation

- Mitigation to reduce the impacts of artificial lighting upon foraging and commuting bats is detailed.
- Mitigation to reduce impacts upon breeding birds and mammals such as badgers, foxes and hedgehogs is detailed.
- Mitigation measures to ensure that no individual reptiles or amphibians are harmed is provided.
- Mitigation measures to minimise the impacts of the proposals on ancient woodland is provided.

Enhancements

- Native species planting is recommended within the landscaping plan for the site, particularly to grade the treelines into the garden.
- Additional bat roosting opportunities should be provided within the new residential property or alternatively from bat boxes on mature trees.

Conclusions

- The survey has shown that the majority of the site is of low ecological value and has limited potential to support protected species.
- The woodland recorded as ancient woodland present on site and adjacent to the site is of medium ecological value and is considered to be irreplaceable habitat and therefore measures to minimise the impact of the proposals is required.
- The enhancement measures advised will increase the net biodiversity on site.

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1.0 INTRODUCTION

- 1.1 Wychwood Environmental Ltd was instructed by NTA Planning to undertake a Preliminary Ecological Assessment to highlight the possible presence of protected species (e.g. bats, badgers, great crested newts, reptiles, and breeding birds) and/or habitat(s) of ecological/conservation value on the proposed development site at a parcel of land located at: White Lodge, Ockley Lane, Hassocks, Burgess Hill, RH15 0BP.
- 1.2 Surveys are necessary to collect information on habitats/protected species to provide necessary guidance and mitigation advice, to ensure that no valuable habitats/protected species are adversely affected by the proposed development.
- 1.3 The survey was completed to inform the Local Planning Authority (LPA) of any material impacts resulting from the proposed development and to ensure compliance with the requirements of the Natural Environment and Rural Communities (NERC) Act (2006) (Section 40) and the Government Circular: Biodiversity and Geological Conservation – Statutory obligations and their impact within the Planning System (ODPM 06/2005, Defra 01/2005). The legislation relating to protected species is detailed in Annex 1.
- 1.4 Development proposals involve the detached dwelling and garage, associated parking and new access from Ockley Lane (Figure 7, Annex 2). The development proposals are a revision of application DM/23/2741. The location of the site is shown in Figures 1 – 3 (Annex 2). Full details of the proposed development are provided in the planning submission.
- 1.5 Section two of this report describes the methodologies used for survey work. Section three provides the results of these surveys, sections four and five provide discussion and implications for development, with further surveys and mitigation covered in section six and enhancement recommendations are made in section seven.

2.0 METHODOLOGY

Habitat Survey

- 2.1 A Preliminary Ecological Assessment (PEA) of the site was undertaken, following standard extended Phase 1 habitat survey protocols (IEA, 1995), by Nadine Clark BSc MSc MCIEEM on 24th July 2023. This involved systematically walking over the site and classifying each parcel of land based on vegetation, into one of approximately 90 habitat types (JNCC, 2010).
- 2.2 A search for any invasive non-native species, as listed under Schedule 9 of the Wildlife and Countryside Act 1981, as amended,¹ such as Japanese knotweed (*Fallopia japonica*) was also carried out.
- 2.3 Any habitats or features of interest and any sightings, signs or evidence of protected or notable fauna or any potential habitats suitable for such species, were assessed as detailed below:
 - The suitability of habitats was assessed for amphibians (including great crested newts, *Triturus cristatus*)²;
 - The suitability of habitats was assessed³ for badgers (*Meles meles*) and any evidence including setts, dung pits/ latrines, badger paths, hairs, bedding, footprints and scratching of trees/ shrubs was noted;
 - The suitability of the habitats was assessed for hedgehog (*Erinaceus europaeus*);
 - The suitability of habitats was assessed for dormouse (*Muscardinus avellanarius*);
 - Buildings with features potentially suitable for roosting bats were assessed following best practice guidelines as outlined by the survey techniques published by the Bat Conservation Trust (BCT)⁴ and Mitchell-Jones and McLeish (2004)⁵. Trees within the development area were also assessed for their potential to support roosting bats (following BCT protocols).
 - Landscape features such as hedgerows, trees and shrubs were also assessed for their potential suitability for bat foraging and commuting;

¹ <http://archive.defra.gov.uk/wildlife-pets/wildlife/management/non-native/documents/schedule9-list.pdf>

² Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). *Herpetological Journal* 10(4), 143-155.

³ Badger survey followed guidelines recommended in Harris *et al.* (1989).

Collins, J. (ed.) (2023) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edn). The Bat Conservation Trust, London.

⁵ Mitchell-Jones A J (2004). *Bat mitigation guidelines*. English Nature.

- The suitability of habitats was assessed for nesting / roosting birds.
- The suitability of habitats was assessed for reptiles.

2.4 The site was not assessed for water voles (*Arvicola amphibius*) and otters (*Lutra lutra*) due to its location and the lack of suitable habitat present on site.

Constraints and Limitations

2.5 It should be noted that lack of evidence of a protected species does not necessarily preclude it from being present at a later date. In relation to use of habitats or roost sites by bat species, use of a particular area of land can vary not only on a seasonal basis but also from day to day. Whilst activity surveys are used to provide an estimate of the likely importance of a given area of habitat for bats, due to the highly mobile nature of bats, it is not possible to accurately determine the exact numbers of bats using standard non-intrusive survey methods.

Desk Study

2.6 The Internet database MAGIC (Multi-Agency Geographic Information for the Countryside) was searched for any areas with statutory designations within a 2km radius of the site.

2.7 Noting the scope and scale of the proposed development involving the construction of two small buildings within a residential curtilage, a detailed species-level desk study was not deemed necessary, due to the scale of likely impacts.

Survey Limitations

2.8 An initial site assessment such as this is only able to act like a 'snapshot' to record any flora or fauna that is present at the time of the survey. It is therefore possible that some species may not have been present during the survey but may be evident at other times of the year. For this reason, habitats were assessed for their potential to support some species, even where no direct evidence (such as droppings) has been found.

Baseline Evaluation Criteria

2.9 Based on the desk study and field survey results, an ecological evaluation of the site was undertaken using a combination of evaluation criteria for habitats and species, following the general framework provided by CIEEM⁶ (Table 1).

⁶ CIEEM (2017). Guidelines for Preliminary Ecological Appraisal (PEA).

- 2.10 Where relevant the evaluation was made with reference to the statutory protection afforded to species and habitats. Legal protection does not always correspond to conservation value. Some species (e.g. badgers) are protected for reasons of animal welfare rather than conservation. Others are of national conservation value but are not protected by law (e.g. some Red Data Book species and UK BAP species).

Table 1. Ecological value criteria used in the ecological evaluation, as outlined by CIEEM.

Ecological Value	Description and Examples
High	Habitats or features that have high importance for nature conservation, such as statutory designated nature conservation sites of international or national importance or sites maintaining viable populations of species of international or national importance (e.g. Red Data Book species, European protected species).
Medium	Sites designated at a county or district level, e.g. Local Wildlife Site (LWS), ancient woodland site, ecologically 'important' hedgerows or ecological features that are notable within the context of a region, county or district (e.g. a viable area of a Priority Habitat on the county BAP or a site that supports a viable population of a county BAP species).
Low	Sites of nature conservation value within the context of a parish or neighbourhood, low-grade common habitats, such as arable fields and improved grasslands and sites supporting common, widespread species.

3.0 RESULTS

Desk Study

Designated Sites

- 3.1 There are two statutory designated sites within 2km of the application site and these are Brighton and Lewes Downs Biosphere Reserve and Ditchling Common Site of Special Scientific Interest (SSSI) (Figure 4, Annex 2). The closest designated site is Brighton and Lewes Downs Biosphere Reserve which is located approximately 140m to the east of the proposed development at its closest point. Ditchling Common SSSI is located approximately 1.6km to the northeast of the development.
- 3.2 The proposed development site falls within a SSSI Impact Risk Zone. However, this type of planning application, small scale residential, is not one which requires consultation with Natural England by the Local Planning Authority.
- 3.3 The development contains a small area of ancient woodland as recorded on the Magic dataset that forms part of Ockley Wood which is located to the immediate south of the site boundary (Figure 5, Annex 2). There are also some other small ancient woodland copses present within the wider area.
- 3.4 There are three EPSM licences that have been granted by Natural England to impact bat roosts held within the Magic dataset. The closest (2017-29042-EPS-MIT) is approximately 650m north of the site and permitted the destruction of a resting place for soprano pipistrelle *Pipistrellus pygmaeus*. The other two licences covered the destruction of resting places for brown long-eared bat *Plecotus auritus*, serotine *Eptesicus serotinus*, whiskered *Myotis mystacinus* and common pipistrelle *Pipistrellus pipistrellus*.
- 3.5 There are also three sites within 2km which have had licences granted by Natural England to impact great crested newts. The closest (2017-29021-EPS-MIT) is approximately 650m to the north of development site for the damage and destruction of a resting place.
- 3.6 There is one EPSM licence for dormice (2017-28572-EPS-MIT) within 2km which is located 1.8km to the northeast of the development site for the destruction of a resting place.

Site Location Description

- 3.7 The site is located in a residential area with detached properties sparsely laid out in the immediate area. Residential properties are present to the north, south and west of the redline boundary. In the wider rural area, there are areas of woodland, arable and pasture land.

Habitat survey

- 3.8 The habitats recorded on the site are shown in Photos 1-12 (Annex 2) and Figure 6 (Annex 2). Habitats present within the redline boundary consist of the following:

- Buildings
- Hardstanding
- Tall Ruderal
- Amenity Grassland
- Introduced Shrub
- Bare Ground
- Scattered trees
- Tree line
- Hedgerow

- 3.9 The application site consists of a detached garage and small shed/wooden summerhouse set within a residential garden. The gardens included areas of amenity grassland, ornamental planting, a disused tennis course and disturbed ground that was overgrown with tall ruderals. The hardstanding/bare ground present on site was encroached by ruderal species. The boundary of the plot included hedgerows and treelines.

Buildings

- 3.10 There are two buildings (a detached garage and wooden shed/summerhouse) on site included within the redline boundary that will be demolished as part of the application (Figure 6, Annex 2). These three buildings (B1 & B2) are discussed in more detail in relation to their potential to support roosting bats, in the sections below.

Hardstanding

- 3.11 This habitat included the disused tennis court which formed a large part of the site (Photograph 1, Annex 2). The central section of the site included the disused tennis court which

had become partly encroached by ruderal species such as Canadian fleabane *Conyza canadensis*, broadleaved plantain *Plantago major* and Oxford ragwort *Senecio squalidus*.

Tall Ruderal

- 3.12 Around the edge of the tennis court and around the disturbed ground were areas of tall ruderal including species such as Canadian fleabane, broadleaved plantain, creeping thistle *Cirsium arvense*, spear thistle *Cirsium vulgare*, Oxford ragwort, bristly oxtongue *Helminthotheca echinoides*, nettle *Urtica dioica*, bramble *Rubus fruticosus* and broadleaved dock *Rumex obtusifolius* (Photograph 2, Annex 2).

Amenity grassland

- 3.13 The western section of the site included shortly mown amenity grassland (Photograph 3, Annex 2). The amenity grassland was generally species poor with minimal forb species recorded although the northern section was more established with the southern section showing areas of bare ground and more recent sowing. Species included perennial ryegrass, Yorkshire fog *Holcus lanatus*, ribwort plantain *Plantago lanceolata*, creeping buttercup *Ranunculus repens*, birds' foot trefoil *Lotus corniculatus*, dandelion *Taraxacum officinale* agg. and selfheal *Prunella vulgaris*.

Introduced Shrub

- 3.14 There were small areas of ornamental planting with species such as Japanese rose *Rosa rugosa* and spotted laurel *Aucuba japonica*.

Bare Ground

- 3.15 There were areas of bare ground present where trees had been removed around the site and woodchip laid down (Photograph 6, Annex 2) along with areas of sandy bare ground around the amenity grassland where sand had washed down the slope (Photograph 5, Annex 2). These areas of bare ground had become encroached in part by species such as redshank *Persicaria maculosa*, shaggy soldier *Galinsoga quadriradiata*, nettle and fat hen *Chenopodium album*.

Scattered Trees

- 3.16 There were a small number of small scattered trees present within the amenity grassland including box elder *Acer negundo*, magnolia *Magnolia* sp., apple *Malus domestica* and cherry plum *Prunus cerasifera* (Photograph 6, Annex 2).

Tree line

- 3.17 The southern boundary of the site consisted of a treeline of predominantly Lawson cypress *Chamaecyparis lawsoniana*, along with other species such as hornbeam *Carpinus betulus*, hazel *Corylus avellana*, holly *Ilex aquifolium* with mature trees adjacent to the boundary within the neighbouring property including pedunculate oak *Quercus robur* (Photograph 7, Annex 2). Ground flora under this treeline predominantly consisted of ivy *Hedera helix*.
- 3.18 The eastern boundary of the site included a mature treeline consisting of species such as pedunculate oak, ash *Fraxinus excelsior*, hawthorn *Crataegus monogyna* and holly (Photograph 8, Annex 2). The ground flora was more developed along this eastern boundary and in the south eastern corner of the site with species such as lords and ladies *Arum maculatum*, bramble, ivy, hedge woundwort *Stachys sylvatica* and wood dock *Rumex sanguineus* present.

Hedgerow

- 3.19 There was a small section of isolated Lawsons cypress hedgerow on the northern boundary of the tennis court (Photograph 9, Annex 2). In addition, there was a newly planted beech *Fagus sylvatica* hedgerow to the immediate west of this existing hedgerow (Photograph 10, Annex 2).
- 3.20 Overall, the habitats, with the exception of the treelines within the site were assessed to be of low ecological value. The mature trees on site had intrinsic value and are recorded as part of an area of ancient woodland as per the Magic dataset which is considered to be of at least medium ecological value.

Protected Species Survey

Bats

- 3.21 The site had moderate potential to support foraging and commuting bats with the gardens and trees present and the location of the site set near higher quality foraging and commuting habitat to the south.
- 3.22 There are a total of two structures within the site that will be impacted by the proposed development: Detached garage (B1) and wooden summerhouse/shed (B2) (Figure 6, Annex 2).

These two buildings are described in more detail below. The main house will not be altered or subject to change as a result of this application and as such is not discussed further.

Garage (B1)

- 3.23 This was a detached double garage that was constructed of concrete panels with a corrugated roof (Photograph 11, Annex 2). The building had no enclosed roof space and was used as a log store at the time of the survey. The building was single skin so although there were few gaps these did not form any suitable crevices for the site. No evidence of roosting bats was found during the internal and external inspection. As no features were noted internally or externally that could be utilised by roosting bats this garage was assessed as having **negligible** potential to support roosting bats.

Summerhouse/shed (B2)

- 3.24 This building was a shiplap wooden cladding shed/summerhouse (Photograph 12, Annex 2). The building had no enclosed roof space and the wooden cladding the building was constructed with was close fitting and there were no gaps noted on the single skin walls or the bitumen felt roof. No evidence of roosting bats was found during the internal and external inspection. Due to the lack of suitable features internally or externally the building was assessed as having **negligible** potential to support roosting bats.

Trees

- 3.25 The site contained a number of trees present within the treelines around the site along with small trees scattered within the lawn area. The majority of the trees had no features suitable for roosting bats and were assessed as having **negligible** potential to support roosting bats. There was a small tree (TN3, Figure 6, Annex 2) that was dead on the eastern boundary of the site which was assessed as having PRF-I potential to support roosting bats due to the presence of some lifting bark.

Amphibians and Reptiles

- 3.26 There are no habitats within the site that could be considered potentially suitable for supporting populations of reptiles or amphibians with short amenity grassland, ruderals on gravel and building and hardstanding the dominant habitats found. There were some log piles present within the site (TN1, Figure 6, Annex 2) which could provide potential refuge habitat

for individual reptiles or amphibians. There are no ponds visible on Ordnance Survey maps or aerial photographs within 250m which could support great crested newts.

Nesting birds

- 3.27 The buildings, shrubs and trees within the site offer potential nesting habitats for a number of common garden bird species during the spring/summer months. The site has a low potential to support nesting birds.

Dormice

- 3.28 The treelines on site were of limited value to dormice with the southern boundary consisting of non-native trees and the eastern boundary had no ground or shrub cover and provided poor quality habitat for foraging and nesting dormice. The woodland to the south of the woodland is small and is relatively isolated from suitable habitat. As such it is considered unlikely that dormice are present on site.

Badgers and other mammals

- 3.29 No evidence of badgers using the site was recorded and no evidence of badger setts was found within the immediate area. There was a single mammal 'push through' present on the southern boundary although there were no badger hairs present on the fence at the time of the survey. However, given the potential habitat for foraging badgers in the wider area then it is likely that badger are present in the wider area and may access the site on occasion.
- 3.30 The garden areas have potential to provide foraging habitat for hedgehogs if they are present in the immediate local area.

4.0 ECOLOGICAL EVALUATION

Designated Nature Conservation Sites

- 4.1 The proposed development is small scale and located approximately 140m from the Brighton and Lewes Downs Biosphere Reserve although the designation is partly for sustainability purposes rather than just the biodiversity value. It is not anticipated that this small-scale residential development will have any impact on any statutory designated sites and as such it is not anticipated that the proposals will have any impact on these designated sites.

Habitats

- 4.2 The site supports the following dominant habitats: amenity grassland, bare ground, tall ruderal, buildings and hardstanding. The site as a whole could be considered to support habitats of **low** ecological value with the treelines on the southern and eastern boundary recorded as ancient woodland and as such is of **medium** ecological value and is considered an irreplaceable habitat. A report produced by David Archer Associates (2023) has looked into the eastern tree line in more detail and this report should be read in conjunction with the Arboricultural Implications Report & Method Statement produced. This indicates that the eastern boundary of the site may not be ancient woodland and the ecological survey did not record any woodland on site only a treeline with a disturbed ground cover.

Protected Species

Flora

- 4.4 None of the species recorded during the survey are specifically protected by the Wildlife and Countryside Act 1981 (as amended) or considered nationally or locally rare (see Preston et al., 2002⁷). Also, none of the species recorded are listed as Species of Principal Biological Importance on Section 41 of the NERC Act 2006 or as Priority Species on the national BAP (UK BAP, 2007⁸).
- 4.5 Mitigation and enhancements for trees and general flora are recommended in Sections 6 and 7.

⁷ Preston, C.D., Telfer, M.G., Arnold, H.R., Carey, P.D., Cooper, J.M., Dines, T.D., Pearman, D.A., Roy, D.B. & Smart, S.M. 2002. *The changing flora of the UK*. Department for Environment, Food and Rural Affairs, London.

⁸ UKBAP (2007) Report on the Species and Habitat Review: Report by the Biodiversity Reporting and Information Group (BRIG) to the UK Standing Committee, June 2007

Fauna

- 4.6 No evidence of roosting bats was found during the PRA survey of the buildings on site and no further surveys were recommended. The habitats present within the redline boundary had potential to be used by foraging and commuting bats. A dead tree on the eastern boundary of the site was assessed as having PRF-I potential to support roosting bats and precautionary mitigation measures are recommended if the tree is removed.
- 4.7 All areas supporting vegetation within the site are considered potentially suitable for supporting nesting birds during the spring/summer. All of the buildings within the site have the potential to support nesting birds.
- 4.8 The site has no potential to support a population of reptiles or amphibians with only very small areas of habitat of suitable habitat present on site which could not support a population of common reptiles or amphibians, and these were isolated from any other habitat which could support these species although the log piles present on site could be used by occasional reptiles or amphibians.
- 4.9 The treelines present on site had very low potential to support dormice with only poor quality habitat on site. Although it is connected to woodland to the south that forms part of grounds of a residential dwelling, the woodland is relatively small and isolated. Given the lack of suitable habitat for dormice it is not anticipated that the site proposals will impact dormice and no additional surveys are required.
- 4.10 No evidence of badgers was found although the habitat in the wider area could support the species and as such, as a precaution, mitigation measures are recommended. The site also had potential to support resting and foraging hedgehogs where they are present in the wider area.

Invasive species

- 4.11 No invasive species were identified at the time of survey.

5.0 RECOMMENDATIONS

- 5.1 Wherever possible, negative ecological impacts should be avoided. If this is unavoidable then mitigation and compensation measures will be proposed for adverse ecological effects. In addition, it is best practice to seek positive biodiversity benefits through enhancement measures, in particular with regard to Priority Habitats and Species listed on the national and local Biodiversity Action Plans and the NERC Act 2006.
- 5.2 CIEEM (2017)⁹ endorses the following principle, recommended by the Royal Town Planning Institute (2019)¹⁰ for optimising the biodiversity outcomes of planning decisions.
- 5.3 New benefits: seek to provide net benefits for biodiversity over and above requirements for mitigation and compensation.
- 5.4 The provision of compensation/enhancements helps local planning authorities in meeting requirements as stipulated under the National Planning Policy Framework¹¹, which states that sustainable development should seek to achieve net gains in biodiversity for nature.

⁹ CIEEM (2017) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

¹⁰ <https://www.rtpi.org.uk/practice/2019/november/biodiversity-in-planning/>

¹¹ National Planning Policy Framework. (2012) Department of Communities and Local Government.

6.0 MITIGATION & FURTHER SURVEY

Designated Sites

- 6.1 The site is unlikely to impact any statutory designated sites give the distance away and the very small scale of the scheme which involves the construction of a single residential property. The southern and eastern boundaries of the proposed development site are recorded as ancient semi natural woodland along with the woodland to the south on the Magic Map dataset. On the ground, within the site, this woodland appeared as a treeline of predominantly non-native trees on the southern boundary and a treeline of predominantly native and mature trees on the eastern boundary. Neither treelines had a developed shrub or ground flora level and the eastern boundary had been subject to some ground disturbance following some apparent tree works and general garden maintenance. A report by David Archer Associates (2023) details the trees present and the implications of the proposed development in relation to the trees present and the ancient woodland designation.
- 6.2 Natural England have produced standing advice for Local Planning Authorities (LPAs) regarding development in and around ancient woodland¹². This standing advice states that a 15m root protection buffer must be implemented from the boundary of ancient woodland. This buffer zone prohibits any form of development, including domestic gardens. The standing advice states that “this area should include creating or establishing habitat with local and appropriate native species, such as native woodland, scrub, wetlands or grasslands.” This buffer zone, in relation to the site is depicted in Figure 5, Annex 2. The development proposals which involved siting the new residential dwelling on existing hardstanding is unlikely to have a significant direct impact on the ancient woodland habitat. The new dwelling and any new hardscaping falls outside of 15m from the southern boundary ancient woodland. The new access point proposed will cut through a tree-line that is the is designated ancient woodland as per the Magic Map dataset. However, no trees will be removed as part of the new access point and the access has been designed to minimise the need for trees to be removed. The report by David Archer Associates provides additional detail on the ancient woodland inventory for the woodland on site as well as detailed information on the impacts of the proposals to the trees on and off site by the proposals as well as providing mitigation recommendations. The treelines and adjacent habitat will continue to be used as a residential garden within a

¹² <https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions>

residential curtilage with no change in use. The land to the south of the development site is also a residential garden with a single residential dwelling present.

- 6.3 Construction measures to protect the ancient woodland to the south during construction and management measures post development will need to be followed. Pollution prevention measures including dust suppression measures must be provided in a construction environmental management plan (CEMP). Post development a management plan and landscaping scheme to ensure that the southern and eastern boundaries of the site are protected and enhanced through the provision of native species of local provenance within the landscaping with a design to grade the treeline into the garden habitat through the use of scrub species such as blackthorn *Prunus spinosa* and hawthorn. These measures should be included within a separate Biodiversity and Ecological Mitigation Plan (BEMP) for the site.

Habitat

- 6.4 No further habitat surveys are required. Best practice should be followed (i.e. S5837:2012 Trees in Relation to design, demolition and construction – Recommendations) to ensure individual trees, including those adjacent to the site, that are to be retained are not adversely affected. Any trees over 100 mm trunk diameter, and/ or of significant ecological value, should be protected by barriers. Minimum distance between tree trunk and barriers must be either the distance of the branch spread or half tree height, whichever is greater. In all cases, trees must be protected from direct impact and from severance or asphyxiation of the roots. Full details of the mitigation measures in relation to the trees on and off site have been provided within an arboricultural report produced by David Archer Associates (2023).
- 6.5 Any planting within the site as part of the proposed development should use native tree and shrub species that will enhance the biodiversity of the site. See Annex 4 for details of planting that will enhance the site for foraging bats and other wildlife.

Bats

- 6.6 The two buildings which (B1 and B2) had no potential to support roosting bats and no additional surveys are required. A dead tree on the eastern boundary of the site had PRF-I potential to support roosting bats. As per best practice guidelines, no additional surveys are required in relation potential bats roosts in trees but it is recommended that if the tree is to

be removed then precautionary mitigation should be followed with the tree surgeons made aware of the legal protection afforded to bats and soft felling methods followed.

- 6.7 The site likely supports foraging habitat for bats with treelines present. As such any light scheme for the new development should limit light spillage. The lighting scheme for the site should be low level and designed to minimise light spillage onto non-target areas such as vegetation. Annex 3 details the Bat Conservation Trust's guidelines on lighting mitigation.

Amphibians and Reptiles

- 6.8 The site supports very little habitat suitable for populations of common reptile and amphibian species and the habitat is isolated from other suitable habitat for these species. Although the site does not support habitat suitable to support a population of reptiles or amphibians it is recommended that any log pile present within the site are dismantled by hand during temperatures above eight degrees centigrade to ensure that no individuals are harmed during the site clearance.

Breeding birds

- 6.9 The trees, shrubs and buildings on site have the potential to support nesting bird species. It is therefore recommended that removal of suitable nesting habitat occurs outside the bird nesting season, which is generally accepted to extend from March - August inclusive (although dates vary by species and are subject to prevailing weather conditions). If this is not possible the area to be removed should be inspected for evidence of nesting activity by a suitably experienced ecologist no more than 24 hours in advance of clearance. If this identifies any nesting activity the habitat feature should be left undisturbed until nesting ceases and chicks have fledged the nest. If any vegetation removal is undertaken on site during the bird-nesting season, all resultant brash should be immediately removed from the site to prevent birds from nesting in it.

Other Mammals

- 6.10 The site has the potential to support foraging and commuting mammals such as hedgehogs, badgers and foxes. It is recommended that during construction all deep trenches and excavations (it is not anticipated that any deep holes will be created) are covered overnight to prevent any animals falling in and not being able to get out.

7.0 ENHANCEMENTS

- 7.1 In line with local and national policy (NPPF 2023¹³), and the requirement to deliver a 10% biodiversity net gain as detailed in the Environment Act 2021¹⁴, the new development should seek to provide biodiversity enhancements. The following suggestions would enhance the site for wildlife.

Shrub/Tree Planting

- 7.2 It is recommended that any landscaping within the redline boundary include native species and species of value to local wildlife including berry bearing species and nectar and pollen rich species particularly where these species provide food sources early or late in the season to ensure extend the season for insects. A list of native and non-native species that are beneficial to pollinating insects, produced by the Royal Horticultural Society, is provided in Annex 4.

Bat Roosting Opportunities

- 7.3 New roosting opportunities could be added to the building during development through the provision of integrated bat boxes such as the Habibat integrated box¹⁵ or the Integrated Eco Bat Box¹⁶ or alternatively bat boxes could be installed on the existing mature trees with a general purpose box such as the Schwegler 2f¹⁷ or Kent Eco bat box¹⁸ offering suitable examples.

¹³ <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

¹⁴ <https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>

¹⁵ <https://www.nhbs.com/habibat-bat-box-staffordshire-smooth-red-brick>

¹⁶ <https://www.nhbs.com/integrated-eco-bat-box?bkfno=232521>

¹⁷ https://www.schwegler-natur.de/portfolio_1395072079/fledermaushoehle-2f/?lang=en

¹⁸ <https://www.nestbox.co.uk/products/eco-kent-bat-box>

8.0 CONCLUSION

- 8.1 The survey of the site has shown that it is of low ecological value with the exception of the treelines on the southern and eastern boundaries which is recorded as ancient woodland and is of at least medium ecological value. Mitigation measures to protect the ancient woodland and create a 15m buffer around the woodland as per the government's standing advice to local planning authorities in relation to ancient woodland is recommended and all new hardscaping and the new dwelling is located at least 15m from the southern boundary and the ancient woodland to the south. The site is not significantly constrained in relation to protected species and no further surveys are recommended. Precautionary measures for protected species such as nesting birds, individual reptiles, badgers and hedgehogs are provided along with suitable enhancement measures.

9.0 REFERENCES

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JNCC (2010) *Handbook for Phase 1 Habitat Survey: a technique for environmental audit*. JNCC, Peterborough.

MAGIC Site Check Report. Available: www.magic.gov.uk.

Mitchell-Jones, J. (2004) Bat Mitigation Guidelines. Natural England.

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Annex 1 – Protected Species Legislation.

Plants

All wild plants are protected against unauthorised removal or uprooting under Section 13 of the Wildlife and Countryside Act 1981 (as amended). Plants listed on Schedule 8 of the Act (e.g. triangular club rush and Deptford Pink) are afforded additional protection against picking, uprooting, destruction and sale. Bluebell is protected against sale only.

Amphibians (Common Species)

Common amphibian species (i.e. common frog, common toad, smooth newt and palmate newt) are afforded partial legal protection under UK legislation, i.e. Schedule 5, Section 9 (5) of the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way Act 2000. This legislation prohibits:

- sale
- transportation
- advertising for sale

Badgers

Badger is a widespread and generally common species. However, they are legally protected under The Protection of Badgers Act 1992, which is based primarily on the need to protect badgers from baiting and deliberate harm or injury. Under this legislation it is illegal to:

- Wilfully kill, injure, take, or cruelly ill-treat a badger, or attempt to do so
- Possess any dead badger or any part of, or anything derived from, a dead badger
- Intentionally or recklessly interfere with a sett by disturbing badgers whilst they are occupying a sett, damaging or destroying a sett, causing a dog to enter a sett, or obstructing access to it

A badger sett is defined in the legislation as *“any structure or place, which displays signs indicating current use by a badger”*.

Bats

All bat species are afforded full protection under UK and European legislation, including the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way Act 2000 and The Conservation of Habitats and Species Regulations 2017. Together, this legislation makes it illegal to:

- Intentionally or deliberately take, kill or injure a bat
- Damage, destroy or obstruct access to bat roosts
- Deliberately disturb bats

A bat roost is defined in the legislation as *“any structure or place which a bat uses for shelter or protection”*. Roosts are protected whether or not bats are present at the time. If a development activity is likely to result in disturbance or killing of a bat, damage to its habitat or any of the other activities listed above, then a licence will usually be required from Natural England.

Birds

The bird breeding season generally lasts from early March to September for most species. All birds are protected under the Wildlife and Countryside Act (1981) (as amended) and the Countryside & Rights of Way Act 2000. This legislation makes it illegal, both intentionally and recklessly to:

- Kill, injure or take any wild bird;

- Take, damage or destroy the nest of any wild bird while it is being built or in use;
- Take or destroy the eggs of any wild bird; and
- Possess or control any wild bird or egg unless obtained legally.

Birds listed under Schedule 1 of the Wildlife and Countryside Act (1981) (as amended) (e.g. barn owl and kingfisher) are afforded additional protection, which includes makes it an offence to disturb a bird while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Great crested newts

Great crested newts and their habitat are afforded full protection under UK and European legislation, including the Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way Act 2000 and The Conservation of Habitats and Species Regulations 2017. This makes it is an offence to kill, injure or disturb great crested newts and to destroy any place used for rest or shelter by a newt. The great crested newt is also listed on Annexes II and IV of the EC Habitats Directive and Appendix II of the Bern Convention. If a development activity is likely to result in disturbance or killing of a great crested newt, damage to its habitat etc, then a licence will usually be required from Natural England.

Reptiles

There are six native species of reptiles in the UK, including the slow-worm (*Anguis fragilis*), viviparous lizard (*Zootoca vivipara*), grass snake (*Natrix natrix*) and adder (*Vipera berus*), smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*), which are afforded varying degrees of protection under UK and European legislation.

Slow-worm, viviparous lizard, adder and grass snake are protected under Schedule 5, Section 9 (1 and 5) of the Wildlife and Countryside Act 1981 (as amended) and the Countryside & Rights of Way Act 2000 against deliberate or reckless killing and injuring and sale.

Otters

Great Otters are fully protected under the Habitats Regulations through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species
- Damage or destruction of a breeding site or resting place
- Deliberate disturbance of otters as:
 - to impair their ability:
 - to survive, breed, or reproduce, or to rear or nurture young;
 - to hibernate or migrate
 - to affect significantly the local distribution or abundance of the species

Otters are also currently protected under the WCA through their inclusion on Schedule 5. Under this Act, they are additionally protected from

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection

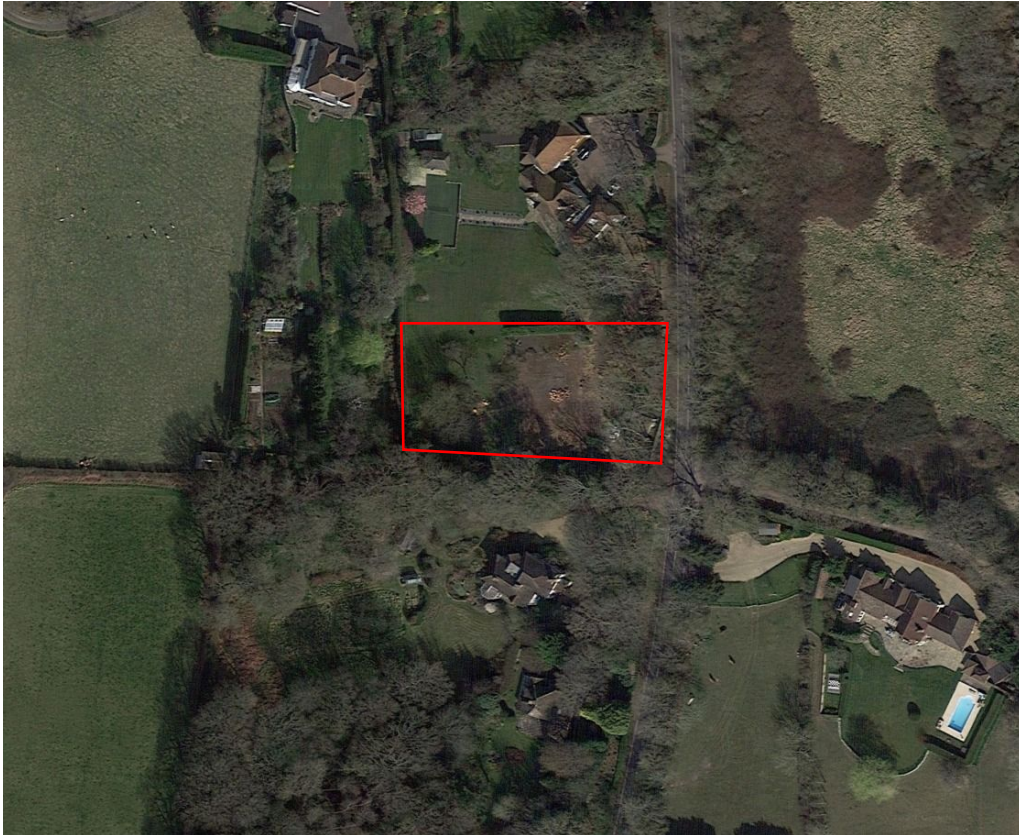
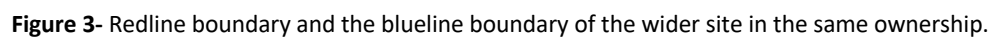
Annex 2 – Plans, Figures and Photographs.

Figure 1 – Approximate location and boundary of the site (red outline). Image taken from Google Earth.



Figure 2 – Approximate location of the site (red oval) within the wider landscape. Image taken from Google Earth.



MAGiC

White Lodge, Hassocks

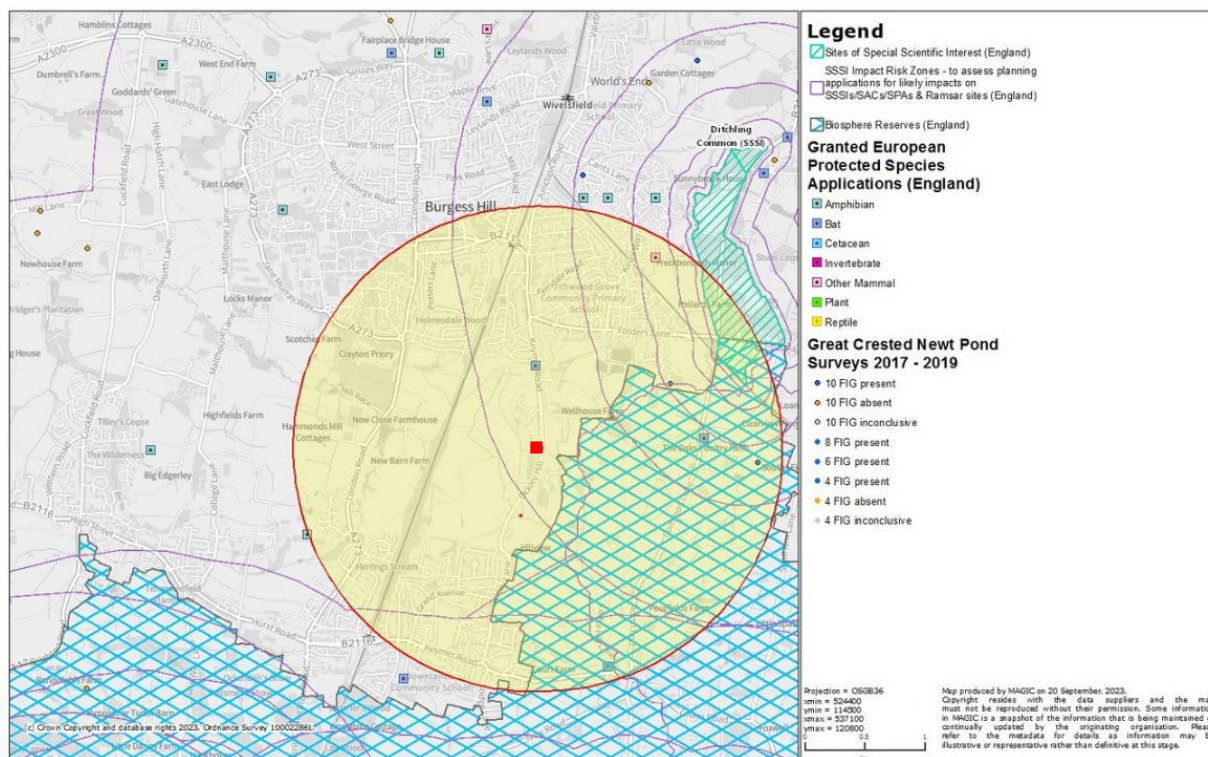


Figure 4– Approximate location of the site (red rectangle) with statutory designated sites and EPSM licences shown. From Magic (September 2023).

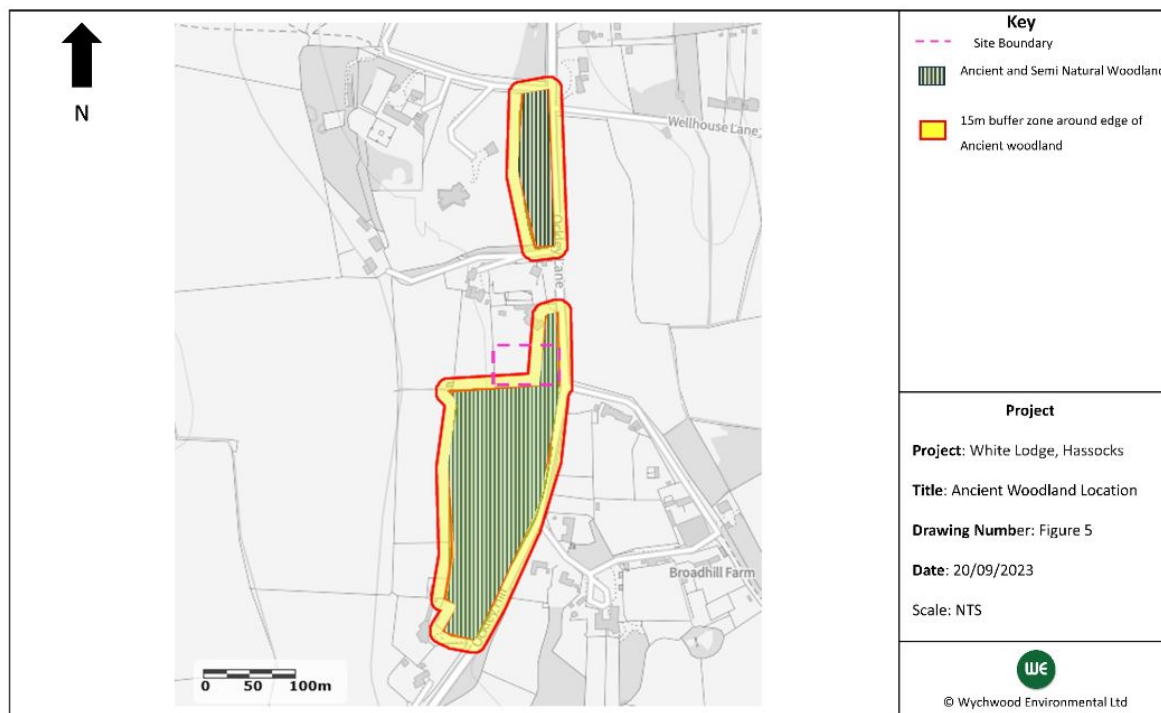
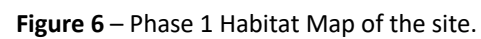


Figure 5– Approximate location of the site with location of the ancient woodland habitat and 15m buffer zone. From Magic (September 2023).



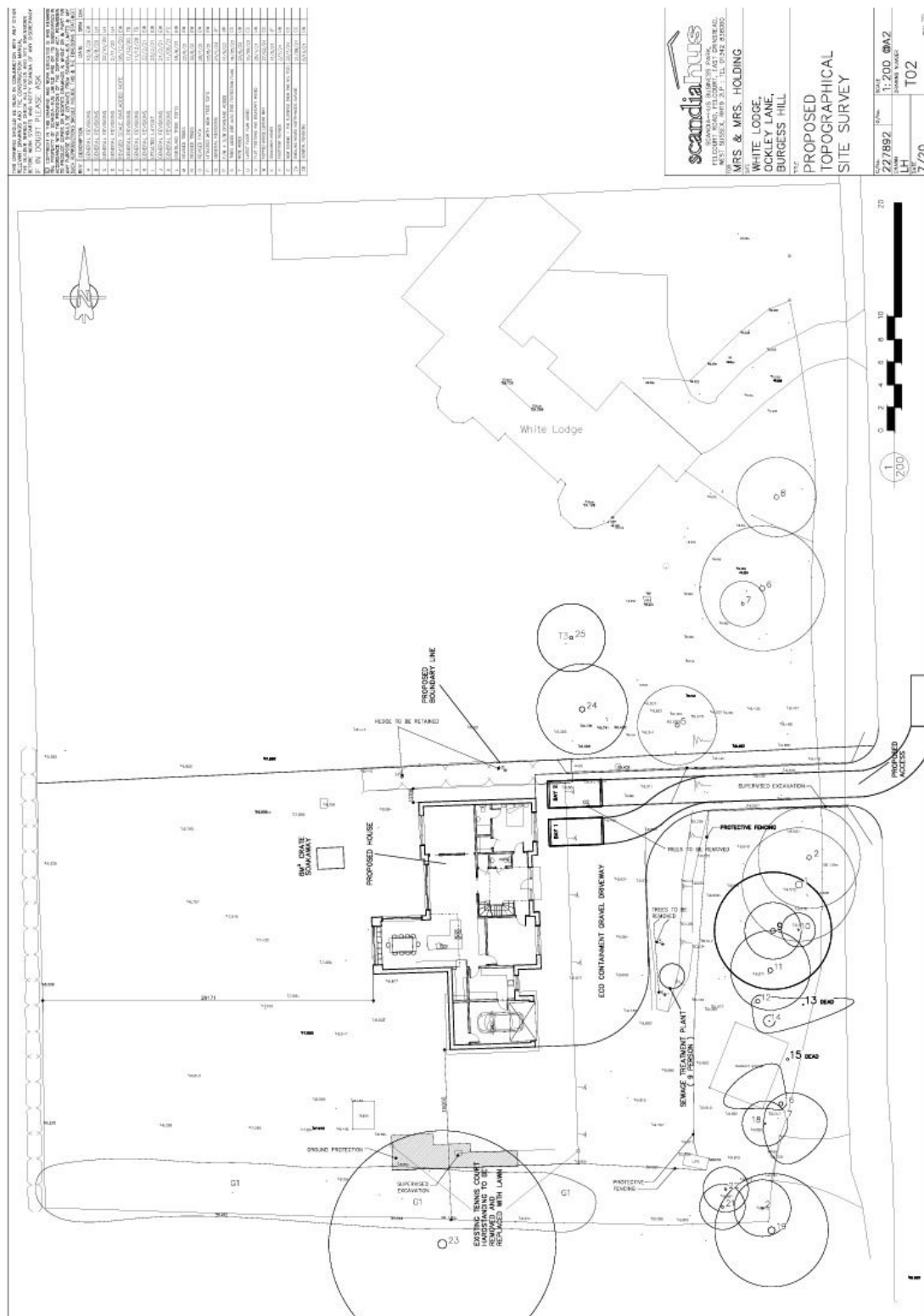


Figure 7 – Proposed layout.



Photograph 1 – View of site looking west across the disused tennis court which was partially encroached by vegetation.



Photograph 2 – View of ruderal species which have encroached an area of disturbed ground to the east of the tennis court.



Photograph 3 – Amenity grassland looking south across the site showing areas of bare ground.



Photograph 4 – Bare ground in the eastern section of the site.



Photograph 5 – Areas of bare ground within the amenity grassland on the western side of the site.



Photograph 6 – View looking west towards the small scattered trees.



Photograph 7 – Treeline on the southern boundary of the site consisting predominantly of lawsons cypress with mature trees present in the neighbouring property.



Photograph 8 – Treeline on the eastern boundary of the site.



Photograph 9 – Cypress hedgerow present on the northern boundary of the tennis court.



Photograph 10 – Recently planted beech hedgerow on the northern boundary of the site.



Photograph 11– Detached garage B1 present on the eastern boundary of the site.



Photograph 12 – Wooden shed/summerhouse present on site.

Annex 3 – Lighting guidance - the impact of artificial light on bats

The following basic set of guidelines is summarized from the latest Guidance Note (08/23)¹⁹ provides a concise checklist of points to consider with any lighting scheme:

- *Use professional lighting design engineers to model and predict light spill so that it can be avoided.*
- *Reduce light levels to the minimum necessary to meet legal and safety requirements.*
- *Reduce horizontal and upward/downward light spillage to the minimum achievable. The use of cowling, masks, louvers etc. and limiting the height of lighting columns may be important depending on the design of the lighting units. No bare bulbs. Lighting should only light the target area.*
- *Use non-reflective surfaces within the area to be lit to minimise indirect (reflected) spillage of light. The use of planting or other structures to add screening.*
- *Reduce the duration of lighting. The use of lighting 'curfews' can also be helpful - especially in the vicinity of bats roosts. For example, the emergence of bats, typically within the hour after sunset, may be disrupted (delayed) by raised light levels and this may result in a loss of feeding opportunities.*
- *Consider the type of light to be used and whether a different type or design may reduce potential impacts on bats and other wildlife. Narrow spectrum lighting with minimal UV emission should be used.*
- *Use 'screen planting' to limit light spill into dark areas.*
- *Use narrow spectrum light sources to lower the range of species affected by lighting, as research has shown that spectral composition does impact biodiversity.*
- *Use light sources that emit minimal ultra-violet light*
- *Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue short wave length content they should be of a warm / neutral colour temperature <4,200 kelvin.*

For more details, please refer to:

<https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>

http://www.bats.org.uk/pages/bats_and_lighting.html

<http://www.batsandlighting.co.uk/index.html>

¹⁹ <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/>

Annex 4 – Gardening for bats.

GARDENING FOR BATS

All sixteen species of bats in the UK eat insects, and need a good supply of these from spring through to the autumn. By growing flowers attractive to a range of insects, our gardens can become important feeding stations for bats, birds and other wildlife.



Many plants depend on insects

We grow flowers in our gardens for our own enjoyment. But colour and perfume are really the plants' way of advertising themselves to insects. Sweet nectar and protein-rich pollen are bait to encourage insects to visit. In return, pollen is carried from one flower to another on their bodies so the flowers are fertilised.

Bats need insects

Flying uses a lot of energy, so bats have huge appetites. All our UK bats eat insects. Five species, including the long-eared bat, prefer moths, but most bats rely more heavily on flies as food than any other insect group. Especially important are craneflies, and a range of midge families and their relatives. Pipistrelles, the bats most likely to visit your garden, depend on catching very large numbers of tiny insects, some of which are pests.

Flower shape and insect tongues

Flowers with long narrow petal tubes, such as evening primrose and honeysuckle, are visited by moths and butterflies. Only their long tongues can reach deep down to the hidden nectar. Short-tongued insects include many families of flies and some moths. They can only reach nectar in flowers with short florets. By planting a mixture of flowering plants, vegetables, trees and shrubs, you can encourage a diversity of insects to drop in and refuel.

Follow these general rules

- ? Plant flowers varying not only in colour and fragrance, but also in shape.
- ? Daisies and daisy-like flowers are open with a mass of shallow florets.
- ? Pale flowers are more easily seen in poor light.
- ? Single flowers have more nectar than double varieties
- ? Native wild flowers or those closely related are most useful
- ? Flowers with landing platforms and short florets such as daisy or carrot family attract many insects.
- ? Many flowering vegetables such as beans and courgettes are also good for insects.

Plant trees and shrubs

These are important in providing

- food for insect larvae
- food for adult insects
- shelter for flying insects

- roosting opportunities for bats.

In a small garden, choose trees that can be coppiced – cut down to the ground every few years - to allow new shoots to spring from the base. Young shoots and leaves will support leaf-eating insects, even if they do not produce flowers. Hawthorn and elder are useful small trees.

Create a wet area

A pond, a marshy area, even a half-tub made into a mini-pond can attract insects. Many of the tiny flies favoured by bats start life in water as aquatic larvae.

Say NO to insecticides

Chemical pesticides kill natural predators and so may do more harm than good. They reduce bats' insect prey, and surviving insects carry traces of poison.

Encourage natural predators

Hoverflies, wasps, ladybirds, lacewings, ground beetles and centipedes are the gardener's friends. As natural predators they help keep the balance, eating many pests.

- ? Allow some weeds to grow to provide ground cover for natural predators
- ? Grow favourites of hoverflies and other predators close to the flowers and vegetables that tend to become infested.
- ? Leave hollow-stemmed plants to overwinter as shelter for ladybirds.
- ? Leave heaps of dead leaves and brushwood undisturbed for hedgehogs.
- ? Most garden birds are effective predators. Provide them with regular food and water.

Prevent a CATastrophe

Many bats and other small mammals fall prey to Britain's most dangerous four-legged predator, the domestic cat. Cats do not need to stay out all night. Bring your cat in an hour before sunset so bats can emerge undisturbed.

(Send for our special leaflet on cats and bats.)

The Bat Conservation Trust, 15 Cloisters House
8 Battersea Park Road, London SW8 4BG
Tel 0845 1300 228 Fax 020 7627 2628
enquiries@bats.org.uk www.bats.org.uk
Registered Charity no 1012361 Company limited by guarantee, registered in England no 271282

August 2004

Gardening for bats

Aim at having flowers in bloom through the year, including both annuals and herbaceous perennials.

Below are some suggestions, but this is by no means an exhaustive list. See what grows well in YOUR garden, and what seems most attractive to insects. Flowering times are approximate, varying in different areas. Regular dead-heading extends flowering period in many flowers. A=annual, HA=hardy annual, HHA=half-hardy annual, P=perennial, W=wild flower.

Flowers for borders

St John's Wort	Hypericum	P	March-
marigolds	Calendula	H/A	March – Oct.
aubrea	a. deltoidea	P	March-June
honesty	Lunaria rediva	HB	March
forget-me-not	Myosotis sp.	A/P	March - May
elephant ears	Begonia	P	April
Wallflowers	Erysimum	B	April - June
Cranesbills	Geranium sp.	P	May – Sept.
Yarrow	Achillea	P	May -
Poppies	Papaver sp.	A	May - July
Dames violet	Hesperis matronalis	P	May - August
Red Valerian	Centranthus ruber	P	May – Sept.
Poached egg plant	Linum catharticum	HA	June – Aug.
Knapweed	Centauria nigra	P	June-Sept.
Phacelia		HA	June – Sept.
Ox-eye daisy	Leucanthemum vulgare	P	June – Aug.
Evening primrose	Oenothera biennis	B	June-Sept.
Candytuft	Iberis umbellata	HA	June – Sept.
Sweet William	Dianthus barbatus	B	June - July
Blanket flowers	Gaillardia	P	June -
Verbena	V. bonariensis	HHA	June – Oct.
Scabious	Knautia anvensis	P	July-Aug.
Night-scented stock	Matthiola biconis	HA	July-Aug.
Pincushion flower	Scabiosa sp.	A/P	July – Sept.
Cherry pie	Hebe	HHA	July – Oct.
Mexican aster	Cosmos sp.	A/P	July – Oct.
Cone flower	Rudbeckia sp.	A/P	August-Nov.
Malva	lavatera sp.	P	August-Oct.
Michaelmas daisy	Aster sp.	P	August-Sept.
Ice plant 'Pink lady'	Sedum spectabile	P	Sept.
Herbs – both leaves and flowers are fragrant			
Fennel	Foeniculum vulgare		July – Sept.
Bergamot	Monarda didyma		June - Sept.
Sweet Cicely	Myrrhis odorata		April - June
Hyssop	Hyssopus officinalis		July - Sept.
Feverfew	Tanacetum parthenium		June – Sept.
Borage	Borago officinalis		May – Sept.

Rosemary	Rosemary officinalis	March - May
Lemon balm	Melissa officinalis	
Coriander	Coprinum sativum	June - August
Lavenders	Lavandula sp.	
Marjoram	Origanum sp.	

Trees, shrubs and climbers important to insects

Oak	Quercus sp.	large gardens only
Silver birch	Betula pendula	
Common alder	Alnus glutinosa	Suitable for coppicing
Hazel	Corylus avellana	Suitable for coppicing
Elder	Sambucus nigra	Small
Pussy willow	Salix caprea	Suitable for coppicing
Hawthorn	Crataegus monogyna	Suitable for coppicing
Honeysuckle	Lonicera sp.	grow a variety for succession.
Dog rose	Rosa canina	Climber
Bramble	Rubus fruticosus	Climber
Ivy	Hedera helix	Climber
Buddleia	Buddleia davidii	shrub
Guelder rose	Viburnum opulus	shrub
Goose	Ulex sp.	shrub

Plants for pond edges and marshy areas

Purple loosestrife	Lythrum salicaria	W	June – Aug.
Meadow sweet	Filipendula ulmaria	W	June – Sept.
Lady's smock	Cardamine pratensis	W	April - June
Water mint	Monarda aquatica	W	July – Sept.
Angelica	Angelica sylvestris	W	July – Sept.
Hemp agrimony	Eupatorium cannabinum	W	July – Sept.
Marsh marigold	Caltha palustris	W	March – May
Creeping Jenny	Lysimachia nummularia	W	May - August
Fringed water lily	Nymphaea peltata	W	June – Sept.
Water forget-me-not	Myosotis scorpioides	W	June – Sept.

Allow part of your lawn to grow long in summer and cut in autumn, removing the clippings. Avoid using fertilizers. Compost heaps are good producers of insects too.

Add a seat to watch your garden come to life!

Native Plant Species Recommended

Hedging/shrubs (60cm whips)	
Blackthorn	<i>Prunus spinosa</i>
Hawthorn	<i>Crataegus monogyna</i>
Common Dogwood	<i>Cornus sanguinea</i>
Guelder Rose	<i>Viburnum opulus</i>
Holly	<i>Ilex aquifolium</i>
Elder	<i>Sambucus nigra</i>
Field Maple	<i>Acer campestre</i>
Hazel	<i>Corylus avellana</i>
Spindle	<i>Euonymus europaeus</i>
Trees (regular standard size)	
Apple	<i>Malus spp.</i>
Cherry	<i>Prunus spp.</i>
Field Maple	<i>Acer campestre</i>
Hornbeam	<i>Carpinus betulus</i>
Rowan	<i>Sorbus aucuparia</i>
Wild Service	<i>Sorbus torminalis</i>
English Oak	<i>Quercus robur</i>
Shrubs/Herbaceous plants (formal beds)	
Use species attractive to pollinators e.g bees, butterflies, moths. See this selection of RHS plants for pollinators: http://www.rhs.org.uk/Gardening/Sustainable-gardening/Plants-for-pollinators (see Appendix 4)	
Note – all specimens should be of British native stock from reputable suppliers.	