

**Preliminary Ecological Appraisal & Buildings Assessment for Roosting Bat Species** 

Land at 191 Harefield Road Uxbridge London Borough of Hillingdon

Dorset House, Kingston Road, Leatherhead, Surrey KT22 7PL, United Kingdom

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### LIABILITIES:

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living creatures are capable of migration and whilst protected species may not have been located during the survey duration, their presence may be found on a site at a later date.

The views and opinions contained within this document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document, or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

It is the duty of care of the landowner/developer to act responsibly and comply with current environmental legislation if protected species are suspected or found prior to or during works.

# 1.0 Introduction

## Background

- 1.1 The Ecology Partnership was commissioned to undertake a Preliminary Ecological Appraisal at 191 Harefield Road in Uxbridge, UB8 1PW. The assessment included an extended Phase 1 habitat survey and a buildings assessment for roosting bat species.
- 1.2 This report presents the results of The Ecology Partnership's surveys in and around the site, which aims specifically to assess the sites potential to support protected species and protected habitats that may be affected by the proposed development.
- 1.3 Section 2 of this report sets out the methodologies of The Ecology Partnership's surveys. In section 3 the results of the surveys are presented. Discussions and implications for development are found in section 4, including general site enhancements. Conclusions drawn from the report are presented in section 5.

# Site Context and Status

- 1.4 The site is located at 191 Harefield Road in the northwest of Uxbridge and just south of the A40. The site consists of the Abrook Arms pub, terrace, car park and a large garden adjacent to the Fray's River running along the western boundary of the site. It is set within an urban landscape, surrounded by medium density housing, commercial properties and playing fields. The Uxbridge Alderglade Nature Reserve is less than 100m north of the site situated within the Colne Valley Regional Park. The site is also approximately 0.6km south of the Fray's Valley Local Nature Reserve (LNR) and the Fray's Farm Meadows Site of Special Scientific Interest (SSSI).
- 1.5 The approximate red line boundary of the site is shown below in figure 1. This was also the approximate survey boundary.



Figure 1: Approximate location of the red line boundary.

## **Description of Proposed Development**

1.6 The proposal is to demolish the existing public house building redevelop the site with a block of flats. The plans have yet to be finalised and will be influenced by a number of surveys of which ecology is one.

## **Planning Policies**

- 1.7 National and local planning policies may have an affect on the proposed development. The following paragraphs identify relevant planning policies and discuss these in the context of the site.
- 1.8 Under the NERC Act (2006) "Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity". In order to comply with this 'Biodiversity Duty', planning decisions must ensure that they adequately consider the potential ecological impacts of a proposed development.

1.9 National policy guidance is provided by National Planning Policy Framework (NPPF), which sets out the Government's planning policies for England and how they should be applied. Several sections are considered to be relevant;

'In preparing plans to meet development needs, the aim should be to minimise pollution and other adverse effects on the local and natural environment. Plans should allocate land with the least environmental or amenity value, where consistent with other policies in this Framework.'

And;

'Planning policies and decisions should encourage the effective use of land by re-using land that has been previously developed (brownfield land), provided that it is not of high environmental value. Local planning authorities may continue to consider the case for setting a locally appropriate target for the use of brownfield land.'

1.10 The site falls under the jurisdiction of Hillingdon London Borough Council. The 'Hillingdon Local Plan: Part 1 – Strategic Policies' was adopted in 2012 and contains local policies relating to nature conservation. The main policy drawn from the report, which is relevant to the site, is indicated below:

## Policy EM7: Biodiversity and Geological Conservation

'Hillingdon's biodiversity and geological conservation will be preserved and enhanced with particular attention given to:

- 1. The conservation and enhancement of the natural state of:
  - Harefield Gravel Pits
  - Colne Valley Regional Park
  - Fray's Farm Meadows
  - Harefield Pit
- 2. The protection and enhancement of all Sites of Nature Conservation. Sites with Metropolitan and Borough Grade 1 importance wil be protected from any adverse impacts and loss. Borough Grade 2 and Sites of Local Importance will be protected from loss with harmful impacts mitigated through appropriate compensation.
- 3. The protection and enhancement of populations of protected species as well as priority species and habitats identified within the UK, London and the Hillingdon Biodiversity Action Plans.

- 4. Appropriate contributions from developers to help enhance Sites of Importance for Nature Conservation in close proximity to development and to deliver/assist in the delivery of actions within the Biodiversity Action Plan.
- 5. The provision of biodiversity improvements from all development, where feasible.
- 6. The provision of green roofs and living walls which contribute to biodiversity and help tackle climate change.
- 7. The use of sustainable drainage systems that promote ecological connectivity and natural habitats.'
- 1.11 The site was surveyed to assess its ecological value and to ensure compliance with national and local plan policies. The report has been produced with reference to current guidelines for preliminary ecological appraisal (CIEEM 2013) and in accordance with BS 42020:2013 Biodiversity – Code of Practise for Planning and Development.

# 2.0 Methodology

## Desk Top Study

2.1 A desk top study search was completed using an internet-based mapping service (www.magic.gov.uk) for statutory designated sites and two internet-based aerial mapping services (bing.com/maps & maps.google.co.uk) were used to understand the habitats present in and around the survey area and habitat linkages and features (ponds, woodlands etc.) within the wider landscape.

## Phase 1 Habitat Survey

2.2 The Preliminary Ecological Appraisal (PEA) was undertaken on 7<sup>th</sup> April 2016 by Tom Rothero BSc (Hons) MSc MCIEEM and Alexia Tamblyn MA (Oxon) MSc CEnv MCIEEM FRGS. The surveyors identified the habitats present, following the standard 'Phase 1 habitat survey' auditing method developed by the Joint Nature Conservancy Council (JNCC). The site was surveyed on foot and the existing habitats and land uses were recorded on an appropriately scaled map (JNCC 2010). In addition, the dominant plant

species in each habitat were recorded. The potential for the site to support protected species was also assessed.

### Internal and External Bat Surveys

- 2.3 An internal/external bat survey was undertaken on the 11<sup>th</sup> April 2016. The surveyors undertook an internal and external examination of the sole building within the red line boundary. The surveyors assessed the buildings visually and searched for evidence such as:
  - Staining beneath or around a hole caused by natural oils in bat fur.
  - Bat droppings beneath a hole, roost or resting area.
  - Bat droppings and/or insect remains beneath a feeding area.
  - Audible squeaking from within a hole.
  - Insects (especially flies) around a hole.
  - Dead bats.
- 2.4 The buildings were accessed during the day. An external investigation of the buildings was undertaken in order to see if there were access points readily available for bats to utilise or crevices that bats could be roosting in. A building considered to have a higher potential to support roosting bats would include the following:
  - Agricultural buildings (e.g. farmhouses, barns and out buildings) of traditional brick or stone construction and/or with exposed beams;
  - Buildings with weather boarding and/or hanging tiles that are within 200m of woodland and/or water;
  - Pre 1960s detached buildings and structures within 200m of woodland and/or water;
  - Pre 1914 buildings within 400m of woodland and/or water;
  - Pre 1914 buildings with gable ends or slate roofs regardless of location;
  - Buildings which are located within or immediately adjacent to woodland and/or immediately adjacent to water;

• Dutch barns or livestock buildings with a single skin roof and board and gap or Yorkshire boarding if, following a preliminary roost assessment the site appear to be particularly suited to bats.

### **Tree Assessment for Bats**

- 2.5 Roosts of bats in trees may be identified from the following field signs:
  - Black stains beneath cracks, splits and other features where bat dropping have fallen;
  - Dark marks at entrance points where bats have rubbed against the wood and left natural body oils;
  - Feeding remains beneath roosts, such as insect wings;
  - Chattering of bats;
  - Bat droppings under access points;
  - Scratch marks around a feature (cavity or split) caused by bat claws;
  - Urine stains below the entrance or end of split;
  - Large roosts or regularly used sites may produce an odour;
  - Flies around the entrance, attracted by the smell of guano.
- 2.6 The trees on site were assessed for their potential to support roosting bats. The trees were assessed visually for evidence of bats as well as for features that increase the likelihood such as the following:
  - Woodpecker holes, natural cracks and rot holes in trunks and branches;
  - Frost cracks;
  - Trunk and branch splits;
  - Hollow sections of trunk and branches;
  - Loose bark;
  - Cavities beneath old root buttresses and coppice stools;
  - Dense epicormic growth;
  - Dense ivy cover.
- 2.7 Trees scheduled for arboricultural work should also be assessed, and may be categorised (Table 1) to relate the value of their features to recommended actions. This approach allows trees to be graded according to their potential to support bat roosts. Trees may be

assessed as having the potential to support bats (from an individual to a larger roost) even if no bats have been found.

Table 1. BCT 2016 Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to
to be used by roosting bats.	
	be used by commuting or foraging bats.
A structure with one or more potential roosting sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by lager numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).	Habitat that could be used by a small numbers of commuting bats such as a gappy hedgerow or un-vegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
A tree of sufficient size and age to contain PRFs but with none seen from the ground of features seen with only very limited roosting potential.	
A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only - the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for long periods of time due to their size, shelter, protections, conditions and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known
	A structure with one or more potential roosting sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by lager numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground of features seen with only very limited roosting potential. A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only - the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed). A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for long periods of time due to their size, shelter, protections, conditions and surrounding habitat.

### **Badger Survey**

- 2.8 A badger survey was undertaken at the site to assess if badgers were using the area and if any setts were located on the site and 30m away from the site that might constrain development. The evaluation of badger activity was based on methodology developed for the National Survey of Badgers (Creswell et *al.*, 1990) and includes searching for badger field signs such as setts, badger pathways, tracks (pawprints), dung piles with latrines, badger hairs and feeding signs such as snuffle holes. During the survey, all habitats potentially suitable for badgers were systematically examined for evidence of badger activity including:
  - Setts: several sett types may be present within a social group territory, ranging from a single hole to numerous interconnecting tunnels. Setts can be categorised into main, annexe, subsidiary and outlier (Wilson et *al.*, 1997).
  - Latrine sites: badgers characteristically deposit dung in pits, which may be located along the boundaries and within the social group territory. These sites serve as means of inter- and intra-group communication.
  - Paths and runs: well used routes between setts and/or foraging areas. Often used by generations of badgers.
  - Snuffle holes: areas of disturbed vegetation often formed by badgers foraging for ground dwelling invertebrates such as earthworms and larvae and the underground storage organs of plants.
  - Hair: often found among spoil and bedding outside entrances to setts or snagged on fences (such as barbwire) along well-used runs.
  - Footprints: easily distinguishable from other large mammal species. Often found along paths and runs or in spoil outside sett entrances.

## Habitat Suitability for Reptiles

- 2.9 Habitat surveys were carried out to assess the potential of the site to hold populations of reptile species. This involved looking for the presence of factors that would increase the suitability of the site for reptiles such as:
  - Scrub and grassland (long sward) mosaic across the site;

- Features that can be potential hibernation sites for common reptiles such as log piles;
- Grass tussocks within the grassland that can act as shelter and burrowing sites;
- Water bodies or damp places on site (grass snakes);
- Compost heaps or decaying vegetation (slow worms);
- Features that can act as refugia on the ground such as disused roofing felt.

## Habitat Suitability for Great Crested Newts

- 2.10 Habitat surveys were carried out to assess the potential of the site to hold great crested newts (*Triturus cristatus*). This involved looking at the wider landscape using Google Maps and Nature on the Map to types of habitat in the wider landscape. This also involved looking for the presence of factors that would increase the suitability of the site for great crested newts such as:
  - The presence of suitable breeding places (water bodies) on site and within 500m of the site in the wider landscape;
  - Habitat connectivity between ponds (if present) in the wider landscape and on site;
  - The condition of the ponds and whether there were factors that would render them unsuitable for great crested newts (GCN's) such as fish;
  - Land uses surrounding the site that may affect the potential of the site to hold GCN's such as agriculture;
  - Type of suitable habitat on site such as scrub/grassland mosaic;
  - Patches of woodland in the wider landscape that can provide terrestrial habitat;
  - Any barriers between known populations of GCN's such as motorways and roads;
  - Hibernation features on site for great crested newts such as log and rubble piles.

#### Dormice

2.11 Woodland and hedgerows were assessed for their potential to support dormice. This involved assessing potential food species, diversity as well as the structure, form and management of features for dormice. Habitat connectivity is also assessed from desk-based resources.

### Limitations

- 2.12 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no single investigation could ensure the complete characterisation and prediction of the natural environment.
- 2.13 The protected species assessment provides a preliminary view of the likelihood of protected species occurring on site, based on the suitability of the habitat and any direct evidence on site. It should not be taken as providing a full and definitive survey of any protected species group. The assessment is only valid for the time when the survey was carried out. Additional surveys may be recommended if, on the basis of this assessment it is considered reasonably likely that protected species may be present.

# 3.0 Results

# Desktop Study

- 3.1 The site lies adjacent to the semi-canalised Frays River and the Colne Valley Regional Park.
- 3.2 The Uxbridge Alderglade Nature Reserve lies within 50m of the site running alongside the river. The area is a Site of Importance for Nature Conservation (SINC) with Borough Grade 1 importance. Bat species have been recorded in this wet woodland and marshland habitat including Brandt's bat (*Myotis brandti*).
- 3.3 To the north of the site also lies the Fray's Valley LNR and Fray's Farm Meadows SSSI 0.6km away and the Denham Quarry Park LNR 0.9km away. However, the A40 acts as a significant barrier between these designations and the site.
- 3.4 Other than nearby statutory designations, there are notable habitats in close proximity. These include Uxbridge Common which lies approximately 0.25km southeast of site and an unnamed ancient replanted and deciduous woodland approximately 0.75km northeast of the site.

# Habitats

3.5 The site was dominated by two main habitats (1) neutral semi-improved grassland and(2) hard standing with some ephemeral vegetation present. Also present were areas of(3) scrub, (4) scattered trees and (5) a large building.

# Neutral Semi-improved Grassland

3.6 The area of neutral semi-improved grassland on site was previously used as the pub garden with seating and a children's play area present. It is presumed that the area was previously regularly mown and managed. The dominant species present included cock's foot (*Dactylis glomerata*), Yorkshire fog (*Holcus lanatus*), dandelion (*Taraxacum agg*), cleavers (*Galium aparine*), perennial rye grass (*Lolium perenne*), yarrow (*Achillea millefolium*), meadow buttercup (*Ranunculus acris*), hogweed (*Heracleum sphondylium*), ribwort plantain (*Plantago lanceolata*), broad leaved dock (*Rumex obtusifolius*). The edges of the grassland also included species such as herb Robert (*Geranium robertaniun*), common nettle (*Urtica dioica*) and common mallow (*Malva sylvestris*).

### Hard Standing with Ephemeral Vegetation

3.7 The areas of hard standing on site have been left unmaintained for sometime and some sparse succession vegetation is now present. The species present included species such as willowherb (*Epilobium spp*), mugwort (*Artemisia vulgaris*), Yorkshire fog, butterfly bush (*Buddlejar davidii*), dock (*Rumex spp*) and common ragwort (*Senecio jacobea*).

#### River Bank - Scrub

3.8 The river bank was narrow and steep and was dominated by bramble (*Rubus fruticosusu agg*), common nettle, and a stand of the schedule 9 invasive species Japanese knotweed (*Fallopia japonica*).

#### Trees & Shrubs

3.9 Also present within and around the site boundary were scattered trees and shrubs. The species present on site included willow (*Salix spp*), elder (*Sambucas nigra*), yucca, butterfly bush, eucalyptus and a leylandii (*Cupressus leylandii*) hedge.

### Internal And External Building Inspection for Bat Species

- 3.10 There was one building present within the site boundary. The large former public house building was assessed internally and externally for its potential to support roosting bat species.
- 3.11 The building supported a steeply pitched tiled roof structure with internal wooden sarking and rough wooden beams. Several enclosed roof voids were present within the building that were all interconnecting. No evidence of roosting bat species was observed within any of the voids present. No droppings, feeding remains or staining on the wooden beams was recorded.
- 3.12 Externally the roof was clad in concrete tiles. Across the roof structure there were missing, broken and lifted tiles present. This creates dark crevice habitat between the

tiles and the internal sarking that could be utilised by crevice dwelling bat species such as pipistrelles (*Pipistrellus spp*) as occasional roosting habitat. The building is considered to have 'low' potential for supporting roosting bat species due to these external features.

### Habitat Suitability for Protected Species

### Badgers

3.13 No badger setts were identified within the red line boundary for the site. No other evidence of badger activity such as latrine posts or digging was observed on site. One mammal path running across the site adjacent to the western boundary along the riverbank was present.

## Hazel Dormice

3.14 There was no habitat present on site considered to be suitable for supporting hazel dormice. There were no species rich hedgerows or woodland blocks on site or adjacent to the site.

### Great Crested Newts

- 3.15 There were no water bodies present on site at the time of the survey. The River Wye adjacent to the western boundary of the site is considered to be a significant barrier to dispersal for GCN due to its wide, fast flowing nature between all ponds to the west of the site.
- 3.16 Two ponds are present within 500m of the site to the east and north east. Pond 1 is approximately 170m east of the site boundary and Pond 2 is located approximately 275m north east of the site. Both ponds are located behind significant areas of housing and road systems that are considered to be barriers to dispersal for GCN.

## Reptiles

3.17 The grassland area on the site is a relatively small area (approx. 0.06ha) of habitat and exhibited a short to medium sward at the time of the survey. This area is considered to have low potential for supporting common reptile species. It is considered unlikely that

there will be a population of common reptile species on site due to a lack of connectivity to other areas of suitable habitat.

## Tree Assessment for Roosting Bat Species & Habitat Suitability

- 3.18 There were no trees on-site which were considered to contain suitable features for roosting bats.
- 3.19 The site itself is small and dominated by hard standing and relatively species poor grassland and it therefore considered to have low suitability for foraging bat species. However the river corridor habitat off site but adjacent to the western boundary of the site is considered to be 'high' quality habitat for bat species for foraging and commuting.

### **Breeding Birds**

3.20 The shrubs and individual trees on-site are considered to have potential for nesting bird species. These habitats may potentially be occupied during the bird breeding season (March - September).

## 4.0 Discussion

## Site Ecological Value

- 4.1 The site is dominated by large expanses of hard standing and relatively species poor neutral semi-improved grassland. All habitats found within the site boundary are considered to common and widespread throughout the UK and are of limited ecological values at site level only.
- 4.2 The site will require a buffer along the edges of Fray's River, a requirement which would need to be agreed with the relevant agency. It is considered that as no development would be planned for the bank side of the red line boundary, that no impacts on the bank side habitat would be predicted. However, it is recommended that this bank side habitat is enhanced where possible. The planting along this edge with native species of ecological value, would provide additional foraging habitat for bats as well as other local native species.

- 4.3 Along the western boundary for the site a stand of schedule 9 invasive plant species Japanese knotweed (*Fallopia japonica*) is present. It is recommended that this be removed from the site using appropriate methods. A specialist contractor will need to provide advice on how to remove this stand due to the location near a water course. The removal of this plant would be recommended prior to development on site.
- 4.4 Two large mature willow (*Salix spp*) trees are present along the western boundary of the site, it is recommended that these trees be retained for their landscape and ecological value.
- 4.5 It is considered that the redevelopment of plot 191 Harefield Road would not have a negative impact on local wildlife and biodiversity. With appropriate enhancements it is considered that a net gain in biodiversity could be achieved for the site post development. Furthermore, it is considered that the redevelopment of the site will not impact upon the nature conservation value of the site or indeed the wider landscape.
- 4.6 Given the sites close proximity to the Fray's River it is recommended that a Pollution Prevention Plan be developed and implemented during the development phase to prevent any negative impacts such as surface water run off into the river and its water quality.

## **Protected Species**

## Internal and External Assessment for Bat Species

- 4.7 No evidence of roosting bat species was recorded within any of the interconnecting roof voids within the building. There were no obvious access points observed into the voids due to the presence of tightly fitting internal wooden sarking. Due to the lack of internal evidence it is considered that bat species are not roosting within any of the enclosed roof voids within the building.
- 4.8 Externally the building exhibited some lifted and missing tiles across the roof structure. This creates access points into the dark crevice habitat between the tiles and the wooden sarking beneath for crevice dwelling species such as pipistrelles (*Pipistrellus spp*).

Externally the building is considered to have 'low' potential for supporting roosting bat species due to the features present. In accordance with the best practice guidance provided by the BCT (2016) at least on dusk emergence survey is recommended for the building prior to demolition to ascertain whether bat species are using these external features.

#### Tree & Habitat Assessment for Bat Species

- 4.9 None of the trees on site were considered to have any potential for supporting roosting bat species. All trees lacked features such as large splits of rot holes that could be utilised as roosting sites. None of the trees within the site are considered to be under any constraints by the presence of roosting bat species and no further surveys are recommended.
- 4.10 The onsite habitats on site are considered to be of 'low' quality for foraging and commuting bat species. The site is dominated large areas of hard standing and relatively species poor grassland which are considered to be sub optimal habitats for foraging bats species due to a low level of biodiversity and low invertebrate activity.
- 4.11 The off site habitats adjacent to the western boundary of the site include the Fray's River and the Uxbridge Alderglade Nature Reserve SINC. These areas are known to support various bat species including Brandt's bat (*Myotis brandtii*) and are considered to be of 'high' quality habitat for foraging and commuting bat species. Although development of the site will no have any direct impacts on these areas it is considered likely that indirect effects such as light spill do have potential for a negative effect, especially on some of the rarer bat species.
- 4.12 It is recommended that a sensitive lighting scheme for the development be conditioned as part of the planning permission to ensure that bat species using the river corridor and adjacent habitats remain unaffected by the proposals. A suggested lighting approach is detailed below.

### Lighting & Mitigation Measures for Bats

4.13 Any proposed lighting scheme as part of the development will have to take into account bat species using the adjacent river corridor and Nature Reserve. All bat species are nocturnal, resting in dark conditions in the day and emerging at night to feed. Bats are known to be affected by light levels, which can affect both their roosting behaviour as well as their foraging behaviour. This needs to be taken into account, with a sympathetic lighting scheme for the development. Recommendations include:

- Lighting should only be installed if there is a significant need;
- Light levels should be kept low, the use of low pressure sodium lamps or high pressure sodium instead of mercury or metal halide lamps where glass glazing is preferred due to its UV filtration characteristics;
- Baffled lights should be used, where light is directed towards the ground;
- Lighting should be avoided on the western boundary of the site along the river corridor, with any lighting angled away from this area, bats use linear features such as treelines and water ways to commute across the landscape and to forage; and
- Lights should have focussed luminance on their target area, preventing light spill and pollution into other areas of the site and local area.
- 4.14 To enhance the local bat population and provide roosting opportunities, it is recommended that boxes should be hung on retained mature trees and have clear flight paths. Recommended boxes include:
  - Schwegler 2F Bat Box these boxes are attractive to small bats and can be hung on trees around the building. One should be used on the mature willow trees along the western site boundary.
  - Schwegler 2FN Bat Box It slightly larger then the 2F and provide opportunities for the larger bats. One should be used on the mature willow trees along the western site boundary.
- 4.15 Incorporating specially designed bat boxes onto mature trees on-site can enhance the habitat on site for bats. Bat boxes will be erected on the trees prior to works starting on site.

## Badgers

4.16 One mammal path crossing the area of grassland along the western boundary on site was the only evidence of mammal activity observed. No specific evidence relating to badgers such as large D-shaped holes, latrines or large areas of digging were observed within the site boundary. The site is not considered to be under any constraints from the presence of badgers.

## Great Crested Newts

- 4.17 There were no water bodies present within the redline boundary of the site at the time of the survey. The Fray's River is considered to be a significant barrier to dispersal for any GCN within ponds to the west of the site due to its width and its high flow rate. On analysis of the sider landscape two ponds were found to be present within 500m of the site boundary to the east and north east of the site.
- 4.18 The ponds are approximately 170m to the east and 275m north east of the site. Both ponds are behind large areas of housing and road systems which are considered to be barriers to dispersal for GCN moving throughout the landscape. It is considered that if GCN are present within these ponds it is highly unlikely that they would be present within terrestrial habitats within the red line boundary for the proposed site during their terrestrial phase. The site is not considered to be under constraints from the presence of GCN and no further surveys are recommended. The locations of the ponds can be found in figure 2, below.



#### Other Species

- 4.19 There were no habitats found within the site boundary that are considered to have potential for supporting hazel dormice. The site is not considered to be under any constraints from this species and no further surveys are recommended.
- 4.20 The grassland area on the site is a relatively small area (approx. 0.06ha) of habitat and exhibited a short to medium sward at the time of the survey. This area is considered to have low potential for supporting common reptile species. It is considered unlikely that there will be a population of common reptile species on site due to a lack of connectivity to other areas of suitable habitat. The site is not considered to be under any constraints from the presence of reptiles species and no further surveys are recommended.
- 4.21 The UK breeding season for most bird species takes place between March and September. It is recommended that any works affecting trees on-site be completed outside of this period. Should this not be possible, it is further recommended that all vegetation suitable for breeding birds be checked for active nests no more than 48 hours prior to vegetation clearance. If active nests are identified, works in the vicinity of the nest must cease until the birds have fledged the nest.
- 4.22 The site boundary is adjacent to the river bank of Fray's River and water vole have been recorded within the Uxbridge Aldergate Nature Reserve to the west of the site. It is considered that the bank habitat of the river will not be affected by the proposed development within the site boundary. Therefore it is considered that there will be no negative impact on water voles in the local area and no further surveys are recommended.

### **General Site Enhancements**

- 4.23 Any mature trees on-site should be maintained where possible to maintain important habitats for a range of birds and invertebrates.
- 4.24 Any trees that are removed should be replaced elsewhere on the site or with native species such as: oak, ash, hazel, beech and cherry, this will mitigate against the loss of habitat that could be considered important under planning local policies.

- 4.25 Bird boxes may be hung on retained mature trees to increase the number of breeding opportunities throughout the site. Recommended boxes include:
  - Schwegler 1N Deep Nest Box give added nest protection from predators
  - Schwegler 1B Bird Box general purpose bird box, suitable for many species
  - Schwegler Bird House This is suitable for all common garden birds and may be attached to a building or wall so is suitable for siting behind climbing plant.

# 5.0 Conclusions

- 5.1 The habitats on site are considered to be of limited ecological value at site level only. The site is dominated by large areas of hard standing and relatively species poor semiimproved neutral grassland. These habitats are considered to be common and widespread throughout the UK.
- 5.2 Offsite habitats include the Fray's River and the Uxbridge Aldergate Nature Reserve are adjacent to the western boundary of the site. It is considered that development on site will not have any direct impacts on these areas but indirect impacts may have a negative effect. Increased surface water runoff and fuel spills during the construction phase could have a negative impact on the water quality of the adjacent habitats. It is recommended that a Pollution Prevention Plan be development and implemented to minimise impacts during the construction phase.
- 5.3 There was one building present on site that was assessed internally and externally for its potential for supporting roosting bat species. The building contained multiple enclosed roof voids, no evidence of roosting bat species was found internally. Externally there were some lifted and missing tiles creating access points into the dark crevice habitats beneath. The building is considered to have 'low' potential for supporting roosting bat species due to the presence of the external features. A minimum of one dusk emergence survey is recommended in accordance with BCT (2016) survey guidelines to ascertain whether these features are used by roosting bat species.

- 5.4 On site habitats are considered to be of 'low' value for foraging bat species due to the low biodiversity of the large areas of hard standing and species poor grassland. The offsite habitats along the western boundary of the site, Fray's River, are considered to be of 'high' quality for foraging bats. It has been recommended within the report that a sensitive lighting scheme be conditioned as part of any planning permission.
- 5.5 No trees were identified on-site, which contained features suitable for roosting bats. As such no further surveys for bats are recommended.
- 5.6 One mammal path was found on site crossing the grassland area adjacent to the western boundary. No other evidence of badgers was found. The site is not considered to be under any constraints from badgers and no further surveys are recommended.
- 5.7 The grassland on site was not considered to be suitable for supporting a population of common reptile species and no suitable habitat for dormice was present on site The site is not considered to be under any constraint from these species and no further surveys are recommended.
- 5.8 No ponds were present on site at the time of the survey and there were no ponds present within the wider landscape that were not behind significant barriers to dispersal for GCN. The site is not considered to be under any constraint from this species and no further surveys are recommended.
- 5.9 The site borders the Fray's River and water voles are known to be present within the adjacent nature reserve. However it is considered that the river bank habitat itself is off site and will not be affected by the development on site and there will be no negative impact on local water vole populations. No further surveys are recommended.
- 5.10 It is recommended that as many of the mature trees as possible within the site boundary be retained as part of the proposals. Enhancements for the site have been detailed within this report.

## 6.0 References

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Magic Interactive Map: <u>www.magic.gov.uk</u>

Appendix 1. Photographs





<b>Photograph 9:</b> Former pub garden limited habitats present on site	
<b>Photograph 10:</b> Former pub garden	
<b>Photograph 11:</b> Japanese Knotweed located on the edge of the pub garden	
<b>Photograph 12:</b> Buddlejar growing out of hard standing terrace	





Appendix 2: Habitat Map



Key	
Hard Standing	
 Building	
Neutral Semi-improved Grassland	
Continuous Scrub	
Scattered Trees (Canopy & Position Approx)	
Cypress Hedge	
River	
Survey Boundary	
Japanese Knotweed	
Ammal Path	
Site: 191 Harefield Road, Uxbridge	
Client: Frendcastle Homes LLP	
Surveyor: TR	
Drawing Date: April 2016	
Drawing Title: Phase 1 Habitat Map	
the ecology partnership	
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