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Preliminary Ecological Appraisal and Preliminary Roost Assessment

18 Parkside Rd
Reading
Berkshire
RG30 2DB

May 2019

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This report remains valid for 12 months from date of issue. Survey data are valid for 12-24 months from the date the survey was undertaken.		

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The views and opinions contained within the 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 works.

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1. EXECUTIVE SUMMARY

- 1.1. This report documents the results of a Preliminary Ecological Appraisal and Preliminary Roost Assessment at 18 Parkside Rd, Reading, RG30 2DB. The survey and report were required to support the proposed planning application for the site.
- 1.2. The proposed plans will involve demolition of the existing buildings, the erection of 14 units and associated landscaping works.
- 1.3. The site is considered to be of low-moderate ecological value. It has the potential to support a small number of protected species, including bats for foraging, hedgehogs for foraging and nesting, nesting birds, reptiles and common amphibians. The habitats of most value to wildlife such as bats and birds are the buildings and trees.
- 1.4. Bat surveys have been recommended for the house and the summerhouse. The house has high bat roost potential and the summerhouse has low bat roost potential. One tree has low bat roost potential and recommendations have been made with regard to any works that are required to take place should it be impacted by the proposal.
- 1.5. Mitigation measures, some precautionary, have been recommended with regard to protected species such as birds, reptiles, hedgehog and amphibians within the wider site and landscape.
- 1.6. Enhancements have been suggested such as log/brash piles and a wildlife friendly planting scheme.

2. INTRODUCTION & BACKGROUND

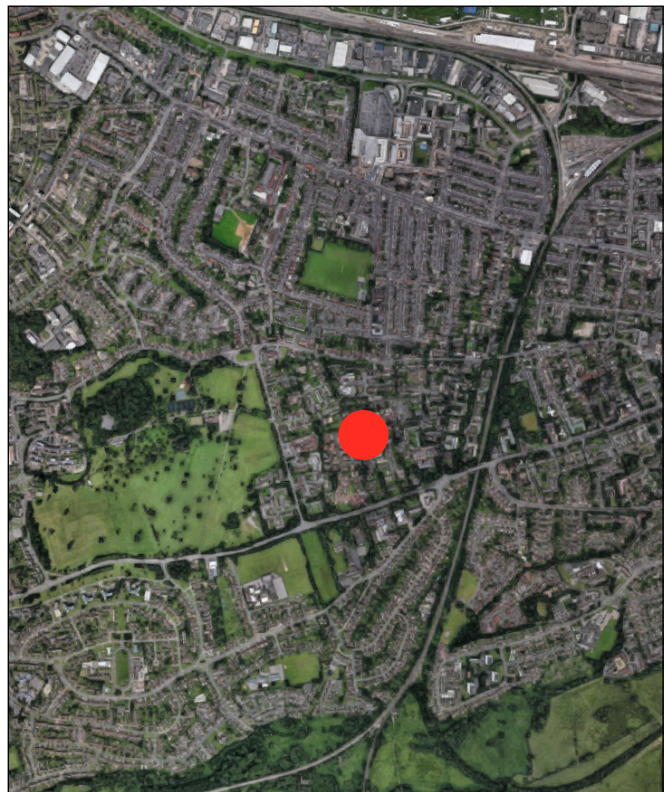
- 2.1. This report documents the results of a Preliminary Ecological Appraisal and Preliminary Roost Assessment at 18 Parkside Rd, Reading, RG30 2DB. The survey and report were required to support the proposed planning application for the site involving the demolition of existing buildings and erection of 14 units.

Site Overview

- 2.2. The proposed development site at 18 Parkside Rd sits within a very urbanised area and is immediately surrounded by similar residential developments with associated gardens. Parkside Road runs along the western boundary and Westcote Road runs along the northern boundary (Map 1).
- 2.3. The wider landscape is dominated by the urban residential area of Reading (Map 2) with an external rural environment consisting of pastoral and agricultural fields, deciduous woodlands, wood pasture and parkland, coastal and floodplain grazing marsh.
- 2.4. The habitats surrounding the site support potential roosting, foraging and commuting habitat for a number of species of bat, with potential flight lines leading from the property to nearby deciduous woodland.



Map 1: 18 Parkside Rd, existing site plan



Map 2: 18 Parkside Rd, within the context of the wider landscape

3. LEGISLATION & POLICY

National Planning Policy Framework (NPPF) 2018

3.1. NPPF aims to minimise impacts on biodiversity and provide net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity. Chapter 15 'Conserving and enhancing the natural environment' details what local planning policies should seek to consider with regard to planning applications.

3.2. Planning policies and decisions should contribute to and enhance the natural and local environment by:

170 a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

170 d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

174 b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

175 a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

175 d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

UK Biodiversity Action Plan & Habitats and Species of Principal Importance

3.3. The UK Biodiversity Plan (BAP) was a programme designed to help conserve the UK's biodiversity. It led to the production of 436 action plans between 1995 and 1999 to help many of the UK's most threatened species and habitats to recover. A review of the UK BAP priority list in 2007 led to the identification of 1,150 species and 65 habitats that met the BAP criteria at UK level. Currently 56 Habitats of Principal Importance and 943 Species of

Principal Importance are included within Schedule 41 of the NERC Act and these include species and habitats which were identified in the UK BAP and which continue to be considered to represent the conservation priorities of England in the UK Post-2010 Biodiversity Framework.

- 3.4. Species of Principal Importance and Habitats of Principal Importance are those identified as the most threatened and requiring conservation action under the Schedule 41 of the UK Biodiversity Action Plan & Habitats and Species of Principal Importance
- 3.5. The UK Biodiversity Plan (BAP) was a programme designed to help conserve the UK's biodiversity. It led to the production of 436 action plans between 1995 and 1999 to help many of the UK's most threatened species and habitats to recover. A review of the UK BAP priority list in 2007 led to the identification of 1,150 species and 65 habitats that met the BAP criteria at UK level. Currently 56 Habitats of Principal Importance and 943 Species of Principal Importance are included within Schedule 41 of the NERC Act and these include species and habitats which were identified in the UK BAP and which continue to be considered to represent the conservation priorities of England in the UK Post-2010 Biodiversity Framework.

Berkshire Local Nature Partnership (LNP)

- 3.6. The Berkshire Local Nature Partnership (LNP) include partners from the health, education, local authority, business, and nature conservation sectors. These partners work together to create a sustainable, healthy and vibrant Berkshire by promoting the conservation and enhancement of nature and the benefits received from a healthy environment.
- 3.7. Priority species in Berkshire include; Lesser Stag Beetle, Otter, Adder, Marsh Fritillary, Water Vole, Long-eared Bat, Lapwing and Hedgehog.
- 3.8. Priority habitats include; urban, lowland meadows, lowland dry acid grassland, lowland calcareous grassland, lowland mixed deciduous woodland, wet woodland, wood-pasture and parkland, rivers, lowland fens, reedbeds, floodplain grazing marsh, eutrophic standing waters, heathland, orchards and hedgerows.
- 3.9. Protected species legislation can be found in Appendix 1.

4. METHODOLOGY

Desk Study

- 4.1. A web-based desk study was undertaken for designated sites and protected species and habitat records within 2 km of the site. The following online resources were consulted:
- The MAGIC website, to obtain information on any designated sites of nature conservation interest within 2 km of the site and details of any European Protected Species licences issued within 2km (<http://www.magic.gov.uk/MagicMap.aspx>); and
 - Google Maps, to view aerial photographs and maps, to assess the ecological context of the site (<http://acme.com/planimeter/>).

Preliminary Ecological Appraisal

- 4.2. Assistant Ecologist Emily Partridge BSc (Hons) undertook a Preliminary Ecological Appraisal on 2nd April 2019.
- 4.3. The PEA identified the habitats present and their potential for protected species, particularly bats, birds, hedgehogs, badgers, dormouse, amphibians and reptiles, following the standard guidelines set out by the Chartered Institute of Ecology and Environmental Management (CIEEM).

Bats

- 4.4. The trees were assessed visually for evidence of bats and assessed for features which increase the likelihood of bats roosting, such as storm damage, rot holes, ivy cover, flaying bark and splits in the trunk.
- 4.5. Linear habitat features, both within and connecting to the site, were visually assessed for their likely use as foraging and commuting corridors.
- 4.6. Other habitats on site were visually assessed for their likely use as foraging sites.

Amphibians

- 4.7. Waterbodies were assessed for their potential for use by amphibians and for features which increase likelihood of use as breeding sites for Great crested newts, such as suitable emergent vegetation, low water turbidity, absence of fish and low levels of water fowl.

- 4.8. Other habitats on site were assessed for their likely use out side of the breeding season for both foraging and shelter purposes.

Reptiles

- 4.9. Open areas of habitat were visually assessed for suitability for reptiles and features which increase likelihood of use by reptiles, including the presence of tussocky vegetation, log and rock piles, basking spots and compost heaps.

Mammals, excluding bats

- 4.10. Areas of dense vegetated cover on site and adjacent to the site were assessed for their likely use by badgers, including the presence of setts and latrines. Open areas of habitat were visually assessed for signs of mammal tracks, push throughs and latrines.
- 4.11. Areas of woodland, copse, tree lines, hedgerows and other boundary vegetation were assessed for their likely use by hazel dormice, or increased likelihood of use due to presence of hazel and other suitable food species.

Bat Building Inspection

- 4.12. Emily Partridge carried out a bat building inspection of all buildings at 18 Parkside Rd on 2nd April 2019 in accordance with the following methodology.

Internal Survey:

- 4.13. An investigation was carried out of all roof and wall features for signs of bats roosting and the access potential of the roof for bats. The surveyor looked for bats, bat droppings, likely access points, signs of feeding, dead bats, scratch marks and staining, and made a suitability assessment of the structure of the roof.

External Survey:

- 4.14. An investigation was carried out of features that may indicate bat presence. For example; gaps under roof and ridge tiles, or behind soffit boards and wooden fascias. A search for bat droppings was made beneath each potential entry/exit point identified. The surveyor used a powerful, low heat LED torch and binoculars.

5. SURVEY RESULTS

Desk Study

- 5.1. One statutory designated site has been identified within 2km of the site, Lousehill Copse Local Nature Reserve (LNR), located approximately 1.1 km northwest of the site.
- 5.2. The site lies within a Site of Special Scientific Interest (SSSI) Impact Risk Zone. No risks are listed for residential developments such that no further action is required.
- 5.3. A number of priority habitats are present in the local area, including coastal and floodplain grazing marsh, deciduous woodland, traditional orchards, and woodland pasture and parkland.
- 5.4. The habitats surrounding the site support potential roosting, foraging and commuting habitat for a number of bat species, with potential flight lines leading from the property to nearby woodland.

Habitat Assessment

- 5.5. Habitats identified within the working footprint boundary include buildings, hardstanding, amenity planting and grassland, scattered trees, tree-lines, and ruderal vegetation.
- 5.6. Figure 1 below illustrates the location and extent of the habitats recorded within the site. It should be noted that not all botanical species present could be observed due to the time of year.



*NOTE Areas are indicative and are not shown to exact scale.



Trees and amenity planting

- 5.7. The habitats on site are dominated by trees with an amenity planting understory (see Figure 1). Tree species include; elder *Sambucus nigra*, privet *Ligustrum* sp., sycamore *Acer pseudoplatanus*, and various fruit trees.
- 5.8. The amenity planting contained a mixture of small plants and shrubs. Small areas of exclusively amenity planting were located to the front of the property (see Figure 1). Species included; cherry laurel *Prunus laurocerasus*, iris sp., bluebell *Hyacinthoides non-scripta*, holly *Ilex* sp., paperplant *Fatsia japonica*, dog rose *Rosa canina* and daffodil *Narcissus* sp..
- 5.9. Additional species recorded include; cleavers *Galium aparine*, common nettle *Urtica dioica*, lords and ladies *Arum maculatum*, green alkanet *Pentaglottis sempervirens* and bramble *Rubus fruticosus* agg..



Image 1: Some amenity planting and small trees on site.

Grassland

- 5.10. The second largest habitat within the site was amenity grassland which was predominantly located to the east of the site (see Figure 1). The grassland has been used as a garden and has likely been subject to regular mowing, however at the time of the survey the grass had not recently been mown and was of a sward length of approximately 5 cm. Species include Yorkshire fog *Holcus lanatus*, springy turf-moss *Rhytidiadelphus squarrosus*, red dead nettle *Lamium purpureum*, field woodrush *Luzula campestris* and yarrow *Achillea millefolium*.



Image 2: The grassland with scattered trees

Hardstanding

- 5.11. A driveway enters the site from Parkside Road on the western boundary and leads to a parking area and garages at the front of the property. The remainder of the hardstanding within the site consists of paths and patio which surround the existing property. The majority of the hardstanding was recorded to be in good condition with few encroaching species.



Image 3: An example of an area of hardstanding

Pond

- 5.12. One man made concrete pond was present on site measuring approximately 1 m by 2 m. The pond contained little water at the time of survey and was dominated by leaf litter and duck weed *Lemna minor*.



Image 4: The concrete lined pond

Ecological value

- 5.13. The boundary habitats were considered to be of low-moderate ecological value providing roosting and foraging opportunities for a range of species, including bats, nesting birds, reptiles and hedgehog.

Preliminary roost assessment of buildings on site

Building	Photos	Description	Potential bat roost features and evidence of use	Assessment of bat potential	Further survey requirements
B1 House	 	Brick built house with clay tile roof	No evidence of use by bats or birds. Access internally and gaps under hanging and roof tiles. Potential for use as a day roost.	High	Minimum of 3 dusk/ dawn surveys. To include 2 between mid May and July.
B2 Summer House	 	Brick built summer house with clay tile roof	Access to void through large opening internally. Potential for use as a night roost or feeding perch.	Low	Minimum of 1 dusk/ dawn surveys between mid May and July.
B3 Shed		Wooden shed with bitumen felt roof	No evidence of use by bats or birds.	Negligible	No further survey work required

Protected species

Bats

- 5.14. The majority of the trees on site were young and no bat potential was recorded within them. A single tree in the northwest of the site was recorded to have thick ivy growth and was classified as having low potential to support roosting bats.



Image 5: Tree with low bat potential.

- 5.15. B1, the house, contains high potential for use as a roost site for small numbers of crevice and void dwelling bat species. The roof space has a maximum height of approximately 2.5m.
- 5.16. B2, the summer house, contains low potential for use as a roost site.
- 5.17. In accordance with the Good Practice Guidelines further surveys are required in order to confirm number and type of species present on site and roost type(s):
- A minimum of 3 bat emergence/re-entry surveys, or as many as required to confirm roost characterisation, are required for B1, the house, to be undertaken between May and September.
 - A minimum of 1 bat emergence/re-entry survey is required for B2, the summer house, to be undertaken between May and September.

Birds

- 5.18. The vegetation within the site provides suitable foraging opportunities for common garden bird species which may be found in the local area.

- 5.19. Recommendations with respect to this species group are set out in Section 6 below to ensure that they are safeguarded throughout the development works.

Reptiles

- 5.20. The development area has low potential for reptile species, it contains a small number of features suitable for foraging and nesting purposes. It would most likely be used by small numbers of common species such as slow worm. Some precautionary mitigation has been recommended following destructive and supervision best practice.

Amphibians

- 5.21. The site is considered to have low potential to support common amphibians such as the common toad *Bufo bufo* and common frog *Rana temporaria*. Precautionary mitigation measures have been recommended.
- 5.22. With regard to great crested newts *Triturus cristatus*, there are no water bodies on site suitable for breeding purposes and the habitat on site has limited suitability. No suitable waterbodies have been identified within 500m for breeding purposes. On this basis, it is considered that the site is of negligible ecological value to this species.

Hedgehogs

- 5.23. The habitats within the site and in the surrounding area are considered to be suitable for hedgehogs. Several records of living hedgehogs are present on Hedgehog Street within 500m of the site.
- 5.24. It is therefore considered likely that this species may be present within the site during the development works. Safeguarding recommendations with respect to this species are therefore set out in Section 6 below.

Badgers

- 5.25. No evidence of use by badgers was seen within the proposed development site and no setts were found. No further survey work is required for this species.

6. IMPACTS, MITIGATION AND ENHANCEMENT FOR DISCUSSION

Habitat Status and Impacts

- 6.1. The plants and habitats recorded within the working footprint are common and widespread in the UK. The site is dominated by trees and amenity planting and is considered to be of low to moderate ecological value within the context of the surrounding landscape.
- 6.2. The site has the potential to support a small number of protected species, including bats for foraging and roosting, hedgehogs for foraging and nesting, nesting birds, reptiles and common amphibians.
- 6.3. The proposed plans will involve the demolition of the existing buildings, removal of areas of habitat, and construction of 14 flats.
- 6.4. A single tree at the north of the site was identified as containing low potential for roosting bats. It is understood from the proposed plans that this tree will remain in situ throughout the development. Recommendations have been made in paragraph 6.9.
- 6.5. Any trees to be retained should be protected throughout the development in accordance with British Standards BS 5837:2012. Root protection areas should be 12 x the diameter at breast height (DBH), or to the extent of the longest branch for unpruned trees, unless otherwise advised by a qualified arboriculturalist.
- 6.6. Trees located offsite but with their roots on site should also be protected. No materials should be allowed to be stored within these root protection areas and no heavy machinery should run over them.

Status of Bats on site

- 6.7. The house was assessed as having high potential for roosting bats and the summer house had low potential for roosting bats. The shed was assessed as having negligible roosting potential.
- 6.8. Further survey effort, as detailed in section 5 above, is required in order to confirm presence or likely absence and to inform suitable mitigation and compensation as required.
- 6.9. The tree in the northwest of the site was recorded to have thick ivy growth and was classified as having low potential to support roosting bats. This tree is recommended to be

section felled and carefully lowered to the ground. If there are any signs of bats, work should stop immediately and a licence bat ecologist consulted.

- 6.10. The tree lines around the site hold moderate potential for use by commuting and foraging bats and provide potential flight lines from the property to nearby deciduous woodland.

Impact of Proposals and Recommendations for bats

- 6.11. All buildings on site are proposed for full demolition. B1, the house, and B2, the summer house, contained high and low potential for use by bats respectively.
- 6.12. The proposed demolition works will have an impact on bats if they are present and therefore further bat emergence/re-entry surveys are required to be undertaken between May and September, in suitable weather conditions, in order to establish the likely presence/absence of bats and thereby determine the level of impact.
- 6.13. If bat are found to be roosting within the buildings proposed for demolition a European Protected Species Mitigation Licence (EPSL) or a Bat Mitigation Class Licence (BMCL) will be required to enable the works.
- 6.14. The correct licence type will be determined based on the number of species and roosts present on site, in addition to the roost types.

Bat Emergence/Re-entry Surveys

- 6.15. Bat emergence/re-entry surveys will be required to confirm the likely presence/absence of bats and also help to confirm the species, type of roost and number of bats using any roosts identified.
- 6.16. These surveys should be undertaken in accordance with best practice guidelines detailed by the Bat Conservation Trust (Bat Surveys - Good Practice Guidelines 2016).
- 6.17. As the house contains high potential for roosting bats, a minimum of 3 surveys are required, or as many as suitable to determine roost characterisation and entry/exit features.
- 6.18. Surveys should be conducted in the bat season between the months May and September. Of the 3 surveys required a minimum of two surveys must be carried out between May and August, with the third able to be carried out between late April and September in suitable weather conditions. Surveys are to include a minimum of one dusk emergence and one dawn re-entry survey, with the third survey consisting of a dusk or dawn as considered most appropriate by the ecologist.

- 6.19. Additional survey types can include capture of bats using static nets in order to determine breeding status, use of static bat detectors etc. if required, the most appropriate technique will be determined by the ecologist in order to answer the questions required by the British Standards.
- 6.20. The summer house has been identified as holding low potential for use by bats and therefore requires a minimum of one dusk emergence / dawn re-entry survey between May and August. It is recommended a single camera is used to survey this building.
- 6.21. Surveyors will record bat activity using hand held EM Touch or Batlogger bat detectors to confirm species identification.
- 6.22. Survey results will be recorded including bat access points, bat species, time and type of activity (e.g. emergence, commuting, foraging).
- 6.23. Following the results of the survey work, mitigation can be put in place in order to ensure no bats are harmed, injured or disturbed by the proposed works. Possible enhancements will also be recommended.

Bats & Lighting

- 6.24. Many bats are sensitive to light and could potentially avoid the area if access points or the surrounding areas become lit.
- 6.25. Any new external lighting from the new development must be directed to avoid light spillage onto vegetation, particularly trees on site, to prevent a decrease in use of the foraging and commuting habitat present.
- 6.26. Appropriate lighting options will prevent a negative impact on bats using the habitats on site and should be approved by a suitably qualified Licensed Bat Ecologist if there is any doubt as to their effect.
- 6.27. Minimising the periods of lighting will reduce the potential impact on bats. "Warm white" LED lights (2000-3000K) should be used as a preference as these are less penetrating than bright white LED lights (3000K +). Using Lower wattage lights will also reduce the light spillage and reflection.
- 6.28. Motion sensors are strongly recommended, using a short timer to reduce the duration of lighting and reduce disturbance to bats.

- 6.29. It is important to direct the light only where it is needed and avoid light spillage onto vegetated margins. Low level stick or bollard lights are most suitable as long as they have full hoods so the bulbs cannot be seen at all.
- 6.30. Upward lighting can be minimised by fitting lights with downward facing baffles to avoid light pollution. Preventing light spillage above an angle of 70 degrees can be achieved by using fixtures that shield the bulb and direct the light downward. Uplighting on trees or buildings of any type are therefore unsuitable.

Status of Birds on Site

- 6.31. Vegetation within the working footprint and wider site hold potential for nesting and foraging use by common garden and woodland bird species
- 6.32. The proposed development has the potential to impact on a number of native species of bird. It is therefore recommended that all vegetation clearance should be undertaken outside of the nesting bird season (March to September inclusive for most species in the UK).
- 6.33. All occupied birds nests have legal protection from damage and destruction under the Wildlife & Countryside Act (1981). If vegetation clearance must be undertaken during the nesting season, a breeding bird survey by a suitably qualified ecologist must be carried out to confirm that no active nest sites will be destroyed by the works.

Hedgehogs

- 6.34. As a precaution, all contractors should be inducted by an ecologist in a tool box talk to ensure they are aware of the risks to protected wildlife on site prior to the commencement of any development works.
- 6.35. The proposed development has potential to impact on hedgehogs as they are present in the area and are likely to use the site on occasion. Therefore, all dense vegetative areas and brash piles should be cleared by hand in a sensitive manner to ensure the welfare of any hedgehogs that may be utilising these habitats.
- 6.36. If any new fence-lines are proposed, these should include wildlife access holes so that they can freely access/exit the site. 13cm by 13cm is sufficient for any hedgehog to pass through and will be too small for most pets.

- 6.37. During all construction works it is recommended that any trenches or excavations be covered overnight, or that a ramp is provided to allow any animal to escape the hole should they fall in. All excavations should be investigated immediately prior to infilling to ensure no animals are trapped.

Amphibians

- 6.38. The site had potential potential for common amphibians. It is considered that the recommended mitigation measures outlined with respect to hedgehogs above such as, tool box talk, dismantling vegetation sensitively and taking precautions with trenches, will safeguard this species group in the unlikely event that they are present within the site.

Reptiles

- 6.39. All British reptiles are listed under schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are therefore protected from intentional killing or injury. This is largely as a consequence of a national decline in numbers associated with habitat loss.
- 6.40. The working footprint contains low potential for common reptile species within the site boundary vegetation and lawn areas. Clearance around the house may impact these species however, the removal of the habitat as a whole is not considered significant given the context of the site.
- 6.41. As a precaution all contractors should be advised on the protection afforded to reptiles before works commence in the tool box talk. Supervised destructive clearance by a suitably qualified ecologist is recommended of the garden habitat. Clearance of dense vegetative areas at ground level should be cleared by hand or with hand tools in a sensitive manner.
- 6.42. If the works involve trenches and/or excavations during the construction phase, it is recommended they are covered overnight or a ramp provided to ensure that no reptiles could fall in and become trapped.

Enhancement Recommendations

Wildlife Beneficial Landscaping Scheme

- 6.43. Any future landscaping planting should seek to enhance biodiversity, improve connectivity to the surrounding habitats and provide food and shelter for a wide range of faunal species.
- 6.44. All amenity planting and formal landscaped areas should be created from a palate of wildlife beneficial plants (not necessarily native) chosen for nectar or fruit.

- 6.45. Care should be taken to manage habitats in a suitable way to encourage a wide variety of insects and other wildlife to use the site. Non-invasive species should be planted. Invasive species currently on site should be removed with care during vegetation clearance and disposed of appropriately.
- 6.46. To enhance the site for invertebrates and hedgehogs it is recommended that two log or brash piles are created on site in secluded locations, preferably with materials from the site. This will increase the chances further of hedgehogs residing on site.

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APPENDIX 1 - PROTECTED SPECIES LEGISLATION

Bats

In England and Wales, all bat species and their roosts are legally protected under the Wildlife and Countryside Act (1981) (as amended); the Countryside and Rights of Way Act, 2000; the Natural Environment and Rural Communities Act (NERC, 2006); and by the Conservation of Habitats and Species Regulations (2010). You will be committing a criminal offence if you:

- Deliberately capture, injure or kill a bat
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time)
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat
- Intentionally or recklessly obstruct access to a bat roost

Barbastelle, Bechstein's, greater horseshoe, lesser horseshoe, brown long-eared, soprano pipistrelle, and noctule bats are all priority species under the UK Biodiversity Action Plan (UK BAP) and have also been adopted as species of principal importance in England under Section 41 of the NERC Act 2006.

Badgers

Badgers and their setts are afforded strict protection under the Protection of Badgers Act 1992. This Act consolidates past badger legislation and, in addition to protecting the badger itself, makes it an offence to damage, destroy or obstruct badger setts. Badgers are also protected under Schedule 6 of the Wildlife and Countryside Act 1981 (as amended), and listed under Appendix III of the Bern Convention, as a species that is in need of protection but may be hunted in exceptional instances. Only badger setts that are currently in use are covered by wildlife legislation.

Birds

All wild birds in the UK are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy the nest or its eggs.

Some bird species, such as the barn owl *Tyto alba*, are listed in Schedule 1 of the 1981 Act and receive further protection, making it an offence to intentionally or recklessly disturb these birds whilst building a nest or in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird.

The NERC Act (2006) inserts a new schedule into the Wildlife and Countryside Act (1981) to protect the nests of some bird species that regularly re-use their nests, even when the nests are not in use. This protection currently applies to golden eagle, white-tailed eagle and osprey.

Reptiles

All British reptiles are listed under schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are therefore protected from intentional killing or injury. This is largely as a consequence of a national decline in numbers associated with habitat loss.

Two scarcer native British reptiles (smooth snake *Coronella austriaca* and sand lizard *Lacerta agilis*), are afforded 'full' protection. This legislation makes it an offence to intentionally or recklessly kill, injure, disturb, take, possess or sell these species (in all life stages). It is also illegal to damage, destroy or obstruct access to places they use for breeding, resting, shelter and protection.

All species of reptile are priority species in the UKBAP and have been adopted as Species of Principal Importance under Section 41 of the NERC Act (2006) in England (Section 42 in Wales).

Amphibians

Great crested newts (GCN's) *Triturus cristatus* and their habitats are fully protected by the Conservation of Habitats and Species Regulations (2010) and partially protected under the Wildlife and Countryside Act 1981 (as amended). This legislation makes it an offence to kill, injure or capture GCN's, their young or eggs, or destroy / damage their ponds or places of shelter used for breeding or protection. The great crested newt is also a Priority species in the UK Biodiversity Action Plan (UKBAP), and had been adopted as a Species of Principle Importance in England under Section 41 of the NERC Act 2006.

The natterjack toad *Epidalea calamita* is fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of The Conservation of Habitats and Species Regulations 2010 making it a European Protected Species. The natterjack toad is also a priority species under the UK Biodiversity Action Plan.

The pool frog *Rana lessonae* is protected under the Conservation (Natural Habitats &C.) Regulations 1994 (as amended). As a European protected species the deliberate capturing, disturbing, injuring or killing of this species is prohibited, as is damage or destruction of its breeding sites or resting places. The pool frog is also a priority species under the UK Biodiversity Action Plan due to a 100% decline over 25 years (1980-2005).

Common toads *Bufo bufo* are also designated UKBAP species due to a serious decline of populations across large areas of southern, eastern and central England, thought to be mainly due to changes in habitat management, mortalities on the roads, and climate change.

Dormice

Common dormice *Muscardinus avellanarius* and their habitats are fully protected by both the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations (2010). This legislation makes it an offence to kill, injure, disturb or capture dormice, or destroy or obstruct their resting or breeding places.

The dormouse is also a priority species under the UK Biodiversity Action Plan and has been adopted as a species of Principal Importance in England under Section 41 of the NERC Act 2006 (section 42 in Wales) and so is protected from any adverse effects as a result of development.

Otters

Otters *Lutra lutra* are protected by both the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2010. This legislation makes it is illegal to; deliberately or recklessly kill, injure or capture an otter, deliberately or recklessly disturb or harass an otter, damage, destroy or obstruct access to a breeding site or resting place of an otter.

The otter is also a UK BAP Priority Species and has been adopted as a Species of Principal Importance in England under Section 41 of the NERC Act 2006 (Section 42 in Wales) and the Conservation (Scotland) Act in Scotland.

Water Voles

Water voles *Arvicola terrestris* are fully protected under the Wildlife and Countryside Act 1981 (as amended). This legislation makes it an offence to kill or injure water voles, and to damage, destroy or obstruct access to places used for protection or shelter, and to disturb water voles whilst they occupy such a place.

The water vole is also a Priority species in the UK Biodiversity Action Plan, and had been adopted as a Species of Principle Importance in England under Section 41 of the NERC Act 2006.

White-clawed Crayfish

The white-clawed crayfish *Austropotamobius pallipes* is protected under the Wildlife and Countryside Act 1981 (as amended), making it a criminal offence to; intentionally or recklessly kill or injure a white-clawed crayfish, or sell or

attempt to sell any part of this species. The Habitats Regulations (2010) provide further protection through the declaration of Special Areas of Conservation (SAC). This protection aims to prevent commercial harvesting of white-clawed crayfish and prohibits their capture without a licence.

The white-clawed crayfish is also a Priority species in the UK Biodiversity Action Plan (BAP), and has been adopted as a Species of Principal Importance in England under Section 41 of the NERC Act 2006.

Hedgehogs

Hedgehogs are UK Biodiversity Action Plan (BAP) species, and therefore must be taken into consideration as part of development planning. A recent report (Wembridge, 2011) shows that hedgehog numbers have declined by 25% in the last ten years.

APPENDIX 2 - SURVEY AND REPORTING LIMITATIONS AND EXCEPTIONS

This report and its survey results should be considered in conjunction with the terms and conditions proposed and scope of works agreed between Darwin Ecology Ltd and the client.

This report has been produced in the context of the proposals stated in the Introduction & Background section of this report (Section 2) and should not be used in any other context.

Darwin Ecology Ltd have endeavoured to identify the likely presence / absence of protected species wherever possible on site, where this falls within the agreed scope of works. Current standard methodologies have been used, which are accepted by Natural England and other statutory conservation bodies. No responsibility can be accepted where these methodologies fail to identify all species or significant species on site.

Extended Phase 1 and Preliminary Ecological survey techniques provide a preliminary assessment of the likelihood of protected species occurring on the development site, based on the suitability of the habitats and any field signs found during the site visit. A Phase 1 survey should not be taken as providing a full and definitive survey of any protected species group.

Extended Phase 1 and Preliminary Ecological Appraisals represent a snapshot of conditions at the time of survey and are limited by factors which affect the presence of plants and animals such as the time of year, migration patterns and behaviour. Surveys should therefore not be considered a comprehensive list of all plant species or as conclusive proof that certain protected species are not present or will not be present in the future.

Where the presence/absence of a certain species is in question our ecologists must apply a precautionary approach until further survey data can be sought to better inform the decision.

Darwin Ecology Ltd will advise on the optimum survey season for a particular habitat or protected species prior to undertaking the survey work. Darwin Ecology Ltd cannot accept responsibility for the accuracy of surveys undertaken outside this period.

The potential impacts, mitigation and enhancement sections of the report provide an overview and is for guidance only. This section should not be solely relied upon, but should be considered in the context of the whole report.

Interpretations of survey results and recommendations outlined in the report represent our professional opinions, expressed in accordance with recognised industry practices and current legislation at the time of reporting. The results of survey work undertaken by Darwin Ecology Ltd are representative at the time of surveying.

Where the client had supplied us with data from previous reports, it has been assumed that this information is valid. No responsibility can be accepted by Darwin Ecology Ltd for inaccuracies within any previous data supplied.

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Amendments to this report after its submission may be necessary in light of new, relevant information and / or legislation. This report should be referred to us for re-assessment if any such amendments are necessary or after the expiry of one year from the date of the report.