

LEIGHTON PARK SCHOOL, READING

NEW SPORTS HALL

PRELIMINARY ECOLOGICAL APPRAISAL

27 SEPTEMBER 2018



soltysbrewster
E C O L O G Y

4 Stangate House,
Stanwell Road,
Penarth,
Vale of Glamorgan,
United Kingdom.
CF64 2AA

Telephone:- 029 2040 8476

e-mail:- enquiry@soltysbrewster.co.uk

Web Site:- www.soltysbrewster.com

LEIGHTON PARK SCHOOL, READING

NEW SPORTS HALL

PRELIMINARY ECOLOGICAL APPRAISAL

Document Ref: E1884301/Doc 01 – 27 September 2018

Issue	Revision	Stage	Date		Prepared by	Approved by	Signed
1	-	Draft for review	21 2018	Sept.	Ben Fowle	Dr. M Watts (Director)	
2	Minor edits following client review	For issue	27 2018	Sept.	Ben Fowle	Dr. M Watts (Director)	

CONTENTS

Summary

1.0 Introduction

2.0 Methodology

Desk study

Field survey

3.0 Results

Desk study

Extended Phase 1 Habitat Survey

Fauna

4.0 Legislation, Policies and Plans

5.0 Conclusions and Recommendations

References

Appendices

Appendix I Proposed Development Layout

Appendix II Local Records Map Received From TVERC

Appendix III Phase 1 Habitat Plan and Accompanying Target Notes

Appendix IV Advice Sheet on The Use of Street Lighting And Bats

SUMMARY

Soltys Brewster Ecology were commissioned to undertake a preliminary ecological appraisal at Leighton Park School in Reading in order to inform a planning application for a new sports hall in the south western part of the grounds. The ecological baseline conditions at the site were established in August 2018 through a combination of desk study and Extended Phase 1 Habitat Survey.

Desk based consultation confirmed that the site does not hold any statutory or non-statutory nature conservation designation although a number of Local Wildlife Sites are located within the surrounding area including Whiteknights Park, Whitley Park Farm/ St Patrick's Hall Pond and The Cowsey. However due to the habitats present on the application site and the physical separation from the designated sites, none would be considered of particular relevance. Records received from Thames Valley Environmental Records Centre identified a number of protected or notable species associated with the surrounding area including a variety of birds, invertebrates, reptiles and bats.

The Phase 1 Habitat survey undertaken in August 2018 identified that the proposed sports hall site was dominated by open grassland with scattered trees (parkland), – of which the open grassland was relatively species poor, - hard standing and mixed plantation woodland. The open grassland and hard standing were not considered of great intrinsic ecological value and represent the most suitable areas of the site to support development. The mixed plantation woodland, although of little intrinsic value due to its small size and relatively limited diversity, is considered likely to provide suitable foraging opportunities and shelter for a variety of bird and mammal species (including bats).

The retention of boundary trees and mature Oaks within the grassland to the south of the proposed Sports Hall would help to ensure ecological resources & connectivity across the site are retained. Six trees within the site – the two mature Oaks within the grassland and 4no. trees in the woodland - were identified as supporting features suitable for use by roosting bats. Retention of the mature Oaks would be recommended although in the event that pruning of these trees, or removal of the remaining four trees with moderate or high bat potential, was required, further survey to establish the presence/ absence of roosting bats would be needed.

Other considerations would include the avoidance of the bird nesting season (March-August) for any vegetation clearance, enhancement of retained wood-pasture and parkland across the wider school site by managing deadwood and sward length and tree planting to replace those to be lost as part of the proposed scheme. The provision of bird and bat boxes as part of the scheme, either on the new building or on retained trees in the immediate area, would also be recommended.

1.0 INTRODUCTION

- 1.1. Soltys Brewster Ecology were commissioned by Leighton Park School to undertake an ecological appraisal of a parcel of land in the south west of the school grounds. A new sports hall is proposed immediately to the south of an existing astro-turf pitch and a survey to establish the ecological baseline and inform a planning application for the works is required in the first instance.
- 1.2. The area associated with the proposed sports hall (i.e. application site) is centred at grid reference SU 7327 7115 within the south west corner of the school campus. A proposed layout plan is illustrated in Appendix I and identifies that the footprint of the sports hall would affect an area of existing grassland with scattered trees. The surrounding area is dominated by the school grounds including playing fields, trees and woodland, with the A327 road corridor along the site boundary to the west.
- 1.3. The current report presents the findings of an ecological desk study and Extended Phase 1 Habitat survey undertaken at the site in August 2018. The report describes the existing ecological conditions as well as identifying any potential ecological constraints/ opportunities associated with the proposed Sports Hall development at the site.

2.0 METHODOLOGY

- 2.1. In order to establish the baseline ecological conditions on site and in the adjoining habitats, a combination of desk-based review of existing site information and an Extended Phase 1 Habitat survey were undertaken in August 2018.

Desk study

- 2.2. The desk study primarily involved a data search request via the Thames Valley Environmental Records Centre (TVERC). A data request to identify any records of rare, protected or notable flora and fauna within the site boundary and surrounding 1km area. The search criteria also included information relating to the location and citation details (where available) for any sites designated for their nature conservation interest such as Sites of Special Scientific Interest (SSSIs) or Local Wildlife Sites (LWS).
- 2.3. A review of work undertaken by Soltys Brewster in 2017 to inform a new car park in the north west of the school grounds was also undertaken to identify any records of relevance to the current (Sports Hall) proposal. The work in 2017 comprised a baseline survey and bat emergence checks of trees (SBE 2017, 2017a.).

Extended Phase 1 Habitat Survey

- 2.4. The fieldwork was undertaken on 18 August 2018 by a suitably experienced ecologist and followed standard Phase 1 Habitat Survey protocol (JNCC, 1990) as amended by the Institute of Environmental Assessment (1995). All habitats within the site were classified and mapped as accurately as possible. Habitats considered to have potential to support rare, protected or otherwise notable species of flora and fauna were noted, as were any direct signs of these species (e.g. Eurasian Badger *Meles meles* setts and dung-pits). Incidental observations of birds on or flying over the site were also recorded as were any stands or individual plants of invasive non-native plant species listed under Schedule 9 of the Wildlife & Countryside Act 1981 (as amended).
- 2.5. A map of habitats was drawn up and target notes were used to identify features of ecological interest. Where possible, habitats were cross-referenced to any relevant Section 41 (NERC Act) or local priority habitats.
- 2.6. In addition any trees present were assessed for their potential to support roosting bats and were categorised in relation to the bat roosting features (BCT, 2016). The categories are as follows:
- **Known or confirmed roost**
 - **High** - A 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 longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
 - **Moderate** – A 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.
 - **Low** - A tree of sufficient size & age to contain PRFs (Potential Roost Features) but with none seen from the ground or features seen with only very limited roosting potential.
 - **Negligible** – Negligible habitat features on site likely to be used by roosting bats.

3.0 RESULTS

Desk Study

- 3.1 The data provided by TVERC confirmed that the site does not contain any statutory or non-statutory nature conservation designations. A number of Local Wildlife Sites (LWS) are located within the surrounding area including Whiteknights Park, Whitley Park Farm/ St Patrick's Hall Pond and The Cowsey. Whiteknights Park is designated due to the Parkland and Wood Pasture habitats and associated species it supports. Whitley Park Farm/ St Patrick's Hall LWS is designated due to the lowland mixed deciduous woodland habitats and associated bird assemblage including Bullfinch *Pyrrhula pyrrhula*, Linnet *Carduelis cannabina*, Lesser Spotted Woodpecker *Dendrocopos minor*, Spotted Flycatcher *Muscicapa striata* and Song Thrush *Turdus philomelos*. The Cowsey LWS is designated due to the lowland mixed deciduous woodland it supports.
- 3.2 Based on the physical separation from the Leighton Park School site these sites were not considered of particular ecological relevance to the current proposals. Maps indicating the location of Local Wildlife Sites in the surrounding area are displayed in Appendix II.
- 3.3 The TVERC data species data confirmed the presence of a number of protected or notable species within the surrounding 1km area, many of which were associated with Whiteknights Park, approximately 700m to the north east of Leighton Park School. Records included Stag Beetle *Lucanus cervus*, Smooth Newt *Lissotriton vulgaris*, Green Woodpecker *Picus viridis*, Song Thrush, Starling *Sturnus vulgaris*, Bullfinch, Slow-Worm *Anguis fragilis*, West European Hedgehog *Erinaceus europaeus*, Common Pipistrelle *Pipistrellus pipistrellus* and other unidentified Myotis bat species *Myotis sp.*.
- 3.4 These records were associated with habitats in areas other than the site and were not considered of particular relevance to the Leighton Park School site based on the known habitat preferences of the species listed above, the physical separation from the site and the site conditions. Mobile species such as birds, bats and other mammals (e.g. Hedgehog) in the surrounding area are considered of relevance to the site, and in particular the trees and woodland belt to western boundary of the site along the A327 corridor. TVERC species records associated with the Leighton Park School site (i.e. the school grounds in general) included Dunnock *Prunella modularis*, House Sparrow *Passer domesticus*, and Stag Beetle as well as Noctule *Nyctalus noctula*, Common and Soprano Pipistrelle bats.
- 3.5 The surveys undertaken by Soltys Brewster in 2017 to inform the new car park development also confirmed presence of foraging/commuting Noctule, Common & Soprano Pipistrelle bats as well as common bird species

typical of scrub/parkland areas such as Blackbird *Turdus merula*, Wood Pigeon *Columba palumbus*, Carrion Crow *Corvus corone*, Long-tailed Tit *Aegithalos caudatus* and Robin *Erithacus rubecula*.

- 3.6 The survey work in 2017 also identified the presence of a small stand of the invasive plant species *Rhododendrum ponticum*, within an area of woodland alongside the proposed car park. Several other invasive plants species were also identified as part of the current TVERC data search although none were specific to the Leighton Park School site. Invasive species such as *Rhododendron* are listed under Schedule 9, Section 14 of the Wildlife and Countryside Act 1981 (as amended) and it is an offence "to plant or otherwise encourage" their growth in the wild. This could include cutting the plant or roots and disturbing surrounding soil if not correctly managed.

Extended Phase 1 Habitat Survey

- 3.7 The distribution and extent of habitats within and adjacent to the proposed Sports Hall site are illustrated in the Phase 1 Habitat plan and accompanying target notes in Appendix III. The site is dominated by amenity grassland, mixed plantation woodland and areas of hard standing with

Parkland

- 3.8 The majority of the school site would fall under the general habitat description of Wood-Pasture and Parkland, which dominates the greater area within the application boundary. Wood-Pasture and Parkland is a habitat of principle importance under Section 41 NERC Act (2006) of which veteran and ancient trees are a key feature, along with open grassland or heathland ground vegetation all subject to grazing by animals or a management scheme to encourage the continuity of such an assemblage. However, no grazing occurs at the school site although grass areas are allowed to grow tall prior to cutting and are not typically managed as 'lawns'.
- 3.9 There are 2 veteran/ancient English Oaks *Quercus robur* within the site boundary near the south east corner. Until recently a third veteran ancient tree, formally a Turkey Oak *Quercus cerris* stood in the vicinity of the all-weather pitch to the north of the site. However, it had fallen on its own accord and had been removed from site prior to the survey leaving just the remaining toppled stump. Although dry from the recent weather there was lots of sedge growth in the precise locality suggestive of very damp conditions. It is likely that over time the water table had been affected by drainage from increased run-off associated with the all-weather pitch. In turn, this may have weakened the root bowl of the Turkey Oak and/or stability of the topsoil.
- 3.10 Open grassland had recently been mown was not ideally suited to survey, nonetheless the sward was identified as being relatively species poor. Management of the pasture seemed to mimic that of low – medium grazing pressure, i.e. 1-2 cuts per year. The assemblage was dominated by Cock's Foot, Sweet Vernal Grass

and Yorkshire Fog. Tall fescue *Festuca arundinacea*, Ribwort Plantain *Plantago lanceolata*, Common Bent *Agrostis capillaris* occurred very frequently with species such as Ragwort *Senecio* sp., Creeping Thistle *Cirsium arvense* and Bird's Foot Trefoil *Lotus corniculatus* being locally abundant in a few areas. Other commonly occurring species present included Bramble *Rubus fruticosus*, Broad-leaved Dock *Rumex obtusifolius*, Hedge Bindweed *Calystegia sepium*, Alexanders *Smyrniololium olusatrum*, Hogweed *Heracleum* sp., Curled Dock *Rumex crispus*, Perennial Rye-grass *Lolium perenne*, Annual Meadow-grass *Poa annua*, Daisy *Bellis perennis* and Dandelion *Taraxacum officinale*. This species assemblage is consistent with a poor semi-improved neutral grassland.

Mixed plantation woodland

- 3.11 The western edge of site and adjacent habitat was dominated by mixed plantation woodland. Canopy trees are dominated by Grand Fir, Oak and Ash *Fraxinus excelsior* with Holly *Ilex aquifolium*, Dog Rose *Rosa canina*, Hawthorn *Crataegus monogyna*, Hazel *Corylus avellana* and Cherry *Prunus avium* making up the shrub layer. The woodland floor and ground flora was dominated by Ivy *Hedera helix* and occasionally species associated with the identified tall ruderal habitat described in paragraph 3.12 below.

Tall ruderal

- 3.12 An area of tall ruderal vegetation including species such as Marsh Thistle *Cirsium palustre*, Bramble, Horsetail *Equisetum* sp, Great Willowherb *Epilobium* sp. nettles, creeping buttercup, alexanders and hedge bind weed are distributed locally where a void exists in the understory and canopy cover of the mixed plantation woodland.

Planted trees

- 3.13 A path which borders the site along its eastern edge is lined on both sides with newly planted sapling Willow trees *Salix* sp.

Deadwood

- 3.14 Arisings of the cross-cut Turkey Oak which had fallen in the north of the site were piled up within the mixed plantation woodland (Plate 2). Deadwood often associated with fallen limbs of ancient/veteran trees or fallen trees themselves form another key feature of Wood-Pasture and Parkland habitats. Deadwood provides numerous resources to a wide range of invertebrates and fungi.

Invasive non-native plant species

- 3.15 No schedule 9 species were identified as present within the site boundary. However, numerous Turkey Oaks are present within the school grounds. They have been introduced to north and western Europe by humans over the past 300-400 years and have been colonising rapidly in part due to their role as an obligate host plant to the Cynipid Gallwasp *Andricus quercuscalicis* which also affects native species (Stone & Sunnucks, 2008).

Plate 1. Open grassland habitat with scattered veteran and ancient trees.



Fauna

3.16 In the course of the survey, a search of field signs for protected or notable species was undertaken and the potential of the habitats to support these species considered. In the context of this report, these species meet any of the following criteria:

- Species protected by British or international law;
- Species listed on Section 41 of the NERC Act;
- Nationally rare or nationally scarce species;
- Species of Conservation Concern (e.g. JNCC Red List, RSPB/BTO Red or Amber Lists);

Bats

3.17 Due to the nature of the dominant habitat type providing a relative abundance of very mature trees, a number of potential roost features (PRFs) were identified across the site. Combined, the two veteran Oak trees in the south of site displayed PRFs which could provide enough opportunities for a number of bats to roost and hibernate. As such, they were considered to be of high bat potential. Within the mixed plantation woodland towards the North West corner of site there were at least three mature Ash trees and an Oak, with rot holes and cracks that were considered to have moderate potential to support roosting bats. The western edge woodland group was considered to have a combined low bat potential amongst the mature trees.

3.18 The trees, woodland and scrub within the site and the wider school grounds are likely to offer foraging and commuting habitats for bats in the local area.

Birds

3.19 During the survey a number of bird species were noted on or flying over the site including Blackbird *Turdus merula*, Wood Pigeon *Columba palumbus*, Carrion Crow *Corvus corone*, Red Kite *Milvus milvus* and Robin *Erithacus rubecula*. The species present at the time of survey would not be considered representative of the full range of species that the site could potentially support (i.e. during the breeding season/ passage) but the assemblage recorded was considered largely representative of that likely to breed on and in the vicinity of site.

3.20 The woodland scrub within the site and the surrounding area were considered suitable to support a variety of breeding birds as well as offering shelter and foraging opportunities.

Reptiles

- 3.21 Although the habitats within the site were considered to have some intrinsic value with the potential to support reptiles, lack of connectivity to surrounding habitats beyond the school and a lack of reptile records on the site itself suggest that it is unlikely for reptiles are present on site. Although their the presence of low numbers of individuals on an irregular basis could not be precluded and it would therefore be recommended that any vegetation clearance were should take a precautionary approach (i.e. using hand tools, directional cutting during active season etc.) as described within section 5 Conclusions & Recommendations.

Other species

- 3.22 There was some standing water outside the site boundary, although the size, evidence of water fowl and fish meant this feature was considered unsuitable to support breeding amphibians. The low quality of available scrub and lack of natural woodland, species rich hedgerows and foraging evidence such as gnawed hazelnuts lead to the consideration of absence of Dormice on the site. Similarly, no evidence of use of the site by Badger was found during the current survey.
- 3.23 A single hole (Target Note 4, Appendix III) characteristic of a fox den was identified in the slope near the fallen Turkey Oak in the northern half of site. There was no evidence (hair, faeces, feeding remains, smell etc.) of any current, active use of the den by a mammalian species.

Plate 2. Deadwood unmown edge of sward as indication of grassland length prior to mowing.



4.0 LEGISLATION, POLICIES AND PLANS

- 4.1 The following legislation and planning policy relating to nature conservation and biodiversity are considered of at least some relevance to the area surveyed and to any the proposed Sports Hall development at the site.

Legislation Pertaining to the Protection of Bats

- 4.2 Under Annex II of the *Council Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora* (EC Habitats Directive) some bat species are listed as of Community Interest, the conservation of which requires designation of Special Areas of Conservation (SACs); Under Annex IV of the EC Habitats Directive all bat species are listed as of Community Interest, in need of strict protection. In England and Wales, the EC Habitats Directive has been transposed into law in 1994 and, following recent amendments is set out in the *Conservation of Habitats & Species Regulation 2010* to give bats, their breeding sites and resting places a high level of strict protection making it an offence (subject to certain specific exceptions) to deliberately capture or kill/injure a bat, to damage or destroy a place used for shelter or protection or to deliberately disturb a bat in such a place.
- 4.3 Bats are also afforded protection within England and Wales under the Wildlife and Countryside Act 1981 (as amended); Countryside and Rights of Way Act 2000; Natural Environment and Rural Communities Act 2006.

Legislation Pertaining to Birds

- 4.4 Under the Wildlife & Countryside Act 1981 (as amended) all wild birds are protected against killing or injury and their nests against damage or destruction whilst they are being built or contain eggs/dependent young.

Natural Environment and Rural Communities Act 2006

- 4.5 Section 40 of the Natural Environment and Rural Communities Act 2006 (the NERC Act) places a duty ('the biodiversity duty') on every public authority - including a local authority and a local planning authority – to have regard to the purpose of conserving biodiversity (which also includes restoring or enhancing a population or habitat). Of the key principles, the most relevant to this site are those directed at maintaining and promoting biodiversity, as well as preventing harm to biodiversity.

National Planning Policy Framework (2012)

4.6 This document set out the Government's planning policies for England and how these are expected to be applied. Chapter 11 deals with Conserving and Enhancing the Natural Environment and states:

The planning system should contribute to and enhance the natural and local environment by:

- protecting and enhancing valued landscapes, geological conservation interests and soils;
- recognising the wider benefits of ecosystem services;
- minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

Reading Borough Local Development Framework - Core Strategy

4.7 The Reading Borough Local Development Framework Core Strategy was adopted in January 2008. This document will guide how the city will grow socially, economically and environmentally and sets out the authorities planning policies. Policies within the Core Strategy considered of relevance to the current site include:

CS36: Biodiversity and Geology

a) Development should retain, protect and incorporate features of biodiversity or geological interest (including protected species and their habitats) found within the application site into their schemes.

On sites with recognised biodiversity or geological value, development will not be permitted where there would be a direct or indirect adverse impact on the site, unless it can be clearly demonstrated that: -

- i. The need for development clearly outweighs the need to protect the value of the site; and*
- ii. Appropriate compensation, impact minimisation, mitigation and compensation are provided.*

b) Local Nature Reserves and Wildlife Heritage Sites will be safeguarded and where possible, enhanced. Permission will not be granted for any development that would adversely affect a designated nature reserve or Wildlife Heritage Site.

c) Any development that would sever or threaten the integrity of an established wildlife link, as indicated on an adopted proposals map, will not be permitted. Where applicable, developments should be designed to protect,

consolidate, extend and enhance the network of wildlife links and corridors in and adjoining the Borough, working with neighbouring authorities where appropriate.

CS38: Trees, Hedges and Woodlands

Individual trees, groups of trees, hedges and woodlands will be protected from damage or removal, and the Borough's vegetation cover will be extended.

5.0 CONCLUSIONS AND RECOMMENDATIONS

- 5.1 The combination of desk study and field surveys undertaken at the site identified a limited range of habitat types dominated by open grassland and scattered trees (Wood pasture/parkland) with mixed plantation woodland, tall ruderal vegetation and some hard standing associated with paths and vehicular access. Given the relative low botanical diversity of the open grassland, although part of a habitat of principle importance, it is considered to be of low intrinsic ecological value.
- 5.2 The mixed plantation woodland, although of little intrinsic value due to its small size and relatively limited diversity, is considered likely to provide suitable foraging and shelter for a variety of bird and mammal species (including bats).
- 5.3 There may be some opportunities during construction associated with retained and surrounding habitats, such as improving soil drainage and addition of enhancements to the open grassland associated with the remaining wood pasture and parkland habitat. Creation of 'insect houses/hotels' and continued sward management to simulate grazing is encouraged. It would be recommended to leave any future deadwood *in situ* as vital resource to invertebrates and can be incorporated into the creation of insect houses.
- 5.4 The proposals for the site are for the construction of a new sports hall and associated parking. The site layout is yet to be finalised, however it is understood there could be some tree loss within the mixed plantation woodland associated with the proposed works due to the lack of available space within the site boundary (see plans in Appendix I). In the event that tree removal along the edge of the woodland is required, further bat surveys may be required if any trees identified with moderate or high potential for roosting bats were to be felled. Further enhancements to improve retained habitat as mitigation would be recommended and this may include the installation of bird and bat boxes either on new building structures or surrounding trees.
- 5.5 It would be recommended that the two ancient/veteran Oaks in the south of site are retained, due to their value intrinsically, as well as for birds and bats and as a key dark connective corridor along the southern boundary of site between the mixed plantation woodland and the wider wood-pasture and parkland habitat. The layout illustrated in Appendix I indicates that retention of these trees would be possible.
- 5.6 In addition to the two mature Oaks within the grassland, four other trees within the plantation woodland were identified as supporting features suitable for use by roosting bats (moderate or high bat potential). Should any of these trees require felling or pruning as part of the proposed works, further survey to establish the presence/absence of roosting bats would be required. This could comprise a physical 'climb

and inspect' survey or alternatively emergence/re-entry surveys. There is no seasonal constraint on climb and inspect surveys although the optimum season for bat activity surveys is May to August inclusive. If evidence of roosting bats was found, specific mitigation and a European Protected Species (EPS) licence would be required to permit works to the tree.

- 5.7 The mixed plantation woodland group of trees near the South West corner of site was considered to have a combined low potential to support roosting bats. In order to minimise impacts on bats and other species foraging/ commuting over the site it is also recommended that development seeks to minimise impacts on any retained habitats such as trees and woodland through sensitive design of site lighting (see Appendix IV).
- 5.8 Given the probable likelihood of a number of birds nesting on site, clearance of trees and scrub vegetation associated with any future development should be undertaken outside of the bird nesting season (i.e. clearance possible between September and February inclusive) or preceded by a thorough check for the presence of nesting birds. All wild birds are protected against killing and injury under the Wildlife and Countryside Act 1981 (as amended) and their nests against damage or destruction whilst in use or being built.
- 5.9 A precautionary approach for site clearance of the open grassland, to minimise the risk to reptiles would also be encouraged. Using hand tools (i.e. brushcutters/strimmers) the open grassland should be strimmed directionally towards to wider open grassland habitat outside the development footprint to the East of site. An initial cut down to 200mm before a second cut to 50mm no less than 48hrs later would encourage any individuals to disperse into the wider habitat. This cutting regime would apply for clearance undertaken when reptiles are active (March – October).
- 5.10 Further recommendations include the use of native species or species of known benefit to wildlife within any soft landscaping scheme associated with future development of the site. Replacement tree planting would also be recommended to mitigate for those to be lost as part of the proposed scheme. The incorporation of bird and bat boxes on the new building or on retained trees would provide localised enhancement for these species.

REFERENCES

- Bat Conservation Trust (2016) *Bat Surveys for Professional Ecologists – Good Practice Guidelines*. Bat Conservation Trust, London.
- Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stroud DA and Gregory RD (2015) *Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man*. British Birds 108, 708–746.
- Institute for Environmental Assessment (1995) *Guidelines for Baseline Ecological Assessment*. E & FN Spon, Hong Kong.
- Joint Nature Conservation Committee (JNCC) (1990) *Handbook for Phase I Habitat Survey. A technique for environmental audit*. JNCC, Peterborough.
- Mitchell-Jones, A.J. (2004) *Bat mitigation guidelines; January 2004*. English Nature. Peterborough.
- Soltys Brewster Ecology (2017) Leighton Park School – Proposed Car Park. Ecological Appraisal Report. Report Ref: E1565502/ Doc 01 – 02 March 2017
- Soltys Brewster Ecology (2017a) Leighton Park School – Proposed Car Park. Bat Survey Report. Report Ref: E1565502/ Doc 02 – 19 July 2017.
- Stone, G.N. & Sunnucks, P., 2008. Genetic consequences of an invasion through a patchy environment - the cynipid gallwasp *Andricus quercuscalicis* (Hymenoptera: Cynipidae). *The Canadian Journal of Chemical Engineering*. Available at: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/j.1365-294X.1993.tb00015.x> [Accessed September 20, 2018].