



LAND OFF WOOLTON ROAD, ALLERTON
ECOLOGICAL ASSESSMENT
September 2016
5171.01.001
Version 2.0

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1.0 SUMMARY

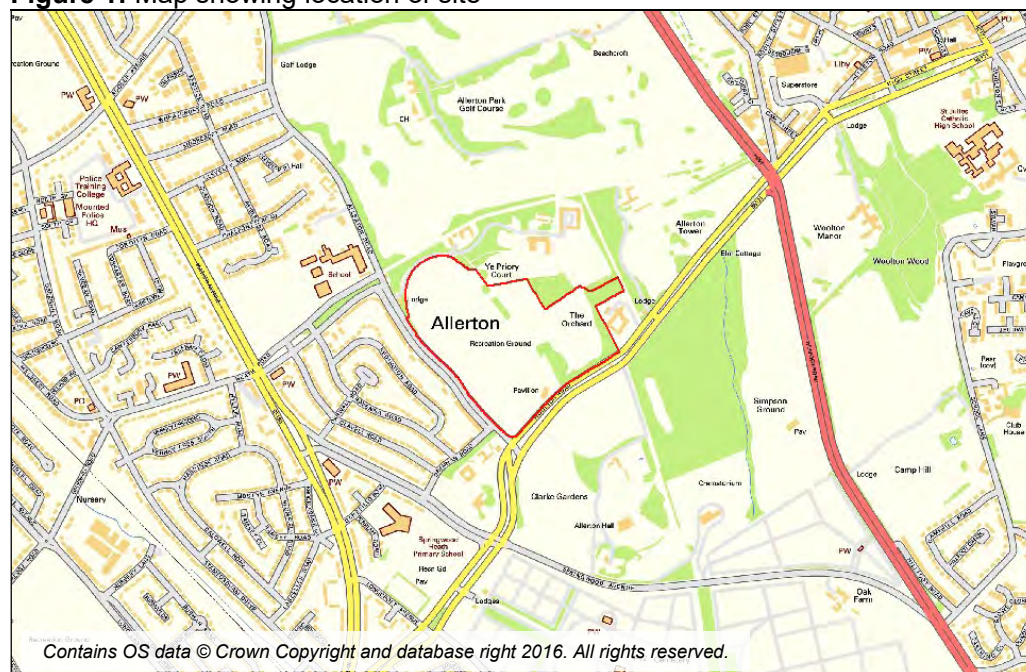
- 1.1 TEP was commissioned by Redrow Homes North West Limited in 2016 to provide an update of an ecological assessment that was undertaken in 2014 with subsequent surveys undertaken in 2015. The assessment informs an outline planning application for up to 160 residential dwellings on a site situated off Woolton Road in Allerton, Liverpool.
- 1.2 The assessment concludes that the ecological features within the site do not preclude development of the site for residential use. However, a number of potential ecological constraints require further consideration so as to ensure that development does not result in either an offence being committed in respect of protected species or a net loss of biodiversity interest. Additionally, the NERC Act imposes a duty upon Local Planning Authorities to seek biodiversity enhancement through development and this duty is transposed through planning policy. Therefore, a number of measures to protect, maintain and enhance ecological features within the site are recommended to comply with current legislation and policy.
- 1.3 The site is designated as Green Space (Policy OE11) and Green Wedge (Policy OE3). Wildlife policies OE5, OE6 and OE7 are also relevant to the site. In relation to nature conservation issues, the outline proposals are policy compliant.
- 1.4 The proposals fall within the Site of Special Scientific Interest (SSSI) Impact Risk Zone for Mersey Estuary SSSI, which lies 2.5km southwest of the site. However the development type is not listed as a potential impact risk for this SSSI.
- 1.5 There are a number of designations within 1km of the site including the Allerton (Eric Hardy) Local Nature Reserve (LNR) which lies approximately 50m south of the site beyond Woolton Road (B5171). Two Local Wildlife Sites (LWS) (Eric Hardy LNR & Clark Gardens pLWS and Hillfoot Road & Simpsons Pavilion LWS) are also approximately 50m south of the site across Woolton Road. With the use of standard best practice construction methods no impacts on these site are predicted.
- 1.6 Calderstones Park LWS approximately 950m north of the site. This site comprises formal parkland with a diversity of mature planted trees and is designated for supporting a range of fauna and flora including great crested newt *Triturus cristatus* and bluebell. Also of note is 'the 400 year old Allerton Oak'. This site and an extension to the north is also designated as a pLWS.
- 1.7 There are three potential LWS's (pt) within 1km of the site including the Land within Allerton Green Wedge ptLWS. This covers a wide area and the entirety of the proposed development site falls within just the southwest corner of the potential site's boundaries. The retention of Woodland within the development site and provision of green open space will maintain habitat connectivity across the site and to the rest of the pt LWS in the east and north.
- 1.8 The site comprises unmanaged neutral grassland (previously sports pitches) surrounded by mature plantation woodland that has become naturalised. The woodland and grassland both have biodiversity value within the site. The outline proposals indicate the woodland will be retained but a proportion of the grassland will be lost to facilitate development. To mitigate the loss of this grassland retained habitats will be enhanced by creating areas of higher quality wildflower meadow habitat with greater botanical biodiversity value.

- 1.9 A Construction Ecological Management Plan (CEMP) will be required prior to development of the site. The CEMP will detail protection measures for habitats and protected species as well as any pre-commencement surveys. It will also provide a mechanism to mitigate potentially adverse ecological impacts during construction and ensure compliance with ecological and environmental legislation.
- 1.10 A detailed planting plan should be produced identifying species to be used within the site and should be agreed with the county ecologist.
- 1.11 A pre-construction check to ensure that badgers have not moved into the site or adjacent habitats in the intervening period is recommended prior to development of the site.
- 1.12 A number of trees within the site have potential to support roosting bats. Further inspection will be required prior to development of the site (see Chapter 6.0 Recommendations for full details).
- 1.13 It is recommended that a sensitive lighting scheme should be designed and implemented for the site to avoid direct lighting of the woodland habitat.
- 1.14 Vegetation clearance should be undertaken outside of the bird nesting season (March to August inclusive). If this period cannot be avoided, a suitably qualified ecologist should carry out a nesting bird check a maximum of 24 hours in advance of vegetation clearance works.

2.0 INTRODUCTION

- 2.1 TEP was commissioned by Redrow Homes North West Limited in 2016 to provide an update of an ecological assessment that was undertaken in 2014 with subsequent surveys undertaken in 2015. Proposals are for residential development of up to 160 dwellings.
- 2.2 TEP undertook a number of surveys during 2014 and 2015. The ecology surveys consisted of:
- Desktop Study (April 2014);
 - Phase 1 Habitat Survey (May 2014);
 - Preliminary Bat Roost Assessment (May 2014);
 - Bat Activity Surveys (May to July inclusive 2015)
 - Bat Static Surveys (May to August inclusive 2015); and
 - Breeding Bird Surveys (April to July 2015).
- 2.3 The objectives of this updated report are therefore to:
- Detail the methods and results of the above surveys;
 - Identify features of ecological value within the site and potential constraints for development proposals;
 - Provide recommendations for maintaining net biodiversity value at the site and identify where opportunities may exist to provide biodiversity enhancement.
- 2.4 The site is situated off Woolton Road, Allerton, Liverpool. The site contains grassland with scattered trees and woodland associated with the boundaries of the site. **Figure 1** shows the location of the site, with a central grid reference of SJ 412 860.

Figure 1: Map showing location of site



3.0 METHODS

Desktop Study

- 3.1 The desktop survey was undertaken by a review of online sources listed in **Table 1** including Mersey biobank. The original desktop was undertaken during 2014 and has subsequently been updated in 2016.

Table 1: Ecological information and consultations

CONSULTEE/SOURCE OF INFORMATION	NATURE OF INFORMATION
Magic Map	Maps showing legally protected areas and designated sites & priority habitats
Where's the Path	Satellite & OS imagery
Mersey Biobank	Designated sites and protected species records
Liverpool Council Unitary Development Plan (adopted Nov 2002)	Extracts of relevant planning policies and supplementary planning guidance

Phase 1 Habitat Survey

- 3.2 The original Phase 1 habitat survey was completed by John Crowder, MCIEEM, FISC Level 3 on 2nd May 2014. An updated walkover of the site was undertaken on the 25th April 2016 by Lee Greenhough, FISC Level 4. The updated survey was undertaken to assess the site for any habitat changes since the 2014 survey. A further walkover of the site was also undertaken by Kim Gallaher FISC Level 5 on 5th September 2016.
- 3.3 Both surveys were carried out using the assessment methods set out in JNCC (2010) with habitat types and any incidental evidence of protected or invasive plant species noted. The survey also includes assessment of the habitats present for their potential to support species of conservation concern. Particularly statutorily protected species or Section 41 of the Natural Environment and Rural Communities Act 2006 (S41) species of principal importance, and recording any signs indicating the presence of these species.
- 3.4 All the information from the habitat survey visits in 2014 and 2016 have been compiled and have been presented in this report and thus present an up-to-date account of the situation on site.

Bat Surveys

Bat roosting assessment

- 3.5 The habitat within the site was initially assessed in 2014 for its potential with regards to roosting, foraging and commuting bats. The initial survey was undertaken by licensed bat ecologist John Crowder (Natural England class licence CL18: Registration number CL0620). This also included a daytime assessment of the buildings on site.

- 3.6 During the Phase 1 survey the conditions of the trees and building on site were assessed in terms of bat roosting potential. The survey involved an external survey of the one building and ground-based assessment of the trees on site looking for signs of bats such as droppings, urine stains and bat roosting features. The Criteria for roost assessment is based upon the Bat Conservation Trust 'Bat Surveys: Good Practice Guidelines' (2016) (BCT) as shown in **Table 2**.

Table 2 Tree & Building roost assessment criteria (from Table 4.1 of BCT Guidelines 2016)

Roost Suitability	Description of roosting habitat	Action required in respect of bat roosts in tree
Uncertain	Potential roost features (PRF) may be present but which may be obscured to observation from the ground due to e.g. ivy cover, height, form or growth or tree or a constrained vantage point.	If PRFs may be obscured from the ground, undertake aerial inspection to determine roost suitability. If aerial inspection is not possible, further surveys may be required to determine presence/absence of a roost.
Negligible	No PRF present.	No further action required.
Low	A tree of sufficient size and age to contain PRFs but with none seen from the ground, or features seen with only very limited roosting potential (as per BS 8596:2015).	Precautionary measures may be appropriate during felling or pruning activities.
Moderate	A tree with one or more PRF that could be used by bats due to their size, shelter, protection, conditions (i.e. temperature, light levels, humidity, height above ground or disturbance levels) and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, irrespective of species conservation status).	Presence/absence survey required. Subject to findings of presence/absence survey, roost characterisation surveys required.
High	A tree with one or more PRF 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.	

Bat activity surveys

- 3.7 Three activity surveys across the site were carried out on the 21st May 2015, 16th June 2015 and 20th July 2015 to sample bat activity during the peak active season.

- 3.8 A pair of surveyors with heterodyne and frequency division detectors walked the transect route. Each survey commenced 15 minutes before sunset and continued for at least 1.5 hours after. Bat passes were logged at each three-minute stop and each intervening walk. Observations of bat activity including the number of bats, behaviour and flight direction were logged by the surveyors and passes were recorded for subsequent sonogram analysis.

Static monitoring

- 3.9 To complement the activity transect method, static monitoring was also undertaken. Two statics were placed on site on three occasions. The first period of static monitoring was undertaken between 19th June 2015 and 22nd June 2015. The second period of static monitoring was undertaken between 18th July 2015 and 20th July 2015. The third period of static monitoring was undertaken between 14th August and 17th August 2015.
- 3.10 The surveys were undertaken within the optimum survey period for bats and there were no significantly limiting weather conditions.

Breeding Bird Surveys

- 3.11 Three breeding bird surveys were undertaken by an ornithologist on 29th April 2015, 5th June 2015 and 17th July 2015.
- 3.12 The survey methodology broadly follows the 'Common Bird Census' (CBC) devised by the British Trust for Ornithology - BTO (Bibby et al., 2000 & Gilbert et al., 1998) and entails walking a pre-determined route (or line transect) across the survey area which will typically follow footpaths, roads and field boundaries. The route is walked at a constant slow pace with regular short stops so that all birds detected can be identified and located. Bird registrations are recorded directly onto a survey map using BTO species codes and behaviour symbology.

4.0 RESULTS

Desktop Study

- 4.1 A summary of the results of the desktop study are set out below. Further details, including maps, are provided in **Appendix 1**.

Local plan

- 4.2 The site is designated as Green Space (Policies OE11 and OE12) and Green Wedge (Policy OE3) within the saved policies of the Liverpool Unitary Development Plan (adopted in 2002). Policies OE5 (Protection of Nature Conservation Sites and Features) OE6 (Development and Nature Conservation) and OE7 (Habitat Creation and Enhancement) are also relevant to the site.

Designated sites

- 4.3 There are no internationally designated sites for nature conservation within 1km of the development boundary.
- 4.4 The site falls within the Site of Special Scientific Interest (SSSI) Impact Risk Zone for Mersey Estuary SSSI, 2.5km southwest of the site.
- 4.5 In regard to this SSSI, consultation with Natural England is required if the planning proposals fall under:
- **Infrastructure** - Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.
 - **Wind & Solar Energy** - Solar schemes with footprint > 0.5ha, all wind turbines.
 - **Minerals, Oil & Gas** - Planning applications for quarries: new proposals or extensions, outside or extending outside existing settlements/urban areas affecting greenspace, farmland or semi natural habitats. Oil & gas exploration/extraction.
 - **Rural Non Residential** - Large non-residential developments outside existing settlements/urban areas where footprint exceeds 1ha.
 - **Rural Residential** - Any residential development of 50 or more houses outside existing settlements/urban areas.
 - **Air Pollution** - Pig & poultry units, slurry lagoons > 4000m³
 - **Combustion** - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.
 - **Waste** - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.
 - **Discharges** - Any discharge of water or liquid waste that is more than 5m³/day. The water needs to either be discharged to ground (ie to seep away) or to surface water, such as a beck or stream. Discharges to mains sewer are excluded.
- 4.6 There is one nationally designated site for nature conservation within 1km of the site. This is Allerton (Eric Hardy) Local Nature Reserve (LNR) which lies approximately 50m south of the site beyond Woolton Road (B5171). No formal citation exists but it is understood (using online resources) that the site is primarily

designated for its broad-leaved woodland that supports bluebell *Hyacinthoides non-scripta* and associated unimproved neutral grassland. A proportion of this site and land adjacent is also designated as two Local Wildlife Sites (LWS) both proposed (p) and current. These are Eric Hardy LNR & Clark Gardens pLWS and Hillfoot Road & Simpsons Pavilion LWS. Both sites still remain approximately 50m south of the site at their closest point. No formal citations for their designations is currently available.

- 4.7 There is one other locally designated wildlife site within 1km of the site. This is Calderstones Park LWS approximately 950m north of the site. This site comprises formal parkland with a diversity of mature planted trees and is designated for supporting a range of fauna and flora including great crested newt *Triturus cristatus* and bluebell. Also of note is 'the 400 year old Allerton Oak'. This site and an extension to the north is also designated as a pLWS.
- 4.8 There are three potential LWS's (pt) within 1km of the site. Allerton Cemetery ptLWS lies approximately 300m south of the site while Woolton Manor, Woolton Woods & Camp Hill ptLWS approximately 480m west of the site. Land within Allerton Green Wedge ptLWS however, includes the proposed development site and land to the north east of this including Allerton Park Golf Course and Recreational Grounds that connect to Calderstones Park LWS.

Priority habitats

- 4.9 Woodland habitats around the periphery of the site are considered a Section 41 Natural Environment and Rural Communities Act 2006 (NERC) Deciduous Woodland habitat of principal importance.
- 4.10 Two NERC habitats of principal importance are reported within 1km of the site. Deciduous Woodland occurs throughout the wider area to the north and south of the site. Wood Pasture and Parkland occurs north of the site and is associated with Calderstones Park LWS.
- 4.11 Grassland habitat within the site qualifies as North Merseyside Biodiversity Action Plan (BAP) priority habitat Urban Grassland (generally all grassland in urban areas qualifies as this local BAP habitat).

Protected species records

- 4.12 A number of species spread over a 1km search radius were identified through the Merseyside BioBank desktop search. Species include those listed under any of the following:
- European Protected Species (EPS);
 - Schedule 1 of the Wildlife and Countryside Act 1981, as amended (WCA1);
 - Schedule 5 of the Wildlife and Countryside Act 1981, as amended (WCA5);
 - Schedule 8 of the Wildlife and Countryside Act 1981, as amended (WCA8);
 - Schedule 9 of the Wildlife and Countryside Act 1981, as amended (WCA9);
 - Species of principal importance under Section 41 of the Natural Environment and Communities Act 2006 (S41);
 - Protection of Badgers Act 1992 (PBA);
 - Local Biodiversity Action Plan (LBAP); and
 - Red and Amber listed Birds of Conservation Concern (BRd/BAm).

- 4.13 In summary, notable species that occurred within 1km of the site within the last 10 years include:

Birds

- Bullfinch *Pyrrhula pyrrhula* (BAm, S41, LBAP)
- Dunnock *Prunella modularis* (BAm, S41, LBAP)
- Song thrush *Turdus philomelos* (BRd, LBAP)

Flowering plants

- Bluebell *Hyacinthoides non-scripta* (WCA8)
- Purple Ramping fumitory *Fumaria purpurea* (LBAP)

Invertebrates

- Azure Damselfly *Coenagrion puella* (LBAP)
- Blue-tailed Damselfly *Ischnura elegans* (LBAP)
- Broad-bodied Chaser *Libellula depressa* (LBAP)
- Brown Hawker *Aeshna grandis* (LBAP)
- Common Darter *Sympetrum striolatum* (LBAP)
- Emperor Dragonfly *Anax imperator* (LBAP)
- Four-spotted Chaser *Libellula quadrimaculata* (LBAP)
- Southern Hawker *Aeshna cyanea* (LBAP)

Mammals

- Badger *Meles meles* (PBA)
- Brown long-eared bat *Plecotus auritus* (EPS, WCA5, LBAP)
- Common pipistrelle *Pipistrellus pipistrellus* (EPS, WCA5, LBAP)
- Hedgehog *Erinaceus europaeus* (S41, LBAP)
- Red squirrel *Sciurus vulgaris* (WCA5, S41, LBAP)

Habitat Survey

- 4.14 The results of the Phase 1 habitat survey are illustrated in Drawing G5171.01.001 and detailed species lists are provided in **Appendix 2**. Habitats present within the development site or adjacent to the site are listed below and descriptions of these habitats are also given:

- Modified neutral grassland;
- Semi-natural broadleaved woodland;
- Scattered broadleaved trees;
- Dense and scattered scrub;
- Tall ruderal herbs;
- Buildings, hardstanding and walls.

- 4.15 The site is situated in a semi-urban environment, bordered by roads to the south and west with Allerton Manor Golf Club to the north and formal landscaped gardens of Allerton Priory Estate and Leonard Cheshire Disability Care Home to the east of the site (beyond which lies Allerton Tower Park). The wider locality is a mixture of residential developments, parkland and recreational countryside.

- 4.16 The site is roughly rectangular in shape and is dominated by grassland habitats with woodland mainly associated with the site peripheries. It is bounded by sandstone walls along its southern and western boundaries.

- 4.17 The grassland dominates the central area of the site and comprises unmanaged modified neutral grassland¹. Historically the site was used as sports pitches associated with the former sports pavilion building along the southern boundary of the site. Prior to this the site was used as gardens and also formed part of the former Allerton Priory Home Farm. The grassland is not particularly diverse and is dominated by false oat-grass *Arrhenatherum elatius* with abundant cock's foot *Dactylis glomerata* (**Figure 2**) Target Note 1 provides a more comprehensive list.

Figure 2 Looking north across modified neutral grassland



- 4.18 The interface between the grassland and woodland is largely dominated by dense bramble *Rubus fruticosus* agg often interspersed with tall ruderal herbs comprising nettle *Urtica dioica* and creeping thistle *Cirsium arvense*. Scattered patches of further dense bramble also occurs within the grassland alongside scattered patches tall ruderals predominantly comprising rosebay willowherb *Chamerion angustifolium*.
- 4.19 The woodland surrounding the periphery of the site comprises mature plantation (that appears to be over 120 years old), which was once part of the former Allerton Hall Estate. A number of the trees are more mature than the surrounding trees and are remnant of former parkland style planting. The woodland has therefore been classified as semi-natural woodland (**Figure 3**) and is not considered to be ancient.
- 4.20 Sycamore *Acer pseudoplatanus* is dominant across the woodland, other species present include horse chestnut *Aesculus hippocastanum*, holly *Ilex aquifolium*, beech *Fagus sylvatica*, lime *Tilia x europaea*, oak *Quercus robur* and sweet chestnut *Castanea sativa*, with rare occurrences of scots pine *Pinus sylvestris*. For

¹ The neutral grassland categories detailed within the Phase 1 Habitat Survey Handbook are concentrated on grassland associated with rural situations (pastures and meadows), as such it was agreed with JNCC in 2005 (P. Gateley, pers. comm.) that neutral grassland habitats that don't easily fit within these categories, usually within urban or industrial areas, can be referred to as modified neutral grassland – 'Modified neutral grassland is not derived from agricultural grassland and the terms semi-improved and improved do not apply. Some modified neutral grassland may be species-rich but many swards are dense, coarse and species-poor. Modified neutral grassland naturally regenerates on disturbed ground and is unmanaged. It most commonly occurs in urban areas and on post-industrial land'.

a full species list please refer to the Tree Survey Report undertaken by Trevor Bridge Associates Limited (Report Ref: MG/4815/AIA/REV B).

Figure 3 Semi-natural broad-leaved woodland along southern boundary of the site



- 4.21 Ground flora throughout the woodland appeared to be particularly poor and for the most part is dominated by bramble or bare ground (**Figure 4**). Semi-natural flora including occurrences of bluebell *Hyacinthoides non-scripta* (assumed to be native) were found to be present sporadically, usually associated with the more mature specimens.

Figure 4 Typical ground flora found across the woodland



- 4.22 It should be noted that a considerable amount of fly-tipping has occurred within the woodland on the western boundary of the site.

Invasive and protected plant species

- 4.23 Bluebell was noted within the woodland on site and given the records of native bluebell in nearby woodlands it is assumed that bluebell present within the site is of the native variety. Native bluebells are a Schedule 8 of the Wildlife and Countryside Act 1981, as amended (WCA8) protected plant species.
- 4.24 Three Schedule 9 (Wildlife and Countryside Act 1981, as amended (WCA9)) invasive plant species were identified on site: Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera* and rhododendron *Rhododendron ponticum*, locations are illustrated at Drawing G5171.01.001A.
- 4.25 Three veteran trees were identified within the site. These are; a horse chestnut (T1) located along the northern boundary of the site close to the access road of Allerton Priory Estate, a sycamore (T92) located on the edge of woodland close to the southern boundary of the site and a sweet chestnut (T106) also on the edge of woodland close to the southern boundary but further east of T92.

Connectivity with the wider landscape

- 4.26 The site, although walled on the southern and western aspects, has good connectivity to habitats within the wider landscape via the on-site woodland connecting to further woodland and tree lines within the wider landscape. The woodland in particular is likely to provide a valuable habitat corridor for wildlife. A mosaic of recreational and parkland habitats directly adjacent to the site also provides connectivity to habitats across the wider landscape.

Fauna

Amphibians

- 4.27 The rough grassland on site provides suitable terrestrial habitat that has the potential to support foraging amphibians. The woodland on site also provides potential refuge and commuting habitat for amphibians. However, no records of any amphibians were recorded within 1km of the site. Although desktop citations suggest Calderstones Park LWS approximately 950m north of the site supports the species. There are no ponds within the development site and no other features that could support breeding amphibians. There are also no ponds within 500m of the development site.

Badger

- 4.28 The desktop study identified a number of records for badgers within 1km of the site. No records occurred within the development site but they are only identified to a six figure grid reference.
- 4.29 The grassland and woodland habitat within the development site provide potential foraging, commuting and sett building habitat for badger. However, no evidence of badgers was found on site or within 30m of the site during the habitat surveys undertaken in 2014 or 2016.

Bats

- 4.30 The desktop identified records of common pipistrelle, both field and potential roost records, within 1km of the site. There is also a record of a possible brown long-

earled bat roost at Allerton Manor Golf Club approximately 430m north of the site. The site woodland features around the periphery of the site provide linear connective features, which could be of value to commuting and foraging bats.

- 4.31 There are several trees within the site that have features that could support roosting bats. The majority of these trees will be retained within the development proposals. **Table 3** summarises trees with roosting potential which are either recommended for removal or require other management works. A precautionary BCT category has also been given which is based on a ground based assessment. For tree locations please refer to the Tree Survey Report undertaken by Trevor Bridge Associates Limited (Report Refs: MG/4815/AIA/REV B and MG.4815.TSR.REV B).

Table 3: Trees requiring management that have bat roosting potential

Tree ID	Species	Feature	Category	TBA Recommendations
High Bat roost Potential				
T1	Horse chestnut (veteran)	Cavity at approximately 6m	High	Reduce canopy
T92	Sycamore (veteran)	Large hollow at base – no other obvious features but veteran age – may have feature in canopy	High	Reduce canopy
T99	Sweet chestnut	Large cavity and deadwood	High	Fell (safety reasons)
T141	Beech	Large cavity on north side	High	Fell (safety reasons)
Moderate Bat roost Potential				
T77	Beech	Broken limbs and significant tear wound	Moderate	Fell (safety reasons)
T100	Beech	Large limb fractures	Moderate	Reduce canopy and cut back fractured limbs
T106	Sweet chestnut (veteran)	Fractured and hanging branches	Moderate	Remove hanging branches
T122	Beech	Possible cavity where branch has broken	Moderate	Reduce canopy and limb over road
Low Bat roost Potential				
T83	Horse chestnut	Broken branch but sky facing. Deadwood present in upper branches	Low	Fell (safety reasons)
T118	Sycamore	Large hollow at base – no other obvious features	Low	Fell (safety reasons)
T124	Sweet chestnut	Deadwood and branches – no obvious other significant features	Low	Reduce height – however present in road so assume fell
G42	Lombardy poplar	Large hollow at base across many of this group – no other obvious features	Low	Fell (safety reasons)
T155	Beech	Large hollow at base – no other obvious features	Low	Fell (safety reasons)

- 4.32 There is one building on site. The building is a former sports pavilion that is a single storey brick built structure with a flat felt roof. The inspection undertaken in 2014 and re-assessment in 2016 revealed the building has been subject to vandalism and fire damage. All of the windows have had the glass removed and rainwater penetrates

the interior of the building throughout, creating wet conditions internally that are unsuitable for roosting bats. Additionally, the building does not have any loft voids and is open to the roof. No evidence of bats was found during external and internal inspections of the buildings. With reference to the BCT guidelines this building has 'negligible' potential for roosting bats.

- 4.33 The transect surveys and static monitoring survey results show that the site is used by at least four species of bat for foraging and dispersal. The majority of activity was accounted for by common pipistrelle, which reflects the national trend. The three other species/species group are soprano pipistrelle, big bat species and *Myotis* species. Activity was principally found to be associated with the woodland that encompasses the peripheries of the site.

Birds

- 4.34 The woodland, scrub, tall ruderal herbs and scattered trees on site provide potential foraging and nesting habitat for birds. The grassland has low suitability to support ground-nesting species due to the swards tall rank form. The breeding bird survey recorded a total of 38 species across all the visits within and adjacent to the site.
- 4.35 Five species were confirmed breeding on site during the breeding bird surveys. These are blackbird *Turdus merula*, jackdaw *Corvus monedula*, mistle thrush *Turdus viscivorus* (BAm), magpie *Pica pica* and song thrush (S41, BRd).
- 4.36 Fifteen species were noted as probably breeding within the site. The majority of these species are common and widespread with only three listed as a species of conservation concern; dunnoek (S41, BRd), whitethroat *Sylvia communis* (BAm) and willow warbler *Phylloscopus trochilus* (BAm).
- 4.37 The remaining eighteen species are identified as possibly breeding within the site. Of these only cuckoo *Cuculus canorus* (S41, BRd), house sparrow *Passer domesticus* (S41, BRd), kestrel *Falco tinnunculus* (S41, BAm), starling *Sturnus vulgaris* (S41, BRd) and stock dove *Columba oenas* (BAm) are listed as a species of conservation concern. For full details of the breeding bird survey please see **Appendix 3**.

Otter and water vole

- 4.38 No records for otter or water vole were identified in the desktop search. There are no ditches or watercourses within the site that are suitable to support water voles or otters. There are also no significant watercourses within 1km of the site.

Reptiles

There are no records of reptiles within 1km of the site boundary. The site offers some suitable sheltering and foraging habitat for reptiles but lacks suitable basking habitat due to the grasslands tall nature. The site is not considered to be of high quality reptile habitat.

Other species

- 4.39 There are records of red squirrel and hedgehog within 1km of the site. The site contains woodland that has suitable habitat to support both species. However it should be noted that grey squirrel was noted on site during the habitat survey.

5.0 CONCLUSIONS

Designated Sites

- 5.1 The site falls within the SSSI Impact Risk Zone for Mersey Estuary SSSI. Current proposals are for residential development of the site, which does not meet any of the development descriptions listed as a concern for the SSSI's.
- 5.2 The list includes 'Rural Residential of 50 or more houses outside existing settlements/urban areas' but the proposed development lies within a semi-urban landscape adjacent to existing developments west of Allerton Road. It is considered that the proposed development is unlikely to pose a risk to Mersey Estuary SSSI's and consultation with Natural England will not be required.
- 5.3 The nationally designated site Allerton (Eric Hardy) LNR lies within 50m of the development site. This site also falls into two other designations as a pLWS and LWS. The main species and habitats for which the LNR, pLWS and LWS are designated is broad-leaved woodland and bluebells. It is not anticipated that there will be any direct impacts on any of the features of interest at this site from the proposed development.
- 5.4 Indirect impacts from pollution such as run-off or emissions could occur at these sites if appropriate pollution prevention measures are not put in place.
- 5.5 One other LWS lies within 950m from the site. This is Calderstones Park LWS which is designated for supporting a range of fauna and flora including great crested newt and bluebell. Given the distance of the development from this site it is considered no direct or indirect impact on any of the features of interest at this site will result from the proposed development.
- 5.6 With regard to the three potential LWS's there will be no direct impact on any of the features of interest at Allerton Cemetery ptLWS and Woolton Manor, Woolton Woods & Camp Hill ptLWS from the proposed development.
- 5.7 As described above, indirect impacts from pollution such as run-off or emissions could also occur at the above sites if appropriate pollution prevention measures are not put in place.
- 5.8 The majority of Land within Allerton Green Wedge ptLWS will remain unaffected by the proposed development. However, the development falls within a small proportion of this site.
- 5.9 Woodland habitats within the development site will be retained. This will maintain habitat connectivity across the site and to habitats that form the rest of the Allerton Green Wedge ptLWS. However, the development will result in the direct loss of rough grassland habitat.
- 5.10 While the grassland within the site is currently unmanaged and appears to be relatively semi-natural, this has only occurred within recent years as the site was most recently used as playing fields. Species using the site are considered to be opportunistic and generalist species that could utilize similar habitats within the wider area.
- 5.11 Direct loss of grassland habitat will be mitigated for by providing higher quality grassland habitat with greater botanical diversity. This will benefit wildlife in the area

and help maintain connectivity across the site in an east west direction by linking into the linear park feature, central green and associated gardenscape. Therefore in consideration of Allerton Green Wedge ptLWS, the proposed development will retain the most valuable habitats (woodland), will increase the biodiversity of the areas of public grassland to compensate for loss of area and will continue to contribute to a green corridor for wildlife moving north/south and east/west in the wider area.

Policies

- 5.12 The assessment of impacts in relation to Allerton Green Wedge ptLWS is also of relevance to Policy OE3 Green Wedges, demonstrating that *'it retains existing vegetation and special site features'*.
- 5.13 The assessment of impacts in relation to designated wildlife sites is also of relevance to Policy OE5 Protection of Nature Conservation Sites, demonstrating no impacts on current or proposed designations and confirming retention of the most valued habitat type and compensation through creation of diverse grassland habitat in relation to a potential local wildlife site (Allerton Green Wedge ptLWS).
- 5.14 Policy OE7 Habitat Creation and Enhancement seeks to *'enhance the nature conservation interest of open land'* through a number of approaches including *'encouraging developers to undertake landscaping in an ecologically sensitive manner'*. The development proposals are currently outline but include the provision of open green spaces and a commitment to discuss planting proposals with the planning authority's ecologist. This is also discussed in the following paragraphs.
- 5.15 The discussion in relation to policies OE3, OE5 and OE7 also demonstrates compliance (in relation to nature conservation issues) with policy OE11 Green Space.

Habitats

- 5.16 Habitat creation will account for the requirements of notable species that would otherwise be adversely affected by the proposals.
- 5.17 The woodland habitat within the site is designated as S41 Deciduous Woodland. It's occurrence in the wider area is common and widespread but is still of value in-situ due to its age and its integral role as part of a wider network of woodland that connects to other habitats surrounding the site. The woodland habitat will be retained and enhanced within development proposals. To avoid significant effects on this habitat as a result of the development a habitat buffer of a minimum of 5m or the extent of the tree canopy (whichever is greatest) will be applied to the location of housing, private gardens, roads and utilities. Where footpaths enter the buffer zone an arboricultural method statement would be produced describing working methods and details of the path substrate to ensure tree roots are not damaged. Providing a footpath associated with the woodland habitat should encourage regular use of the path by local residents and thereby increase feelings of ownership for the area and reducing antisocial behaviour including the fly tipping currently experienced on site.
- 5.18 Appropriate construction-phase tree protection measures, would be put in place to ensure an adequate habitat buffer from the woodland is retained during development of the site.
- 5.19 A proportion of the grassland habitat within the site will be lost to facilitate development of the site. This habitat qualifies as North Merseyside BAP priority

habitat Urban Grassland. The grassland however, lacks management and is becoming encroached by scrub and tall ruderal herbs. It is considered that if the site remains unmanaged the value of the grassland will decline and eventually be completely succeeded by scrub habitat.

- 5.20 To mitigate the loss of this grassland habitat (as discussed earlier) wildflower meadow planting with greater botanical biodiversity value will be retained and enhanced across the boundaries of the site and within areas of open space. With the appropriate mitigation in place loss of grassland habitat within the site is not considered to be significant.
- 5.21 Site proposals have the opportunity to greatly improve biodiversity across the site. Woodland will be retained and enhanced, landscape buffers and green corridors will be planted with a range of native wildlife friendly shrubs and trees with glades of species rich wildflower meadow planting. This still allows for more formal managed areas bordering footpaths and roads. Furthermore the low housing density allows for relatively large gardens which will further increase diversity of opportunities for wildlife.

Invasive and protected plant species

- 5.22 The protected plant species bluebell WCA8 has been identified within the woodland on site, particularly along the western boundary. As these habitats will be retained, bluebell will intrinsically be retained and protected within the development proposals. Fly tipping and bramble clearance should however be cleared from the woodland to enhance opportunities for ground flora to develop.
- 5.23 Three invasive species were identified within the development site. These are Japanese knotweed, Himalayan balsam and rhododendron. A method statement detailing the removal of these species from the site will be required prior to development commencing.
- 5.24 Three veteran trees are present within the site. Proposals indicate these trees will be retained within the development. These trees are of value to wildlife and an adequate habitat buffer will be required around these trees to ensure their longevity. Appropriate tree protection measures will need to be put in place during both construction and development of the site.

Fauna

Amphibians

- 5.25 There are no waterbodies on site or within 500m of the site. Although terrestrial habitat could support amphibians it is considered highly unlikely amphibians would range into the site, particularly given the lack of suitable breeding habitat within 500m of the site which is the typical ranging distance for great crested newts. There will be no implications for the development of the site with regard to great crested newts.

Badger

- 5.26 There is no evidence of badgers utilising the site so there are currently no implications relating to badgers from the proposed development however, the habitats present have potential to support badger setts in the future. The retention of woodland and the provision of open space within the landscaping ensure badger

shelter and foraging habitat is available and connectivity with the wider landscape is retained.

Bats

- 5.27 There are 13 trees within the site that have bat roosting potential (BRP) and require removal or management works. Four trees are classed as having high potential to support roosting bats, four trees are classed as having moderate potential to support roosting bats and five are classed as having low potential to support roosting bats.
- 5.28 Two trees with High BRP and one tree with Moderate BRP have been identified as unsuitable to retain (Category U). Two High and three Moderate BRP trees require pruning works but will be retained. As only a ground based assessment has been undertaken further survey of these trees will be required prior to submitting a detailed/reserved matters application and before works commence on site. The results of these surveys will detail the mitigation required with regard to tree works including timing, method and replacement roosting provision and will confirm whether or not they require a licence from Natural England.
- 5.29 There is one building on site that has negligible potential for roosting bats. There will be no implications with regard to roosting bats and demolition of this building.
- 5.30 The woodland habitat surrounding the periphery of the site is of value to foraging, commuting and potentially roosting bats. This habitat is of particular value in the connectivity it provides across and beyond the site to adjacent habitats such as the woodland to the north and east of the site. Proposals indicate that these woodland habitats will be retained within the development proposals.
- 5.31 Provided an adequate habitat buffer is retained adjacent to the woodland and these habitats are protected from direct lighting, it is considered that the local bat population is unlikely to be significantly affected by development of the site.

Birds

- 5.32 This site supports a moderate diversity of bird species. The total of 38 recorded species on site is not unexpected for this kind of habitat and the species recorded are generally widespread and common birds. The site is considered to be of less than local Importance for breeding birds.
- 5.33 Proposals indicate the woodland on site will be retained however some scrub loss is anticipated. Nevertheless the majority of the breeding habitat within the site will be maintained. A large proportion of the rough grassland will however be lost within the proposals. Loss of this grassland will impact the foraging value of the site but wildflower meadow planting with greater botanical biodiversity value is proposed which will mitigate for the loss of grassland within the site. Planting plans will consider the foraging requirements of the birds recorded on site.
- 5.34 All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended). It is an offence to intentionally or recklessly, damage or destroy nests or to disturb birds while they are at the nest. This includes nest construction to fledging of the young.

- 5.35 Although loss of scrub habitat is unlikely to have a significant effect on the local bird population removal of these features means an offence is likely to occur during the nesting season if nests are present. Therefore there will be implications for development of the site with regard to nesting birds and clearance of the site.

Otter and Water vole

- 5.36 The site is assessed to have no potential for otter or for water vole. There will be no implications for the proposed development of the site with regard to either of these species.

Reptiles

- 5.37 Although the site offers some suitable habitat for reptiles, habitats surrounding the site would need to be of high quality to support the species and allow inward migration to the site. The habitats adjacent to the site are heavily managed with low suitability to support reptiles.
- 5.38 Given the lack of records in the wider area and in consideration with habitats surrounding the site, it is considered highly unlikely that reptiles would range into the site. There will be no implications for the development of the site with regard to reptiles.

Other species

- 5.39 A record for red squirrel was identified within 1km of the site. The record has no location or count details and dates from 2008. The most recent historic record occurs in 1940. Given the presence of grey squirrel in the area it is considered highly unlikely that red squirrel is present within the site or surrounding area. There will be no implications for the development of the site with regard to red squirrel.
- 5.40 Habitats within the site are suitable to support hedgehog, a S41 species of principal importance. One of the factors contributing to the decline of this species in the UK is habitat fragmentation, caused in part by garden boundaries becoming more secure. As woodland habitat will be retained across the site it is unlikely hedgehogs will be significantly affected by the proposals however further enhancements within the detailed landscaping proposals could benefit this species. Hedgehog passes could also be created between garden boundaries to ensure garden habitats are accessible to any hedgehogs in the area.

6.0 RECOMMENDATIONS

- 6.1 It is considered that the ecological features present within the site do not preclude development of the site for residential use. However, a number of potential ecological constraints require further consideration so as to ensure that development does not result in either an offence being committed in respect of protected species or a net loss of biodiversity interest. Additionally, the NERC Act imposes a duty upon Local Planning Authorities to seek biodiversity enhancement through development and this duty is transposed through planning policy. Therefore, a number of measures to protect, maintain and enhance ecological features within the site are recommended to comply with current legislation and policy.

Designated Sites

- 6.2 A Construction Ecological Management Plan (CEMP) will be required prior to development of the site. The CEMP will detail pollution prevention measures to ensure potential indirect effects on nearby designated sites does not occur.

Habitats

- 6.3 A detailed planting plan should be produced identifying species to be used and should be agreed with the county ecologist. Areas of tree and shrub planting should incorporate a mix of native species of local provenance, to include a variety of berry and nectar bearing species that encourage insects. Increased insect abundance will, in turn, enhance foraging opportunities for bats, birds and other wildlife.
- 6.4 Retained grassland habitats will be enhanced by native wildflower seeding. Other more landscaped areas across the site can be enhanced by the inclusion of wildflower meadow buffers and wildflower bulbs within the proposals, to promote herbaceous diversity and pollinator opportunities. The National Pollinator Strategy recommends the following seasonal planting:
- Spring: primroses and crocuses
 - Summer: lavenders, meadow cranesbill and ox-eye daisies
 - Autumn: ivy and hebes; and
 - Winter: mahonia shrubs and cyclamen.
- 6.5 Any other shrub or herb planting incorporated into the design should include the use of native or wildlife friendly species to enhance the biodiversity of the site. For example, trellising on any fencing or other boundary features would offer additional habitat for nesting and foraging birds. Honeysuckle or ivy would be ideal species on trellising.
- 6.6 Consideration should be given to retaining some of the scrub habitat present on the edge of the woodland. This habitat is of value to wildlife and creates a natural barrier that will prevent encroachment of human activity into the woodland.
- 6.7 The CEMP will detail measures to protect retained habitats and features of value, such as veteran trees, within the development site. It will also include a method statement and management scheme to eradicate invasive species from the site, including measures to:
- a. isolate and control the species during construction,
 - b. avoid spreading of these species into the wild

- c. ensure storage, handling, decontamination and disposal of infested soils in accordance with waste legislation and current government guidance.

Fauna

Badger

- 6.8 If development of the site does not commence within twelve months of the most recent survey date (September 2016), a pre-construction check to ensure that badgers have not moved into the site or adjacent habitats in the intervening period is recommended. This will be detailed in the CEMP.

Bats

- 6.9 Prior to felling trees identified as having moderate or high bat roosting potential will require further aerial inspection to determine if the features identified could support roosting bats. If evidence of bats is found or the trees are deemed likely to support roosting bats (and remain as having moderate or high potential) up to three dusk/dawn surveys (between the months of May and September) will be required to ascertain presence or absence of bats. If bat roosting activity is identified in trees to be removed then a Natural England development bat licence may be required to allow works to proceed.
- 6.10 Trees requiring management works may also require further aerial inspection, but this will depend on the scale of works and what areas of the tree will be affected. A bespoke management regime may be appropriate alongside a bat roosting Favourable Conservation Status (FCS) method statement.
- 6.11 Trees identified as having low bat roosting potential can be section felled under the supervision of a licensed bat ecologist. In the unlikely event that bats are found works will cease and advice should be sought from Natural England.
- 6.12 Irrespective of the confirmation of bat roosting, the removal of these trees will likely result in the reduction of potential roosting habitat availability and bat boxes installed on retained trees and/or new buildings will be provided in the detailed proposals.
- 6.13 Direct lighting of the woodland should be avoided to ensure no disturbance to potential foraging, commuting and potential roosting bats. It is recommended that a sensitive lighting scheme should be designed and implemented for the site.

Birds

- 6.14 It is recommended that all vegetation clearance should be undertaken outside the bird nesting season (March to August inclusive). If this period cannot be avoided, a suitably qualified ecologist should carry out a nesting bird check a maximum of 24 hours in advance of vegetation clearance works. If nesting birds are found, an appropriate exclusion zone will need to be set up around any active nests until the young have fledged. Detailed methods will be included in the CEMP.
- 6.15 Planting plans will also consider the foraging requirements of bird species recorded on site to mitigate for the loss of grassland, scrub and tall ruderals.

Hedgehog

- 6.16 Hedgehog could be present within the site during development of the site. Reasonable Avoidance Measures (RAMs) will be required to ensure no harm to this species during construction. A detailed method statement of how this species will be protected will be included in the CEMP.
- 6.17 Consideration should also be given to hedgehog-friendly features within the development through providing links between garden areas and hedgehog boxes in wildlife areas associated with the public open space.

Other opportunities for biodiversity enhancement

- 6.18 Enhancement for roosting bats and nesting birds could be delivered within the new site through the provision of bat and bird boxes. Hedgehog boxes and habitat hotels could also be provided in the wildlife friendly areas of the open space to encourage these species into the site.
- 6.19 Interpretation boards could also be incorporated into the landscape proposals along proposed footpaths to increase public awareness of the local wildlife and encourage a sense of ownership across the site which will ultimately deter dumping of garden waste and trampling.
- 6.20 During the site clearance works, consideration should be given to chipping or composting vegetation for re-use on the new habitats on site, or creation of brash piles on the periphery of the site to the south as a further aid to increasing the biodiversity of the site.

APPENDIX 1. Desktop Study

Desk Based Ecology Assessment

**Allerton
Liverpool**

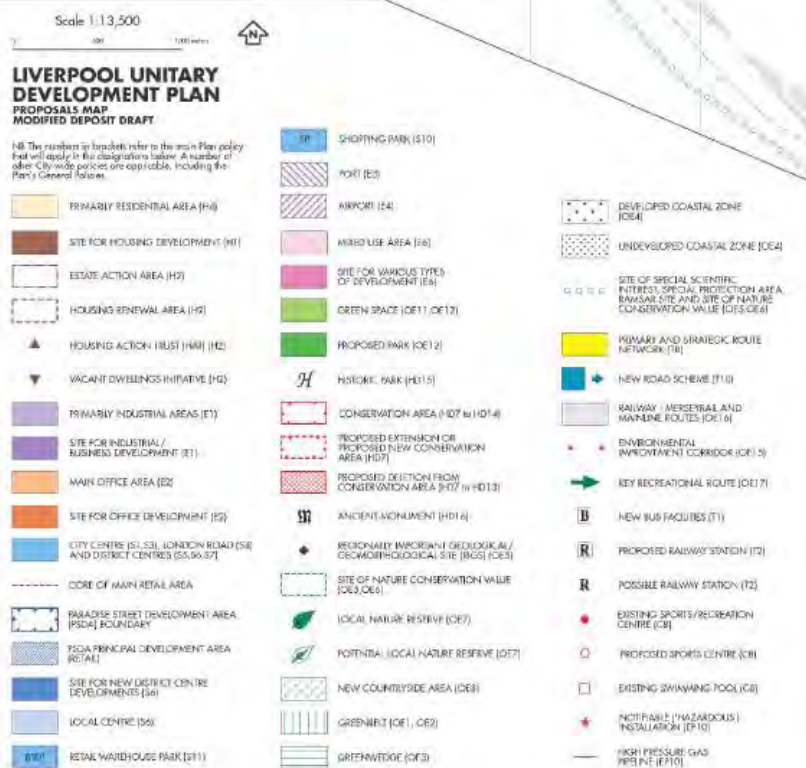
Approximate Central Grid Reference: SJ 41278 86016

Contents

- **Site location plan**
- **Extract from local plan**
- **Extracts of relevant planning policies**
- **Local site designations**
- **Local species records**
- **National site designations**
- **Habitat inventory records**
- **Wildlife site citations**



Extract of Liverpool Council Unitary Development Plan (adopted Nov 2002) and supporting key



Extracts of relevant planning policies and supplementary planning guidance

GREEN WEDGES OE3

The City Council will protect and improve the open character, landscape, recreational and ecological quality of the Green Wedges at Calderstones / Woolton and Otterspool by:

- i. not granting planning permission for proposals for new development that would affect the predominantly open character of the Green Wedges or reduce the physical separation between existing built up areas;
- ii. requiring that, where new built development is permitted (including conversion or extension), such development:
 - has regard to the openness of the Green Wedge and the purposes of including land within it;
 - should be in accordance with the criteria set down in policy HD18 and, in particular, uses materials and built forms sympathetic to the character of the area;
 - retains existing vegetation and special site features where appropriate; and
 - provides and maintains a high standard of landscaping
- iii. retaining its own land in predominantly open use and supporting proposals which would:
 - enhance tree cover by the retention of existing trees and replacement of older trees where necessary;
 - enhance the recreational role of the Green Wedges; or
 - offer uses and activities which accord with their open character, particularly those that secure the continued use of sports grounds surplus to the owner's requirements, for open space purposes.

PROTECTION OF NATURE CONSERVATION SITES AND FEATURES OE5

1. The City Council will seek to protect the nature conservation interest of open land and the water environment in the City by not permitting development which would:
 - i. destroy, fragment or adversely affect directly or indirectly a designated or proposed Special Protection Area (SPA), Ramsar site, or Site of Specific Scientific Interest (SSSI), unless the City Council is satisfied that there is no alternative solution and there are imperative reasons of overriding public interest;
 - ii. destroy, fragment or adversely directly or indirectly affect a Site of Nature Conservation Value as identified by the City Council unless it can be clearly demonstrated that there are reasons for the proposal including benefits to the community, which outweigh the need to safeguard the substantive nature conservation value of the site;
 - iii. destroy, fragment or adversely affect, directly or indirectly, a Regionally Important Geological/Geomorphological Site (RIGS) unless it can be demonstrated that the benefits of the proposal to the community outweigh the need to safeguard the geological value of the site;

- iv. have an adverse affect on legally protected wildlife species; or
 - v. destroy, fragment or adversely affect, indirectly or directly, sites with known conservation value in a neighbouring authority area.
2. In assessing criteria ii to iv full account will be taken of proposed mitigation measures.

DEVELOPMENT AND NATURE CONSERVATION OE6

In the circumstances where development is permitted on or adjacent to any sites covered by policy OE5, which in the case of the Mersey Estuary will be subject to the most rigorous examination, the City Council will seek to minimise potential damage by:

- i. requiring developers to undertake a site investigation to identify the nature conservation interest of the site;
- ii. requiring developers to set out proposals for the protection and management of the nature conservation value of the site; and
- iii. considering the use of conditions and/or planning obligations to safeguard the nature conservation interest and/or provide compensatory measures for any nature conservation interest damaged or destroyed during the development process.

HABITAT CREATION AND ENHANCEMENT OE7

1. The City Council will seek to enhance the nature conservation interest of open land and water courses in the City by:
- i. supporting and initiating proposals for habitat creation and enhancement particularly within Sites of Nature Conservation Value and those other sites which, although do not meet the criteria required to be designated as an SNCV, are considered to be of value for nature conservation;
 - ii. supporting proposals which strengthen and enhance wildlife corridors in the City;
 - iii. managing its own land, and particularly the City's parks, in a manner more positively beneficial to wildlife and encouraging other landowners to do the same where appropriate;
 - iv. encouraging the reopening of culverted water courses where opportunities arise and supporting the Alt 2000 initiative;
 - v. encouraging developers to undertake landscaping in an ecologically sensitive manner; and
 - vi. encouraging and supporting community groups, schools and other organisations to work in partnership with the City Council on habitat creation and enhancement initiatives.
2. In addition to the designation of Mull Wood Local Nature Reserve at Croxteth Park, the City Council will seek to designate further Local Nature Reserves (LNRs) in the

City and secure appropriate management regimes with initial consideration being given to:

- Mill Wood
- Otterspool Gorge
- Childwall Woods and Fields
- Land adjacent to Garston Gas Works
- Hillfoot Road and Simpsons Pavilion
- Melrose Cutting
- Mersey Estuary
- Croxteth Country Park (extension to existing Local Nature Reserve)

GREEN SPACE OE11

Planning permission will not be granted for built development on part or all of any green space unless the proposed development can be accommodated without material harm to:

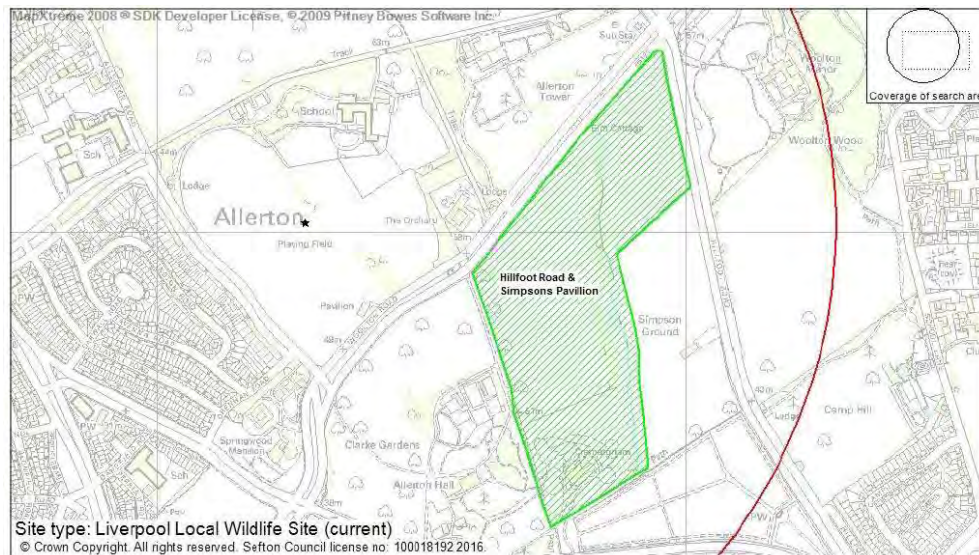
- i. the recreational function of the green space, unless:
 - the development is ancillary to the use of the site for active or passive outdoor recreation and enhances its value for these activities;
 - the site does not lie in an area of open space deficiency or its development would not create an area of open space deficiency;
 - a replacement facility of at least equal quality and suitable size is provided at an appropriate location to ensure that an area of open space deficiency would not otherwise be created ;
 - in the case of green space in educational use, the development is specifically required for educational purposes and that suitable and convenient alternative recreational facilities are available.
- ii. the visual amenity value of the green space in terms of:
 - important vistas into and across the site;
 - key frontages which are visible from a main road;
 - important trees and landscape features, and the character of the site within the surrounding area; or its importance as open land in an otherwise closely developed area;
- iii. its relationship to adjoining green spaces, particularly whether the development might destroy a valuable link between areas of green spaces; and
- iv. any known nature conservation value as identified in policy OE5.

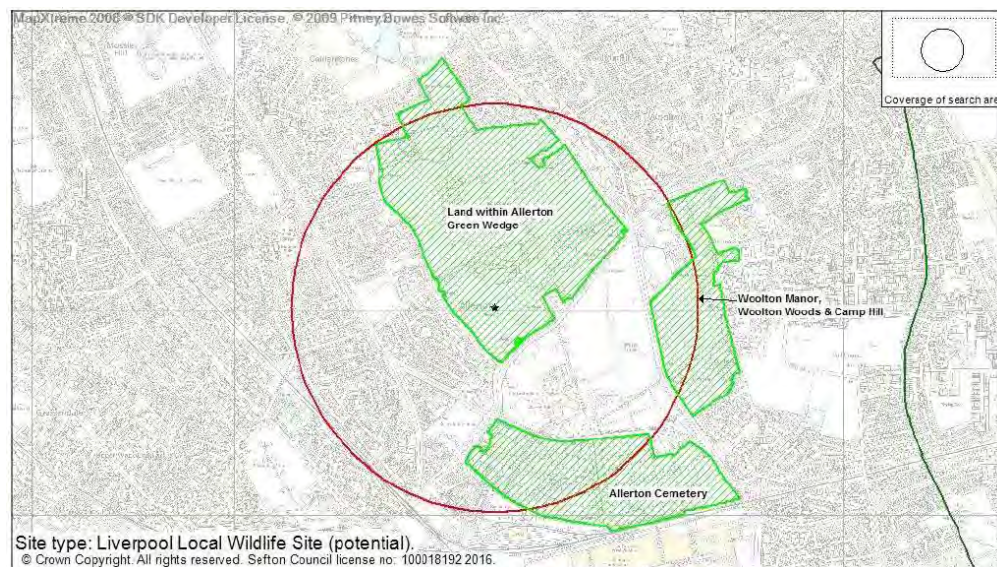
ENHANCEMENT OF GREEN SPACE OE12

The City Council will seek to enhance the overall stock of publicly accessible green space by:

- i. improving the quality and management of existing parks, playing fields, golf courses and cemeteries;
- ii. pursuing opportunities for new recreational provision in areas of local open space deficiency as identified in this Plan, particularly on green spaces surplus to the City Council requirements for other purposes; and
- iii. providing new parks as identified on the Proposals Map.

Map provided by Merseyside BioBank of site designations within 1km





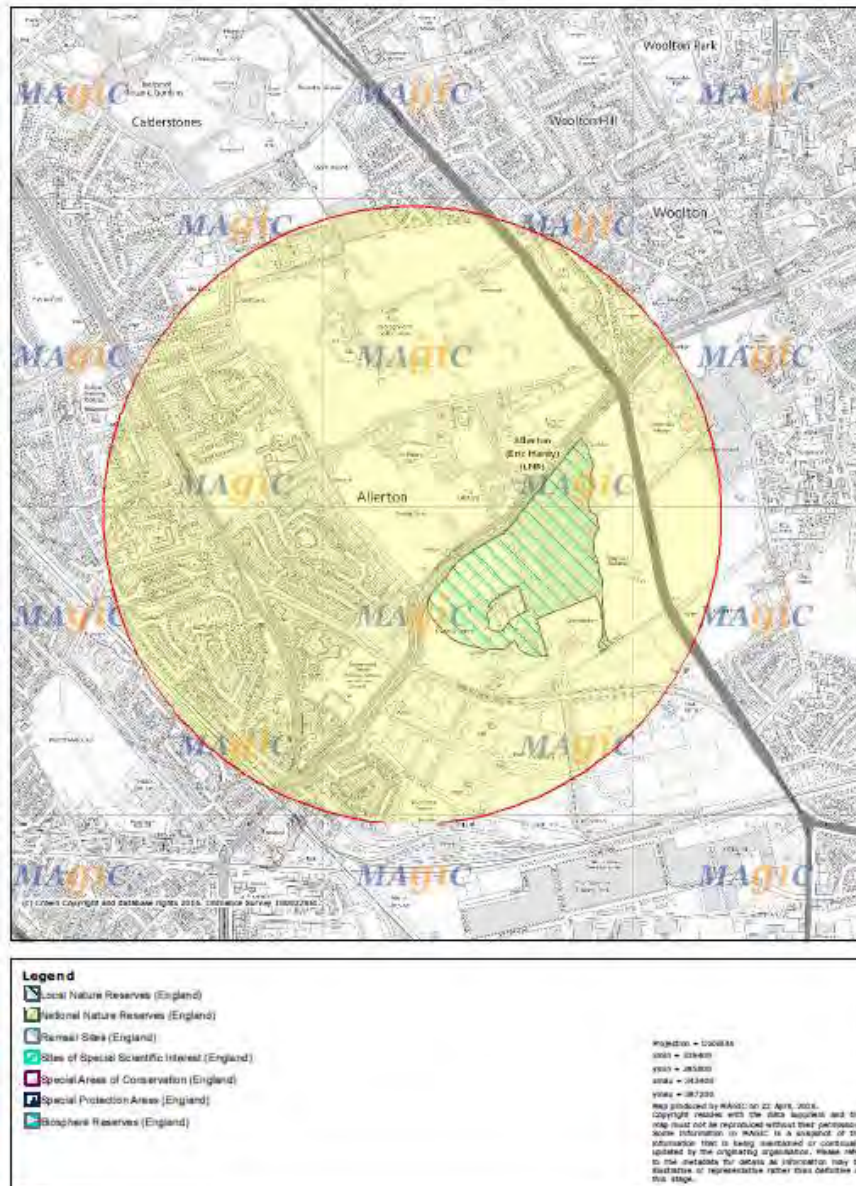
Extract of species data provided by Biobank within 1km

GridRef	Location Name	Common Name	Scientific Name	Group	Abundance, breeding status etc	Date
SJ403860		House Sparrow	Passer domesticus	bird	2 Proven Count of Confirmed breeding	2001
SJ405863		House Sparrow	Passer domesticus	bird	1 Proven Count of Confirmed breeding	2001
SJ406857		House Sparrow	Passer domesticus	bird	10 Proven Count of Confirmed breeding	2001
SJ406858		House Sparrow	Passer domesticus	bird	Proven Count of Confirmed breeding	2001
SJ408855		House Sparrow	Passer domesticus	bird	1 Proven Count of Confirmed breeding	2001
SJ408859		House Sparrow	Passer domesticus	bird	2 Proven Count of Confirmed breeding	2001
SJ409857		House Sparrow	Passer domesticus	bird	1 Proven Count of Confirmed breeding	2001
SJ409858		House Sparrow	Passer domesticus	bird	Proven Count of Confirmed breeding	2001
SJ410857		House Sparrow	Passer domesticus	bird	2 Proven Count of Confirmed breeding	2001
SJ410857		House Sparrow	Passer domesticus	bird	1 Proven Count of Confirmed breeding	2001
SJ411851		House Sparrow	Passer domesticus	bird	3 Proven Count of Confirmed breeding	2001
SJ420864		House Sparrow	Passer domesticus	bird	2 Proven Count of Confirmed breeding	2001
SJ48H	Halewood Triangle	Brown Hawker	Aeshna grandis	insect - dragonfly (Odonata)	Present Count	
SJ48H	Halewood Triangle	Azure Damselfly	Coenagrion puella	insect - dragonfly (Odonata)	Present Count	
SJ48H	Halewood Triangle	Blue-tailed Damselfly	Ischnura elegans	insect - dragonfly (Odonata)	Present Count	
SJ48H	Halewood Triangle	Common Darter	Sympetrum striolatum	insect - dragonfly (Odonata)	Present Count	
SJ48H	Halewood Triangle	Emperor Dragonfly	Anax imperator	insect - dragonfly (Odonata)	Male Count	2013
SJ403855		House Sparrow	Passer domesticus	bird	1 Proven Count of Confirmed breeding	22/05/2001
SJ405855		House Sparrow	Passer domesticus	bird	8 Proven Count of Confirmed breeding	22/05/2001
SJ406856		House Sparrow	Passer domesticus	bird	1 Proven Count of Confirmed breeding	22/05/2001
SJ407856		House Sparrow	Passer domesticus	bird	1 Proven Count of Confirmed breeding	22/05/2001
SJ407857		House Sparrow	Passer domesticus	bird	1 Proven Count of Confirmed breeding	22/05/2001
SJ408859		House Sparrow	Passer domesticus	bird	1 Proven Count of Confirmed breeding	22/05/2001
SJ409858		House Sparrow	Passer domesticus	bird	1 Proven Count of Confirmed breeding	22/05/2001
SJ418855	Springwood Crematorium, Allerton, Liverpool	Common Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal	21-50 Count	14/06/2005
SJ418855	Lancashire	Common Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal	1 Adul/ Count of young	
SJ418855	Springwood Avenue	Common Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		
SJ418855	Springwood Avenue	Common Pipistrelle	Pipistrellus pipistrellus	terrestrial mammal		14/06/2005
SJ418859	ALLERTON ERIC HARDY LNR	Indian Balsam	Impatiens glandulifera	flowering plant		
SJ418859	ALLERTON ERIC HARDY LNR	Japanese Knotweed	Fallopia japonica	flowering plant		
SJ4285	Camp Hill, Woolton	Emperor Dragonfly	Anax imperator	insect - dragonfly (Odonata)	1 Count of Total	12/06/2007
SJ4286		Eurasian Red Squirrel	Sciurus vulgaris	terrestrial mammal		03/04/2008
SJ4286		Eastern Grey Squirrel	Sciurus carolinensis	terrestrial mammal		05/04/2008
SJ4186	Woodland pathways, Childwall woods	Rhododendron	Rhododendron ponticum	flowering plant	1 Count of Present	04/04/2010
SJ4186	Boundary path in Childwall woods	Welsh Poppy	Meconopsis cambrica	flowering plant	1 Count of Present	
SJ411861	Allerton playing fields, South Lancashire	Indian Balsam	Impatiens glandulifera	flowering plant	Present Count	25/08/2010
SJ411861	Near Allerton playing fields, South Lancashire	Japanese Knotweed	Fallopia japonica	flowering plant	Present Count	25/08/2010
SJ4186	Meadowland in Childwall woods	Common Frog	Rana temporaria	amphibian	1 Count of Present	
SJ4211865	High Street, Woolton, Liverpool 25, South Lancashire	Eastern Grey Squirrel	Sciurus carolinensis	terrestrial mammal	1 Count of Adult	04/03/2011
SJ404855	Unknown	Four-spotted Chaser	Libellula quadrimaculata	insect - dragonfly (Odonata)	Present Count	
SJ404855	Unknown	Broad-bodied Chaser	Libellula depressa	insect - dragonfly (Odonata)	Present Count	
SJ404855	Unknown	Four-spotted Chaser	Libellula quadrimaculata	insect - dragonfly (Odonata)	Present Count	30/04/2011
SJ404855	Unknown	Broad-bodied Chaser	Libellula depressa	insect - dragonfly (Odonata)	Present Count	
SJ404855	Unknown	Four-spotted Chaser	Libellula quadrimaculata	insect - dragonfly (Odonata)	Present Count	
SJ4085	Unknown	Broad-bodied Chaser	Libellula depressa	insect - dragonfly (Odonata)	Present Count	06/05/2011
SJ404855	Unknown	Four-spotted Chaser	Libellula quadrimaculata	insect - dragonfly (Odonata)	Present Count	
SJ404855	Unknown	Azure Damselfly	Coenagrion puella	insect - dragonfly (Odonata)	Present Count	
SJ404855	Unknown	Broad-bodied Chaser	Libellula depressa	insect - dragonfly (Odonata)	Present Count	08/05/2011
SJ404855	Unknown	Four-spotted Chaser	Libellula quadrimaculata	insect - dragonfly (Odonata)	Present Count	
SJ404855	Unknown	Azure Damselfly	Coenagrion puella	insect - dragonfly (Odonata)	Present Count	
SJ404855	Unknown	Broad-bodied Chaser	Libellula depressa	insect - dragonfly (Odonata)	Present Count	19/05/2011
SJ404855	Unknown	Four-spotted Chaser	Libellula quadrimaculata	insect - dragonfly (Odonata)	Present Count	
	Allerton Towers Grounds, B5171, Woolton Road, Allerton, Liverpool,					
		Rhododendron	Rhododendron ponticum	flowering plant	local Count of Flowering	25/06/2011
	Allerton Towers Grounds, B5171, Woolton Road, Allerton, Liverpool,					
		Rhododendron	Rhododendron ponticum	flowering plant	locally frequent Count of Flowering	25/06/2011
	Allerton Towers Grounds, B5171, Woolton Road, Allerton, Liverpool,					
		Rhododendron	Rhododendron ponticum	flowering plant	locally frequent Count of Flowering	25/06/2011
	Allerton Towers Grounds, B5171, Woolton Road, Allerton, Liverpool,					
		Rhododendron	Rhododendron ponticum	flowering plant	occasional Count of Flowering	25/06/2011
	Allerton Towers Grounds, B5171, Woolton Road, Allerton, Liverpool,					
		Eastern Grey Squirrel	Sciurus carolinensis	terrestrial mammal	1 Count of Adult	25/06/2011
	Allerton Towers, Woolton Road, Allerton, Liverpool, Merseyside, South	Indian Balsam	Impatiens glandulifera	flowering plant	local Count of Flowering	31/07/2011
SJ4086	Liverpool 19: Heath Road, South	Rubinoletus rubinus	Rubinoletus rubinus	fungus	1 Count	17/08/2011

SJ411864	Allerton Golf Club Path	Indian Balsam	<i>Impatiens glandulifera</i>	flowering plant	1 Count	07/09/2012
SJ411864	Allerton Golf Club Path, Liverpool	Indian Balsam	<i>Impatiens glandulifera</i>	flowering plant	Present Count	
SJ4286	Unknown	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	Present Count	
SJ4161861	Allerton Tower Park, B5171, Woolton Road, Allerton, Liverpool, Merseyside, South Lancashire	Rhododendron	<i>Rhododendron ponticum</i>	flowering plant	occasional Count of Flowering	22/06/2013
SJ4164857	Clark Gardens, Eric Hard NR, Springwood Avenue, Allerton, Liverpool, South Lancashire	Eastern Grey Squirrel	<i>Sciurus carolinensis</i>	terrestrial mammal	1 Count of Adult	03/12/2013
SJ4164857	Clark Gardens, Eric Hard NR, Springwood Avenue, Allerton, Liverpool, South Lancashire	Eastern Grey Squirrel	<i>Sciurus carolinensis</i>	terrestrial mammal	1 Count of Adult	03/12/2013
SJ4166856	Eric Hardy Local Nature Reserve, Springwood Avenue, Allerton, Liverpool, Merseyside, South Lancashire	Rhododendron	<i>Rhododendron ponticum</i>	flowering plant	occasional InFlower- Count of Flowering	04/12/2013
SJ4170855	Eric Hardy Local Nature Reserve, Springwood Avenue, Allerton, Liverpool, Merseyside, South Lancashire	Rhododendron	<i>Rhododendron ponticum</i>	flowering plant	occasional InFlower- Count of Flowering	04/12/2013
SJ4159861	Allerton Tower Park, B5171 Woolton Road, Allerton, Liverpool, Merseyside, South Lancashire	Rhododendron	<i>Rhododendron ponticum</i>	flowering plant	occasional Count	24/12/2013
SJ4159862	Allerton Tower Park, B5171 Woolton Road, Allerton, Liverpool, Merseyside, South Lancashire	Rhododendron	<i>Rhododendron ponticum</i>	flowering plant	occasional Count	24/12/2013
SJ4185	Allerton Cemetery, South Lancashire	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	Present Count of Flowering	
SJ48C	Allerton	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	O Count of DAFOR	12/04/2014
SJ48C	Allerton	Corn Spurrey	<i>Spergula arvensis</i>	flowering plant	R Count of DAFOR	
SJ48C	Allerton	Indian Balsam	<i>Impatiens glandulifera</i>	flowering plant	F Count of DAFOR	
SJ48C	Allerton	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	R Count of DAFOR	12/04/2014
SJ4185	Allerton Cemetery, South Lancashire	Three-cornered Garlic	<i>Allium triquetrum</i>	flowering plant	Present Count of Flowering	
SJ48C	Allerton	Three-cornered Garlic	<i>Allium triquetrum</i>	flowering plant	R Count of DAFOR	
SJ4185	Public footpath alongside cemetery, South Lancashire	Welsh Poppy	<i>Meconopsis cambrica</i>	flowering plant	Present Count of Flowering	12/04/2014
SJ48C	Allerton	Welsh Poppy	<i>Meconopsis cambrica</i>	flowering plant	R Count of DAFOR	
SJ4185	Allerton, Liverpool	Eurasian Badger	<i>Meles meles</i>	terrestrial mammal	Present Count of Sett	17/02/2015
SJ416855	Clarke Gardens/ Eric Hardy Nature Reserve, Allerton, Liverpool, South Lancashire	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	Present Count	04/04/2015
SJ4185	Broad leaved plantation, Eric Hardy LNR and Clarke gardens	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	Present Count	14/05/2015
SJ4185	Plantation around Alerton house, Clarke Gardens, Eric Hardy LNR and Clarke gardens	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	Present Count	14/05/2015
SJ4186	Scrub, Eric Hardy LNR and Clarke gardens	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	Present Count	
SJ4185	Broad leaved plantation, Eric Hardy LNR and Clarke gardens	Indian Balsam	<i>Impatiens glandulifera</i>	flowering plant	Present Count	14/05/2015
SJ4185	Broad leaved plantation, Eric Hardy LNR and Clarke gardens	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	Present Count	14/05/2015
SJ4185	Broad leaved plantation, Eric Hardy LNR and Clarke gardens	Large-leaved Lime	<i>Tilia platyphyllos</i>	flowering plant	Present Count	14/05/2015
SJ4185	Plantation around Alerton house, Clarke Gardens, Eric Hardy LNR and Clarke gardens	Welsh Poppy	<i>Meconopsis cambrica</i>	flowering plant	Present Count	14/05/2015
SJ410869	Woodland, Yewtree road, South of Calderstones Park	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	Present Count	21/05/2015
SJ4151856	Clarke Gardens, Allerton, Liverpool, Merseyside, South Lancashire	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	local Count	04/06/2015
SJ4152856	Clarke Gardens, Allerton, Liverpool, Merseyside, South Lancashire	Bluebell	<i>Hyacinthoides non-scripta</i>	flowering plant	local Count of Fruiting	04/06/2015
	Clarke Gardens, Allerton, Liverpool,	Indian Balsam	<i>Impatiens glandulifera</i>	flowering plant	locally frequent Count	04/06/2015
	Clarke Gardens, Allerton, Liverpool, Merseyside, South Lancashire	Indian Balsam	<i>Impatiens glandulifera</i>	flowering plant	locally abundant Count	04/06/2015
	Clarke Gardens, Allerton, Liverpool,	Indian Balsam	<i>Impatiens glandulifera</i>	flowering plant	locally frequent Count	04/06/2015
	Clarke Gardens, Allerton, Liverpool,	Indian Balsam	<i>Impatiens glandulifera</i>	flowering plant	local Count	04/06/2015
	Clarke Gardens, Allerton, Liverpool, Merseyside, South Lancashire	Japanese Knotweed	<i>Fallopia japonica</i>	flowering plant	local Count	04/06/2015
	Clarke Gardens, Allerton, Liverpool,	Japanese Rose	<i>Rosa rugosa</i>	flowering plant	local Count of Flowering	04/06/2015
	Clarke Gardens, Allerton, Liverpool,	Rhododendron	<i>Rhododendron ponticum</i>	flowering plant	local Count of Flowering	04/06/2015
	Clarke Gardens, Allerton, Liverpool, Merseyside, South Lancashire	Rhododendron	<i>Rhododendron ponticum</i>	flowering plant	local Count of Flowering	04/06/2015
SJ48I	Liverpool Loop Line, Broad Green-	Eastern Grey Squirrel	<i>Sciurus carolinensis</i>	terrestrial mammal	1 Count of Adult	09/06/2015
SJ416858	Clarke Gardens/Eric Hardy LNR, Allerton,	Broad-bodied Chaser	<i>Libellula depressa</i>	insect - dragonfly (Odonata)	1 Count	16/06/2015
	Allerton golf club, Liverpool. North-east Allerton, west of A562 and east of	Brown Long-eared Bat	<i>Plecotus auritus</i>	terrestrial mammal	1 Count of possible roost	04/09/2015
	Allerton Cemetery, Springwood Avenue, Allerton, Liverpool, Merseyside, South	Rhododendron	<i>Rhododendron ponticum</i>	flowering plant	local Count of Flowering	18/10/2015
	Allerton Cemetery, Springwood Avenue, Allerton, Liverpool, Merseyside, South	Rhododendron	<i>Rhododendron ponticum</i>	flowering plant	local Count of Flowering	18/10/2015
SJ408868						
SJ408868	Maryton Grange	Dunnoch	<i>Prunella modularis</i>	bird	1 Count of Probable breeding	04/06/2010- 04/06/2010
SJ4086						
SJ4086	Maryton Grange	Eurasian Badger	<i>Meles meles</i>	terrestrial mammal	1 Count of Present	13/08/2010- 16/08/2010
SJ4086						

Desk Based Appendix

MAGIC Map 1km search zone for designated wildlife sites - Map



MAGIC Map 1km search zone for designated wildlife sites - Report

Local Nature Reserves (England)

Reference

1460413

Name

ALLERTON (ERIC HARDY)

Hectares

19.34

Hyperlink
http://www.lnr.naturalengland.org.uk/special/lnr/lnr_details.asp?themeid=1460413

MAGIC Map search for SSSI Impact Risk Zones for site only

SSSI Impact Risk Zones – to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)

1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?

2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:

All Planning Applications
Infrastructure

Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.

Wind & Solar Energy

Solar schemes with footprint > 0.5ha, all wind turbines.

Minerals, Oil & Gas

Planning applications for quarries: new proposals or extensions, outside or extending outside existing settlements/urban areas affecting greenspace, farmland or semi natural habitats. Oil & gas exploration/extraction.

Rural Non Residential

Large non residential developments outside existing settlements/urban areas where footprint exceeds 1ha.

Residential
Rural Residential

Any residential development of 50 or more houses outside existing settlements/urban areas.

Air Pollution

Pig & poultry units, slurry lagoons > 4000m³

Combustion

General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.

Waste

Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.

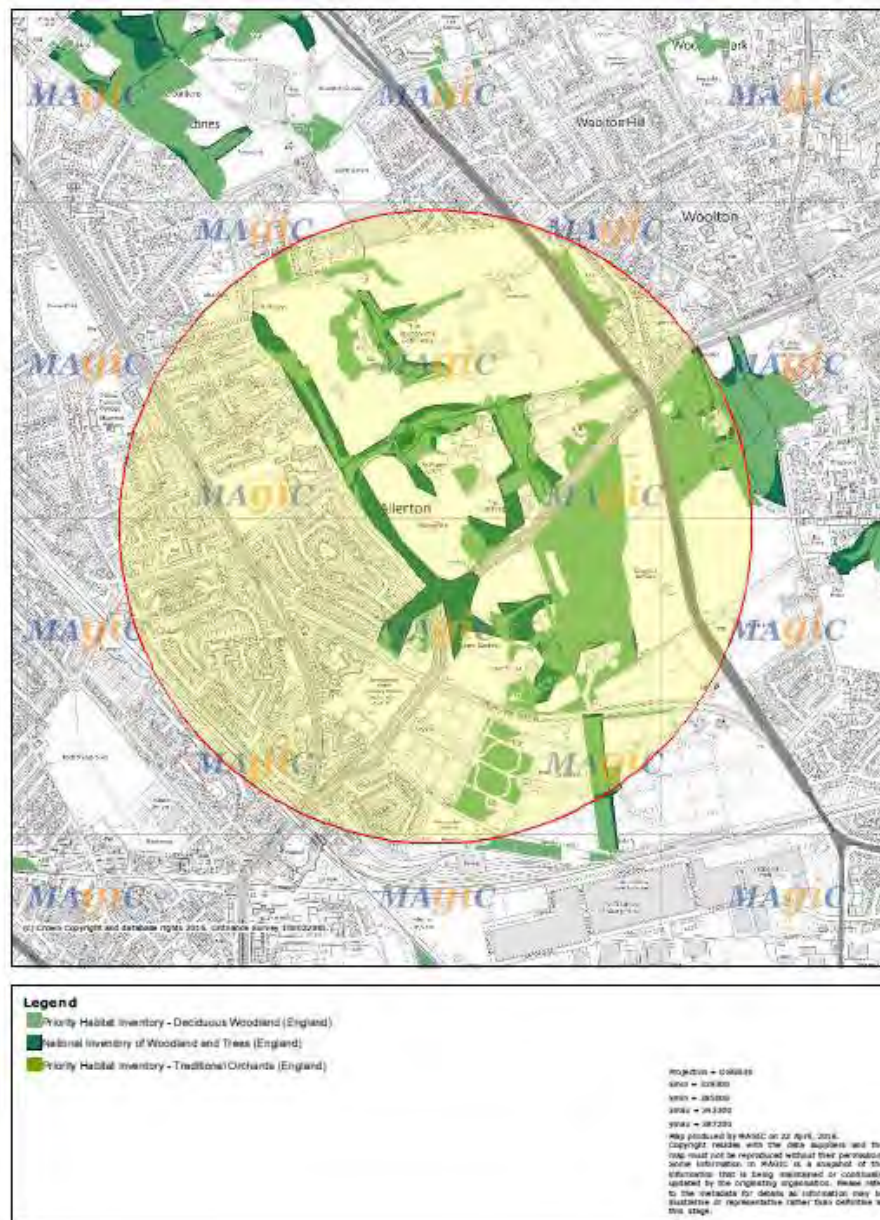
Composting
Discharges

Any discharge of water or liquid waste that is more than 5m³/day. The water needs to either be discharged to ground (ie to seep away) or to surface water, such as a beck or stream. Discharges to mains sewer are excluded.

Water Supply
GUIDANCE – How to use the Impact Risk Zones

[/Metadata for magic/SSSI IRZ User Guidance v2.5 MAGIC 10Mar2016.pdf](#)

MAGIC Map 1km search zone for habitat inventory data



Wildlife Site Citations

Site name: Eric Hardy Local Nature Reserve and Clarke Gardens, Allerton

Site area: 28.92 hectares

National grid reference: SJ638941

Date of designation: 1995 (as Hillfoot Road/Simpson's Pavilion)

District: Liverpool

Date of last revision: March 2010

Local Wildlife Site number: 15

Citation:

An extensive area of largely native broadleaved woodland, planned in the early 1980s is now reaching maturity. juxtaposition with unimproved neutral grassland creates a relatively high diversity of habitats. The site supports a good diversity of common grassland species, including Black Knapweed and Bird's-foot Trefoil but a lack of recent management may be leading to some losses. The woodland has a well developed understorey, mostly of elder and rowan.

Breeding birds are mostly species associated with woodland and scrub and include the nationally declining Bullfinch, which depends upon the dense Hawthorn and Blackthorn thickets. Regular wintering birds include good numbers of Siskin and Lesser Redpoll. A range of common grassland and woodland butterfly species breeds.

A deep gully marks the channel of a flood drain flanked by a narrow plantation woodland of sycamore and beech with a reasonably diverse understorey. The ground flora is dominated by ruderal species with abundant Japanese Knotweed, but species of interest include Scaly Male-fern, Soft and Hard Shield-ferns, Pigout and Dog's Mercury. The amount of fallen and standing dead wood is locally notable and supports a variety of fungi.

Part of the site was designated as a Local Nature Reserve in 2007.

Appraisal:

Guideline		Comment
HABITATS		
H1	Rarity	1 BAP priority habitat, 1 regionally important habitat
H2	Diversity	10 habitats recorded
H3	Naturalness	—
H4	Isolation	—
PLANTS		
Sp1	Rarity	1 regionally important species, 8 locally rare species
Sp2	Diversity	A total of 73 plant species was recorded during 2005-2007 but more than 100 are known.
Sp3	Naturalness	58% of the plants are native to the city. Colonisation has been aided by man and the site has been physically altered.
Sp4	Nationally rare	—
ANIMALS		
General		
Sp5	Rare/priority	—
Birds		
B1	Non-breeding population	—
B2	Breeding population	—
B3	Regionally rare/scarc	—
B4	Breeding assemblage	—
B5	Assemblage breeding, wintering, passage	Guideline met. The site supports a breeding assemblage of 50 species associated with habitat mosaics.
Dragonflies		
Od1	Breeding	—
Od2	Regionally rare/scarc	—
Butterflies		
Bf1	Regionally rare/scarc	—
Bf2	Breeding assemblage	—
Amphibians		
A1	Rarity	—
A2	Exceptional population	—
Reptiles		
R1	Population of native species	—
R2	Exceptional population	—

Bats		
Bat1	Roost	---
Bat2	Assemblage	---
Mammals		
M1	Breeding	---

SUMMARY: The combination of these factors has led to this site being identified as a Local Wildlife Site.

NOTE: Validated data from 1995 to 2008 have been used in this assessment. Other data may become available to support this designation.

Status of features of nature conservation importance

HABITATS

1 BAP priority habitat

Unimproved neutral grassland

1 regionally important habitat

Unimproved neutral grassland

PLANTS

1 regionally important species

Bluebell *Hyacinthoides non-scripta*

8 locally rare species

Burnet Rose *Rosa spinosissima*

Dove's-foot Crane's-bill *Geranium molle*

Enchanter's Nightshade *Circaea intermedia*

Hard Shield-fern *Polystichum aculeatum*

Pignut *Conopodium majus*

Scaly Male-fern *Dryopteris affinis*

Soft Shield-fern *Polystichum setiferum*

Wild Angelica *Angelica sylvestris*

APPENDIX 2.

Target notes

Target Notes Report

ALLERTON

Target Note TN1

Modified neutral grassland that occupies the central area of the site. This area was previously used as a playing field and is now unmanaged.

<i>Arrhenatherum elatius</i>	False oat-grass	D
<i>Cirsium arvense</i>	Creeping Thistle	A
<i>Dactylis glomerata</i>	Cock's-foot	A
<i>Holcus lanatus</i>	Yorkshire fog	A
<i>Plantago lanceolata</i>	Ribwort Plantain	F
<i>Centaurea nigra</i>	Black Knapweed	F
<i>Senecio jacobaea</i>	Ragwort	F
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	O
<i>Chamerion angustifolium</i>	Rosebay Willowherb species	O
<i>Heracleum sphondylium</i>	Hogweed	O
<i>Rumex obtusifolius</i>	Broad-leaved Dock	O
<i>Rumex acetosa</i>	Common sorrel	O
<i>Taraxacum</i> sp.	Dandelion species	O
<i>Chamerion angustifolium</i>	Rosebay willowherb	O
<i>Agrostis stolonifera</i>	Common bent	O
<i>Anthriscus sylvestris</i>	Cow Parsley	R
<i>Cardamine pratensis</i>	Cuckooflower	R
<i>Cerastium fontanum</i>	Common Mouse-ear	R
<i>Equisetum arvense</i>	Field Horsetail	R
<i>Galium aparine</i>	Cleavers	R
<i>Quercus</i> sp.	Oak species	R
<i>Ranunculus acris</i>	Meadow Buttercup	R
<i>Urtica dioica</i>	Nettle	R
<i>Vicia</i> sp.	Vetch species	R

Target Note TN2

Trees species with semi-natural woodland areas on site and understorey.

<i>Fagus sylvatica</i>	Beech	A
<i>Hedera helix</i>	Ivy	A
<i>Acer pseudoplatanus</i>	Sycamore	F
<i>Castanea sativa</i>	Sweet Chestnut	F
<i>Rhododendron ponticum</i>	Rhododendron	F
<i>Rubus fruticosus</i> agg.	Bramble	F
<i>Urtica dioica</i>	Nettle	F
<i>Aesculus hippocastanum</i>	Horse-chestnut	O
<i>Anthriscus sylvestris</i>	Cow Parsley	O
<i>Chamerion angustifolium</i>	Rosebay Willowherb	O
<i>Dactylis glomerata</i>	Cock's-foot	O
<i>Galium aparine</i>	Cleavers	O
<i>Ilex aquifolium</i>	Holly	O
<i>Pinus sylvestris</i>	Scots Pine	O
<i>Quercus robur</i>	English Oak	O
<i>Rubus idaeus</i>	Raspberry	O
<i>Tilia</i> sp.	Lime sp.	O
<i>Sambucus nigra</i>	Elder	O
<i>Populus</i> sp.	Poplar sp.	O
<i>Sambucus nigra</i>	Elder	O
<i>Betula pendula</i>	Silver Birch	R
<i>Hyacinthoides</i> sp.	Bluebell species	R
<i>Populus nigra italica</i>	Lombardy Poplar	R

<i>Prunus sp.</i>	Cherry species	R
<i>Prunus spinosa</i>	Blackthorn	R
<i>Aegopodium podagraria</i>	Ground elder	R
<i>Arum maculatum</i>	Lords and ladies	R
<i>Crataegus monogyna</i>	Hawthorn	R
<i>Prunus laurocerasus</i>	Cherry laurel	R
<i>Quercus cerris</i>	Turkey oak	R
<i>Prunus avium</i>	Wild cherry	R
<i>Acer platanoides</i>	Norway maple	R
<i>Taxus baccata</i>	Yew	R
<i>Larix sp.</i>	Larch sp	R
<i>Fraxinus excelsior</i>	Ash	R
<i>Tilia cordata</i>	Small-leaved Lime	R

APPENDIX 3. Breeding Bird Survey



Allerton Priory Allerton, Liverpool Breeding Bird Surveys 2015

Document Ref: 5171.003
Version 1.0
October 2015

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**Allerton Priory Liverpool
Breeding Bird Survey Report**

TEP Report Ref: 5171.003

October 2015

Version 1.0

Prepared by:

John Crowder

TEP

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for

Redrow Homes Limited

Redrow House

St. Davids Park

Ewloe

Flintshire

Written:	Checked:	Approved:
JC	ACP	ACP

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2.0 PRE-EXISTING DATA FOR SITE.....	2
3.0 HABITAT DESCRIPTION	2
4.0 SURVEY RESULTS	3
5.0 SUMMARY	8

FIGURES

G5171.002	Breeding Birds Survey 1 29/04/15
G5171.003	Breeding Birds Survey 2 05/06/15
G5171.004	Breeding Birds Survey 3 17/07/15

1.0 GENERAL DETAILS

Site Name	Allerton Priory		
Job Number	5171	Doc. Ref	5171.003
Central NGR	SJ 412 860		
Site Location	Allerton, Liverpool		
Date(s)	Visit 1 – 29/04/15 Visit 2 – 05/06/15 Visit 3 – 17/07/15		
Surveyor(s)	Tim Ross		
Weather	Visit 1 – Dry and calm Visit 2 – Cloudy with sunny intervals Visit 3 – Dry with some cloud and a slight breeze		
Methods	Three morning visits to site using transect method based on BTO Breeding Bird Survey.		
Seasonal Constraints	The surveys were undertaken during the optimum breeding bird survey period. There are therefore no constraints associated with the survey.		
Drawing References	Visit 1 – G5171.002 Visit 2 – G5171.003 Visit 3 – G5171.004		

	Written	Checked	Authorised
Initial	JD	JC	ACP

2.0 PRE-EXISTING DATA FOR SITE

Desktop records from Mersey Biobank revealed a number of species within 1km of the site, including; Barn owl - a Schedule 1 Species and amber-list Bird of Conservation Concern (BoCC); and also dunnoek, house martin and swift which are amber list BoCC; and bullfinch, song thrush, starling, house sparrow, lapwing, linnet, skylark and willow tit which are red list BoCC and/or Section 41 species.

3.0 HABITAT DESCRIPTION

The Allerton Priory site is in the Allerton suburb of Liverpool. The site comprises grassland with areas of dense and scattered scrub, scattered trees, plantation and broadleaved woodland around the boundaries of the site. The site is surrounded by a mixture of open land and residential development.

4.0 SURVEY RESULTS

Visit 1	Date	29/04/15	Start time	07:15	End time	11:00
Visit 2	Date	05/06/15	Start time	07:15	End time	11:00
Visit 3	Date	17/07/15	Start time	05:25	End time	09:10

Species	Visit 1 -number recorded	Visit 2 -number recorded	Visit 3 -number recorded	Conservation status	Likely breeding status within site
Blackbird	14	16	9		C (2) Pr (5)
Blackcap	12	8			Pr (5)
Blue tit	9	3			Pr (3)
Buzzard			9		Po
Carrion crow	1	4	3		Pr (1)
Chiffchaff	4	2	1		Pr (2)
Canada Goose	2				N
Chaffinch		9	2		Pr (4)
Collared Dove		3			Po
Cuckoo		1		S41, R	Po
Duncock	3	4	4	S41, A	Pr (3)
Feral Pigeon	1				N
Goldcrest	1	1			Po
Goldfinch	2	1	24		Pr (1)
Greenfinch	1		1		Po
Great spotted woodpecker	2	3	1		Pr (1)
Great tit	7	3			Pr (3)
House Sparrow			2	S41, R	Po
Jay	3		1		Po
Jackdaw	13	8	47		C (1)
Kestrel			1	S41, A	Po
Lesser Black- backed Gull	2			A	N
Long-tailed tit	1				Po
Mistle thrush		1	2	A	C (1)
Magpie	18	9	8		C (1) Pr (2)
Nuthatch	2	1			Pr (1)
Pied Wagtail			15		Po
Raven			2		Po
Robin	7	17	2		Pr (6)
Sedge Warbler		1			Po
Song thrush	1	4	2	S41, R	C (1) Pr (2)
Starling			24	S41, R	Po
Stock Dove			6	A	Po
Tree Creeper		2			Po
Whitethroat	1		2	A	Pr (1)
Willow Warbler	4	1	1	A	Pr (1)
Wood pigeon	11	15			Pr (5)
Wren	11	14	2		Pr (8)
TOTAL	25	24	24		

Key: S41 = Section 41 / 42; R = Red List; A = Amber List; C = Confirmed, Pr = probably breeding within site, Po = possibly breeding within site, N = not breeding within site.

5.0 SUMMARY

Desktop records from Mersey Biobank revealed a number of BoCC species within 1km of the site including; Barn owl, song thrush, starling, house sparrow, lapwing, linnet, skylark, willow tit, dunnoek, bullfinch, house martin and swift.

A total of 38 bird species were recorded at Allerton in the 2015 breeding bird survey across all visits; 24 species were recorded in the 1st visit, 25 were recorded in the 2nd visit, and 24 during the 3rd visit. There were no Schedule 1 Species recorded on any of the visits undertaken during the 2015 breeding bird survey.

Six Section 41 (S41) species were recorded across all survey visits. Song thrush was recorded on each visit, cuckoo was recorded on visit 2, dunnoek on visits 2 and 3 and house sparrow, kestrel and starling on visit 3. Only song thrush was confirmed as breeding with adults observed carrying food on visits 2 and 3. Dunnoek is regarded as a probable breeder with around three pairs likely to breed around the edge of the site. All other Section 41 species were regarded as possible breeders despite juvenile starling observed feeding on site, it is likely that the roost is located off-site.

Five amber-listed BoCC species which are not also listed as Section 41 species were recorded across all visits. Mistle thrush was the only species to be recorded as a confirmed breeder with an adult observed carrying food on visit 2. Whitethroat and willow warbler are regarded as probable breeders with at least a pair of each likely to breed on site. Stock dove was regarded as a possible breeder and lesser black backed gull as a non-breeder.

There were 26 non-BoCC species which were recorded on site. Of these, 3 species were confirmed as breeding. These species were blackbird, magpie and jackdaw. Blackbird was recorded in reasonable numbers across all visits. Two separate birds were seen carrying food on visit 2 with a family noted on visit 3. Jackdaw was recorded across all three visits in reasonable numbers although only breeding evidence was an active nest observed during the first visit. Magpie were recorded in reasonable numbers across all visits with an active nest observed on visit one and a family group noted on visit 2.

Evaluation

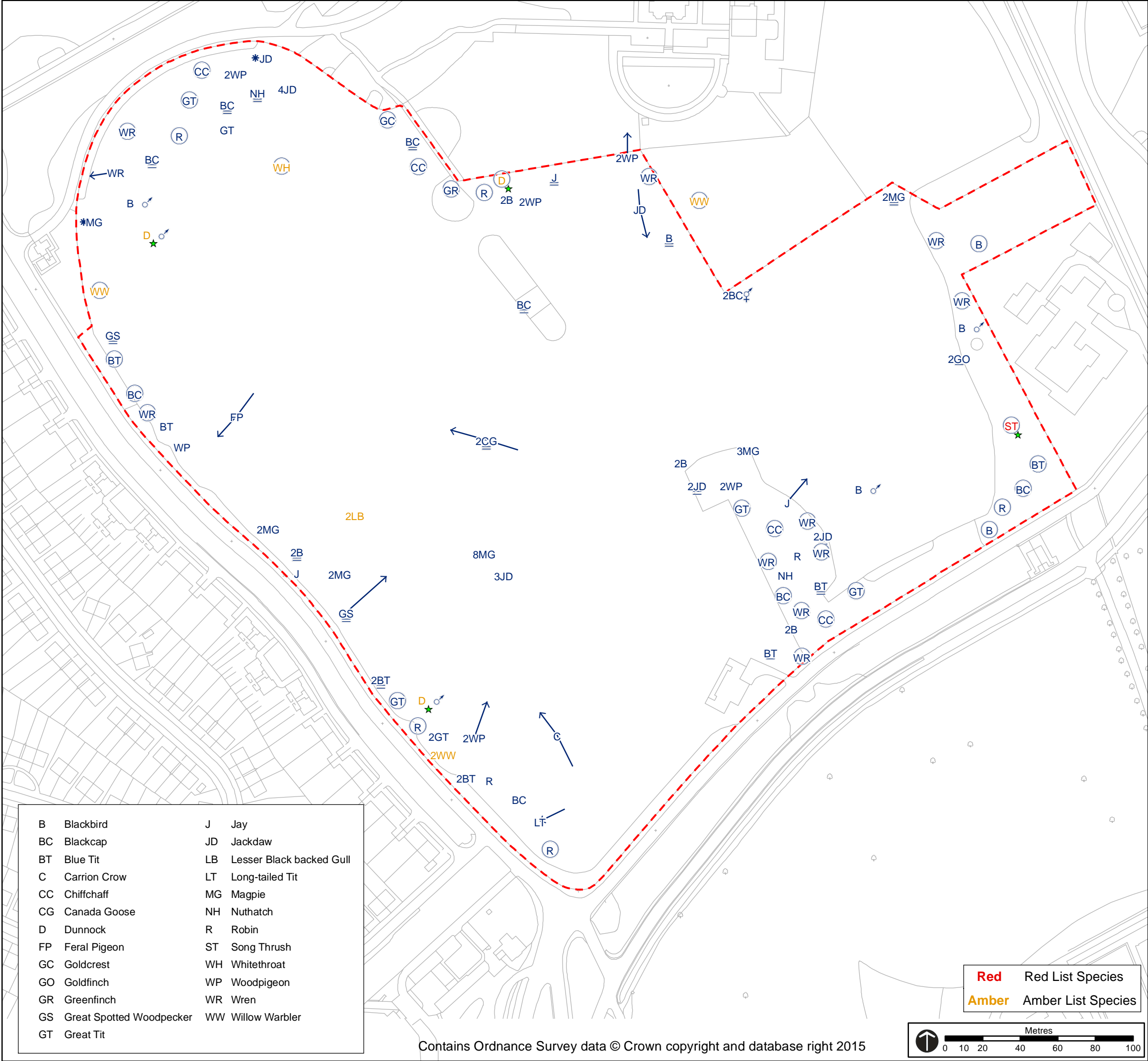
This site is considered to support a moderate diversity of species, with several species of birds recorded breeding on the site. Although confirmed breeders were all common species, there was still a low to moderate number of Section 41 species that were recorded on site. Any loss of open/rank grassland, trees and scrub will reduce breeding habitat for these species. If tree and scrub clearance/removal is proposed then this should be conducted outside of the breeding bird season (March-August inclusive) and sufficient habitat creation should be planned to mitigate for the loss of breeding habitat.

The following enhancement approaches to avoid or minimise impacts on birds should be implemented:

- Install bird boxes, suitable for the species recorded on site, on retained trees across the site.
- Avoid street lighting along nesting and foraging areas where possible, any lighting to be baffled and low UV. All external lighting included in the detailed designs should be designed to be sensitive to birds.
- Foraging and nesting areas will be retained (as green infrastructure or as gardens). The detailed planting plan will include a number of native plant species which attract invertebrates, particularly in residential gardens and around the newly created wetland areas.

DRAWINGS

G5171.002	Breeding Birds Survey 1 29/04/15
G5171.003	Breeding Birds Survey 2 05/06/15
G5171.004	Breeding Birds Survey 3 17/07/15



Key

- Site Boundary
- Alarm call
- Calling
- Male
- Male and Female
- Occupied nest
- Singing
- Section 41 Species
- Directional flight line

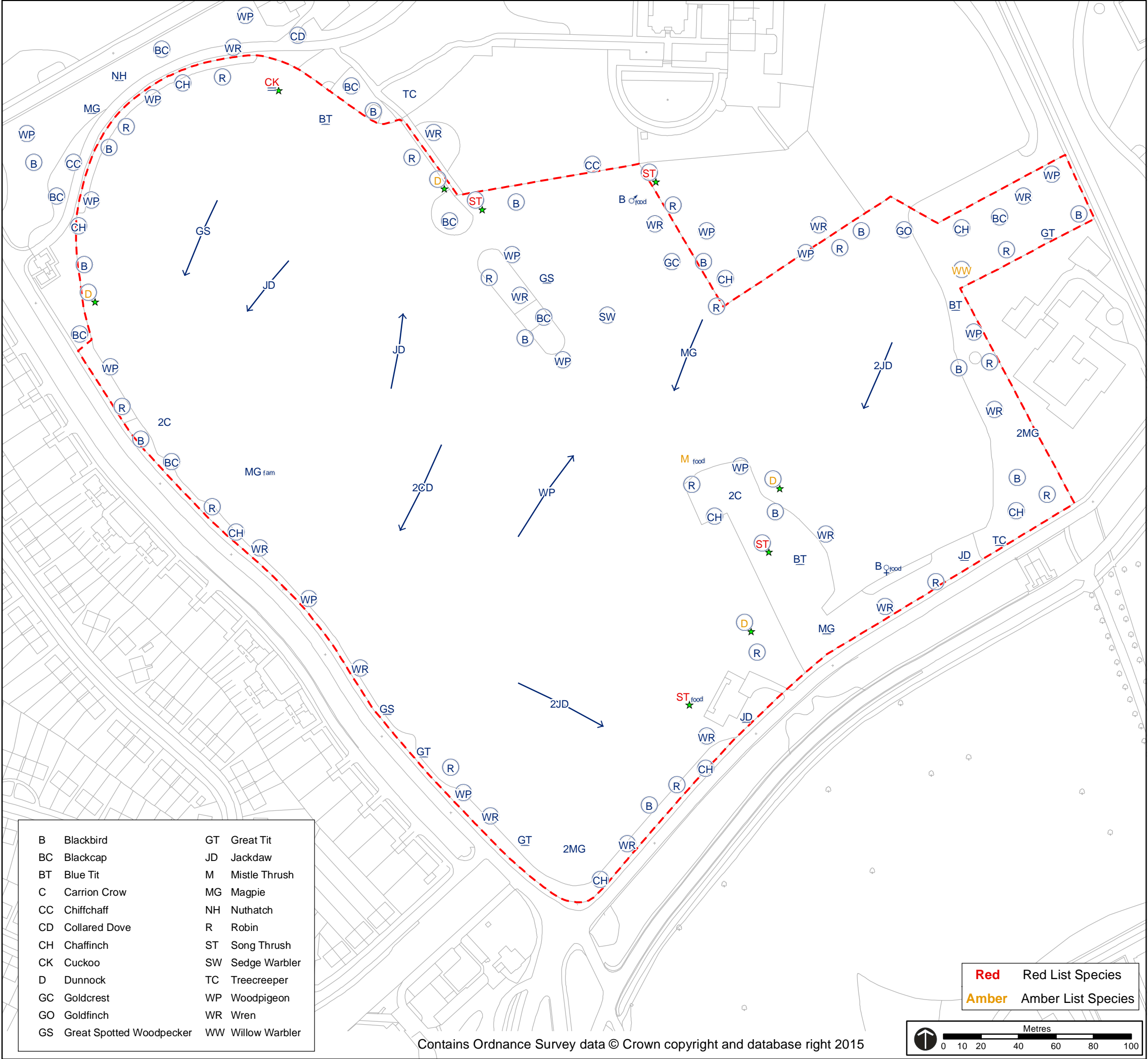
Genesis Centre
Birchwood Science Park
Warrington WA3 7BH
Tel 01925 844004
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email tep@tep.uk.com

Project: **Allerton Priory, Liverpool**

Title: **Breeding Bird Survey Visit 1 29th April 2015**

Drawing No: **G5171.002**

Scale: 1:2,000 @ A3	Date: 22/09/2015	
Drawn: CM	Checked: JC	Approved: JC



Key

- Site Boundary
- Alarm call
- Calling
- Carrying Food
- Family
- Female, Food
- Male, Food
- Singing
- Section 41 Species
- Directional flight line

Allerton Priory, Liverpool

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Project: Allerton Priory, Liverpool		
Title: Breeding Bird Survey Visit 2 5th June 2015		
Drawing No: G5171.003		
Scale: 1:2,000 @ A3		Date: 06/08/2015
Drawn: CM	Checked: JC	Approved: JC

APPENDIX 4. Bat Activity Survey



Allerton Priory Liverpool Bat Activity Surveys 2015

Document Ref: 5171.002
Version 1.0
October 2015

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**Allerton Priory Liverpool
Bat Activity Survey Report**

**TEP Report Ref: 5171.002
October 2015
Version 1.0**

Prepared by:

John Crowder

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for

**Redrow Homes Limited
Redrow House
St. Davids Park
Ewloe
Flintshire**

Written:	Checked:	Approved:
JC	ACP	ACP

CONTENTS	PAGE
1.0 GENERAL DETAILS.....	1
2.0 TRANSECT ROUTE.....	2
3.0 TREE ROOST SURVEY RESULTS.....	2
4.0 TRANSECT RESULTS.....	3
5.0 STATIC MONITORING.....	4
6.0 INTERPRETATION	10
7.0 SUMMARY	12

DRAWINGS

G5171.005	Transect survey 1 21/05/15
G5171.006	Transect survey 2 16/06/15
G5171.007	Transect survey 3 20/07/15
G5171.008	Static detector survey (Location of Anabats)
SK003 CD 070814	Proposed development layout

1.0 GENERAL DETAILS

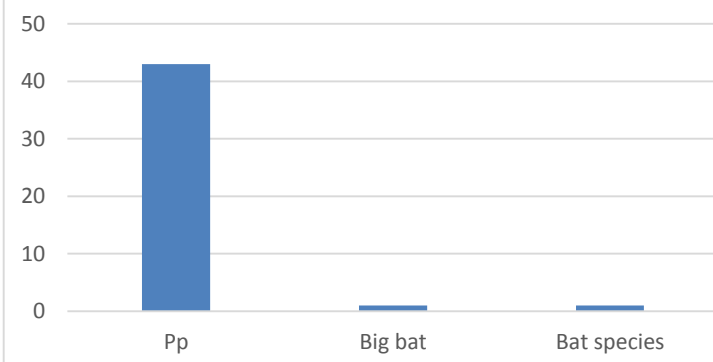
Site Name	Allerton Priory		
Job Number	5171	Doc. Ref	5171.002
Site Location	Allerton, Liverpool		
Survey Location	Woolton Road, Allerton, Liverpool. Central grid ref SJ 413 860.		
Date(s)	<p>Transect: 21/05/15, 16/06/15 and 20/07/15</p> <p>Static detector: 19/06/15/-22/06/15, 18/07/15-20/07/15 and 14/08/15 – 17/08/15</p>		
Methods	<p>Historic survey information</p> <p>Six trees on site were assessed as category 2 (Bat Conservation Trust Guidelines 2012) for bats during surveys in June 2014, TEP Report 4524.001. These trees are to be retained within the current development proposals. A small building on site was assessed as having negligible potential to support roosting bats.</p> <p>Walked Transect Survey</p> <p>The walked transect was surveyed in May, June and July to sample bat activity during the peak active season.</p> <p>A pair of surveyors with heterodyne and frequency division detectors walked the transect route. Each survey commenced 15 minutes before sunset and continued for at least 1.5 hours after. Bat passes were logged at each three-minute Stop and each intervening Walk. Observations of bat activity including the number of bats, behaviour and flight direction were logged by the surveyors and passes were recorded for subsequent sonogram analysis.</p> <p>Weather conditions during each survey are provided in Section 3.0. During the first transect survey there was light rains spots six minutes before the end of the survey, bats were still active and as the rain was light and near the end of the survey, the weather had no significant effect on the outcome of the survey. The second and third surveys were carried out during favourable weather conditions.</p> <p>Static Detector Survey</p> <p>To complement the activity transect method, two statics were placed on site on three occasions. The location of the statics is set out at Drawing G5171.008 – Location A in the south east and Location B in the west.</p> <p>Sonogram Analysis</p> <p>Recorded calls were analysed using Analook W4.1d software by John Crowder, trained to Analook Analysis Level 2.</p>		

Constraints	<p>Some UK species are less likely to be detected due to low amplitude (e.g. brown long-eared) or directional calls (e.g. horseshoe species). This has been taken into account in the interpretation of results, within the geographical range of such species. Surveyor observations are also logged during each survey thereby reducing the risk of under-recording such species.</p> <p>Bats vary their calls dependent on the habitat(s) in which they fly and on their activity (commuting, foraging, social interaction, etc). It is not always possible to identify sonograms to species level owing to the overlap of call parameters between some species and/or poor quality recordings (e.g. of brief and distant passes). In these cases, species may confidently be attributed (e.g. based on surveyor observations) but are otherwise presented to genus level or simply as 'bat species'. This ensures the dataset is interpreted accurately and transparently.</p> <p>Bat activity indices do not represent the number of bats on site but an indication or sample of their activity.</p>
Surveyors	Survey teams variously led by licensed surveyor John Crowder MCIEEM (Class Licence Level 2 CL18 2015-10700-CLS-CLS), and licensed surveyor Marjorie Nadouce (licence CL18 2015-9736-CLS-CLS).
Drawing Ref(s)	<p>Transect: G5171.005 21/05/15, G5171.006 16/06/15 and G5171.007 20/07/15</p> <p>Static detector locations: G5171.008</p>

2.0 TRANSECT ROUTE

Description of Habitats
The site comprises grassland with areas of dense and scattered scrub, scattered trees, plantation and broadleaved woodland around the boundaries of the site. The walked transect route was designed to sample each of these habitats, including open grassland and linear features in and around the site which offer connectivity to the wider landscape.

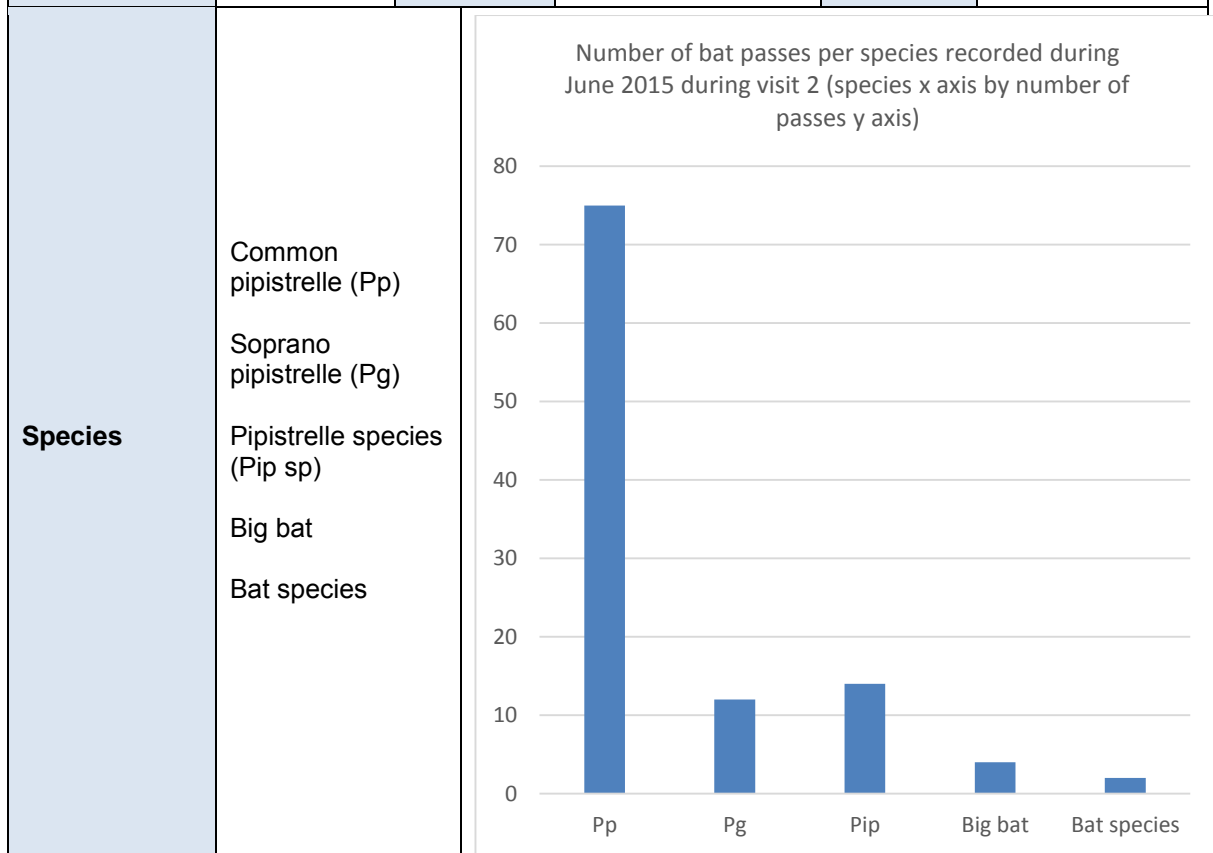
3.0 TRANSECT RESULTS

Date	21/05/15	Location	Transect across site	Habitat	Grassland, scattered trees, dense scrub, scattered scrub, broadleaved and plantation woodland								
Sunset	21:13	Start	20:47	Finish	22:47								
Min. air temp.	13°C	Rain	Light rain 10 minutes from end of survey	Detector	Anabat SD2/ Magenta 5								
Start/finish cloud cover (oktas)	4/8 4/8	Start/finish wind (Beaufort)	1/12 1/12	Season	Early summer								
Species	Common pipistrelle (Pp) Big bat * Bat species		<div>Number of bat passes per species recorded in May 2015 during Visit 1 (species x axis by number of passes y axis)</div>  <table><thead><tr><th>Species</th><th>Number of Passes</th></tr></thead><tbody><tr><td>Pp</td><td>43</td></tr><tr><td>Big bat</td><td>1</td></tr><tr><td>Bat species</td><td>1</td></tr></tbody></table>			Species	Number of Passes	Pp	43	Big bat	1	Bat species	1
Species	Number of Passes												
Pp	43												
Big bat	1												
Bat species	1												
Species	Pp	Big bat	Bat sp										
Bat passes/hour (mean)	69.66	20.00	20.00										
Bat passes/night (mean)	43	1	1										
Overall bat activity index for Visit 1 (all species combined)				109.66	Bat passes/hr								

Illustrated on **G5171.008**

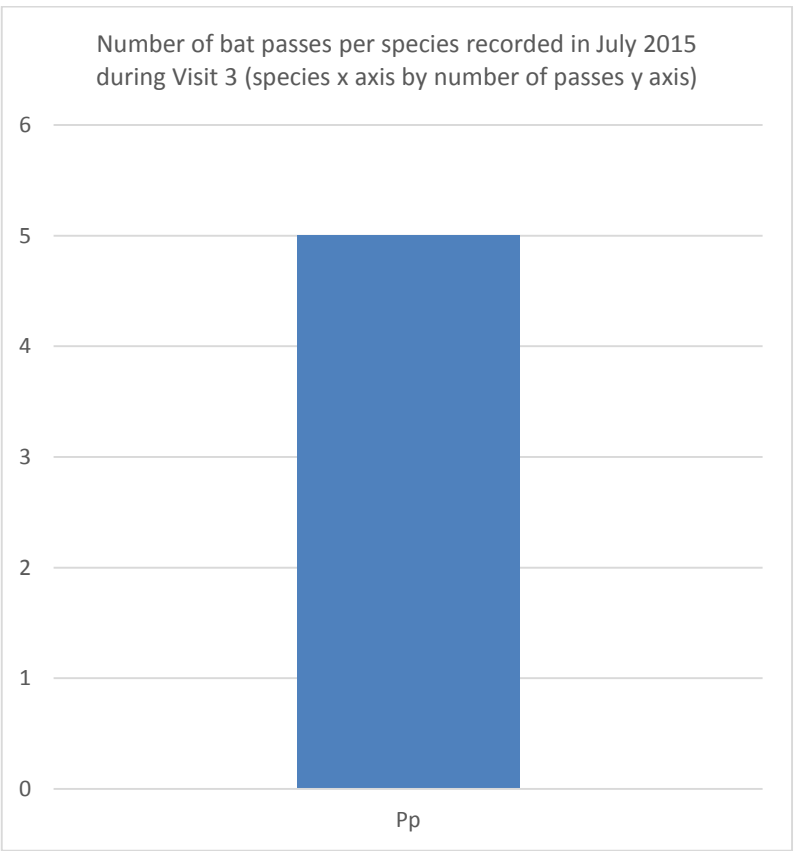
* Big bat includes noctule, Leisler's and serotine bats, where these passes cannot be assigned to species level with certainty.

Date	16/06/15	Location	Transect across site	Habitat	Grassland, scattered trees, dense scrub, scattered scrub, broadleaved and plantation woodland
Sunset	21:43	Start time	21:28	Finish time	23:37
Min. air temp.	14°C	Rain	No	Detector	Anabat SD2/ Magenta 5
Start/finish cloud cover (oktas)	2/8 2/8	Start/finish wind (Beaufort)	1/12 1/12	Season	Summer



Species	Pp	Pg	Pip sp.	Big bat	Bat species
Bat passes/ hour (mean)	111.88	51.55	77.33	25.00	12.00
Bat passes/ night (mean)	75	12	14	4	2
Overall bat activity index for Visit 2 (all species combined)				277.76	Bat passes/hr

Illustrated on G5171.006

Date	20/07/15	Location	Transect across site	Habitat	Grassland, scattered trees, dense scrub, scattered scrub, broadleaved and plantation woodland
Sunset	21:26	Start	21:10	Finish	23:17
Min. air temp.	17°C	Rain	No	Detector	Anabat SD2/ Magenta 5
Start/finish cloud cover (oktas)	6/8 6/8	Start/finish wind (Beaufort)	3/12 2/12	Season	Summer
Species	Common pipistrelle (Pp)	<p>Number of bat passes per species recorded in July 2015 during Visit 3 (species x axis by number of passes y axis)</p> 			
Species	Pp				
Bat passes/ hour (mean)	21				
Bat passes/ night (mean)	5				
Overall bat activity index for Visit 3 (all species combined)				21	Bat passes/hr

Illustrated on G5171.007

5.0 STATIC MONITORING

Description of Location
Two Anabat or Anabat Expresses were placed on site, one on the edge of the tree line on the south east boundary (Location A) and one on the edge of the tree line on the west boundary (Location B) of the site.

Species

Pp: Common
pipistrelle

Pg: Soprano Pipistrelle

Pip sp: Pipistrelle
species

Myo sp.: Myotis species

Season:	Summer	Location	A (south east)	Habitat	Tree line	
Start date	19/06/15	Finish date	22/06/15	No. nights	3 (25 hours of survey)	
Air temp. (recorded)	11 - 19°C	Rain	Brief spells of rain as follows: 19/06/15 11:20 to 11:50 & 01:20 to 03:50 22/06/15 03:20 to 05:50	Detector	Anabat Express	
Species	Myo sp	Pp	Pip sp	Big bat	Bat sp	
Bat passes/ hour (mean)	0.12	47.84	0.04	0.12	1.4	
Overall bat activity index for Visit 1 (all species combined)				49.64	Bat passes/hr	

Season	Summer	Location	B (west)	Habitat	Tree line	
Start date	19/06/15	Finish date	22/06/15	No. nights	3 (25 hours of survey)	
Air temp. (recorded)	11 - 19°C	Rain	Brief spells as follows: 19/06/15 11:20 to 11:50 & 01:20 to 03:50 22/06/15 03:20 to 05:50	Detector	Anabat Express	
Species	Pp	Pg	Pip sp	Big bat	Bat sp	
Bat passes/ hour (mean)	5.4	1.0	0.04	0.12	0.92	

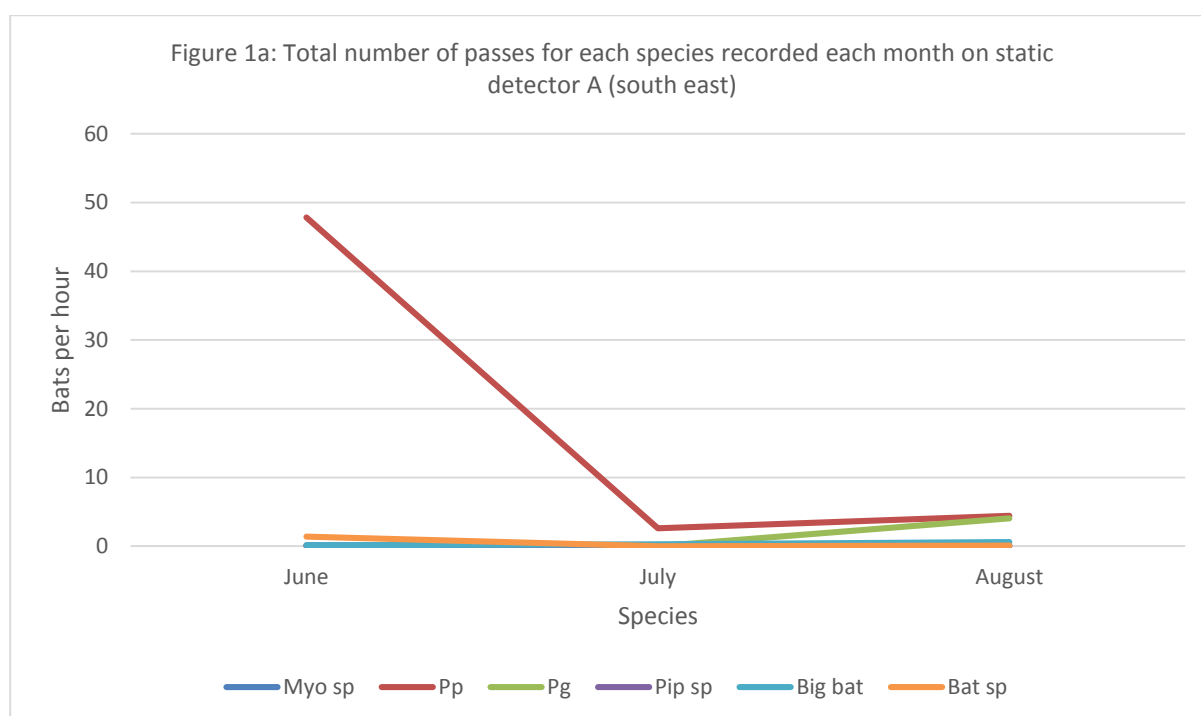
Overall bat activity index for Visit 2 (all species combined)	7.48	Bat passes/hr
----------------------------------------------------------------------	------	---------------

Season	Summer	Location	A (south east)	Habitat	Tree Line
Start date	18/07/15	Finish date	20/07/15	No. nights	3 (28.5 hours of survey)
Air temp. (recorded)	12 - 21°C	Rain	19/7/15 03:50 to 07:50 20/7/15 11:50 to 12:20	Detector	Anabat Express
Species	Myo sp	Pp	Big bat		
Bat passes/ hour (mean)	0.07	2.60	0.28		
Overall bat activity index for Visit 3 (all species combined)				2.95	Bat passes/hr

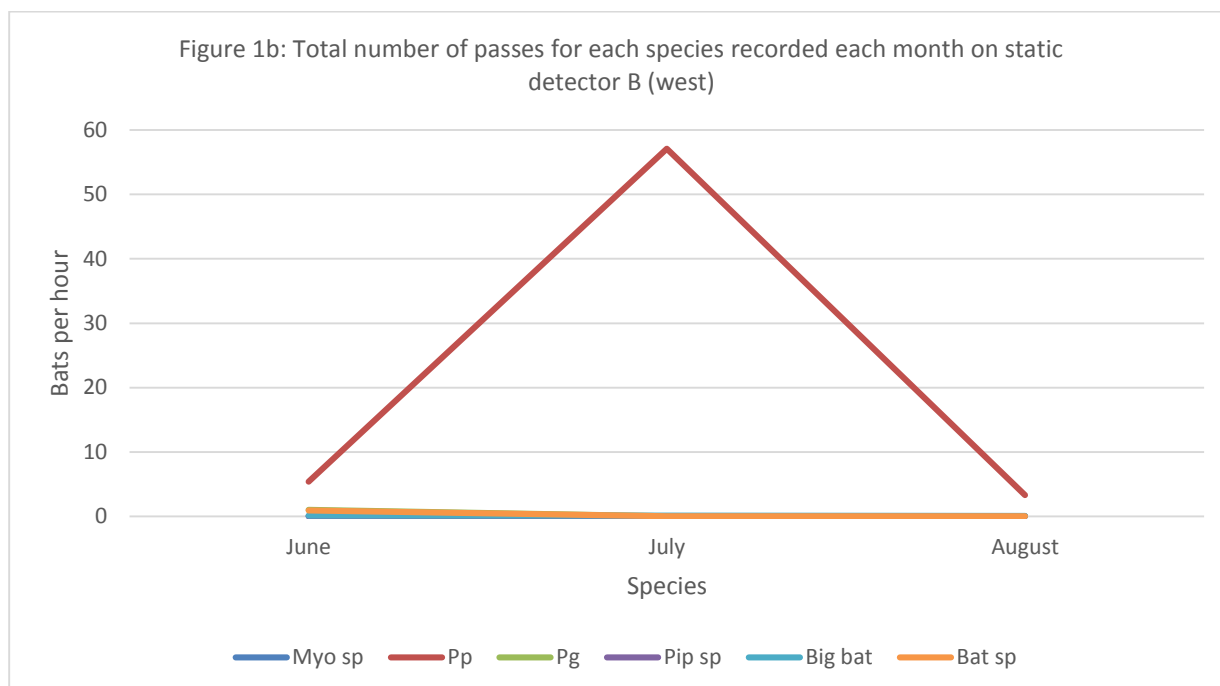
Season	Summer	Location	B (west)	Habitat	Tree Line
Start date	18/07/15	Finish date	20/07/15	No. nights	3 (28.5 hours of survey)
Air temp. (recorded)	12 - 21°C	Rain	19/7/15 03:50 to 07:50 20/7/15 11:50 to 12:20	Detector	Anabat Express
Species	Myo sp	Pp	Pip sp	Big bat	
Bat passes/ hour (mean)	0.01	57.09	0.01	0.14	
Overall bat activity index				57.25	Bat passes/hr

Season	Summer	Location	A (south east)	Habitat	Tree Line		
Start date	14/08/15	Finish date	16/08/15	No. nights	3 (31.5 hours of survey)		
Air temp. (recorded)	9 - 20°C	Rain	14/8/15 05:50 to 14:50	Detector	Anabat SD2		
Species	Myo sp	Pp	Pg	Pip sp.		Big bat	Bat sp
Bat passes/ hour (mean)	0.1	4.41	4.06	0.06		0.6	0.06
Overall bat activity index for Visit 3 (all species combined)				9.29 Bat passes/hr			

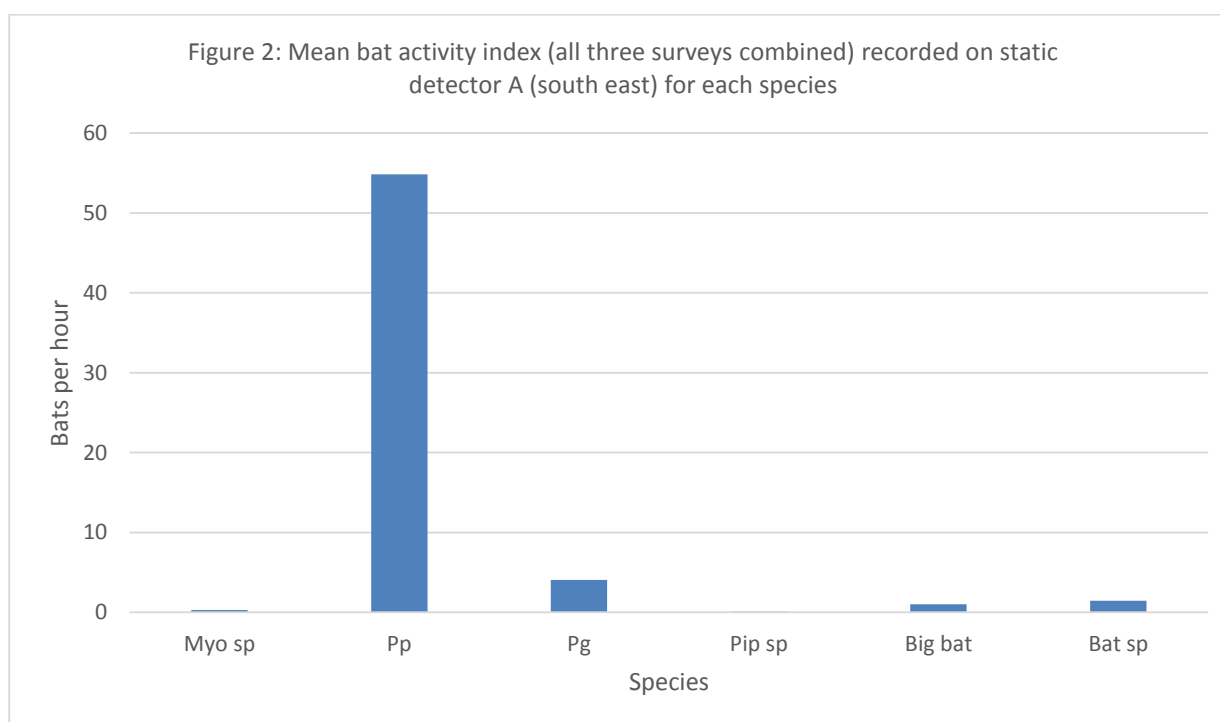
Season	Summer	Location	B (west)	Habitat	Tree Line
Start date	14/08/15	Finish date	16/08/15	No. nights	3 (31.5 hours of survey)
Air temp. (recorded)	9 - 20°C	Rain	14/8/15 05:50 to 14:50	Detector	Anabat SD2
Species	Pp	Pip sp	Big bat		
Bat passes/hour (mean)	3.33	0.03	0.06		
Overall bat activity index				3.42	Bat passes/hr

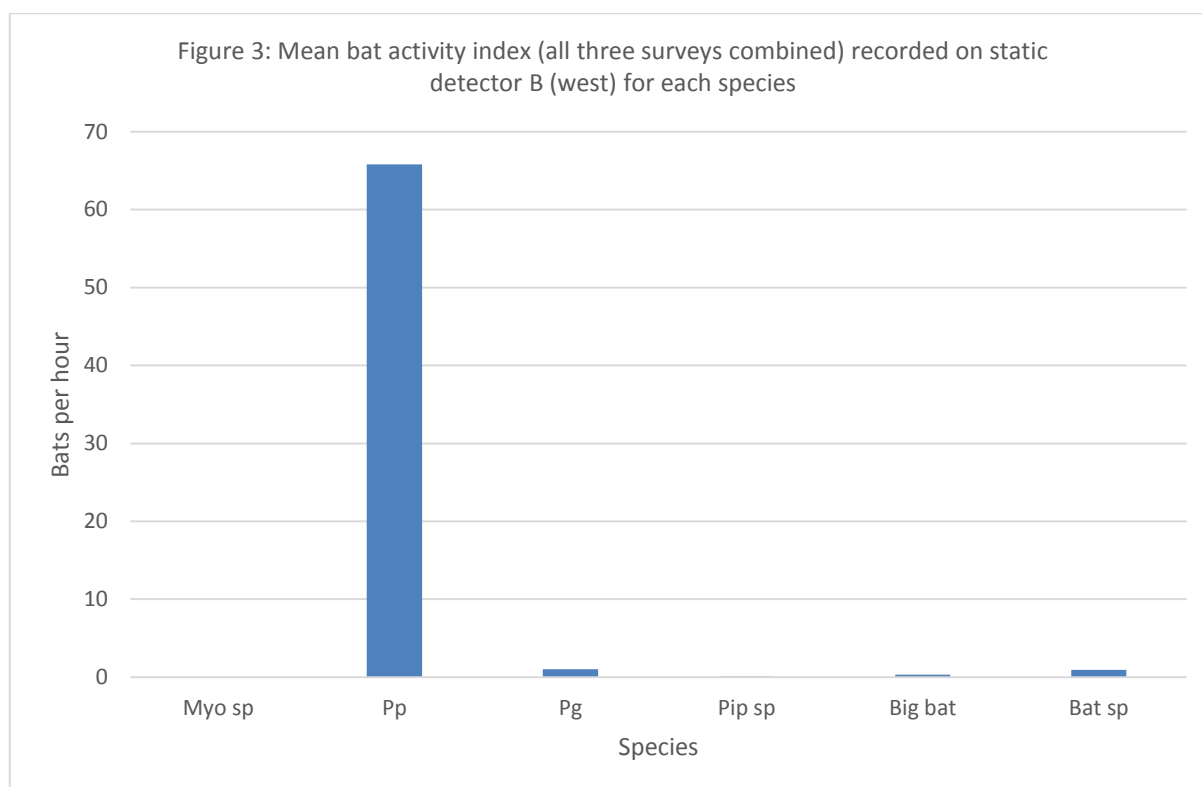


Note: Very low passes by other species were recorded on static detector A (south east).



Note: Static detector B (west) recorded common pipistrelle alone. All other species registered very low passes.





6.0 INTERPRETATION

Species Composition

Together, the activity transect and static detector surveys revealed at least four species of bat on the site - common pipistrelle, soprano pipistrelle, passes of big bat and of Myotis bat.

Common pipistrelle was consistently the most frequently recorded species, accounting for 92% of all passes recorded on the static detectors in both June, July and August.

For static detector A, the overall activity index (passes/hour for all species combined) was 49.64 passes/hour in June 2015 of which 47.84 passes/hour was of common pipistrelle, 2.95 passes/hour in July 2015 of which 2.60 passes/hour was of common pipistrelle, 9.29 passes/hour in August 2015 of which 4.46 passes/hour was of common pipistrelle. For each of these surveys, passes which could not be attributed to species level, of Myotis sp, pipistrelle species, bat species and big bat, were each recorded at much rarer occurrence (all <2 pass/hour). Soprano pipistrelle was recorded only in August 2015, at 4.06 passes/hour.

For static detector B, the overall activity index (passes/hour for all species combined) was 7.48 passes/hour in June 2015 of which 5.4 passes/hour was of common pipistrelle, 57.25 passes/hour in July 2015 of which 57.09 passes/hour was of common pipistrelle, 3.42 passes/hour in August 2015 of which 3.33 passes/hour was of common pipistrelle. For each of these surveys, passes of all other species - of soprano pipistrelle, Myotis sp, pipistrelle species and big bat - were recorded at much rarer occurrence (all <2 pass/hour).

This was broadly reflected in the transect survey data, with common pipistrelle passes accounting for between 63.5% of all passes recorded in May, 40% of all passes in June and 100% of all passes in July.

Spatial Hotspots

For the transect surveys undertaken in May, June and July the findings for each month are set out below:

During the May transect, bat activity recorded in terms of habitats across the site is as follows:

- High levels of activity (>100 passes/hour) were associated with tree line in west of the site (Walk 17) and south west of the site (Stop 20).
- Medium levels of activity (<100 passes/hour) were associated with the tree lines in south west and north east of the site (Stop 14 and Walks 13 and 14).
- Low levels of activity (<50 passes/hour) were associated with the tree line in the north east of the site (Stop 13) and tree line and open field in south west of the site (Stop 18 and Walks 18 and 19).

During the June transect, bat activity recorded in terms of habitats across the site is as follows:

- High levels of activity (>100 passes/hour) were recorded by the tree line in the south east of the site (Stops 5, 7 and Walk 6). Activity here included both common and soprano pipistrelles as well as undifferentiated bat passes.
- Medium levels of activity (<100 passes/hour) were associated with the open field in the south east of the site (Stop 6 and Walk 8).
- Low levels of activity (<50 passes/hour) were associated with the open field in the north and east of the site (Stops 10, 11 – common pipistrelle - and 15 - noctule) and tree lines in the south and west of the site (Walks 2, 17 and 18).

During the July transect, bat activity recorded in terms of habitats across the site is as follows:

- Low levels of activity (<50 passes/hour) were associated with the open field in the south east of the site (Stop 6) and by tree line in south east of the site (Stop 8 and Walk 6). Low levels of activity were also recorded in the north and west of the site (Stop 16 and Walk 14).

Common pipistrelle accounted for the majority of these activity hotspots. Low numbers of big bat passes were associated with the open field in the north of the site (Stop 15, June) and soprano pipistrelle tree lines south east of the site (Stop 5 and 7, June).

Temporal Peaks in Activity

The transect survey data peaked in June, with an overall activity index (all species combined) of 277.76 passes/hour in comparison to May (109.66 passes/hour i.e. less than half) and July (21.00 passes/hour).

Static detector B in the west showed a similar trend, with a peak of 57.25 passes/hour in June, 7.48 passes/hour in May and 3.42 passes/hour in July. In contrast, static detector A in the south east recorded a peak in May (49.64 passes/hour), and 2.95 passes/hour in June, and 9.29 passes/hour in July.

The fall and rise in bat activity for both transect and static surveys across the survey period may reflect the fluctuation in temperatures across the survey period.

7.0 SUMMARY & RECOMMENDATIONS

Summary

Six trees on site were assessed as category 2 (Bat Conservation Trust Guidelines 2012) for bats during surveys in June 2014, TEP Report 4524.001. These trees are to be retained within the current development proposals. A small building on site was assessed as having negligible potential to support roosting bats.

The transects and static detector survey results show that the site is used by at least four species of bat for foraging and dispersal. The majority of activity was accounted for by common pipistrelle, which reflects the national trend.

Activity was principally found to be associated with the tree lines that border the site. These habitats are both of value to bats in themselves and in the connectivity they provide across and beyond the site, to adjacent habitats such as the woodland to the north and east of the site.

Recommendations

The trees across the site will be largely retained. A small loss of trees may occur in the south of site to allow site access for the proposed development works.

The areas of grassland across the site will be lost to development. During the activity surveys, the levels of bat activity across the grassland areas was very low in terms of foraging and commuting. Loss of this area will not impact on bat activity on the site as this was found to be associated with the tree-lines associated with the boundaries of the site.

A Sensitive Lighting Strategy will set out the lighting proposals during both construction and operation to ensure potential lighting effects are avoided. This will ensure lux levels are maintained at 3lux ¹, peaking at 550nm ² (levels may be revised if replaced by future guidance) of the tree lines on site. Lighting of roads that pass through or adjacent to tree lines will respect 3lux within these areas. This may be achieved, for example by provision of hooded lighting on the roads and properties, directed away from the tree canopies.

¹ Threshold described in BCT & Institute of Lighting Engineers (2008) Bats & Lighting in the UK: Bats and the Environment Series

² Threshold described in BCT (2014) Artificial Lighting & Wildlife: Interim guidance – recommendations to help minimise impacts of artificial lighting

DRAWINGS

G5171.005	Transect survey 1 21/05/15
G5171.006	Transect survey 2 16/06/15
G5171.007	Transect survey 3 20/07/15
G5171.008	Static detector survey (Location of Anabats)
SK003 CD 070814	Proposed development layout



Key

Site Boundary

Transect stops:
Pie charts show percentage of bat species recorded during stop interval

S# Stop reference

No bat activity

Low level of activity
1 to 50 bat contacts/hour

Medium level of activity
51 to 100 bat contacts/hour

High level of activity
over 100 bat contacts/hour

Transect walks:
Showing levels of bat activity recorded during walk interval

No bat activity

Low level of activity
1 to 50 bat contacts/hour

Medium level of activity
51 to 100 bat contacts/hour

High levels of activity
over 100 bat contacts/hour

Bat species identification

Common pipistrelle

- Contains Ordnance Survey data © Crown copyright and database right 2015

Site Map

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email tep@tep.uk.com

Project:	Allerton Priory, Liverpool	
Title:	Bat Transect Survey Visit 1 - 21st May 2015	
Drawing No:	G5171.005	
Scale:	1:2,000 @ A3	Date: 18/09/2015
Drawn:	Checked:	Approved:
MK	CB	JC



Key

Site Boundary

Transect stops:
Pie charts show percentage of bat species recorded during stop interval

S# Stop reference

No bat activity

Low level of activity
1 to 50 bat contacts/hour

Medium level of activity
51 to 100 bat contacts/hour

High level of activity
over 100 bat contacts/hour

Transect walks:
Showing levels of bat activity recorded during walk interval

No bat activity

Low level of activity
1 to 50 bat contacts/hour

Medium level of activity
51 to 100 bat contacts/hour

High levels of activity
over 100 bat contacts/hour

 Pipistrelle species Common pipistrelle Soprano pipistrelle Big bat species Unknown

TEP

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Project:

Allerton Priory, Liverpool

Title:

Bat Transect Survey
Visit 2 - 16th June 2015

Drawing No:

G5171.006

Scale:

@ A3

Date:

18/09/2015

Drawn:

Checked:

Approved:

MK

CB

JC



Key

Site Boundary

Transect stops:
Pie charts show percentage of bat species recorded during stop interval

S# Stop reference

No bat activity

Low level of activity
1 to 50 bat contacts/hour

Transect walks:
Showing levels of bat activity recorded during walk interval

No bat activity

Low level of activity
1 to 50 bat contacts/hour

Bat species identification

Common pipistrelle

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Site Map

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Project:	Allerton Priory, Liverpool	
Title:	Bat Transect Survey Visit 3 - 20th July 2015	
Drawing No:	G5171.007	
Scale:	1:2,000 @ A3	Date: 18/09/2015
Drawn:	Checked:	Approved:
MK	CB	JC



Key



Site Boundary



Static Anabat Locations

- Contains Ordnance Survey data © Crown copyright and database right 2015



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Fax 01925 844002
email tep@tep.uk.com

Project: **Allerton Priory, Liverpool**

Title: **Static Anabat Locations**

Drawing No: **G5171.008**

Scale:	1:2,000 @ A3	Date:	22/09/2015
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Drawn:	Checked:	Approved:
AP	CB	JC