Premier Group of Companies

Wombwell High School, Wombwell

Additional Ecological Information

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1.0 INTRODUCTION

1.1. FPCR Environment and Design Ltd. (FPCR) were commissioned by Premier Group of Companies to review the ecological information submitted to the Local Planning Authority (LPA), development proposals and correspondence between the Local Authority (LA) and the applicant relating to re-development of the former Wombwell High School (Planning Reference Number: Planning Reference: 2019/0089).

1.2. To assist the review and the LPA with the decision-making process, FPCR completed a site visit on 18 September 2019. This site visit was completed to assess the nature of and potential ecological value of the habitats to support a significant population of breeding birds and bats. A nocturnal bat activity survey was completed on 17 September 2019 and static bat detectors were deployed across the Site over the period of 17 - 22 September 2019.

1.3. The following report details the findings of the assessments completed by FPCR in September 2019 and outlines mitigation strategies both breeding birds and bats. Further details of which could be the subject of an appropriately word planning condition.

Site Context

1.4. The Site is located to the southern end of Wombwell and is bordered by residential development on three sides, with unmanaged recreational land adjoining to the south west. It is approximately 7.8ha in size and predominantly comprises unmanaged brownfield site and amenity grassland, with the fields largely bounded by native hedgerows and tree lines. A small area of broadleaved woodland features in the north east corner of the site, and some small areas of hardstanding are located in the western section (previously Wombwell High School). Other habitats present include poor semi-improved grassland field margins, tall ruderal vegetation and scrub.

Development Proposals

1.5. The Site is currently council owned and is allocated in the Local Plan for the development of up to 250 residential units with appropriate infrastructure. A proportion of the allocated site is retained for the development of a new primary school.

1.6. The applicant originally submitted development proposals for the construction of up to 218 residential units with an area of the site retained for a primary school. Following the submission, the LPA requested further residential housing was required on the site to meet local needs.

1.7. The proposals and the proposed used of the retained land provide a key contribution to local housing needs and local requirements. Further consideration of overall planning merits of these proposals is provided in submissions by DLP Planning.

Main Issues

1.8. From review of the correspondence, the LPA have two main ecological issues with the proposed development. These are:

1. To support the development proposals including the creation of woodland paths through the plantation to the northeast of the site and to inform additional mitigation proposals a bat activity survey was recommended. It is the LPA's position that this survey should be completed prior to the granting of planning permission.

2. To support the proposed mitigation strategy for breeding birds a single breeding bird survey was recommended in the submitted report. The LPA considered the completion of this survey is required prior to determination of the application.

1.9. No further substantive matters have been raised relating to ecology and nature conservation relating to this application. Consequently, to avoid unnecessary repetition the following document restricts comments to the specific points outlined above.

2.0 METHODOLOGY

Field Survey

Bird Assessment

2.1. A walkover survey to assess the quality of the habitats to support breeding bird was completed by an experienced ornithologist from FPCR on 17 September 2019. The survey recorded the broad habitat types and assessed the suitability of the habitats to support general breeding birds / ground nesting species. The assessment also considered species which were likely to be present based on the habitats present within the site, the context of the site and the records provide in the submitted Ecological Assessment.

2.2. Over this survey species recorded using the site were recorded and are reported in the following document.

Bats

Foraging / Commuting Habitat

2.3. The potential for the Site to support foraging and commuting bats was assessed, with particular regard being given to the presence of linear features such as watercourses, continuous treelines and hedgerows providing good connectivity in the wider landscape, and the presence of varied habitat such as scrub, woodland, tree groups, and open water in the vicinity. This assessment was completed by a licenced bat worker from FPCR.

Activity Surveys

2.4. A single walked activity transect was completed during September 2019, comprising a single route around the edges and linear features of the site. The primary objective of the transect survey was to identify bat foraging areas, commuting routes and species utilisation of the Site.

2.5. This methodology takes into account the statutory guidance from Natural England[1] and further guidelines introduced by the BCT[2] and JNCC[3]. The survey effort was informed by the current BCT survey guidance.

2.6. The transect route was predetermined prior to survey in order to comprehensively sample all representative habitats within the site (Figure 1). The survey commenced at sunset and was two hours in duration. Point count stops were incorporated into the transect to provide further information regarding bat activity levels. These were strategically located throughout the Site to ensure coverage of habitats present and included features of potential value to bats (e.g. hedgerows / tree lines / watercourses etc.). Each point count was five minutes long, during which time all bat activity was recorded.

2.7. The transect routes were walked at a steady pace and when a bat passed by, the species, time and behaviour was recorded on a site plan. This information provides a general view of the bat activity present on site and identifies the key foraging area and commuting routes.

[1] Bats: Survey & mitigation for development project. https://www.gov.uk/guidance/bats-surveys-and-mitigation-for-development-projects
[2] Hundt L (2016) Bat Surveys: Good Practice Guidelines, 3rdnd edition, Bat Conservation Trust
[3] Mitchell-Jones AJ (2004) *Bat Mitigation Guidelines.* English Nature, Peterborough.

2.8. Transect surveys were completed using Wildlife Acoustics Inc. Echo Meter Touch® bat detectors in conjunction with the Echo Meter Touch® app and Apple Inc. iPad®. Post-survey, bat calls were analysed using Kaleidoscope© Pro (Wildlife Acoustics) software package by taking measurements of the peak frequency, inter-pulse interval, call duration and end frequency. From this the level of bat activity across the site in relation to the abundance of individual species foraging and commuting along habitats was assessed.

2.9. All transects were undertaken when conditions were suitable (i.e. when the ambient air temperature exceeded 10ºC and there was little wind or rain), see Table 1.

Table 1: Activity Transect Survey Conditions

Date	Survey	Sunset	Start of Survey	End of Survey	Temp at start of survey °C	Rain	Wind 0-5	Cloud %
17.09.19	Transect	19:17	19:17	21:12	15	0	1	50

Automated Static Bat Detector Surveys

2.10. Static passive recording broadband detectors were deployed on site to supplement the manual transects surveys. In addition, passive recording is stipulated within current BCT guidance.

2.11. Passive monitoring was undertaken using an automated logging system (Wildlife Acoustics Inc. Song Meter® SM4 BAT FS bat detectors) with the output saved to an internal storage device. SM4 BAT FS devices were placed along linear features considered to be of value to bats, such as areas of dense scrub. Devices were placed in each location during suitably mild weather conditions (Table 2) and were programmed to activate 30 minutes before dusk and record continuously until 30 minutes following sunrise for an extended period on each occasion (five consecutive nights). The output from the detectors was subjected to computer analysis using Kaleidoscope© Pro (Wildlife Acoustics) software package to assess bat activity over this period.

2.12. In some cases, the static bat detectors were deployed for longer than five nights. In accordance with the BCT guidelines the first five nights of data are presented in this report. Any data recorded following the initial five nights were analysed / checked for the presence of Annex II species and notable species only.

Table 2: Weather conditions during static detector surveys

Survey Occasion	Unit	Location	Weather Conditions
17/09/19 - 22/09/19	14	SE 40329 02517 On the Southern edge of the small patch of woodland in the north eastern corner of the site.	Sunset 19:17-19:08 Sunrise 06:42-06:49 Temperatures 11-19°C Average wind speed 3-12 km/h (Beauford calm to light air) Patchy showers on 5th night
17/09/19 - 22/09/19	15	SE 40105 02244 On the woodland section adjacent to the south western site boundary.	

Limitations

2.13. The bird assessment was completed outside the main bird breeding season. As the site is in an extensively urban environment it is considered that an adequate assessment can be made of the species likely to use the site and inform the mitigation package.

2.14. Owing to the difficulty of detecting brown long-eared bats due to the low volume of their calls it is considered that the nocturnal data will represent an underestimation of brown long-eared bat activity levels and numbers present.

2.15. Where calls could not be identified to species level, for example due to the lower quality of those recordings or where there are similarities between species echolocation calls (particularly for *Myotis* and *Nyctalus* bats) making definite identification difficult, contacts were identified to family only.

2.16. The SM4 BAT FS records sound files of up to 12 seconds in length before a new file is created. The analysis of the SM4 BAT FS files recorded can highlight the presence of more than one bat if they are recorded simultaneously on the same sound file. It is not possible however to determine whether consecutive sound files have been recorded as the result of a single bat passing the detector as it commutes across the landscape, or by one bat repeatedly triggering the detector as it forages in close proximately for an extended period. Therefore, each sound file is counted as a single bat pass. The number of bat passes, for example, as expressed as an hourly average, provides only an indication of the relative importance of the location sampled by the detector.

3.0 RESULTS

Walkover Survey

3.1. From the general walkover survey, FPCR broadly agree with the habitat descriptions and assessment of ecological value presented in the submitted report.

Bird Assessment

3.2. The Preliminary Ecological Appraisal from MRB Ecology details several species of bird records returned from the Barnsley Local Records Centre. These included: a number of UK Biodiversity Action Plan (BAP) species and Birds of Conservation Concern (BoCC), such as tree pipit *Anthus trivialis*, cuckoo *Cuculus canorus*, lapwing *Vanellus vanellus* and corn bunting *Emberiza calandra*. The site conditions are unlikely to support any of these species.

3.3. From the type / quality of habitats present on-site and the nature intensive nature of the residential use surrounding the site, the bird species most likely to be using the site would be urban-edge species. The species most likely to use the site would be those associated the scrub / woodland habitat or those associated with the surrounding residential environment. The notable species which this is likely to include are: dunnock, song thrush, bullfinch, mistle thrush, whitethroat, starling and willow warbler.

3.4. In terms of a habitat assessment for ground nesting species, the habitats / habitat management comprises three distinct areas:

Area 1: Land to the east of the site comprise occasion mown grassland with relatively young plantation in the north eastern corner and a belt of young plantation running from Gypsy Lane to the south east of the site. This area was also regularly use by dog walker and therefore subject to regularly disturbance.

Area 2: Land comprising the former school area. Habitats in this area comprise rough grassland with scattered semi-mature trees and plantation. Self-set scrub and area of introduced vegetation was present on the northern / north western boundaries to this area.

Area 3: Land comprising the former sport field. The habitats in this area were comprised unmanaged grassland. Boundary treatments including existing residential housing, introduction shrubs and plantation woodland were present.

3.5. The habitats within Area 1 are unlikely to provide suitable conditions to support ground nesting species due to the enclosed nature of the grassland and regularly disturbance. The presence of the existing boundary treatments and the scattered tree present throughout Area 2 reduces the overall suitability for ground nesting species. Consequently, the habitats in this area of the site are also unlikely to support ground nesting species such a skylark.

3.6. The open grassland habitat within Area 3 of the site does provide some potential suitability to support ground nesting species such as skylark. The suitability of this area for skylark is significant reduced through the presence of boundary treatment including broadleaved plantation, residential garden boundary treatments and scattered area of the plantation / introduced scrub on the western boundary. When the influence of such treatments is removed, only 0.8-1ha of this area provides suitable breeding habitat for skylark. This area is only likely to support one breeding pair (or a maximum of two breeding pair of skylarks).

3.7. Over the survey small number of urban edge species were recorded across the site. These included: woodpigeon *Columba palumbus,* magpie *Pica pica,* carrion crow *Corvus corone,* blue tit *Cyanistes caeruleus,* pheasant *Phasianus colchicus,* pied wagtail *Motacilla alba* and blackbird *Turdus merula.* These are all common and widespread species locally.

Bats

Tree Roost

3.8. The mature plantation tree present across the site were young mature trees and no suitable features including dense old ivy or rot holes were recorded.

Activity Surveys

3.9. The following section provides a summary of the results recorded during the nocturnal activity surveys and static detector surveys completed in September 2019. Field data are also summarised within Figure 1 as indicated.

Transect Surveys (Figure 1)

17th September Dusk Transect (Figures 1)

3.10. The September transect recorded five contacts, comprising four common pipistrelle and a Single soprano pipistrelle. Bat activity was restricted to the south western part of the site around the area of the former Wombwell High School. Within this area of the site the bat activity was fairly evenly spread with bats foraging around the norther boundary where the gardens of Roebuck street meet the site and along the hedgerows separating the school grounds from the adjoining fields.

Automated Static Bat Detector Surveys (Appendix A)

3.11. A summary of the static detector survey results is provided in Appendix A.

17th – 22nd September 2019 (Figure 1)

3.12. Unit 14 was located on the southern edge of the woodland in the north eastern corner of the site and recorded 1683 registrations. The dominant species was common pipistrelle with 616

registrations (c.37%) over the five night. Soprano pipistrelle was the second most frequently recorded species with 614 registrations (c.36%). Other species recorded at much lower levels were unidentified *Myotis* sp. (430 registrations, c.26%), unidentified pipistrelle species (13 registration, c.0.8%), noctule (8 registrations, c.0.5%) and brown long-eared bat (2 registrations, c.0.1%). The overall activity levels were evenly spread over the nights with the exceptions of the first night which was saw less activity.

3.13. Unit 15 was located approximately midway along the south western boundary of the site and recorded only 178 registrations. This activity was dominated by common pipistrelle (101 contacts, c.57%) which was recorded evenly spread across all five nights. Less frequently recorded species comprised soprano pipistrelle (43 registrations, c.24%), unidentified *Myotis* sp. (10 registrations, c.6%), brown long-eared bat (10 registrations, c.6%) noctule (8 registrations, c.4%) and unidentified pipistrelle species (6 registrations, c.3%). The bat activity recorded was evenly spread across all nights with no significant peaks in activity on any one date.

3.14. No Annex II bat species were identified on any additional nights of static recordings.

4.0 DISCUSSION & RECOMMENDATIONS

Breeding Birds

4.1. The proposed development site is situated in an urban environment with extensive residential development situated on the northern / southern elevations of the site. Habitats in the eastern are of the site are subject to disturbance from dog walking and other informal recreational use. Whilst habitats in the western area of the site are not subject to regularly recreational disturbance, the habitats and therefore any breeding bird assemblage will be influenced by the urban environment.

4.2. The overall conclusion is any breeding bird assemblage present would be representative of widespread urban edge species. Species within such an assemblage are only afforded protection whilst on the nest or through listing as Species of Principle Importance on Section 41 of the NERC Act 2006. It is noteworthy that the NERC Act only places a duty on Local Authority to have regard for such species when exercising their duties, thus authorities need to consider the species in the overall balance in the decision-making process. Given the location the site would not support a significant assemblage of farmland birds.

4.3. From the completed habitat assessment, the larger areas of broadleaf plantation and the connectivity plantation belt are largely retained. The provision of the woodland path through the larger plantation area and the inclusion of the central plantation belt is likely to slightly have some minor effects to the species assemblage using these areas of the site. However, adequate mitigation for potential effects could be provide through the implementation of an appropriate bird box scheme which provides additional habitat for woodland edge species in the retained plantation. Further details of this scheme could be subject to planning condition and submitted with the detailed landscape proposals.

4.4. To facilitate the required development, including the allocation of land for the development of the school, within the site boundary will result in the loss of the remaining areas of grassland, plantation woodland, areas of scrub and self-set vegetation. This loss will result in inevitable change to the environment currently used by the breeding bird assemblage. However, as the assemblage using the site are likely to be species which typical use urban environment, the

development of residential development with garden habitats and additional habitats provided in the green infrastructure is unlikely to result in significant effects to the local breeding bird population.

4.5. To ensure the potential effects of the proposals are avoided native species scrub and tree planting will be provided in areas of open space and a bird box scheme will be provided within the curtilage of at least 75% the new property boundaries. The bird boxes provided could include; sparrow terraces, swift nest boxes and range of other standard boxes with varying entrance holes to suitable a range of urban species. Again, further details of the type's and location could be secured by conditions.

4.6. The majority of the habitat situated across the site does not provide suitable habitats to support ground nesting species. A small area of the former cricket pitch does provide some limited potential to support one (or a maximum two breeding pairs) of skylark. Unless there was a significant reduction in the quantum of development, skylark if present would be displaced to other open habitats present on the western area of the site. Such displacement follows the breeding cycle of skylarks and the wider landscape level use of land by skylarks which is linked to cropping or habitat management regimes. Consequently, the displacement of one (or a maximum of two pairs) of skylarks from the site would not result in significant negative effects to the population in a local or regional context.

4.7. If mitigation was considered necessary for this species, such mitigation could not be provided within the site and an offsite solution would be required. Such an offsite solution could be accommodated through the provision of habitat enhancements or the application of appropriate management on land outside the site boundary. The standard mechanism for providing such mitigation would be through the provision a S106 contribution to the Local Authority to provide such enhancement of site. The provision of such enhancements would avoid potential effect to ground nesting species such a skylarks.

4.8. To further minimise potential effects to breeding birds, vegetation removal should be completed outside of the main nesting period which is March – September (inclusive). In the event this is not possible and vegetation removal is completed over the main bird breeding season appropriate ecological supervision will be required. Where active nest sites are found, the nest and an appropriate buffer zone surround the nest should be applied and retained until confirmation the chicks have fledge the nest.

Bats

4.9. The activity survey and the static detector survey completed across the site confirm relatively low level of activity. The static detector surveys also confirmed higher levels of activity around the plantation woodland to the north east of the site. The completion of this survey complies with the recommendations of the Preliminary Ecological Appraisal (MRB Ecology & Environment, January 2019) which states:

> ***'A survey of bat foraging activity is recommended during the period May to September prior to any vegetation clearance work so as to identify whether there are any significant foraging corridors across the site and whether strategically sited tree***

planting may be beneficial in strengthening habitat linkages to the retained habitats….' (Paragraph 8.1.3).

4.10. The activity recorded over the survey was dominated by common and widespread species including common and soprano pipistrelle bats. These species have adapted to the urban environment and loss of the habitats within the site and the creation of garden habitats is unlikely to result in significant affects to either of these species. Unidentified *Myotis* species were the second most frequently recorded species at the plantation woodland. Other species were only recorded at low levels demonstrating the site does not provide a significant resource for these species.

4.11. Commuting and foraging activity around the retained plantation from common / soprano pipistrelle and the unidentified *Myotis* species was recorded throughout over the recording period. The spread of the data indicates small numbers of bat using the woodland edge. Other than the creation of woodland paths through the plantation is retained. The retention of the plantation will maintain the overall foraging resource for this species and the creation of open rides through the plantation will potentially increase the overall foraging resource for this species. Connectivity to the plantation is maintained through retention of the central corridor of broadleaved plantation and the mature trees on the eastern boundary. Albeit the revised layout will require the implementation of a standard hop-over avoid potential effects to connectivity through the minor loss to the connective central corridor.

4.12. On completion of the proposed development the introduction of artificial lighting street lighting and inappropriate positioned external lighting on new residential dwellings could affect use of the retained commuting route to the woodland and around the plantation woodland. Such potential effects can be controlled through the implementation of appropriate low level directional lighting where required around the retained plantation woodland, the implementation of appropriate external lighting on where necessary of the front or rear elevation of new properties and / or the construction of site boundary fence which will minimise light spill onto retained habitat. The details of such measures can be controlled through the application of an appropriate worded planning condition.

4.13. Further mitigation the development could provide for the local bat population would include the provision of species rich grassland and native species scrub / woodland planting in areas of Public Open Space in the site. The implementation of an appropriate bat box scheme on retained mature trees and a proportion of the new residential dwellings would provide further enhancements for the local bat population.

4.14. Through the implementation of the measure outlined above no significant effects to the local bat population would be expected.

Appendix A: Static Bat Detector Survey Data

Survey Dates	Unit Number	Survey Hours	Total Av. per hour	Total Registration	Common Pipistrelle			Soprano Pipistrelle			Myotis Species			Pipistrelle Species			Noctule			Brown Long-eared		
					Period Total	Peak Count	Per Av. Hour	Period Total	Peak Count	Per Av. Hour	Period Total	Peak Count	Per Av. Hour	Period Total	Peak Count	Per Av. Hour	Period Total	Peak Count	Per Av. Hour	Period Total	Peak Count	Per Av. Hour
17/09/19 - 22/09/19	14	63.25	26.61384	1683	616	189	9.741013	614	225	9.709386	430	204	6.799733	13	7	0.205573	8	5	0.126507	2	1	0.031627
17/09/19 - 22/09/19	15	63.25	2.814761	178	101	30	1.59714	43	10	0.67997	10	4	0.158133	6	2	0.09488	8	6	0.126506	10	4	0.158133
		TOTALS	14.71427	1861	717	189	5.669067	657	225	5.194668	440	204	3.478925	19	7	0.150226	16	6	0.126506	12	4	0.09488

Key:

- Site Boundary
- Start point
- Finish point
- Point Count Locations
- Transect Route
- Flight Arrow
- Static Locations

Bat Contacts
- Common Pipistrelle
- Soprano Pipistrelle

Plan Ref.	Time	Bat Specie	Passes	Behaviour
PCA	19:21-19:26	No Bats		
PCB	19:31-19:36	No Bats		
PCC	19:42-19:47	No Bats		
1	19:47	Common pipistrelle	2	F
PCD	19:52-19:57	Ref. 2, 3		
2	19:53	Common pipistrelle	4	F
3	19:54	Soprano pipistrelle	2	F
4	20:00	Common pipistrelle X2	Cont.	F
PCE	20:06-20:11	No Bats		
5	20:13	Common pipistrelle	2	F
PCF	20:27-20:32	No Bats		
PCG	20:46-20:51	No Bats		
PCF	21:02-21:07	No Bats		

Client: Premier Group of Companies
Project: Wombwell High School, Wombwell
Drawing Title: AUTUMN BAT TRANSECT & STATIC LOCATION PLAN
Scale: 1:3500 @ A3 | Drawn: MPG/LOA | Date: 26/9/2019
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