Ref: VMOA101 / 001 / 003

February 2009

thomson ecology

New Lodge, Barnsley, South Yorkshire

Ecological Surveys

For

Morgan Ashurst Plc

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Morgan Ashurst Plc

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Ecological Surveys

Project Number	Report No.	Revision No.	Date of Issue
VMOA101	001	003	2nd February 2009

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1 SUMMARY AND MAIN RECOMMENDATIONS

1.1 SUMMARY

1.1.1 A client of Morgan Ashurst proposes to construct a new build Primary Care Centre on an area of council owned land at New Lodge, Barnsley.

1.1.2 The brief was to undertake an extended Phase 1 habitat survey, plus an external bat scoping survey of buildings on the site. In addition, any stands of Japanese knotweed or giant hogweed were to be noted. The report was required to discuss the legal and planning policy issues associated with the proposed development and biodiversity. The methods used in the surveys are consistent with best practice guidelines. The main objective of the surveys was to gather baseline ecological data for the proposed development site.

1.1.3 During the extended Phase 1 habitat survey, the site was found to support broadleaved scattered trees, amenity grassland, bare ground and buildings and hard standings (See Figure 2). Two of the buildings on site (B2 and B6 on Figure 3) were considered to have low potential to support roosting bats. All bats and their roosts are strictly protected under a range of legislation and policy, including the Conservation (Habitats &c) Regulations and the Wildlife and Countryside Act 1981 (as amended). Further survey is recommended on these two buildings to establish presence or likely absence of bats.

1.1.4 Suitable habitat is also present on site to support breeding birds. The mitigation proposals set out below should ensure that the development is compliant with the law and planning policy with respect to birds.

1.2 MAIN RECOMMENDATIONS

1.2.1 The main recommendations are set out below:

- Necessary clearance of trees and shrubs to be undertaken outside the breeding bird season;
- Further survey to establish presence or likely absence of bats within buildings B1 and B5;
- Using native trees and shrubs in the landscape design for the redeveloped site; and
- Incorporation of bird boxes and bat roosting opportunities, such as bat boxes and bat tubes, in the structure of the new buildings.
- Additional ecological enhancements could include the use of a wild flower lawn mix; and a small wildlife pond.



Photo 1: Amenity grassland area looking towards the north east boundary of the survey area



Photo 2: Amenity grassland area looking towards the south boundary of the survey area



Photo 3: Buildings B1 (left) and B2 (right)



Photo 4: Building B3



Photo 5: Buildings B5 (foreground), B6 (middle) and B7 (background)

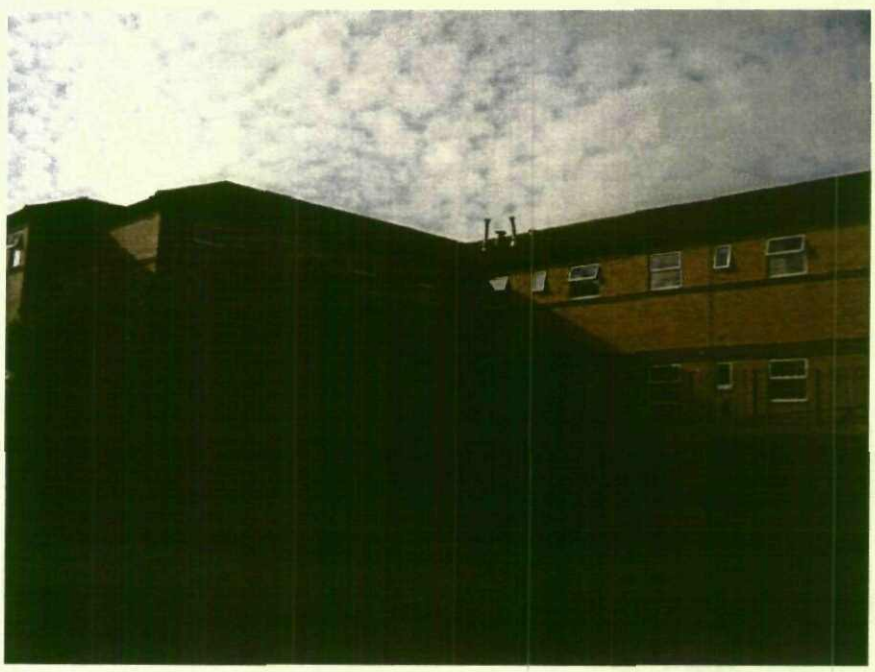


Photo 6: Building B8

2 INTRODUCTION

2.1 DEVELOPMENT BACKGROUND

2.1.1 A client of Morgan Ashurst proposes to construct a new build Primary Care Centre. The plans are for a two storey rectangular building with car parking provision.

2.1.2 The proposals described above are hereafter referred to collectively as 'the development'.

2.1.3 The development will be located on approximately 1.8 ha of council owned amenity grassland (Grid Reference SE344092), adjacent to the A61 Wakefield road to the north of Barnsley, see Figure 1. The area affected by the development is hereafter referred to as 'the site'.

2.2 THE BRIEF AND OBJECTIVES

2.2.1 Morgan Ashurst commissioned Thomson Ecology on 28th August 2008 to undertake an extended Phase 1 habitat survey, invasive non - native weed survey and bat scoping survey within the development site. The brief was to:

- Undertake an extended Phase 1 habitat survey of the site, recording the main habitats present on site;
- Make an assessment of the potential of the site to support protected species or species of conservation concern;
- Note any stands of Japanese knotweed and giant hogweed;
- Carry out a bat scoping survey of any buildings within the survey boundary and make an assessment of the potential for the buildings to support roosting bats;
- Provide a report on all surveys, giving in each case the methods and results of the survey, discussion of the legal and planning policy issues and our recommendations, including opportunities for enhancement; and
- Provide digitised maps of the survey results.

2.3 LIMITATIONS

2.3.1 The surveys were undertaken at a suitable time of year to make the appropriate ecological assessments.

3 EXTENDED PHASE 1 HABITAT SURVEY

3.1 METHODOLOGY

3.1.1 A survey area was defined that encompassed the site and an additional *boundary around the site. This was provided by Morgan Ashurst Plc.* The survey area is shown on Figure 2.

3.1.2 An extended Phase 1 habitat survey (JNCC, 1993; IEA, 1995) was conducted throughout the survey area. Phase 1 habitat survey is a standard technique for rapidly obtaining baseline ecological information over a large area of land. It is primarily a mapping technique and uses a standard set of habitat definitions for classifying areas of land on the basis of the vegetation present. For this survey, the technique was modified (or extended) to provide more detail over a smaller area, and give further consideration to fauna. The standard habitat definitions were used with an additional category of coarse grassland for unmanaged, secondary grasslands that are species poor.

1.1.1. The dominant and readily identified species of higher plant species from each habitat type within the survey area were recorded and their abundance was assessed on the DAFOR scale:

D Dominant

A Abundant

F Frequent

O Occasional

R Rare

1.1.2. These scores represent the abundance within the defined area only and do not reflect national or regional abundances. Plant species nomenclature follows Stace (1997).

3.1.3 Incidental records of fauna were also made during the survey and the habitats identified were evaluated for their potential to support protected species and other species of conservation concern, including Biodiversity Action Plan Priority species. However, no specific faunal surveys were undertaken.

3.1.4 The survey was conducted on 23rd September 2008.

3.2 RESULTS

Habitats and Flora

3.2.1 The following Phase 1 habitat types were identified:

- Broadleaved scattered trees and bare ground;
- Amenity grassland; and
- Buildings and hard standing.

3.2.2 These habitats are described below and their distribution is given on Figure 2. Full species lists are shown in Appendix 1.

Broadleaved Scattered Trees and Bare Ground

3.2.3 There is a small area of broadleaved scattered trees towards the south of the site along the boundary with the residential nursing home (SBW1 on Figure 2). These are approximately 8m tall and consist dominantly of beech (*Fagus sylvatica*), with abundant elder (*Sambucus nigra*) and frequent ash (*Fraxinus excelsior*). Much of the ground underneath the trees is bare and there has been some litter dumped under the trees.

Amenity Grassland

3.2.4 Much of the site (approximately 1.4ha) comprises amenity grassland (AM1 on Figure 2, photos 1 and 2). The sward is mown regularly and comprises dominantly of perennial ryegrass (*Lolium perenne*), with abundant white clover (*Trifolium repens*), frequent dandelion (*Taraxicum* agg.) and occasional red fescue (*Festuca rubra*), cocksfoot (*Dactylis glomeratus*) and ribwort plantain (*Plantago lanceolata*). Within the grassland there are four trees to the centre of the site comprised of elder, rowan (*Sorbus aucuparia*) and Cherry (*Prunus* sp.). The areas of amenity grassland comprising gardens to the properties to the north-west and south-west of the site include occasional introduced species such as fuschia (*Fuschia* sp.), mallow (*Malva* sp.) redcurrant (*Ribes rubrum*) and rose (*Rosa* sp.).

Buildings and hard standing

3.2.5 There is approximately 0.45ha of buildings and hard standings within the survey area.

3.2.6 Fauna

3.2.7 Feral pigeon (*Columba livia*) was recorded during the survey.

3.3 LEGISLATION AND PLANNING POLICY ISSUES

Background

3.3.1 The content of this legislation and planning policy section is the legislation and planning policy issues that we know are relevant based on this extended Phase 1 habitat survey. A detailed description of the method for this section is given in Appendix 2.

Protected Species

3.3.2 Feral pigeon was recorded within the survey area and suitable habitat is present within the site to support breeding birds. All birds, eggs and nests are protected from damage and destruction under the Wildlife and Countryside Act 1981, as amended.

3.3.3 Some buildings within the site have the potential to support bats; this is detailed in the bat scoping survey, see Section 4 of this report.

3.3.4 The mitigation measures set out in Section 3.4 should ensure that the development proposals are compliant with the law and policy GS15 with respect to birds.

Invasive Plant Species

3.3.5 No Japanese knotweed or giant hogweed was found to be present on site.

Ecological Enhancement

3.3.6 Central and local government policy now points towards ecological enhancement on development sites. For example, PPS9 states that "*plan policies should promote opportunities for the incorporation of beneficial biodiversity and geological features within the design of development*" and Policy GS15 of the Barnsley Unitary Development Plan states that "*development proposals should, where appropriate, include measures to conserve and enhance existing features of nature conservation interest and to create new nature conservation areas.*"

3.3.7 Where appropriate the developer will be expected to incorporate compensatory measures including the implementation of schemes for habitat creation and/or enhancement within the site or locality, and proposals to ensure future management. Measures outlined in section 3.4.3 should be consistent with these policies.

3.4 RECOMMENDATIONS

Mitigation

3.4.1 The recommendations for mitigation (including avoidance, mitigation and compensation) measures given in this section are based on the findings of the extended Phase 1 habitat survey. It may include precautionary mitigation measures for some species which could occur on the site.

Protected species

3.4.2 Site clearance should be undertaken outside the breeding bird season i.e. site clearance should be undertaken in the period August to February inclusive.

Ecological Enhancements

3.4.3 Measures to maintain and enhance the ecological interest of the site after development could include:

- Native species of tree and shrub being incorporated in the landscaping of the new development;
- Bird and bat boxes being incorporated onto the site;
- The use of a wild flower lawn mix on any areas of grassland included in the landscaping; or
- A small wildlife pond.

3.4.4 Implementing two or three of these recommendations is likely to be consistent with planning policy as detailed in Section 3.3.6.

3.5 CONCLUSION

3.5.1 The proposed development with the mitigation measures proposed above is likely to be compliant with the relevant legislation and policy, subject to the results of any further surveys as detailed in Section 4 of this report.

4 BATS

4.1 METHODOLOGY

General Approach

4.1.1 A survey area was defined that encompassed all buildings within the survey area provided by Morgan Ashurst Plc (see Figure 3).

4.1.2 A daytime survey was undertaken to locate potential roost sites for bats.

Daytime Survey of Potential Roosts

4.1.3 The survey area was searched during daylight hours for potential roost sites for bats within the buildings.

4.1.4 A preliminary inspection of potential bat roosts was made from the ground with the aid of binoculars and a powerful torch. All potential roost sites that could be investigated in this way were searched for bats themselves and evidence of current or past bat use. Buildings were inspected for features which could be used by roosting bats.

4.1.5 Buildings 1 - 8 were inspected and the evidence searched for included:

- Gaps around windows, doors and lintels;
- Lifted lead flashing;
- Loose or missing tiles;
- Gaps between stone or brickwork where mortar has fallen out;
- Other gaps or cracks between various elements of building structure;
- Presence or absence of cavity wall and potential access points; and
- Suitable access points around eaves, soffits, barge board, facia, flashing and hanging tiles.

4.1.6 The information recorded for each potential roost included the site type and a description of the potential roost and its location.

4.1.7 Each building was then graded and placed into a category for its level of potential for roosting bats. This was dependent on the degree of exposure, cavity dimensions and the presence or absence of crevices considered suitable for bats to use as roosts. In addition the following factors were also considered:

- Setting & locality;

- Level of disturbance;
- Age of building or structure;
- Proximity of nearest woodland and / or water;
- Presence or absence of substantial linear features linking to woodland or other commuting and foraging habitat; and
- Size, particularly when considering potential for winter hibernation sites.

4.1.8 Table 1 shows the relevant categories.

Table 1: Outline of categories of bat potential.

Type of roost / Level of potential	Summer or transitional roost used by non breeding bats	Maternity roost	Hibernation roost
Confirmed	Presence of bats or evidence of bats. Confirmation of roost status may require further survey.		
High Bat Potential	Feature with multiple roosting opportunities for one or more species of bat. With good connectivity to high quality foraging habitat.	Feature with multiple roosting opportunities for breeding bats (size, temperature). With proximity and connectivity to high quality foraging habitat.	Large site that offers cool stable conditions with multiple roosting opportunities. With proximity and connectivity to high quality foraging habitat.
Medium Bat Potential	Feature with some roosting opportunities. With connectivity to moderate - high quality foraging habitat.	Feature providing some roosting opportunities. With some connectivity and proximity to moderate or high quality foraging habitat.	Medium sized feature with a number of roosting opportunities. With some connectivity and proximity to moderate or high quality foraging habitat
Low Bat Potential	Feature with a limited number of roosting opportunities. With poor connectivity to foraging habitat	Feature with a limited number of roosting opportunities for breeding bats. With low proximity and connectivity to low - moderate quality foraging habitat.	Small sized feature or feature which may be subject to disturbance or environmental variations, with a limited number of roosting opportunities. With limited connectivity to foraging habitat.
Negligible Bat Potential	Feature with no or very limited roosting opportunities for bats or where the feature is isolated from foraging habitat.	Feature with no suitable roosting opportunities for breeding bats.	Feature with no suitable roosting opportunities for hibernating bats.

Dates of Survey

4.1.9 The daytime survey for potential roosts was undertaken on 23rd September 2008.

4.2 RESULTS

Daytime survey of potential roosts

4.2.1 The buildings were rated for their potential to support roosting bats as detailed in Table 2 below. Table 3 details the potential roost features and access points within the buildings along with details of environmental factors.

Table 2: Overall potential of the buildings surveyed to support roosting bats.

Building	Overall potential to support roosting bats		
	Summer/ transitional	Maternity	Hibernation
B1	Negligible	Negligible	Negligible
B2	Low	Negligible	Negligible
B3	Negligible	Negligible	Negligible
B4	Negligible	Negligible	Negligible
B5	Low	Negligible	Negligible
B6	Negligible	Negligible	Negligible
B7	Negligible	Negligible	Negligible
B8	Negligible	Negligible	Negligible

Table 3: Details of potential access points, roost spaces and environmental factors

Building	Description	Potential Access Points	Potential Roost Points	Evidence of Bats	Environmental Factors
B1	This is a two storey residential property comprising four self contained units (see Photograph 3). It is approximately 50 years old and built from solid brick walls. The roof is tiled with clay pan tiles and has a wooden soffit box. Half the building seems to be disused and is boarded up.	No potential access points were found during the external inspection of this building.	No potential roost points were found during the external inspection of this building.	No evidence of bats was found during the external inspection of this building.	This building is situated in an urban environment in close proximity to an area of amenity grassland. It has poor connectivity to areas of woodland.
B2	This is a two storey residential property comprising four self contained units (see Photograph 3). It is approximately 50 years old and built from solid brick walls. The roof is tiled with clay pan tiles and has a wooden soffit box.	No potential access points were found during the external inspection of this building.	Bats could roost between loose roofing tiles and the roofing felt.	No evidence of bats was found during the external inspection of this building.	This building is situated in an urban environment in close proximity to an area of amenity grassland. It has poor connectivity to areas of woodland.

Building	Description	Potential Access Points	Potential Roost Points	Evidence of Bats	Environmental Factors
B3	This building is a terraced two storey residential property (see Photograph 4). It is approximately 50 years old and is building from solid brick walls. The roof is tiled with clay pan tiles. A ground level extension carries a corrugated iron roof.	No potential access points were found during the external inspection of this building.	No potential roost points were found during the external inspection of this building.	No evidence of bats was found during the external inspection of this building.	This building is situated in an urban environment in close proximity to an area of amenity grassland. It has poor connectivity to areas of woodland.
B4	This building is a detached single storey electrical shed and is approximately 3m x 3m x 3m in dimension. It is approximately 50 years old and is built from solid brick walls with a flat roof.	This building could be accessed by bats via ventilation holes in the soffit.	Bats could roost within the soffit, however there seems to be a substantial amount of disturbance due to heat production from the utilities held within the building, which reduces the chance of roosting bats.	No evidence of bats was found during the external inspection of this building.	This building is situated in an urban environment in close proximity to an area of amenity grassland. It has poor connectivity to areas of woodland.

Building	Description	Potential Access Points	Potential Roost Points	Evidence of Bats	Environmental Factors
B5	This is a two storey residential property comprising four self contained units (see Photograph 5). It is approximately 50 years old and built from solid brick walls. The roof is tiled with clay pan tiles and has a wooden soffit box.	No potential access points were found during the external inspection of this building	Bats could roost between loose roofing tiles and the roofing felt and under loose lead flashing.	No evidence of bats was found during the external inspection of this building.	This building is situated in an urban environment in close proximity to an area of amenity grassland. It has poor connectivity to areas of woodland.
B6	This is a two storey residential property comprising four self contained units (see Photograph 5). It is approximately 50 years old and built from solid brick walls. The roof is tiled with clay pan tiles and has a wooden soffit box. Half the building seems to be disused and is boarded up.	No potential access points were found during the external inspection of this building	No potential roost points were found during the external inspection of this building.	No evidence of bats was found during the external inspection of this building.	This building is situated in an urban environment in close proximity to an area of amenity grassland. It has poor connectivity to areas of woodland.

Building	Description	Potential Access Points	Potential Roost Points	Evidence of Bats	Environmental Factors
B7	This is a two storey residential property comprising four self contained units (see Photograph 5). It is approximately 50 years old and built from solid brick walls. The roof is tiled with clay pan tiles and has a wooden soffit box.	No potential access points were found during the external inspection of this building	No potential roost points were found during the external inspection of this building.	No evidence of bats was found during the external inspection of this building.	This building is situated in an urban environment in close proximity to an area of amenity grassland. It has poor connectivity to areas of woodland.
B8	This is a two storey modern extension onto a nursing home (see Photograph 6). The walls are brick construction. The roof is tiled with clay pan tiles and has a wooden soffit box.	No potential access points were found during the external inspection of this building	No potential roost points were found during the external inspection of this building.	No evidence of bats was found during the external inspection of this building.	This building is situated in an urban environment in close proximity to an area of amenity grassland. It has poor connectivity to areas of woodland.

4.3 LEGAL AND PLANNING POLICY ISSUES

4.3.1 The content of the legislation and planning policy section is the legislation and planning policy issues that we know are relevant based on the external building inspection.

4.3.2 As set out in Appendix 3, bats and their roost are strictly protected by a range of legislation and policy, including the following:

- Conservation (Habitats &c) Regulations 1994;
- Wildlife and Countryside Act 1981, as amended;
- Countryside and Rights of Way Act 2000;
- Natural Environment and Rural Communities Act 2006; and
- Planning Policy Statement 9.

4.3.3 In addition, bats are protected and their conservation promoted through Policy ENV8 of the Yorkshire and Humber Regional Plan and Policy GS15 of the Barnsley Unitary Development Plan which states that "*The council will seek to safeguard important habitats and species from any activities which would cause disturbance, pollution or other damage.*"

4.3.4 Buildings B2 and B5 have the potential to support roosting bats. Providing the recommendations made in Section 4.6 are adhered to, the development is likely to comply with relevant legislation and planning policy with respect to bats.

4.4 RECOMMENDATIONS

Further Survey

4.4.1 If the development proposals include the demolition of some or all of the buildings within the survey boundary, as outlined in this report, further surveys are recommended for buildings B2 and B5.

4.4.2 Further surveys would consist of one dusk emergence and dawn return survey of the buildings to determine presence or likely absence of bats using the buildings as roosts, following best practice guidelines (BCT, 2007), these surveys should be undertaken between April and September.

Mitigation

4.4.3 If, following further survey, a bat roost is confirmed within buildings B2 or B5, damage or disturbance of the roost should only be carried out under a European Protected Species Licence (EPSL) acquired from Natural England. The licence application would need to prove that a suitable avoidance, mitigation and compensation strategy is proposed in order to adequately deal with the bat population on site. Further surveys would also be required in order to assess the population of bats using the buildings as a roost.

Opportunities for Enhancement

4.4.4 In order to enhance the site for bats, the following could be included in the design proposals;

- It is suggested that bat boxes could be put up on trees and the new buildings which are available from http://www.schwegler-nature.com/BatProtection/index.htm;
- Linear features such as tree lines are suggested to be retained and / or created, where possible and appropriate, to increase foraging and commuting habitat for bats; and
- Proposed cladding of the building could be designed in order to allow space for roosting bats.

4.5 CONCLUSION

4.5.1 Further surveys are recommended for B2 and B5 to assess presence or likely absence of bat roosts. If a bat roost is discovered in B2 or B5 an EPSL will be required to disturb or destroy these roosts. It should be possible to be compliant with legislation and planning policy providing further survey is undertaken and mitigation measures are adhered to.

4.5.2 If no bats are found during the further surveys, the development is likely to comply with relevant legislation and planning policy with respect to bats.

4.6 REFERENCES

4.6.1 Bat Conservation Trust (2007). Bat Surveys, Good Practice Guidelines. BCT, London.

4.6.2 Mitchell-Jones, A.J. & McLeish, A.P. (1999). *Bat Workers' Manual* (2nd Edition). Joint Nature Conservancy Committee, Peterborough

4.6.3 Mitchell-Jones (2004). *Bat Mitigation Guidelines*. English Nature, Peterborough.

4.6.4 Yorkshire and Humber Regional Plan, 2005. www.yhassembly.gov.uk/

5 APPENDIX 1

5.1 IDENTIFICATION OF LEGAL AND PLANNING POLICY ISSUES IN ENGLAND

Scope of Assessment

5.1.1 The first step is to identify any biodiversity features found on the site that are subject to legal or policy controls, as follows:

Protected Species

5.1.2 The species known to occur on the site as a result of the Phase 1 habitat survey are compared with those listed in nature conservation legislation i.e. the Wildlife and Countryside Act 1981, as amended, the Conservation (Habitats &c) Regulations 1994.

5.1.3 In addition, the species known to occur on the site as a result of Phase 1 habitat survey are compared with those listed in animal welfare legislation, i.e. the Badgers Act 1992 and the Wild Mammals (Protection) Act 1996.

Biodiversity Action Plan Priority Species

5.1.4 The species known to occur on the site are compared with those listed as Priorities in the UKBAP, Species of Principal Importance for the Conservation of Biodiversity by the Secretary of State or requiring action in the Local Biodiversity Action Plan.

Other Species of Conservation Concern

5.1.5 The species known to occur on the site are compared with other nature conservation listings, such as red data books.

Invasive Plant Species

5.1.6 The species of plant present on the site are compared with those listed by government agencies as invasive non-natives, with particular attention given to those listed in the Wildlife and Countryside Act.

Review of Legislation and Policy

5.1.7 If any of the above are found to occur on or near the site and are likely to be affected by the development in any way, the relevant legislation and planning policy (including national, regional, county and borough policies) are examined to determine whether the proposed development is compliant.

Ecological Enhancement

5.1.8 Planning policy generally requires new developments to be enhanced for biodiversity. The existing proposals are considered to determine whether biodiversity enhancements are offered and whether they are adequate to

meet the policy requirements. Again, national, regional, county and borough policies are considered.

5.2 IDENTIFICATION OF POTENTIAL FURTHER ECOLOGICAL ISSUES

5.2.1 Further ecological issues are those which can not be resolved during the extended Phase 1 habitat survey for any reason, including the following:

- Suitable habitat is present on or near the site for a protected species/species of conservation concern and specialist survey techniques are required for their detection;
- Suitable habitat is present on or near the site for a protected species/species of conservation concern and the extended Phase 1 habitat survey was not undertaken at a suitable time of year for their detection;
- A protected species/species of conservation concern was found on or near the site but further information on population size or distribution is required in order to resolve any legal and planning policy issues (such as obtaining licences).

5.2.2 No attempt is made to evaluate the importance of the site for species not yet confirmed to be on or near the site, nor to discuss the implications for the development if the species were to be found on the site.

6 APPENDIX 2: PHASE 1 HABITAT SPECIES LIST

Habitat Patch	Common Name	Latin Name	DAFOR
SBW1	Privet	*Ligustrum ovalifolium*	R
	Elder	*Sambucus nigra*	A
	Beech	*Fagus sylvatica*	D
	Ash	*Fraxinus excelsior*	F
	Nettles	*Urtica dioica*	F
	Bramble	*Rubus fruticosus*	F
AM1	Perennial ryegrass	*Lolium perenne*	D
	Dandelion	*Taraxicum* agg.	F
	Ribwort plantain	*Plantago lanceolata*	O
	Red fescue	*Festuca rubra*	O
	Cocksfoot	*Dactylis glomeratus*	O
	Common nettle	*Urtica dioica*	OE
	Common ragwort	*Senecio jacobaea*	O
	White clover	*Trifolium repens*	A
	Yorkshire fog	*Holcus lanatus*	O
	Red clover	*Trifolium pratense*	R
	Dock sp.	*Rumex* sp.	O
	Cleavers	*Galium aparine*	RE
	Couch	*Elytrigia repens*	OE
	Daisy	*Bellis perennis*	O
	Common knapweed	*Centaurea nigra*	FE
	Common chickweed	*Stellaria media*	FE
	Mallow sp.	*Malva* sp.	FE
	Annual meadowgrass	*Poa annua*	RE
	Greater plantain	*Plantago major*	O
	Wall barley	*Hordeum murinum*	RE
	Fuchsia sp.	*Fuchsia* sp.	RE
	Redcurrant	*Ribes rubrum*	RE
	Prickly sow thistle	*Sonchus asper*	RE
	Elder	*Sambucus nigra*	R
	Rowan	*Sorbus aucuparia*	R
	Rose	*Rosa* sp.	R
	Cherry sp.	*Prunus* sp.	R

7 APPENDIX 3: BRITISH BATS

7.1 INTRODUCTION

7.1.1 A summary of the biology of British bats, the legislation that protects them and other mechanisms of highlighting species of conservation concern is provided below. For further information, the relevant source documents should be consulted.

7.2 BIOLOGY

7.2.1 There are seventeen British species of bats of two families, the horseshoe bats (*Rhinolophidae*) and vesper bats (*Vespertilionidae*). In Britain, there are two species of horseshoe bat both of which belong to the genus *Rhinolophus*, and the fifteen species of vesper belonging to six genera (*Myotis*, *Eptesicus*, *Nyctalus*, *Pipistrellus*, *Plecotus* and *Barbastella*). Whilst there are many differences in the biology of the different species, all share certain characteristics and these are described below.

Roosting

7.2.2 Bat species utilise roost sites of varying character; some preferring tree roosts whilst others are thought to be almost entirely dependent on built structures. Most bats will have a range of available roosting sites within their range which they move between throughout the year. They are generally faithful to their roosts and a colony of bats may use the same roost site(s) year after year.

7.2.3 In winter bats hibernate, often animals gather to hibernate communally remaining in the same hibernation roost from November to February/March. Hibernation roost sites typically have a constant low temperature and high humidity levels, sites include caves, mines, thick walled buildings and hollow trees. As the temperature and day length increase in spring bats leave their hibernation roosts, either moving immediately to summer roost sites or utilising occasional, transitional roosts.

7.2.4 By June breeding females congregate in maternity roost sites where they will give birth to, and nurture young. Male bats are also occasionally found roosting in maternity roosts but during this period they mostly roost alone. Maternity roost sites include hollowed out trees, buildings and bridges. Male bats may use similar sites but also cracks and crevices in trees, under loose tiles or even amongst dense ivy growth during the summer period. Similar sites may be used by bats for brief periods during the night when they are resting or eating recently caught prey. In autumn, male bats establish mating roosts and are visited by females and then a variety of roost sites may be used until the bats return to their hibernation roosts.

Foraging

7.2.5 All British bat species feed on invertebrates, with flies, beetles, moths and other insects making up much of their diet. Areas rich in insects are therefore favoured foraging sites for bats, with woodlands, scrub, wetlands, river corridors and flower rich grasslands being favoured foraging habitats. Habitats such as intensively farmed arable land, and amenity grassland support a much lower invertebrate diversity and is therefore unfavourable foraging habitat for bats.

Commuting

7.2.6 Bats favour roost sites in close proximity to suitable foraging habitat, however given variation in prey availability, land-use change, and competition with other bats, for at least part of the year bats must commute between their roosts and foraging habitat.

7.2.7 Commuting routes tend to follow linear features in the landscape such as hedgerows, woodland edges, rivers and other watercourses, particularly when crossing areas of less favourable habitat. The distance that bats commute between roost sites and foraging areas is dependent on local geography and also the species of bat. Some species will travel up to 18km, though shorter distances are more typical.

7.3 SITE DESIGNATION

7.3.1 All bat roosts in the UK receive protection under the following legislation:

- Conservation (Habitats etc.) Regulations 1994 (as amended 2007);
- Wildlife and Countryside Act 1981, as amended;
- The Countryside and Rights of Way Act 2000; and
- Natural Environment and Rural Communities (NERC) Act 2006.

7.3.2 This is described in more detail under 'Species Protection' below. In addition, the most important sites for certain bat species in the UK receive further statutory protection by being designated as Special Areas of Conservation (SACs) and Sites of Special Scientific Interest (SSSIs).

7.3.3 Four bat species, greater and lesser horseshoe, barbastelle and Bechstein's bats, in the UK are included on Annex II of the European Community Directive of the Conservation of Natural Habitats and of Wild Fauna and Flora, referred to as the Habitats Directive. The Habitats Directive was transposed into UK law by the Conservation (Natural Habitats etc.) Regulations 1994 (as amended 2007). This legislation requires that areas are designated as Special Areas of Conservation (SACs) to protect

populations of these bat species. To date, 22 SACs have been designated specifically to protect these species, with a further 12 SACs where their presence is a qualifying feature but not the primary reason that the site was designated.

7.3.4 Sites designated under the Wildlife and Countryside Act 1981 (WCA) are known as Sites of Special Scientific Interest (SSSIs). SSSIs received further protection under the Countryside and Rights of Way Act 2000 (CRoW).

7.3.5 Some SSSIs are designated for the population(s) of bats that they support. The criteria for selecting SSSIs on the basis of their bat populations are provided in Guidelines for the Selection of Biological SSSIs (NCC, 1989):

- Greater horseshoe bat - all main breeding roosts and all winter roosts with 50 or more adult bats;
- Lesser horseshoe bat - all main breeding roosts containing 100 or more adult bats and all winter roosts containing 50 or more bats;
- Barbastelle, Bechstein's and grey long-eared bats - any traditional breeding roosts;
- Natterer's, Daubenton's whiskered, Brandt's, serotine, noctule and Leisler's bats - only exceptionally large breeding roosts or those with a long history of use.
- Mixed Roost sites - all hibernacula containing 4 or more species and more than 50 individuals or 3 species and 100 or more individuals or 2 species and 150 or more individuals, though these criteria may be lower in some parts of the UK.

7.3.6 Sites that qualify as SSSIs for the bat populations they support are considered to be of at least national importance for the bats they support.

7.3.7 Sites designated for nature conservation at the county level may also include bat populations as part of the site qualifying criteria, although the criteria used may vary from county to county. Such sites are protected through the planning system and there is generally a presumption against development that affects such sites in local authority development plans.

7.4 SPECIES PROTECTION

Legislation

7.4.1 Both within and outside designated sites, all bat species are fully protected under the Conservation Regulations 1994 (as amended 2007), the Wildlife and Countryside Act 1981, and Countryside and Rights of Way Act 2000 as amended. Taken together, these make it an offence to:

- Deliberately capture, injure or kill a bat;
- Damage or destroy a breeding site or resting place of a bat;
- Intentionally, deliberately or recklessly damage, destroy, disturb, or obstruct access to any structure or place used for shelter or protection by a bat;
- Possess or control any live or dead specimen or anything derived from a bat, unless acquired lawfully; and
- Sell, barter, exchange or transport or offer for sale bats or part of them.

7.4.2 A roost is any structure or place used by bats for shelter or protection. As bats tend to re-use the same roosts year after year, the roost is protected whether bats are present or not at the time.

7.4.3 In this context, 'damage' would include such operations as treatment of wood with toxic preservatives or use of rodenticides near roosting bats while 'disturbance' includes any work in or affecting a bat roost.

7.4.4 If proposed actions, such as redevelopment of an existing building may lead to an offence under the above legislation, appropriate mitigation which seeks to avoid these impacts should be devised and implemented under licence from Natural England to allow the activity to proceed legally.

7.4.5 In addition to the above legislation, all bats are protected under the Bonn Convention, within which the Agreement on the Conservation of Bats in Europe (1991) or EUROBAT, establishes a mechanism for international collaboration to conserve bats and their habitats, including foraging habitats. All European bat species are covered under Appendix II of the Conservation of Migratory Species of Wild Animals (CMS).

7.4.6 The Hedgerow Regulations 1997 provide for the conservation of 'important' hedgerows and their constituent trees. The presence of a protected species such as bats is included in the assessment of whether a hedgerow is considered 'important' and applications to remove such hedgerows must be made to the planning authority.

Planning Policy

7.4.7 Planning Policy Statement 9 Biodiversity and Geological Conservation (PPS9) gives further direction with respect to biodiversity conservation and land use change / development. PPS9 states that not only should existing biodiversity, including bat species, be conserved but importantly that habitats supporting such species should be enhanced or restored where possible.

The policies contained within PPS9 may be material to decisions on individual planning applications.

7.5 UK BIODIVERSITY ACTION PLAN AND SPECIES OF PRINCIPAL IMPORTANCE

7.5.1 Seven species of bats (Barbastelle, Bechstein's, greater and lesser horseshoe, brown long-eared, noctule and soprano pipistrelle) are listed as Priority species in the UK Biodiversity Action Plan (HM Government 1994 et seq.). The UK Biodiversity Action Plan was published in response to the 1992 International Convention on Biological Diversity.

7.5.2 As Priority species in the UK Biodiversity Action Plan, these species are also Species of Principal Importance for the Conservation of Biodiversity in England under Section 41 of the Natural Environment and Rural Communities Act. This places a duty on all government departments to have regard for the conservation of these species and on the Secretary of State to further, or promote others to further, the conservation of these species.

7.6 REFERENCES

7.6.1 Altringham, J. (2003) British Bats. New Naturalist Series No. 93.

7.6.2 Bat Conservation Trust (2007). Bat Surveys, Good Practice Guidelines. BCT, London.

7.6.3 Entwistle, A. C., Harris, S., Hutson, A., Racey, P., Walsh, A., Gibson, S., Hepburn, I., and Johnston, J. (2002) Habitat management for bats: A guide for land managers, land owners and their advisors. JNCC, Peterborough.

7.6.4 Highways Agency (1996 et seq). Design Manual for Roads and Bridges, Volume 10 Environmental Design and Management,Section 4 The Good Roads Guide- Nature Conservation, Part 6 Nature Conservation Management Advice in Relation to Bats.

7.6.5 HM Government (1995). Biodiversity: The UK Steering Group Volume 2: Action Plans. JNCC, Peterborough.

7.6.6 HM Government (1998). Tranche 2 Action Plans: Volumes I and II. English Nature, Peterborough.

7.6.7 Mitchell-Jones, A.J. & McLeish, A.P. (1999). Bat Workers' Manual (2nd Edition). Joint Nature Conservancy Committee, Peterborough

7.6.8 NCC (1989). Guidelines for Selection of Biological SSSIs. Nature *Conservancy Council, Peterborough*

7.6.9 Office of the Deputy Prime Minister (2005). Planning Policy Statement 9; Biodiversity and Geological Conservation.

7.6.10 Russ, J. (1999). The Bats of Britain and Ireland. Alana Ecology, Shropshire.



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Legend

Site Location

Figure 1:
Site Location
New Lodge, Barnsley

Surveyed For Morgan Ashurst plc
September 2008

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VMOA101/001/3975/1
01/10/2008

Legend

- Location and Direction of Photograph
- Broadleaved Scattered Trees
- Amenity Grassland (A)
- Fence
- Wall
- Buildings
- Hard Standing
- Bare Ground
- Survey Area Boundary

Figure 2:
Phase 1 Habitat Survey
New Lodge, Barnsley

Surveyed For Morgan Ashurst plc
September 2008

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This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a Phase 1 baseline habitat survey. This map is not intended to represent a scaled landscape survey so should not be used to pin-point accurate engineering work or as a basis for detailed site planning.
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VMOA101/001/3977/1
01/10/2008

Legend

Location and Direction of Photograph

Bat Building Potential

Low

Negligible

Survey Area Boundary

Figure 3:
Results of the Bat Scoping Survey
New Lodge, Barnsley

Surveyed For Morgan Ashurst plc
September 2008

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