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Hoyland, Barnsley, South Yorkshire

Ecological Surveys

For

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Morgan Ashurst Plc

Hoyland, Barnsley, South Yorkshire

Ecological Surveys

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1 SUMMARY AND MAIN RECOMMENDATIONS

1.1 SUMMARY

1.1.1 A client of Morgan Ashurst Plc proposes to construct a new build Primary Care Centre on an area of part council and part privately owned land in Hoyland, 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 scattered scrub, scattered broadleaved trees, poor semi-improved grassland, tall ruderal herb, amenity grassland, introduced shrub, bare ground and buildings and hard standings (See Figure 2). Six of the buildings on site 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. Further survey is recommended on the six buildings to establish presence or likely absence of bats.

1.1.4 Feral pigeon was recorded on site and suitable habitat is also present on site to support them and other 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 B6-10;
- Using native trees and shrubs in the landscape design for the redeveloped site; and
- Incorporation of bird boxes and bat roost roosting opportunities, such as bat boxes and bat tubes within 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: Brick planters with broadleaved trees



Photo 2: Car park and introduced shrub (IS3).



Photo 3: Amenity grassland to the south of the survey area



Photo 4: Poor semi-improved grassland to foreground, introduced shrub to background



Photo 5: Building B1



Photo 6: Building B2



Photo 7: Building B3



Photo 8: Building B4



Photo 9: Building B5



Photo 10: Building B7 (foreground) and B6 (background)



Photo 11: Building B9



Photo 12: Building B8 (left) and B10 (right)

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 three storey rectangular building.

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 1.4ha of land in the main business district of Hoyland which is part owned by the Council and part by private ownership (Grid Reference SE373005), between the High street and Southgate, to the south 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 22nd September 2008.

3.2 RESULTS

Habitats and Flora

3.2.1 The following Phase 1 habitat types were identified:

- Scattered scrub;
- Poor semi-improved grassland;
- Tall ruderal herb;
- Amenity grassland;
- Introduced shrub; and
- Buildings and hard standing.

3.2.2 These habitats are described below and their distribution is given on Figure 2.

Scattered shrub

3.2.3 There are two areas (approximately 0.01ha) of scattered shrub (SS1 and SS2 on Figure 2) to the west of the survey area. Both of these comprise dominant dog rose (*Rosa canina* agg.) and species such as mugwort (*Artemisia vulgaris*), dandelion (*Taraxicum* agg.) and black medick (*Medicago lupulina*). SS1 also contains cotoneaster (*Cotoneaster* sp.), and occasional bramble (*Rubus* agg.) and elder (*Sambucus nigra*) along with frequent creeping thistle (*Cirsium arvense*), perennial ryegrass (*Lolium perenne*) and ribwort plantain (*Plantago lanceolata*). SS2 comprises additional ground flora such as frequent wall barley (*Hordeum murinum*) and occasional dock (*Rumex* sp.), common ragwort (*Senecio jacobaea*) and broadleaved willowherb (*Epilobium montanum*).

Poor semi-improved grassland

3.2.4 An area of poor semi-improved grassland of approximately 0.02ha occurs to the east of the survey area (see Figure 2; photo 4). The sward reaches 1m tall in places and comprises species such as Yorkshire fog (*Holcus lanatus*), perennial ryegrass, rough meadow grass (*Poa trivialis*), cocksfoot (*Dactylis glomeratus*), sweet vernal grass (*Anthoxanthum oderatum*), false oat grass (*Arrenatherum elatius*) creeping bent (*Agrostis stolonifera*) and couch (*Elytrigia repens*). Other species include butterfly bush (*Buddleja davidii*), dandelion, mugwort, hedge bindweed (*Calystegia sepium*) and dock.

Tall ruderal herb

3.2.5 There is an area (approximately 0.01ha) of tall ruderal herb (TR1 on Figure 2) to the east of the survey area. This comprises abundant mugwort,

rosebay willowherb (*Chamerion angustifolium*) and butterfly bush with frequent ragwort, bramble (*Rubus fruticosus*) and Yorkshire fog. Creeping thistle, broadleaved willowherb and dandelion are also present occasionally along with some elder.

Amenity grassland

3.2.6 There are several areas (totalling approximately 0.04ha) of amenity grassland (AM1 on Figure 2, photo 3) towards the south of the survey area. Perennial ryegrass is dominant in these areas, with abundant white clover (*Trifolium repens*) and red fescue (*Festuca rubra*) and occasional dandelion (*Taraxicum* agg.) Some young planted rowan (*Sorbus aucuparia*) saplings are also present.

Introduced shrub

3.2.7 There are several areas of introduced shrub (approximately 0.03ha) throughout the survey area (IS1-6 on Figure 2). IS1 comprises dominant Euonymus sp. (*Euonymus* sp.) with abundant Fatsia (*Fatsia japonica*) and occasional elder and dandelion. IS2 contains abundant Veronica (*Hebe* sp.) and perennial ryegrass with frequent Lavender (*Lavandula* sp.) and occasional Yucca (*Yucca* sp.), a young silver birch (*Betula pendula*) is also present. IS3 (Photo 2) comprises a dominant introduced shrub species with dog rose (*Rosa canina* agg.), lavender and frequent black medick, mugwort and red fescue. Bare ground is also abundant. IS4 comprises dominant cotoneaster, berberis (*Barberry stenophylla*) and Japonica (*Chaenomelesse* sp.) with abundant hedge bindweed and occasional dog rose and elder. IS5 comprises dominantly of butterfly bush with frequent hedge bindweed and occasional hornbeam (*Carpinus* sp.) and sycamore (*Acer psuedoplatanus*). IS6 consists of a small garden area which has many large plants containing species such as hosta (*Hosta* sp.), rose (*Rosa* sp.) and lavender among other introduced garden plant species.

Buildings and hard standing

3.2.8 Most of the site (a total of 1.3ha) comprises buildings and hard standings. To the north of the site there is a row of trees within the hard standing area comprising non-native alder (*Alder* sp.). To the west of the site there are four brick planters (photo 1) with three trees of Japanese maple (Acer sp.) and Lime (*Tilia cordata*).

Fauna

3.2.9 Feral pigeon (*Columbia livia*) was recorded in the survey area.

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 1.

Protected Species

3.3.2 Feral pigeon was recorded on the site, and additional suitable habitat is present to support them and other 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 In addition, the ODPM circular 05/2006 states that the presence of protected species is a material consideration in the planning process, which is addressed by Policy GS15 of the Barnsley Unitary Development Plan. This states that "*The council will seek to safeguard important habitats and species from any activities which would cause disturbance, pollution or other damage.*"

3.3.5 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

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

Ecological Enhancement

3.3.7 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.*"

3.3.8 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 desk study and 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 3.3.7.

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 as supplied 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 - 10 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 22nd 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	Low	Low	Negligible
B2	Negligible	Negligible	Negligible
B3	Negligible	Negligible	Negligible
B4	Negligible	Negligible	Negligible
B5	Negligible	Negligible	Negligible
B6	Low	Negligible	Negligible
B7	Low	Negligible	Negligible
B8	Low	Negligible	Negligible
B9	Low	Negligible	Negligible
B10	Low	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 building is a factory shop and warehouse (see Photograph 5). It is approximately a 1990's build and is built from solid brick walls with metal facia.	This building could be accessed by bats via holes in the metal roofing.	Bats could roost in the roof void and in between an area of weatherboarding and the wall.	No evidence of bats was found during the external inspection of this building.	This building is situated in an urban area and has poor connectivity to woodland and other foraging areas.
B2	This building is a metal container (see Photography 6).	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 area and has poor connectivity to woodland and other foraging areas.
B3	This is a detached public house building (see Photograph 7). It is approximately 30 years old and is built from solid brick walls. The roof is flat with a felt roofing material.	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 area and has poor connectivity to woodland and other foraging areas.

Building	Description	Potential Access Points	Potential Roost Points	Evidence of Bats	Environmental Factors
B4	This building is a detached single storey electrical shed (see Photograph 8) and is approximately 3m x 3m x 3m in dimension. It 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.	No evidence of bats was found during the external inspection of this building.	This building is situated in an urban area and has poor connectivity to woodland and other foraging areas.
B5	This is a building complex containing council offices and a superstore (see Photograph 9). It is approximately 30 years old and is built from solid brick walls. The roofs of this complex are flat with felt roofing material. Metal weather boarding is used in some areas of the building.	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 area and has poor connectivity to woodland and other foraging areas.

Building	Description	Potential Access Points	Potential Roost Points	Evidence of Bats	Environmental Factors
B6	This building is two storey commercial property (see Photograph 10). It is approximately 30 years old and is built from solid brick walls. The roof is flat with felt roofing material.	This building could be accessed by bats via a ventilation system and a hole in the wall.	Bats could roost within the interior of the building, between bricks where mortar is missing and in a small gap between building 6 and 7.	No evidence of bats was found during the external inspection of this building.	This building is situated in an urban area and has poor connectivity to woodland and other foraging areas.
B7	This building is two storey commercial property (see Photograph 10). It is approximately 30 years old and is built from solid brick walls. The roof is flat with felt roofing material.	No potential access points were found during the external inspection of this building	Bats could roost in a small gap between building 6 and 7.	No evidence of bats was found during the external inspection of this building.	This building is situated in an urban area and has poor connectivity to woodland and other foraging areas.
B8	This is an L - shaped unit of out - houses (see Photograph 12). It is of solid brick construction and is roofed with corrugated iron.	This building could be accessed by bats via the coal bunker, gaps between the ridge tiles and felt roofing and between the walls and the roof.	Bats could roost within the interior of the building and between bricks where mortar is missing and behind the weather board.	No evidence of bats was found during the external inspection of this building.	This building is situated in an urban area and has poor connectivity to woodland and other foraging areas.

Building	Description	Potential Access Points	Potential Roost Points	Evidence of Bats	Environmental Factors
B9	This building is a detached residential property (see Photograph 11). It is of solid brick construction. The roof is tiled with clay pan tiles.	This building could be accessed by bats via a gap under the eaves.	Bats could roost between slipped tiles and the roofing material and in the roof void.	No evidence of bats was found during the external inspection of this building.	This building is situated in an urban area and has poor connectivity to woodland and other foraging areas.
B10	This is a warehouse and shop building attached to building 8 (see Photograph 12). It is of solid brick construction with corrugated iron facia in places. The roof is covered with corrugated iron.	This building could be accessed by bats via a gap between the walls and the roofing material.	Bats could roost between bricks where the mortar is missing and in the roof void.	No evidence of bats was found during the external inspection of this building.	This building is situated in an urban area and has poor connectivity to woodland and other foraging areas.

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 B1, B6, B7, B8, B9 and B10 are considered to have a low 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 outlines in this report, further surveys are recommended for buildings B1, B6, B7, B8, B9 and B10.

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 B1, B6, B7, B8, B9 or B10, 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

4.5 CONCLUSION

4.5.1 Further surveys are recommended for B1, B6, B7, B8, B9 and B10 to assess presence or likely absence of bat roosts. If a bat roost is discovered in B1, B6, B7, B8, B9 or B10 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 surveys are 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
SS1	Black medick	*Medicago lupulina*	O
	Dandelion	*Taraxicum agg.*	F
	Creeping thistle	*Cirsium arvense*	F
	Bramble	*Rubus fruticosus*	O
	Red fescue	*Festuca rubra*	R
	Common ragwort	*Senecio jacobaea*	O
	Yorkshire fog	*Holcus lanatus*	O
	Japanese maple	*Acer* sp.	R
	Elder	*Sambucus nigra*	O
	Common nettle	*Urtica dioica*	F
	Dog rose	*Rosa canina* agg.	D
	Ribwort plantain	*Plantago lanceolata*	F
	Perennial ryegrass	*Lolium perenne*	F
	Sycamore	*Acer pseudoplatanus*	R
	Cocksfoot	*Dactylis glomerata*	O
	Mugwort	*Artemisia vulgaris*	F
	Dock sp.	*Rumex* sp.	R
	Broad-leaved willowherb	*Epilobium montanum*	R
	Cotoneaster	*Cotoneaster* sp.	A
	Daisy	*Bellis perennis*	R
	Spear thistle	*Cirsium vulgare*	R
	Scentless mayweed	*Tripleurospermum inodorum*	R
SS2	Black medick	*Medicago lupulina*	A
	Wall barley	*Hordeum murinum*	F
	Mugwort	*Artemisia vulgaris*	F
	Dog rose	*Rosa canina* agg.	D
	Red fescue	*Festuca rubra*	O
	Dock sp.	*Rumex* sp.	O
	Creeping thistle	*Cirsium arvense*	O
	Black medick	*Medicago lupulina*	F
	Broad-leaved willowherb	*Epilobium montanum*	O
	Annual meadow grass	*Poa annua*	O
	Perennial ryegrass	*Lolium perenne*	O
	Red fescue	*Festuca rubra*	R
	Wall barley	*Hordeum murinum*	R
	Dandelion	*Taraxicum* agg.	O

Habitat Patch	Common Name	Latin Name	DAFOR
	Common ragwort	*Senecio jacobaea*	O
	Sycamore	*Acer pseudoplatanus*	R
SI1	Butterfly-bush	*Buddleja davidii*	F
	Yorkshire fog	*Holcus lanatus*	F
	Perennial ryegrass	*Lolium perenne*	F
	Rough meadow grass	*Poa trivialis*	F
	Cock's foot	*Dactylis glomerata*	F
	Dandelion	*Taraxicum* agg.	O
	Hedge bindweed	*Calystegia sepium*	F
	Willowherb sp.	*Epilobium* sp.	F
	Mugwort	*Artemisia vulgaris*	O
	Creeping buttercup	*Ranunculus repens*	R
	Dock sp.	*Rumex* sp.	O
	Sweet vernal grass	*Anthoxanthum oderatum*	F
	Couch	*Elytrigia repens*	F
	False oat grass	*Arrenatherum elatius*	F
	Creeping bent	*Agrostis stolonifera*	F
TR1	Mugwort	*Artemisia vulgaris*	A
	Butterfly-bush	*Buddleja davidii*	A
	Bramble	*Rubus fruticosus*	F
	Cock's foot	*Dactylis glomerata*	O
	Sycamore	*Acer pseudoplatanus*	O
	Rosebay willowherb	*Chamerion angustifolium*	A
	Yorkshire fog	*Holcus lanatus*	F
	Meadow grass sp.	*Poa sp.*	F
	Dandelion	*Taraxicum agg.*	O
	Perennial ryegrass	*Lolium perenne*	O
	Moss sp.	-	R
	Ash	*Fraxinus excelsior*	R
	Creeping thistle	*Cirsium arvense*	O
	Common ragwort	*Senecio jacobaea*	F
	Elder	*Sambucus nigra*	O
	Broad-leaved willowherb	*Epilobium montanum*	O
AM1	Perennial ryegrass	*Lolium perenne*	D
	White clover	*Trifolium repens*	A
	Wall barley	*Hordeum murinum*	O
	Red fescue	*Festuca rubra*	R
	Dandelion	*Taraxicum* agg.	O
	Cock's foot	*Dactylis glomerata*	R

Habitat Patch	Common Name	Latin Name	DAFOR
	Ribwort plantain	*Plantago lanceolata*	R
	Cotoneaster	*Cotoneaster* sp.	R
	Rowan	*Sorbus aucuparia*	R
	Dandelion	*Taraxicum* agg.	F
	Red fescue	*Festuca rubra*	A
	Rowan	*Sorbus aucuparia*	R
IS1	Couch	*Elytrigia repens*	O
	Elder	*Sambucus nigra*	O
	Dandelion	*Taraxicum agg.*	O
	Ivy	*Hedera helix*	R
	Meadow grass sp.	*Poa sp.*	
	Euonymus sp.	*Euonymus sp.*	D
	Fatsia	*Fatsia japonica*	A
IS2	Silver birch	*Betula pendula*	R
	Creeping thistle	*Cirsium arvense*	R
	Elder	*Sambucus nigra*	R
	Lavender sp.	*Lavandula* sp.	A
	Dandelion	*Taraxicum* agg.	F
	Veronica sp.	*Hebe* sp.	A
	Meadow grass sp.	*Poa* sp.	O
	Perennial ryegrass	*Lolium perenne*	A
	Couch	*Elytrigia repens*	O
	Yucca sp.	*Yucca* sp.	O
IS 3	Dog rose	*Rosa canina* agg.	A
	Introdcued shrub sp.	Introduced shrub sp.	D
	Mugwort	*Artemisia vulgaris*	F
	Dandelion	*Taraxicum* agg.	O
	Creeping thistle	*Cirsium arvense*	O
	Wall barley	*Hordeum murinum*	OE
	Sow thistle sp.	*Sonchus* sp.	R
	Black medick	*Medicago lupulina*	F
	Red fescue	*Festuca rubra*	F
	Annual meadow grass	*Poa annua*	R
	Rowan	*Sorbus aucuparia*	O
	Lavender	*Lavandula sp.*	F
	Common chickweed	*Stellaria media*	O
IS4	Hedge bindweed	*Calystegia sepium*	A
	Cotoneaster	*Cotoneaster* sp.	D
	Wall barley	*Hordeum murinum*	O

Habitat Patch	Common Name	Latin Name	DAFOR
	Japonica	*Chaenomelesse*	D
	Common ragwort	*Senecio jacobaea*	O
	Dog rose	*Rosa canina* agg.	O
	Sycamore	*Acer pseudoplatanus*	O
	Perennial ryegrass	*Lolium perenne*	FE
	Berberis	*Barberry stenophylla*	D
	Elder	*Sambucus nigra*	R
IS5	Sycamore	*Acer pseudoplatanus*	O
	Hedge bindweed	*Calystegia sepium*	F
	Butterfly-bush	*Buddleja davidii*	D
	Hornbeam sp.	*Carpinus* sp.	O
IS 6	Rose	*Rosa sp.*	O
	Hosta	*Hosta sp.*	F
	Lavender	*Lavandula sp.*	O
HS	Alder sp.	*Alnus* sp.	R
	Japanese maple	*Acer* sp.	R
	Lime	*Tilia cordata*	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

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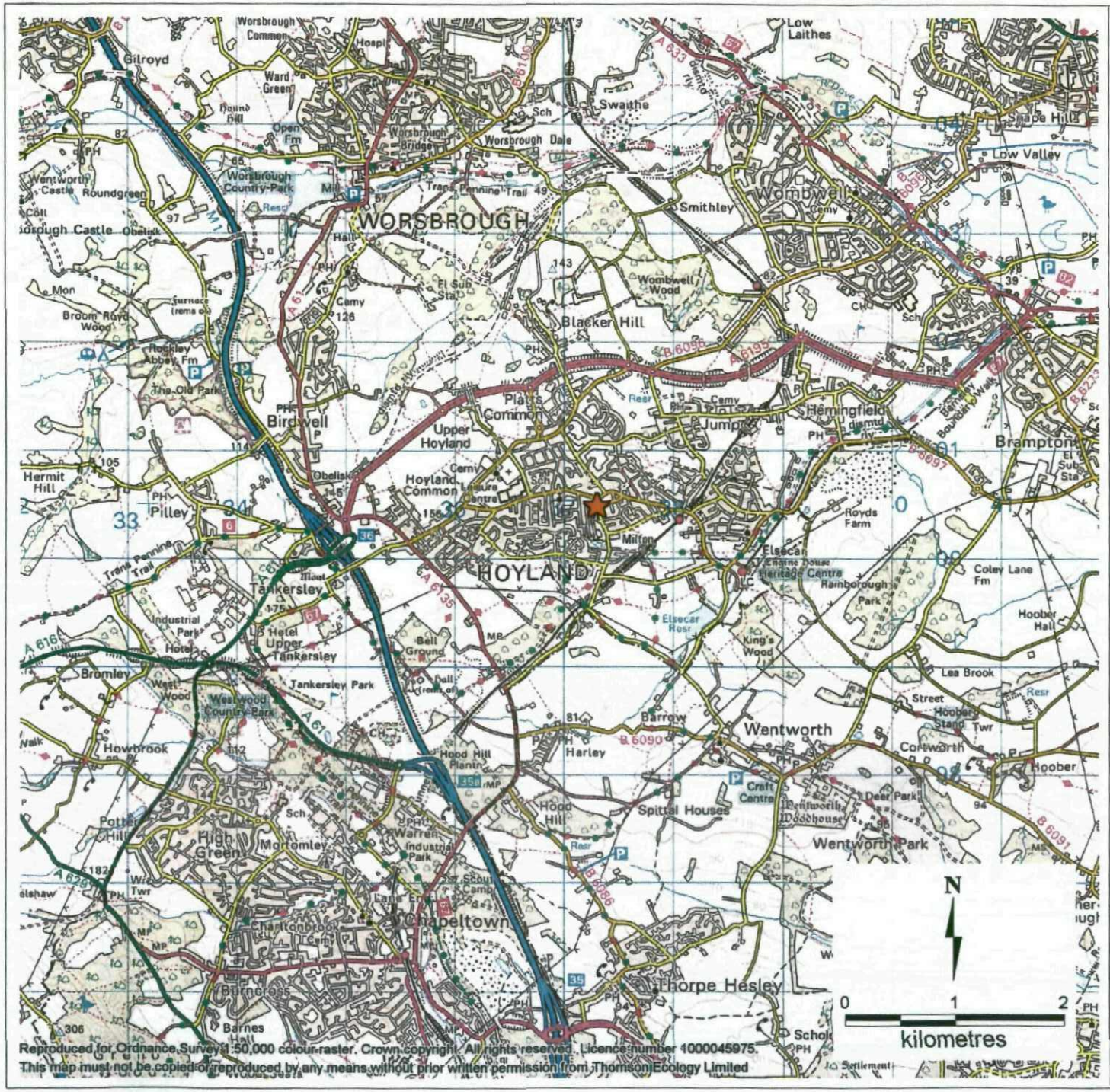
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Legend

Site Location

Figure 1:
Site Location
Hoyland, Barnsley

Surveyed For Morgan Ashurst plc
September 2008

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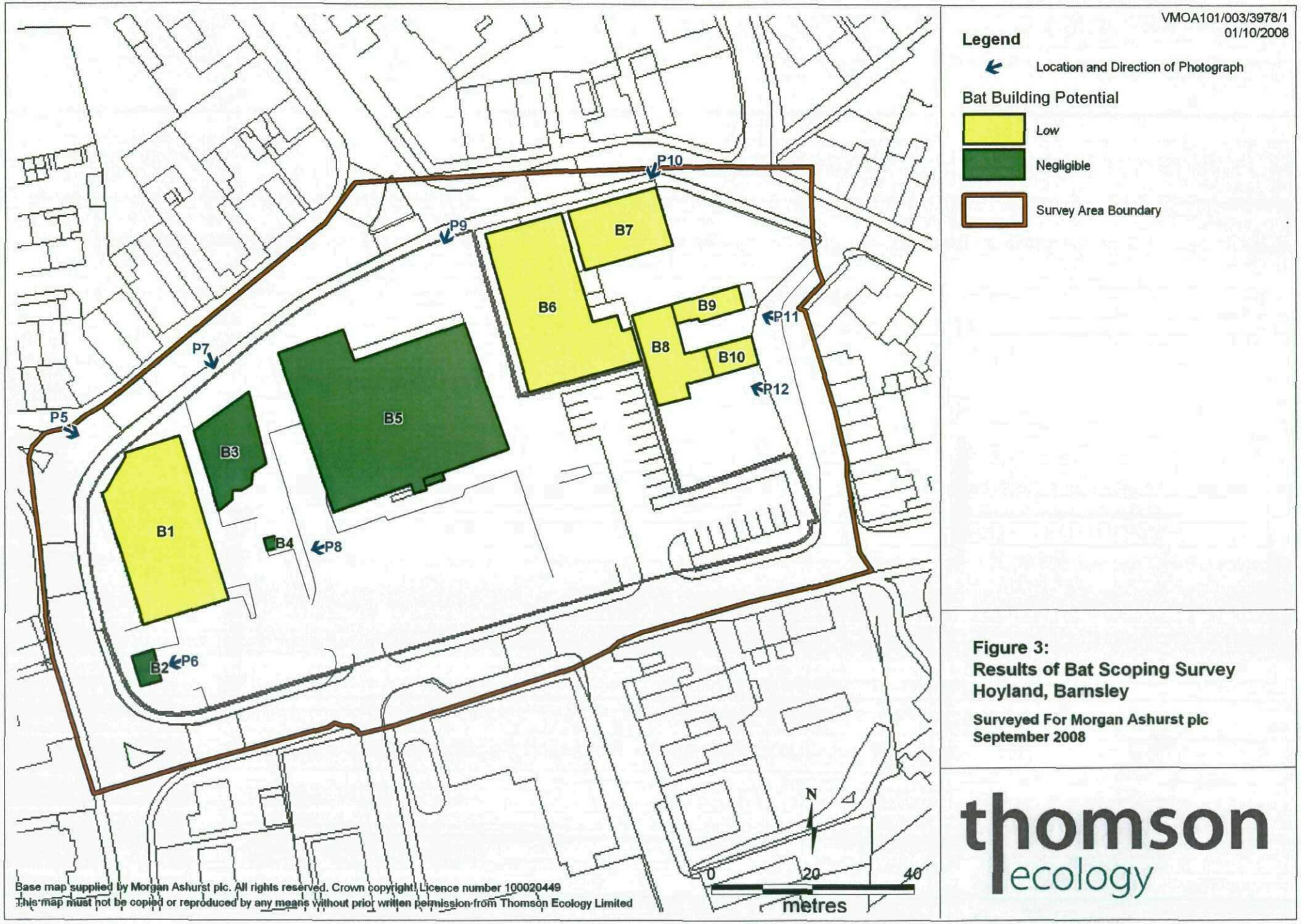
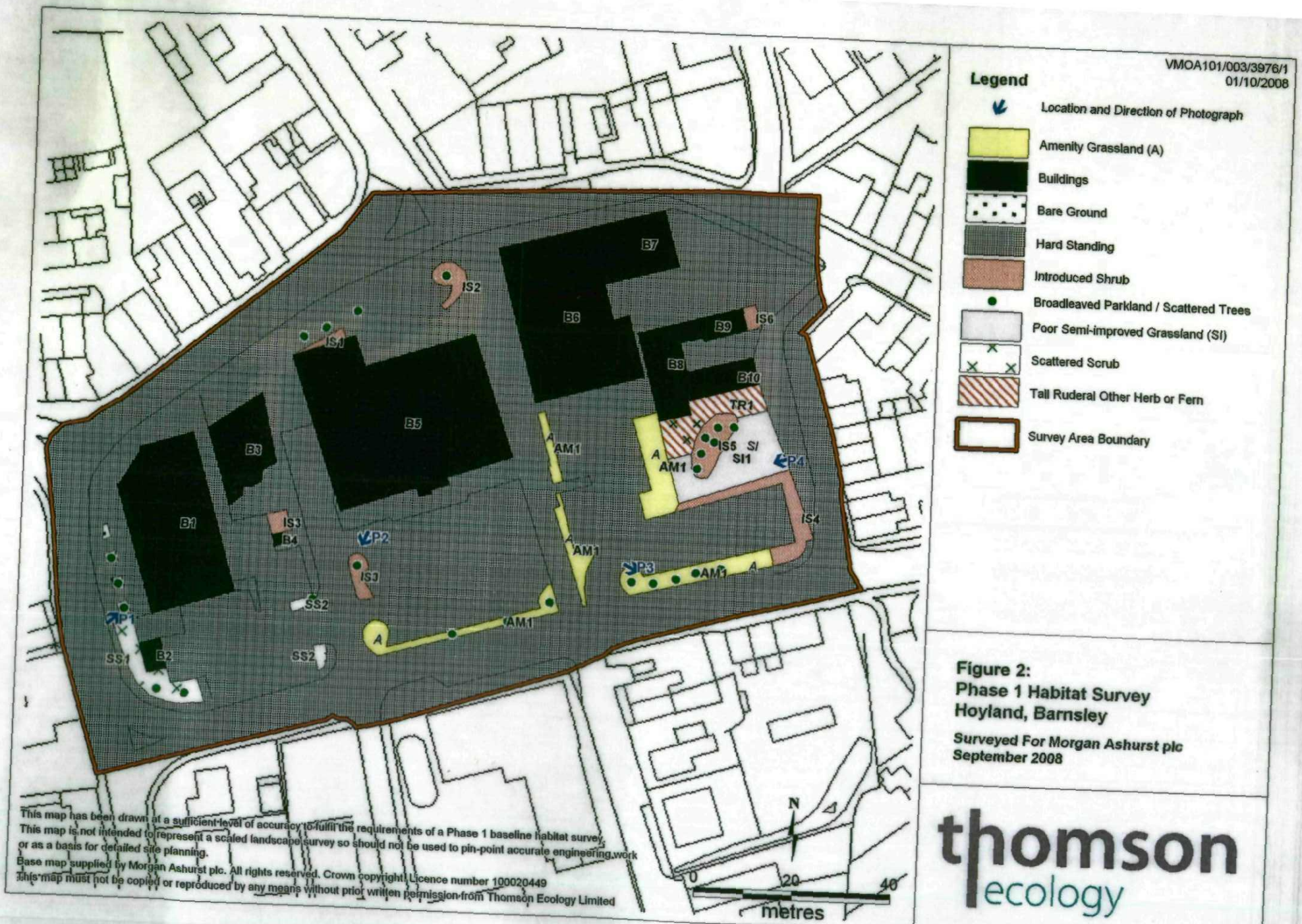


Figure 3:
Results of Bat Scoping Survey
Hoyland, Barnsley

Surveyed For Morgan Ashurst plc
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Legend

- Location and Direction of Photograph
- Amenity Grassland (A)
- Buildings
- Bare Ground
- Hard Standing
- Introduced Shrub
- Broadleaved Parkland / Scattered Trees
- Poor Semi-improved Grassland (SI)
- Scattered Scrub
- Tall Ruderal Other Herb or Fern
- Survey Area Boundary

Figure 2:
Phase 1 Habitat Survey
Hoyland, 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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