MANCHESTER ACADEMIES

PLANTHILL
BLACKLEY, MANCHESTER

ECOLOGICAL ASSESSMENT

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for

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CONTENTS PAGE

1.0 SUMMARY 1
2.0 INTRODUCTION 2
3.0 SITE DESCRIPTION 2
4.0 METHODS 3
Desktop survey 3
Habitat survey 3
Bat assessment 3
Bird survey 4
Japanese knotweed 4
Tree survey 4
5.0 RESULTS 4
Desktop survey 4
Bat assessment 4
Habitat survey 5
Bird observations 6
Other species of concern 6
Wildlife corridors 7
Tree survey 7
6.0 CONCLUSIONS AND IMPLICATIONS 7
Designated and protected sites 7
Habitats 7
Bats 7
Birds 8
Other ecological concerns 8
7.0 RECOMMENDATIONS 9
Habitats 9
Bats 9
Nesting birds 9
Japanese knotweed 10
Trees 10
Opportunities for enhancement 10
BREEAM assessment 11
8.0 REFERENCES AND FURTHER READING 13

DRAWINGS

Drawing 1335.06.002 Location Plan
Drawing D1335.06.001 Phase 1 Habitat Survey
Drawing D1335.06.002 Tree Location Plan

APPENDICES

Appendix A: Ecological and legislative context
Appendix B: British bat ecology and survey techniques
Appendix C: Desktop survey results
Appendix D: Tree survey results
Appendix E: Examples of habitat enhancement measures for bats and birds
Appendix F: Green roofs and green walls

1.0 SUMMARY

1.1 TEP was commissioned by Balfour Beatty to undertake an ecological assessment of the site of the proposed Planthill Academy, Blackley in Greater Manchester. The purpose of the surveys was to provide ecological baseline information to support future development proposals.

1.2 A field survey following Phase 1 Habitat survey methods (JNCC 2003) was carried out by an experienced ecologist, Katrina Hoyle B.Sc. AIEEM, on the 23rd January 2007 and a tree survey was undertaken by experienced arborist Alistair McGregor on 15th January 2007.

1.3 The desktop survey identified no records for protected habitats or species within the proposed residential development.

1.4 The site of Planthill Academy generally provides a low diversity of habitats, with the area comprising predominantly amenity, buildings, areas of hardstanding and scattered trees.

1.5 Some of the buildings on site are considered to have some **potential to support roosting bats**. The trees associated with the site generally lack features of bat roosting potential, however they provide foraging and commuting opportunities for bats and birds. It is recommended that a **bat survey** of buildings with pitched roofs is undertaken prior to finalisation of design to ensure that, should a bat roost(s) be confirmed by survey, appropriate mitigation can be designed into the new site layout prior to a planning application.

1.6 No other concerns regarding ecologically important habitats or protected species were identified.

1.7 It is recommended that the **mature and semi-mature trees** on site be retained and protected during redevelopment of the site wherever possible.

1.8 There are three stands of **Japanese knotweed** (*Fallopia japonica*) (Drawing D1335.06.001) located along the western boundary of the site. This plant will require appropriate treatment and removal.

1.9 There are therefore implications for development with the regard to Japanese knotweed control and removal, this will require the drawing up of a method statement that recommends the best methods for eradication of the Japanese knotweed stands.

1.10 Consideration should be given to creating **wildlife zones** in the site, which, in addition to the perimeters of the site could be designed both for biodiversity and outdoor education (e.g. a nature trail, pond dipping).

1.11 The ecological features of the site can be enhanced through the addition of wildlife friendly and native species and by placing bat and bird boxes on appropriately located buildings and trees. The inclusion of a pond/wetland area and living roofs will also enhance ecological value.

2.0 INTRODUCTION

2.1 TEP was commissioned by Balfour Beatty to undertake an ecological assessment of the site of the proposed Planthill Academy, Blackley in Greater Manchester. The site is centred on NGR SD 853 037 and lies within an area defined, in the north, east and west by residential housing and the south by Plant Hill Road.

2.2 The objectives of this assessment are to identify potential ecological constraints and opportunities at the site to inform the design process and to identify further ecological surveys that would be required to support a future planning application for the new Academy.

2.3 The following preliminary surveys were carried out and are described in this report:

- Desktop survey;
- Preliminary walkover habitat survey and assessment for species of conservation concern;
- Arboricultural Survey to BS5837 (2005): Trees in Relation to Development.

2.4 To identify potential ecological impacts of development proposals, the ecological planning and legislative context affecting the site must be assessed in terms of the following:

- Protected sites (statutory and non-statutory);
- Species of conservation concern, including:
  - Statutorily protected species;
  - UK Biodiversity Action Plan (UKBAP) priority species; and
  - Species and habitats of local concern.
- Locally adopted wildlife strategies and natural area targets.

2.5 This report provides ecological information for the area of the proposed academy, helping to outline potential implications for development and inform recommendations for conserving biodiversity within development proposals for the site.

2.6 A description of the planning and legislative context of the considerations listed above is presented at Appendix A.

3.0 SITE DESCRIPTION

3.1 The site is in Higher Blackley, to the north of Manchester city centre. Its location, illustrated in the Location Plan (Drawing 1335.06.002), is bounded on the south by Plant Hill Road and the north, west and east by residential development.

3.2 The site comprises mostly of amenity grassland. The grassland is separated by a number of areas of hard standing. There is a large area of hard standing in the east part of the site. There are a number of buildings and associated hard standing in the south east part of the site.

3.3 There are three areas of broadleaved plantation throughout the north and east part of the site and numerous scattered broadleaved trees throughout the site. There are a several areas of dense scrub along the north boundary of the site, a large area of dense scrub in the south west part of the site and an area of dense scrub in the south part of the site, which is associated with a species poor hedgerow. There are a number of small areas of tall ruderal in the north east part and south west part of the site.

4.0 METHODS

Desktop survey

4.1 Records for protected species were requested from the Greater Manchester Ecology Unit (GMEU) and the South Lancashire Bat Group.

4.2 A desk based search was also undertaken utilising the following sources:

- MagicMap (Multi-Agency Geographic Information for the Countryside)
- Greater Manchester UDP
- UK Biodiversity Action Plan
- Greater Manchester Biodiversity Action Plan
- Natural England and Nature on the map
- Planning Policy Statement 9 and ODPM circular 06/2005
- The Manchester Plan (adopted 21st July 1995)
- Aerial photograph (Windows Live Local)

Habitat survey

4.3 A field survey following Phase 1 habitat survey methods (JNCC 2003) was carried out by an experienced ecologist, Katrina Hoyle B.Sc. (Hons) AIEEM, on the 23rd January 2007. Note that fieldwork was undertaken outside the optimum period recommended for Phase 1 surveys. However, due to the mildness of the autumn and winter of 2006 it was considered that the available evidence of the site's vegetation was sufficient for findings to be mapped and described in Phase 1 terms.

4.4 All of the accessible open areas, including the exteriors of existing buildings were surveyed and broad habitat types mapped. Target notes were recorded to note further detail of the main zones that comprise the site. Details of the target notes and the plant species recorded within each area are included as Appendix C. Throughout the survey a visual search was made for any signs or likely sites where protected species may be found.

4.5 Weather conditions during the course of the Walkover survey were cold and grey with little wind and no rain.

Bat assessment

4.6 A daytime assessment of the trees and external elevations of the buildings was undertaken during the habitat survey visit in January 2007. Trees and building elevations were viewed from the ground, using binoculars where appropriate.

4.7 Appendix B explains the basic principles of British bat ecology and describes the features of trees and buildings that provide roosting opportunities for bats. Details of field signs and evidence of bat presence in these roost types are also discussed.

Bird survey

4.8 Records of birds seen or heard at the site were noted during the January visit.

Japanese knotweed

4.9 The habitat survey included an inspection for invasive species such as Japanese knotweed. Three infestations of Japanese knotweed were noted during the course of the site survey.

Tree survey

4.10 A tree survey was undertaken by experienced arborist Alistair McGregor on 17th January 2007. Species, height, size and spreads of trees were recorded and tree quality was assessed according to current British Standards BS5837 detailed results are provided in Appendix D.

5.0 RESULTS

Desktop survey

5.1 One designated ecological site was identified within 1km of the proposed Planthill Manchester Academy site. This is the LNR Blackley Forest which covers a large area about 1km to the west of the site. The closest designated area is a Site of Biological Importance (SBI), the non-statutorily designated Flushes near Alconbury Walk which is located directly north of the site at a distance of 1km.

5.2 There were no records of any protected species held by GMEU for this area of inner Manchester.

5.3 South Lancashire Bat Group (SLBG) held 13 bat records for the area within a 2km radius of the site. These consisted of two field records and eleven roost sites for both pipistrelle and soprano pipistrelle. The majority of the records were beyond 1km away from the school grounds with most to the north of the site.

5.4 The nearest sighting of a 45 KHz, or soprano, pipistrelle is 500m away at Crab Lane to the west of the site and was recorded in 2005. There is also a record of a pipistrelle roost off Torcross Road, just less than 1km to the north-west of the site in 1997. Most of the available records are located to the north of the M60 (five pipistrelle roost), only three being located within Higher Blackley, south of the motorway. The remaining four are 2km to the south.

5.5 No records of great crested newts were revealed within 1km of the site. No records of any other protected species, such as badger or water vole were revealed within the 1km search area around the site either.

Bat assessment

5.6 The desktop survey identified 13 records for bat species within 2km. The distribution of bats in the local area is summarised in paragraph 4.2, above. It is possible that bats roosting in nearby residential areas may potentially use parts of the school site for foraging.

Trees

5.7 Overall, the site holds a range of mature, semi-mature and recently planted trees. The bulk of the trees are in the southern and southwestern part of the site, as indicated on the Tree Location Plan D1335.O6.002.

5.8 None of the trees within the site appear to have potential to support roosting bats and possess suitable roosting features. However, the mature and semi-mature trees could provide nesting and foraging habitats for local bird species.

Buildings

5.9 The daytime assessment of the site did not reveal any external evidence of a bat roost on the site. The majority of the buildings at the school are considered to have limited potential for roosting bats. A number of buildings have pitched roofs and therefore have potential to support bats.

Habitat survey

5.10 The habitats on site are illustrated in the Habitat Map (Drawing D1335.06.001)

5.11 The following habitat types are present on site, brief descriptions of the vegetation and the key species present on site are set out below:

- Broad-leaved plantation
- Broad-leaved trees
- Amenity grassland
- Species poor hedgerow
- Dense scrub
- Tall ruderal herbs
- Japanese knotweed
- Hard standing
- Buildings

Broad-leaved plantation

5.12 There are three areas of plantation within the site and an area of plantation that is offsite beyond the north east boundary. The plantation within the amenity grassland in the east part of the site and in the north east part contain a mix of Ash (*Fraxinus excelsior*), Rowan (*Sorbus aucuparia*) European Larch (*Larix decidua*), Silver Birch (*Betula pendula*), Common Alder (*Alnus glutinosa*) and English Oak (*Quercus robur*) some of the species which occur. The under story was lacking due to the dense cover provided by the planting. The third plantation to the very east of the site is a very recent planting consisting of very young specimens.

Broad-leaved trees

5.13 The array of planted trees surviving across the site is described in detail on the tree data spreadsheet attached as Appendix D. Drawing D1335.06.002 shows their layout across the site, demonstrating the linking lines and avenues which are valuable to small birds, mammals and invertebrates. The species mix includes non-natives such as Norway maple and sycamore but there are also natives such as ash and birch.

Amenity grassland

5.14 The mown ryegrass dominated grassed areas form the predominant vegetation type. These swards are species-poor and lack structural diversity and generally have minimal ecological value, though some areas may be used by roosting

gulls and as feeding habitat for urban birds such as starling, blackbird and pied wagtail.

Species poor hedgerow

5.15 A species poor hedgerow passes across the centre of the site along the boundary of the current college building, from the south west to the north east part of the site.

Dense scrub

5.16 There are several areas of scrub around the perimeter of the site, this is scrub which has emerged from residential housing such as overgrown privets and blackthorn suckers, which have begun to invaded the site. The scrub can provide a valuable resource to foraging and nesting birds.

Tall ruderal herbs

5.17 There are several areas of tall ruderal herb stands of willowherb (*Epilobium species),* Dock species (*Rumex* species) and Blackberry (*Rubs fruiticosus)* all are present along the boundary near to the overgrown scrub. There is also ruderal herbs growing amongst the overgrown grass which lies in the east but they do not generally form large enough stands to map as communities

Japanese knotweed

5.18 There are three stands of **Japanese knotweed** (*Fallopia japonica*) that are within the site, they are on the western boundary of the site.

Hard standing

5.19 There is an area of hard standing in the north east part of the site accompanying the existing buildings.

Buildings

5.20 There are a number of buildings within the south east part of the site which form the current Planthill School and College.

Bird observations

5.21 Only two bird species (magpie and blackbird) were noted on site during the site visit of 23rd January 2007, they included:

5.22 A dedicated bird survey would reveal a higher number of species but it is unlikely that anything but the typical range of common urban species would frequent this area.

Other species of concern

Great crested newts

5.23 There are no waterbodies on site therefore there is no breeding habitat to support amphibians. There is potential sheltering habitat associated with the areas of dense scrub.

Badgers

5.24 No signs of badgers using the site or land adjacent to the site were found during the course of the daytime site visit in January 2007.

Water voles

5.25 There is no permanent pond or other waterbody on site, there is therefore no suitable habitat for supporting a water vole population.

Wildlife corridors

5.26 There are some wildlife corridor features associated with this site. The areas of broadleaved trees along the boundaries of the site show some potential for linking with the park land to the south of the site and the dense scrub and the hedgerow in the centre of the site connected by the row of trees along the pathway. Thereby providing a link from the south to the north east part of the site.

Tree survey

5.27 A total of 41 individual trees and 31 groups of trees were identified within and adjacent to the school grounds during the tree survey. Their positions are shown on the Tree Location Plan (Drawing D1335.06.002) and a table showing details of all the specimens is presented at Appendix D.

5.28 There are a number of native and non-native species planted around the school buildings and along parts of the palisades fencing. This is generally middle aged to mature. This tree stock is of varied condition with some having a high retention value, whilst other trees should be removed.

5.29 The boundary of the open land to the south of the school has a wooded belt. These trees are generally mature. A large proportion of these trees are non-native species such as Norway maple, Silver Maple and Horse Chestnut.

5.30 The open land to the west and to the south-west of the school has two areas of young structure planting.

6.0 CONCLUSIONS AND IMPLICATIONS

Designated and protected sites

6.1 The redevelopment proposals, as outlined on the feasibilities sketches, will not create any detrimental impacts upon any site designated for its ecological value.

Habitats

6.2 The site of the Planthill High School generally provides a low diversity of habitats, with the area comprising predominantly amenity grasslands and commercial buildings, areas of hard standing and scattered trees. The most species-diverse area is the area of developing neutral grassland that surrounds the large area of broadleaved plantation in the north east part of the site. At present this area holds little value for mammals, birds or invertebrates.

Bats

6.3 No evidence of bat roosting was observed during daytime survey of the site. The main buildings also have limited potential to support roosting bats. Most of the school buildings were flat roofed and possessed no features that would support bat roosting. Some of the school buildings have pitched roofs. The roof tiles of these building, specifically the ridge tiles, are likely to be the most significant feature in the site in respect of bat roost potential. Weatherboards of all buildings appeared well maintained, presenting very little opportunity for

bat roosting. It is recommended that internal bat survey inspections are undertaken of the buildings with pitched roofs pre-demolition.

Birds

6.4 Bird species noted on site are widespread species typically associated with urban habitats, gardens and woodland edges. The presence of house sparrow which is red-listed species in the national list of birds of conservation concern, on site contributes ecological value to the bird habitats on and around the site.

6.5 The trees and shrub planting on site provide some nesting and foraging opportunities for local bird populations.

6.6 Virtually all UK wild birds are protected at the nest under the *Wildlife and Countryside Act 1981 as amended*, which makes it an offence (in addition to possession, control and sale offences) to kill, injure or take any wild bird; take, damage or destroy the nest of any wild bird while it is in use or being built; and take or destroy the egg of any wild bird. Best practice interprets this legislation such that UK wild birds receive protection from the point of constructing a nest to fledging the young birds and vacating the nest. Generally this period is considered to last from March to August inclusive, although there is variation between species and latitude. There is no derogation from this legislation by means of a licence for the purpose of disturbing nesting UK wild birds in the course of a development.

Other ecological concerns

6.7 No great crested newt records were revealed within 1km of the school. There are no waterbodies on site, therefore there is no breeding habitat to support amphibians. The areas of dense scrub within the site provide limited potential as sheltering habitat for amphibians. This site is isolated from surrounding habitats by Plant Hill Road to the south and by residential areas to the north, east and west. There are therefore no statutory obligations in respect of amphibian species.

6.8 No other concerns regarding threats to ecologically important habitats or species were identified. No evidence of badgers or water voles was identified and the habitats across the site are unsuitable for supporting these species.

6.9 **Japanese knotweed** was observed in three small areas on the western edge of the site. Japanese knotweed is classed as an invasive weed under the *Wildlife and Countryside Act 1981* (as amended). Any waste containing Japanese knotweed is classed as controlled waste under the *Environmental Protection Act (Duty of Care) Regulations 1991*, which requires all producers, carriers and disposers of waste to follow a code of practice and keep records. Under provisions made within the *Wildlife and Countryside Act 1981*, it is an offence to spread Japanese knotweed. Liability may also extend in situations where a landowner has knowingly permitted the spread of the plant onto neighbouring land. There are therefore implications for development with the regard to Japanese knotweed control and removal.

6.10 Failure to manage and dispose of Japanese knotweed in accordance with current guidelines can lead to prosecution. Due to the persistent and invasive nature of the plant, failure to manage Japanese knotweed on a development site may also result in future structural damage, especially to tarmac surfaces.

6.11 Given its legal status and the potential for damage this plant demonstrates, the infestation of Japanese knotweed on site requires eradication.

7.0 RECOMMENDATIONS

Habitats

7.1 The habitat with the greatest ecological value within the site, which should be retained, protected and, where possible, enhanced is the tree resource. Tree retention and protection measures are discussed below.

7.2 The planting of a hedgerow or hedgerows along the north boundary of the site would provide a continuous corridor linking with the areas of dense scrub and plantation in the northern part of the site.

7.3 Consideration should be given to creating wildlife zones in areas of low intensity use (i.e. outside the footprints of buildings, hardstanding and sports pitches/play areas). These areas and the perimeters of the site could be designed not only to enhance biodiversity but also for outdoor education (e.g. a nature trail, pond dipping), which could contribute towards credits for a future BREEAM assessment (discussed further in paragraphs below).

Bats

7.4 The main school buildings have potential to support roosting bats. There are a number of school buildings with pitched roofs where internal bat surveys would be required pre-demolition.

7.5 The rest of the school buildings have only limited potential to support roosting bats. However, due to the dynamic roosting nature of bats, best practice precautionary measures are recommended. Select features of the buildings should be removed sensitively (ideally by hand) before the main destructive works commence. Wooden facias should be removed with care, as should roofing felt where it overlaps the eaves. Roof tiles, particularly ridge tiles, should also be removed if possible. In the unlikely event that a bat is uncovered during these activities, works should cease immediately in that area and advice sought from a licensed bat specialist.

7.6 Tree and hedgerow removal should be avoided wherever possible to maintain existing commuting routes and foraging habitats within and across the site. Other opportunities for enhancing the new academy landscape are discussed below but should include the addition, or incorporation, of items shown in Appendix F. A sensitive lighting scheme should be adopted which avoids, or at least minimises, the extent of light spillage on tree canopies, shrub planting and hedgerows (including those which are newly planted).

Nesting birds

7.7 Any tree felling, surgery works (e.g. removal of dead wood for health and safety reasons) or clearance of shrub-beds should avoid the bird nesting season (March – August inclusive). If this is not possible, then trees should be reassessed for the presence of nesting birds prior to any tree works commencing. Similarly when buildings are to be demolished checks should be made for nesting birds prior to demolition, if this is to be carried out within the nesting season. Both starling and house sparrow typically nest in houses where they can gain access around the eaves.

Japanese knotweed

7.8 A plan for the treatment and removal of the Japanese knotweed should be drawn up and implemented.

Trees

7.9 An arboricultural implications assessment should be undertaken when detailed development proposals are available. Retention and protection measures should then be identified and implemented prior to development commencing. All future tree survey and protection measures should be in accordance with British Standards.

7.10 There is an opportunity to increase the stock of trees on site with the future landscaping. It is recommended that further tree-planting take place, with the emphasis on providing locally native species planted in lines and groups to maximise their value for bat commuting and to strengthen the wildlife corridors through the site. Opportunities for enhancement are discussed further in paragraphs below.

Opportunities for enhancement

7.11 Trees to be retained within the new academy landscape should, where appropriate, be provided with at least 0.5m radius buffer from mowing around the base of the trunk. Under groups of trees larger unmown areas should be established, with the opportunity taken in the future to introduce native woodland groundflora species that are tolerant of shady conditions once an overall canopy has become established.

7.12 Grass areas that are left to flower and seed provide enhanced foraging opportunities for bird and invertebrate species, as well as providing more shelter and habitat than uniform short-mown swards. Any areas of grass in full light that are left unmown should be cut at least once, late in the year, with all mowings collected and removed from site for composting.

7.13 Any proposed sports pitches and surrounding grassed areas constitute a greenspace with potential for being linked by minor wildlife corridors to surrounding areas. There is opportunity to create and enhance existing weak corridors by infilling between existing trees and clumps with new tree planting and creation of areas of longer grass/herb swards and native shrub planting. Consideration could be given to planting new hedgerows, with native trees, along the northern, western and southern boundaries, as well as internal hedgerows across the site to help strengthen wildlife corridors through the greenspace. Native species appropriate to the local area should be used in any new hedgerow; for example holly, blackthorn, hawthorn, hazel, dog rose, grey willow and elder. Use of at least five different species would create intrinsic diversity and variety within the basic hedge structure, supplemented by locally native trees; also climbers such as honeysuckle, ivy and bramble should be considered.

7.14 Areas of grassland which are not used frequently for formal activities hold potential for enhancement for wildlife by changes in management; introducing a differential mowing regime for example. The grass sward in selected areas of the greenspace could be left to establish during the summer months by less frequent cutting (mid-late July) and/or cutting to a higher sward height. Removal of the cuttings after mowing would prevent further enrichment of the

soil and enhance conditions for planting "plugs", or sowing seeds, of locally native wildflower species.

7.15 Creation of permanent water and/or wetland areas would increase the biodiversity of the greenspace and provide a focal point, or points. Other potential enhancement measures include the provision of wildlife refuge features such as log piles, insect houses and bird nest boxes. As well as nesting boxes, incorporation of breeding ledges or fixing of artificial nests to new buildings, to attract swallows, house martins and swifts is also recommended. Examples of suitable items for these species, and also titmice, bats *et cetera*, are included in Appendix F.

7.16 The wildlife value of buildings can be greatly enhanced by constructing living roofs and/or by installing areas of green walls. These elements need not encompass the whole of a building or complex, but could be incorporated in part. Some outlines of options for their construction, along with a summary of their wildlife value (in addition to more general environmental value) are found in Appendix G. Further information may also be found in English Nature Research Report 468, which reports on the use of green roofs for conserving biodiversity in urban areas.

BREEAM assessment

7.17 The Planthill Academy will be assessed under the Building Research Establishment Environmental Assessment Method for Schools and should achieve at least a “Very Good” rating. Early consideration of the requirements for the BREEAM assessment is recommended, as some of the credits can only be awarded if specific actions are implemented early in the design phase. According to the BREEAM guidelines, credits can be awarded for Landuse and Ecology as follows:

- Land reuse – one credit can be awarded where at least 75% of the overall site has been previously built on or used for industrial purposes in the last 50 years. Details of previous land use (maps, reports, site photographs etc) are required to achieve this credit. In addition plans must be assessed to ensure there is no change between the design and as-built building footprint.
- Use of contaminated land – one credit can be awarded where land prior to development is defined as contaminated and where remedial steps have been taken to decontaminate the land. To achieve this credit the design team must provide documentary evidence that the land was contaminated and remedial steps were taken to decontaminate the site.
- Consultation with students and staff – one credit can awarded where the design team consults both students and staff of the school to determine the educational and social needs for the grounds and their ideas for the school grounds design AND where the design team agrees to keep staff and students informed of how there ideas are built into the design. At least two workshops should be implemented during the consultation with the staff and two with students of different ages. A workshop schedule, a framework for each workshop and a summary of key outcomes from the workshops are required to achieve this credit.

- Land of low ecological value – one credit can be awarded where the land has been defined as of low ecological value. This assessment is affected by the presence of ecological features such as trees, watercourses, hedgerows, wetlands etc.
- Local wildlife partnerships - one credit can be awarded where the design team set up partnership with a local group(s) with wildlife expertise (e.g. the local Wildlife Trust or local specialist wildlife group such as mammal groups or amphibian groups). The partnership should be established with the aim that the wildlife group will provide advice at the design stage and support and advice for the school to manage the grounds in the long-term. To achieve this credit, the design team must provide details on the partnership (e.g. letter from the wildlife group agreeing objectives and framework) and the wildlife group (location, membership, expertise etc). Confirmation is also required that the partnership has been maintained during the construction phase (site records, correspondence, meeting minutes, reports etc).
- Ecological enhancement – one credit can be awarded where the design team (or client) has sought and acted upon advice on enhancing a site's ecological value provided by an ecological consultant (as defined by BREEAM). It is recommended that the possibility of installing green roofs and green walls should be considered, along with other recommendations made above. To achieve this credit a copy of the ecological report(s) and written commitment that the report recommendations will be implemented is required.
- Change in ecological value – up to five credits can be awarded in this category where the ecological value of the site is not substantially harmed OR is enhanced beyond its previously existing state. The credits are awarded based upon the number of native species present on site prior to development and the number of native and wildlife-friendly species present after development. The full five credits can be only awarded if the change in ecological value is reflected by an increase of greater than nine plant species from the original number of species. Details on the types and areas of land use present on site prior to development and the types and areas of land use after development are required in order to assess and award these credits.
- Protection of ecological features – one credit can be awarded where the contract specification ensures that all trees over a 100mm trunk diameter, hedges, ponds streams etc are maintained and adequately protected from damage during clearing and construction works. The design team must confirm that no changes occur following the Design and Procurement assessment and the contractor must confirm by site survey pre and post construction and progress photographs that key features were protected during the works.
- Long term impact on biodiversity – one credit can be awarded where steps are taken to prevent adverse impacts on biodiversity as set out in by the BREEAM Schools assessment criteria. Mandatory requirements include written confirmation that all UK and EU legislation relating to the protection and enhancement of ecology is adhered to and a five year working management plan is produced and provided to a school working group comprising staff and students. Additional requirements are also defined for this assessment, depending on the nature of the site.

7.19 Further advice and guidance on the criteria and assessment requirements can be found in the BREEAM for Schools Training Manual © Buildings Research Establishment Ltd Department for education and skills.

8.0 REFERENCES AND FURTHER READING

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APPENDIX A
Ecological and legislative context

ECOLOGICAL PLANNING AND LEGISLATIVE CONTEXT

A1.0 GENERAL

A1.1 This is a brief summary of the ecological planning and legislative context generally applying to England. It is not a comprehensive view and does not purport to advise in relation to any specific site, species or habitat. Specific advice is provided by TEP in the main body of the report.

A1.2 Sites, species or habitats may be protected or highlighted by six broad categories of instrument:

- Statutory Instruments
- National Planning Policy Guidance
- County, District and Unitary Development Plans
- The UK Biodiversity Action Plan
- Local Biodiversity Action Plans, locally adopted Wildlife Strategies and the Natural Area profile for the area
- Other lists of species of conservation concern

A2.0 STATUTORY INSTRUMENTS

A2.1 Statutory protection is afforded to wildlife sites and to particular species by EU Directives, various international conventions to which the UK is signatory and various Acts and Regulations of Parliament, principally the *Wildlife and Countryside Act, 1981 as amended* **(WCA)**. Other relevant legislation includes the *Conservation (Habitats &c) Regulations, 1995* (usually known as the *Habitats Regulations*). These Regulations translate the EU Habitats Directive into British Law, by requiring particular protection for 'European' species and for 'European' sites of nature conservation value.

Statutory wildlife sites

A2.2 In the UK there are many designations for giving protection to sites of national or international importance. The most commonly-encountered designations are summarised below:

- ***Special Area of Conservation (SAC):*** An area of land or water of international (European) conservation importance as designated by European Member States under the EU Habitats Directive (Directive 92/43/EC). In the UK, all SACs will also be designated as Sites of Special Scientific Interest (SSSI).
- ***Special Protection Area (SPA):*** A site of international (European) conservation importance for birdlife as designated by European Member States under the Birds Directive (Directive 79/409/EC). In the UK, all SPAs will also be designated as SSSIs.
- ***Ramsar site:*** A wetland of recognised international importance designated under the Ramsar Convention 1971. In the UK, all Ramsar sites will also be designated as SSSIs.
- ***National Nature Reserve (NNR):*** A nationally important nature reserve designated by English Nature under the WCA and managed by either English Nature or an approved body. NNRs will usually be designated as SSSIs.
- ***Local Nature Reserve (LNR):*** A nature reserve on public land, established by a Local Authority under s21 of the *National Parks and Access to the Countryside Act, 1949*.

LNRs may or may not be Sites of Special Scientific Interest.

- ***Site of Special Scientific Interest (SSSI):*** An area of land or water notified by English Nature under the WCA or the *National Parks and Access to the Countryside Act, 1949* as being of special nature conservation interest for its plant or animal communities, geological or landform features.

Statutorily protected species and their habitats

A2.3 In most cases relevant to planning applications, protected species are those listed in Schedule 1, 5 and 8 of the WCA (as amended), in the *Protection of Badgers Act, 1992* (PBA) and in the *Conservation (Natural Habitats &c) Regulations, 1994*. The extent of legal protection varies between species, and the protocols for development which affects such species also varies.

A2.4 It is particularly important to obtain site-specific advice before formulating an action plan when considering development affecting protected species. The following paragraphs are outlines of legal protection afforded to some of the species most frequently encountered.

A2.5 It must also be remembered that many protected species can range widely, and their presence outside the proposed development must always be considered. Many planning applications have failed because inadequate consideration was given to the terrestrial habitats of amphibians present some distance from the proposed development.

A2.6 **European protected species** include **great crested newts** and native species of British **bat**. The full list of European species is in the Habitats Regulations, 1994. The extent of legal protection covers both the species and its habitat. Any development proposal that would impact on either species or habitat is required to provide for conservation of the species and its habitat under licence from Natural England.

A2.7 Natural England require Local Planning Authorities to consider the impact of the proposed development on the European species and their habitat, the need for development and consideration of possible alternative development proposals before determining planning applications that could affect European protected species.

A2.8 Natural England will also expect detailed surveys to have been carried out before granting any licences for handling the species or affecting the habitat when development is proposed.

A2.9 The conservation scheme necessary to enable any development project will depend on the size of the newt population, the locality and the impact of the proposed development. Usually an extended period of alternative habitat creation, trapping and movement of the animals is required, followed by a period of site management and monitoring.

A2.10 **Schedule 1** of the WCA lists a number of **birds** for which it is illegal to disturb or destroy the birds or nests, except by licence from English Nature. Some Schedule 1 species are relatively common (kingfishers), most are rare.

A2.11 The WCA also makes it illegal to disturb the nests of **most British birds** while at the nest. Some agricultural vermin species are excluded. There is a legal defence if the nest-destruction is the incidental result of a lawful action which could not have reasonably have been avoided. Legal advice may be needed to determine if a proposed nest destruction is lawful. In some cases it will be, in other cases it may not be.

A2.12 **Schedule 5** of the WCA lists animals which are protected. The degree of protection varies. **Water voles** receive no protection of the animal, but the habitat is protected. Site-specific licences are not required for habitat destruction. However, as the habitat is inevitably a watercourse, Environment Agency consent will be required for culverting or drainage. EA will usually consult English Nature who will object unless satisfactory habitat mitigation is provided.

A2.13 **Reptiles** are all protected. The commoner species are protected only from unlawful killing. In practice this requires a reptile protection scheme before implementing a planning permission. No specific licence is required. The rarer reptiles require a protection and conservation scheme, and English Nature may not grant such licences unless they are assured that protection and conservation is guaranteed.

A2.14 **Badgers** receive protection under the PBA. In terms of development, this means that any scheme which involves the destruction of a recently-active sett (even if an outlier) requires a licence from English Nature. English Nature will require adequate protection of the animals, which means that alternative provision is needed and disturbance will not be permitted in the hibernation or early spring period when badgers are gestating or have dependent young. English Nature will tend to object to loss of a main sett.

A2.15 **Schedule 8** of the WCA lists **plants** which are statutorily-protected. In relation to development, these plants do tend to be very rare and not frequently encountered. The **bluebell** is scheduled, but this prohibits commercial bulb-picking from the wild rather than to prohibit development.

A2.16 There is also a category of **plants** which it is an offence to introduce to the wild. These include **Japanese knotweed,** which is frequently encountered on brownfield sites. Care is needed to avoid spreading the species around the site during earthworks, and to ensure that any removal of infested soils off-site is to a licensed tip. **Giant hogweed** is also listed in this category of invasive alien plant species**.**

A3.0 NATIONAL PLANNING POLICY GUIDANCE

A3.1 National Planning Guidance is issued in the form of Planning Policy Guidance Notes (PPGs) and Planning Policy Statements (PPSs). These are issued on a topic basis. The most relevant is PPS9 Biodiversity and Geological Conservation (2005), but PPS12 (2004) Local Development Frameworks and PPG13 (2001) Transport also refer to nature conservation interests and consideration for nature conservation and biodiversity in the planning process.

A3.2 The thrust of guidance in PPS9 is aimed at Regional Planning Bodies and Local Planning Authorities who must consider nature conservation impacts in planning policy and decision.

A3.3 The presence of a statutorily protected species is a material consideration when a planning authority is considering a development proposal that, if carried our, would likely result in the harm to the species of its habitat. PPS9 reiterates the requirement to comply with legislation in respect of such statutorily protected species.

A3.4 Government Circular ODPM06/2005 states that the effects of development upon UK or local BAP species may be a material consideration in the making of planning decisions. PPS9 introduces an obligation on local authorities to further the conservation of habitats and species of principle importance for nature conservation, which do not receive statutory protection, through their planning function.

A3.5 PPS9 also introduces an obligation for local authorities to seek maximised opportunities for building in biodiversity or geological features as part of good design. Where significant harm to biodiversity and geological interests cannot be prevented, local authorities should seek adequate mitigation and/or compensation measures, or else planning permission should be refused.

A4.0 COUNTY, DISTRICT AND UNITARY DEVELOPMENT PLANS

A4.1 PPG12 (2001) Development Plans has been replaced by PPS12 (2004) Local Development Frameworks. However, PPG12 will remain in operation for development plans still being prepared under the 1999 Development Plan Regulations

A4.2 Local, Structure and Unitary Development Plans (to be replaced by Local Development Plan Documents under the Planning and Compulsory Purchase Act 2004) will provide protection, both to sites and to certain species. The degree of protection varies according to different types of site, or different species. Policies will always be very heavily weighted against development which might affect **statutory wildlife sites** (see section 2 above).

A4.3 The development plan will allow for the designation and policy protection of **non-statutory wildlife sites**, (sometimes generically called second-tier sites, to distinguish them from statutory sites). These sites go under a variety of names such as. Site of Biological Importance (SBI), Site of Importance for Nature Conservation (SINC), Biological Heritage Site (BHS) etc. Often geological sites are grouped with ecological sites, for example Regionally Important Geological/Geomorphological Sites (RIGS), Geological Heritage Sites (GHS).

A4.4 Non-statutory sites are usually identified by a fairly rigorous system of criteria which are themselves usually adopted as supplementary planning guidance.

A4.5 Adopted development plans often provide protection for '**Wildlife Corridors**' or **'Greenways'**, which are identified on plan.

A4.6 The extent of protection to non-statutory sites is usually not absolute, but even where the importance of development is considered to outweigh ecological interests, a mitigation strategy is usually required as a condition of a planning consent.

A5.0 THE UK BIODIVERSITY ACTION PLAN

A5.1 The publication of the **UK Biodiversity Action Plan** (UKBAP) is in response to Article 6 of the Rio Biodiversity Convention, to develop national strategies for the conservation of biological diversity and the sustainable use of biological resources. The UKBAP contains action plans for over 200 '**UK Priority**' species and 30 '**UK Key Habitats**', considered to be of national importance for nature conservation.

A5.2 'UK Priority Species' are defined in the 'UK Biodiversity Group Tranche 2 Action Plans' (HMSO, 1998) as either globally threatened or rapidly declining in the UK, i.e. by more than 50% in the last 25 years. Some of the UK Priority species are statutorily protected, while others receive partial or no protection.

A5.3 The listing of a species or habitat in the UKBAP does not *per se* provide it with any statutory or planning policy protection. However, under obligations introduced by PPS9, it is likely that many planning authorities will begin to introduce policies that provide protection to UKBAP species and habitats. Many non-statutory wildlife sites are already selected by reference to populations of UKBAP species and habitats.

A5.4 UKBAP species and habitats are often cited by objectors to planning applications. The species most commonly encountered in relation to development are as follows:

- Mammals – water vole*, bats*, brown hare, badgers*
- Birds – skylark, linnet, reed bunting, grey partridge
- Amphibians – great crested newts*

**species marked by asterisk are also statutorily protected.*

A6.0 LOCAL BIODIVERSITY ACTION PLANS AND ECOLOGICAL STRATEGIES

A6.1 Many districts, counties or metropolitan areas have **adopted nature conservation strategies** that tend to set out general principles of attention to nature conservation. Most of these date from the early to mid 1990s.

A6.2 More recently, counties have prepared **Local Biodiversity Action Plans** (LBAP), in conjunction with partners such as the Wildlife Trust. These LBAPs highlight species and habitat types which are either of national concern (UKBAP species and habitats) or are endemic to the county and of local concern. LBAPs will be prepared for these species and habitats. As with the UKBAP, listing of a habitat type, a site or a species in a LBAP does not confer any new statutory or planning policy protection. However, impacts upon sites, habitats or species prioritised in LBAPs may be a material consideration in a planning application.

A6.3 On a broader level, English Nature has mapped the country into a number of discrete Natural Areas. Each Natural Area has a distinct ecological identity, e.g.

the 'Cheshire Meres and Mosses' is characterised by waterbodies in peat or boulder clay. Conservation priorities are set in terms of retaining and enhancing waterbody and field hedgerow connections. By comparison, the 'Sefton Coast' Natural Area highlights the unique sand dune and mudflat systems, with conservation priorities being set accordingly.

A6.4 Natural Areas have no legislative power, and for many developments, they are described in too broad a scale to have site-specific value. Nevertheless they give an indication of which habitats are particularly valued locally.

A7.0 OTHER LISTS OF SPECIES OF CONSERVATION CONCERN

A7.1 In addition to the lists referred to above, there are other lists made of national abundance of groups of fauna, particularly the less well-documented groups. These lists do not themselves confer any statutory protection, but may often be used in Environmental Impact Assessment to establish whether or not a proposed development will have a significant impact.

A7.2 In the case of **invertebrates**, few species are statutorily protected or listed in the UK Biodiversity Action Plan, but many are thought to be rare or vulnerable. Such species are known as **Red Data Book (RDB)** species and there are various grades of ecological sensitivity, e.g. Rare/Vulnerable species, Nationally Notable (A), Nationally Notable (B) and Nationally Scarce. These gradings are based on frequency of occurrence of species in $10km^2$ squares across the country e.g. Nationally Notable species occur in less than 300 $10km^2$ squares in the UK.

A7.3 In the case of **birds**, there are various 'species of conservation concern' **(SPoCC),** known informally amongst ornithologists, but not protected or listed in the UKBAP e.g. the lapwing has undergone substantial decline in numbers, particularly on farmland.

A7.4 Such RDB/SPoCC species are often listed in LBAPs (see Section 6, above).

APPENDIX B
British bat ecology and survey techniques

BRITISH BAT ECOLOGY AND SURVEY TECHNIQUES

B1.0 BATS IN BRITAIN

B1.1 There are 16 species of bat occurring in Britain, one of which is possibly now extinct. These species all belong to one of two families – horseshoe bats or vesper (evening) bats.

B1.2 As recently as the 1950's bats in Britain were numerous to the point that colonies of thousands of bats could be seen. Today, colonies of such numbers are extremely rare.

B1.3 The greater horseshoe bat has declined by 99% in Britain, and other species have suffered similar declines.

B1.4 Bats are highly specialised animals, being the only mammal with the ability of true flight. They are nocturnal and, in Britain, they are all insectivorous. Bats have evolved to use a specialised echolocation system by which to navigate and catch insects, even in complete darkness.

B1.5 Bats need a variety of roosts throughout the year in which to breed, hibernate and give birth.

B1.6 Six different categories of bat roost have been described (Hutson, 1993):

- Spring gathering roosts
- Maternity roosts
- Mating roosts
- Night roosts and feeding roosts
- Prehibernal roosts
- Hibernation roosts

B1.7 It is uncommon for bats to use the same roost throughout the year as they require different conditions for breeding and hibernating. Some bats can fly long distances between suitable sites, which can be remotely located. There are three main types of roost:

- Buildings: most important in the summer, but some are used throughout the year.
- Caves / mines / underground structures: most important for winter hibernation because they give stable, cold conditions.
- Trees: used throughout the year.

B1.8 Each species of bat prefers its own type of roost. Some almost always use one type of roost, while others switch between roosts during the year. Once a roosting site is established, bats are quite faithful to it and return regularly.

B2.0 BATS IN TREES

B2.1 Trees (especially native ones such as Oak, Beech, Ash and Scots Pine) and hedgerows play host to swarms of insects, which forms the primary prey item for UK bats.

B2.2 Trees also provide bats with a place to roost or rest, give birth, raise young, form groups and hibernate in natural holes, crevices and sheltered places. Such features are traditionally associated with mature trees.

B2.3 The availability of suitable holes may limit the number of these species.

B2.4 Identification of tree roosts is an area with a poor record of success. Typical sites may be old woodpecker holes, cavities and cracks in trees, crevices behind peeling-off bark, woodpiles and behind ivy or dense epicormic growth.

B2.5 Over a period in time bats will use a number of trees to optimise roosting conditions. External disturbances, an internal build up of parasites or distance from feeding area can influence the choice of tree.

B2.6 Bats also use trees, lines of trees and hedges to navigate at night. Loss or damage to such features affects the ability of bats to commute safely and economically between roosts and feeding sites. A gap in a hedge as little as 10 metres may force some bats to seek an alternative route or to change roosts.

B2.7 Bats in tree roosts may offer little or no evidence of their occupation, especially when in hibernation. Signs to look for include:

- Obvious holes, cavities and splits
- Dark staining on the tree below a hole
- Staining around a hole caused by the natural oils in bats' fur
- A maze of tiny scratch marks around the hole made by bats' claws
- Droppings below a hole – they look similar to those for rodents, but crumble to a powder of insect fragments
- Noise (squeaking or chittering) coming from a hole, especially on a hot day or at dusk
- On closer inspection a hole may contain droppings or smell of bats

B2.8 All UK bat species are dependent to some extent on trees. This dependency varies with species, season, roosting behaviour and foraging behaviour.

B2.9 Some bat species, such as noctule (*Nyctalus noctula*), Bechstein's bat (*Myotis bechsteinii*) and barbastelle (*Barbastella barbastellus*) rely almost exclusively on trees for roost sites throughout the year. A number of other species may use tree roosts for only a part of the year, including pipistrelles (*Pipistrellus* spp.) and brown long-eared bats (*Plecotus auritus*).

B3.0 BATS IN BUILDINGS

B3.1 Buildings also provide bats with a variety of places in which they can roost e.g.:

- External hanging tiles or weather boarding
- Cavity spaces
- Cracks in bricks/mortar
- At top of solid walls
- In eaves, behind fascia and barge boarding
- Beneath underfelt, tiles or slates
- Around timber joints, gable end or around chimneybreast.

B3.2 The most common time of year in which bats utilise buildings is between May and August, when the pregnant females gather in maternity roosts to give birth and raise their young.

B3.3 Females and young often remain in a favoured roost for the duration of summer or move about using several roosts.

B3.4 Most summer colonies will have dispersed by the autumn, though brown long-eared bats often appear early in the year (early April) and leave later (October or later). These bats will also occasionally roost in a single building throughout the entire year.

B3.5 Buildings may also be used as temporary or "transitional roosts" by small numbers of adult and immature bats of both sexes, particularly in spring and autumn.

B3.6 Many outbuildings are attractive to bats for temporary nighttime roosts or as sheltered feeding perches. The latter are generally indicated by the presence of a lot of insect remains, particularly of moths or large beetles and some droppings.

B3.7 Cool, undisturbed, humid places are important as hibernation sites. Most species will tuck themselves into small crevices e.g. between bricks/stonework, and can easily pass the winter there unnoticed.

B3.8 Bats are usually concealed in crevices, behind roofing felt, in cavity walls, in old timber joints or under ridge tiles and are only occasionally seen out in the open in lofts. Consequently, the key identification feature is the presence of droppings. Sometimes only a small scattering of droppings may be obvious, on other occasions the accumulation of droppings into piles beneath ridge-boards and around chimneys or gable ends is also typical of bats.

B3.9 Bats are sometimes drawn to open water tanks in lofts in search of a drink. They fall into the tank, can't get out and eventually drown. Dead bats are often found in these 'open' tanks in roof spaces where bats habituate.

B3.10 Characteristic odour will also provide evidence to the presence of bats. A polished or clean surface near a place where light enters may also indicate habitual usage by bats. Bats may sometimes be heard "chittering", but this is usually in warm summer weather or when they are about to leave the roost to forage at dusk.

B3.11 The species most commonly occurring in buildings (usually modern houses) are two pipistrelle species (*Pipistrellus pipistrellus* and *P.pygmaeus*), the former is the most common species local to the site, the latter generally less so.

B3.12 These highly gregarious small bats use roofs for breeding during the summer and, in general, the bats disperse during the autumn. The most likely place to find droppings in the roof void are at the gable end wall and along the eaves. In some cases, the bats may roost beneath ridge tiles, on top of the ridge beam or under insulation close to the eaves.

B3.13 The brown long-eared bat (*Plecotus auritus*) is the second most common species in Britain but is the one most likely to be encountered in roof voids. It may occasionally be seen clinging on to timbers near the apex of the roof. Like the pipistrelle, highest numbers may be seen on hot days between June and September when breeding colonies may be present. During the autumn and in cool weather, bats remain concealed in crevices or hollow walls but may appear on mild days or if disturbed.

B3.14 Brown long-eared bats tend to fly around in the open roof void and hang from the ridge during the night, so droppings are usually found scattered over the floor or concentrated in piles beneath favoured roosting areas, typically beneath the ridge beam. In hipped roofs, piles of droppings may also be found in the junction between two hips.

B3.15 A number of other species are more frequently recorded roosting in buildings than other types of roost site. These include Brandt's bat (*Myotis brandtii*), whiskered bat (*Myotis mystacinus*), Natterer's bat (*Myotis nattereri*), Leisler's bat (*Nyctalus leisleri*), serotine (*Eptesicus serotinus*) and the two horseshoe species (*Rhinolophus ferrumequinum* and *R.hipposideros*). Some of these species are relatively widespread while others are restricted and/or rare.

APPENDIX C
Desktop survey results

GREATER MANCHESTER ECOLOGY UNIT
ECOLOGICAL SEARCH - PLANTHILL SCHOOL
SCALE 1:10000 - MAP 4

1KM BUFFER ZONE

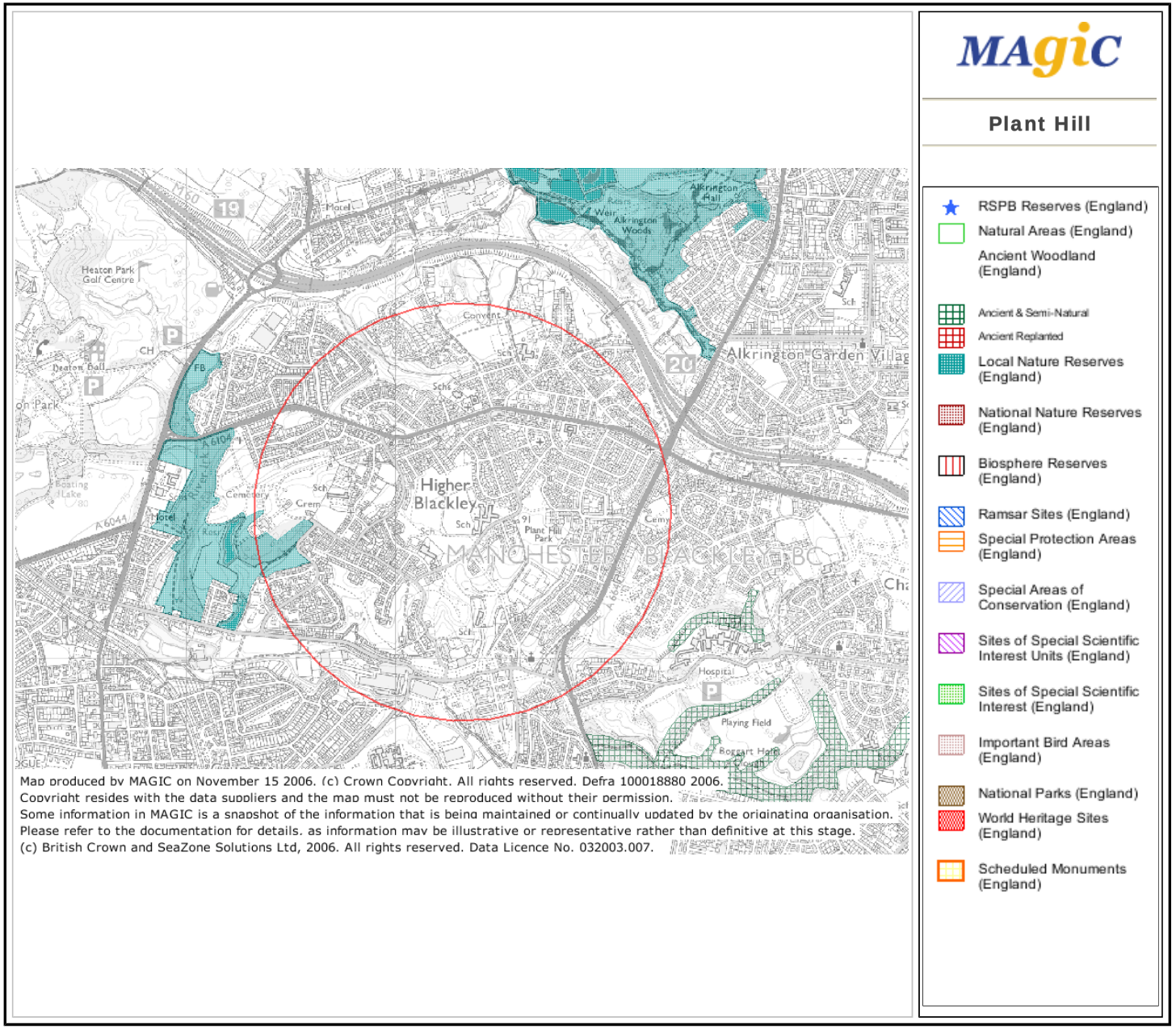
FLUSHES NEAR ALCONBURY WALK SBI

BLACKLEY FOREST LNR

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Date Produced: 21st December 2006

*field record • roost All Pipe


MAGIC
Plant Hill
RSPB Reserves (England)
Natural Areas (England)
Ancient Woodland (England)
Ancient & Semi-Natural
Ancient Replanted
Local Nature Reserves (England)
National Nature Reserves (England)
Biosphere Reserves (England)
Ramsar Sites (England)
Special Protection Areas (England)
Special Areas of Conservation (England)
Sites of Special Scientific Interest Units (England)
Sites of Special Scientific Interest (England)
Important Bird Areas (England)
National Parks (England)
World Heritage Sites (England)
Scheduled Monuments (England)
Higher Blackley
MANCHESTER
BLACKLEY
Alkrington Garden Villag
Heaton Park Golf Centre
Hospital
Playing Field
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Report generated on November 15 2006.

You clicked on the point:
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Full Grid Ref: 385322 , 403701

The following features have been found within 1,000 metres of your search point:

RSPB Reserves (England)

There are no features within your search area.

Natural Areas (England)

Reference	Name	Hotlink
26	URBAN MERSEY BASIN	http://www.english-nature.org.uk/science/natural/na_details.asp?na_id=26&s=&r=2

Ancient Woodland (England)

There are no features within your search area.

Local Nature Reserves (England)

Reference	Name
1122967	BLACKLEY FOREST

National Nature Reserves (England)

There are no features within your search area.

Biosphere Reserves (England)

There are no features within your search area.

Ramsar Sites (England)

There are no features within your search area.

Special Protection Areas (England)

There are no features within your search area.

Special Areas of Conservation (England)

There are no features within your search area.

Sites of Special Scientific Interest Units (England)

There are no features within your search area.

Sites of Special Scientific Interest (England)

There are no features within your search area.

Important Bird Areas (England)

There are no features within your search area.

National Parks (England)

There are no features within your search area.

World Heritage Sites (England)

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Scheduled Monuments (England)

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