

## **4 ASSESSMENT OF POTENTIAL IMPACTS**

### **4.1 Constraints on study information**

#### **Desk study**

There were no constraints to the desk study information. The Greenspace Information for Greater London (GIGL) open space and biodiversity records centre provided comprehensive records for protected and notable species.

#### **Field survey**

Access to all areas of the site was made available, however the field survey was undertaken during mid February, which is a sub-optimal time for a botanical survey and as a result some plants could not be identified to the species level.

#### **Bat roost assessment**

Bat roost assessments can be undertaken at any time of year to assess the potential for bats to be roosting in buildings both externally and internally and look for evidence of use of a building by a bat via field signs (e.g. droppings). No evidence of bat usage in or around the buildings and structures was recorded during the survey and there is no reason to suspect that evidence of bats had been cleared away. Hence it is considered that adequate conclusions can be made regarding the likely use of the buildings and structures by bats at the time of survey.

Despite the assessment of the trees being undertaken at an appropriate time of year, when deciduous trees have lost their leaves, which would otherwise obscure features that could be used shelter bats, ivy cladding on some trees meant that such features may have been obscured in some instances.

### **4.2 Potential impacts**

#### **4.2.1 Designated sites**

Since the proposed works, as described in section 1.2, will consist of an internal refit of R Block and the construction of a new sports hall within the footprint of the existing redgra pitch, there are no direct or indirect impacts expected to affect any of the statutory or non-statutory designated sites.

#### **4.2.2 Habitats**

The internal refit of R Block is not expected to have any impacts on the habitats within the site.

The construction of the new sports hall is to be within the footprint of the existing redgra pitch, which has extremely limited biodiversity value, and beyond the Root Protection Area of the single avenue of Horse chestnut trees to the south. The only tree losses expected are a small number of young semi-ornamental garden trees. New trees are proposed to frame views to the new sports hall which is seen as a positive addition to the campus landscape by giving focus to an otherwise disparate collection of adhoc buildings. A new woodland copse is proposed to the east of the new sports hall with a structured understorey and groundcover, including native species of seasonal bulbs, preferably of local provenance, that may be enjoyed by students and staff of the college. Elsewhere on the site, native parkland trees are proposed to create a stronger definition to the open space as well as frame views across it.

Overall there would be a net gain in the biodiversity value of the habitats on site as a result of this development.

#### **4.2.3 Protected species**

##### **Breeding birds**

Birds are likely to be using the trees and scrub during their breeding season, (between mid March and August inclusive, as a guide). The loss of the semi-ornamental garden trees, which are to be the only trees to be affected by the development, is not expected to impact on breeding birds, since they provide limited opportunities for nesting birds and therefore their removal should not be an issue. However, should the works be undertaken during the breeding bird season, these trees should be checked for nesting birds prior to their removal. The new trees proposed to frame the sports hall, the new wood and native parkland trees will more than offset the loss of the semi-ornamental garden trees and provide additional habitat for breeding birds.

##### **Bats**

Since the R Block buildings and structures had no evidence for bats and little or no potential for roosting bats, it is not expected that the internal refurbishment will impact upon bats. A false acacia to the south (rear) of R block has high potential for roosting bats however. While the tree itself will be retained, any works to the exterior of the building would need to take account of this tree and ensure that appropriate mitigation is put in place to avoid indirect impacts to bats which might be roosting within the tree. The proposed new sports hall will be adjacent to the avenue of horse chestnut trees to the west of the site and ten of these trees were assessed as having some potential for roosting bats. Although the development is not expected to directly impact upon these trees, and therefore no license with respect for bats will be required for the works to proceed, there may be some indirect impacts as a result of the construction effort, in terms of noise, light and air pollution for example.

##### **Stag beetle**

The data search revealed that there are a large number of records for stag beetle from within 210 – 990 metres of the site. This species is Britain's largest native ground dwelling beetle and has a strong affinity with dead and rotting wood. The trees lost to the development are young trees with little or no opportunities for this species and therefore the loss of these trees will not adversely impact on this species.

#### **4.2.4 Other habitats/species**

The species incidentally recorded during the survey are all mobile, common and widespread. It is unlikely that the development would adversely affect them, especially if the development takes into account the seasonality of nesting birds.

### **4.3 Legislation and policy guidance**

#### **4.3.1 Breeding birds**

Nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended by the CRow Act 2000<sup>1</sup>) which makes it an offence to recklessly kill, injure or take any wild bird or

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<sup>1</sup> Key sections of the Wildlife and Countryside Act 1981, principally those relating to powers and penalties (described later), have been amended by the Countryside and Rights of Way Act 2000 (CRow Act). One of the most important of these is the addition of the word 'reckless' within offences under Section 1 (5) of the Wildlife and Countryside Act 1981.

take, damage or destroy its nest whilst it is in use or being built, or to take or destroy its eggs. In addition to this, for some rarer, endangered, declining or vulnerable species (listed in Schedule 1 of the Act), it is an offence to intentionally or recklessly disturb them while they are nest building or are in, on or near a nest with eggs or young, or to disturb the dependent young of such a bird.

#### **4.3.2 Bats**

All species of bats are afforded full protection under the following pieces of legislation: the Wildlife and Countryside Act 1981 (as amended<sup>2</sup>) through inclusion in Schedule 5; and in Schedule 2 of the Conservation (Natural Habitats &c.) Regulations 1994 (which implements the EC Directive 92/43/EEC in the United Kingdom).

The legislation makes it illegal under the Wildlife and Countryside Act 1981 (as amended by the Crow Act 2000)<sup>3</sup> to:

- Intentionally kill, injure or take a wild bat
- To be in possession or control of any live or dead wild bat or any part of, or anything derived from a wild bat
- Intentionally or recklessly damage, destroy or obstruct access to any place that a wild bat uses for shelter or protection
- Intentionally or recklessly disturb any wild bat while it is occupying a structure or place that it uses for shelter or protection.

Under the Conservation Regulations 1994 it is an offence to:

- Deliberately capture or kill any bat
- Deliberately disturb any bat
- Damage or destroy a breeding site or resting place of any bat<sup>4</sup>.

#### **Licences**

Although the law provides strict protection to bats it also allows this protection to be set aside (derogation) under Section 39 of the Habitat Regulations 1994 through the issuing of licences. These licences in England are currently determined by Natural England for development works.<sup>5</sup>

Three tests must be satisfied before Natural England can issue a licence to permit otherwise prohibited acts:

1. Regulation 44(2) e states that licences may be granted to "preserve public

<sup>2</sup> Key sections of the Wildlife and Countryside Act 1981, principally those relating to powers and penalties (described later), have been amended by the Countryside and Rights of Way Act 2000 (CRoW Act). One of the most important of these is the addition of the word 'reckless' within offences under Section 9(4) of the Wildlife and Countryside Act 1981, which will make prosecution easier.

<sup>3</sup> There are offences of selling and advertising to sell bats or parts of bats, but these are not detailed here as they are not considered relevant to the proposed works.

<sup>4</sup> A breeding site or resting site of any bat is known as a bat roost. A bat roost is any structure a bat uses for shelter or protection. Because bats tend to re-use the same roosts, Natural England currently advise that it is an offence to damage or destroy a bat roost at any time of year whether bats are in residence or not.

<sup>5</sup> In this context, "development" should be interpreted broadly to include plans or projects such as the carrying out of building, engineering, mining or other operations, on, over, or under land, or the material change of use of any buildings or other land. This would also include the demolition of buildings, rebuilding, structural alterations of, or additions to, buildings.

health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment”.

2. Regulation 44(3) states that a licence may not be granted unless “...there is no satisfactory alternative”.
3. Regulation 44(3)(b) states that a licence cannot be issued unless the licensing authority is satisfied that the action proposed “will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range”.

#### **4.3.3 Stag beetle**

The species is protected by the Wildlife and Countryside Act 1981 (as amended), Schedule 5, Section 9, Part 5 only. This relates to the buying or selling of the species. Stag beetles are also recognised as Priority Species by the UK BAP and London BAP.

#### **4.3.4 The Natural Environment and Rural Communities Act 2006 (NERC Act)**

Paragraph 40(1) of the NERC Act states that “every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity”. The term Public Authority includes local authorities and local planning authorities.

Paragraph 40(3) goes on to state that “conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat”.

Paragraph 41(1) states that “the Secretary of State must, as respects England, publish a list of the living organisms and types of habitat which in the Secretary of State’s opinion are of principal importance for the purpose of conserving biodiversity”. This replaces Section 74 of the Countryside and Rights of Way Act 2000 (the CRoW Act).

#### **4.3.5 Planning Policy Statement 9: Biodiversity and Geological Conservation (PPS9)**

PPS9 sets out planning policies on protection of biodiversity and geological conservation through the planning system. Of relevance to biodiversity generally is paragraph 14. This states that when considering development proposals, local planning authorities should maximise opportunities for building-in beneficial biodiversity or geological features as part of good design. Planning obligations should be used where appropriate.

Of particular relevance to species of principal importance for the conservation of biodiversity in England (the “Section 41 species” discussed above) is paragraph 16. In the context of development proposals, local planning authorities are directed to ensure that “these species are protected from the adverse effects of development, where appropriate, by using planning conditions or obligations”. Planning authorities should refuse permission where harm to the species or their habitat would result unless the need for, and benefits of, the development clearly outweigh that harm.

#### **4.3.6 UK and Local Biodiversity Action Plans**

The UK Biodiversity Action Plan (BAP) is the UK Government’s response to the Convention on Biological Diversity signed in 1992. It describes the UK’s biological resources and commits a detailed plan for the protection of these resources. The UK BAP includes 391 Species Action Plans and 45 Habitat Action Plans. The London Biodiversity Action Plan

aims to conserve the County's priority habitats and species, implementing the UK BAP at a local level.

## 5 MITIGATION AND ENHANCEMENT RECOMMENDATIONS

Recommendations for Mitigation include:

Minimising indirect impacts on trees with potential for roosting bats: The works footprint will not directly affect these trees, but the design of the new buildings and its surroundings have careful consideration to the design of the lighting scheme.

The lighting should minimise upward light spillage through the use of direction hoods and should avoid any direct illumination to the trees with potential for bats. Where practical noise caused by plant and other machinery used in the construction of the sports hall should be minimised around the boundary with the row of horse chestnut trees, where there is potential for roosting bats.

Any clearance of potential bird breeding habitat, such as the felling of trees or scrub clearance, should ideally be undertaken outside the bird breeding season, (avoiding March-July as a guide). Should it prove necessary to remove potential breeding bird habitat during the breeding season, then these works should be carried out under the supervision of an Ecological Clerk of Works, and the area will be checked in advance for the presence/absence of any remaining birds' nests. If any active nests are found in this area then clearance activities must cease and an appropriate buffer zone should be established until the young have fledged and the nest is no longer in use.

Recommendations for the proposed ecological enhancement include the following:

Native trees and species-rich native hedgerows will be planted where appropriate around the sports hall, to enhance the overall ecological value of the site. Additionally, consideration will be given to preferentially planting native species such as holly, rowan *Sorbus aucuparia* and hawthorn *Crataegus monogyna* rather than non-native shrubs and trees, which as well as being beneficial to wildlife are also visually attractive species.

Native species which could be considered for inclusion within the landscaping are as follows:

- Alder *Alnus glutinosa*
- Ash
- Beech
- Blackthorn *Prunus spinosa*
- Dog rose *Rosa canina*
- Dogwood *Cornus sanguinea*
- Field maple *Acer campestre*
- Guelder rose *Viburnum opulus*
- Hawthorn
- Holly
- Hornbeam *Carpinus betulus*
- Horse chestnut
- Ivy
- Lime
- Oak *Quercus robur*
- Rowan
- Silver birch *Betula pendula*
- Traveller's-joy *Clematis vitalba*
- Wild cherry *Prunus avium*
- Wild privet *Ligustrum vulgarerowan*
- Wild hop *Humulus lupulus*

In all instances, species of local provenance should be obtained, if practicable.

In addition to the above recommendations, the provision of both nesting and roosting opportunities for birds and bats in the form of bird and bat boxes, on suitably-sized trees and on the new buildings, if appropriate, would represent additional means by which the value of the site to wildlife can be maximised. Management of the site could be put in place to enhance it for Stag Beetles; this would involve retaining as much dead wood (logs, windblown trees and stumps) as possible. The wood must be retained in piles, partially shaded to avoid desiccation and be lying on or close to the ground. A buffer zone should be managed around these areas so that soil and vegetation are protected from disturbance.<sup>6</sup>

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<sup>6</sup> Rose V. (2005) Creation and management of stag beetle habitats. *Habitat Management News, British Wildlife*, 16, 249-250

## 6 CONCLUSION

The surveyed land, part of St Mary's College, comprises a series of buildings and structures known as R Block and habitats including amenity grassland, trees, ephemeral short perennial / ruderal vegetation and scrub. None of these habitats are of conservation concern.

This report has established baseline ecological information for the site. It has also assessed the potential impacts of the proposed development on designated sites within a kilometre of the site, the habitats on site and protected species. This information is likely to be required by the Local Planning Authority as part of any planning application since, under PPS9, they are required to take biodiversity conservation issues into account as part of their decision making.

The conclusion of this report is that there are no direct or indirect impacts expected to affect designated sites, a negligible impact to the habitats on site through the removal of some semi-ornamental garden trees and no direct impacts on protected species, provided that the mitigation recommendations are followed in relation to breeding birds. Roosting bats could be indirectly affected by inappropriate noise, light and air pollution, should they be roosting in the horse chestnut trees adjacent to the redgra pitch, or the false acacia tree adjacent to R block which were assessed as having varying degrees of potential for bats. However, this can be mitigated for and the indirect impact reduced by minimising potential disturbance to the south of the redgra pitch.

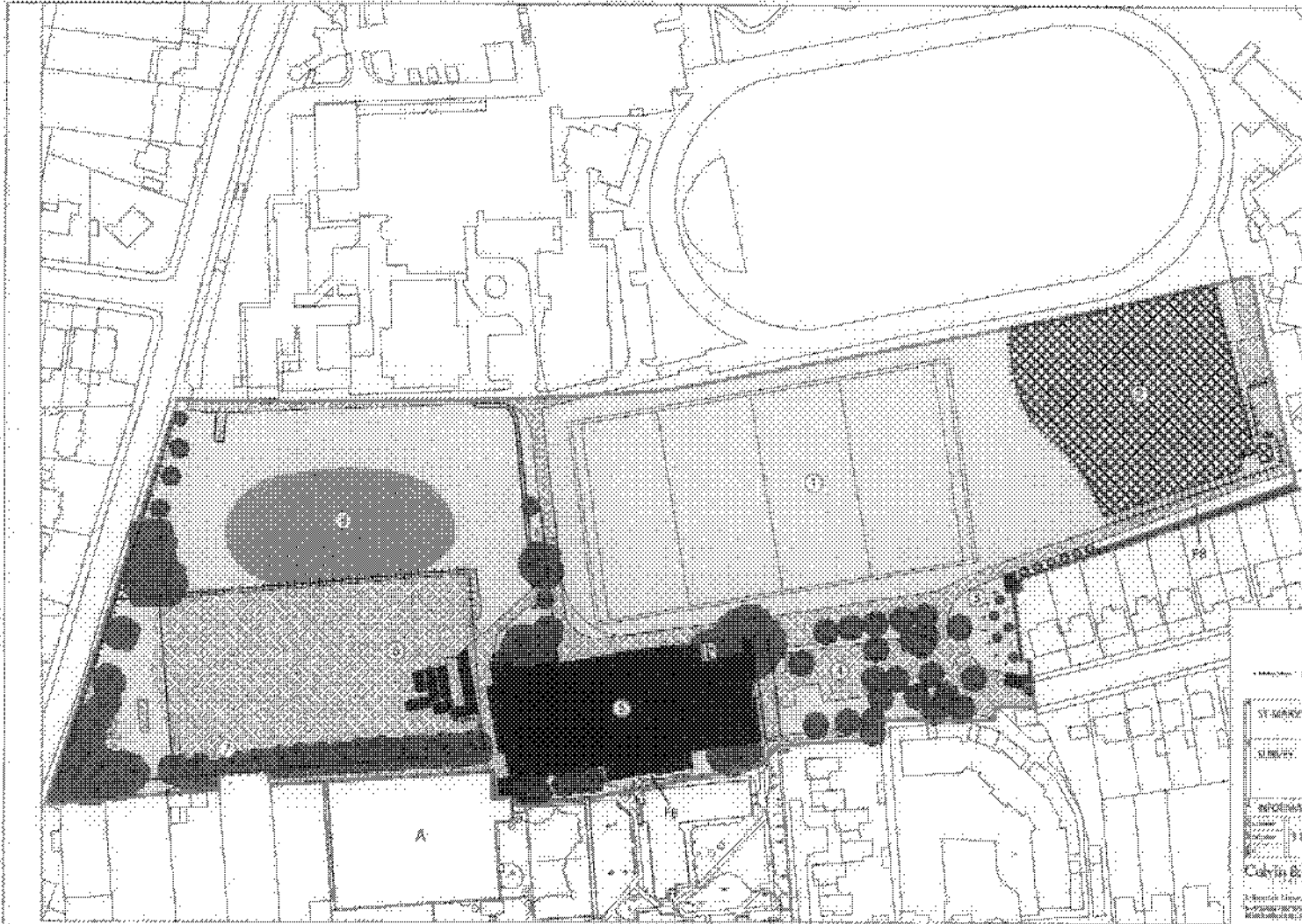
Overall it is considered that the negligible impact to the existing habitats on site is greatly offset by the benefits the development will bring. The new trees proposed to frame the sports hall, the new woodland copse and native parkland trees will enhance the ecology of the site and bring a net gain for the biodiversity of the site. This will benefit a wide range of species including protected species, since there will be an increase in the area over which birds can forage and nest, bats can forage and roost, and potentially stag beetle.



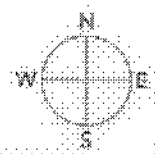
PHASE 1 HABITAT SURVEY

Legend

- Tree
- Watercourse
- Grassland
- Hard Surface
- Impervious
- Tree
- Road
- Green Wall
- Impervious (Diagonal)
- Road
- Grassland (Dark)
- Road
- Road
- Road



ST MARY'S COLLEGE  
 TWICKENHAM  
 ANNOTATED  
 1:1000  
 Colin B. N.  
 15/05/2011



**baker  
 shepherd  
 gillespie**

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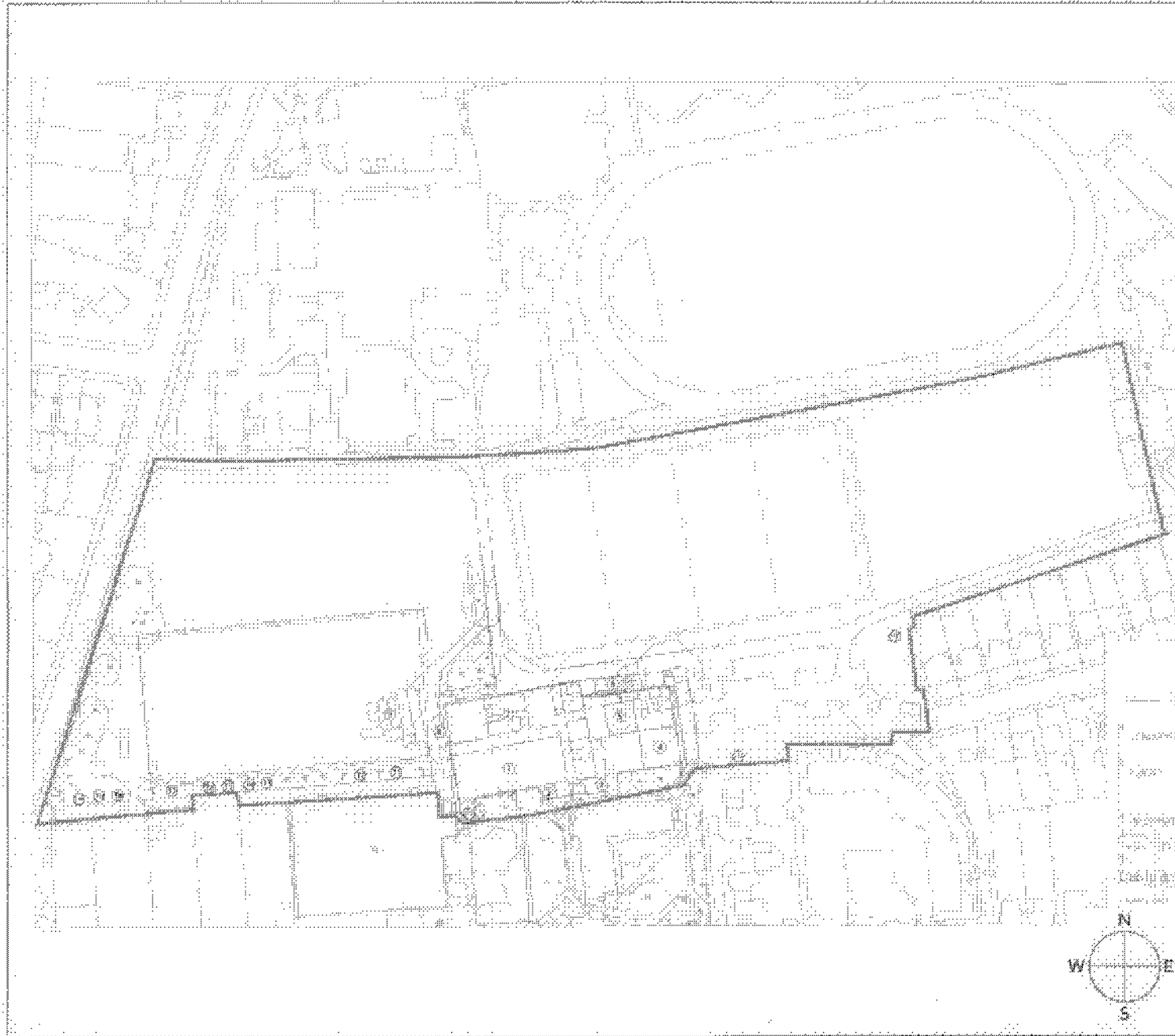
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**SURVEY OF BUILDINGS AND TREES FOR  
BAT ROOST POTENTIAL**

Legend:

-  Boundary lines
-  Buildings
-  Trees



**baker  
shepherd  
gillespie**  
Architectural Conservation

01273 812222

Date:	15th 2017	Checked:	JKR	Scale:	1:100
Drawn:	JKR	Approved:	JKR	Job Ref:	201701
				Proj. No:	4000001

## 7 APPENDICES

### Appendix 1: Target notes from the Phase 1 habitat survey

T1. Amenity grassland dominated by perennial ryegrass. Two sports pitches with associated grass verges. Small number of ornamental trees.

T2. Bare ground with ephemeral short perennial vegetation and ruderals. Fenced off from the rest of the site

T3. To the east of a car park is a banked area with bare ground and trees along with some scrub to the rear and a shed.

T4. Car park area of hard standing with mown grass verges which support trees, species including common lime (dominant), horse chestnut, oak, yew, laurel, Leyland cypress, poplar and maple. Some of the large mature trees have TPO tags. The grassland has species of cow parsley, spring crocus, perennial ryegrass, stichwort, common nettle, daisy, red dead nettle and dandelion.

T5. R Block and associated buildings and structures. Brick and timber walls. Flat roofs, except the sports hall which is pitched. Several large mature trees, including species of lime, Leyland cypress, oak and false acacia. Hard standing footpaths and road around the front of R Block, with ornamental trees and shrubs planted.

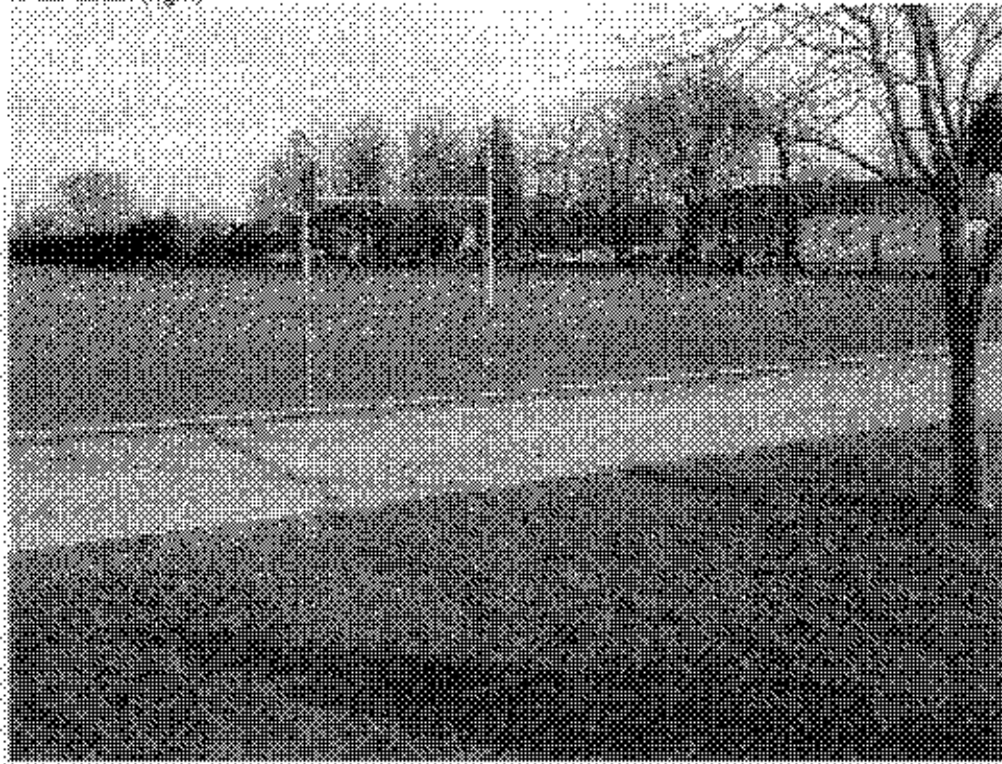
T6. Hard standing composed predominantly of redgra. Muddy with puddles of water. Used as a car park for the college. Prefabricated structures made of metal within the hard standing area to the east.

T7. Avenue of large, mature horse chestnut trees, with one lime at the R Block end. Area of scrub beneath trees at the western end.

T8. Amenity grassland sports pitch, with grass worn away to bare ground in the centre. Adjacent to the redgra area. Trees to the west, species including Scot's pine and beech. Fox earth close to the western boundary

Appendix 2: Photographs of selected areas of the site

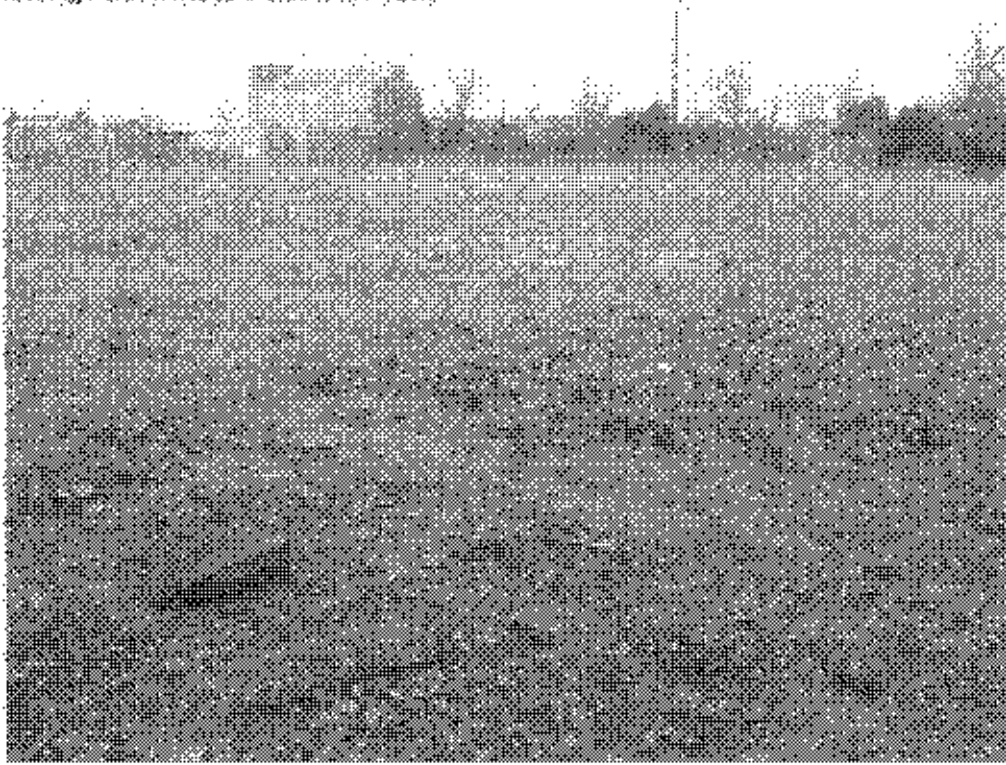
Photograph 1: View looking south east, with amenity grassland in the foreground and H Block to the south (right)



Photograph 2: View looking north-west, to the east of R Block (pictured in the top-left section of the photograph)



Photograph 3: Ephemeral short perennial and bare ground, to the east of the site. View looking north towards the athletics track.



Photograph 4: The riparian areas assessed to have a high potential to support roosting bats, located to the south (rear) of R Block.

