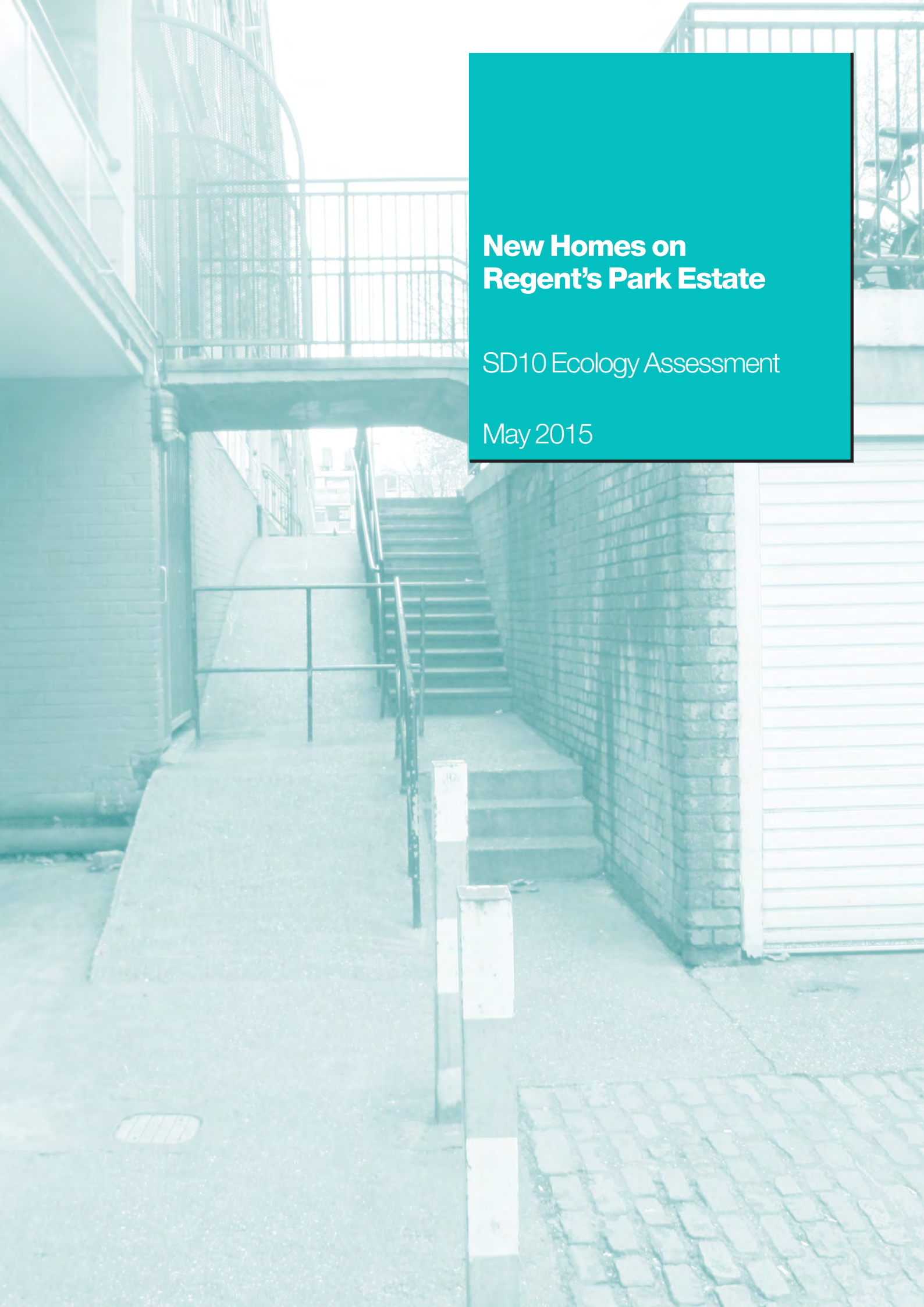

New Homes on Regent's Park Estate

SD10 Ecology Assessment

May 2015

East

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Confidential

Regent's Park Estate

Ecology Assessment

For

Camden

Project Number:

11775

May 2015

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Author	Ruth Jones
Project Partner	David Innes
Project Number	11775
Project Name	Regent's Park Estate

Contents

Appendices

1.0 INTRODUCTION

1.1. Thomson Ecology was commissioned by Campbell Reith Hill LLP ('CampbellReith') on behalf of the London Borough of Camden to undertake a preliminary ecological assessment of the overall development of 11 sites within the Regent's Park Estate, London Borough of Camden.

1.2. This report summarises the 'Desk Study, Extended Phase 1 Habitat Survey and External Inspection for Bats' report (Ref: ACAM206/005/001/002), and the 'Further Bat Surveys, The Victory Public House and St Bede's Hall, Regent's Park Estate' report (Ref: ACAM206/007) which are contained within **Appendices 1** and **2**.

1.3. Eleven sites that were originally assessed within the 'Desk Study and Extended Phase 1 Habitat Survey' are listed within the first two columns of **Table 1.1** below. However, since the survey was undertaken, the sites are now referred to as 'Plots' and only 9 of the previously identified 11 sites are being taken forward to planning. Plot 7 Camden People's Theatre (formally Site 9) will be applied for via a separate planning application. The Plots that are being taken forward to planning are listed in **Table 1.1** and will be referred to within this document.

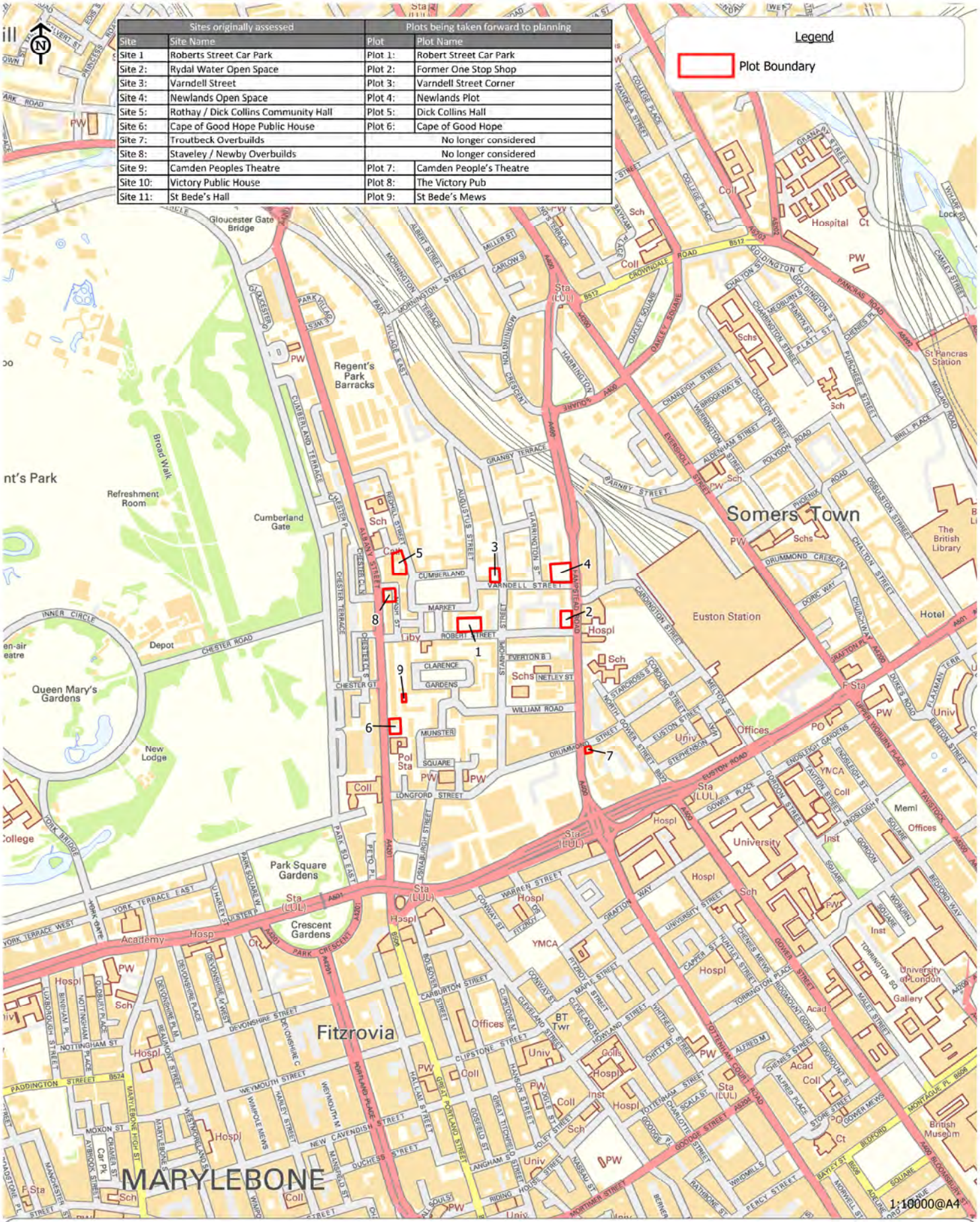
Table 1-1: Superseded site names and plots being taken forward to planning

Sites originally assessed		Plots being taken forward to planning	
Site	Site Name	Plot	Plot Name
Site 1	Roberts Street Car Park	Plot 1:	Robert Street Car Park
Site 2:	Rydal Water Open Space	Plot 2:	Former One Stop Shop
Site 3:	Varndell Street	Plot 3:	Varndell Street Corner
Site 4:	Newlands Open Space	Plot 4:	Newlands Plot
Site 5:	Rothay / Dick Collins Community Hall	Plot 5:	Dick Collins Hall
Site 6:	Cape of Good Hope Public House	Plot 6:	Cape of Good Hope
Site 7:	Troutbeck Overbuilds	No longer considered	
Site 8:	Staveley / Newby Overbuilds	No longer considered	
Site 9:	Camden Peoples Theatre	Plot 7:	Camden Peoples Theatre*
Site 10:	Victory Public House	Plot 8:	The Victory Pub
Site 11:	St Bede's Hall	Plot 9:	St Bede's Mews

*Note that Plot 7 Camden Peoples Theatre will be applied for via a separate planning application

1.4. The locations of the 9 plots within the Regent's Park Estate are shown on **Figure 1.1.**

1.5. For reference, the buildings and sites that were originally identified within the external building inspection for bats are summarised in **Table 1.2** below. Note that these sites are being referred to as plots (see section 1.3).



Sites originally assessed		Plots being taken forward to planning	
Site	Site Name	Plot	Plot Name
Site 1	Roberts Street Car Park	Plot 1:	Robert Street Car Park
Site 2:	Rydal Water Open Space	Plot 2:	Former One Stop Shop
Site 3:	Varndell Street	Plot 3:	Varndell Street Corner
Site 4:	Newlands Open Space	Plot 4:	Newlands Plot
Site 5:	Rothay / Dick Collins Community Hall	Plot 5:	Dick Collins Hall
Site 6:	Cape of Good Hope Public House	Plot 6:	Cape of Good Hope
Site 7:	Troutbeck Overbuilds	No longer considered	
Site 8:	Staveley / Newby Overbuilds	No longer considered	
Site 9:	Camden Peoples Theatre	Plot 7:	Camden People's Theatre
Site 10:	Victory Public House	Plot 8:	The Victory Pub
Site 11:	St Bede's Hall	Plot 9:	St Bede's Mews

Regents Park Estate

Client: Camden

Figure 1.1:
Location of Plots within Regent's Park Estate

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Table 1-2: Buildings identified within the External Building Inspection

Site	Site Name	Building	Plot Name	
Site 5:	Dick Collins Community Hall	B1	Plot 5:	Dick Collins Hall
Site 6:	Cape of Good Hope Public House	B2	Plot 6:	Cape of Good Hope
Site 7:	Troutbeck Overbuild	B3		
Site 8:	Newby Overbuilds	B5		
	Staveley Overbuilds	B6		
Site 9:	Camden Peoples Theatre	B7	Plot 7:	Camden Peoples Theatre*
Site 10:	Victory Public House	B8	Plot 8:	The Victory Pub
	Victory Public House	B8a		
Site 11:	St Bede's Hall	B4	Plot 9:	St Bede's Mews

2.0 DESK STUDY AND EXTENDED PHASE 1 HABITAT SURVEY

2.1. Brief and Objectives

2.1.1. The brief was to:

- Conduct a desk based study comprising the purchase and collation of third-party data on statutory and non-statutory designated sites within 2km of the site, and records of protected species and species of conservation concern within 1km of the site;
- Conduct an extended Phase 1 habitat survey of 11 sites;
- Conduct a bat survey comprising external inspections of a maximum of six buildings and up to 100 trees on the 11 sites; and
- Produce a report identifying any ecological constraints identified and recommendations for further surveys and mitigation, as required.

2.2. Desk Study

2.2.1. A request for biological data was made to Greenspace Information for Greater London (GiGL) on 15th September 2015 and the biological records were received on 22nd September 2015. Records of designated sites were sought for the full study area, whereas records for species were sought for part of the study area encompassing the plots and within 1km of the perimeter of the plots.

2.2.2. The main findings of the desk study were that the plots are located within 2km of two statutory, and 30 non-statutory designated, and priority habitat, sites. The closest designated site to the Regent's Park Estate is Camley Street Nature Park Local Nature Reserve (LNR) which lies approximately 0.9km to the north east. This site has also been designated as a Site of Importance for Nature Conservation (SINC).

2.2.3. The closest non-statutory designated sites (SINCs) to the Regent's Park Estate is St James's Garden which is located approximately 10m to the east of Plot 2 Former One Stop Shop (formally Site 2).

2.2.4. In addition, the desk study found records of protected species and species of conservation concern within 1km of the plots. These included invertebrates, birds and hedgehogs.

2.2.5. The development is unlikely to have an impact on designated sites or priority habitats as the plots are in an already heavily urbanised area and development will be confined to the plot boundaries.

2.3. Extended Phase 1 Habitat Survey

2.3.1. The survey was conducted on 29th September 2015. During the extended phase 1 habitat survey the majority of the plots were found to support scattered broadleaved woodland, scattered broadleaved trees, species poor hedge, species poor hedge with trees, amenity grassland, fence, building, introduced shrub and introduced shrub / scattered broadleaved woodland mosaic. The plots were found to support habitats of low ecological value with the exception of:

- Hedgerows PHT1 and PHT2 located within Plot 4 Newlands Plot (formally Site 4) which could be classified as Habitats of Principal Importance (HPIs).

- Amenity areas within Plots 2 Former One Stop Shop (formally Site 2), Plot 3 Varndell Street Corner (formally Site 3), Plot 4 Newlands Plot (formally Site 4) and Plot 5 Dick Collins Hall (formally Site 5) could be classified as representing examples of the London Priority Habitat type 'London's Parks and Green Spaces'. Therefore mitigation measures should be undertaken (as detailed in section 3) to ensure that the development of the plots are consistent with these policies.
- Wall cotoneaster and Virginia creeper were both recorded present within Plot 8 The Victory Pub (formally Site 10). These species are listed on Schedule 9 of the Wildlife and Countryside Act 1981, as amended (WCA 1981). As such it is an offence to plant or otherwise cause these species to grow in the wild. Measures are therefore proposed in section 3.1.7 for the eradication of these species from Plot 8 in advance of development.
- Habitat occurs within plots that are suitable for breeding birds and hedgehogs. All birds, eggs and nests are protected from damage and destruction under the WCA 1981. Hedgehogs are listed as a species of principal importance under Section 41 of the NERC Act 2006. Recommendations detailed within section 3 should ensure that the development of the plots is compliant with legislation and policy pertaining to protected species and species of conservation concern.

2.4. Potential Further Ecological Issues

2.4.1. Certain species presence is seasonal, or require specialist survey techniques; therefore the following issues may require further investigation

Protected and Priority Species

Invertebrates

2.4.2. A large number of priority species and local Biodiversity Action Plan (BAP) species of moths were recorded as present within 1km of the Regent's Park Estate on the desk study. Due to the significant urban barriers separating the plots where these species were recorded and the development sites, and the lack of suitable habitat recorded on the development plots during the extended Phase 1 habitat survey, there should be no issues with regard to these species and the development.

Breeding birds

2.4.3. Records of a number of bird species of conservation concern were obtained during the desk study. Suitable habitat for some of these species, in particular house sparrow (Passer domesticus) which is a priority species and London BAP species, was recorded across the development plots. All birds, eggs and nests are protected from damage and destruction under the Wildlife and Countryside Act 1981, as amended.

2.4.4. Providing recommendations made within section 2.5 are followed, the development should be compliant with the legislation regarding breeding birds.

European hedgehog

2.4.5. The desk study provided a record of a hedgehog within 0.4km of the development plots. The hedgerows and introduced shrub on the plots provides suitable habitat for hedgehogs.

Hedgehogs are listed as a species of principal importance under Section 41 of the NERC Act 2006 and are a London Biodiversity Action Plan species. Recommendations for mitigation for hedgehogs are detailed below.

Bats

2.4.6. Buildings on Plot 5 Dick Collins Hall (formally Site 5), Plot 6 Cape of Good Hope (formally Site 6), Plot 7 Camden People's Theatre (formally Site 9), Plot 8 The Victory Pub (formally Site 10) and Plot 9 St Bede's Mews (formally Site 11) were considered to have potential to support roosting bats.

2.4.7. All species of bat and their roosts are fully protected by the Habitats Regulations 2010 with additional protection against disturbance under the WCA 1981. All species of bat are priority species under the London Biodiversity Action Plan.

2.4.8. Following the Phase 1 Habitat survey further bat surveys were undertaken.

2.5. External Inspection for Bats

2.5.1. An external inspection of the buildings on Plot 5 Dick Collins Hall (formally Site 5), Plot 6 Cape of Good Hope (formally Site 6), Plot 7 Camden People's Theatre (formally Site 9), Plot 8 The Victory Pub (formally Site 10) and Plot 9 St Bede's Mews (formally Site 11) was undertaken on 30th September 2014.

2.5.2. During the external inspection for bats in trees and buildings, 6 buildings were inspected as detailed with **Table 2.1** below.

Table 2-1: Buildings identified within the External Building Inspection and Overall Potential of Buildings to Support Roosting Bats

Building	Plot Number and Name		Overall Potential to Support Bats
B1	Plot 5:	Dick Collins Hall	Negligible
B2	Plot 6:	Cape of Good Hope	Negligible
B7	Plot 7:	Camden Peoples Theatre	Negligible
B8	Plot 8:	The Victory Pub	Low
B8a			Negligible
B4	Plot 9:	St Bede's Mews	Low

2.6. External Inspection Results

2.6.1. No trees within the plots and within the vicinity were assessed as having the potential to support roosting bats.

2.6.2. A total of 6 buildings were identified across the plots listed in **Table 2.1**. Of these, two were assessed as having low potential to support summer / transitional bat roosts. The remaining four buildings were assessed as having negligible potential to support roosting bats.

2.6.3. As bats are strictly protected by European and national legislation and planning policy, further survey of these buildings was recommended, should the proposals require demolition or extensive modification to these buildings.

2.7. **Further Bat Surveys: Internal Inspection and Emergence/Return Surveys**

2.7.1. In order to further characterise potential bat habitat the following surveys were undertaken:

- Inspection of the roof spaces of Plot 8 The Victory Pub (formally Site 10) and Plot 9 St Bede's Mews (formally Site 11), for evidence of roosting bats;
- Two dusk emergence and two dawn return to roost survey at Plot 8 The Victory Pub (formally Site 10) and Plot 9 St Bede's Mews (formally Site 11); and

2.8. **Dates of survey**

2.8.1. The internal inspections were undertaken on 16th March. Dusk emergence and dawn return to roost surveys were carried out on 16th and 17th March and 5th and 6th May 2015.

2.9. **Further Survey Results**

Internal Inspection

2.9.1. Internal access was not granted for Plot 8 The Victory Pub (formally Site 10) Victory Public therefore an internal inspection was not carried out. External features were, however, noted which are suitable for use by roosting bats.

2.9.2. No evidence of bats or their roosts was identified during the internal inspection undertaken within Plot 9 St Bede's Mews (formally Site 11). However, both internal and external features are present which are suitable for use by roosting bats.

Dusk Emergence and Dawn Return to Roost Survey

2.9.3. No bats were seen or heard foraging, commuting or emerging from or returning to roost within Plot 8 The Victory Pub (formally Site 10) and Plot 9 St Bede's Mews (formally Site 11) during the dusk emergence and dawn return to roost survey undertaken on 16th and 17th March.

2.9.4. A single commuting pass by a common pipistrelle bat (*Pipistrellus pipistrellus*) was heard by the surveyors during the dusk emergence survey of Plot 8 The Victory Pub (formally Site 10) undertaken on 5th May 2015. This was recorded 84 minutes after the dusk emergence survey began, approximately 30 minutes after the typical emergence time for this species. In addition, a single commuting pass by a soprano pipistrelle bat (*Pipistrellus pygmaeus*) was heard by the surveyor during the dusk emergence survey of Plot 8 The Victory Pub (formally Site 10) undertaken on 5th May 2015. This was recorded 76 minutes after the dusk emergence survey began, approximately 15 minutes after the typical emergence time for this species.

2.9.5. No bats were seen to emerge from, or return to, roosts during the survey, and very low levels of incidental bat activity was recorded, consisting of a single commuting pass on each building.

3.0 RECOMMENDATIONS

Mitigation

3.1.1. 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, and the subsequent bat surveys.

Habitats of Principal Importance

3.1.2. Should it be necessary to remove hedgerows PHT1 or PHT2 in Plot 4 Newlands Plot (formally Site 4) they should be replaced on at least a like for like basis.

3.1.3. Development proposals could include the provision of amenity space to mitigate for any loss of the London Parks and Green Spaces priority habitat type. New amenity areas should include ecological enhancements as outlined within section 2.6.

Breeding birds

3.1.4. Plot clearance involving removal of trees, hedgerows, introduced shrub and buildings should be undertaken outside of the breeding birds season, i.e. site clearance and demolition should be undertaken in the period September to February, inclusive. If this is not possible, the demolition of the buildings and clearance of vegetation should take place under an ecological watching brief in the presence of an ecologist. This would involve checking for nests immediately prior to, and during demolition and clearance. If an active nest is found, works will be stopped in that area and an exclusion zone put in place until the nest is no longer active.

European hedgehog

3.1.5. To mitigate for the potential killing or injury of hedgehogs clearance of the amenity grassland, hedgerow and introduced shrub could be carefully carried out by hand. Should a hedgehog be found during the search, it should be caught and moved to an area of suitable habitat on site (or immediately adjacent to it) that will not be lost to the development.

Trees

3.1.6. For any existing trees which are to be retained (see Arboricultural Impact Assessment and Arboricultural Method Statement report (Thomson Ecology, May 2015)), to prevent damage to the trees during or following development, a buffer zone should be set aside to protect the rooting area adjacent to each tree, in which no construction activities are permitted. In accordance with British Standard BS5837:2012 'Trees in relation to design, demolition and construction - recommendations'

Invasive Plant Species

3.1.7. Wall cotoneaster and Virginia creeper should be removed from Plot 8 The Victory Pub (formally Site 10). Measures should be taken to avoid the spread of these species to the surrounding area. This is best achieved by digging up the plants and their root stock and disposing of the waste vegetation appropriately such as burning on site following Forestry Commission guidelines for managing invasive non-native plants (Forestry Commission, 2006).

Bats

3.1.8. As it was not possible to arrange access for an internal inspection of Plot 8 The Victory Pub (formally Site 10), it is recommended that an internal inspection is undertaken prior to demolition works to Plot 8 The Victory Pub. Any demolition works should be undertaken following a 'Working Method Statement' (WMS). The WMS would detail how the works should proceed with caution to include that all features suitable for use by bats be removed using hand tools under the supervision of a Natural England bat licence holder. Should a bat roost or evidence of a bat roost be discovered, it would be necessary for works to halt immediately and Natural England be consulted on how to proceed, as if bats are disturbed or a roost damaged or destroyed, an offence will have been committed under national and European legislation.

3.1.9. Any necessary clearance or demolition of any buildings with the potential to be used by breeding birds should be undertaken outside of the bird breeding season, i.e. between September and February inclusive, or be conducted under an ecological watching brief.

3.2. **Ecological Enhancements**

3.2.1. As the government's National Planning Policy Framework (NPPF) and the Camden Core Strategy encourage ecological enhancement on development sites, the following suggestions are made to enhance the value of the plots for biodiversity following the completion of the development:

- Use of predominantly native trees and shrubs of could be included in the landscape design for the developed plots;
- Bird boxes and bat boxes suitable for locally occurring species could be installed on the outside of the new buildings or on retained mature trees;
- Provision of native hedgerow and shrub species to provide suitable habitat for hedgehogs;
- Provision of native hedgerow and shrub species to provide suitable habitat for bats;
- Incorporation of green or brown roofs in to the development; and
- Planting of species which attract insects e.g. rowan (Sorbus aucuparia), honey suckle (Lonicera periclymenum) and evening primrose (Oenothera sp.) would enhance the habitat for invertebrates and foraging bat species.

4.0 CONCLUSIONS

4.1.1. There are two statutory designated sites and 30 non-statutory designated sites within 2km of the Regent's Park Estate boundary, the closest of which is less than 10m from the Regent's Park Estate boundary. None of the plots should be negatively impacted by the development.

4.1.2. A number of records of species protected by legislation and species protected by planning policy, namely breeding birds, invertebrates and hedgehog have been recorded within 1km of the development plot boundaries.

4.1.3. Scattered broadleaved woodland, scattered broadleaved trees, species poor hedge, species poor hedge with trees, amenity grassland, fence, building, introduced shrub and introduced shrub / scattered broadleaved woodland mosaic were recorded across the majority of the plots during extended Phase 1 habitat surveys.

4.1.4. The scattered woodland, scattered trees, hedges and buildings provide suitable habitat for breeding birds. Provided that the recommendations for mitigation made within this report are followed the development should be compliant with legislation with respect to breeding birds.

4.1.5. Invasive species recorded on Plot 8 The Victory Pub (formally Site 10) should be eradicated following best practice guidelines. Overall, the site has a low potential for bats, however, due to the inability to survey Plot 8 The Victory Pub (formally Site 10), any demolition works must be preceded by development of a Working Method Statement and supervised by appropriately Natural England licenced personnel.

Appendix 1: Desk Study, Extended Phase 1 Habitat Survey and External Inspection for Bats' (Thomson Ecology, October 2014)

Desk Study and Extended Phase 1 Habitat Survey and External Building Inspection for Bats Regent's Park Estate

For

Campbell Reith Hill LLP

Project No.: ACAM206 / 005 / 001/ 002

October 2014

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Project Number	Report No.	Revision No.	Date of Issue
ACAM206	005	002	16/10/2014

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Checked by:	David Prys Jones		Senior Ecologist
Approved by:	Daniel Atter		Principal Ecologist

Contents

1. Summary and Main Recommendations

1.1 Summary

1.1.1 London Borough of Camden are seeking to redevelop eleven sites within Regent's Park Estate. It is understood that the development will include the construction of new residential units.

1.1.2 The brief was to undertake a desk study and an extended Phase 1 habitat survey, plus an external inspection for bats of trees and buildings within the development site. 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.

1.1.3 The main findings of the desk study were that the development is located within 2km of two statutory, 30 non-statutory designated sites, and priority habitats. In addition, the desk study found records of protected species and species of conservation concern within 1km of the site. These included invertebrates, birds and hedgehog.

1.1.4 The development is unlikely to have an impact on designated sites or priority habitats as the site is in an already heavily urbanised area and will be confined to the site boundary.

1.1.5 During the extended phase 1 habitat survey the site was found to support scattered broadleaved woodland, scattered broadleaved trees, species poor hedge, species poor hedge with trees, amenity grassland, fence, building, introduced shrub and introduced shrub / scattered broadleaved woodland mosaic. Two of the hedgerows could be classified as Habitats of Principal Importance (HPIs), whereas some of the sites could be classified as the London Priority Habitat type 'London's Parks and and Green Spaces. In addition, habitat occurs on site that is suitable for breeding birds and hedgehogs. All birds, eggs and nests are protected from damage and destruction under the Wildlife and Countryside Act 1981, as amended. Hedgehogs are listed as a species of principal importance under Section 41 of the NERC Act 2006.

1.1.6 During the external inspection for bats of trees and buildings, nine buildings were inspected, of which four were assessed to have low potential to support roosting bats (St Bede's Hall, Newby Overbuilds, Staeveley Ovebuildsr and Victory Public House). As bats are strictly protected by European and national legislation and planning policy, further survey of these buildings is recommended, as outlined below, should the proposals require demolition or extensive modification to these buildings. The remaining buildings (Dick Collins Community Hall, Cape of Good Hope, Troutbeck Overbuild, Camden People's Theatre and Victory Public House Annex) were assessed as having negligible potential to support roosting bats. None of the trees within the survey area were assessed as having the potential to support roosting bats.

1.1.7 The mitigation proposals set out below should ensure that the development is compliant with the law and planning policy on these with respect to priority habitats, breeding birds and hedgehogs.

1.2 Main Recommendations

1.2.1 The following measures are recommended in order for the development to comply with relevant biodiversity legislation and policy:

- Hedgerows PHT1 and PHT2 in Newlands Open Space should be replaced on at least a like for like basis if they are to be removed by the development;
- Proposals for the site should include provision of amenity greenspace, incorporating some of the ecological enhancements recommended below;
- Necessary clearance of all trees and shrubs should be undertaken outside of the bird breeding season, *i.e.* between September and February inclusive, or be conducted under an ecological watching brief;
- Wall cotoneaster and Virginia creeper should be removed from the site and disposed of appropriately.

1.2.2 The following measures could be implemented to enhance the site for biodiversity:

- Use of predominantly native trees and shrubs of could be included in the landscape design for the developed site (see Table 4);
- Bird boxes and bat boxes suitable for locally occurring species could be installed on the outside of the new buildings or on retained mature trees;
- Provision of native hedgerow and shrub species to provide suitable habitat for hedgehogs;
- Incorporation of green or brown roofs in to the site development; and
- Planting of species which attract insects e.g. rowan (*Sorbus aucuparia*), honey suckle (*Lonicera periclymenum*) and evening primrose (*Oenothera* sp.) would enhance the habitat for invertebrates and foraging bat species.

1.3 Further Survey

1.3.1 If it is necessary to demolish or significantly modify buildings St Bede's Hall, Newby Overbuilds, Staveley Overbuilds and Victory Public House assessed to have low potential to support roosting bats, further survey is recommended to determine the presence or likely absence of this species group. In line with best practice guidelines, at least two dusk and/or dawn return to roost bat surveys of the buildings should be undertaken spaced at least a month apart, prior to works commencing. These surveys should be undertaken between May and August inclusive and in September weather dependent. Should roosting bats be found to be present at the site it would be necessary to obtain a European Protected Species Licence (EPSL), informed by an appropriate mitigation strategy.

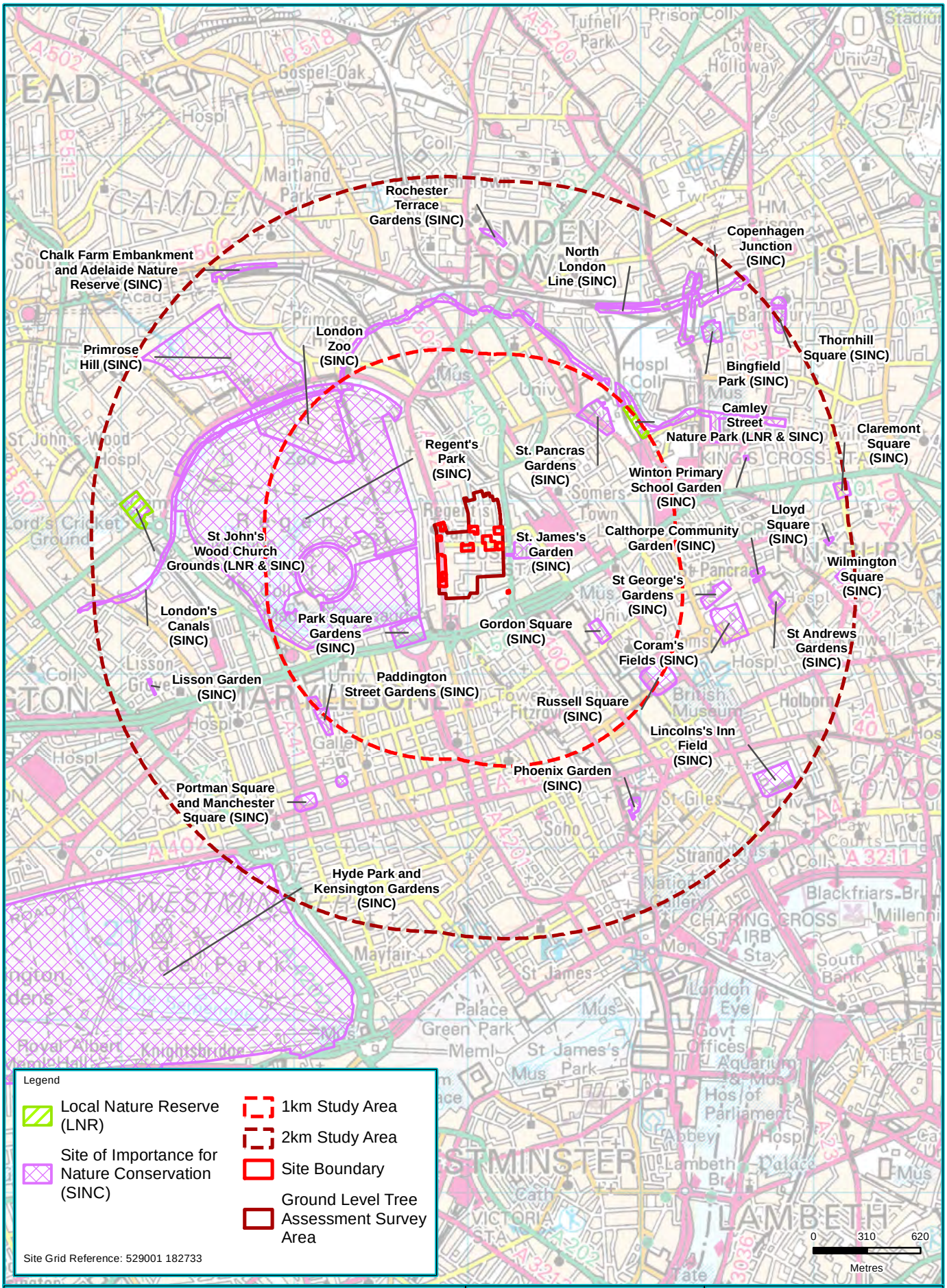

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Figure Title: Site Location and Desk Study Results		Drawn: AC	Checked: NS
		Date: 01/10/2014	Date: 01/10/2014

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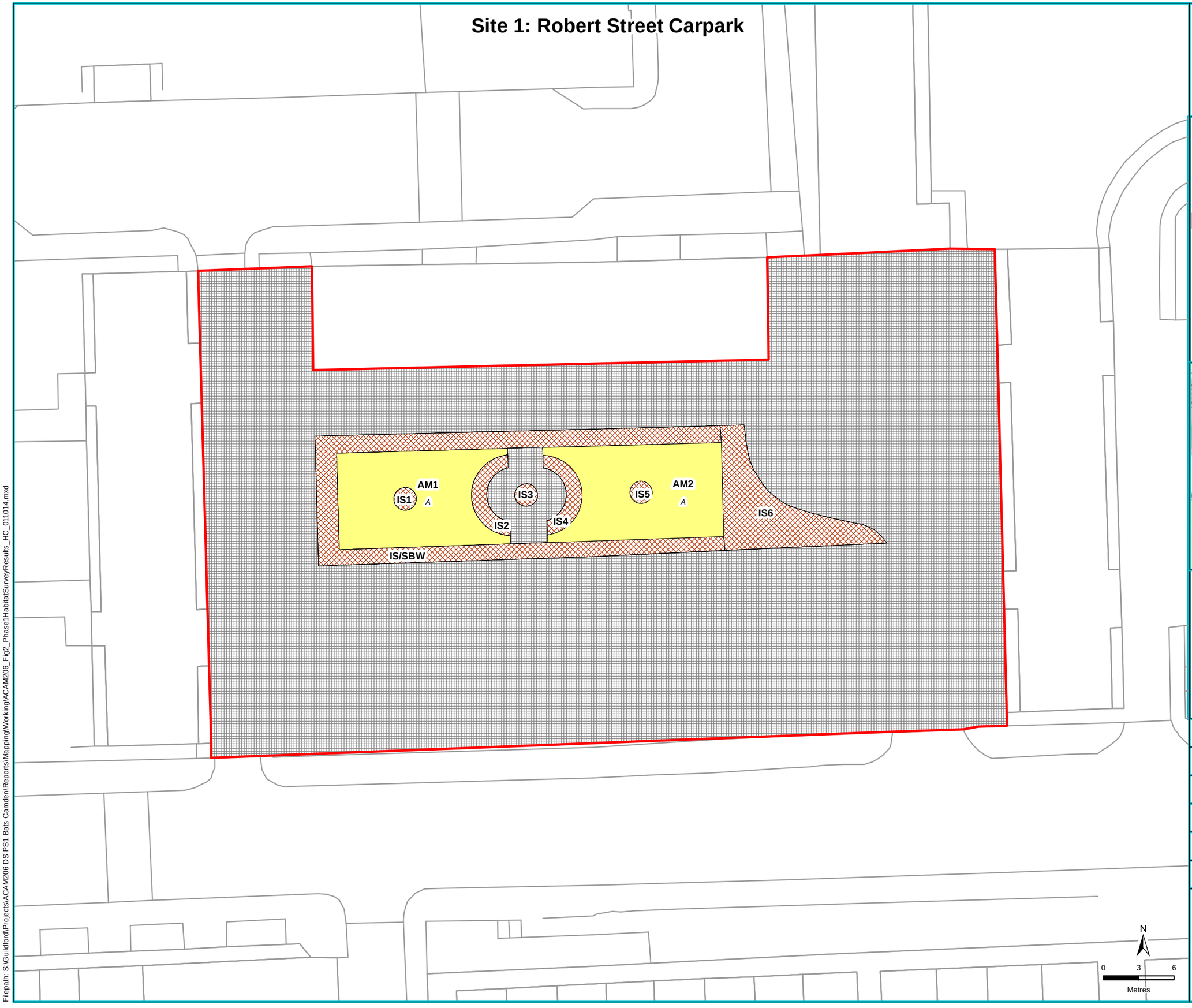
Site 1: Robert Street Carpark



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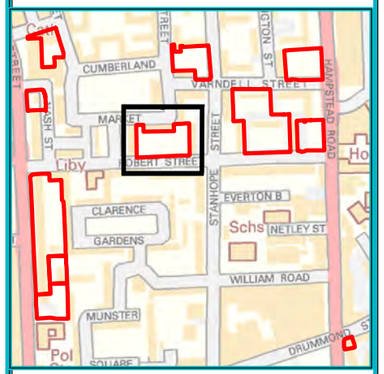
Legend

- Amenity Grassland (*A*)
- Introduced Shrub
- Hard Standing
- Site Boundary



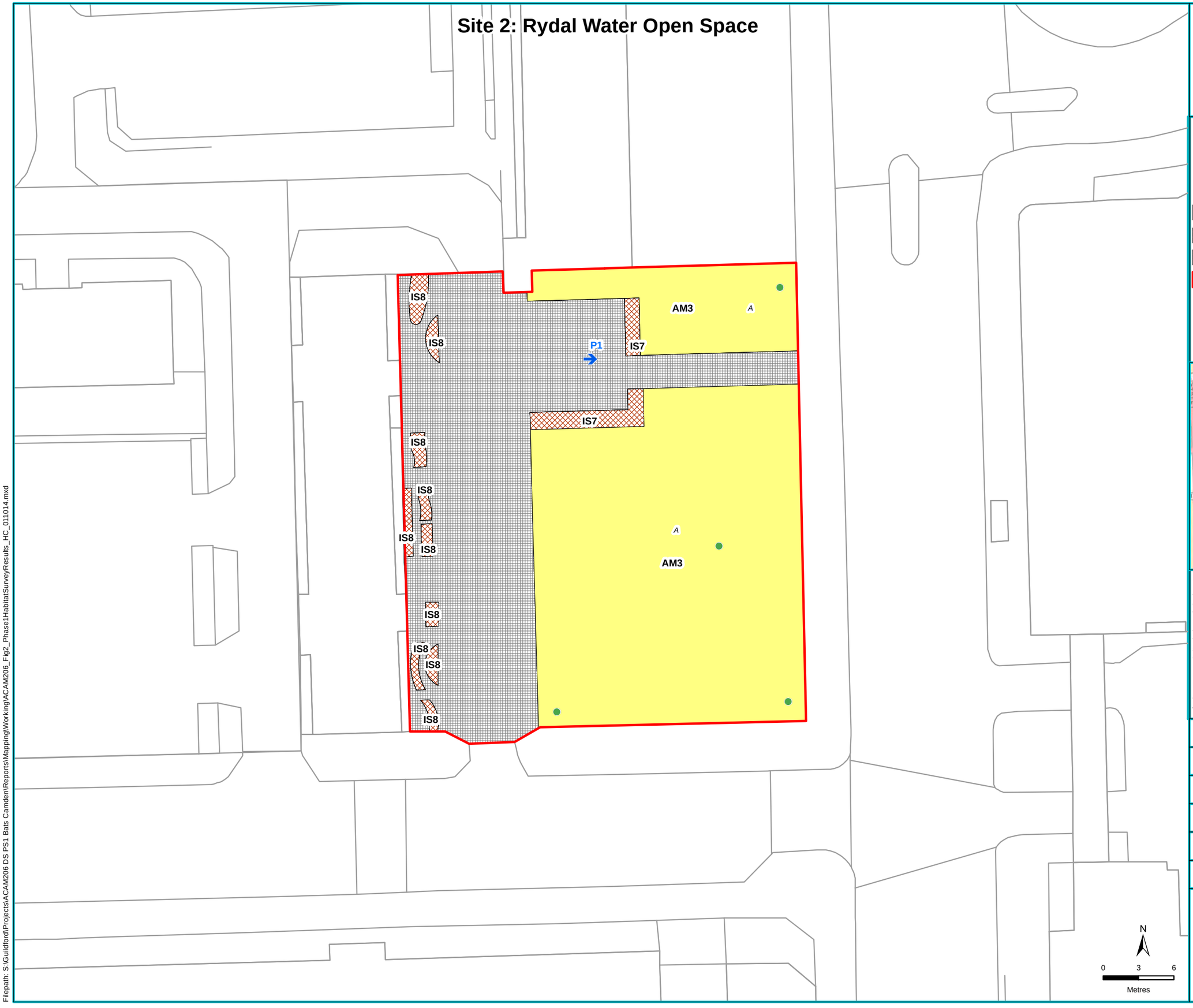
Site Grid Reference: 529,001 182,733

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a Phase 1 baseline habitat survey. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, 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.

Drawing Ref	ACAM206/17157/1
Scale at A3	1:300
Drawn: HC	Checked: AC
Date: 03/10/2014	Date: 03/10/2014
Client	Campbell Reith Hill LLP
Figure Number	2a
Figure Title	Extended Phase 1 Habitat Survey Results Site 1

Filepath: S:\Guildford\Projects\ACAM206 DS PS1 Bats Camden\Reports\Mapping\Working\ACAM206_Fig2_Phase1HabitatSurveyResults_HC_011014.mxd

Site 2: Rydal Water Open Space



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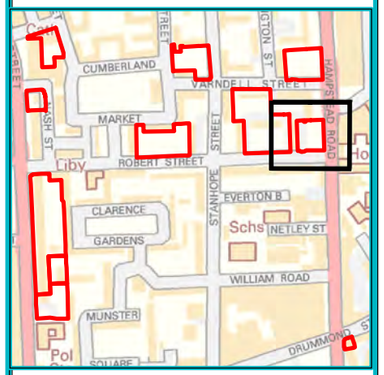
Legend

- Photograph Location and Direction
- Scattered Broadleaved Trees
- Amenity Grassland (*A*)
- Introduced Shrub
- Hard Standing
- Site Boundary



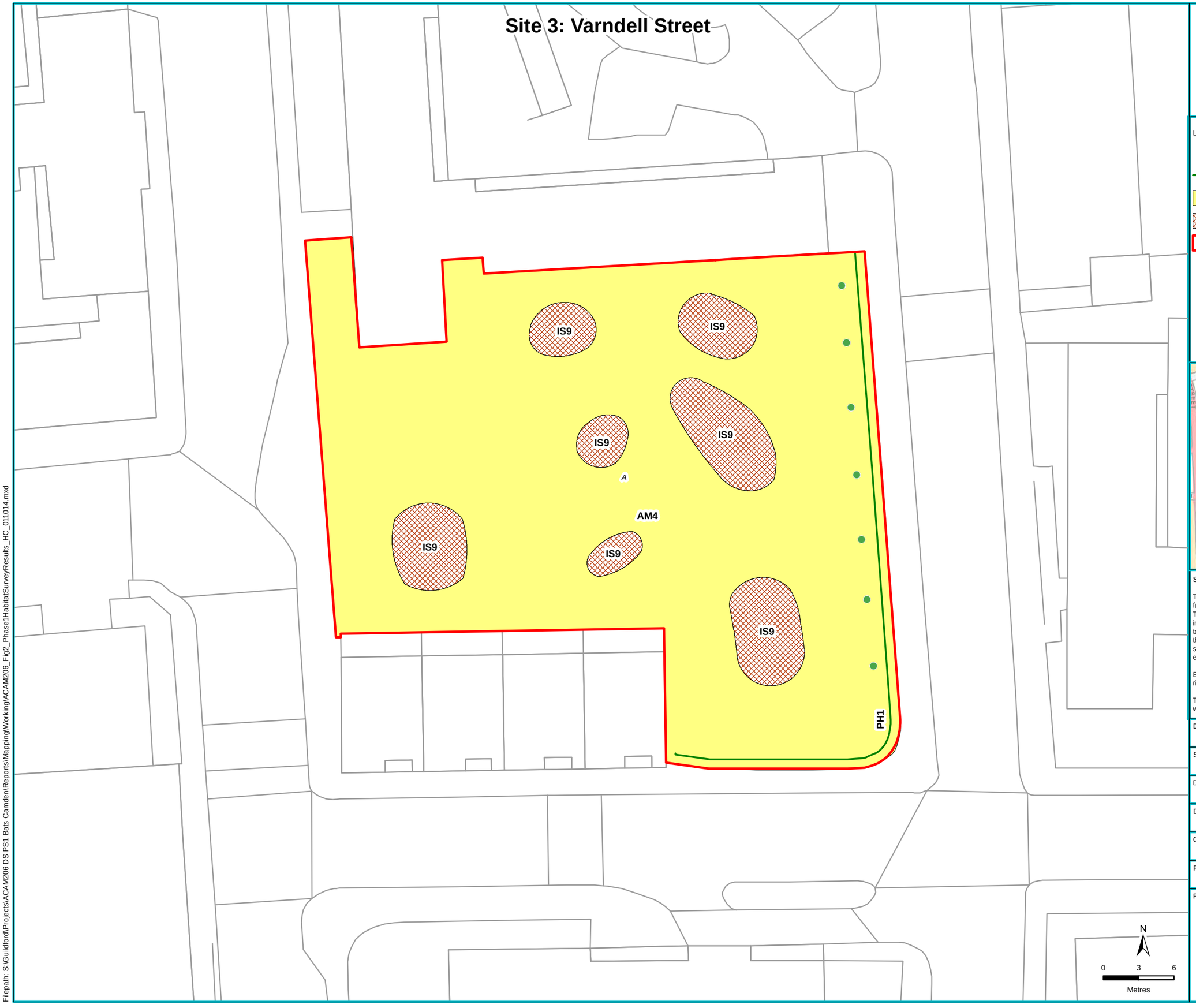
Site Grid Reference: 529,189 182,739

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a Phase 1 baseline habitat survey. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, 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.

Drawing Ref	ACAM206/17158/1
Scale at A3	1:300
Drawn: HC	Checked: AC
Date: 03/10/2014	Date: 03/10/2014
Client	Campbell Reith Hill LLP
Figure Number	2b
Figure Title	Extended Phase 1 Habitat Survey Results Site 2

Filepath: S:\Guildford\Projects\ACAM206 DS PS1 Bats Camden\Reports\Mapping\Working\ACAM206_Fig2_Phase1HabitatSurveyResults_HC_011014.mxd

Site 3: Varndell Street



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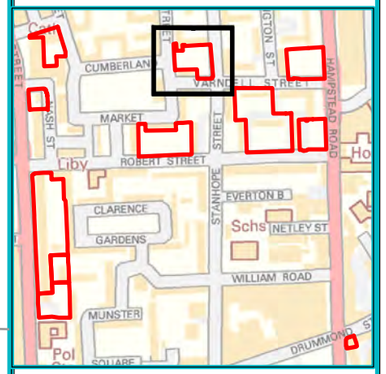
Legend

- Scattered Broadleaved Trees
- Species-poor Hedge
- Amenity Grassland (*A*)
- Introduced Shrub
- Site Boundary



Site Grid Reference: 529,037 182,833

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a Phase 1 baseline habitat survey. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, 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.

Drawing Ref	ACAM206/17159/1
Scale at A3	1:300
Drawn: HC	Checked: AC
Date: 03/10/2014	Date: 03/10/2014
Client	Campbell Reith Hill LLP
Figure Number	2c
Figure Title	Extended Phase 1 Habitat Survey Results Site 3

Filepath: S:\Guildford\Projects\ACAM206 DS PS1 Bats Camden\Reports\Mapping\Working\ACAM206_Fig2_Phase1HabitatSurveyResults_HC_011014.mxd

Site 4: Newlands Open Space

PHT1

AM5

PHT2

N

0 3 6

Metres

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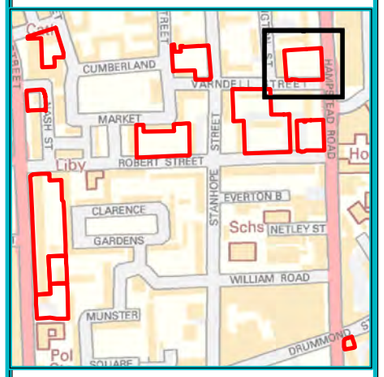
Legend

- Scattered Broadleaved Trees
- Species-poor Hedge With Trees
- Amenity Grassland (*A*)
- Hard Standing
- Site Boundary



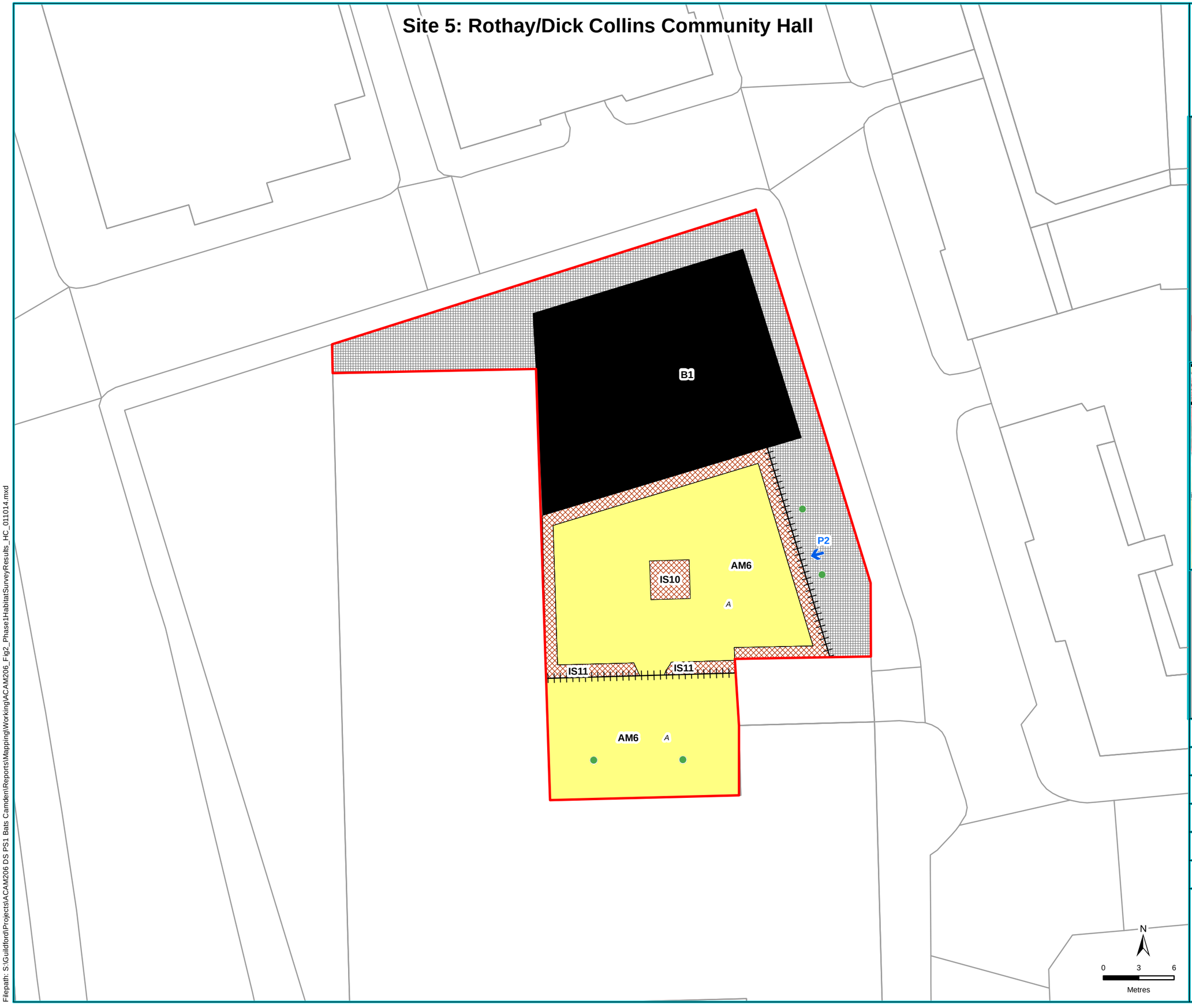
Site Grid Reference: 529,180 182,830

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a Phase 1 baseline habitat survey. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, 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.

Drawing Ref	ACAM206/17160/1
Scale at A3	1:300
Drawn: HC	Checked: AC
Date: 03/10/2014	Date: 03/10/2014
Client	Campbell Reith Hill LLP
Figure Number	2d
Figure Title	Extended Phase 1 Habitat Survey Results Site 4

Filepath: S:\Guildford\Projects\ACAM206 DS PS1 Bats Camden\Reports\Mapping\Working\ACAM206_Fig2_Phase1HabitatSurveyResults_HC_011014.mxd

Site 5: Rothay/Dick Collins Community Hall



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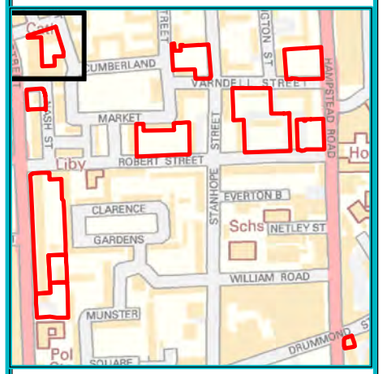
Legend

- Photograph Location and Direction
- Scattered Broadleaved Trees
- Fence
- Amenity Grassland (*A*)
- Introduced Shrub
- Building
- Hard Standing
- Site Boundary



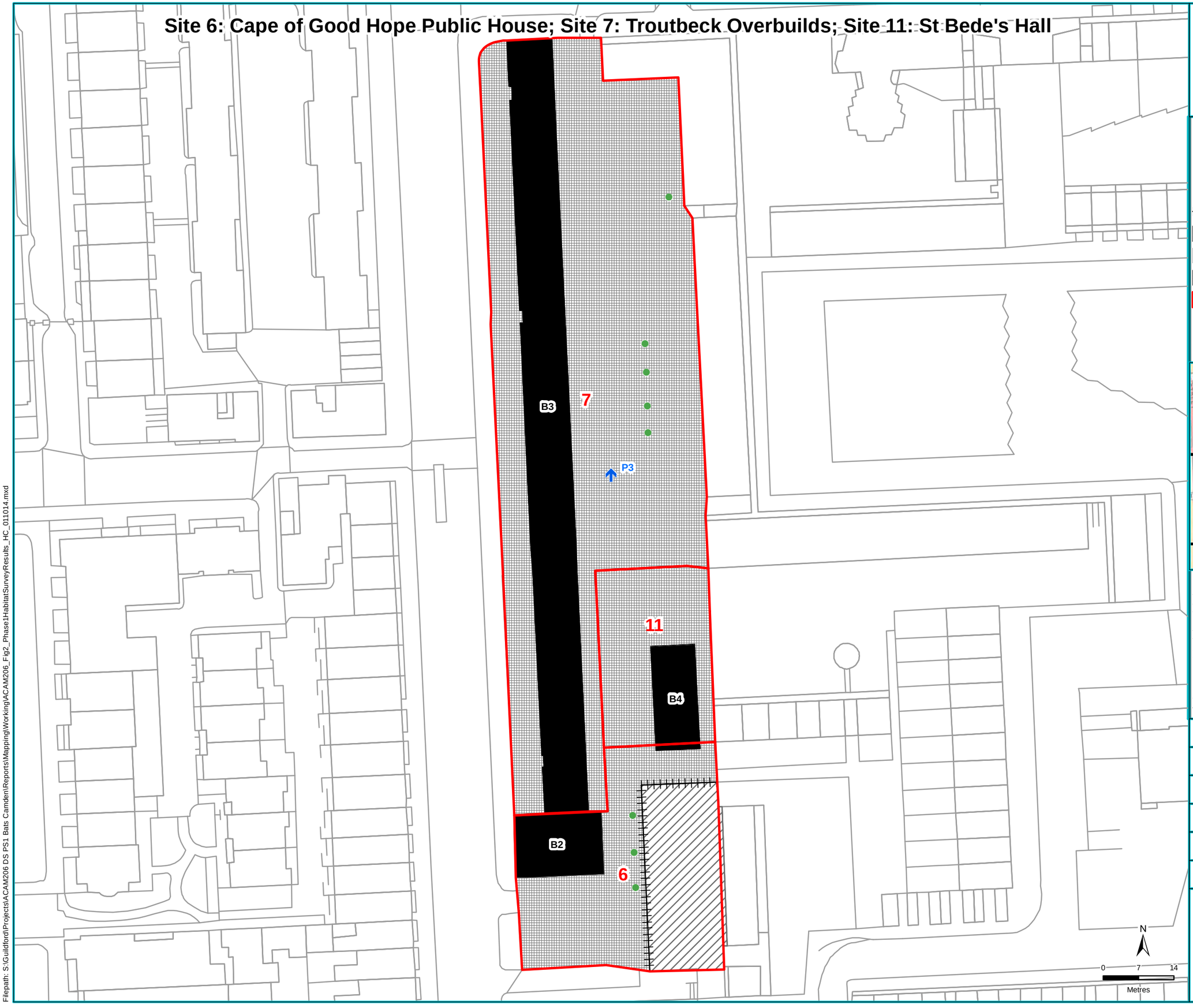
Site Grid Reference: 528,851 182,852

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a Phase 1 baseline habitat survey. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, 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.

Drawing Ref	ACAM206/17161/1
Scale at A3	1:300
Drawn: HC	Checked: AC
Date: 03/10/2014	Date: 03/10/2014
Client	Campbell Reith Hill LLP
Figure Number	2e
Figure Title	Extended Phase 1 Habitat Survey Results Site 5

Filepath: S:\Guildford\Projects\ACAM206 DS PS1 Bats Camden\Reports\Mapping\Working\ACAM206_Fig2_Phase1HabitatSurveyResults_HC_011014.mxd

Site 6: Cape of Good Hope Public House; Site 7: Troutbeck Overbuilds; Site 11: St Bede's Hall



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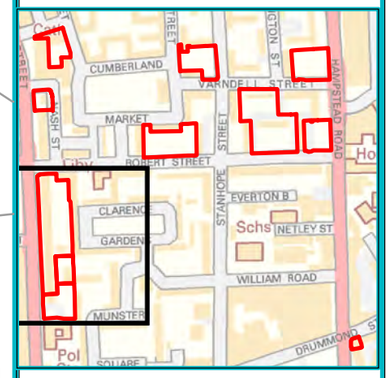
Legend

- Photograph Location and Direction
- Scattered Broadleaved Trees
- Fence
- No Access
- Building
- Hard Standing
- Site Boundary



Site Grid Reference: 528,856 182,599

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a Phase 1 baseline habitat survey. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, 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.

Drawing Ref	ACAM206/17162/1
Scale at A3	1:700
Drawn: HC	Checked: AC
Date: 03/10/2014	Date: 03/10/2014
Client	Campbell Reith Hill LLP
Figure Number	2f

Figure Title

Extended Phase 1 Habitat Survey Results
Site 6, 7 and 11

Filepath: S:\Guildford\Projects\ACAM206 DS PS1 Bats Camden\Reports\Mapping\Working\ACAM206_Fig2_Phase1HabitatSurveyResults_HC_011014.mxd

Site 8: Staverly/ Newby Overbuilds

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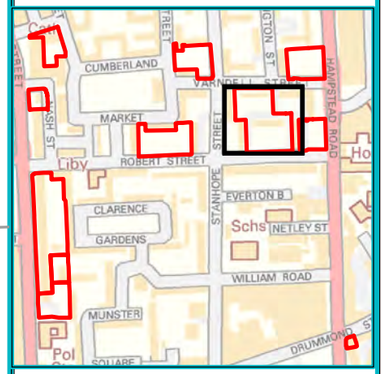
Legend

- Photograph Location and Direction
- Scattered Broadleaved Trees
- Species-poor Hedge
- Amenity Grassland (*A*)
- Introduced Shrub
- Building
- Hard Standing
- Site Boundary



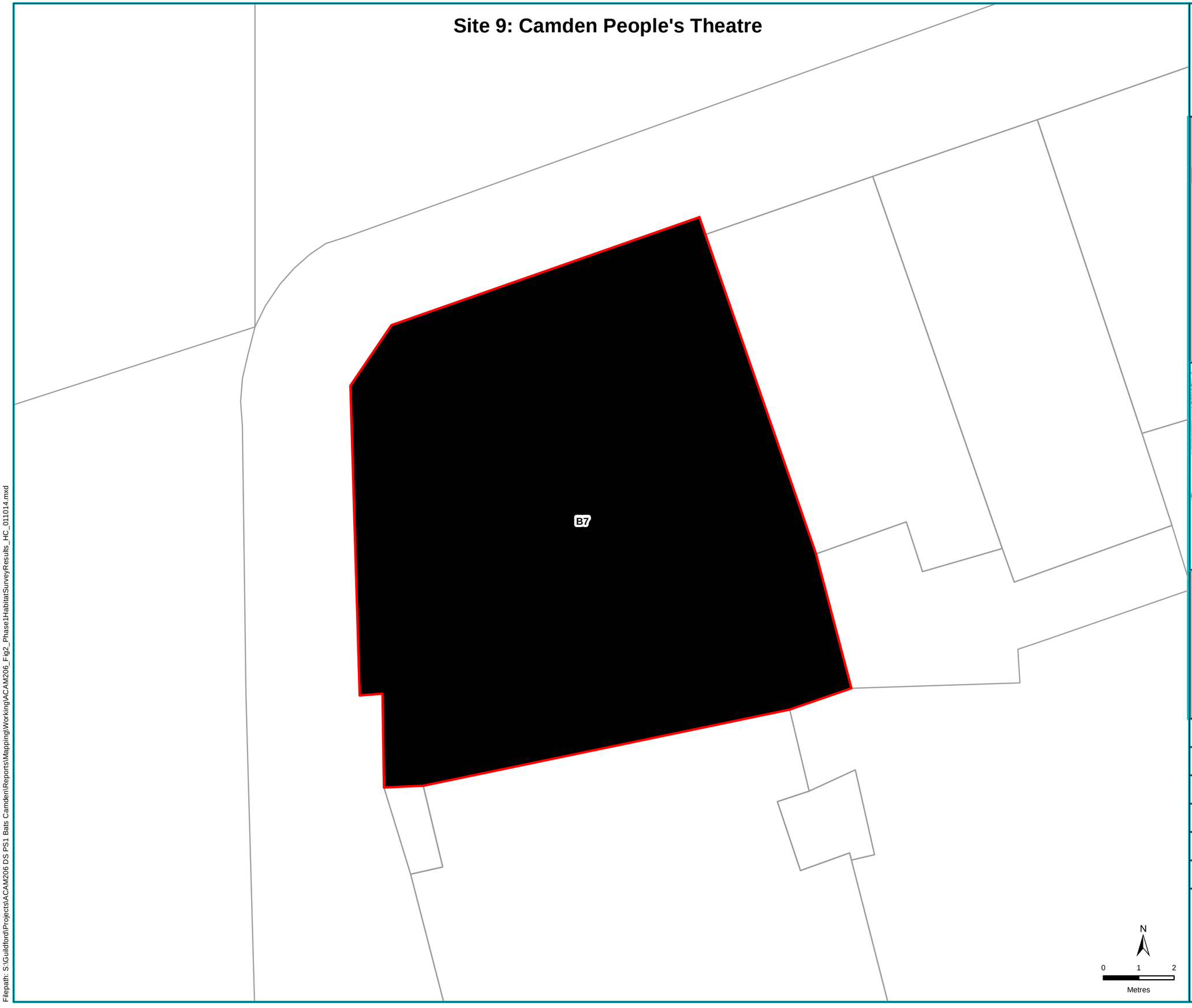
Site Grid Reference: 529,126 182,757

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a Phase 1 baseline habitat survey. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, 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.

Drawing Ref	ACAM206/17163/1
Scale at A3	1:400
Drawn: HC	Checked: AC
Date: 03/10/2014	Date: 03/10/2014
Client	Campbell Reith Hill LLP
Figure Number	2g
Figure Title	Extended Phase 1 Habitat Survey Results Site 8

Filepath: S:\Guildford\Projects\ACAM206 DS PS1 Bats Camden\Reports\Mapping\Working\ACAM206_Fig2_Phase1HabitatSurveyResults_HC_011014.mxd

Site 9: Camden People's Theatre



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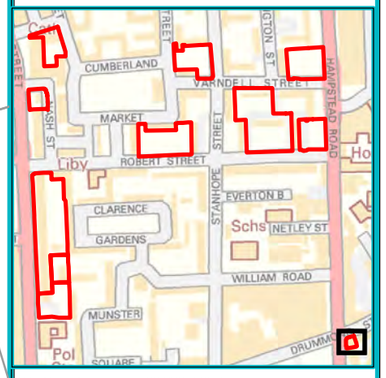
Legend

- Building
- Site Boundary



Site Grid Reference: 529,238 182,475

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a Phase 1 baseline habitat survey. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, 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.

Drawing Ref	ACAM206/17164/1
Scale at A3	1:100
Drawn: HC	Checked: AC
Date: 03/10/2014	Date: 03/10/2014
Client	Campbell Reith Hill LLP
Figure Number	2h
Figure Title	Extended Phase 1 Habitat Survey Results Site 9

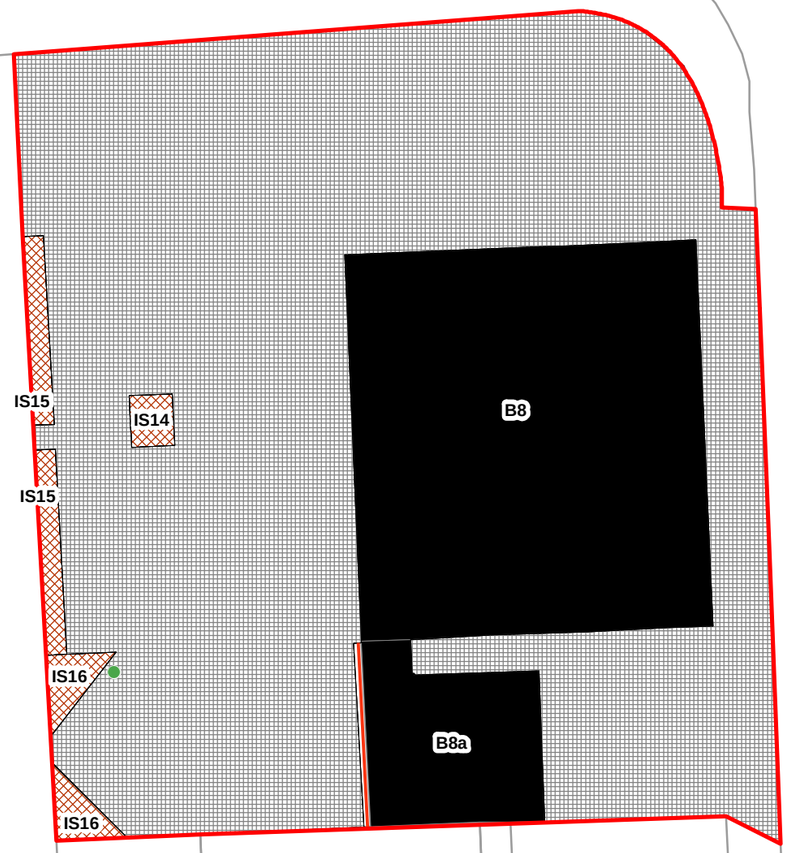
N

0 1 2

Metres

Filepath: S:\Guildford\Projects\ACAM206 DS PS1 Bats Camden\Reports\Mapping\Working\ACAM206_Fig2_Phase1HabitatSurveyResults_HC_011014.mxd

Site 10: Victory Public House



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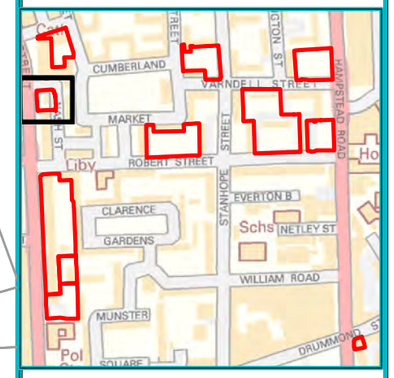
Legend

- Scattered Broadleaved Trees
- Wall
- Introduced Shrub
- Building
- Hard Standing
- Site Boundary



Site Grid Reference: 528,839 182,784

This map has been drawn at a sufficient level of accuracy to fulfil the requirements of a Phase 1 baseline habitat survey. The level of accuracy depends on both the size of the area involved and the base mapping. Every effort has been made to create a map that is as accurate as possible. However, 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.

Drawing Ref	ACAM206/17165/1
Scale at A3	1:200
Drawn: HC	Checked: AC
Date: 03/10/2014	Date: 03/10/2014
Client	Campbell Reith Hill LLP
Figure Number	2i
Figure Title	Extended Phase 1 Habitat Survey Results Site 10

N

0 2 4

Metres

Filepath: S:\Guildford\Projects\ACAM206 DS PS1 Bats Camden\Reports\Mapping\Working\ACAM206_Fig2_Phase1HabitatSurveyResults_HC_011014.mxd

Photograph 1:
North-west corner of Site 2.

Photograph 2:
Amenity grassland in Site 5 as viewed from the east.

Photograph 3:
Site 8 viewed from the south.

Photograph 4:
Site 11 viewed from the east.

Client: Campbell Reith Hill LLP		Drawing Ref: ACAM206/17119/1	
Figure Number: 3		Scale at A4: Not applicable	
Figure Title: Extended Phase 1 Habitat Survey Photographs		Drawn: HC	Checked: AC
		Date: 03/10/2014	Date: 03/10/2014

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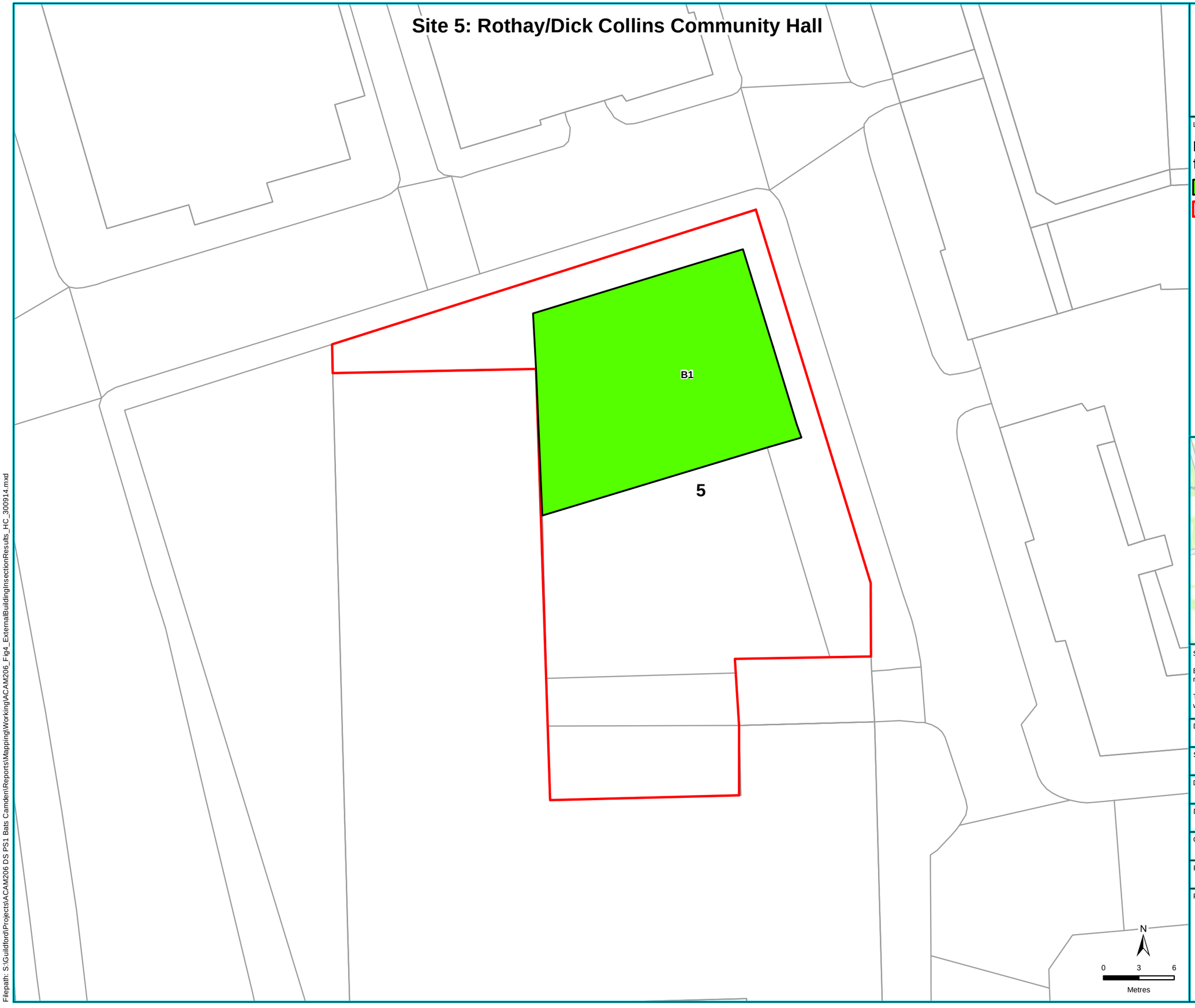
Site 5: Rothay/Dick Collins Community Hall



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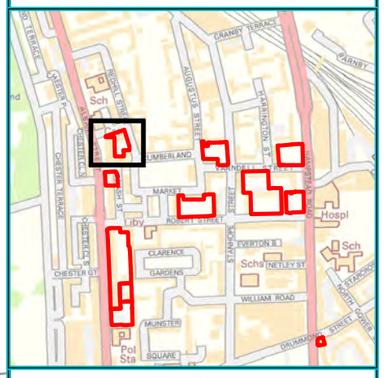
Legend

Potential of Buildings for Bats

- Negligible
- Site Boundary



Site Grid Reference: 528,851 182,852

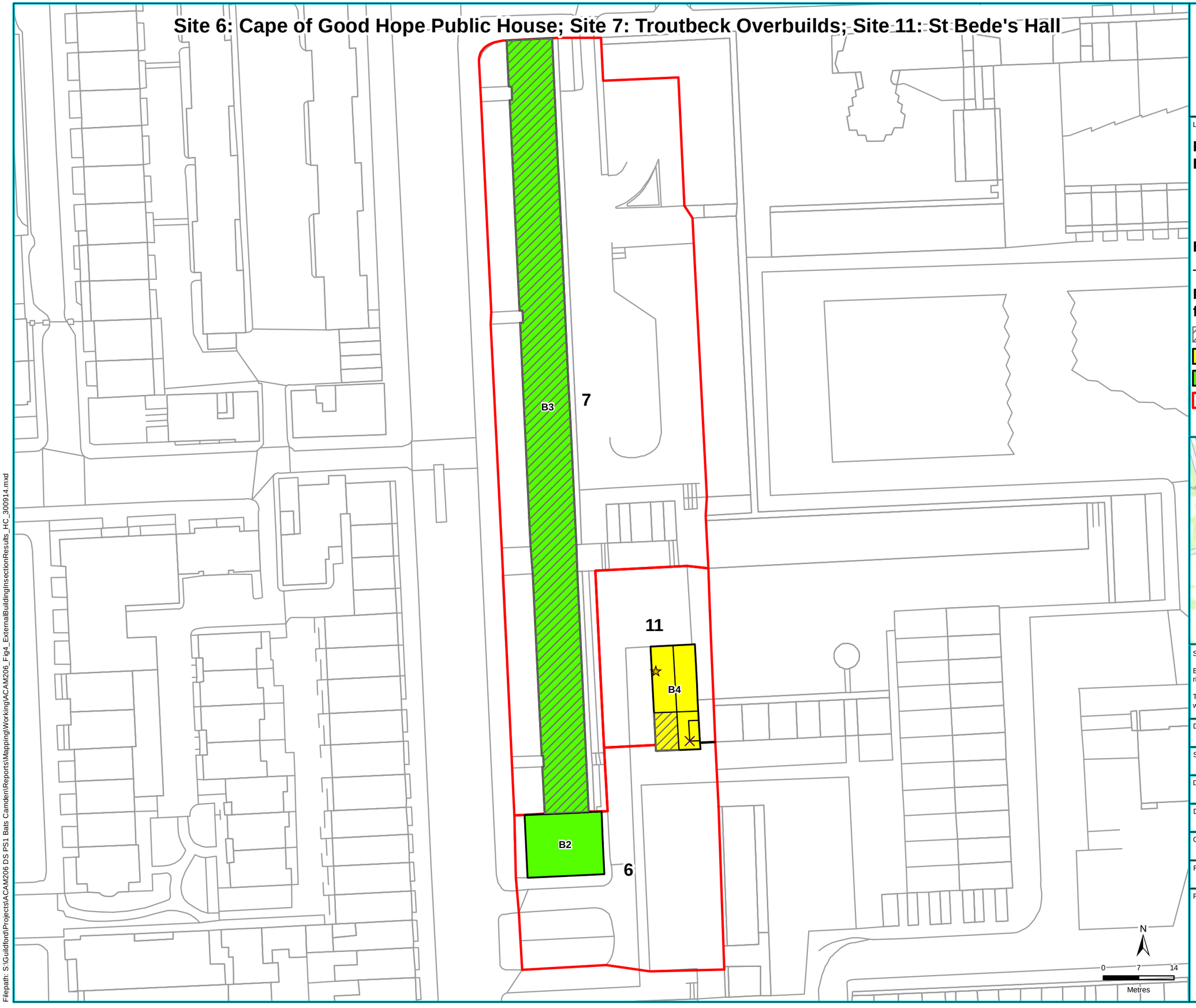
Drawing Ref	ACAM206//17152/1/1
Scale at A3	1:300
Drawn: HC	Checked: AC
Date: 30/09/2014	Date: 30/09/2014
Client	Campbell Reith Hill LLP
Figure Number	4a

Figure Title

External Building Inspection for Bat Results
Site 5

Filepath: S:\Guildford\Projects\ACAM206 DS PS1 Bats Camden\Reports\Mapping\Working\ACAM206_Fig4_ExternalBuildingInsectionResults_HC_300914.mxd

Site 6: Cape of Good Hope Public House; Site 7: Troutbeck Overbuilds; Site 11: St Bede's Hall



Filepath: S:\Guildford\Projects\ACAM206 DS PS1 Bats Camden\Reports\Mapping\Working\ACAM206_Fig4_ExternalBuildingInsectionResults_HC_300914.mxd

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Legend

Potential Bat Access/ Egress Points

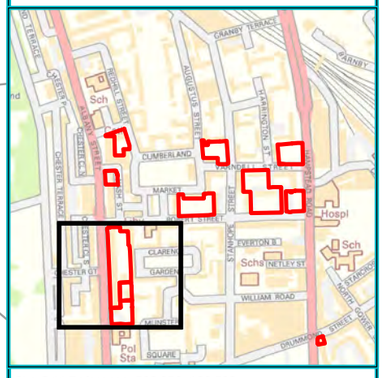
- Gap under tile
- Gap under tile and lifted lead flashing

Building Features

- Roof Lines

Potential of Buildings for Bats

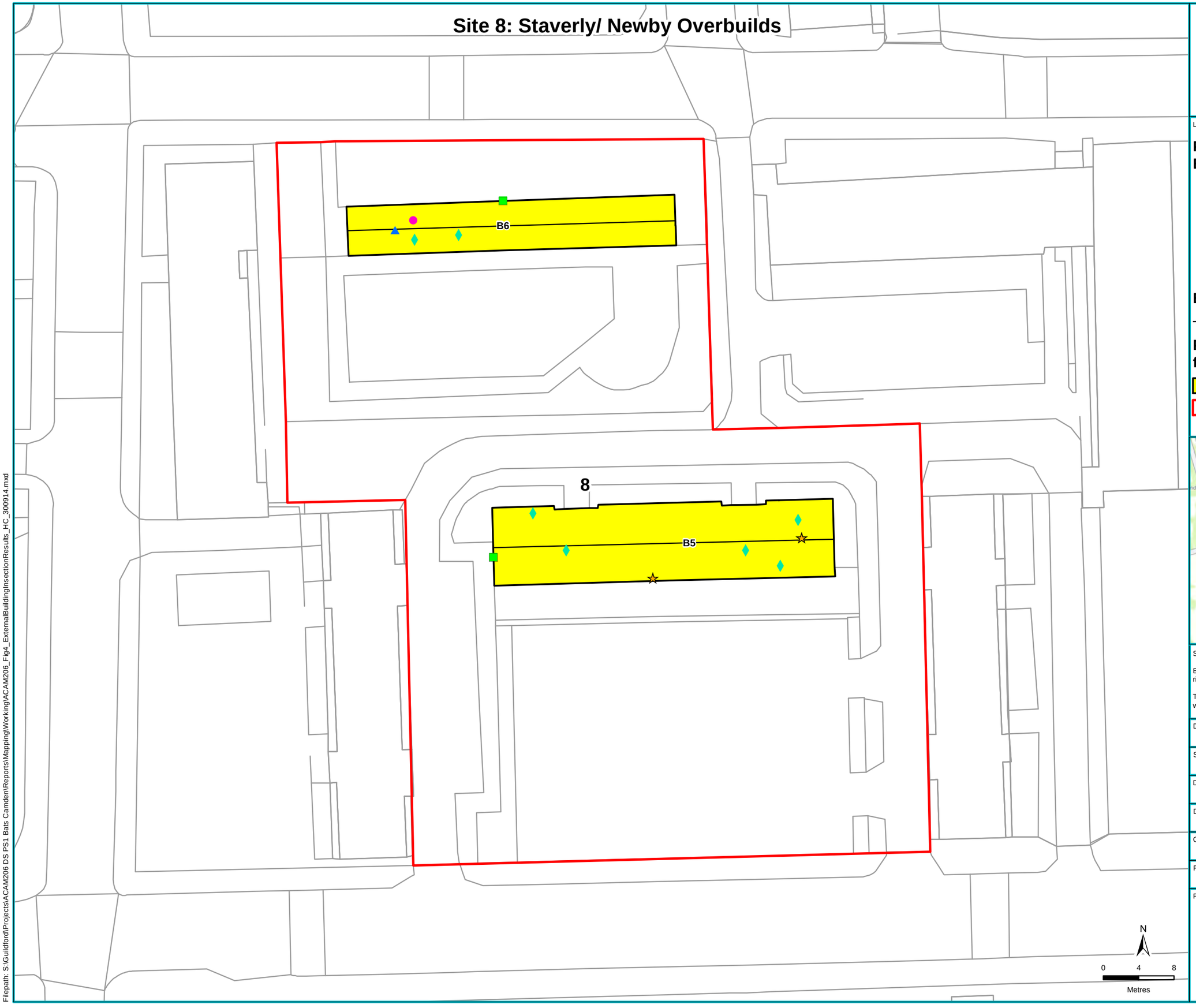
- No View of Roof
- Low
- Negligible
- Site Boundary



Site Grid Reference: 528,856 182,599

Drawing Ref	ACAM206//17153/1/1
Scale at A3	1:700
Drawn: HC	Checked: AC
Date: 30/09/2014	Date: 30/09/2014
Client	Campbell Reith Hill LLP
Figure Number	4b
Figure Title	External Building Inspection for Bat Results Site 6, 7 and 11

Site 8: Staverly/ Newby Overbuilds



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Legend

Potential Bat Access/ Egress Points

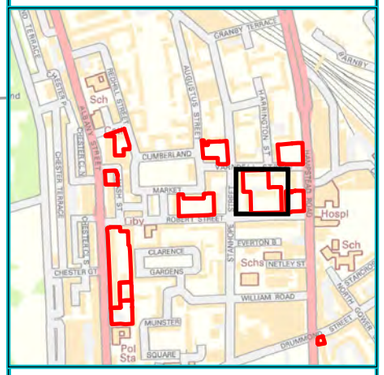
- Damaged ridge tile
- Drainage hole
- Gap under ridge tile
- Gap under tile
- Missing tiles

Building Features

- Roof Lines

Potential of Buildings for Bats

- Low
- Site Boundary



Site Grid Reference: 529,126 182,757

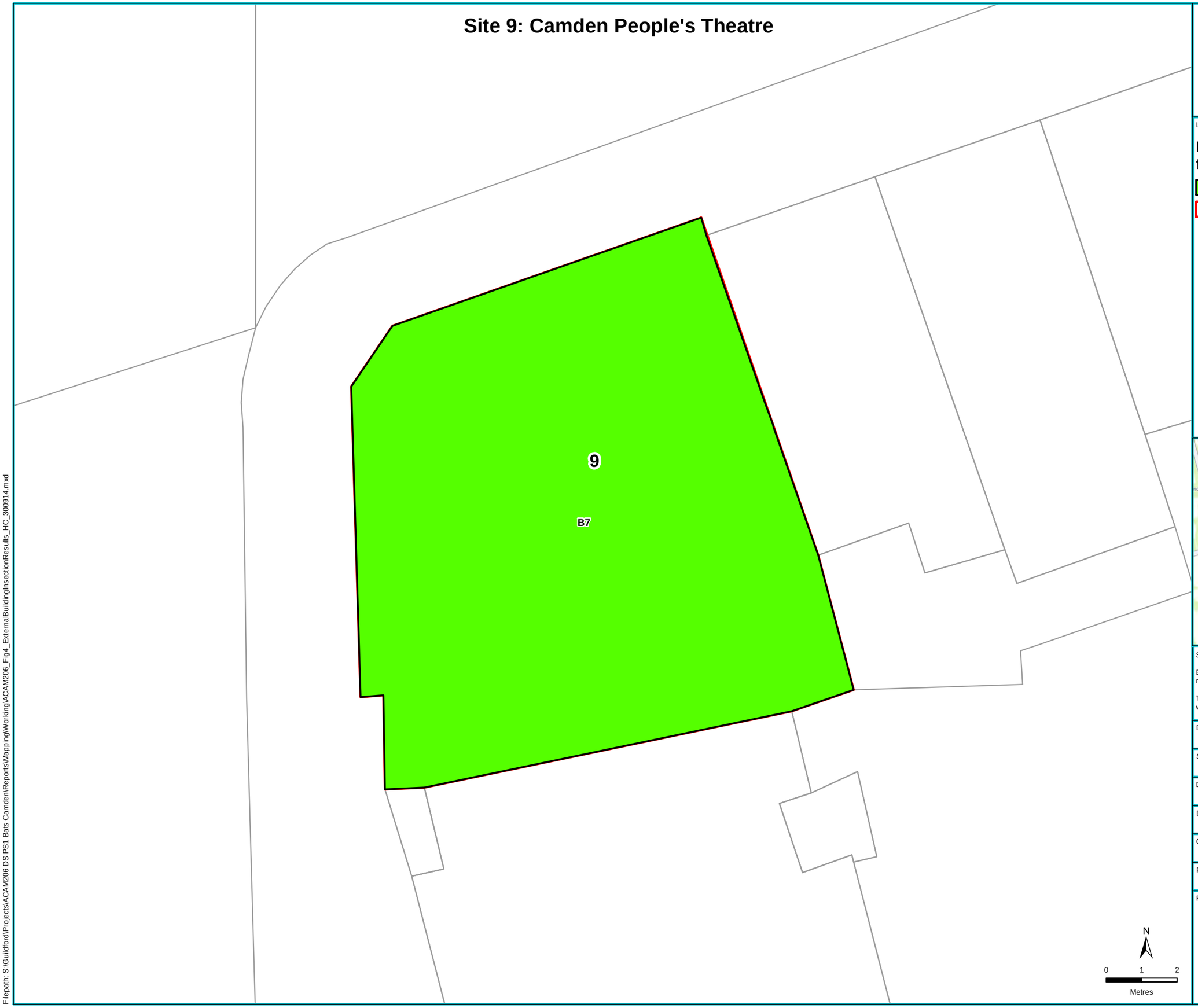
Drawing Ref	ACAM206//17154/1/1
Scale at A3	1:400
Drawn: HC	Checked: AC
Date: 30/09/2014	Date: 30/09/2014
Client	Campbell Reith Hill LLP
Figure Number	4c

Figure Title

External Building Inspection for Bat Results Site 8

Filepath: S:\Guildford\Projects\ACAM206 DS PS1 Bats Camden\Reports\Mapping\Working\ACAM206_Fig4_ExternalBuildingInsectionResults_HC_300914.mxd

Site 9: Camden People's Theatre



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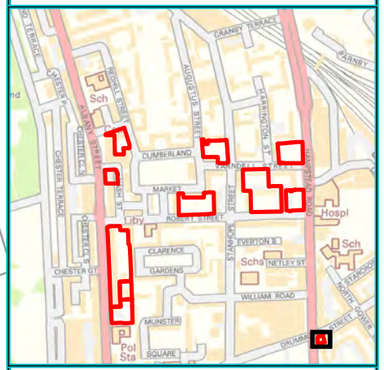
Legend

Potential of Buildings for Bats

- Negligible
- Site Boundary

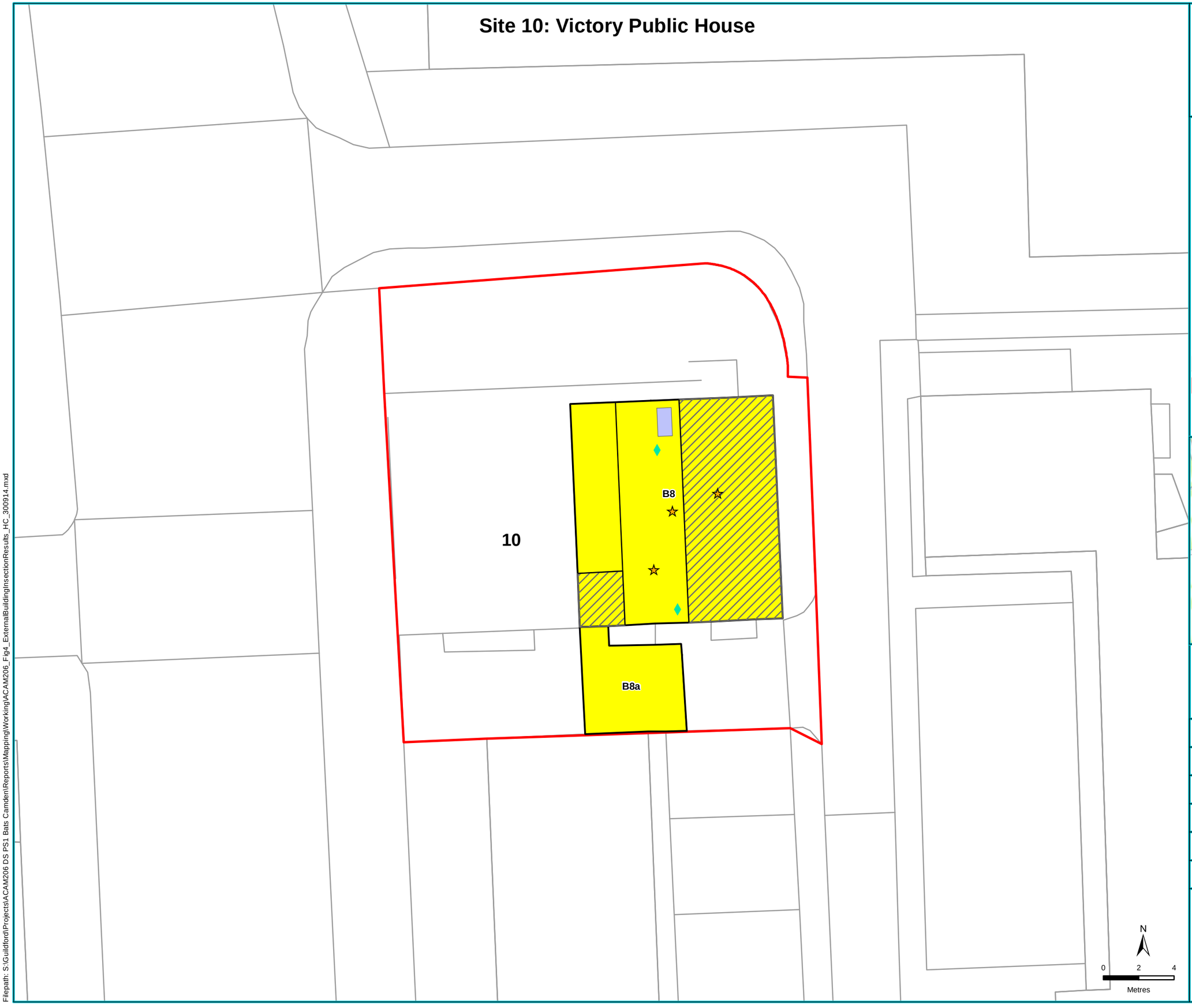


Site Grid Reference: 529,238 182,475

Drawing Ref	ACAM206//17155/1/1
Scale at A3	1:100
Drawn: HC	Checked: AC
Date: 30/09/2014	Date: 30/09/2014
Client	Campbell Reith Hill LLP
Figure Number	4d
Figure Title	External Building Inspection for Bat Results Site 9

Filepath: S:\Guildford\Projects\ACAM206 DS PS1 Bats Camden\Reports\Mapping\Working\ACAM206_Fig4_ExternalBuildingInsectionResults_HC_300914.mxd

Site 10: Victory Public House



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Legend

Potential Bat Access/ Egress Points

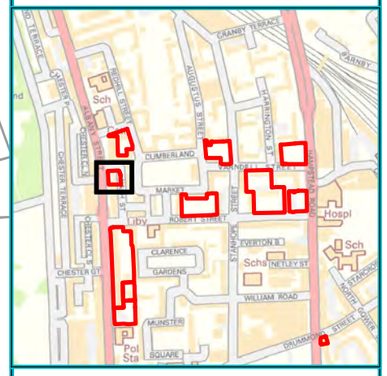
- Gap under tile
- Missing tiles

Building Features

- Roof Lines
- Chimney

Potential of Buildings for Bats

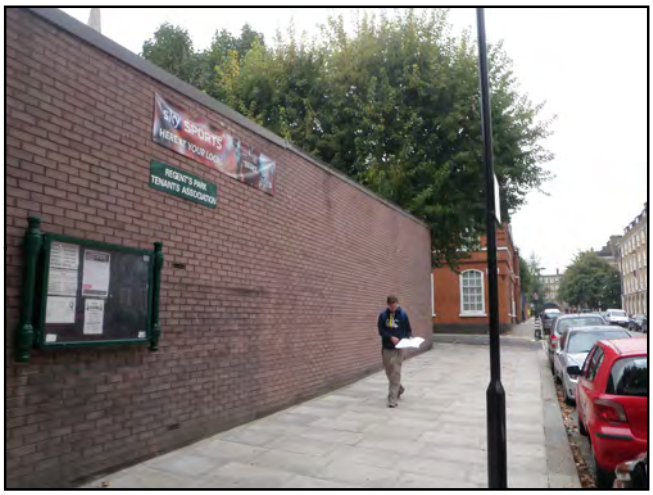
- No View of Roof
- Low
- Site Boundary



Site Grid Reference: 528,839 182,784

Drawing Ref	ACAM206//17156/1/1
Scale at A3	1:200
Drawn: HC	Checked: AC
Date: 30/09/2014	Date: 30/09/2014
Client	Campbell Reith Hill LLP
Figure Number	4e
Figure Title	External Building Inspection for Bat Results Site 10

Filepath: S:\Guildford\Projects\ACAM206 DS PS1 Bats Camden\Reports\Mapping\Working\ACAM206_Fig4_ExternalBuildingInsectionResults_HC_300914.mxd



Photograph 1:
Building 1 (including the Dick Collins Community Hall) was assessed as having negligible potential to support roosting bats.

Photograph 2:
No features suitable for roosting bats were identified on Building 2 (Cavaili Restaurant and Bar).

Photograph 3:
The Troutbeck Overbuilds (Building 3) was also assessed to have negligible potential to support roosting bats.

Photograph 4:
St Bede's Hall (Building 4) is a former church, structure assessed as having low overall potential to support roosting bats.

Client: Campbell Reith Hill LLP		Drawing Ref: ACAM206/17146/1	thomson ecology
Figure Number: 5a		Scale at A4: Not applicable	
Figure Title: External Building Inspection Photographs		Drawn: HC / Checked: AC	
		Date: 08/10/2014 / Date: 08/10/2014	

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Photograph 5:
Due to the presence of features including missing roof tiles, the Newby Overbuilds (Building 5) were assessed to have low overall potential to support roosting bats.

Photograph 6:
Suitable roosting features, including a lifted ridge tile, were identified on the Stavely Overbuilds (Building 6), which was also assessed to have low potential to support roosting bats.

Photograph 7:
The Camden People's Theatre (Building 7) was assessed to have negligible potential to support roosting bats.

Photograph 8:
Missing and loose roof tiles were recorded on the roof of the Victory Pub (Building 8) which was assessed as having low potential to support roosting bats.

Client: Campbell Reith Hill LLP		Drawing Ref: ACAM206/17173/1	thomson ecology
Figure Number: 5b		Scale at A4: Not applicable	
Figure Title: External Building Inspection Photographs		Drawn: HC / Checked: AC	
		Date: 08/10/2014 / Date: 08/10/2014	

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2. Introduction

2.1 Development Background

2.1.1 Eleven sites within the Regent's Park Estate are being considered for replacement housing for residents of residential blocks that will need to be demolished to facilitate HS2. There is a possibility that some of the 11 sites will be considered for development, however as the development proposals have not been finalised, this report assesses all of them. The proposals above are hereafter referred to collectively as 'the development'.

2.1.2 Development could be undertaken on 11 distinct sites (Sites 1-11 on Figures2a to 2i) which combined total approximately 12.6ha within the Regent's Park area (Grid Reference TQ290828), adjacent to the A4201 road in Camden, London, see Figure 1. The areas affected by the development are hereafter referred to as the 'development site'. It is understood that a planning application will be submitted to Camden Borough Council in 2015.

2.2 The Brief and Objectives

2.2.1 CampbellReith commissioned Thomson Ecology on 11th September 2014 to undertake a preliminary ecological assessment of the overall development site. The brief was to:

- Conduct a desk based study comprising the purchase and collation of third-party data on statutory and non-statutory designated sites within 2km of the site, and records of protected species and species of conservation concern within 1km of the site;
- Conduct an extended Phase 1 habitat survey of 11 sites, as seen from the provisional plan provided by CampbellReith;
- Conduct a bat survey comprising external inspections of a maximum of six buildings and up to 100 trees on the 11 sites;
- Provide a combined report that covers the 11 sites. This report will detail the methods and results of the extended Phase 1 habitat surveys, desk study and bat inspections, any ecological constraints identified and recommendations for further surveys and mitigation, if required; and
- Appropriate digitised mapping.

2.3 Limitations

2.3.1 The species data collated during the desk study is mainly derived from records submitted by members of the public and *ad hoc* surveys undertaken by volunteers. Therefore, it should not be taken as a definitive list of the protected species and other species of conservation concern that occur in the local area.

2.3.2 An area within the south of Rothay/Dick Collins Community Hall was not accessible at the time of survey. However, the site could be viewed from a distance and has been classified in this manner.

2.3.3 During the external inspection of buildings for bats, the view to the roof structure of six of the buildings was limited, largely because of the urban / inaccessible nature of the area, as summarised in Table 1 below.

Table 1: Limitations to external inspection of buildings for bats.

Building	Name	Limitation
B1	Dick Collins Community Hall	It was not possible to get a full view of the flat roof. As flat roofs do not typically support features suitable for roosting bats, this limitation is not considered to be significant.
B2	Cape of Good Hope	It was not possible to get a full view of the flat roof. As flat roofs do not typically support features suitable for roosting bats, this limitation is not considered to be significant.
B3	Troutbeck Overbuild	It was not possible to get a full view of the flat roof. As flat roofs do not typically support features suitable for roosting bats, this limitation is not considered to be significant.
B4	St Bede's Hall	It was not possible to get access to amenity area to the east of the building, although it was possible to view the roof of this side of the building from a distance using binoculars. It was not possible to view the south western side of the roof comprising the church tower. Although it is possible some features present on the building were not identified, these limitations are considered not to have had a significant impact upon our assessment of the building.
B7	Camden People's Theatre	It was not possible to get a full view of the flat roof. As flat roofs do not typically support features suitable for roosting bats, this limitation is not considered to be significant.
B8	Victory Public House	Restricted view to the eastern part of the roof. Although it is possible some features present on the building were not identified, these limitations are unlikely to have had a significant impact upon our assessment of the building.

3. Desk Study and Extended Phase 1 Habitat Survey

3.1 Methodology

Desk Study

3.1.1 A study area was defined that encompassed the development site and all land within 2km of the perimeter of the site, see Figure 1. A request for biological data was made to Greenspace Information for Greater London (GiGL) on 15th September 2014 with a response requested as soon as possible. Records of designated sites were sought for the full study area, whereas records for species were sought for part of the study area encompassing the site and within 1km of the perimeter of the site.

3.1.2 In addition, published data was consulted including the following:

- The Multi-Agency Geographical Information for the Countryside (MAGIC);
- Camden Core Strategy 2010-2025; and
- London Plan (2011).

Extended Phase 1 Habitat Survey

3.1.3 Eleven survey areas were defined that encompassed the eleven proposed development sites. The survey areas are shown on Figures 2a – 2i.

3.1.4 An extended Phase 1 habitat survey (JNCC, 2010; IEA, 1995) was conducted throughout the survey areas. 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.

3.1.5 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

3.1.6 These scores represent the abundance within the defined area only and do not reflect national or regional abundances. The additional code of 'L' for locally was used. Plant species nomenclature follows Stace (2010).

3.1.7 The survey was conducted on 29th September 2014.

4. Results

4.1 Background

4.1.1 The contents of the results section are the factual results of the desk study and extended Phase 1 habitat survey. Excluded from this section is the assessment of the site to support species of conservation concern not recorded during the survey. Instead, potential further ecological issues are discussed in Section 6.

4.2 Desk Study

4.2.1 Biological records from GiGL were received on 22nd September 2014. These results are summarised below on Tables 1 and 2 and the locations of designated sites are shown in Figure 1.

Designated Sites

4.2.2 Two statutory designated sites lie within 2km of the site's boundaries. The closest designated site to the site boundary is Camley Street Nature Park Local Nature Reserve (LNR). This site, which lies 0.9km to the north east of the site boundary, is also designated as a Site of Importance for Nature Conservation (SINC).

4.2.3 In addition, there are 30 non-statutory designated sites (SINCs) within 2km of the site. The closest of these to the site boundary is St James's Garden located 10m to the east of the boundary of Site 2 (Rydal Water Open Space). The location, area and distance of all designated sites from the proposed development are shown in Table 2, and locations are shown on Figure 1.

Table 2. Designated sites within 2km of the site

Site Designation	Grid Reference	Area (ha)	Distance to site (km)	Description
Statutory Designated Sites (LNR)				
Camley Street Nature Park LNR SINC	TQ 299 834	0.82	0.9	Urban wild space containing range of habitats created on formerly vacant land.
St. John's Wood Church	TQ 271 830	1.99	1.6	Small park

Site Designation	Grid Reference	Area (ha)	Distance to site (km)	Description
Grounds LNR SINC				predominantly comprising amenity grassland and scattered trees.
Non-statutory Designated Sites (SINCs)				
St James's Garden	TQ 293 827	1.07	<0.01	Former churchyard comprising amenity grassland, planted shrubs and scattered trees.
Regent's Park	TQ 280 829	131.64	0.1	Public park comprising amenity grassland, pond and woodland.
Park Square Gardens	TQ 287 822	2.23	0.2	Garden square comprising amenity grassland, planted shrubs and scattered trees.
Gordon Square	TQ 297 823	0.92	0.5	Public square comprising amenity grassland, hedges and mature trees.
London Zoo	TQ 280 834	15.31	0.6	Zoological garden.
St Pancras Gardens	TQ 297 835	2.11	0.7	Old churchyard comprising

Site Designation	Grid Reference	Area (ha)	Distance to site (km)	Description
				grassland, hedges, scattered trees and planted shrubs.
Russell Square	TQ 301 819	2.49	0.8	Public square comprising amenity grassland, hedges and mature trees.
London's Canals	TQ 202 833	188.52	0.9	Waterways and adjacent riparian habitats.
Paddington Street Gardens	TQ 282 818	1.17	0.9	Garden comprising amenity grassland, planted shrubs and scattered trees.
Primrose Hill	TQ 276 838	25.19	1.1	Area of Regent's Park comprising mostly of amenity grassland with scattered mature trees.
St George's Gardens	TQ 304 824	1.06	1.1	Former churchyard comprising amenity grassland, planted shrubs and scattered trees.

Site Designation	Grid Reference	Area (ha)	Distance to site (km)	Description
Coram's Fields	TQ 305 823	2.69	1.1	Park comprising amenity grassland and scattered trees.
Portman Square and Manchester Square	TQ 281 813	1.36	1.2	Manchester Square is a small square containing scattered trees and amenity grassland. Portman Square comprises scattered trees and planted shrubs.
North London Line	TQ 299 841	0.88	1.3	Small area of wildlife habitat along railway line comprising scattered trees and scrub.
Phoenix Garden	TQ 299 812	0.12	1.3	Community garden comprising amenity grassland, pond and scattered trees.
Calthorpe Community Garden	TQ 306 825	0.44	1.3	Community garden comprising scattered trees, amenity grassland and planted shrubs

Site Designation	Grid Reference	Area (ha)	Distance to site (km)	Description
Copenhagen Junction	TQ 303 841	2.94	1.4	Railside comprising large areas of bracken.
Winton Primary School Garden	TQ 306 832	0.03	1.4	Small school nature garden containing a pond and dipping platform.
St Andrew's Gardens	TQ 307 824	0.66	1.5	Former churchyard comprising amenity grassland, planted shrubs and scattered trees.
Bingfield Park	TQ 304 839	1.21	1.5	Open space comprising mostly amenity grassland.
St. John's Wood Church Grounds	TQ 271 830	1.94	1.6	Small park predominantly comprising amenity grassland and scattered trees.
Rochester Terrace Gardens	TQ 291 845	0.45	1.6	Small park comprising many non-native trees and amenity grassland.
Chalk Farm Embankment and Adelaide Nature Reserve	TQ 276 843	0.9	1.7	Railway embankment with areas of

Site Designation	Grid Reference	Area (ha)	Distance to site (km)	Description
				neutral grassland.
Lisson Garden	TQ 272 819	0.14	1.7	Small children's playground and garden.
Lincoln's Inn Field	TQ 307 813	2.94	1.7	Large public square comprising amenity grassland and scattered trees.
Wilmington Square	TQ 3113 825	0.35	1.8	Square comprising broadleaved woodland and amenity grassland.
Hyde Park and Kensington Gardens	TQ 270 802	252.29	1.8	Large open par comprising amenity grassland, scattered trees and lake.
Lloyd Square	TQ 310 827	0.12	1.8	Small square comprising broadleaved woodland.
Claremont Square	TQ 311 830	0.65	1.9	Small square comprising amenity grassland and scattered trees.
Thornhill Square	TQ 308 840	1.21	1.9	Square comprising amenity grassland, scattered trees

Site Designation	Grid Reference	Area (ha)	Distance to site (km)	Description
				and planted shrubs.

Priority Habitats

4.2.4 Four priority habitat types were found to be located within 2km of the site during the desk study. These are habitats of principal importance for the conservation of biodiversity as listed under Section 41 of the NERC Act. The closest of these is a parcel of deciduous woodland located less than 0.1km from the boundary of Site 2 (Rydal Open Water Space). The habitats recorded include:

- Deciduous woodland (48 parcels);
- Traditional orchard (two parcels); and
- Wood pasture and parkland (one parcel).

Ancient Woodland

4.2.5 No Ancient Woodlands greater than 2ha in area occur within the site boundary or within 2km of the development site perimeter.

Protected Species

4.2.6 Protected species and species of conservation concern were identified within the search area during the desk study. These included records of invertebrates, birds and European hedgehog (*Erinaceus europaeus).* Details of the species are given in Table 3. All the records below have been supplied by GiGL.

4.2.7 Only records within the last 10 years, and the closest records to the site for each species, have been include

Table 3: Records of Protected and Other Species of Conservation Concern derived from the Desk Study

Common Name	Scientific Name	SPI	London BAP species	Distance from site (km)	Source
Invertebrates					
Shoulder-striped wainscot	*Mythimna comma*	✓	✓	0.7	GiGL

Common Name	Scientific Name	SPI	London BAP species	Distance from site (km)	Source
White ermine	*Spilosoma lubricipeda*	✓	✓	0.7	GiGL
White admiral	*Limenitis camilla*	✓	✓	0.9	GiGL
Blood vein	*Timandra comae*	✓	✓	0.9	GiGL
Latticed heath	*Chiasmia clathrata*	✓	✓	0.9	GiGL
August thorn	*Ennomos quercinaria*	✓	✓	0.9	GiGL
Dusky thorn	*Ennomos fuscantaria*	✓	✓	0.9	GiGL
Brindled beauty	*Lycia hirtaria*	✓	✓	0.9	GiGL
Beaded chestnut	*Agrochola lychnidis*	✓	✓	0.9	GiGL
Centre-barred sallow	*Atethmia centrago*	✓	✓	0.9	GiGL
Knot grass	*Acronicta rumicis*	✓	✓	0.9	GiGL
Ear moth	*Amphipoea oculea*	✓	✓	0.9	GiGL
Rosy rustic	*Hydraecia micacea*	✓	✓	0.9	GiGL
Rustic	*Hoplodrina blanda*	✓	✓	0.9	GiGL
Cinnabar	*Tyria jacobaeae*	✓	✓	0.9	GiGL
Birds					
House sparrow	*Passer domesticus*	✓	✓	0.2	GiGL
Starling	*Sturnus vulgaris*		✓	0.4	GiGL

Common Name	Scientific Name	SPI	London BAP species	Distance from site (km)	Source
Song thrush	*Turdus philomelos*		✓	0.4	GiGL
Dunnock	*Prunella modularis*		✓	0.4	GiGL
Herring gull	*Larus argentatus*			0.5	GiGL
Redwing	*Turdis iliacus*			0.5	GiGL
Firecrest	*Regulus ignicapilla*			0.5	GiGL
Scaup	*Aythya marilla*	✓	✓	0.9	GiGL
Lapwing	*Vanellus vanellus*	✓	✓	0.9	GiGL
Stone curlew	*Burhinus oedicneumus*	✓	✓	0.9	GiGL
Whimbrel	*Numenius phaeopus*			0.9	GiGL
Mediterranean gull	*Larus melanocephalus*			0.9	GiGL
Turtle dove	*Streptopelia turtur*	✓	✓	0.9	GiGL
Cuckoo	*Cuculus canorus*	✓	✓	0.9	GiGL
Kingfisher	*Alcedo atthis*			0.9	GiGL
Wood warbler	*Phylloscopus sibilatrix*	✓	✓	0.9	GiGL
Skylark	*Alouda arvensis*	✓	✓	0.9	GiGL
Sand martin	*Riparia riparia*		✓	0.9	GiGL
Tree pipit	*Athus trivialis*	✓	✓	0.9	GiGL
Yellow wagtail	*Motacilla flava*		✓	0.9	GiGL

Common Name	Scientific Name	SPI	London BAP species	Distance from site (km)	Source
Ring ouzel	*Turdus torquatus*	✓	✓	0.9	GiGL
Fieldfare	*Turdus pilaris*			0.9	GiGL
Spotted flycatcher	*Musicapa striata*	✓	✓	0.9	GiGL
Lesser redpoll	*Acanthis cabaret*	✓		0.9	GiGL
Common redpoll	*Acanthis flammea*		✓	0.9	GiGL
Linnet	*Linaria cannabina*	✓		0.9	GiGL
Brambling	*Fringilla monrifringilla*			0.9	GiGL
Common crossbill	*Loxia curvirostra*			0.9	GiGL
Snow bunting	*Plectrophenax nivalis*			0.9	GiGL
Reed bunting	*Emberiza schoeniclus*	✓	✓	0.9	GiGL
Mammals					
European hedgehog	*Erinaceus europaeus*	✓	✓	0.4	GiGL

SPI = Species of Principal Importance listed under Section 41 of the NERC Act 2006

BAP = Biodiversity Action Plan

4.3 Extended Phase 1 Habitat Survey

Site 1: Robert Street Car Park

4.3.1 This site comprises a car park with a small area of landscaping located to the centre of the site. The following Phase 1 habitat types were identified within Site 1:

- Amenity grassland;
- Introduced shrub;
- Introduced shrub / scattered broadleaved trees mosaic; and
- Hard standing.

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

Amenity grassland

4.3.3 Two areas of amenity grassland (AM1 and AM2), totalling approximately 263m^2 in area are present within the centre of the site. These are both dominated by cock's foot (*Dactylis glomerata*) with frequent creeping bent (*Agrostis stolonifera*), black medick (*Medicago lupulina*), cleavers (*Galium aparine*), dandelion (*Taraxacum officinale* agg.), and occasional yarrow (*Achillea millefolium*) and ground ivy (*Glechoma hederacea*).

Introduced shrub

4.3.4 Six areas of introduced shrub, totalling approximately 87m^2 in area, are present across the site. IS1-IS5 are dominated by Geranium (*Pelargonium* sp.). IS6 comprises frequent hebe (*Hebe* sp.), Spindle *(Euonymus fortunei*), Philadelphus (*Philadelphus coronarius*), corn marigold (*Chrysanthemum segetum*) and dog rose (*Rosa canina*).

Introduced shrub / Scattered broadleaved trees mosaic

4.3.5 A mosaic of introduced shrub and scattered broadleaved trees, totalling approximately 110m^2 in area, is present within the centre of the site. The area comprises abundant kerria (*Kerria japonica*), occasional yellow berried cotoneaster (*Cotoneaster rothschildianus*) and Rowan (*Sorbus aucuparia* 'Joseph Rock') and rarely occurring horse chestnut (*Aesculus hippocastanum*), sycamore (*Acer pseudoplatanus*), wild cherry (*Prunus avium*), ash (*Fraxinus excelsior*) and spotted laurel (*Aucuba japonica*).

Hard standing

4.3.6 The site is dominated by hard standing (approximately 2000m^2 in area), comprising a car park to the south of the site, an access road to the east and footpaths to the north.

Site 2: Rydal Water Open Space

4.3.7 This area comprises a small communal area including areas of grassland and other soft landscaping (see Photograph 1 on Figure 3). The following Phase 1 habitat types were identified within Site 2:

- Amenity grassland;
- Introduced shrub; and
- Hard standing

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

Amenity grassland (with scattered broadleaved trees)

4.3.9 An area of amenity grassland (AM3), 123m^2 in area, is present along the site's eastern boundary. These areas are dominated by perennial rye grass (*Lolium perenne*), abundant cock's foot, cleavers, dandelion and ground ivy, with frequent shepherd's purse (*Capsella bursa-pastoris*) and rarely occurring weeping willow (*Salix alba x babylonica*) and cherry (*Prunus* sp.).

Introduced shrub

4.3.10 Ten Parcels of Introduced shrub, totalling approximately 55m^2 in area, are present across the site. IS7 is present to the north-east of the site and comprises dominant butterfly bush (*Buddleja davidii*) and hebe. IS8 consists of planted introduced shrubs along the site's western boundary and comprises rarely occurring lavender (*Lavandula* sp.) , Japanese maple (*Acer japonica*), Japanese andromeda (*Pieris japonica*) and karo (*Pittosporum crassifolium*).

Hard standing

4.3.11 An area of hard standing totalling approximately 513m^2 is present to the north and west of the site (see Photograph 1 on Figure 3).

Site 3: Varndell Street

4.3.12 This site is another amenity area, entirely comprising soft landscaping. The following Phase 1 habitat types were identified within Site 3:

- Species-poor hedge;
- Scattered broadleaved trees;
- Amenity grassland; and
- Introduced shrub.

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

Species-poor hedge

4.3.14 A hedge (PH1), 60m in length, is present along the site's southern and eastern boundaries. The hedge is dominated by garden privet (*Ligustrum ovalifolium*).

Amenity grassland (with scattered broadleaved trees)

4.3.15 Amenity grassland (AM4), approximately 1450m^2 in area is present throughout the site. The area is dominated by common couch (*Elytrigia repens*), with abundant perennial rye grass, greater plantain (*Plantago major*), daisy (*Bellis perennis*) and dandelion, with frequent creeping thistle (*Cirsium arvense*) and creeping cinquefoil (*Potentilla reptans*), common mouse-ear (*Cerastium fontanum*) and rarely occurring whitebeam (*Sorbus aria* agg.).

Introduced shrub

4.3.16 Seven parcels of introduced shrub (IS9), totalling approximately 213m^2 in area, is present across the site. These areas comprise occasional kerria, rose (*Rosa* spp.), privet and box (*Buxus sempervirens*).

Site 4: Newlands Open Space

4.3.17 Site 4 is also an amenity area dominated by soft landscaping. The following Phase 1 habitat types were identified within Site 4:

- Species-poor hedge with trees;
- Amenity grassland; and
- Hard standing.

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

Species-poor hedge with trees

4.3.19 A species-poor hedge with trees (PHT1), 58m in length, is present along the western, northern and southern boundaries. The hedge is dominated by dogwood, with frequent elder (*Sambucus nigra*) and hawthorn (*Crataegus mongyna*) with occasional wild service tree (*Sorbus torminalis*).

4.3.20 A species-poor hedge (PHT2), approximately 29m in length, is present along the site's eastern boundary. The hedge comprises of frequently occurring London plane (*Platanus* x *acerfolia*), elm (*Ulmus procera*) and false acacia (*Robinia pseudacacia*).

Amenity grassland

4.3.21 Amenity grassland (AM5), approximately 1500m^2 in area is present throughout the site. The area comprises abundant perennial rye grass, yarrow, cock's foot, cleavers and dandelion with occasional red clover (*Trifolium pratense*) and red dead nettle (*Lamium purpureum*) with rarely occurring white poplar (*Populus alba*) and silver birch (*Betula pendula*).

Hard standing

4.3.22 Hard standing, approximately 230m^2 in area, is present along the site's western boundary, comprising a pedestrian walkway.

Site 5: Rothay/ Dick Collins Community Hall

4.3.23 This site includes a community hall building and an associated garden area, as shown on Photograph 2 on Figure 3. The following Phase 1 habitat types were identified within Site 5:

- Scattered broadleaved trees;
- Amenity grassland;
- Introduced shrub;
- Building; and
- Hard standing.

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

Scattered broadleaved trees

4.3.25 Rarely occurring mature London plane (*Platanus x acerifolia*) trees are scattered across the site.

Amenity grassland

4.3.26 Amenity grassland (AM6), approximately 270m^2 in area is present within the centre of the site. The area is dominated by perennial rye grass with rarely occurring greater plantain (*Plantago major*) and dandelion (see Photograph 2 on Figure 4).

Introduced shrub

4.3.27 Two areas of introduced shrub (IS10 and IS11), totalling approximately 83m^2 in area are present within the centre of the site. IS10 is dominated by cabbage palm (*Cordyline australis*). IS11 comprises occasional euonymus (*Euonymus europaeus*), cherry (*Prunus* sp.), gorse (*Ulex europaeus*), garden privet and guelder rose (*Viburnum opulus*).

Building

4.3.28 A building (B1), approximately 345m^2 in area is present to the north of the site. The building is currently in use as a community centre.

Hard standing

4.3.29 Hard standing, approximately 266m^2 in area, is present to the north and east of the site.

Site 6: Cape of Good Hope Public House

4.3.30 This site is dominated by hard standing with a single restaurant building located within the boundary. The following Phase 1 habitat types were identified within Site 6:

- Scattered broadleaved trees;
- Fence;
- Building; and
- Hard standing.

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

Scattered broadleaved trees

4.3.32 Occasional cockspur thorn (*Crataegus crus-gallis*) and rarely occurring small leaved lime (*Tilia cordata*) are present to the south of the site.

Fence

4.3.33 A fence, approximately 50m in length, is present to the south-east of the site.

Building

4.3.34 A building (B2), approximately 215m^2 in area, is present to the north of the site. The building is currently used as a cafe.

Hard standing

4.3.35 Hard standing, approximately 758m^2 in area is present to the south-west and north-east of the site.

Site 7: Troutbeck Overbuilds

4.3.36 Site 7 includes a large five storey apartment block, with the remaining area comprising pavements and car parks. The following Phase 1 habitat types were identified within Site 7:

- Scattered broadleaved trees;
- Building; and
- Hard standing.

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

Scattered broadleaved trees

4.3.38 Rarely occurring scattered small leaved lime are present to the east of the site.

Building

4.3.39 A building (B3), approximately 1365m^2 in area, is present to the west of the site. The building is currently used as for apartments.

Hard standing

4.3.40 Hard standing, approximately 3616m^2 in area is present to across the site.

Site 8: Staveley/ Newby Overbuilds

4.3.41 This site comprises two residential blocks and associated car parking and landscaped areas (see Photograph 3 on Figure 3) The following Phase 1 habitat types were identified within Site 8:

- Species-poor hedge;
- Scattered trees;
- Amenity grassland;
- Introduced shrub;
- Building; and
- Hard standing.

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

Species-poor hedge

4.3.43 A hedge, approximately 37m in length (PH3 on Figure 2g), is present to the centre of the site. The hedge is dominated by cherry laurel (*Prunus laurocerasus*).

Scattered broadleaved trees

4.3.44 Scattered broadleaved trees (SBT1) totalling approximately 91m^2 in area is present to the south of the site. The area is dominated by mature London plane trees, with frequent cherry laurel, euonymus, tutsan (*Hypericum androsaemum*), and wild carrot (*Daucus carota*), with occasional rhododendron (*Rhododendron ponticum*) and mahonia (*Mahonia aquifolium*) with rarely occurring holly (*Ilex aquifolium*). No understorey was recorded, as the trees were on hardstanding

Amenity grassland

4.3.45 Three areas of amenity grassland (AM7-AM9), totalling approximately 1010m^2 in area are present on site. AM7 is present to the north of the site and is dominated by perennial rye grass with abundant creeping buttercup (*Ranunculus repens*), cleavers and creeping bent (*Agrostis stolonifera*), frequent dandelion, occasional yarrow, daisy and ribwort plantain (*Plantago lanceolata*), and rarely occurring ragwort (*Senecio jacobaea*) and creeping thistle.

4.3.46 AM8 is present to the north of the site and is dominated by Yorkshire fog (*Holcus lanatus*) with locally dominant meadow buttercup (*Ranunculus acris*), abundant creeping bent, daisy and dandelion, frequent red dead nettle, red clover, creeping cinquefoil and yarrow, and occasional cock's foot and annual meadow grass (*Poa annua*).

4.3.47 AM9 is present to the south of the site and is dominated by common couch with locally dominant self-heal (*Prunella vulgaris*) and frequently occurring daisy, dandelion, ribwort plantain and cleavers.

Introduced shrub

4.3.48 Two areas of introduced shrub (IS12 and IS13), totalling approximately 185m2 in area are present to the north of the site. IS12 is dominated by privet. IS13 comprises frequent variegated holly (*Ilex aquifolium*), burburus (*Burburus* sp.) with occasional elder.

Building

4.3.49 Two buildings (B5 and B6), totalling approximately 541m^2 in area are present at the site. Both are currently in use as residential buildings.

Hard standing

4.3.50 Hard standing, approximately 2000m^2 in area is present to across the site (see Photograph 3 on Figure 3).

Site 9: Camden Peoples Theatre

4.3.51 Site 9 comprises a single theatre building (B7 on Figure 2h, totalling approximately163m^2). No other habitats are present on this site.

Site 10: Victory Public House

4.3.52 Site 10 is a pub with associated outside area and small areas of planting. The following Phase 1 habitat types were identified within Site 10:

- Scattered broadleaved tree;
- Introduced shrub;
- Building; and
- Hard standing.

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

Scattered broadleaved tree

4.3.54 An ash tree is present to the south-west of the site.

Introduced shrub

4.3.55 Three areas of introduced shrub (IS14-IS16) totalling approximately 17m^2 in area are present on site. IS14 comprises occasional ornamental Senecio (*Senecio cineraria*) and Californian lilac (*Ceonathus* sp.), with rarely occurring wild pansy (*Viola tricolor*).

4.3.56 IS15 comprises frequent *Camellia sasanqua* with rarely occurring ground ivy. IS16 comprises occasional wall cotoneaster (*Cotoneaster horizontalis*), Californian lilac and ground ivy.

Building

4.3.57 Two buildings (B8 and B8a), approximately 173m^2 in area, are present within the site. B8 is currently in use as a pub. B8a is a wooden shed clad in Virgina creeper (*Parthenocissus quinquefolia*).

Hard standing

4.3.58 Hard standing totalling 416m^2 in area is present across the site.

Site 11: St. Bede's Hall

4.3.59 This site comprises a former church building and associated areas of hard standing. The following Phase 1 habitat types were identified within Site 11:

- Building; and
- Hard standing.

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

Building

4.3.61 One building (B4), approximately 182m^2 is present within the site. The building is a former church currently in use as a community centre.

Hard standing

4.3.62 Hard standing, approximately 602m^2 in area, is present across the site (see Photograph 4 on Figure 3).

5. Legislation and Planning Policy Issues

Designated Sites

5.1.1 Two designated sites (LNR) and 30 non-statutory designated sites (SINC) are found within 2km of the site boundary (see Table 1 in Section 3.2). Designated sites receive protection through national and local planning policy. The National Planning Policy Framework (NPPF, 2012) states that "*the planning system should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes and minimising impacts on biodiversity and providing net gains in biodiversity*". This is transposed into local planning policies by the London Plan (2011) which states that "*where development is proposed which would affect a site of importance for nature conservation, the approach should be to seek to avoid adverse impacts on the nature conservation value of the site*" and that "*development proposals should give the highest protection to sites with existing...national designations in line with relevant UK guidance and legislation*". In addition, Policy CS15 of the Camden Core Strategy states that "*The council will protect and improve sites of nature conservation and biodiversity...by designating existing nature conservation sites and protecting other green areas with nature conservation value*".

5.1.2 The closest designated site to the development site boundary is St James's Gardens SINC, which is located less than 10m to the east of Site 2. The proposed regeneration development is unlikely to have a significant negative effect on the nature conservation importance of the SINC because:

- The proposed development will be confined to the existing site boundary;
- The development will follow the Environment Agency's pollution prevention guidelines; and
- The sites are located in a highly urban area with a high density of residential buildings and therefore the development is unlikely to result in a significant increase in recreational pressures upon the designated site.

5.1.3 For the same reasons as stated above, the remaining statutory and non-statutory designated sites within 2km of the site boundary are unlikely to be significantly adversely affected by the development.

Priority Habitats

5.1.4 The desk study identified 48 parcels of deciduous woodland, two parcels of traditional orchard, and one parcel of wood pasture and parkland within 2km of the site boundary, the closest being 0.1km from the site. All of these habitats are listed in Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 as being habitats of principal importance for the conservation of biodiversity in England as required under Section 41 of the NERC Act. The ODPM circular 06/2005 states that the presence of such habitats is capable of being a material consideration in the planning process. These sites are granted protection under the NPPF which states that council policies should "*promote the preservation, restoration and re-creation of priority habitats*".

For the reasons set out in Section 5.1.2, it is considered that the development should not have an impact on these priority habitats.

5.1.5 Hedgerows PHT1 and PHT2 in Site 4 are classified as habitats of principal importance for the conservation of biodiversity as listed under Section 41 of the NERC Act 2006 and therefore a priority habitat in England. In addition amenity areas within Sites 2, 3, 4, 5 and 8 could be interpreted as representing examples of the London Priority Habitat type London Parks and Green Spaces. Paragraph 117 of the NPPF (2012) states that '*planning policies should 'Promote the preservation, restoration and re-creation of priority habitats'* and Policy CS15 of Camden Borough Council's Core Strategy States that '*The Council will protect and improve sites of nature conservation and biodiversity, in particular habitats and biodiversity identified in the Camden and London Biodiversity Plans'*. Mitigation measures outlined within Section 6.2 should ensure that the development is consistent with these policies.

Protected Species and species of conservation concern

5.1.6 The ODPM circular 06/2005 states that the presence of protected species is a material consideration in the planning process. The National Planning Policy Framework also states that "*planning policies should promote the protection of priority species populations linked to national and local targets*".

5.1.7 The desk study shows records of legally and planning policy protected birds within 1km of the site boundary, some of which may breed within the development sites. All birds, eggs and nests are protected from damage and destruction under the Wildlife and Countryside Act 1981, as amended. In addition, the desk study shows records of invertebrates and hedgehog, which receive planning policy protection, within 1km of the site. Recommendations are made within Section 6.2 of this report should ensure that the development is compliant with legislation and policy pertaining to protected species and species of conservation concern.

Invasive Plant Species

5.1.8 Rhododendron was recorded in Site 8 and wall cotoneaster and Virginia creeper were both recorded present within Site 10. These species are listed on Schedule 9 of the Wildlife and Countryside Act 1981, as amended. As such it is an offence to plant or otherwise cause these species to grow in the wild. Measures are therefore proposed in Section 6.2 for the eradication of these species from the site in advance of development.

Ecological Enhancement

5.1.9 Central and local government policy points towards ecological enhancement on development sites. For example, the NPPF states that "*opportunities to incorporate biodiversity in and around developments should be encouraged*". This is supported by Policy CS15 of the Camden Core Strategy 2010-2025 which states that the council will "*expect the provision of new or enhanced habitat, where possible, including through biodiverse green or brown roofs and green walls*" and will promote "*the provision of new trees and vegetation, including additional street trees*".

5.1.10 Recommendations for ecological enhancement of the site are given in Section 6.3.

6. Potential Further Ecological Issues

6.1 Background

6.1.1 The potential further ecological issues section sets out our assessment of the potential of the site to support protected species and other species of conservation concern which were not detected during the extended Phase 1 habitat survey, either because their presence is seasonal or because specialist survey techniques are required. Further survey work or appropriate mitigation is likely to be required before these issues can be addressed. Further information on the methods of assessment are given in Appendix 1

6.2 Protected and Priority Species

Invertebrates

6.2.1 A large number of priority species and local Biodiversity Action Plan (BAP) species of moths were recorded as present within 1km of the site on the desk study. Due to the significant urban barriers separating the sites where these species were recorded and the development sites, and the lack of suitable habitat recorded on the development sites during the extended Phase 1 habitat survey, there should be no issues with regard to these species and the development.

Breeding birds

6.2.2 Records of a number of bird species of conservation concern were obtained during the desk study. Suitable habitat for some of these species, in particular house sparrow (*Passer domesticus*) which is a priority species and London BAP species, was recorded across the development sites. All birds, eggs and nests are protected from damage and destruction under the Wildlife and Countryside Act 1981, as amended.

6.2.3 Providing recommendations made within Section 6.3 are followed, the development should be compliant with the legislation regarding breeding birds.

European hedgehog

6.2.4 The desk study provided a record of a hedgehog within 0.4km of the development sites. The hedgerows and introduced shrub on site provides suitable habitat for hedgehogs. Hedgehogs are listed as a species of principal importance under Section 41 of the NERC Act 2006 and are a London Biodiversity Action Plan species.

6.2.5 Recommendations for mitigation for hedgehogs are given in 6.3.

Bats

6.2.6 Buildings on the site could have potential to support roosting bats. All species of bat and their roosts are fully protected by the Habitats Regulations 2010 with additional protection against disturbance under the Wildlife and Countryside Act 1981, as amended. All species of bat are

priority species under the London Biodiversity Action Plan. Issues with regards to the proposed development and bats are addressed within Section 7 of this report.

6.3 Recommendations

Mitigation

6.3.1 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.

Habitats of Principal Importance

6.3.2 Should it be necessary to remove hedgerows PHT1 or PHT2 in Site 4 they should be replaced on at least a like for like basis.

6.3.3 Development proposals could include the provision of amenity space to mitigate for any loss of the London Parks and Green Spaces priority habitat type. New amenity areas should include ecological enhancements as outlined within Section 4.6.

Breeding birds

6.3.4 Site clearance involving removal of trees, hedgerows, introduced shrub and buildings should be undertaken outside of the breeding birds season, *i.e.* site clearance and demolition should be undertaken in the period September to February, inclusive. If this is not possible, the demolition of the buildings and clearance of vegetation should take place under an ecological watching brief in the presence of an ecologist. This would involve checking for nests immediately prior to, and during demolition and clearance. If an active nest is found, works will be stopped in that area and an exclusion zone put in place until the nest is no longer active.

European hedgehog

6.3.5 To mitigate for the potential killing or injury of hedgehogs clearance of the amenity grassland, hedgerow and introduced shrub could be carefully carried out by hand. Should a hedgehog be found during the search, it should be caught and moved to an area of suitable habitat on site (or immediately adjacent to it) that will not be lost to the development.

Trees

6.3.6 For any existing trees which are to be retained, to prevent damage to the trees during or following development, a buffer zone should be set aside to protect the rooting area adjacent to each tree, in which no construction activities are permitted. In accordance with British Standard BS5837:2012 '*Trees in relation to design, demolition and construction - recommendations',* this 'root protection area' is calculated in relation to the circumference of the tree trunk.

Invasive Plant Species

6.3.7 Rhododendron, wall cotoneaster and Virginia creeper should be removed from the Sites 8 and 10 respectively. Measures should be taken to avoid the spread of these species to the surrounding area. This is best achieved by digging up the plants and their root stock and disposing of the waste vegetation appropriately such as burning on site following Forestry Commission guidelines for managing invasive non-native plants (Forestry Commission, 2006).

6.4 Ecological Enhancements

6.4.1 As the government's NPPF and the Camden Core Strategy encourage ecological enhancement on development sites, the following suggestions are made to enhance the value of the site for biodiversity following the completion of the development:

- Use of predominantly native trees and shrubs of could be included in the landscape design for the developed site (see Table 4);
- Bird boxes and bat boxes suitable for locally occurring species could be installed on the outside of the new buildings or on retained mature trees;
- Provision of native hedgerow and shrub species to provide suitable habitat for hedgehogs;
- Incorporation of green or brown roofs in to the site development; and
- Planting of species which attract insects e.g. rowan (*Sorbus aucuparia*), honey suckle (*Lonicera periclymenum*) and evening primrose (*Oenothera* sp.) would enhance the habitat for invertebrates and foraging bat species.

Table 4: Suggested native tree and shrub species for landscaping

Common Name	Species Name
Beech	*Fagus sylvatica*
Pedunculate oak	*Quercus robur*
Common lime	*Tilia* x *europaea*
Silver birch	*Betula pendula*
Hazel	*Corylus avellana*
Blackthorn	*Prunus spinosa*
Hawthorn	*Crataegus monogyna*
Holly	*Ilex aquifolium*
Elder	*Sambucus nigra*

Common Name	Species Name
Wild privet	*Ligustrum vulgare*
Box	*Buxus sempervirens*

6.5 Conclusion

6.5.1 There are two statutory designated sites and 30 non-statutory designated sites within 2km of the site boundary, the closest of which is less than 10m from the site boundary. None of the sites should be negatively impacted by the development.

6.5.2 A number of records of species protected by legislation and species protected by planning policy, namely breeding birds, invertebrates and hedgehog have been recorded within 1km of the development site boundary. Issues concerning protected species are dealt with in Sections 5 and 6 of this report.

6.5.3 Scattered broadleaved woodland, scattered broadleaved trees, species poor hedge, species poor hedge with trees, amenity grassland, fence, building, introduced shrub and introduced shrub / scattered broadleaved woodland mosaic were recorded across the 11 sites that make up the proposed development site during extended Phase 1 habitat surveys.

6.5.4 The scattered woodland, scattered trees, hedges and buildings provide suitable habitat for breeding birds. Provided that the recommendations for mitigation made within this report are followed the development should be compliant with legislation with respect to breeding birds.

6.5.5 Invasive species recorded on site should be eradicated following best practice guidelines.

6.5.6 Buildings 5, 6, 7, 8, 9, 10 and 11 may have potential to support roosting bats. All species of bat and their roosts are strictly protected by European and domestic legislation. Potential issues with regard to bats are discussed in Section 7 of this report.

6.6 References

6.6.1 Forestry Commission (2006) Managing and Controlling Invasive Rhododendron.

6.6.2 HM Government (2012) National Planning Policy Framework. Department for Communities and Local Government.

6.6.3 HM Government (2010) The Conservation of Habitats and Species Regulations (as amended)

6.6.4 HM Government (2006) Natural Environment and Rural Communities Act.

6.6.5 HM Government (1981) Wildlife and Countryside Act, as amended

6.6.6 Institute of Environmental Assessment (1995) Guidelines for Baseline Ecological Assessment. E & FN Spon, London.

6.6.7 JNCC (2010) Handbook for Phase 1 habitat survey: A technique for environmental audit. Joint Nature Conservancy Committee, Peterborough.

6.6.8 London Borough of Camden (2010) Camden Core Strategy 2010-2025

6.6.9 London Plan (2011) Spatial Development Strategy for Greater London. Greater London Press.

6.6.10 Stace, C. (2010) New Flora of the British Isles (second edition). Cambridge University Press,

7. External Bat Inspection

7.1 Methodology

7.1.1 An external inspection of all buildings within Sites 1-11 and all trees within the Ground Level Tree Assessment (GLTA) survey area (as shown on Figure 1) was conducted on 30th September 2014. The survey was conducted from the ground with the aid of binoculars and a powerful torch.

Ground Level Tree Assessment

7.1.2 All trees within the site boundary were inspected from ground level for features that could support roosting bats. Particular attention was paid to:

- Woodpecker and rot holes;
- Loose bark, splits and cracks;
- Presence or absence of ivy (*Hedera helix*) or dense epicormic growth; and
- Crevices and holes.

7.1.3 Evidence of roosting bats searched for included:

- Dark staining below an access point that may be caused by bat faeces;
- Staining around a hole that may be caused by the natural oils in bat fur;
- Scratch marks and smoothing of surfaces around the hole made by bat claws;
- Flies around the entry point;
- Bat droppings in around and below entrance;
- Distinctive smell of bats; and
- Noises made by bats.

External Inspection of Buildings

7.1.4 Nine buildings (B1-B8a on Figure 2a – 2i) across the development site were assessed for their potential to support roosting bats this included looking for the presence of potential roosts, access points and evidence of bats or bats themselves. Features looked for included:

- Gaps around windows, doors and lintels;
- Lifted lead flashing;
- Loose or missing roof, ridge or hanging tiles;
- Gaps between stones or bricks where mortar has fallen out;
- Other gaps or cracks between various elements of the building structure;
- Presence or absence of cavity wall, weather boarding and potential access points; and

- Suitable access points around eaves, soffits, barge board, and fascia.

7.1.5 Evidence of roosting bats searched for included:

- Dark staining below an access point that may be caused by bat faeces;
- Staining around a hole that may be caused by the natural oils in bat fur;
- Scratch marks around the hole made by bat claws;
- Bat droppings and corpses; and
- Noises made by bats.

Categorisation of Results

7.1.6 Each building and tree was then assessed and placed into a category (Table 5 shows the relevant categories) 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 and 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.

Table 5: 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.

7.2 Results

Environmental factors

7.2.1 The sites are all located within a highly urbanised location within central London, see Figure 1. Small fragments of foraging and commuting habitat across the area include scattered street trees and small amenity greenspaces including gardens and public amenity spaces. Regents Park, an extensive area of suitable foraging and commuting habitat is located approximately 100m to the west of sites 5-7 and sites10-11 (see Figure 1). Sites 1-4 and 8-9 are situated further away from this and any other significant areas of greenspace.

Ground Level Tree Assessment

7.2.2 No trees with the potential to support roosting bats were identified within the GLTA survey area.

External Inspection of Buildings

7.2.3 A total of nine buildings were identified across the proposed development site. The location of these buildings are summarised within Table 6 below.

Table 6: Buildings Identified Within the External Building Inspection

Building	Name	Site Number
B1	Dick Collins Community Hall	5
B2	Cavali Restaurant and Bar	6
B3	Troutbeck Overbuild	7
B4	St Bede's Hall	11
B5	Newby Overbuilds	8
B6	Staveley Overbuilds	8
B7	Camden People's Theatre	9
B8	Victory Public House	10
B8a	Victory Public House	10

7.2.4 Of these, four were assessed as having low potential to support summer/ transitional bat roosts. The remaining five buildings were assessed as having negligible potential to support roosting bats. The results of the external inspection of buildings are summarised in Tables 7 and 8 below

and shown on Figure 4. Photographs accompanying the results of the external bat inspection are included on Figure 5.

Table 7: Assessment of Overall Potential of Buildings to Support Roosting Bats

Building	Evidence of Bats	Potential to Support Roosting Bats			Overall Potential to Support Bats
		Summer/ Transitional Roost	Maternity	Hibernation	
B1 (Site 5)	None	Negligible	Negligible	Negligible	Negligible
B2 (Site 6)	None	Negligible	Negligible	Negligible	Negligible
B3 (Site 7)	None	Negligible	Negligible	Negligible	Negligible
B4 (Site 11)	None	Low	Negligible	Negligible	Low
B5 (Site 8)	None	Low	Negligible	Negligible	Low
B6 (Site 8)	None	Low	Negligible	Negligible	Low
B7 (Site 9)	Negligible	Negligible	Negligible	Negligible	Negligible
B8 (Site 10)	None	Low	Negligible	Negligible	Low
B8a (Site 10)	None	Negligible	Negligible	Negligible	Negligible

Table 8: Results of External Inspection of Buildings for Bats

Building	Description	Potential Access Points	Potential Roost Points	Evidence of Bats	Environmental Factors
B1 (Site 5)	A single storey community hall building including a bar area and offices (see Photograph 1 on Figure 5). The structure ins estimated to be around 40 years old. The walls are of brick construction and have cavities. The flat roof is covered with bitumen felt. Approximate maximum dimensions: 25m (l) x 18m (w) x 4m (h).	None identified	None identified	None	Regent's park is less than 100m to the west but is separated by a busy main road (the A4201). Small fragments of foraging and commuting habitat across the area include scattered street trees, gardens and public amenity spaces.
B2 (Site 6)	A two storey restaurant structure estimated to be around 40 years old. The building has a flat felt roof across two levels and wooden facia boarding (see Photograph 2 on Figure 5). The walls are of brick construction and have a cavity. Approximate maximum dimensions: 15m (l) x 11m (w) x 7m (h).	None identified	None identified	None	Regents park is less than 100m to the west but is separated by a busy main road (the A4201). Small fragments of foraging and commuting habitat across the area include scattered street trees, gardens and public amenity spaces.

Building	Description	Potential Access Points	Potential Roost Points	Evidence of Bats	Environmental Factors
B3 (Site 7)	A five storey building, largely comprising residential units, but with some commercial use within the basement area. Building is rectangular in shape and is constructed of cavity brick wall with a flat felt roof (see Photograph 3 on Figure 5). The structure is estimated to be around 50 years old Approximate maximum dimensions: 120m (l) x 8m (w) x 10m (h).	None identified	None identified	None	Immediately adjacent to a busy main road to the west of the building (the A4201). Regent's Park is less than 100m to the west. Small fragments of foraging and commuting habitat across the area include scattered street trees, gardens and public amenity spaces.

Building	Description	Potential Access Points	Potential Roost Points	Evidence of Bats	Environmental Factors
B4 (Site 11)	A two storey former church building currently comprising a community hall. The building is estimated to be approximately 100 years old. The building has solid brick walls with a pitched slate roof over two levels, including an elevated tower type section to the south of the building, also with a pitched roof (see Photograph 4 on Figure 5). A large chimney extends from the east of the tower and a protruding window is present on the west of the main roof section. The roof was noted to be in good condition. Approximate maximum dimensions: 20 (l) x 10m (w) x 12m (h) (tower 17m high).	- Gap under tile on eastern aspect of roof. - Gap under tile and lifted lead flashing adjacent to chimney on the eastern part of the tower, to the south of the building.	- Bats could roost within crevices underneath the lifted tiles and lifted lead flashing.	None	Regent's park is approximately 150m to the west. Small fragments of foraging and commuting habitat across the area include scattered street trees, gardens and public amenity spaces.

Building	Description	Potential Access Points	Potential Roost Points	Evidence of Bats	Environmental Factors
B5 (Site 8)	A three storey residential apartment building formed of solid brick walls with a simple pitched tiled roof (see Photograph 5 on Figure 5). The building is estimated to be approximately 50 years old. Approximate maximum dimensions: 40 (l) x 8m (w) x 10m (h).	- Gaps under tiles - Missing tiles - Drainage hole in side of the building	- Bats could roost within crevices under tiles. - Bats could access roof void via missing roof tiles or bats could access crevices underneath tiles. - The drainage hole could lead to hidden roosting points within the building structure.	None	Small fragments of foraging and commuting habitat across the area include scattered street trees, gardens and public amenity spaces.

Building	Description	Potential Access Points	Potential Roost Points	Evidence of Bats	Environmental Factors
B6 (Site 8)	A two storey residential apartment building with cavity brick walls and a simple pitched tiled roof (see Photograph 6 on Figure 5). The building is estimated to be approximately 50 years old. Approximate maximum dimensions: 40 (l) x 5m (w) x 7m (h).	- Missing tiles - Gaps under ridge tiles and a damaged ridge tile - Drainage hole in side of the building	- Bats could access roof void via missing roof tiles or bats could access crevices underneath tiles. - In crevice underneath damaged ridge tiles or within roof void	None	
B7 (Site 9)	A three storey theatre building with solid walls and a flat roof that was not visible for survey (see Photograph 7 on Figure 5). The building is estimated to be over 100 years old. Approximate maximum dimensions: 10 (l) x 10m (w) x 20m (h).	None identified	None identified	None	Immediately adjacent to a busy main road (A400), Small fragments of foraging and commuting habitat across the area include scattered street trees, gardens and public amenity spaces.

Building	Description	Potential Access Points	Potential Roost Points	Evidence of Bats	Environmental Factors
B8 (Site 10)	A two storey pub building with solid brick walls and a pitched roof. The western wall is rendered with plaster. The building has a balcony to the west set between inversely pitched sections of roof (see Photograph 8 on Figure 5). Approximate maximum dimensions: 10 (l) x 10m (w) x 8m (h).	- Gaps under tiles - Missing tiles	- Bats could roost within crevices under tiles. - Bats could access roof void via missing roof tiles or bats could access crevices underneath tiles.	None	Immediately adjacent to a busy main road to the west of the building (the A4201). Regent's Park is less than 100m to the west. Small fragments of foraging and commuting habitat across the area include scattered street trees, gardens and public amenity spaces.
B8a (Site 10)	A small wooden shed structure adjoining the main pub building. The roof is obscured by dense Virginia creeper Approximate maximum dimensions: 4 (l) x 3m (w) x 2m (h).	- None	None	None	

7.3 Legislation and Planning Policy Issues

7.3.1 As set out in Appendix 3, bats and their roosts are strictly protected by legislation. This makes it an offence, with very few exceptions, to:

- Deliberately capture, injure or kill a bat;
- Deliberately disturb a bat in such a way as to be likely:
    i. to impair its ability to survive, to breed or reproduce, or to rear or nurture its young; or
    ii. to impair its ability to hibernate or migrate; or
    iii. to affect significantly the local distribution or abundance of the species to which they belong.
- Damage, destroy or obstruct a breeding site or resting place of a bat; and
- Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead bat, or any part of, or anything derived from a bat.

7.3.2 In addition protected species including bats are protected through the planning system. As stated by the Office of the Deputy Prime Minister (ODPM) Circular 06/2005, Paragraph 98 of which states '*the presence of a protected species is a material consideration when a planning authority is considering a development'* and Paragraph 99 states that *'is essential that the presence or otherwise of a protected species, and the extent that they may be affected by the proposed development is established before the planning permission is granted*'.

7.3.3 Buildings B4 (Site 11), B5 (Site 8), B6 (Site 8) and B8 (Site 10) have the potential to support roosting bats. It is understood that proposals for the development are yet to be finalised. Should finalised proposals involve either demolition or significant alterations to these buildings, it is recommended that further survey are carried out of these buildings in order to determine the presence or likely absence of roosting bats, as outlined within Section 7.

7.4 Recommendations

Further Survey

7.4.1 In order to determine the presence or likely absence of roosting bats at the buildings B4, B5, B6 and B8, it is recommended that dusk emergence and/ or dawn return to roost surveys of the buildings should be carried out. Surveys should comprise at least two visits spaced at least a month apart in line with Bat Conservation Trust Good Practice Guidelines (2012). Bat emergence and/ or return to roost surveys can be undertaken during May to August inclusive and during suitable weather conditions in April and September.

7.4.2 An internal inspection of the buildings could also be carried out which would involve a systematic search of accessible roof spaces by a licensed bat worker to inform the scope of further emergence surveys, and may be able to confirm the presence of roosting bats from buildings.

7.4.3 Should roosting bats be identified by further survey it would be necessary to apply for an European Protected Species Licence (EPSL) from Natural England in order for the works to proceed in accordance with legislation pertaining to bats. This would need to include an appropriate mitigation strategy and may need to be informed by further survey visits.

7.5 Conclusion

7.5.1 Four of the nine buildings inspected were found to have the potential to support roosting bats (Buildings B4, B5, B6 and B8 – Sites 11, 8, 8 and 10, respectively). Further survey of these buildings is required to determine the presence or likely absence of bats. There are no known issues regarding bats and the other buildings (B1-3, B7, B8a- Sites 5, 6, 7, 9 and 10, respectively).

7.6 References

7.6.1 HM Government (2012) National Planning Policy Framework. Department for Communities and Local Government.

7.6.2 Hundt, L. Bat Conservation Trust (2012). Bat Surveys, Good Practice Guidelines. BCT, London.

7.6.3 London Borough of Camden (2010) Camden Core Strategy 2010-2025

7.6.4 Office of The Deputy Prime Minister Circular 06 (2005) Biodiversity and Geological Conservation Statutory Obligations and Their Impact on the Planning System

8. Appendix 1 Assessment Methodology

8.1 Identification of Legal and Planning Policy Issues in England

Scope of Assessment

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

Designated Sites

8.1.2 The location of the site is compared to the distribution of sites with a statutory or non-statutory nature conservation designation using information derived from the desk study. Consideration is given to designated sites that could be affected directly or indirectly by the proposed development.

Habitats outside Designated Sites

8.1.3 The habitats known to occur on the site are compared to those which receive some protection, in law or policy, outside of designated sites i.e. hedgerows, uncultivated land and semi-natural areas, habitats listed as priorities in the home nation biodiversity strategies, habitats listed as Habitats of Principal Importance for the Conservation of Biodiversity by the Secretary of State and local priority habitats listed as requiring action (formerly under the Local Biodiversity Action Plans).

Ancient Woodland

8.1.4 The ancient woodland inventory is checked to determine whether any known ancient woodland occurs either on the site or nearby.

Protected Species

8.1.5 The species known to occur on the site as a result of the desk study and 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 2010.

8.1.6 In addition, the species known to occur on the site as a result of the desk study and 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.

Priority Species

8.1.7 The species known to occur on the site are compared with those listed as priority species (i.e. Species of Principal Importance for the Conservation of Biodiversity in the country concerned) or those requiring action on the local priority species lists (Local Biodiversity Action Plans).

Other Species of Conservation Concern

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

Invasive Plant Species

8.1.9 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 1981, as amended.

Review of Legislation and Policy

8.1.10 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

8.1.11 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.

8.2 Identification of Potential Further Ecological Issues

8.2.1 Further ecological issues are those which can not be resolved during the preliminary ecological appraisal for any reason, including the following:

- The development is near a designated site and consultation with the relevant regulator is required in order to determine whether further assessment is required;
- 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).

8.2.2 Discussion of issues raised by 3rd parties, e.g. reports of protected species from the site by local people, may also be discussed under this heading.

8.2.3 The desk study is used as a guide to the protected species/species of conservation in the local area, however, the list is not taken to be exhaustive and it is borne in mind that some species may no longer occur in the locality.

8.2.4 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.

9. Appendix 2 Plant Species and Abundance

Site 1

Amenity grassland (AM1)

Common Name	Scientific Name	Abundance
Cock's foot	*Dactylis glomerata*	D
Black medick	*Medicago lupulina*	F
Cleavers	*Galium aparine*	F
Creeping bent	*Agrostis stolonifera*	F
Dandelion	*Taraxacum officinale* agg.	F
Yarrow	*Achillea millefolium*	O
Ground ivy	*Glechoma hederacea*	O

Amenity grassland (AM2)

Common Name	Scientific Name	Abundance
Cock's foot	*Dactylis glomerata*	D
Black medick	*Medicago lupulina*	F
Cleavers	*Galium aparine*	F
Creeping bent	*Agrostis stolonifera*	F
Dandelion	*Taraxacum officinale* agg.	F
Yarrow	*Achillea millefolium*	O
Ground ivy	*Glechoma hederacea*	O

Introduced Shrub (IS1)

Common Name	Scientific Name	Abundance
Pelargonium	*Pelargonium* sp.	D

Introduced Shrub (IS2)

Common Name	Scientific Name	Abundance
Pelargonium	*Pelargonium* sp.	D

Introduced Shrub (IS3)

Common Name	Scientific Name	Abundance
Pelargonium	*Pelargonium* sp.	D

Introduced Shrub (IS4)

Common Name	Scientific Name	Abundance
Pelargonium	*Pelargonium* sp.	D

Introduced Shrub (IS5)

Common Name	Scientific Name	Abundance
Pelargonium	*Pelargonium* sp.	D

Introduced shrub (IS6)

Common Name	Scientific Name	Abundance
Hebe	*Hebe* sp.	F
Euonymus	*Euonymus fortunei*	F
Philadelphus	*Philadelphus coronarius*	F
Corn marigold	*Chrysanthemum segetum*	F
Dog rose	*Rosa canina*	F

Introduced shrub / Scattered broadleaved trees

Common Name	Scientific Name	Abundance
Kerria	*Kerria japonica*	A
Yellow berried cotoneaster	*Cotoneaster rothschildianus*	O
Rowan	*Sorbus aucuparia* 'Joseph Rock'	O
Horse chestnut	*Aesculus hippocastanum*	R
Sycamore	*Acer pseudoplatanus*	R
Wild cherry	*Prunus avium*	R
Ash	*Fraxinus excelsior*	R
Spotted laurel	*Aucuba japonica*	R

Site 2

Amenity grassland (AM3)

Common Name	Scientific Name	Abundance
Perennial rye grass	*Lolium perenne*	D
Cock's foot	*Dactylis glomerata*	A
Cleavers	*Galium aparine*	A
Dandelion	*Taraxacum officinale* agg.	A
Ground ivy	*Glechoma hederacea*	A
Shepherd's purse	*Capsella bursa-pastoris*	F
Weeping willow	*Salix alba* x *babylonica*	R
Cherry	*Prunus* sp.	R

Introduced shrub (IS7)

Common Name	Scientific Name	Abundance
Buddleia	*Buddleja davidii*	D
Hebe	*Hebe* sp.	D

Introduced shrub (IS8)

Common Name	Scientific Name	Abundance
Lavender	*Buddleja davidii*	R
Japanese maple	*Acer japonica*	R
Japanese andromeda	*Pieris japonica*	R
Karo	*Pittosporum crassifolium*	R

Site 3

Species-poor hedge (PH1)

Common Name	Scientific Name	Abundance
Garden privet	*Ligustrum ovalifolium*	D

Amenity grassland (AM4)

Common Name	Scientific Name	Abundance
Couch grass	*Elytrigia repens*	D
Perennial rye grass	*Lolium perenne*	A
Greater plantain	*Plantago major*	A
Daisy	*Bellis perennis*	A
Dandelion	*Taraxacum officinale* agg.	A
Creeping thistle	*Cirsium arvense*	F
Creeping cinquefoil	*Potentilla repens*	F
Common mouse ear	*Cerastium fontanum*	F
Whitebeam	*Sorbus aria* agg.	R

Introduced shrub (IS9)

Common Name	Scientific Name	Abundance
Kerria	*Kerria japonicum*	O
Rose	*Rosa* sp.	O
Privet	*Ligustrum ovalifolium*	O
Box	*Buxus sempervirens*	O
Coconut	*Cocos nucifera*	O

Site 4

Species-poor hedge (PH2)

Common Name	Scientific Name	Abundance
London plane	*Platanus* x *acerifolia*	F
Elm	*Ulmus procera*	F
False acacia	*Robinia pseudacacia*	F

Species-poor hedge with trees (PHT1)

Common Name	Scientific Name	Abundance
Dogwood	*Rosa canina*	D
Elder	*Sambucus nigra*	F
Hawthorn	*Crataegus monogyna*	F
Wild service tree	*Sorbus terminalis*	O
Rowan	*Sorbus aucuparia* 'Joseph Rock'	O

Amenity grassland (AM5)

Common Name	Scientific Name	Abundance
Perennial rye grass	*Lolium perenne*	A
Yarrow	*Achillea millefolium*	A
Cock's foot	*Dactylis glomerata*	A
Cleavers	*Galium aparine*	A
Red Clover	*Trifolium pratense*	O
Red dead nettle	*Lamium purpureum*	O
White poplar	*Populus alba*	R
Silver birch	*Betula pendula*	R

Site 5

Scattered broadleaved trees

Common Name	Scientific Name	Abundance
London plane	*Platanus* x *hispanica*	F

Amenity grassland (AM6)

Common Name	Scientific Name	Abundance
Perennial rye grass	*Lolium perenne*	D
Greater plantain	*Plantago major*	R
Dandelion	*Taraxacum officinale* agg.	R

Introduced shrub (IS10)

Common Name	Scientific Name	Abundance
Cabbage palm	*Cordyline australis*	D

Introduced shrub (IS11)

Common Name	Scientific Name	Abundance
Euonymus	*Euonymus europaeus*	O
Cherry	*Prunus* sp	O
Gorse	*Ulex europaeus*	O
Privet	*Ligustrum ovalifolium*	O

Guelder rose	*Viburnum opulus*	O

Site 6

Scattered broadleaved trees

Common Name	Scientific Name	Abundance
Cockspur thorn	*Crataegus crus-gallis*	O
Small leaved lime	*Tilia cordata*	R

Site 7

Scattered broadleaved trees (PH2)

Common Name	Scientific Name	Abundance
Small leaved lime	*Tilia cordata*	R

Site 8

Species-poor hedge (PH3)

Common Name	Scientific Name	Abundance
Cherry laurel	*Prunus laurocerasus*	D

Scattered broadleaved woodland (SBW1)

Common Name	Scientific Name	Abundance
London plane	*Platanus* x *hispanica*	D
Cherry laurel	*Prunus laurocerasus*	F
Euonymus	*Euonymus* sp.	F
Tutsan	*Hypericum androsaemum*	F
Wild carrot	*Daucus carota*	F
Rhododendron	*Rhododendron ponticum*	O
Mahonia	*Mahonia aquifolium*	O
Holly	*Ilex aquifolium*	R

Amenity grassland (AM7)

Common Name	Scientific Name	Abundance
Perennial rye grass	*Lolium perenne*	D
Creeping bent	*Agrostis stolonifera*	A
Cleavers	*Galium aparine*	A
Creeping buttercup	*Ranunculus repens*	A
Yarrow	*Achillea millefolium*	A
Dandelion	*Taraxacum officinale* agg.	F
Daisy	*Bellis perennis*	F
Ribwort plantain	*Plantago lanceolata*	F
Ragwort	*Senecio jacobaea*	R

Creeping thistle	*Cirsium arvense*	R

Amenity grassland (AM8)

Common Name	Scientific Name	Abundance
Yorkshire fog	*Holcus lanatus*	D
Meadow buttercup	*Ranunculus acris*	LD
Creeping bent	*Agrostis stolonifera*	A
Daisy	*Bellis perennis*	F
Red dead nettle	*Lamium purpureum*	F
Red clover	*Trifolium pratense*	F
Creeping cinquefoil	*Potentilla reptans*	F
Yarrow	*Achillea millefolium*	F
Cock's foot	*Dactylis glomerata*	O
Annual meadow grass	*Poa annua*	O

Amenity grassland (AM9)

Common Name	Scientific Name	Abundance
Common couch	*Elytrigia repens*	D
Self heal	*Prunella vulgaris*	LD
Daisy	*Bellis perennis*	F
Dandelion	*Taraxacum officinale* agg.	F
Ribwort plantain	*Plantago major*	F
Cleavers	*Galium aparine*	F

Introduced shrub (IS12)

Common Name	Scientific Name	Abundance
Privet	*Ligustrum ovalifolium*	D

Introduced shrub (IS13)

Common Name	Scientific Name	Abundance
Variegated holly	*Ilex* sp.	F
Berberis	*Berberis* sp.	F
Elder	*Sambucus nigra*	O

Site 10

Scattered broadleaved trees

Common Name	Scientific Name	Abundance
Ash	*Fraxinus excelsior*	R

Introduced shrub (IS14)

Common Name	Scientific Name	Abundance
Senecio	*Senecio cineraria*	O
Californian lilac	*Ceonathus* sp.	O
Wild pansy	*Viola tricolor*	R

Introduced shrub (IS15)

Common Name	Scientific Name	Abundance
Camellia sasanqua	*Camellia sasanqua*	F
Ground ivy	*Glechoma hederacea*	R

Introduced shrub (IS16)

Common Name	Scientific Name	Abundance
Wall cotoneaster	*Cotoneaster horizontalis*	O
Californian lilac	*Ceonathus* sp.	O
Ground ivy	*Glechoma hederacea*	R

10. Appendix 3: British Bats

10.1 Introduction

10.1.1 A summary of the biology of British bats and the legislation and policy that protects them concern is provided below.

10.2 Biology

10.2.1 There are 18 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 the16 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

10.2.2 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.

10.2.3 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.

10.2.4 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

10.2.5 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

10.2.6 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.

10.2.7 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.

10.3 Site Designation

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

- Conservation of Habitats and Species Regulations 2010 (which replaces the Conservation (Habitats &c) Regulations 1994 as amended)
- Wildlife and Countryside Act 1981, as amended;
- The Countryside and Rights of Way Act 2000 (which amends the Wildlife and Countryside Act); and
- Natural Environment and Rural Communities Act 2006 (which amends the Wildlife and Countryside Act).

10.3.2 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/or Sites of Special Scientific Interest (SSSIs).

10.3.3 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 is transposed into UK law by the Conservation of Habitats and species Regulations 2010. This legislation requires that areas are designated as Special Areas of Conservation (SACs) to protect populations of these 4 bat species. To date, 26 SACs have been designated specifically to protect these species, and these sites are of international importance for the populations of bats that they support. A further 5 SACs have been designated, where the presence of at least one of the 4 bat species is a qualifying feature but not the primary reason that the site was designated.

10.3.4 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) and the Natural Environment and Rural Communities Act 2006.

10.3.5 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; and
- Mixed Roost sites – all hibernacula containing four or more species and more than 50 individuals or three species and 100 or more individuals or two species and 150 or more individuals, though these criteria may be lower in some parts of the UK.

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

10.3.7 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.

10.4 Species Protection

Legislation

10.4.1 All bat species are protected by the Conservation of Habitats and Species Regulations 2010. The Regulations make it an offence, with very few exceptions, to:

- Deliberately capture, injure or kill a bat;
- Deliberately disturb a bat in such a way as to be likely:
  - iv. to impair its ability to survive, to breed or reproduce, or to rear or nurture its young; or
  - v. to impair its ability to hibernate or migrate; or
  - vi. to affect significantly the local distribution or abundance of the species to which they belong.
- Damage or destroy a breeding site or resting place of a bat;
- Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead bat, or any part of, or anything derived from a bat.

10.4.2 In addition to the protection given to bats under the Conservation of Habitats and Species Regulations 2010 already described, bats are also partially protected in England under the Wildlife and Countryside Act, which adds the following offences (with certain exceptions):

- Disturbance while it is occupying a structure or place which it uses for shelter or protection; or
- Obstructing access to any structure or place used for shelter or protection.

10.4.3 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.

10.4.4 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.

10.4.5 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.

10.4.6 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).

10.4.7 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

10.4.8 The National Planning Policy Framework (NPPF) gives further direction with respect to biodiversity conservation and land use change / development. The NPPF encourages local planning authorities to identify, conserve and restore, ecological networks, which should benefit bats, and it also states that planning permission should be refused if significant harm to biodiversity cannot be avoided, mitigated or compensated. In addition, the Government Circular 06/05. which relates to biodiversity conservation states that all protected species, such as bats, are a material consideration for the planning authority when considering proposed developments.

10.4.9 Seven species of bat (barbastelle, Bechstein's, greater and lesser horseshoe, brown long-eared, noctule and soprano pipistrelle) are listed as species of principal importance for the conservation of biodiversity in England under Section 41 of the Natural Environment and Rural Communities Act 2006. Under this Act, the Secretary of State must take steps, or encourage others to take steps, to further the conservation of these species. In addition, every competent authority, including Network Rail, has a general duty to have regard for the purpose of conserving biodiversity. This duty does not extend specifically to the Section 41 list; however, guidance published by Defra indicates that the Section 41 species should be considered a priority when implementing the duty.

10.5 References

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

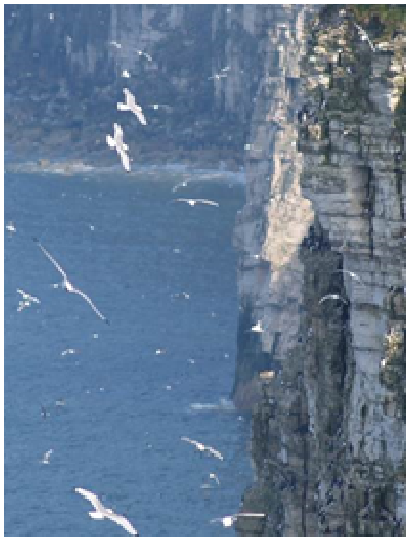
10.5.6 HM Government (1998) Tranche 2 Action Plans: Volumes I and II. English Nature, Peterborough.

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

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

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

Appendix 2: Further Bat Surveys, The Victory Public House and St Bede's Hall (Thomson Ecology, May 2014)


Further Bat Surveys, The Victory Public House and St Bede's Hall, Regent's Park Estate

For

Campbell Reith Hill LLP

Project No.: ACAM206/007

May 2015

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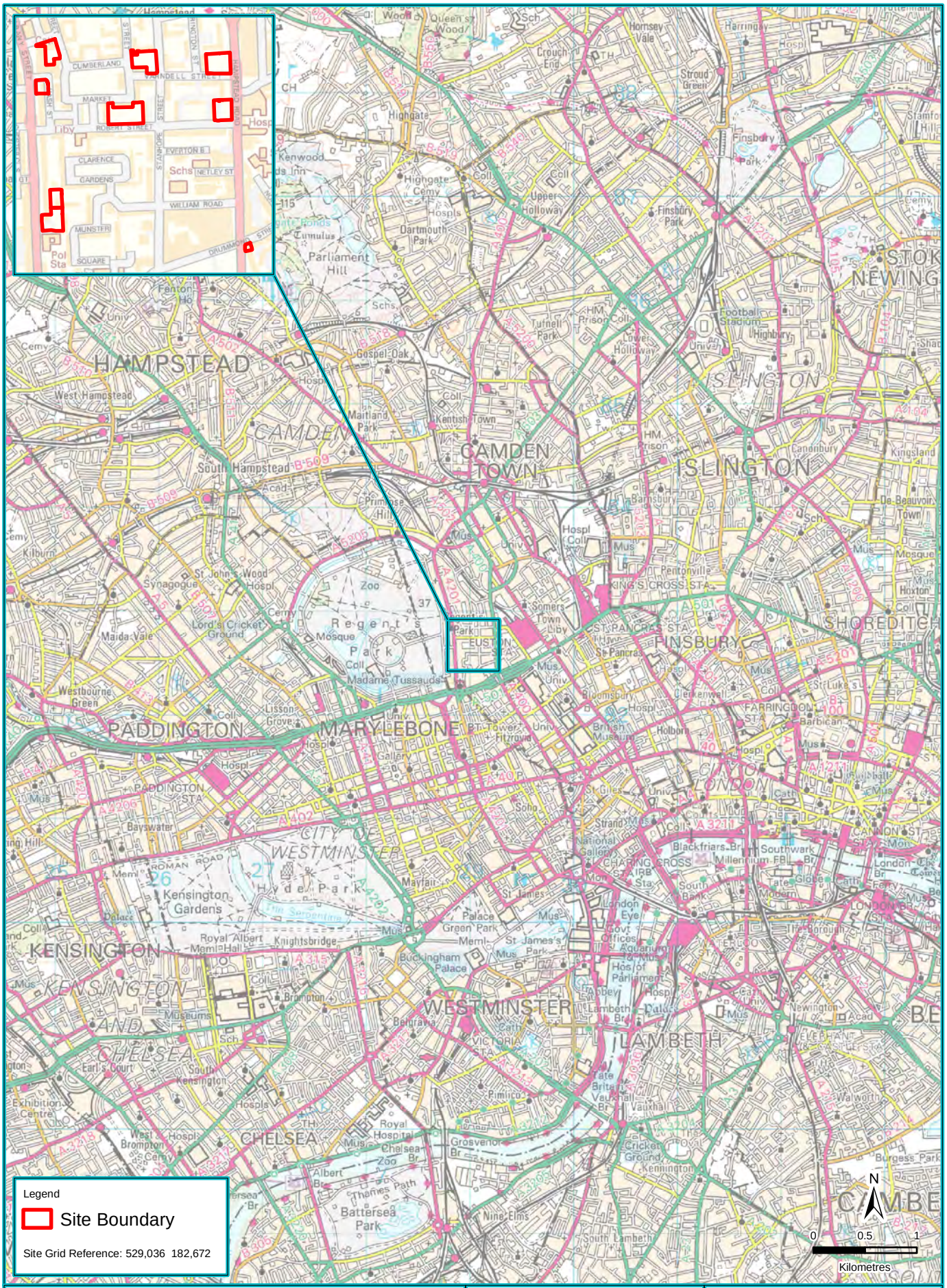
Project Number	Report No.
ACAM206/007	001

Revision No.	Report Status	Date of Issue	Author	Reviewer	Approver
001	1st Draft	02/04/15	Xenia Snowman	Leanne Wall	Marion Thomson
002	2nd Draft	08/05/15	Xenia Snowman	Gabrielle Graham	Gabrielle Graham

Disclaimer:

Contents



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Legend

Surveyor Location

Potential Bat Access/ Egress Points

Gap Under Tile

Missing Tiles

Building Features

Roof Lines

Chimney

Potential of Buildings for Bats

Low

Negligible

No View of Roof

Roof Space Inaccessible

Site Boundary

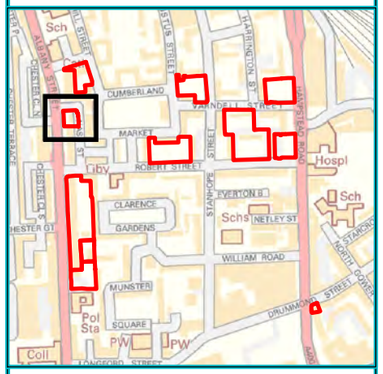

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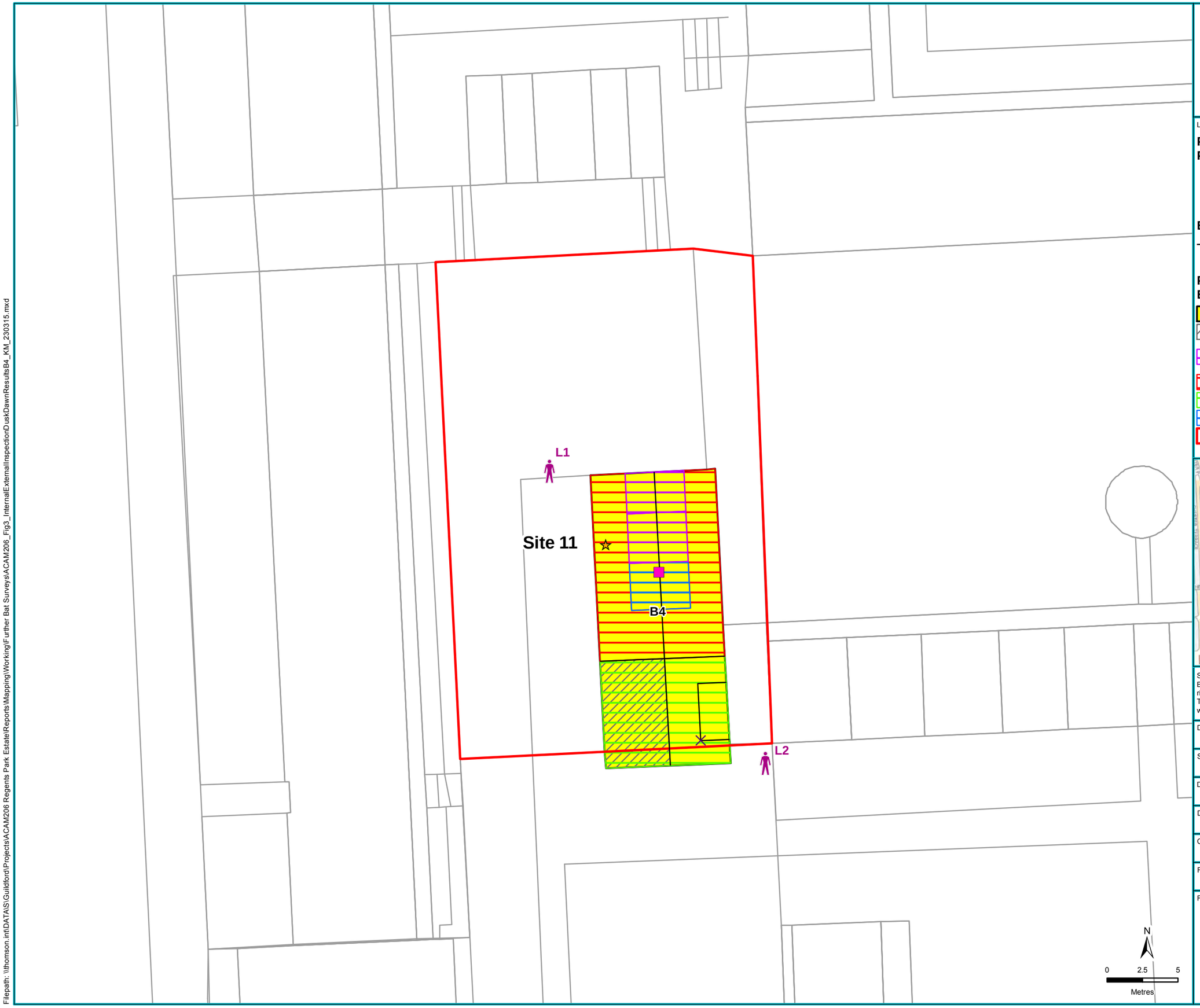
Figure Title

Internal and External Inspection and Dusk Emergence and Dawn Return to Roost Bat Survey Results



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Legend

Potential Bat Access/ Egress Points

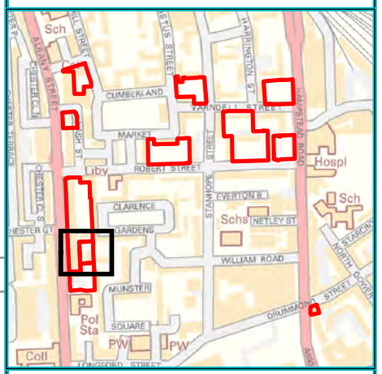
- Gap Under Tile
- Gap Under Tile and Lifted Lead Flashing

Building Features

- Roof Lines
- Loft Hatch

Potential of Buildings for Bats

- Low
- No View of Roof
- Accessed Partially with Endoscope
- No Roof Space
- Roof Space Accessible
- Roof Space Inaccesible
- Site Boundary



Site Grid Reference: 528,867 182,568

Drawing Ref	ACAM206/18242/1
Scale at A3	1:250
Drawn: KM	Checked: NS
Date: 23/03/2015	Date: 23/03/2015
Client	Campbell Reith Hill LLP
Figure Number	3

Figure Title

Internal and External Inspection and Dusk Emergence and Dawn Return to Roost Bat Survey Results - St. Bede's Hall

Filepath: \\thomson.int\DATA\S\Guildford\Projects\ACAM206 Regents Park Estate\Reports\Mapping\Working\Further Bat Surveys\ACAM206_Fig3_InternalExternalInspectionDuskDawnResultsB4_KM_230315.mxd

Photograph 1:
The Victory Public House is a functional public house assessed as having low potential to support roosting bats.

Photograph 2:
St. Bede's Hall is a converted church assessed as having low potential to support roosting bats.

Photograph 3:
St. Bede's Hall within the elevated tower section to the south of the building.

Photograph 4:
St. Bede's Hall evidence of breeding birds within the elevated tower section to the south.

Client: Campbell Reith Hill LLP		Drawing Ref: ACAM206/18243/1	thomson ecology
Figure Number: 4		Scale at A4: Not applicable	
Figure Title: Photographs of Building Inspection for Bats – St. Bede's Hall	Drawn: KM	Checked: NS	www.thomsonecology.com enquiries@thomsonecology.com
	Date: 25/03/2015	Date: 25/03/2015	

1. Summary and Main Recommendations

1.1 Summary

1.1.1 Campbell Reith Hill LLP (CampbellReith) is seeking to redevelop nine sites within Regent's Park Estate (Figure 1). It is understood that the developments will include the construction of new residential units.

1.1.2 In October 2014 Thomson Ecology undertook a desk study, extended Phase 1 habitat survey and external inspection of nine buildings and the trees within Regent's Park Estate for bats. Four of the buildings were identified with the potential to support roosting bats, but no trees were deemed to have potential for use by bats. Detailed results were provided in our report entitled 'Extended Phase 1 Habitat Survey, Desk Study, External Bat Inspection for Bats' (Thomson Ecology Report ref: ACAM206 / 005 / 001 / 002).

1.1.3 Further bat surveys were recommended for the Victory Public House (see Figure 2) and St. Bede's Hall (see Figure 3). The current proposals include the demolition of the Victory Public House and new buildings are due to be built in close proximity to St Bede's Hall.

1.1.4 These further surveys were to include an internal inspection, by a Natural England licensed bat ecologist, of the roof spaces of the Victory Public House and St Bede's Hall to look for evidence of roosting bats. The surveys also included two dusk emergence and two dawn return to roost surveys for both buildings.

1.1.5 Access was not granted for an internal inspection of the Victory Public House, so no results were obtained. During the internal inspection for bats within St Bede's Hall, no evidence of roosting bats was identified. No bats were seen emerging from or returning to roost within the Victory Public House or St Bede's Hall during the dusk emergence and dawn return to roost surveys. The surveys were undertaken on 16th and 17th March, and the 5th and 6th May 2015.

~~1.1.6~~ The initial surveys were undertaken on 16th and 17th March, which is considered an unsuitable time of year to carry out these surveys, as stated within the Bat Conservation Trust's Good Practice Guidelines (Hundt, 2012). Notwithstanding this CampbellReith received communication from the LPA that the survey time was considered acceptable. No bats or evidence of roosts were recorded during the initial surveys of the Victory Public House and St Bede's Hall on the 16th and 17th March, during the dusk emergence and dawn return to roost bat surveys. Given the timing of the survey and as likely absence of bats from the buildings could not be confirmed following these surveys, Thomson Ecology recommended undertaking an additional survey in May, as per Hundt (2012). This was undertaken on 5th and 6th May with an aim to confirm the likely absence of bat roosts from these buildings, or from within external features of these buildings. The conditions were variable during the surveys, but overall conditions were deemed sub-optimal and no bats were seen to emerge from or return to roost in the Victory Public House and St Bede's Hall.

1.1.7 Bats are protected under The Conservation of Habitats and Species Regulations 2012, as amended, The Wildlife and Countryside Act 1981, as amended, and the Natural Environment and Rural Communities Act 2006. Taken together, this legislation makes it an offence to capture, injure, kill or disturb a bat or to damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat.

1.1.8 As the proposed development has the potential to adversely impact bats that may be present within buildings on the site, the recommendations within this report could be followed in order to avoid committing an offence and to comply with legislation and planning policy in relation to bats during the development.

1.2 Main Recommendations

1.2.1 The main recommendations are set out below:

- It is recommended that, if possible, the development avoids areas where a full assessment for bats has not been made and areas where the likely absence of bat roosts has not been confirmed;
- Necessary clearance of all trees and shrubs or demolition of any buildings with the potential to be used by breeding birds should be undertaken outside of the bird breeding season, i.e. between September and February inclusive, or be conducted under an ecological watching brief. Feral pigeon was recorded as breeding on St Bede's Hall. Given this species can breed all year round, and all birds and active nests are protected under the Wildlife and Countryside Act (1981), as amended, a check of the areas of proposed works is recommended prior to construction. Should any active bird nests be identified during the check it is recommended that works stop until such time as the nest becomes inactive.
- Bat boxes suitable for locally-occurring bat species could be installed on the outside of the new buildings or on retained mature trees;
- Provision of native hedgerow and shrub species to provide suitable habitat for bats to include the planting of species which attract insects e.g. rowan (*Sorbus aucuparia*), honey suckle (*Lonicera periclymenum*) and common evening-primrose (*Oenothera biennis*) would enhance the habitat for invertebrates and foraging bat species.

1.2.2 Following good practice guidelines the following further surveys are recommended to obtain sufficient information to undertake the impact assessment:

- As it was not been possible to gain access to the Victory Public House to carry out a full internal inspection and the survey conditions were sub-optimal, it is not possible to confirm likely absence of roosting bats from the Victory Public House. It is therefore recommended that a precautionary method is adopted. This should include an internal inspection prior to demolition works and that the demolition of the Victory Public House be undertaken following a 'Working Method Statement' under the supervision of a Natural England Bat Licence holder. This will involve supervised removal of any features suitable for use by bats using hand tools. Should bats or evidence of roosting bats be discovered during works, it will be considered a breach of the legislation protecting bats and works must stop immediately and Natural England be notified.

2. Introduction

2.1 Development Background

2.1.1 Nine sites (Site 1 to 6 and Site 9 to 11) within Regent's Park Estate are being considered for a development to provide replacement housing following the loss of residential blocks that are due to be demolished to facilitate the HS2 National Infrastructure project. At this stage, two buildings, the Victory Public House and St Bede's Hall have been identified as having low bat roosting potential and will be affected by the development proposals. Thomson Ecology Report ref: ACAM206 / 005 / 001/ 002 includes all 11 sites.

2.1.2 Two buildings within site 10 and 11 are addressed in this report: the Victory Public House, due for demolition, and St Bede's Hall adjacent to which a new building will be constructed. The proposals above are hereafter referred to collectively as 'the development'.

2.1.3 The Victory Public House (Grid reference TQ288825) and St Bede's Hall (Grid reference TQ288827) total approximately 0.14ha within Regent's Park Estate. The location of the buildings is presented in Figures 2 and 3, respectively. Regent's Park Estate is situated adjacent to the A4201 road in Camden, London.

2.1.4 It is understood that a planning application will be submitted to Camden Borough Council in May 2015.

2.2 Ecology Background

2.2.1 Thomson Ecology undertook a preliminary ecological appraisal (PEA), which included a desk study, an extended Phase 1 habitat survey and external bat inspection of nine buildings (B1 – B8 and B8a) across 11 sites (including the nine sites now being considered for development) within Regent's Park Estate on 11th September 2014. Full results of these surveys, including a description of all the buildings and their location within each site, are provided in Thomson Ecology Report Reference: ACAM206 / 005 / 001/ 002. During the initial assessment, four of the nine buildings surveyed were assessed as having low potential to support summer/transitional bat roosts. This included Victory Public House (B8 in the original report) and St Bede's Hall (B4 in the original report).

2.2.2 The remaining five buildings were assessed as having negligible potential to support roosting bats. No trees with the potential to support roosting bats were identified within the survey area. Further surveys including an internal inspection and dusk emergence and dawn return to roost surveys were recommended at the Victory Public House and St Bede's Hall to ascertain whether bat roosts were located within these buildings. An internal inspection was also recommended.

2.3 The Brief and Objectives

2.3.1 Campbell Reith Hill LLP (CampbellReith) commissioned Thomson Ecology on 13th February 2015 and 23rd April to undertake further surveys for bats. The brief was to:

- Carry out one visit, by a bat licensed ecologist, to inspect the roof spaces of the Victory Public House and St Bede's Hall, for evidence of roosting bats;
- Undertake two visits, by suitably qualified ecologists, to conduct two dusk emergence and two dawn return to roost surveys at the Victory Public House and St Bede's Hall; and
- Produce a single report following these surveys, consolidating the methods, results and any recommendations for both surveys to be supported by appropriate digital mapping.

2.4 Limitations

2.4.1 The dusk emergence and dawn return to roost surveys were undertaken on 16th and 17th March and 5th and 6th May 2015. The Bat Conservation Trust (BCT) (Hundt, 2012) states that "*the minimum number of presence/absence survey visits required to provide confidence in negative preliminary roost assessment results from buildings*" is one dusk emergence and/or dawn re-entry survey between May and September inclusive, with the optimum survey period being May to August inclusive and that "*if a building…is considered to have a low likelihood of use by bats, one dusk emergence survey at an appropriate time of year, together with a pre-dawn re-entry survey or automated survey is recommended to provide confidence in a negative survey result*".

2.4.2 As the initial dusk emergence and dawn return to roost surveys were undertaken outside of optimum survey period, on the 16th and 17th March, this was considered to be a significant limitation to the survey results. Therefore, additional dusk emergence and dawn return to roost surveys were undertaken on the 5th and 6th May during the optimum survey period.

2.4.3 Small sections of the loft space of St Bede's Hall (shown on Figure 2) were not accessible during the internal inspection. However, although this is a limiting factor, it is not considered to be a significant limitation to the overall inspection survey as these were partially inspected using an endoscope and were only a small proportion of the overall loft space area.

2.4.4 No internal access was available within the Victory Public House therefore no internal inspection for bats was possible; therefore this is a significant limitation to the surveys.

2.5 Surveyors and dates

2.5.1 The internal inspection of St Bede's Hall was undertaken by Dan Sidoli and Xenia Snowman who is a Natural England (NE) bat licence holder (licence number: 2014-4338-CLS-CLS). All the dusk emergence and dawn return to roost surveys were led by NE bat licence holder Xenia Snowman, accompanied by Dan Sidoli, Stephen Hewitt, Irfaan Junaideen and Manuel Arzúa Piñeiro in March and Chris Savage, Cróna Mc Monagle, Michael Sears Jocelyn Moore all of whom have experience of undertaking bat surveys.

3. Methodology

3.1 General Approach

3.1.1 A survey area was defined which included the Victory Public House (see Figure 2 and Photograph 1 on Figure 4) and St Bede's Hall (see Figure 3 and Photograph 2 on Figure 4).

3.1.2 The following surveys were undertaken:

- Internal inspections of the roof spaces of St Bede's Hall, where possible, to look for bats, signs of bats and their roosts and to classify the potential of each feature to support roosting bats (as low, medium, high or confirmed) and the likely type of each roost (maternity, hibernation or transitional); and
- Two dusk emergence and two dawn return to roost surveys were carried out at the Victory Public House and St Bede's Hall.

3.2 Evidence of Bats

3.2.1 During the internal inspection surveys, evidence of roosting bats searched for included:

- Bat droppings, feeding remains and corpses (with notes made on quantity, freshness and type);
- Dark staining below an access point that may be caused by bat faeces or urine;
- Staining around a hole that may be caused by the natural oils in bat fur; and
- Noises made by bats.

3.2.2 Any evidence of bats found was recorded together with a note on the location. If any bat droppings were found, their location, spread, approximate number and age were recorded on a plan of the building. If necessary for identification, a sample of droppings was collected and retained for later analysis, including DNA analysis where required.

3.3 Internal Inspections of Buildings

3.3.1 Where safe to do so, buildings were entered and searched further for potential roosting opportunities for bats and evidence of bats. A ladder, torch and endoscope were used when necessary.

3.3.2 The following information was recorded for each roof void:

- Dimensions (maximum height, width and length) of the void and volume of stored material (<25%, 26 - 50% and >50%);
- Presence, type (roofing felt, breathable membrane) and condition (no, minor, moderate or severe damage/decay/gaps) of the roof lining;
- Presence and position of insulation (cold roof or warm roof);
- Presence of water tanks and whether covered; and

- Structure of interior timbers (purlin and rafter, attic trusses or typical trussed).

3.3.3 The search for bats and evidence of bats focused on the following key areas within the roof void:

- Along and on top of all beams and the floor or surfaces immediately below;
- On and around dividing walls, gable end walls and chimney breasts;
- Within gaps in the structure, such as mortise joints and gaps in mortar;
- Within any uncovered water tanks;
- Between the tiles and the roof lining, if accessible without causing damage; and
- On top of stored items.

3.3.4 A search was also made for any access points which had not been recorded previously. In addition, for each area searched, a note was made as to whether the area appeared to have been recently cleaned.

3.4 Dusk Emergence and Dawn Return to Roost Survey

3.4.1 The dusk emergence and dawn return to roost surveys were carried out by suitably qualified ecologists stationed at three locations around the Victory Public House (locations of surveyors are shown on Figure 2) and at two locations around St Bede's Hall (locations are shown on Figure 3). These surveyor locations were selected based on the results of the external inspections in order to allow all potential access or egress points on all aspects of the buildings to be monitored.

3.4.2 At dusk, potential egress points were watched constantly by the ecologists. At dawn, bats were tracked back to any access points within the buildings. A Duet frequency division bat detector was used by each ecologist to detect bats emerging from or returning to the potential roost site. Recordings of any bat passes were made using an Mp3 player for later analysis, where necessary, using Adobe Audition sound-analysis software.

3.4.3 The dusk survey began 30 minutes before sunset and ended 90 minutes after sunset to encompass peak activity periods for foraging bats. The dawn surveys began 90 minutes before sunrise and ended at sunrise (or 15 minutes after the last bat was recorded). The cloud cover, wind strength, rain and temperature were all recorded.

3.4.4 During the dusk emergence and dawn return to roost surveys, any incidental foraging and commuting bat activity within the vicinity of any potential roosts was also recorded, particularly along suitable commuting and foraging routes. For each location the species of bat and the number of passes was recorded. As a gauge to the overall level of activity, a bat activity index is calculated in the following way:

- The total number of passes for all species during each survey event at each location is divided by the duration time of the survey. This is then multiplied by 100 to give an activity score. The activity score is then compared to those in Table 1; and
- A bat pass is defined as an unbroken stream of echolocation calls, heard as a series of 'clicks' on a bat detector as the bat passes in and out of the detector's range.

Table 1: Categorisation of activity level (based bat surveys undertaken by Thomson Ecology in 2006 and 2007)

Activity Score	Assessment of Activity Level
Up to 5	Very Low
6 - 30	Low
31-50	Moderate
51-90	High
90 plus	Very High

3.5 Dates of survey

3.5.1 The internal inspection of St Bede's Hall was undertaken on 16th March 2015. Dusk emergence and dawn return to roost surveys of the Victory Public House and St Bede's Hall were carried out on 16th and 17th March and the 5th and 6th May 2015. The dates, surveyor locations and weather conditions during the surveys are detailed in Tables 2 and 3.

Table 2: Surveyor locations at dusk and dawn for each building surveyed.

Date	Sunset / Sunrise time	Building name	Surveyor Location
16/03/2015	17:36	Victory Public House	L1
		Victory Public House	L2
		Victory Public House	L3
		St Bede's Hall	L1
		St Bede's Hall	L2
17/03/2015	04:41	Victory Public House	L1
		Victory Public House	L2
		Victory Public House	L3
		St Bede's Hall	L1
		St Bede's Hall	L2
05/05/2015		Victory Public House	L1

Date	Sunset / Sunrise time	Building name	Surveyor Location
		Victory Public House	L2
		Victory Public House	L3
		St Bede's Hall	L1
		St Bede's Hall	L2
06/05/2015		Victory Public House	L1
		Victory Public House	L2
		Victory Public House	L3
		St Bede's Hall	L1
		St Bede's Hall	L2

4. Results

4.1 Environmental Factors

4.1.1 The Victory Public House and St Bede's Hall are located within a highly urbanised location within central London, see Figure 1. Small fragments of foraging and commuting habitat throughout the Regent's Park Estate include scattered street trees and small amenity green spaces including gardens and public amenity spaces. Regent's Park, an extensive area of suitable foraging and commuting habitat is located approximately 100m to the west of the Victory Public House and St Bede's Hall (see Figure 1).

4.2 Internal Inspection

4.2.1 Internal access was not granted for the Victory Public House therefore an internal inspection was not carried out. External features were, however, noted which are suitable for use by roosting bats.

4.2.2 No evidence of bats or their roosts was identified during the internal inspection undertaken within St Bede's Hall (see Photographs 2, 3 and 4 on Figure 4). However, both internal and external features are present which are suitable for use by roosting bats; these features are listed in Table 5 and are shown in Figures 3 and 4.

4.2.3 The results of the internal (where applicable) and previously undertaken external inspection (16th October 2014, Thomson Ecology Report ref: ACAM206 / 005 / 001 / 002) for bats of the Victory Public House and St Bede's Hall are detailed in Table 5 with corresponding plans of the buildings shown in Figures 2 and 3 and photographs shown on Figure 4.

4.2.4 Feral pigeon nests were located on the external window ledges of brick arch windows at both ends of the St Bede's Hall tower located at the southern end of this building.

4.3 External Inspection

4.3.1 It was not necessary to revise the potential assigned to the buildings during the external inspections for bats based on the findings of the internal inspection and the emergence and return to roost bat surveys.

4.4 Dusk Emergence and Dawn Return to Roost Survey

4.4.1 No bats were seen or heard foraging, commuting or emerging from or returning to roost within the Victory Public House or St Bede's Hall during the dusk emergence and dawn return to roost survey undertaken on 16th and 17th March (see Figures 2 and 3).

4.4.2 A single commuting pass by a common pipistrelle bat (*Pipistrellus pipistrellus*) was heard by the surveyors in location 1 and 2 (Figure 2) during the dusk emergence survey of the Victory Public House undertaken on 5th May 2015. This was recorded 84 minutes after the dusk emergence survey began, approximately 30 minutes after the typical emergence time for this species.

4.4.3 A single commuting pass by a soprano pipistrelle bat (*Pipistrellus pygmaeus*) was heard by the surveyor in location 2 (Figure 2) during the dusk emergence survey of the Victory Public House

undertaken on 5th May 2015. This was recorded 76 minutes after the dusk emergence survey began, approximately 15 minutes after the typical emergence time for this species.

4.4.4 The results of the dusk emergence and dawn return to roost surveys undertaken of the Victory Public House and St Bede's Hall are detailed within Table 4 with corresponding survey details of the buildings shown in Figures 2 and 3. No bats were seen to emerge from, or return to, roosts during the survey, and very low levels of incidental bat activity was recorded, consisting of a single commuting pass on each building.

Table 3: Weather conditions recorded during the survey

Survey Type	Date	Temperature °C		Cloud cover	Precipitation	Wind (Beaufort scale)	Suitability of weather conditions
		Max	Min				
Dusk	16/03/2015	7.6	6.8	100%	Dry	1	Suitable
Dawn	17/03/2015	6.2	5.8	60%	Dry	1	Suitable
Dusk	05/05/2015	13.4	12.7	60%	Dry	6	Sub-optimal
Dawn	06/05/2015	10.7	9.9	90%	Intermittent Showers	6	Sub-optimal

Table 4: Incidental bat activity recorded during dusk emergence and dawn return to roost surveys

Date	Surveyor Location	Details of Bats Emerging from or Returning to buildings	Incidental Bat Activity	
			Species and Description of Behaviour	Overall Activity Score
Dusk 16/03/2015 Sunset 17:36	1 - Victory Public House)	No bats seen to emerge.	No passes.	0 - Very Low
	2 - Victory Public House	No bats seen to emerge.	No passes.	0 - Very Low
	3 - Victory Public House	No bats seen to emerge.	No passes.	0 - Very Low
	1 - St Bede's Hall	No bats seen to emerge.	No passes.	0 - Very Low
	2 - St Bede's Hall	No bats seen to emerge.	No passes.	0 - Very Low
Dawn 17/03/2015 Sunrise	1 - Victory Public House	No bats seen to return.	No passes.	0 - Very Low
	2 - Victory Public House	No bats seen to return.	No passes.	0 - Very Low

Date	Surveyor Location	Details of Bats Emerging from or Returning to buildings	Incidental Bat Activity	
			Species and Description of Behaviour	Overall Activity Score
04:41	3 - Victory Public House	No bats seen to return.	No passes.	0 - Very Low
	1 - St Bede's Hall	No bats seen to return.	No passes.	0 - Very Low
	2 - St Bede's Hall	No bats seen to return.	No passes.	0 - Very Low
Dusk 05/05/2015 Sunset	1 - Victory Public House)	No bats seen to return.	1 common pipistrelle commuting pass	0 - Very Low
	2 - Victory Public House	No bats seen to return.	1 common pipistrelle commuting pass	0 - Very Low
	3 - Victory Public House	No bats seen to return.	No passes.	0 - Very Low
	1 - St Bede's Hall	No bats seen to return.	No passes.	0 - Very Low
	2 - St Bede's Hall	No bats seen to return.	1 soprano pipistrelle commuting pass	0 - Very Low
Dawn 06/05/2015 Sunrise	1 - Victory Public House)	No bats seen to return.	No passes.	0 - Very Low
	2 - Victory Public House	No bats seen to return.	No passes.	0 - Very Low
	3 - Victory Public House	No bats seen to return.	No passes.	0 - Very Low
	1 - St Bede's Hall	No bats seen to return.	No passes.	0 - Very Low
	2 - St Bede's Hall	No bats seen to return.	No passes.	0 - Very Low

Table 5: Results of External and Internal Building Inspections for Bats.

Building	Description	Potential Access Points	Potential Roost Points	Evidence of Bats	Environmental Factors	Overall Roost Potential
Victory Public House	A two storey pub building with solid brick walls and a pitched roof. The western wall is rendered with plaster. The building has a balcony to the west set between inversely pitched sections of roof (Figure 4). Approximate maximum dimensions: 10 (l) x 10m (w) x 8m (h).	- Gaps under tiles - Missing tiles	- Bats could roost within crevices under tiles. - Bats could access roof void via missing roof tiles or bats could access crevices underneath tiles.	None	Immediately adjacent to a busy main road to the west of the building (the A4201). Regent's Park is less than 100m to the west. Small fragments of foraging and commuting habitat across the area include scattered street trees, gardens and public amenity spaces.	Low

Building	Description	Potential Access Points	Potential Roost Points	Evidence of Bats	Environmental Factors	Overall Roost Potential
St Bede's Hall	A two storey former church building currently comprising a community hall, luxury health and fitness centre, The building is estimated to be approximately 100 years old. The building has solid brick walls with a pitched slate roof over two levels, including an elevated tower section to the south of the building, also with a pitched roof (see Figures 3 and 4). A large chimney extends from the east of the tower and a protruding window is present on the west of the main roof section. The roof was noted to be in good condition. Internally, the roof structure comprised of A-frame roof beams with plastic-lined roofing membrane and ground-level insulation. The brick arch windows have wire mesh installed to prevent access by birds. Active birds nests noted on the outer section of these window ledges (Figure 4). Approximate maximum dimensions: 20 (l) x 10m (w) x 12m (h) (tower 17m high).	- Gap under tile on eastern aspect of roof. - Gap under tile and lifted lead flashing adjacent to chimney on the eastern part of the tower, to the south of the building.	- Bats could roost within crevices underneath the lifted tiles and lifted lead flashing.	None	Regent's Park is approximately 150m to the west. Small fragments of foraging and commuting habitat across the area include scattered street trees, gardens and public amenity spaces.	Low

5. Legal and Planning Policy Issues

5.1.1 As set out in Appendix 1, bats and their roosts are strictly protected by legislation. This makes it an offence to:

- Deliberately capture, injure or kill a bat;
- Deliberately disturb a bat in such a way as to be likely:
  i. to impair its ability to survive, to breed or reproduce, or to rear or nurture its young; or
  ii. to impair its ability to hibernate or migrate; or
  iii. to affect significantly the local distribution or abundance of the species to which they belong.
- Damage, destroy or obstruct a breeding site or resting place of a bat; and
- Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead bat, or any part of, or anything derived from a bat.

5.1.2 In addition, protected species including bats are protected through the planning system. As stated by the Office of the Deputy Prime Minister (ODPM) Circular 06/2005, Paragraph 98 of which states '*the presence of a protected species is a material consideration when a planning authority is considering a development'* and Paragraph 99 states that '*is essential that the presence or otherwise of a protected species, and the extent that they may be affected by the proposed development is established before the planning permission is granted*".

5.1.3 The Victory Public House and St Bede's Hall have the potential to support roosting bats and their likely absence could not be confirmed from the limited surveys which were undertaken. Feral pigeon was observed nesting at both ends of the tower in St Bede's Hall. It is understood that development proposals are yet to be finalised, but current proposals include the demolition of the Victory Public House and new buildings are proposed to be built in close proximity to St Bede's Hall. It is recommended that further surveys are carried out on these buildings in order to determine the presence or likely absence of roosting bats, as detailed within Section 6.

6. Recommendations

6.1 Mitigation

6.1.1 As it was not possible to arrange access for an internal inspection of the Victory Public House, it is recommended that an internal inspection is undertaken prior to demolition works to the Victory Public House. Any demolition works should be undertaken following a 'Working Method Statement' (WMS). The WMS would detail how the works should proceed with caution to include that all features suitable for use by bats be removed using hand tools under the supervision of a Natural England bat licence holder. Should a bat roost or evidence of a bat roost be discovered, it would be necessary for works to halt immediately and Natural England be consulted on how to proceed, as if bats are disturbed or a roost damaged or destroyed, an offence will have been committed under national and European legislation.

6.1.2 Any necessary clearance or demolition of any buildings with the potential to be used by breeding birds should be undertaken outside of the bird breeding season, *i.e.* between September and February inclusive, or be conducted under an ecological watching brief.

6.2 Opportunities for Enhancement

6.2.1 The following measures could be implemented to enhance the site for bats:

- Planting of species which attract insects *e.g.* rowan, honey suckle and common evening-primrose would enhance the habitat for invertebrates and foraging bat species; and
- Provision of native hedgerow and shrub species to provide suitable habitat for bats.

7. Conclusion

7.1.1 One common pipistrelle was recorded commuting during the dusk emergence surveys undertaken on the Victory Public House Public House and one soprano pipistrelle bat was recorded commuting during the dusk emergency survey at St Bede's Hall undertaken on 5th May 2015. However, no bats were seen to emerge or re-enter the buildings during the dusk emergence or dawn return to roost surveys undertaken in March or May 2015.

7.1.2 The Victory Public House was deemed to have low potential for use by roosting bats and no bats were seen emerging or re-entering the building during the surveys undertaken on 5th and 6th May 2015. Therefore, if demolition works are undertaken following a 'Working Method Statement' (WMS) under the supervision of a Natural England bat licence holder following a tool box talk with all contractors, providing no bats are discovered, then the development proposals will be in line with the legislation and policy protecting bats and their roosts. However, if roosts are discovered at any stage of demolition, works must stop immediately as a breach in the legislation may have occurred, as described within Section5. It would then be necessary to apply for a European Protected Species Licence (EPSL) from Natural England to undertake any works in order to proceed with the planned demolition. This would need to be informed by an appropriate mitigation strategy for any further works which may affect bats or their roosts.

7.1.3 A single commuting bat was recorded during the dusk emergence survey undertaken on St. Bede's Hall. No bats were recorded emerging or re-entering the building during the dusk emergence and dawn re-entry survey undertaken on 5th and 6th May 2015, this building is deemed as having low potential to support roosting bats and the proposals are to build new buildings in close proximity to St Bede's Hall without directly impacting on this building. Therefore, the development proposals will be in line with the legislation and policy protecting bats and their roosts.

7.1.4 If development proposals described within this report are altered in any way, further advice should be sought in order to inform their impact on bats.

8. References

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

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9. Appendix 1 – British Bats

9.1 Introduction

9.1.1 A summary of the biology of British bats and the legislation and policy that protects them concern is provided below.

9.2 Biology

9.2.1 There are 18 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 the16 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

9.2.2 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.

9.2.3 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.

9.2.4 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

9.2.5 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.

9.3 Commuting

9.3.1 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.

9.3.2 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.

9.4 Site Designation

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

- Conservation of Habitats and Species Regulations 2010 (which replaces the Conservation (Habitats &c) Regulations 1994 as amended)
- Wildlife and Countryside Act 1981, as amended;
- The Countryside and Rights of Way Act 2000 (which amends the Wildlife and Countryside Act); and
- Natural Environment and Rural Communities Act 2006 (which amends the Wildlife and Countryside Act).

9.4.2 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/or Sites of Special Scientific Interest (SSSIs).

9.4.3 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 is transposed into UK law by the Conservation of Habitats and species Regulations 2010. This legislation requires that areas are designated as Special Areas of Conservation (SACs) to protect populations of these 4 bat species. To date, 26 SACs have been designated specifically to protect these species, and these sites are of international importance for the populations of bats that they support. A further 5 SACs have been designated, where the presence of at least one of the 4 bat species is a qualifying feature but not the primary reason that the site was designated.

9.4.4 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) and the Natural Environment and Rural Communities Act 2006.

9.4.5 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 four or more species and more than 50 individuals or three species and 100 or more individuals or two species and 150 or more individuals, though these criteria may be lower in some parts of the UK.

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

9.4.7 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.

9.5 Species Protection

Legislation

9.5.1 All bat species are protected by the Conservation of Habitats and Species Regulations 2010. The Regulations make it an offence, with very few exceptions, to:

- Deliberately capture, injure or kill a bat;
- Deliberately disturb a bat in such a way as to be likely:
    i. to impair its ability to survive, to breed or reproduce, or to rear or nurture its young; or
    ii. to impair its ability to hibernate or migrate; or
    iii. to affect significantly the local distribution or abundance of the species to which they belong.
- Damage or destroy a breeding site or resting place of a bat;
- Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead bat, or any part of, or anything derived from a bat.

9.5.2 In addition to the protection given to bats under the Conservation of Habitats and Species Regulations 2010 already described, bats are also partially protected in England under the Wildlife and Countryside Act, which adds the following offences (with certain exceptions):

- Disturbance while it is occupying a structure or place which it uses for shelter or protection; or
- Obstructing access to any structure or place used for shelter or protection.

9.5.3 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.

9.5.4 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.

9.5.5 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.

9.5.6 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).

9.5.7 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

9.5.8 The National Planning Policy Framework (NPPF) gives further direction with respect to biodiversity conservation and land use change / development. The NPPF encourages local planning authorities to identify, conserve and restore, ecological networks, which should benefit bats, and it also states that planning permission should be refused if significant harm to biodiversity cannot be avoided, mitigated or compensated. In addition, the Government Circular 06/05. which relates to biodiversity conservation states that all protected species, such as bats, are a material consideration for the planning authority when considering proposed developments.

9.6 UK Biodiversity Action Plan and Species of Principal Importance

9.6.1 Seven species of bat (Barbastelle, Bechstein's, greater and lesser horseshoe, brown long-eared, noctule and soprano pipistrelle) are priority species in the UK Biodiversity Action Plan

(HM Government, 1994 et seq.). The UK Biodiversity Action Plan (UK BAP) was published in response to the 1992 International Convention on Biological Diversity and was last updated in 2007. In addition, bats of any species may appear as Priority Species on Local or Regional BAPs. Government Circular 06/05 makes clear that UK and local BAP species are capable of being a material consideration in the planning process.

9.6.2 The bat species listed as priority species in the UK Biodiversity Action Plan have also been adopted as species of principal importance for the conservation of biodiversity in England under Section 41 of the Natural Environment and Rural Communities Act 2006. Under this Act, the Secretary of State must take steps, or encourage others to take steps, to further the conservation of these species. In addition, every public authority, including local planning authorities, has a general duty to have regard for the purpose of conserving biodiversity. This duty does not extend specifically to the Section 41 list; however, guidance published by Defra indicates that the Section 41 species should be considered a priority when implementing the duty. Furthermore, the NPPF states that '*local planning authorities should promote the protection and recovery of priority species populations which presumably means those listed under the Section 41 of the Act'*.

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