



Bat Survey - Preliminary Roost Assessment

KOKO, Camden Palace Old Theatre, Camden High Street, Kings Cross, London NW1 7JE

Veil International Limited

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Executive summary

- Arbtech Consulting Ltd. undertook a Preliminary Roost Assessment at KOKO, Camden Palace Old Theatre, Camden High Street, Kings Cross, London NW1 7JE on 2nd February 2017. The aim of the assessment was to consider the value and suitability of the site for roosting bats.

- The proposed development is described as:

To construct a 32-bedroom boutique hotel, with an extension to the rear following the demolition of 65 Bayham Place and 1 Bayham Street (part of the façade will be retained). The construction works will involve excavation of basement, rationalisation and refurbishment of various parts of the building within the site boundary, retaining the façade front Bayham Place, Bayham Street and Crowndale Road, and provision of various aspects of the proposed development. [Planning reference: 2016/6959/P]

Recommendations - This is work you will need to commission (if any) to obtain planning permission or comply with legislation for other consent.

Survey feature	Recommendations
B1 (KOKO complex)	No further surveys required

For full justification of these recommendations, please go straight to section [4.0 Conclusions, Impacts and Recommendations](#). Otherwise, the full report starts below.

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1.0 Introduction and Context

1.1 Background

- Arbtech were commissioned by Vevil International Limited to undertake a Preliminary Roost Assessment (PRA) at KOKO, Camden Palace Old Theatre, Camden High Street, Kings Cross, London NW1 7JE. The assessment is informed by the Bat Conservation Trust publication *Bat Surveys for Professional Ecologists – Good Practice Guidelines* (Collins, J. (Ed) 2016).
- No previous ecological reports have been produced for this site by Arbtech Consulting Ltd.

1.2 Site Context

- The site is located at National Grid Reference TQ 2923 8340, and comprises a building area of approximately 1500m². There is one survey building within the site boundary, the KOKO complex. This building was the focus of the survey as it will be materially affected by the proposed development. There are no affected trees/hedges/woodland etc.

1.3 Scope of the report

This report provides a description of all features suitable for roosting bats, and evaluates those features in the context of the site and wider environment. It further documents any physical evidence collected or recorded during the site survey that establishes the presence of roosting bats. It provides information on constraints to the proposals as a result of roosting bats, and summarises the requirements for any further surveys, to inform subsequent mitigation proposals, achieve Planning or other statutory consent, and to comply with wildlife legislation.

The aim of the assessment was to determine the presence or evaluate the likelihood of presence of roosting bats, and to gain an understanding of how they could use the site. To achieve this, the following steps have been taken:

- A desk study has been carried out.
- A field survey has been undertaken, including an external survey and internal inspection where possible.
- An outline of likely impacts on any known roosts has been provided, based on current development proposals.
- Recommendations for further survey and assessment have been made, along with advice on European Protected Species Mitigation Licensing if appropriate.

A survey plan is presented in Appendix 1, the proposed Project Plan is included in Appendix 2 (where available), a summary of relevant legislation can be found in Appendix 3, and desk study results are provided in the Appendix 4.

1.4 Project Description

This report is prepared in support of a current planning application with the London Borough of Camden [Planning reference: 2016/6959/P].

The proposed development is described from this application:

Redevelopment involving change of use from offices (Class B1) and erection of 5 storey building with basement to provide 32 bedroom hotel (Class C1) following demolition of 65 Bayham Place and 1 Bayham Street (retention of façade) including change of use at 1st and 2nd floor of 74 Crowndale Road from pub (Class A4) to hotel (Class C1), mansard roof extension to 74 Crowndale Road, retention of ground floor of Hope & Anchor PH (Class A4), conversion of flytower to ancillary recording studio and hotel (C1), creation of terraces at 3rd and 4th floor level and erection of 4th floor glazed extension above roof of Koko to provide restaurant and bar to hotel (C1).

The proposed site plan is included in Appendix 2 (where available).

2.0 Methodology

2.1 Desk Study methodology

Existing bat records relating to the site and a surrounding 2km radius (the study area) are required to conform with national survey guidelines, and will need to be commissioned by the client from the London Bat Group.

The data search is confidential information that is not suitable for public release.

A review of the following information sources has also been undertaken to inform the assessment:

- Landscape structure using aerial images from Google Earth and OS maps
- Designated sites, habitat and granted EPSL records held on Magic.gov.uk.

2.2 Site Survey methodology

- The survey was undertaken by Craig Williams (Natural England Bat Licence Number: 2015-11169-CLS-CLS) on 2nd February 2017.

All features that will be impacted by the project proposals were assessed for their bat roosting and/or commuting habitat. The surveyor systematically surveyed all features suitable for-bats and signs of bat activity.

For any surveyed buildings:

A non-intrusive visual appraisal from the ground using binoculars, inspecting the external features of the building(s) for potential access/egress points, and for signs of bat use. An internal inspection of the building was also made, including the living areas of derelict or abandoned buildings and the accessible roof spaces of all buildings, using an endoscope, torch and ladders. The surveyor paid particular attention to the floor and flat surfaces, window shutters and frames, lintels above doors and windows, and carried out a detailed search of numerous features within the roof space.

For any surveyed trees

A visual inspection from ground level using binoculars and where accessible an internal inspection of suitable roosting features using an endoscope, torch and ladders.

2.3 Breeding birds and other incidental observations

The surveyor also made note of any other ecological constraints observed during the survey, notably the likelihood of presence or signs of breeding birds, and the suitability of the site for barn owls *Tyto alba*.

2.4 Suitability Assessment

All affected survey features on site were categorised according to the likelihood of bats being present, in line with best practice guidelines (Collins, J. (ed) 2016). The features that dictate the likelihood of roosting bats are summarised in Tables 1 and 2 below. Roost suitability is classified as high, moderate, low and negligible and dictates any further surveys required before works can proceed.

Table 1: Features of a building that are correlated with use by bats

Likelihood of bats being present	Feature of building and its context
Higher	Buildings/structures with features of particular significance for roosting bats e.g. mines, caves, tunnels, icehouses and cellars. Habitat on site and surrounding landscape of high quality for foraging bats e.g. broadleaved woodland, tree-lined watercourses and grazed parkland. Site is connected with the wider landscape by strong linear features that would be used by commuting bats e.g. river and or stream valleys and hedgerows. Site is proximate to known or likely roosts (based on historical data).
Lower	A small number of possible roost sites/features, used sporadically by more widespread species. Habitat suitable for foraging in close proximity, but isolated in the landscape. Or an isolated site not connected by prominent linear features. Few features suitable for roosting, minor foraging or commuting.

Table 2: Features of a tree that are correlated with use by bats

Likelihood of bats being present	Feature of tree and its context
Higher	A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Lower	A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential.

2.5 Limitations – evaluation of the methodology

It should be noted that whilst every effort has been made to describe the features on site in the context of their suitability for roosting bats, this does not provide a complete characterisation of the site. This survey provides a preliminary view of the likelihood of bats being present. This is based on suitability of the habitats on the site and in the local area, the ecology and biology of bats as currently understood, and the known distribution of bats as recovered during the desk study.

- There were no specific limitations to the survey regarding internal access, exterior visibility, safety from biotic (e.g. wasps) or abiotic (e.g. asbestos) sources or adverse weather. Therefore, the survey was carried out to its fullest extent, and the conclusions based on the maximum range of evidence.

3.0 Results and Evaluation

3.1 Desk Study Results

A summary of desk study results is provided below; full details are included in Appendix 4.

3.2 Designated sites

Table 3 provides details of any designated sites including their reasons for notification. Any relevant locations and extents are illustrated in Appendix 5

Table 3: Designated sites within 2km radius of the site

Designated Site Name	Distance from Site (approx.)	Reasons for Notification from Natural England and/or BRD or LPA policy maps
Statutory Sites		
Camley Street Nature Park LNR	~650m east	Local nature reserve <i>The reserve provides natural habitat for birds, butterflies, amphibians and a rich variety of plant life. Species - Rare earthstar fungi; reed warblers, kingfishers, geese, mallards, and reed buntings; bats.</i>
Barnsbury Wood LNR	~1800m north-east	Local nature reserve <i>Barnsbury Wood was originally a garden belonging to George Thornhill who built the surrounding houses in the 1840s. The area was eventually abandoned to nature and then became woodland.</i>
Non-statutory Sites		
Non-known	N/A	N/A

3.3 Landscape

The site is situated within central London, and is surrounded by high density buildings. Small parks are interspersed within the landscape which could offer limited foraging habitat for bats, however there is very limited connectivity to commuting routes between these, and no dark corridors. The habitat value of the area improves ~650m to the east with the start of Regents Park. But, again there is no direct bat commuting to or from this area and the survey site. The nearest source of open water is the Regent’s Canal, located ~550m to the north-east. This could provide foraging resources and a commuting route for bats. In conclusion, the local area provides poor bat habitat in general.

Priority habitats within 2km of the site are listed in Table 4.

Table 4: Priority Habitat Inventory within 2km (Magic.gov.uk):

Habitat	Closest distance from site
Deciduous Woodland	~140m south-east
National Forest Inventory	~140m south-east

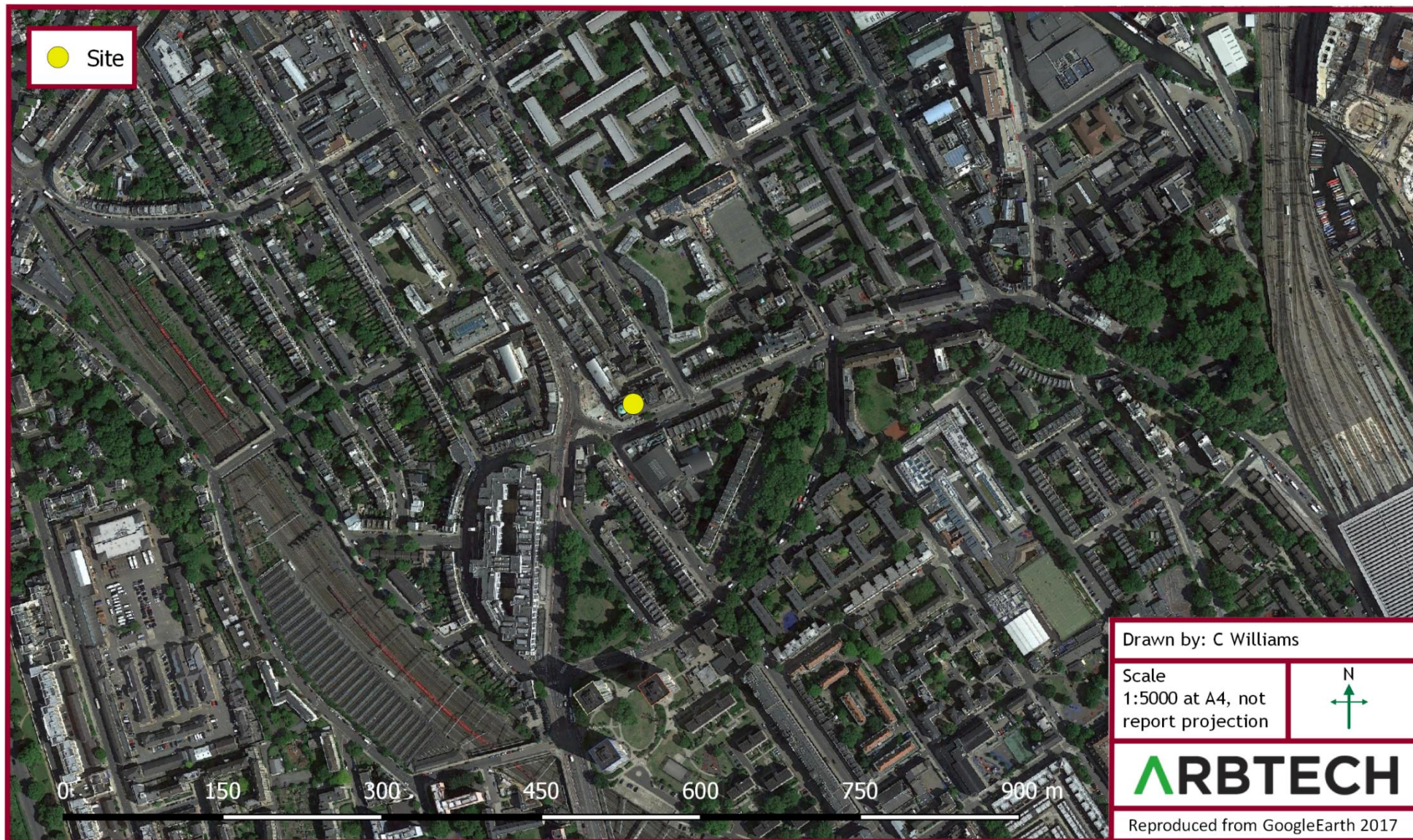


Figure 1: Aerial photo of site, showing landscape structure

3.4 Historical records

- To conform to best practice guidelines, historic bat records within a 2km radius of the site should be ordered from the local bat group. These will be summarised in Table 5 below when received.

Table 5: Historical records of bats within 2km of the site

Common name	Scientific binomial	Number of records	Number of roost records	Maternity roost records
Awaiting data	Awaiting data	Awaiting data	Awaiting data	Awaiting data

A search of the Magic database for granted European Protected Species Mitigation Licences (EPSMLs) for bats within a 2km radius of the site found one licenced site and this is detailed in Table 6 below.

Table 6: Granted EPSMLs (bats) within 2km of the site

Case reference of granted application	Approx. distance from site	Bat Species Effected	Licence Start Date:	Licence End Date:	Impacts allowed by licence
EPSM2012-4961	~1640m west	Common pipistrelle, Soprano pipistrelle	16/10/2012	30/11/2012	Destruction of a resting site

3.5 Field Survey Results

There is one survey building on the site. This is designated as B1 and is illustrated in the map in Appendix 1. The environmental variables recorded at the time of the survey are shown in Table 7.

Table 7: Environmental variables during the survey

Date: 02/02/2017	
Temperature	10°C
Humidity	86%
Cloud Cover	100%
Wind	1km/h
Rain	Light

3.6 Site Feature descriptions and photos

B1

B1 is a large complex consisting of a theatre, office and a public house.

The main structure at the western end is a four-storey theatre that is Grade II Listed.

The four-storey theatre section has felted, flat roofs around a copper ornamental dome. The dome, exterior parapet walls, corbels, cornices and windows are in a good condition and there are no holes, cracks or fissures that could be used for roosting by crevice-dwelling bats.

Attached to the western-most extremity of the building is a single storey flat roofed terrace. This is the main entrance to the site complex. Security lights are present around this facing the street.

The mid-section of B1 is a three/four storey brick building, with various intact flat and sloping roofs lined with felt. There is also a pitched, mansard roof of slate tiles with a dormer on the eastern side. These slate tiles are of a good condition without any broken or slipped examples that could be utilised by roosting bats.



Photo 1: Looking south-east at the front (western end) of B1.



Photo 2: Looking north-east at B1.



Photo 3: Looking north-west at B1.



Photo 4: Looking west at the rear of B1.



Photo 5: Looking south-west at the rear of B1.



Photo 6: Looking east along the northern elevation of B1.

Parapet walls surround most of the flat roof structures and these are intact without and cracks or missing mortar.

Various plant units and ventilation ducts run across the roof, and these provide no habitat value for roosting bats.

At the eastern end of the building is a flat roofed public house and a flat roofed office. No gaps, holes or cracks were observed within these areas. Therefore these areas provide no habitat value for roosting bats.

There are no loft spaces in B1, as the pitched roofs are habitable rooms.

Bat evidence

No bat evidence was found in or on any part of the building. Due to the poor quality of the surrounding habitat and lack of roosting opportunities within the building, it is assessed that it is highly unlikely that bats will be using this building.



Photo 7: Looking west at the dome from the roof of B1.



Photo 8: Looking east at the slate tiled pitched roof from the roof of B1.



Photo 9: Examples of sloping felt roofs on B1.



Photo 10: Plant machinery on the roof of B1, towards the north.



Photo 11: Looking north into a small courtyard at the eastern end of B1.



Photo 12: The roof of the public house section of B1.

4.0 Conclusions, Impacts and Recommendations

4.1 Informative guidelines

Bats are protected under the Wildlife and Countryside Act and Conservation Regulations; see Appendix 3 for a summary of legislation protecting bats in the UK. Legislation protects all wild birds whilst they are breeding, and prohibits the killing, injuring or taking of any wild bird or their nests and eggs. Certain species of bird, including the barn owl, are subject to special provisions; it is an offence to disturb any bird or their young during the breeding season.

There are three possible outcomes of this survey, each with specific recommendations. These are outlined below:

Confirmed bat roost

Best practice survey guidelines (Collins, 2016) recommends additional surveys for confirmed roosts. Three further surveys are required to characterise the bat roost present including species, roost type and access points to inform a European Protected Species Mitigation Licence (EPSML) application with Natural England. Surveys must be completed during the active bat season (May – September). At least two of the surveys should be completed during the optimal survey period mid-May to August, and at least one of the surveys should be a dawn re-entry survey (Collins, J. 2016).

Low, moderate or high likelihood of a bat roost present

Best practice survey guidelines (Collins, 2016) recommends additional surveys for features assessed as having low to high suitability for roosting bats. One, two or three further surveys are required to confirm presence/likely-absence of a bat roost, based on a low, medium or high roost likelihood evaluation. Surveys must be completed during the active bat season (May – September). If more than one survey is recommended, at least one of them should be completed during the optimal survey period mid-May to August, and at least one of the surveys should be a dawn re-entry survey (Collins, J. 2016). The survey effort recommended at this stage is iterative and if bats are recorded emerging from the buildings, a further survey will be required to provide sufficient information to inform an EPSML application to Natural England.

Negligible likelihood of a bat roost present

Buildings assessed as comprising negligible suitability for roosting bats do not normally require further surveys. However, if bats are found during any stage of the development, work should stop immediately and a suitably qualified ecologist should be contacted to seek further advice.

Appropriate justification for this assessment is provided in Section 3 and Tables 1 and 2 of this report.

4.2 Evaluation

Taking the desk based assessment and site survey results into account, the following value for roosting bats has been placed on each site survey feature.

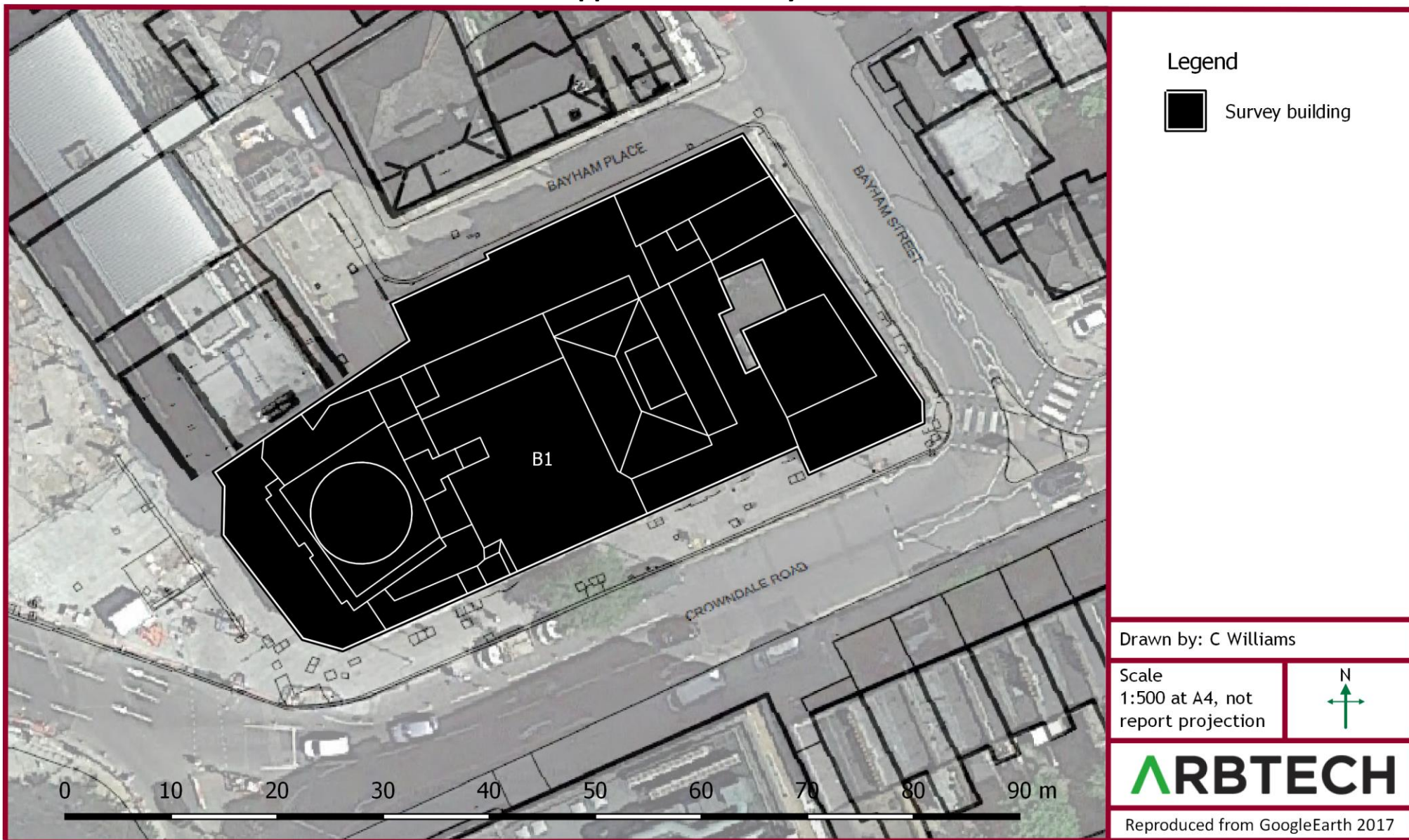
Table 8: Evaluation of buildings/trees on site

Ref	Survey assessment conclusions (with justification)	Foreseen impacts	Recommendations	Enhancements The Local Planning Authority has a duty to ask for enhancements under the NPPF and circular 06/2005: Biodiversity and Geological Conservation. Para.99
B1	This building has a negligible likelihood of supporting roosting bats based on the evidence gathered in the desk study and field survey.	Bats are very unlikely to be roosting within this building and as such, there are not anticipated to be any impacts on bats by the proposed works.	No further surveys required.	To enhance the value of the site for bats, it is recommended that habitat enhancements are included as part of the development. This could be achieved through installing bat boxes on the new building. For example: <ul style="list-style-type: none"> • Install 1x Schwegler 1WQ bat box on the building. This will be positioned 3-5m above ground level, away from windows and light sources and with clear flight paths to the entrance.

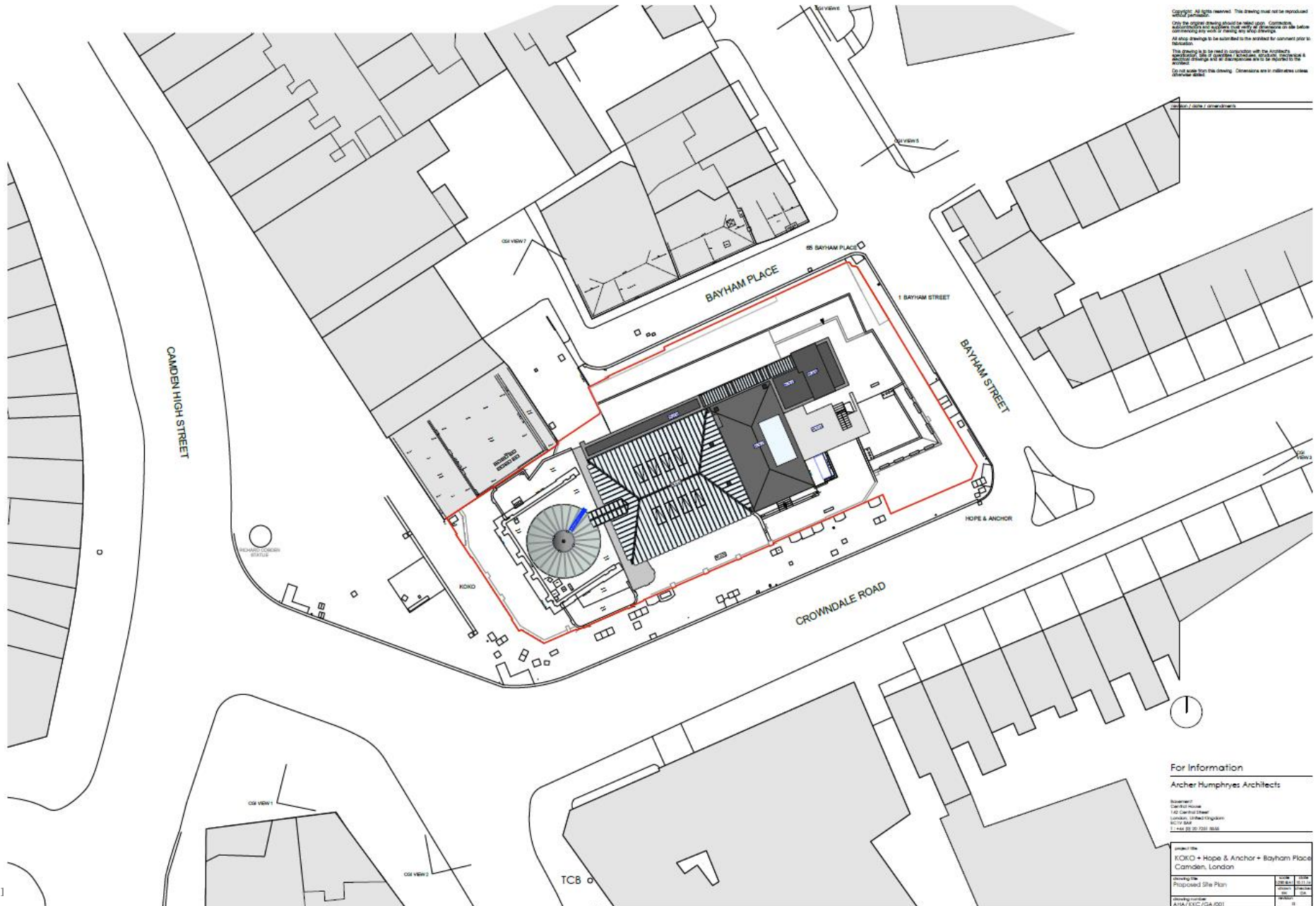
5.0 Bibliography

- British Trust for Ornithology (2016) www.bto.org/about-birds/nnbw/putting-up-a-nest-box
- Collins, J. (ed.) (2012). Bat Surveys for Professional Ecologists —Good Practice Guidelines, 3rd edition, Bat Conservation Trust, London.
- Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected?
- Google Earth (2017).
- Magic database (2017) <http://www.magic.gov.uk/MagicMap.aspx>
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.

Appendix 1: Survey Plan



Appendix 2: Proposed Site Plans



Appendix 3: Legislation and Planning Policy related to bats

LEGAL PROTECTION

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2010 (as amended) through their inclusion on Schedule 2.

Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. all bats)
- Deliberate disturbance of bat species as:
 - a) to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young
 - (ii) to hibernate or migrate
 - b) to affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place

Bats are also protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale

Effect on development works:

A European Protected Species Mitigation (EPSM) Licence issued by the relevant statutory authority (e.g. Natural England) will be required for works likely to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficiency/success to be monitored.

The legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded *de facto* protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost (Garland & Markham, 2008)

NATIONAL PLANNING POLICY (ENGLAND)

National Planning Policy Framework

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as UK Biodiversity Action Plan priority species) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and the Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act, 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act (Section 42 in Wales) requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity.' This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

Appendix 4: Desk Study Information

