Bat/CfSH & BREEAM Report: Tybalds Estate, London

Ref: LON-135-001 (REV03)

ASG ECOLOGY

Report For:

Durkan Ltd

May 2015

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1 Introduction

1.1 ASG Ecology Ltd was commissioned by Durkan Ltd to undertake the ecological component of Code for Sustainable Homes/BREEAM assessment for a development at Tybalds Estate, Holborn, London, WC1N 3JT (Planning Application Reference No. 2013/1014/P). ASG Ecology was also commissioned to undertake an initial bat roost assessment of the buildings present on-site which was completed concurrently.

1.2 This report presents the results of the Phase 1 habitat survey and Code for Sustainable Homes (CfSH) Assessment (ECO 1-4) undertaken in line with the 2010 methodology. The following credits were evaluated:

- ECO 1- Ecological Value of Site;
- ECO 2 - Ecological Enhancement;
- ECO 3 - Protection of Ecological Features; and,
- ECO 4 - Change of Ecological Value of Site.

1.3 The BREEAM assessment was undertaken using the BREEAM Domestic Refurbishment methodology (2012). The following credits were evaluated:

- MAN05 – Protection and Enhancement of Ecological Features

1.4 The proposed development site is located to the south of Great Ormond Street in Camden, London, WC1N 3JT (Grid Reference: TQ 305 818). It is approximately 1.8ha in size and is bordered by residential development on all sides. The site comprises a number of residential buildings and associated hard and soft landscaping. Habitats present on-site include amenity grassland, bare ground, introduced shrub, scattered trees and species-poor defunct hedgerow.

1.5 The proposal for a mixed used development comprising 93 mixed tenure residential units, alterations to existing units, an energy centre, refuse/caretakers facilities as well as associated landscaping and car parking was approved by Camden Council in May 2014.

2 Relevant Legislation and Planning Policy

General Legislation & Planning Policy

2.1 The following pieces of nature conservation legislation are relevant to this appraisal:

- The Conservation of Habitats and Species Regulations 2010 (the Habitats Regulations);
- The Wildlife and Countryside Act, 1981 (as amended);
- The Natural Environment and Rural Communities Act, 2006;
- The Protection of Badgers Act, 1992 (as amended); and
- Wild Mammals (Protection) Act, 1996.

2.2 The National Planning Policy Framework (Department of Communities and Local Government, 2012) requires local authorities to avoid and mitigate impacts on biodiversity, notably designated sites as well as priority habitats and species. It also encourages Local Planning Authorities to provide net gains in biodiversity when making planning decisions.

Bats - Legislative Protection

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

2.4 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:
    - to impair its ability to survive, to breed or reproduce, or to rear or nurture its young; or
    - to impair its ability to hibernate or migrate; or

- 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.

2.5 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.

2.6 A roost is defined as any structure or place that bats use for protection. The roost is protected throughout the year even if bats are not present at the time.

2.7 Proposed operations than can lead to an offence under the legislation cited above include the redevelopment of a site and/or building, arboricultural works, re-roofing, or any other activity that damages, removes or disturbs the area used by roosting bats. When this occurs, a European Protected Species Mitigation Licence (EPSM) may be required to allow the operations or development to legally proceed. This is issued by the relevant government body responsible (In England, licences are administered by Natural England). The licence requires that robust data is collected on how bats use the site, and a mitigation plan developed that provides protection throughout proposed works and must demonstrate that the conservation status of the species in question will be maintained.

Bats - Planning Policy

2.8 Seven species of bat (Barbastelle, Bechstein's, greater and lesser horseshoes, noctule, brown long-eared and sorano pipistrelle are included as priority species on the UK Biodiversity Action Plan (UKBAP). The UKBAP was published as part of the UKs conservation strategy following the International Convention on Biological Diversity in (1992). Local Biodiversity Action Plans (LBAPs) may also list additional bat species.

2.9 All UKBAP species are adopted under Section 41 of the NERC Act 2006 as 'species of principal importance'. The Act requires that 'every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity'. Guidance published by Defra indicates that Section 41 species should be considered as priority species when local planning authorities are implementing the duty. In

additional the National Planning Policy Framework (NPPF) states that local planning authorities (LPAs) should promote the protection and recovery of priority species populations which is widely interpreted as those species listed under Section 41.

2.10 Seven species of bat (Barbastelle, Bechstein's, greater and lesser horseshoes, noctule, brown long-eared and sorano pipistrelle) are included as priority species on the UK Biodiversity Action Plan (UKBAP). The UKBAP was published as part of the UKs conservation strategy following the International Convention on Biological Diversity in (1992). Local Biodiversity Action Plans (LBAPs) may also list additional bat species.

2.11 The presence of a protected species (including bats) is a material consideration in the planning process. If the results of a site visit indicate that a protected species may be present, the LPA should require that the results of a full survey are made available to them before planning permission is granted so that a fully informed decision can be made. LPAs have a duty to ensure that protected species are fully considered when granting planning permission. If a development proposal that, if it goes ahead, is likely to result in harm to the species (and in some cases it's habitat), the LPA may consult Natural England before making a decision. LPAs may also consider the use of appropriate planning conditions or obligations once permission is granted to ensure the protection of the species.

3 Methodology

Extended Phase 1 Habitat Survey & Code for Sustainable Homes Assessment

3.1 A walkover ecological survey was undertaken of the proposed development site on 30th March 2015 to confirm the ecological baseline as recorded in the previous extended Phase 1 Habitat survey commissioned by Cambell Reith in 2012 (Report Ref: RT-MME-111475-02 Rev1)

3.2 The field survey was carried out following the standard 'Phase 1 habitat survey' auditing method developed by the Joint Nature Conservancy Council (JNCC 2010). The site was surveyed on foot and the existing habitats and land uses were recorded on a map. In addition, the dominant plant species in each habitat were recorded.

3.3 The potential for the site to support protected species was also assessed from observations carried out in conjunction with the field survey. The site was surveyed for evidence of protected species including habitat suitable for breeding birds and roosting bats. The purpose of this assessment is to identify any potential constraints on the development resulting from the presence of a protected species.

3.4 The CfSH/BREEAM assessment was undertaken by Adam Earl, a suitably qualified ecologist with over four years' relevant experience and is a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM) and thereby qualifies as a Suitably Qualified Ecologist (SQE) as specified under the DCLG (2010) CfSH guidance.

Limitations

3.5 The survey was considered sufficient to meet the aims of the report and provide robust data upon which to base the CfSH and BREEAM assessment.

3.6 Whilst every effort has been made to document all evidence and potential features to provide a comprehensive description of the buildings on site, it is not possible to provide a complete characterisation of the site and/or predict the natural environment. The findings of the survey are based on the implementation of published best practice guidelines, use of professional judgement and ensuring all surveyors were experienced in bat ecology and survey methods.

Initial Bat Roost Assessment

3.7 An external inspection of all buildings present on-site and an external inspection of all trees located within or directly adjacent to the site boundary was undertaken on 30th March 2015.

3.8 The survey was carried out following guidelines provided in the Bat Conservation Trust's (BCT) 'Bat Surveys: Good Practice Guidelines' and the Joint Nature Conservancy Committee's (JNCC) 'Bat Workers Manual ' (Hunt, 2012). The survey was undertaken by a licenced bat ecologist: Aaron Grainger BSc MSc MCIEEM (Natural England Survey No. 20121483).

Building Inspection

3.9 A visual inspection of all buildings was made with the aid of 10x42 binoculars to gain suitable views of parts that could not be adequately seen from the ground. A high powered torch was also used to inspect any features that had potential to be used by roosting bats such as gaps into cavity walls and other crevices in the brickwork.

3.10 The buildings were inspected externally for evidence of occupancy by bats, including droppings, feeding remains, urine and fur staining, scratch marks around crevices and the presence of any dead bats. Any evidence recorded was described in detailed notes and the location annotated on a site plan.

3.11 The buildings were also assessed for their potential to support roosting bats based on features identified on the building, such as slipped tiles, gaps in soffit boards, direct access points into roof voids and crevices in the brickwork. Each feature was fully investigated for evidence of active use by bats. All potential features were recorded in detailed site notes.

3.12 The area immediately surrounding the buildings was also assessed for its potential to offer suitable foraging and/or commuting opportunities for any bats that may be present. Suitable features may include mature woodland, watercourses and hedgerows. The close proximity of these features to a building can increase the likelihood of occupancy by bats.

3.13 The buildings were then assigned an overall grade for their potential to support roosting bats based on current best practice guidelines (Hundt, 2012).

Tree Inspection

3.14 Trees located directly adjacent to the site boundary were subject to a detailed ground level inspection. This involved the use of close-focussing binoculars to inspect all visible aspects of the trees. A high powered torch was used to inspect any cavities or cracks in the trunks or branches that were present.

3.15 Trees were assessed for the presence of features suitable for supporting roosting bats, including natural holes, loose bark, cracks and splits in major limbs and dense epicormic growth. Evidence of occupancy by bats was also searched for, including bat droppings in or around features, flies around a potential access/egress point and the audible sound of bats social calls. The survey was carried out in-line with best practice guidelines (Hundt, 2012).

3.16 All trees were assessed for their potential to support roosting bats in-line with the following categories derived from guidance provided in Hundt (2012):

- **Known or confirmed roost** – Evidence of bats confirmed;
- **Category 1*** – Trees with multiple highly suitable features capable of supporting roosting bats ;
- **Category 1** – Trees with definite bat potential supporting fewer suitable features than category 1* trees or have potential for use by individual bats;
- **Category 2** – Trees with no obvious potential to support roosting bats. Although aerial surveys may result in cracks or crevices being found; or some features that may have limited potential to support roosting bats; and
- **Category 3** – Trees with no potential to support roosting bats.

4 Code for Sustainable Homes Assessment

ECO 1 – Ecological Value of the Site

4.1 The 2010 CfSH assessment methodology provides credits relevant to the ecological aspects of a development. The method encourages development on sites of low ecological value and the inclusion of enhancement measures to maximise the value of a residential project for biodiversity.

4.2 One credit is given for minimising ecological damage by developing land of inherently low ecological value and demonstrating this by:

- Meeting the defined criteria for low ecological value (using checklist ECO 1 - Land of Low Ecological Value);

OR,

- Being confirmed by a SQE;

OR,

- An independent ecological report of the site prepared by a SQE which states that the construction zone is of low or insignificant ecological value;

AND,

- Any land of ecological value outside the construction zone but within the development site will remain undisturbed by the construction works.

4.3 The development site is small in size (c. 1.8ha) and the construction zone largely comprises buildings and hard standing with small areas of amenity grassland and scattered trees. Although the scattered mature trees have some inherent ecological value, all habitats recorded on-site are considered to be common and widespread and are of limited ecological value overall.

4.4 As the site is considered to be of limited ecological value, **one credit** for ECO 1 - Ecological Value of Land and Protection of Ecological Features can be achieved.

ECO 2 – Ecological Enhancement

4.5 One credit point is available under ECO 2 if steps are taken to enhance the ecological value of the site following development.

4.6 At the Design Stage the information required to demonstrate compliance with the legislation relating to protected species, and to be awarded credit ECO 2 includes the ecologist's report which must confirm: "that all UK and EU legislation in relation to protected species has been met and recommendations go beyond these requirements".

4.7 The results of an initial bat roost assessment undertaken on the 30th March 2015 are detailed in section 6 of this report. The existing stairwell of Devonshire Court contains lifted lead flashing that provides potential for crevice dwelling bat species. If the recommendations for further survey and mitigation with regards to the single building with potential to support roosting bats are followed, all UK and EU legislation should be adhered to. The remaining buildings and trees present on-site have negligible potential to support roosting bats

4.8 Some of the habitats and features present have potential to support common and widespread breeding bird species. All birds are protected from killing or injury and their eggs and nests from damage and destruction under the Wildlife and Countryside Act 1981 (as amended). The introduced shrub, mature trees and some crevices in the buildings on-site have potential to support nesting birds.

4.9 To mitigate for the potential killing or injuring of birds or destruction of their eggs and nests, any vegetation clearance work required to facilitate the development should be undertaken outside of the breeding bird season which is generally considered to be March to August inclusive (i.e. clearance work should be undertaken between September and February inclusive).

4.10 If site clearance is unavoidable during the breeding bird season, the areas in question should be checked for the presence of active nests immediately before and during demolition/vegetation removal by a suitably qualified ecologist. If an active nest is located, works must cease in the area around the nest (which should also be cordoned off at a suitable distance by the appointed ecologist) until the young are confirmed to have fledged or the nest is considered to be inactive by the appointed ecologist.

4.11 If the recommendations for further survey and mitigation with regards to the single building with potential to support roosting bats and vegetation with potential to support nesting birds are followed, all UK and EU legislation should be adhered to.

4.12 Recommendations to increase the value of the project in terms of biodiversity are provided below.

Key Recommendations

4.13 **Swift Boxes -** Swifts are breeding summer migrants observed in the UK between April and September, and are often seen circling tall city buildings feeding on insects. They have a long association with buildings/structures, occupying crevices and cavities where they raise their young. New build projects and renovations of old stock often lead to breeding sites either being destroyed or the birds being excluded due to modern building practices and facade materials.

4.14 6 x Schwegler (No 16 or 17) swift boxes should be installed as part of the proposed development in line with the following specification:

- Boxes should be cited on the external walls of proposed buildings preferably under the shelter of eaves or overhanging roofs, or alternatively locating them on parapet edges or cornices. They should be mounted at a minimum height of 5m from the ground facing north, north-east or north-west to avoid direct sunlight. In addition, a clear area free from obstructions at least 5m below the box is recommended to ensure direct access is possible.

4.15 **Insect Houses -** It is recommended that six insect houses should be cited within the development. These can be mounted on walls, trees or within any areas of proposed biodiverse roof at 0-2m. These will provide benefit to invertebrate species of urban environments including solitary bees, wasps and butterflies. Enhancing the invertebrate assemblage at the site will also increase foraging opportunities for bird species.

4.16 **Sparrow Terrace Next Boxes** - Over the past 25 years the house sparrow (*Passer domesticus*) has seen a drop in numbers by up to 70% and as a result it has been placed on the Red List of birds of conservation concern. Although a sole cause for the decline has yet to be determined, a reduction of nest sites in urban environments is believed to have played a part. 4 x Schwegler 1SP Sparrow Terraces should be installed as part of the proposed development in line with the following specification:

4.17 Boxes should be cited on the external walls of proposed buildings preferably under the shelter of eaves or overhanging roofs, or alternatively locating them on parapet edges or cornices. They should be mounted at a minimum height of 5m from the ground facing north, north-east or north-west to avoid direct sunlight. In addition, a clear area free from obstructions at least 5m below the box is recommended to ensure direct access is possible.

Additional Recommendations

4.18 **Bat Boxes** - Three Schwegler 2F (or equivalent) bat boxes should be included within the development. These woodcrete boxes provide a more durable alternative to conventional wooden boxes. These will provide roosting opportunities for bat species such as common and soprano pipistrelles. All boxes should be mounted above 3m on suitable walls, fencing or buildings away from sources of external lighting to prevent spillage onto the box entrance which is likely to deter use. It is recommended that the boxes are orientated in different directions (at least one should face south) to provide a range of internal temperatures which will maximise roosting opportunities throughout the active season (March-Nov). The entrance to the box should be kept clear of clutter allowing easy access.

4.19 **Landscape Planting** - Native and non-native species of known value to wildlife should be used in the planting scheme. It is recommended that this includes an area of native tree/shrub planting comprising at least six species of known benefit to wildlife.

4.20 **Biodiverse Roof –** The proposed development should incorporate areas of green roof into the detailed building design. The green roof specification should include a minimum of five species of known benefit to wildlife, for example Sedum acre and Sedum album. The green roof will increase plant diversity in the locality, and provide valuable habitat for other species groups, including invertebrate and bird populations.

Summary of Credits

4.21 If all the key recommendations (Section 4.13-4.17) and 30% of the additional recommendations (Sections 4.18 – 4.20) described above are followed, **one credit** can be awarded for ecological enhancement. The client must provide written confirmation and evidence that the recommendations will be followed to the appointed assessor prior to the credit being awarded.

ECO 3 – Protection of Ecological Features

4.22 One credit point is available under ECO 3 if all existing features identified as having ecological value under ECO 1 are maintained and adequately protected from damage during site clearance, preparation and construction works.

4.23 The development will require the removal of 12 mature trees present on-site, including two London Plane (*Platanus x acerifloia*), a group of four cherry trees (*Prunus avium*) and four lime trees (*Tilia x europea*). However, many of the trees present on the site will be retained as part of the development proposal, and extensive tree planting is proposed to replace those trees being lost. Although the mature trees present on-site have some inherent ecological value, the

site is considered to be of negligible ecological value overall and does not support any features of ecological value. Therefore **one credit** under ECO 3 can be awarded by default.

ECO 4 – Change in Ecological Value of Site

4.24 Under ECO 4, credits are awarded by taking steps to minimise reductions in biodiversity or improve the ecological value of the site. Under ECO 4, the ecological value of the site pre-development is based on the number of native plant species identified within each habitat. The ecological value of the site post-development is based on the number of species of ecological value/area in the landscape proposals and planting schemes associated with the development.

4.25 Following the pre and post-development assessments, a comparative calculation is then produced to determine the estimated change in species richness following development of the site.

4.26 Credit points are available under ECO 4 as follows:

Credit Points	Criteria
1	Minor negative change: between –9 and less than or equal to –3 natural species
2	Neutral: greater than –3 and less than or equal to +3 natural species
3	Minor enhancement: greater than 3 and less than or equal to 9 natural species
4	Major enhancement: greater than +9 natural species

Species Pre-Development

4.27 One habitat type was identified on site. The number of native species identified per habitat type and the extent of each habitat compartment is summarised in the following table.

Plot Type (Habitat)	**Area on Site (m^2)**	**Number of Native Species**		**Species x Area of Plot Type**
Amenity grassland	3940	8		31520
Buildings and hard standing	13983	0		0
Introduced shrub	357	0		0
Scattered trees	200	4		800
Species-poor defunct hedgerow	20	0		0
Total site area =	**18,500**		**Total =**	**32320**
Species before development = **(Total Σ species x area of plot type/Total site area)**				**1.75**

Species Post-Development

4.28 The approximate habitat areas present post-development are based on landscape proposals as prepared by Camlins Landscape Architects (Drawing Refs: LL434-200-0008 & LL434-200-0009/Planting Schedule Issued Dec 2013).

4.29 The soft landscape proposals for the site include the retention of trees and amenity grassland. New areas of planting include areas of amenity grassland, planted beds and semi-mature trees. Semi-extensive green roofs and brown roofs are also proposed on several of the new build units. By assessing the number of native species in the planted areas, the average number of species after development can be calculated. The areas are approximated (measured using ArcView GIS Software). The post-development calculations are shown in the following table:

Plot Type (Habitat)	Area on Site (m^2)	Number of Native Species		Species x Area of Plot Type
Buildings and hard standing	9994	0		0
Amenity Grassland	1205	3		3615
Planted Shrubs	1960	22		43120
Tree Planting	370	11		4070
Semi-extensive green roof	1080	14		15120
Brown Roof	2050	4		8200
Retained Amenity Grassland	1841	8		14728
Total site area =	**18500**		**Total =**	**88403**

Species after development = **(Total Σ species x area of plot type/Total site area)**	**4.78**

Change in Ecological Value

4.30 The total change in species can be calculated as follows:

Total No. Species After Development		Total No. Species Before Development		Total Change in Species
4.78	-	1.75	=	+3.03

4.31 Based on the above figures and current landscape proposals, **three** credit points can be awarded under ECO 4 for a neutral change in species diversity. If further credit points are required from ECO 4, larger areas of planting with additional species will be required. Given that the area available for planting post-development is restricted, the most effective way to

facilitate additional credits would be through the inclusion of larger areas of amenity grassland seeded with an appropriate wildflower mixture.

5 BREEAM Domestic Refurbishment Assessment

MAN 05 – Protection and Enhancement of Ecological Features

5.1 One credit is achievable under MAN 05 if features with ecological value are protected from substantial damage during refurbishment and the sites ecological value is enhanced.

5.2 In order to achieve one credit under MAN 05 the site must be compliant with three assessment criteria:

- Where a site survey is carried out by a member of the project team or a Suitably Qualified Ecologist (SQE) to determine the presence of ecological features;
- Where protected species have been identified as present on site, the relevant Statutory Nature Conservation Organisation (SNCO) has been notified and protected species have been adequately protected; and
- Where all existing features of ecological value on the refurbishment site potentially affected by the works, are maintained and adequately protected during refurbishment works.

5.3 **Exemplary Performance Requirements –** In order to achieve the exemplary level criteria, the following needs to be achieved in order to gain an innovation credit in relation to MAN 05:

- Where a Suitably Qualified Ecologist has been appointed to recommend appropriate ecological features that will positively enhance the ecology of the site and where the developer adopts all general ecological recommendations and 30% of additional recommendations.

5.4 Cambell Reith was appointed in 2012 to undertake a Phase 1 Habitat Survey at the site and determine the presence of ecological features (Report Ref: RT-MME-111475-02 Rev1). ASG Ecology was subsequently appointed in March 2015 to conduct an initial assessment of the potential of the buildings and trees present within the development site to support roosting bats.

5.5 The BREEAM assessment was undertaken by Adam Earl, a suitably qualified ecologist with over four years' relevant experience and is a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM) and thereby qualifies as a Suitably Qualified Ecologist (SQE) as specified under BREEAM guidance (2012). Therefore the first mandatory criteria under MAN 05 will be met.

5.6 No protected evidence of protected species was identified on-site, although some of the habitats and features present have potential to support common and widespread bird and bat species.

5.7 **Breeding Birds** - All birds are protected from killing or injury and their eggs and nests from damage and destruction under the Wildlife and Countryside Act 1981 (as amended). The introduced shrub, mature trees and some crevices in the buildings on-site have potential to support nesting birds.

5.8 To mitigate for the potential killing or injuring of birds or destruction of their eggs and nests, any vegetation clearance work required to facilitate the development should be undertaken outside of the breeding bird season which is generally considered to be March to August inclusive (i.e. clearance work should be undertaken between September and February inclusive).

5.9 If site clearance is unavoidable during the breeding bird season, the areas in question should be checked for the presence of active nests immediately before and during demolition/vegetation removal by a suitably qualified ecologist. If an active nest is located, works must cease in the area around the nest (which should also be cordoned off at a suitable distance by the appointed ecologist) until the young are confirmed to have fledged or the nest is considered to be inactive by the appointed ecologist.

5.10 **Bats** - The results of an initial bat roost assessment undertaken on the 30th March 2015 are detailed in section 6 of this report. The existing stairwell of Devonshire Court contains lifted lead flashing that provides potential for crevice dwelling bat species. If the recommendations for further survey and mitigation with regards to the single building with potential to support roosting bats are followed, all UK and EU legislation should be adhered to. The remaining buildings and trees present on-site have negligible potential to support roosting bats

5.11 The remaining areas of the site were assessed as having negligible potential to support other protected species. Provided the above recommendations are adhered to, protected species should be adequately protected during construction and the second mandatory criteria under MAN 05 will be met.

5.12 The development will require the removal of 12 mature trees present on site, including two London Plane (Platanus x acerifloia), a group of four cherry trees (Prunus avium) and four lime trees (Tilia x europea). However, many of the trees present on the site will be retained as part of the development proposal and extensive tree planting is proposed to replace those trees being lost. Although the mature trees present on-site have some inherent ecological value, the site is considered to be of negligible ecological value overall and does not support any notable ecological features. Therefore, the final mandatory criteria under MAN 05 will be met.

5.13 If the above recommendations are followed, the development will meet all of the mandatory criteria specified under MAN 05. Therefore **one credit** can be awarded under MAN 05.

5.14 **Innovation Credit** – As described in sections 4.5 to 4.21 of the CfSH assessment, appropriate measures have been suggested that will positively enhance the ecological value of the site. Provided all of the key recommendations and 30% of the additional recommendation are adopted, the development can also achieve an innovation credit under the exemplary performance requirements.

6 Results of Initial Bat Roost Assessment

Results of External Assessment

6.1 **Site Context –** The site is located in central London which is generally of limited potential for use by foraging, roosting or commuting bats due to the restricted extent and quality of suitable habitat. The level of street lighting also further limits use by species that are more sensitive to light disturbance. The area immediately surrounding the site is built up, comprising both residential and commercial space. Although there are some tree-lined roads in the vicinity of the site, the overall quality of the habitat for bats is low.

6.2 Coram's Fields Site of Importance for Nature Conservation (SINC) is located 200m to the north of the site. The mature trees and hedgerows may provide a foraging resource for bats. Additionally, Russell Square SINC is 260m to the west of the site and also contains a number of mature trees that may be of value for bats.

6.3 The desk study undertaken in 2012 (Ref RT-MME-111475B-02 Rev1) reported four bat records, the nearest being located approximately 522m from the site. Given the close proximity of the records, it is concluded that these species may be present in close proximity to the site.

6.4 In terms of the habitats present within the site boundary, the existing trees and shrubs have limited value for bats but and may provide a foraging resource for the bat assemblage in the area. Overall, the limited extent and quality of the habitat present and the availability of alternative foraging resources close to the site suggests that it is only of local value for common and widespread bat species that are present in urban areas such as common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*).

6.5 **Building Assessment –** Eight residential buildings are present within the application boundary. They are of a broadly similar construction type (1950s/60s social housing) and all have a flat roof. No evidence of roosting bats was recorded during the survey and seven of the buildings contained no features with potential to support roosting bats which are listed below. All are considered to be of **negligible potential** to support roosting bats:

- **Falcon** – Eight storey residential block (see photograph 1)
- **Richbell -** Eight storey residential block (see photograph 2)
- **Springwater -** Eight storey residential block (see photograph 3)
- **Windmill –** Seven storey residential block (see photograph 4)
- **Blemundsbury –** Ten story residential block (see photograph 5)

- **Babington Court –** 14 storey residential block (see photograph 6)
- **Chancellor's Court –** 14 storey residential block (see photograph 7)

6.6 **Devonshire Court –** Devonshire court is a five storey residential block in the western section of the site. It is of a similar construction type to the other buildings present on-site. The brickwork appears to be in reasonable condition and there were no discernible cracks/crevices that would provide a suitable roosting location for bats. The eastern façade contains exterior walkways that provide access to the properties (see photograph 8). The windows and doors also appear to be in reasonable condition. The stairwell at the southern end of Devonshire Court has some lifted lead flashing (see photographs 9 & 10) where the facia board meets the roofing material (this feature was also identified in the previous ecological appraisal (Report Ref: RT-MME-111475-02 Rev1). This feature has some potential to support crevice dwelling bat species.

6.7 No direct evidence of roosting bats was recorded during the survey, although the building contained a feature that had potential to support roosting bats as described above. Overall, the covered stairwell that forms part of Devonshire Court was assessed as having **low potential** to support roosting bats.

6.8 **Tree Assessment –** All trees surveyed both within and directly adjacent to the site are considered to have negligible potential to support roosting bats (category 3) owing to the fact that they did not possess suitable features/cavities. They are therefore not considered further in this report.

Conclusions

6.9 **Devonshire Court** was considered to have structural features with potential to support roosts of common and widespread bat species. There is some habitat near to the site which may provide a foraging resource for bats. The network of mature gardens associated with nearby residential properties provides additional habitat. There are also several desk study records for bat species within 522m of the site boundary indicting that they are present in close proximity to the site. In accordance with best practice guidelines (Hundt, 2012), the absence of roosting bats cannot be ruled out from the results of the external inspection.

6.10 The features present on Devonshire Court are considered unlikely to support hibernation roosts for bats during the winter period (November to-March). It should be noted that the hibernation habits of some common species are poorly understood, therefore the presence of hibernating bats cannot be completely ruled out.

6.11 The redevelopment of Devonshire Court will require the demolition of the existing staircase and its replacement with a new shared stairwell. It is therefore recommended that all buildings are subject to further survey in advance of their removal in accordance with best practice guidelines.

Further surveys

6.12 In accordance with the Bat Conservation Trust's Good Practice Survey Guidelines 2nd Edition (Hundt, 2012), buildings and trees assessed as having low to moderate potential are required to be subject to two further bat surveys (comprising a combined dusk emergence/dawn re-entry visit) in order to determine the presence/likely absence of bats. All features identified as having potential to provide access/egress for bats would be observed by suitably experienced surveyors.

6.13 Surveys should be undertaken between May and September during the bats 'active' season (Hundt, 2012). Ideally, they should also be spread across the survey season as far as is practicable, in order to provide robust and representative data on which to base the subsequent assessment and to ensure that recommended mitigation is appropriate and proportionate.

6.14 It is recommended that the following surveys are undertaken:

- **Devonshire Court (Existing Stairwell) –** 1 x dusk emergence and 1 x dawn re-entry survey (2 x surveyors required)

6.15 Upon completion of these surveys, an assessment as to the presence or likely absence of roosting bats will be provided within an associated survey report which will detail the survey results along with any recommendations for the protection of roosting bats during the site clearance, construction and operational stages of the development.

6.16 If a bat roost were to be identified in any of these surveys, its removal or disturbance would require a license from Natural England and an agreed mitigation scheme. In order to obtain an EPSM licence, Natural England must be presented with robust and conclusive survey data that provides a comprehensive description of how bats are using the site. In the event a bat roost is found on-site, further surveys may be required which comprise three dusk emergence/dawn re-entry surveys, carried out in accordance with good practice guidelines (Hundt, 2012).

6.17 As well as providing detailed background survey information, EPSM license applications also require a detailed method statement that describes how bats are to be protected throughout the redevelopment process which may restrict the timing of site clearance or construction works and limits the working methods that can be used in close proximity to a roost. The

application will also need to contain a comprehensive account of the design and location of post-construction mitigation measures (such as replacement roosts). It should be noted that Natural England currently require 30 working days to process EPSM licence applications.

7 Conclusion

7.1 Following completion of the ecological component of the CfSH assessment (ECO 1- ECO 4) using the DCLG (2010) methodology and the ecological component of the assessment for BREEAM Refurbishment of Domestic Buildings 2012 (MAN 05), a total of six and one (plus the additional innovation credit if relevant) credits can be awarded for the respective assessments if the recommendations for each credit are implemented as specified in the report. A summary of the credits can be found in the tables below:

CfSH Assessment

Credits Achievable Under CfSH ECO 1-4	
ECO 1	**One credit** can be awarded for Ecological Value of the Site
ECO 2	**One credit** can be awarded for Ecological Enhancement
ECO 3	**One credit** can be awarded for the Protection of Ecological Features
ECO 4	**Three credits** can be awarded for Change in Ecological Value of the Site

BREEAM Assessment

Credits Achievable Under BREEAM Refurbishment (2012) Assessment	
MAN 01	**One credit** can be awarded for Protection and Enhancement of Ecological Features
MAN 01: Innovation Credit	**One innovation credit** can be awarded under the exemplary performance requirements

7.2 The awarding of credits achievable under ECO 2 and the innovation credit under MAN 01 requires the implementation of enhancement measures for which evidence of implementation of must be provided to the BREEAM assessor as discussed in the main body of the report. ECO 4 was calculated based on the landscape planting specification provided at the time of report production.

7.3 **Initial Bat Roost Assessment** – The existing stairwell of Devonshire Court was assessed as having low potential to support roosting bats. It is recommended that further surveys are

undertaken in advance of construction to ascertain the presence, or likely absence of roosting bats.

7.4 Provided the recommendations outlined in the main body of the report are followed, the development should not contravene legislation or planning policy relevant to the protection of wildlife and the conservation of biodiversity. If the enhancements detailed in section 4 are implemented, the sites overall value for biodiversity should be enhanced.

8 References

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Appendices

APPENDIX 1 - SITE PHOTOGRAPHS

Photograph 1 – Falcon Residential Block

Photograph 2 – Richbell Residential Block

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Photograph 3 – Springwater Residential Block

Photograph 4 – Windmill Residential Block

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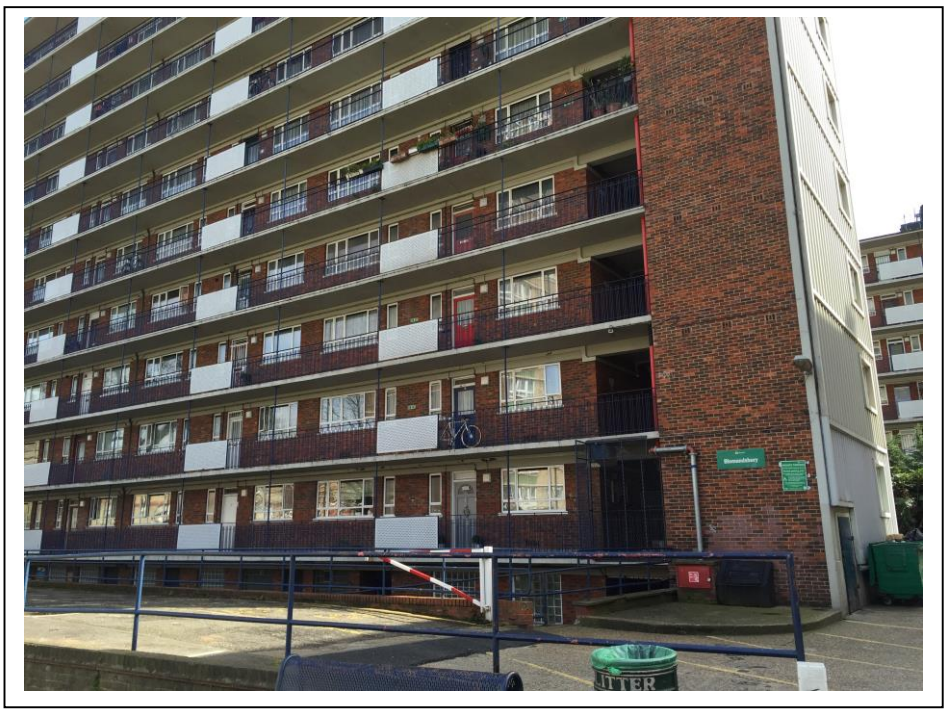

Photograph 5 – Blemundsbury Residential Block

Photograph 6 – Babington Court

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Photograph 7 – Chancellor's Court

Photograph 8 – Devonshire Court

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Photograph 9 – Covered Stairwell (Devonshire Court)

Photograph 10 – Lifted Lead Flashing: Covered Stairwell (Devonshire Court)