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integrating nature conservation

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Ecological Impact Assessment

City House
Sutton Park Road
Sutton
SM1 2AE

August 2023

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QUALITY CONTROL		
The information which we have prepared and provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct.		
Prepared by	Ecologist Abigail Harrington BSc (Hons)	26/07/23
Checked by	Principal Ecologist Olatz Gartzia BSc MSc ACIEEM	31/08/23
<p>This report remains valid for 12 months from date of issue.</p> <p>Survey data are valid for 12-18 months from the date the survey was undertaken.</p>		

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Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living creatures are capable of migration and whilst protected species may not have been located during the survey duration, their presence may be found on site at a later date.

The views and opinions contained within the document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document, or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

It is the duty of care of the landowner/developer to act responsibly and comply with current environmental legislation if protected species are suspected or found prior to works.

1. EXECUTIVE SUMMARY

- 1.1. Darwin Ecology Ltd was commissioned by Macar Living (City House) Ltd to undertake an Ecological Impact Assessment (EclA) of City House, Sutton Park Road, Sutton, SM1 2AE. The assessment was required to support a planning application for the demolition of the existing building and erection of a block of flats and was informed by a desk study, a habitat walkover survey and internal / external building inspection.
- 1.2. During the walkover survey, habitats recorded on site include amenity grassland, introduced shrub, mature trees, and hardstanding.
- 1.3. The habitats on the site have been assessed as having some limited potential to support commuting and foraging bats and common nesting bird species. Based on the plans provided, it is anticipated that there will be a loss of habitat of low ecological importance which would be utilised by these species.
- 1.4. During the internal / external building inspection the building was assessed as providing **negligible potential** to support roosting bats due to a lack of crevice roosting features and a well sealed void space.
- 1.5. Therefore, the proposed plans will not directly impact any bat roosts and works can proceed without precautionary measures.
- 1.6. **In the unlikely event that a bat is discovered during the works, all works must cease and a bat licence ecologist contacted for advice.**
- 1.7. Outline mitigation and enhancement recommendations have been made in order to ensure that opportunities are available for protected species following the completion of the development, and that the ecological value of the site is enhanced in the long-term.

2. INTRODUCTION AND BACKGROUND

- 2.1. Darwin Ecology Ltd was commissioned by Macar Living (City House) Ltd to undertake an Ecological Impact Assessment (EclA) of City House, Sutton Park Road, Sutton, SM1 2AE. The assessment was required to support a planning application for the demolition of the existing building and erection of a block of flats and was informed by a desk study, a habitat walkover survey and internal / external building inspection.
- 2.2. The habitat walkover survey followed the Chartered Institute for Ecological and Environmental Management (CIEEM) Guidelines for Preliminary Ecological Appraisal (2017) and the internal / external building inspection followed the Bat Conservation Trust (BCT) Good Practice Guidelines (2016).
- 2.3. The subsequent EclA follows the CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland (2018).

Site Overview

- 2.4. The site comprises a large multi-storey office building with associated hardstanding parking and a small area of amenity planting.
- 2.5. The site is immediately surrounded by other large office complexes, apartments and a primary school. The north and west boundaries of the property are bordered by the A232 road.
- 2.6. The wider landscape consists predominately of further office complexes, car parks and residential housing. Nonsuch Park, a large area of amenity grassland and mature trees lies approximately 1.75 km to the west, as well as the Banstead Downs, a large area of grassland, heathland and woodland, approximately 1.8 km to south of the site.



Figure 1: Site location within the local landscape (Copyright Google Earth Pro, 2023). The building subject to survey is highlighted in orange.



Figure 2: Site location within the wider landscape (Copyright Google Earth Pro, 2023).

3. LEGISLATION & POLICY

General Wildlife Legislation

- 3.1. Wildlife in the United Kingdom (UK) is protected through European and national legislation, supported by national and local policy and guidance. Development can contribute to conservation and enhancement goals outlined by these various legislation and policy by retaining and protecting the most valuable ecological features within a site and incorporating enhancements to provide biodiversity net gain.
- 3.2. This section provides a brief summary of the principal legislation and policy that triggers the requirement for preliminary and further ecological assessments in the UK. The presence of protected species within a site are a material consideration during the planning process. Preliminary and any necessary further ecological assessments provide an ecological baseline for a site and evaluation of the potential impact of proposals.
- 3.3. It is the responsibility of those involved with development works to ensure that the relevant legislation is complied with at every stage of a project. Such legislation applies even in the absence of related planning conditions or projects outside the scope of the usual planning process (i.e. permitted development projects or projects requiring Listed Building Consent only).

Bat Legislation

- 3.1. In England and Wales, all bat species and their roosts are legally protected under the European *Habitats Directive (1992)*; the *Conservation of Habitats and Species Regulations (2017)*; the *Wildlife and Countryside Act (1981) (as amended)*; the *Countryside and Rights of Way Act, 2000*; and the *Natural Environment and Rural Communities Act (NERC, 2006)*.
- 3.2. *Barbastelle (Barbastella barbastellus)*, *Bechstein's (Myotis bechsteinii)*, *greater horseshoe (Rhinolophus ferrumequinum)*, *lesser horseshoe (Rhinolophus hipposideros)*, *brown long-eared (Plecotus auritus)*, *soprano pipistrelle (Pipistrellus pygmaeus)*, and *noctule (Nyctalus noctula)* bats are all species of principal importance in England under *Section 41* of the *Natural Environment and Rural Communities Act 2006*.
- 3.3. You will be committing a criminal offence if you:
 - Deliberately capture, injure or kill a bat;
 - Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats;
 - Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time);
 - Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat; or
 - Intentionally or recklessly obstruct access to a bat roost.

- 3.4. The government's statutory conservation advisory organisation, Natural England, is responsible for administering EPS licenses that permit activities that would otherwise lead to an offence.
- 3.5. A licence can be obtained if the following three tests have been met:
- Regulation 53(9)(a) - there is "no satisfactory alternative" to the derogation, and;
 - Regulation 53(9)(b) - the derogation "will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range" and;
 - Regulation 53(2)(e) - the derogation is for the purposes of "preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment".

National Planning Policy

- 3.6. The *National Planning Policy Framework (2023)* aims to minimise impacts on biodiversity and provide net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity. Chapter 15 'Conserving and enhancing the natural environment' details what local planning policies should seek to consider with regard to planning applications.
- 3.7. Planning policies and decisions should contribute to and enhance the natural and local environment by:
- 180 a)* Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
 - 180 b)* Recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
 - 180 d)* Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
 - 181)* Plans should: distinguish between the hierarchy of international, national and local designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries;

182 Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural beauty which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks and Broads. The scale and extent of development within all these designated areas should be limited, while development within their settings should be sensitively located and designed to avoid or minimise adverse impacts on the designated area.

3.8. Specific policies regarding habitats and biodiversity comprise:

185) To protect and enhance biodiversity and geodiversity, plans should:

- a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation and
- b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species and identify and pursue opportunities for securing measurable net gains for biodiversity.

186) When determining planning applications, local planning authorities should apply the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoid (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) development on land within or outside of Sites of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the feature of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees)

should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around development should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Local Planning Policy

3.9. The local planning policy for the site is the Sutton Local Plan 2016-2031, which sets out strategic and detailed policies to ensure the London Borough Of Sutton remains an attractive and thriving place whilst enabling sustainable growth to occur. Ecologically relevant policies include:

POLICY 13: Housing and Garden Land

- The council will not grant planning permission for the development of back garden land where the site, either individually or as part of a larger street block:
 - Makes an important contribution to the character and appearance of the surrounding area;
 - Is considered to be of local ecological value by the council; or
 - Is likely to make a significant contribution to minimising the risk of flooding in Flood Zones 2 and above or in a critical drainage area.
- Where the development of the site would adversely affect the amenity of future occupiers or those currently occupying adjoining or nearby properties. Front Garden Land The council will seek the retention of established boundary treatments, such as front garden walls, to maintain the suburban character and appearance of the borough. Where the paving of all or part of a front garden is sought:
 - A permeable or porous material (including for the sub-base layer) should be used; and
 - The maximum amount possible of soft landscaping and/or vegetation should be retained or created.

POLICY 26: Biodiversity

- The council will protect and enhance Sites of Importance for Nature Conservation, Green Corridors and biodiversity. New development should incorporate opportunities to enhance biodiversity, wherever possible. The council will grant permission for developments that create, conserve or enhance biodiversity and improve access to nature, subject to other policies in the plan.

The council will not grant planning permission within or adjacent to a SINC where there would be a damaging impact on the nature conservation value or integrity of the site, unless:

- the need for and the benefits of the development clearly outweigh the harm.
 - where there are no reasonable alternative sites that would result in less harm.
 - where development can demonstrate no net loss for biodiversity and, where possible, net gains for biodiversity by providing mitigation and/or compensation measures.
- The council will not grant planning permission for development within a Green Corridor where there would be a significant damaging impact to the corridor, unless the need for and benefits of the development clearly outweigh the harm and where development can demonstrate no net loss for biodiversity by providing mitigation and/or compensation measures.
 - The council will grant planning permission for development provided that the development will not adversely affect the integrity and biodiversity of the Banstead Downs Site of Special Scientific Interest (SSSI) adjacent to the London Borough of Sutton.

Sutton Biodiversity Action Plan

- 3.10. Sutton's Biodiversity Strategy is a plan of action to ensure that plants, animals and ecosystems are conserved, protected and enhanced and that progress is tracked, using measurable targets. The strategy introduces a process called Biodiversity Net Gain, a process designed to ensure that every new development improves Sutton's environment for plants, animals and ecosystems, by either delivering those improvements on the development site, or by paying for improvements elsewhere within the borough. The process has been nationally mandated for all Local Planning Authorities, but Sutton is the first London Borough to adopt this way to evaluate biodiversity during the planning process. The strategy is a working document that can adapt to changes in the national scene, such as the recent publication of the Environment Bill (2019) and any exit from the EU. It shows how the Council intends to deliver locally on the Government's "A Green Future: our 25 year plan to improve the environment", how Sutton Council will encourage restoration of nature in all its forms, and documents how priorities may change through time to deliver environmental protection and gains.

4. METHODOLOGY

Desk Study

- 4.1. A desk study was undertaken for designated sites, protected species and priority habitats within a 2 km radius of the site:
- The MagicMap website was reviewed, to obtain information on any designated sites of nature conservation interest within 2 km of the site and details of any European Protected Species (EPS) licences issued within 2 km;
 - The London Borough of Sutton Planning Portal was searched for past and pending planning applications that may have associated ecological documents detailing results of bat surveys; and
 - Google Maps was utilised to view aerial photographs and to assess the ecological context of the site within the wider landscape.

Habitat Walkover Survey

- 4.2. Ecologist Abigail Harrington BSc (Hons) undertook a walkover survey at City House on 4th July 2023 in accordance with the following methodology.
- 4.3. The walkover survey assessed habitats present within the application red line boundary for their potential to support protected species, including:
- Bats;
 - Great crested newt *Triturus cristatus*;
 - Common amphibians;
 - Reptiles;
 - Dormice *Muscardinus avellanarius*;
 - Other terrestrial mammals, including European hedgehog *Erinaceus europaeus* and badger *Meles meles*;
 - Birds; and
 - Invertebrates.
- 4.4. As there is no running water within the site, in combination with their nationally sparse distribution, it is considered highly unlikely that white clawed crayfish *Austropotamobius pallipes* would be using the site and they are therefore not considered further in this report.
- 4.5. Otters *Lutra lutra* and water voles *Arvicola amphibious* are not considered further in this report due to the lack of running water on site and within the wider area. The site also does not offer any suitable habitat for these species.

- 4.6. The site was also searched for non-native, invasive plant species, with particular care to search for the most commonly occurring and problematic species, such as Japanese knotweed *Fallopia japonica*, Indian balsam *Impatiens grandiflora* and giant hogweed *Heracleum mantegazzianum*.

Building Inspection

- 4.7. Ecologist Abigail Harrington BSc (Hons) undertook a roost assessment of the buildings affected by the proposals at City House on 4th July 2023 in accordance with the following methodology.

External Survey

- 4.8. An investigation was carried out of external features with potential for use by roosting bats, such as gaps under roof and ridge tiles, gaps at soffit boxes or fascias. A search for bat droppings was made beneath each potential entry/exit point identified where accessible. The surveyor used binoculars and powerful, low-heat LED torch.

Internal Survey

- 4.9. An investigation was carried out of the roof void (including the floor and walls) for signs of bats roosting and the access potential into the roof void for bats. The surveyor looked for bats, bat droppings, likely access points, signs of feeding, dead bats, scratch marks and staining, and made a suitability assessment of the structure of the roof.

Categorisation of Bat Roosting Potential

- 4.10. The building was assessed for its potential to support roosting bats as detailed in **Table 1** below which is taken from the Bat Conservation Trust 2016 guidelines Table 4.1 and Table 7.3.

Survey Limitations

- 4.11. Ecological surveys are limited by factors that affect the presence of plants and animals such as the time of the year, weather, migration patterns. The survey was undertaken in July during the key April-September timeframe for these surveys and therefore represents a valid sample of ecological evidence present on that date/season. The report is not designed, nor is it required to present a completed inventory of flora/fauna.
- 4.12. This report remains valid for 2 years from the date of the survey, however, a walkover survey within this period may be required to demonstrate whether or not the habitats have remained as described.
- 4.13. The desk study does not include data from the local environmental records centre (LERC). However, following CIEEM guidelines (2017) it is possible to conduct a robust assessment without the need of LERC data, for example for small-scale projects or on sites such as;
- A field in active arable cultivation where there is no impact on any hedges, trees or water bodies;

- A small area of cultivated garden/amenity grassland, as above; or
 - A small urban site comprising mostly asphalt or compacted hardstanding.
- 4.14. The site is a small plot set within an urban area and comprised of hardstanding and gardens and therefore the lack of LERC data is not considered a limitation to the ecological assessment of the site.
- 4.15. Many species of bat in the UK are crevice-dwelling, and bats or signs of bats can be difficult to find within a building. In addition, a small portion of the loft void on the northern elevation was inaccessible due to a partition wall limiting access. The surveyor inspected the area from a safe place using a high powered torch but this may have resulted in some features being missed.
- 4.16. No other limitations were encountered, or assumptions made during either the desk study or the field survey and it is considered that with the access gained and recording undertaken an accurate assessment of the site's ecological importance has been made.

Table 1: Roost Classification from the Bat Conservation Trust (2016) guidelines.		
Category	Description of Roosting habitat	Number of Surveys required
Negligible	Negligible habitat features on site likely to be used by roosting bats.	No further surveys
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, protection, appropriate conditions and or suitable surrounding habitat to be used on a regular basis by large numbers of bats.	Single survey between May to August
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, condition and surrounding habitat but unlikely to support a roost of high conservation status.	Two separate surveys with one dusk and one dawn re-entry survey between May-August.
High	A structure with one or more potential roost sites that are obviously suitable for use by a larger number of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Three separate surveys with at least one dawn survey.

5. SURVEY RESULTS

Desk Study

Designated Sites

- 5.1. There are four statutory designated sites within a 2 km radius of City House, comprising three Local Nature Reserves (LNR), and a Site of Special Scientific Interest (SSSI). Further details of these sites are given in **Table 2** below.

Priority Habitats

- 5.2. Two areas of priority deciduous woodland were found within 1 km of the site at City House; an area 800 m to the west and an area 950 m to the east. These areas are also listed on the National Forest Inventory (2020). No areas of ancient or semi-natural ancient woodland were found within 1 km of the site.
- 5.3. Further priority habitats found within 1 km of the site include one area lowland calcareous grassland approximately 1km west and one area of traditional orchard approximately 850m southeast.

Habitat Walkover Survey

- 5.4. During the walkover survey, habitats recorded on site include amenity grassland, introduced shrub, trees, a building and hardstanding. **Figure 3** illustrates the location and extent of the habitats recorded.

Hardstanding

- 5.5. The majority of the site comprised a paved car parking area with a concrete slab walkway leading around the building.

Amenity Grassland

- 5.6. Amenity grassland was present in the northern end of the site. The sward height was between 5-10cm in length and appeared to be under regular management. Species recorded included ribwort plantain *Plantago lanceolata*, selfheal *Prunella vulgaris*, common daisy *Bellis perennis*, dandelion *Taraxacum spp.*, white clover *Trifolium repens*, and various mosses.

Introduced Shrub

- 5.7. Designated planting beds were located throughout the site featuring species such as holly *Ilex aquifolium*, rose *Rosa spp.*, privet *Ligustrum spp.*, common fig *Ficus carica*, lavender *Lavandula spp.*, *Fuchsia spp.*, English ivy *Hedera helix* and hazel *Corylus avellana*.

Trees

- 5.8. Mature trees were found at the northern edge of the site including a small-leaved lime *Tilia cordata*, a black locust *Robinia Pseudoacacia* and an English yew *Taxus baccata*. Several Norwegian maple saplings *Acer platanoides* were also identified within the introduced shrub.

Buildings

- 5.9. One large office complex was located within the site. Further details regarding the building can be found in the **Building Inspection** section of this report.

Table 2: Statutory designated sites within 2 km of the site.

Designated sites	Name and designation type	Reason for designation	Approximate distance from site
Within 2km of Site	Devonshire Avenue Nature Area (LNR)	An approximately 0.42 hectare area of neutral and chalk grassland, shrubs and woodland. The reserve provides habitat to several important invertebrate species such as the small blue butterfly (<i>Cupido minimus</i>), as well as several nationally scarce plant species such as ivy broomrape (<i>Orobanche hederæ</i>).	850 m south
	Anton Crescent Wetland (LNR)	An approximately 1.1 hectare wetland area used both as floodwater storage and as a nature reserve. The site contains one of the densest reed beds in the Sutton. The site provides habitat for wading bird species, such as a green sandpiper (<i>Tringa ochropus</i>) and common snipe (<i>Gallinago gallinago</i>), which have limited options in the Greater London area.	1.3 km north
	Belmont Pastures (LNR)	An approximately 1.3 hectare area of unimproved grassland, with several mature native trees. Due to the extensive presence of wildflowers, the area is known for its diverse array of invertebrate species, with species such as Roesel's bush cricket (<i>Metrioptera roeselii</i>) and Peacock butterfly (<i>Inachis io</i>) frequently observed.	1.5 km south
	Banstead Downs (SSSI)	An approximately 127 hectare area comprised of chalk downland interspersed with scrub and woodland, designated due to the diverse flora and invertebrates and birds found on the site. A total 32 species of butterfly have been recorded on this site. The site also hosts two nationally rare species of plant species, the Early Gentian (<i>Gentianella anglica</i>) and Broadleaf Cudweed (<i>Filago pyramidata</i>).	1.8 km south

Habitat Walkover Photographs



Image 1: Amenity grassland and introduced shrub.



Image 2: Hardstanding and introduced shrub located in the northern end of the site.



Image 3: Mature small-leaved lime, located in the northern end of the site.



Image 4: View, of the hardstanding parking area.



Image 5: View of the introduced shrub in the southern end of the site.

Protected Species

Bats

- 5.10. There are records on MagicMap of one EPS license for works impacting bats within 2km of the application site:
- EPS mitigation licence (EPSM2013-6680) to allow for the destruction of a resting place for common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelle approximately 500m south.
- 5.11. A search of Sutton Council Planning Portal shows that there are no relevant planning applications with related ecological documents within the last two years in the nearby area.
- 5.12. Trees and introduced shrub on site provided limited foraging opportunities for bats within the wider area. The site is set within an urban area with relatively insubstantial pockets of amenity grassland and tree lines in the wider landscape.

Building Inspection

External Inspection

- 5.13. The building on site was a three storey building of brick construction and was used as office space. It had a slate tiled roof which showed no signs of lifting and the eaves were well sealed with uPVC soffits. The brick work was in good condition and there were no gaps around the windows.

Internal Inspection

- 5.14. Internally, three loft void areas are present, the details of which are outlined below. Loft void 1 and 2 were located along the edges of the loft converted office space and void 3 was positioned above the office space at the apex of the building.
- 5.15. Loft Void 1: Located on the eastern side of the clock face and measured approximately 3m (w) x 6m (l) x 1.5m (h). It was of timber frame construction, with fibreglass insulation covering the floor space and a mixture of fibreglass and board insulation on the internal walls. Bitumen felt was used to line the roof tiles on the pitched side of the void and was in good condition. The void space was warm and without airflow, with a low light ingress present from the north elevation, around the metal ventilation shafts. The space was dusty and had a high level of cobwebbing throughout. No evidence of bats was found during the inspection.
- 5.16. Loft Void 2: Located on the western side of the clock face and including the internal chamber of the clock face. It measured approximately 3m (w) x 20m (l) x 1.5m (h). It was of similarly construction and condition to loft void 1. Access was limited due to the lack of boarding on the floor.
- 5.17. Loft Void 3: Measured approximately 4m (w) x 4m (l) x 2m (h). It was of timber frame construction with a central ridge beam. Fibreglass insulation was present throughout the

space and the roof tiles were lined with bitumen felt. Two small rips were identified however, these were blocked by air vents upon closer inspection, and the lining was generally in good condition and the space was well sealed. The space was dusty and had a high level of cobwebbing throughout. No evidence of bats was identified. A long rectangular section of void of similar construction protruded from the main loft space, and lead up to the clock face. This space was approximately 3m (l) x 2m (w) x 1.5m (h) and was heavily cobwebbed.

- 5.18. The building was assessed as providing **negligible potential** to support roosting bats due to a lack of crevice roosting opportunities and a well sealed void space.

Building Inspection Photos



Image 6: View of the southern elevations of the building.



Image 7: View of the north-facing clock face.



Image 8: View of the northwest elevation of the building.

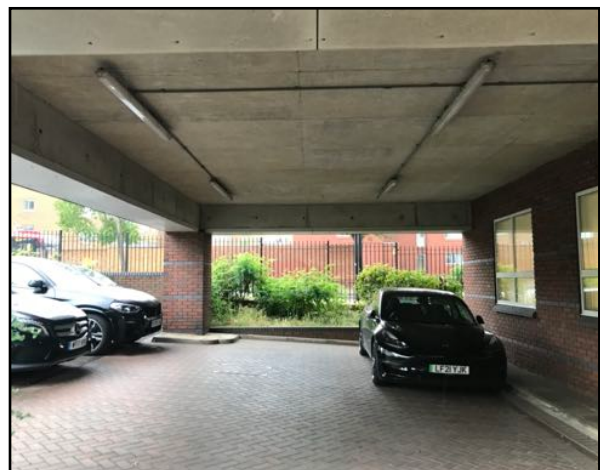


Image 9: View of the covered parking area.



Image 10: View of the converted office space.



Image 11: Internal view of loft void one.



Image 12: View of loft void two. High light ingress from translucent clock face.



Image 13: View of loft void two.



Image 14: View of loft void three.



Image 15: Central ridge beam in loft void three.

Great Crested Newt and Common Amphibians

- 5.19. There are no EPS licences, Great Crested Newt Pond Survey 2017 - 2019 or licence returns recorded on Magic Map for works impacting great crested newts within 1 km of the site.
- 5.20. There are no ponds on site or ponds within a 500m radius of the site.
- 5.21. Amenity grassland on site is regularly maintained and kept to a short sward length and so is unsuitable for amphibians as it offers no shelter or foraging opportunities. There is minimal suitable habitat in the wider area and the site is bound by a main road which would act as a significant barrier to movement. Therefore, it is considered highly unlikely that great crested newts or common amphibians are present within the site.

Reptiles

- 5.22. The site does not provide suitable habitat for reptiles due to the short sward length of the amenity grassland and lack of structural diversity. Introduced shrub does provide some potential for cover however it is on a small scale and there is limited habitat for reptiles within the wider landscape. It is considered unlikely that reptiles are present on site.

Dormice and other Terrestrial Mammals

- 5.23. MagicMap has no records of EPS licences works impacting dormouse within 1km of the application site. There are no hedgerows on site and no suitable foraging habitat to support hazel dormice. The site has poor connectivity to natural areas and linear features and nearby roads provide a significant barrier to dispersal.
- 5.24. No signs of badger activity e.g. latrines, snuffle holes, or sett entrances were recorded on site during the survey or within 20m of the site boundary. Common garden habitat in the form of amenity grassland and introduced shrub may support small mammals including hedgehogs however the site is bordered by a busy main road which likely limits access.

Birds

- 5.25. The habitats on the site offer resources to support common bird species typically found in suburban/urban areas. The mature trees and ornamental planting offer suitable nesting habitat, however, no nests were noted at the time of the survey.

Invertebrates

- 5.26. The site likely supports a common assemblage of invertebrates.

6. DISCUSSION, MITIGATION AND RECOMMENDATIONS

Designated Sites

- 6.1. It is not anticipated that the proposed works will impact any statutory designated sites, priority habitats or ancient woodlands through land take.
- 6.2. There will be an increase in residential units and therefore resulting impacts to the surrounding designated sites, green space and wildlife sites are likely to include increased recreational use. However, there are several non-designated open green spaces available in the area and therefore impacts to sites present within 2km are expected to be minimal.

Habitats

Status on Site

- 6.3. Habitats within the site comprising amenity grassland, hardstanding and introduced shrub are common and widespread and have a negligible/low ecological value.
- 6.4. The mature trees on site have a moderate ecological value in the context of the site.

Potential Impacts

- 6.5. Amenity grassland, ornamental planting, scattered trees and hardstanding will be impacted by the demolition of the existing buildings and construction of the new dwelling, resulting in the loss of low value habitats.
- 6.6. Destructive work has the potential to impact the root protection zones of mature trees on site which could result in the damage and/or degradation of these moderate/high importance habitats.

Mitigation

- 6.7. The root protection zones of the trees and hedgerow in the vicinity of the works should be protected in line with BS5837:12. Heras fencing (or similar) should be installed during the works to provide a buffer around the root protection zone. No materials should be allowed to be stored within these root protection areas and no heavy machinery should run over them. The fence should remain until the completion of all construction works.
- 6.8. Given the above mitigation strategies, it is considered likely that there will be no residual impacts on habitats.

Bats

Status on Site

- 6.9. The building has been assessed as providing **negligible potential** to support roosting bats due to a lack of suitable crevices and a well sealed void.

Potential Impacts

- 6.10. The proposed plans for City House include the demolition of the existing building and construction of a block of flats.
- 6.11. The proposed will not result in the destruction of a bat roost, and therefore, works can proceed without any requirement of a protected species licence or further surveys. No precautionary measures are recommended in this instance.
- 6.12. In the unlikely event that a bat is discovered during the works, all works must cease and a bat licensed ecologist contacted for advice.**
- 6.13. It is not expected the proposals will significantly increase the level of light pollution within the local area as the site is located in an urban setting, however, it is recommended where new lighting is proposed, a sensitive lighting plan should be designed.

Mitigation

- 6.14. Any new external lighting must be directed to avoid light spillage onto the retained trees and hedgerow. Upward lighting will be avoided by fitting lights with downward facing baffles and fixtures to ensure no light spillage above an angle of 70°. Lighting will be triggered by motion sensors using a short timer where possible and in compliance with building regulations. Warm white LEDs will be used in preference to bright white LEDs. All lighting plans will be reviewed by a suitably qualified ecologist before finalising and submitting for approval. See the **Appendix** for further information on designing lighting to minimise impacts on bats.
- 6.15. *Habitats:* The proposals do not result in significant loss of foraging habitat for bats, however, a wildlife friendly landscaping scheme is recommended to enhance the site for bats and other wildlife.
- 6.16. Given the above mitigation strategies, it is considered likely that there will be no residual impacts on bats using the application site for foraging and commuting.

Terrestrial Mammals

Status on Site

- 6.17. Hedgehog may be present in the wider area however they are unlikely to access the site due to it being bound by a busy main road.

Potential Impacts

- 6.18. Should hedgehog be present during the proposed works, they may be injured due to the destructive activity or trapped in any excavations.

Mitigation

- 6.19. **Trenches and Excavations:** As a precautionary measure, during construction all trenches and holes are to be covered overnight to prevent wildlife falling in and becoming trapped. Contractors should also ensure that ramps are installed at any excavations or trenches, which must be checked before filling takes place.
- 6.20. Given the above mitigation strategies, it is considered likely that there will be no residual impacts on terrestrial mammals.

Birds

Status on Site

- 6.21. The trees and hedgerows on site provided suitable nesting and foraging potential for birds. At the time of the survey no active nests were identified.

Potential Impacts

- 6.22. No plans were available at the time of writing, however it is expected some area of habitat suitable for breeding birds is removed to allow for the development, which could result in the disturbance or injury of nesting birds.

Mitigation

- 6.23. All occupied birds nests have legal protection from disturbance, damage and destruction under the Wildlife & Countryside Act (1981). All clearance of suitable vegetation and trees should be undertaken outside of the nesting bird season (March to September inclusive for most species in the UK).
- 6.24. If vegetation clearance is required during the breeding bird season (February - August) all vegetation should be checked for nesting birds by a suitably qualified ecologist immediately prior to clearance taking place. If active nests are recorded, a suitable buffer will be retained around these until all chicks have fledged (to be confirmed by a suitably qualified ecologist).

Invertebrates

Status of Invertebrates on Site

- 6.25. The application area has limited value for invertebrates, as there is little introduced shrub present on site and there is no standing water.

Potential Impacts

- 6.26. The habitats which will be lost have low ecological value to invertebrates and will be recreated following the works.

Recommendations

- 6.27. Where possible, area of species rich grassland which will be attractive to invertebrates should be incorporated into the design of the site. Some areas of grassland should also be

allowed to grow longer (for example along the hedgerows) to help improve structural diversity on site.

- 6.28. Where new planting is considered in the plan, native tree and shrub species should be used to enhance the ecological value of the site. Examples of these species include apple, box, heather, common poppy, cornflower, and oregano.
- 6.29. Given the above recommendations, it is considered likely that there will be no residual impacts on invertebrates.

7. ENHANCEMENT RECOMMENDATIONS

- 7.1. National planning policy states that all developments should seek to enhance onsite biodiversity whether impacts on protected species are recorded or not. Incorporating enhancement features into new or renovated buildings should be carefully considered. These features can be simple and inexpensive, please see below for specific recommendations.

Wildlife Beneficial Landscaping Scheme

- 7.2. In order to achieve a biodiversity net gain on the site as part of the development, it is recommended that an extensive green roof is installed on the new building. This type of green roof has a lightweight soil layer laid down with plants suitable for the local environment introduced within the substrate at the time of construction. These type of roofs are known as biodiverse green roofs or 'brown roofs'.
- 7.3. Any future landscape planting should seek to enhance biodiversity, improve connectivity to the surrounding habitats and provide food and shelter for a wide range of wildlife. All amenity planting and formally landscaped areas should be designed using a variety of plant species beneficial for wildlife. These do not necessarily have to be native but should be chosen for their ability to provide nectar or fruit and should be non-invasive species. There are a number of specialist seed mixes available specific to certain soil types, growing conditions and designed to benefit different groups of species such as bees or butterflies and moths.
- 7.4. All habitats should be managed in a suitable way to encourage a wide variety of insects and other wildlife to use the site.

Bat and Bird Boxes

- 7.5. Integrated bat boxes must be incorporated into the new block of flats (see the **Appendix** for further details).
- 7.6. In addition, bat boxes can be installed on existing mature trees within the application area to provide additional roosting opportunities for bats (see the **Appendix**).
- 7.7. Tree-mount bird boxes can also be installed at existing mature trees (see the **Appendix**). Bird boxes should be installed at least 5 m from ground level and with unobstructed air space in front.

Invertebrate features

- 7.8. The main aim of management for invertebrates is to maintain a diverse structure, with areas of short sward, bare ground, tussocks and flowering herbaceous plants. Native plants should be allowed to set seed to increase the availability of food (nectar and pollen) for foraging insects. Bee bricks are also recommended to increase the nesting opportunities for bees and wasps.

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THE IMPACT OF LIGHTING ON BATS

Bats favour a dark environment for both roosting and foraging as they are adapted to low-light conditions. Artificial lighting will disturb bats if the lighting covers roost access points, flight paths or foraging habitats.

The main peak of nocturnal insect abundance occurs at dusk and a delay in emergence results in a lower foraging rate for bats.

Artificial lighting creates a 'vacuum effect' for nocturnal insects. During the night nocturnal insects use the light of the moon* to navigate. However, artificial lighting and even sky glow above cities obscures the natural moonlight as it is closer

and radiates light in multiple directions.

Some species of bats have been recorded foraging around street lights such as Pipistrelle species and Nyctalus species. However, species that are less tolerant of artificial light are at a disadvantage when foraging as insects are drawn away from these species usual foraging grounds into the zones of artificial light.

Lighting must be considered in context to any development as increased lighting may cause roost abandonment, reduced reproductive success, and reduced foraging. Mitigation to reduce the impacts of lighting for bats is therefore of great importance in bat conservation.

Table 1: Summary of predicted impact of lighting for each species/genus

Impact	High	Medium	Low
Roosting	All species		
Midnight roost	All species		
Night roost	<ul style="list-style-type: none"> Myotis spp. Pipistrellus spp. Nyctalus spp. 	<ul style="list-style-type: none"> Pipistrellus spp. Nyctalus spp. Eptesicus serotinus Bombus terrestris 	
Emergence	All species		
Foraging	<ul style="list-style-type: none"> Myotis spp. Pipistrellus spp. Nyctalus spp. 		<ul style="list-style-type: none"> Pipistrellus spp. Nyctalus spp. Eptesicus serotinus Bombus terrestris
Communing	<ul style="list-style-type: none"> Myotis spp. Pipistrellus spp. Nyctalus spp. 		<ul style="list-style-type: none"> Pipistrellus spp. Nyctalus spp. Eptesicus serotinus Bombus terrestris
Swarming	All species		
Observation	All species		

*For more information see Warrant, E., and Dacke, M. (2016) Visual Navigation in Nocturnal insects. *Physiology*, 31, 182-196.

APPENDICES

Sources of light that can disturb bats include; light spill via windows, sport floodlighting, car headlights, roadside lighting, security lighting, aesthetic lighting of waterways, and aesthetic illumination of buildings. Glare will affect bats over greater distance than the target area directly illuminated.

Avoidance is the most effective method, but if this is not possible the following measures should be considered.

What lighting should I use?

- Low pressure sodium lights or 'warm' LEDs
- Wavelength above 540nm
- Colour temperature below 2700K
- Shielded lights that prevent light spill above a 70 degree angle
- Passive infrared (PIR) motion sensors



What to avoid:

- Lighting roost entrances, flightpaths, and foraging or commuting routes
- Reflective surfaces beneath lighting
- High level lights
- Non-directional lighting

Lighting should be considered at an early stage allowing impacts to be minimised through the design of the site.

Key Points

- Keep lighting intensity to the minimum level required
- Limit the times that lights are on to provide some dark periods (e.g. switching installations off between midnight and 5am)
- Dim lighting according to demand
- As an alternative to lighting pathways use paving materials that reflect moonlight
- Low level lighting allows darkness to be retained within higher vegetation
- Set dark habitat buffers - lighting should always be a minimum of 25m from vegetated margins and 40m from waterbodies
- Incorporate dark corridors within the site
- Compensate for the loss of dark areas by enhancing other dark areas
- Consider building design - install internal lighting away from windows



TYPES OF BAT BOXES



Schwegler 2F Double Front Panel

- Manufactured from long-lasting woodcrete
- Lifetime - 20-25 years
- Suitable for pipistrelle and Myotis species
- A second inner wooden panel is fitted adjacent to the front panel imitating a cavity wall



Schwegler 1FD Double Front Panel

- Manufactured from long-lasting woodcrete
- Lifetime - 20-25 years
- Suitable for pipistrelle and Myotis species
- A second inner wooden panel is fitted adjacent to the front panel imitating a cavity wall
- Small entrance hole discourages birds from using the box



Vincent Pro Bat Box

- Manufactured from timber and recycled plastic
- The front and the top of the box is black, which helps heat absorption
- Suitable for a range of species including pipistrelle species, Myotis species, and brown long-eared bats.
- No maintenance required



Schwegler 2FN

- Manufactured from long-lasting woodcrete
- Lifetime - 20-25 years
- Suitable for pipistrelle species, Myotis species, serotine, brown long-eared, noctule and Leisler's bats
- Dual entrance
- Birds and dormice have also been found using this box
- A newer model is now available, Schwegler 3FN, designed with smaller entrance holes which discourage birds and dormice



Schwegler 1FS Large Colony Box

- Manufactured from long-lasting woodcrete
- Lifetime - 20-25 years
- Suitable for a range of bats including pipistrelle species, Myotis species, Noctule, and brown long-eared bats
- Three grooved inner wooden panels are connected to the front panel, which are ideal for bats to cling to.
- Accommodates large summer colonies



Schwegler 1FF Colony Box

- Manufactured from long-lasting woodcrete
- Lifetime - 20-25 years
- Suitable for a range of crevice dwelling bats including pipistrelle species, barbastelle, noctule, and brown long-eared bats
- Rough wooden surface for bats to cling onto and climb



Greenwoods Ecohabitats Small Hollow Bat Box

- Manufactured from long-lasting ecostyrocete
- Lifetime - 20-25 years
- Suitable for a range of bats preferring a cavity space, including pipistrelle species, myotis species, noctule, and brown long-eared bats
- Suitable for hibernating bats



TYPES OF BIRD BOXES



Vivar Pro Seville 32mm WoodStone Nest Box

- Manufactured from woodstone - increases longevity and provides a consistent internal temperature
- The nest box compensates for the lack of natural cavities that are found in trees
- Suitable for blue tits, tree sparrows, house sparrows, great tits, crested tits, nuthatches, coal tits and pied flycatchers
- Should be installed between 1.5m and 3m high



House Martin Nest Cups



Swallow Nest Bowl

- Suitable nest building mud is difficult for house martins and swallows to find
- Alterations to house construction and roof design have resulted in a decrease of suitable nesting sites
- Install swallow nest bowls within an outbuilding or garage that has flight access - 6cm below the ceiling
- Install house martin nest cups under the eaves of a house - minimum of 2m high



Swift Nest Box

- Swift numbers are declining partly due to a loss of nesting sites
- The entrance hole discourages other birds such as starlings and sparrows
- Install a minimum of 5m high with unobstructed airspace in front of the nest
- Integrated models of swift nest boxes are also available



5KL Schwegler Nuthatch Nest Box

- Manufactured from woodcrete
- Nuthatches prefer nest boxes with larger cavities. They will often occupy owl nest boxes and fill the entrance hole with mud reducing the size to approximately 32mm
- Nuthatches plaster mud on the internal walls of the cavity and line the floor with wood chipping and leaves to nest
- To discourage nuthatches from using owl nest boxes try installing the 5KL immediately adjacent



Open-fronted Nest Box

- Manufactured from woodstone - lifetime of 20-25 years
- Suitable for robin, wren, spotted flycatchers, and black redstart
- Best installed hidden from view on the wall of a building or hidden within ivy/honeysuckle as the boxes open-front may attract predators
- Install at a height of 1-3m



Sparrow Terrace Nest Box

- Sparrow populations are decreasing due to a lack of nesting sites
- Sparrows are a sociable species and prefer to nest in a colony
- Likelihood of uptake is increased if more nesting chambers are available (the example nest box shown contains three nesting chambers)
- Various other nest box designs are available
- Install at a minimum of 2m high



Tawny Owl Nest Box

- Install on a mature tree within a woodland (not on the outskirts)
- Install a minimum of 3m high
- Face the box entrance away from prevailing wind (generally avoiding west/south-west)



Little Owl Nest Box

- Prefer areas of mixed farmland and orchards
- Essential features; small entrance hole (70mm), narrow tunnel, and a dark nesting chamber
- Install on a horizontal tree branch/wall top or beam so that owlets can walk in/out prior to fledging
- Can be installed on any tree species apart from cherry - the cherry harvest coincides with the little owl breeding season
- Entrance hole should face the tree trunk
- Install at a minimum height of 3m